

REPORT

South Bank Quay

Transport Statement

Client: Tees Valley Combined Authority

Reference: PC1084-RHD-SB-EN-RP-EV-1112

Status: Final/P01

Date: 07 October 2020

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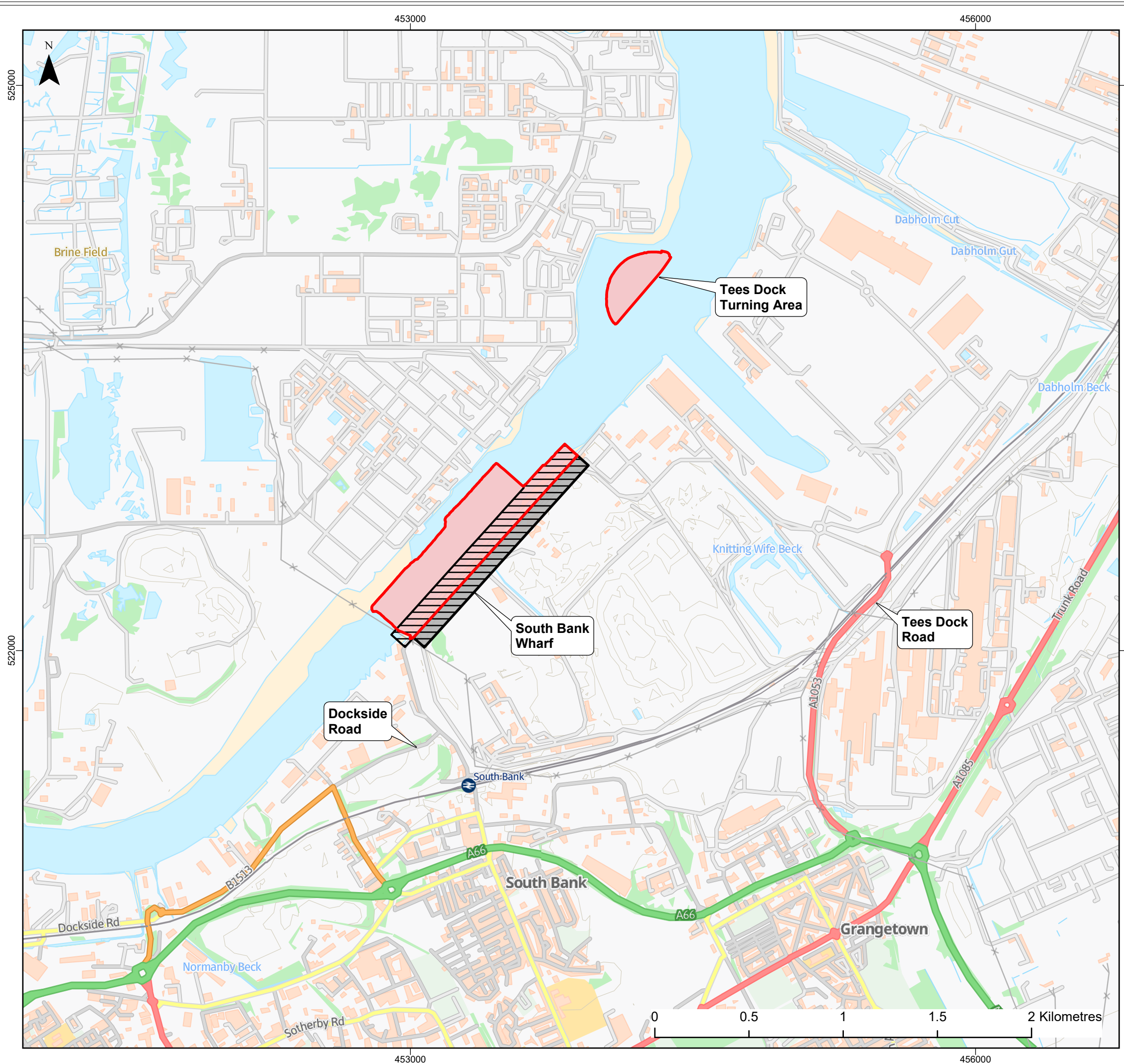
1 Introduction

1.1 Background

- 1.1.1 This Transport Statement (TS) has been prepared by Royal HaskoningDHV on behalf of Tees Valley Combined Authority (TVCA) in support of a planning application and marine licence application to construct a new quay at South Bank (Tees estuary) (referred to as the proposed scheme hereafter).
- 1.1.2 The new quay would support South Tees Development Corporation's (STDC's) landside proposals for general industry and storage, or distribution uses within part of the South Industrial Zone (SIZ).
- 1.1.3 The proposed scheme comprises demolition of the existing wharf, jetties and other minor infrastructure along the intertidal and on 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). The location of the proposed scheme is shown in **Figure 1**.
- 1.1.4 A separate planning application has been submitted to Redcar and Cleveland Borough Council (RCBC) for the landside proposals at the South Industrial Zone (Planning ref: R/2020/0357/OOM) (referred to hereafter as the landside works). The planning application for the landside works was supported by an Environmental Statement (ES) and a Transport Assessment (TA).

1.2 Scope

- 1.2.1 The proposed new quay at South Bank would be required to support the landside works at the SIZ. The TA submitted in support of the planning application for the landside works included a detailed assessment of the operational impacts.
- 1.2.2 The TA for landside works identifies that when fully operational, there could be up to 3,870 employees at the SIZ. It is forecast that up to 10 employees would be required to operate the new quay.
- 1.2.3 The TA for the SIZ contains a comprehensive assessment of traffic impacts generated by operational traffic movements. It is therefore implicit that the 10 employees (for the proposed new quay) would have been contained within the bounds of the assessed outcomes of the SIZ TA and are therefore not a material consideration within this TS. The scope of this TS therefore focusses upon impacts of the construction of the new quay only.
- 1.2.4 The TA for the landside works stated that the specifics of construction were not known at the time of writing and as such made a commitment to produce a Construction Traffic Management Plan (CTMP) to assess the construction impacts of the landside proposals.



- Legend**
- Proposed Dredge and Excavation Envelope (including side slopes)
 - Proposed Quay Envelope
 - Proposed Demolition Area

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Title:
Site Location

Figure: 1

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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Co-ordinate system: British National Grid

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- 1.2.5 The purpose of this TS is to quantify the potential impacts associated with the construction of the proposed quay at South Bank. It is envisaged that this information would then allow the CTMP for the landside works to include a detailed assessment of the potential for cumulative construction impacts with the new quay.

1.3 Consultation

- 1.3.1 **Table 1.1** provides a summary of the consultation responses provided by consultees to the planning application for the landside works. These are considered to be pertinent to the traffic and transport parameters of the proposed scheme. **Table 1.1** details how this TS has been developed in response to the comments received on the landside application.

- 1.3.2 This TS has been created in accordance with the landside application consultation dialogue. The consultee responses have been considered in the proposed scheme.

Table 1.1: Summary of comments received on the landside proposals

Consultee	Consultee response	TS reference
RCBC Transport Officer 17 th July 2020	<i>"The Teesdale Way historic trail runs along the opposite side of the railway line along the southern boundary of the site. This should not be affected by the proposed works. There are no PROW objections."</i>	Section 4 details the proposed scheme including the associated construction traffic. The proposed scheme does not affect the Teesdale Way historic trail.
Highways England 7 th August 2020	Recommended that planning permission should not be granted for a specific period (a holding objection): <i>"To ensure that the A174 & A1053 Trunk Roads continue to serve their purpose as part of a national system of routes for through traffic in accordance with Section 10(2) of the Highways Act 1980 by minimising disruption on the trunk road network and in the interests of road safety. The recommendation shall be maintained until 7 November 2020 or until sufficient information has been received to enable Highways England to reach an alternative view at which point a further notice will be issued."</i>	Section 4 details the proposed scheme including the associated construction traffic. There are no significant impacts upon the A174 and A1053.
Network Rail 19 th August 2020	<i>"Network Rail would be keen to ensure that there was no impact on railway assets from construction traffic associated with the site. Any Environmental Impact Assessment should include details of the haulage routes in the Transport Assessment and a traffic management plan associated with the marine construction works"</i>	Section 4 details the proposed scheme including the associated construction traffic. There are no impacts predicted on the railway assets as a result of the proposed scheme.

1.4 Report structure

- 1.4.1 This TS details the transport context of the existing site and provides a summary of the forecast construction traffic on the local highway network.
- 1.4.2 Following this introduction, the TS is structured as follows:
- **Section 2** provides a summary of the relevant national and local policy guidelines, specific to the proposed scheme;

- **Section 3** describes the existing transport situation at and in the vicinity of the existing site, including details of sustainable transport provision and road safety;
- **Section 4** outlines the construction vehicular traffic generation from the proposed scheme; and
- **Section 5** provides a summary and conclusion.

2 Planning context

2.1 Introduction

2.1.1 There are a number of overarching national and local items of policy and guidance applicable to the proposed scheme. The following subsections focus on key policy and guidance pertinent to the proposed scheme.

2.2 National planning policy

National Planning Policy Framework

2.2.1 The National Planning Policy Framework (NPPF) was published in March 2012 by the Ministry of Housing, Communities and Local Government and is the primary source of national planning guidance in England. The NPPF was last updated in June 2019.

2.2.2 The NPPF contains the Government's strategies for economic, social and environmental planning policies in England and it is designed to be a single, tightly focused document.

2.2.3 **Table 2.1** provides details of the relevant transport policies contained within the NPPF.

Table 2.1: Relevant NPPF Policies

NPPF Reference	Policy Requirements	TS Reference
Chapter 9 – Promoting Sustainable Transport	Paragraph 109: <i>“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”</i>	Section 3 details the existing highway network including road safety. Section 4 details the proposed scheme's construction traffic demand.
	Paragraph 111: <i>“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”</i>	Section 4 details the proposed scheme's construction traffic demand.

2.3 Local planning policy

2.3.1 The development's proposals fall under the jurisdiction of Redcar and Cleveland Borough Council and Middlesbrough Council. The local planning documents relevant to the proposed scheme are:

- Redcar and Cleveland Local Plan;
- Redcar and Cleveland Local Transport Plan (LTP 3);
- Redcar and Cleveland South Tees Area Supplementary Planning Document (SPD); and
- Middlesbrough Local Plan.

Redcar and Cleveland Local Plan

2.3.2 The Redcar and Cleveland Local Plan adopted in May 2018 is a statutory document that sets out

the vision and overall development strategy for the borough and how it will be achieved for the period until 2032. The Plan provides the policy framework to meet these challenges and to deliver sustainable development across the borough.

Redcar and Cleveland Local Transport Plan 3 (LTP3)

- 2.3.3 The Redcar and Cleveland Local Transport Plan 3 (LTP3), was submitted in March 2011 to the Department for Transport (DfT). The LTP was developed in partnership with key stakeholders and neighbouring authorities to reflect the external factors that are affecting service delivery. A timescale of 2021 was adopted for the long-term transport strategy.

Redcar and Cleveland South Tees Area Supplementary Planning Document (SPD)

- 2.3.4 The Supplementary Planning Document (SPD), adopted in May 2018 was prepared to support the adopted planning policies to guide and inform future planning applications that will support both the expansion of existing business operators and future employment opportunities who wish to locate to the South Tees Area.

Middlesbrough Local Plan

- 2.3.5 The Local Plan is a series of development plan documents that set policies and proposals for the use of land in Middlesbrough. It includes the Housing Local Plan, a Core Strategy, and Regeneration DPD.
- 2.3.6 The Council is currently preparing a new Local Plan for Middlesbrough. The new Local Plan will set out a vision for the future development of Middlesbrough in relation to housing, the economy, the environment, community facilities and infrastructure, up to 2037. The new Local Plan, when adopted, will replace the existing planning policy documents, and provide a basis for determining planning applications within Middlesbrough. The council consulted on its publication Local Plan in 2018 and this TS considers the publication as the appropriate local plan.
- 2.3.7 **Table 2.2** provides details of the local planning policy documents and the policies contained within which are relevant to the parameters of the proposed scheme.

Table 2.2: Relevant local planning policies

Policy reference	Policy requirements	TS consideration
Redcar and Cleveland Local Plan (May 2018)		
Policy TA1 – Transport and New Development	<p>The Council and its partners will ensure that the transport requirements of new development, commensurate to the scale and type of development, are taken into account and seek to promote sustainable travel to minimise environmental impacts and support residents' health and wellbeing.</p> <p>Applicants will need to demonstrate that existing or proposed public transport services can accommodate development proposals, or, where appropriate, demonstrate how public transport improvements will be delivered.</p>	Section 4 details the proposed scheme's construction traffic demand.

Policy reference	Policy requirements	TS consideration
Middlesbrough Publication Local Plan (October 2018)		
Policy INFRA 1 – Integrated Transport Strategy	<p>A 21st century sustainable transport network will reduce the need for and dependency on car borne travel by improving non car connectivity within and beyond Middlesbrough.</p> <p>This would be achieved by enhancing and extending the accessibility to, and quality of, a safe pedestrian and cycle network (including Public Rights of Way) by Ensuring development proposals provide high quality access and integration into strategic routes together with appropriate storage facilities.</p>	Section 3 details the existing highway network including an audit of the sustainable transport infrastructure.
Policy DM1 – General Development Principles	<p>When assessing the suitability of development, it will be permitted where it:</p> <ul style="list-style-type: none"> • Will not adversely impact on highway safety or lead to unacceptable provision of car parking; • Achieves accessibility by a choice of sustainable transport modes. 	<p>Section 3 details the existing highway network including a review of road safety and car parking.</p> <p>Section 4 details the proposed scheme's traffic generation for construction.</p>

2.4 Planning guidance

Planning Practice Guidance (PPG)

2.4.1 Planning Practice Guidance (PPG) 'Travel Plans, Transport Assessment and Statements' (henceforth referred to as the Transport PPG) sets out the key principles to be adopted when developing a TS as follows:

- Proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- Established at the earliest practicable possible stage of a development proposal;
- Be tailored to particular local circumstances (other locally determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally); and
- Be brought forward through collaborative ongoing working between the Local Planning Authority / transport authority, transport operators, rail network operators, Highways Agency (now Highways England) where there may be implications for the strategic road network and other relevant bodies.

2.4.2 The Transport PPG principles have shaped the development of this TS and can be seen throughout the document.

3 Baseline conditions

3.1 Introduction

3.1.1 This section of the report sets out the context of the existing site, in relation to the local transport infrastructure and accessibility.

3.2 Local highway context

3.2.1 The proposed scheme footprint is located within the STDC area, a part of the South Industrial Zone. The landside parts of the proposed scheme are located on the south bank of the River Tees, approximately 7km to the west of Redcar town centre and 5km to the east of Middlesbrough town centre.

3.2.2 Vehicular access to the proposed scheme footprint is currently provided from Tees Dock Road and Dockside Road, existing access roads to the east and west of the proposed scheme respectively.

3.2.3 Tees Dock Road is predominantly a single-lane single carriageway that runs south from the west of the site to its roundabout with the A1053. The road is subject to the National Speed Limit until its approach to the access gate where it is subject to a 30mph speed limit. A continuous footway on the left side of the road are present along the road. There is no street lighting along the road.

3.2.4 The A1053 is a two-way dual carriageway road to the south of its roundabout with the A66 to its roundabout with the A174 within proximity of the proposed scheme footprint and is subject to the National Speed Limit. Street lighting is present along the entirety of the road whilst a continuous footway and cycleway is present along the length of the road between the A66 and the A1085. .

3.2.5 Dockside Road is a single carriageway road that runs east from The Leeway (within proximity of the Riverside Stadium) through its roundabouts with Works Road and Old Station Road to its roundabout with Smith's Dock Road. The majority of the road is subject to a 50mph speed limit with the exception of the approaches to Old Station Road and Smith's Dock Road which are subject to a 30mph speed limit. Street lighting and a continuous footway on the northern side of the road are present along the road.

3.2.6 Similarly, Old Station Road is a single carriageway road that runs south of its roundabout with Dockside Road to its roundabout with the A66. The road is subject to a 30mph speed limit with street lighting, and continuous footways present along the road.

3.2.7 The A66 is a two-way dual carriageway road that east of its junction with the A171 to its roundabout with the A1053 within proximity of the site and is subject to a 50mph speed limit. Street lighting is present along the length of the road.

Baseline traffic flows

3.2.8 Due to the COVID-19 pandemic, it was not possible to obtain representative baseline survey data from new traffic counts. To establish the baseline traffic flows, the following data sources have therefore been utilised:

- Annual Average Daily Flows (AADF) data from Department for Transport (DfT) traffic counts¹; and
- 2016 Manual Classified Counts (MCC) data (07:00 to 10:00 and 15:00 to 18:00) publicly available online for the planning application for the new roundabout at Smith's Dock Road²

3.2.9 Growth factors extracted from the Trip End Model Presentation Program (TEMPro) v7.2 have been used to factor up the MCC 2016 baseline traffic counts to a 2018 base year to correlate with the date of the DfT traffic counts. The factors used were for a car driver on an average day based on the National Transport Model (NTM) AF15 dataset for all urban roads in Middlesbrough and Redcar and Cleveland.

3.2.10 **Table 3.1** details the baseline traffic flows for the local highway network.

Table 3.1: Baseline traffic flows

Road	Source	2018 AADF	
		All vehicles	HGVs
Tees Dock Road	2018 DfT (7490)	4,830	1,486
Old Station Road	MCC Data*	5,013	795
Dockside Road	MCC Data*	5,446	776
A66 (East)	2018 DfT (8673)	47,977	3,763
A66 (West)	2018 DfT (9799)	22,383	2,999
A1053	2018 DfT (48684)	22,378	1,736

* MCC Data converted to AADF based on factors derived from the traffic profile of the A66.

3.3 Accessibility

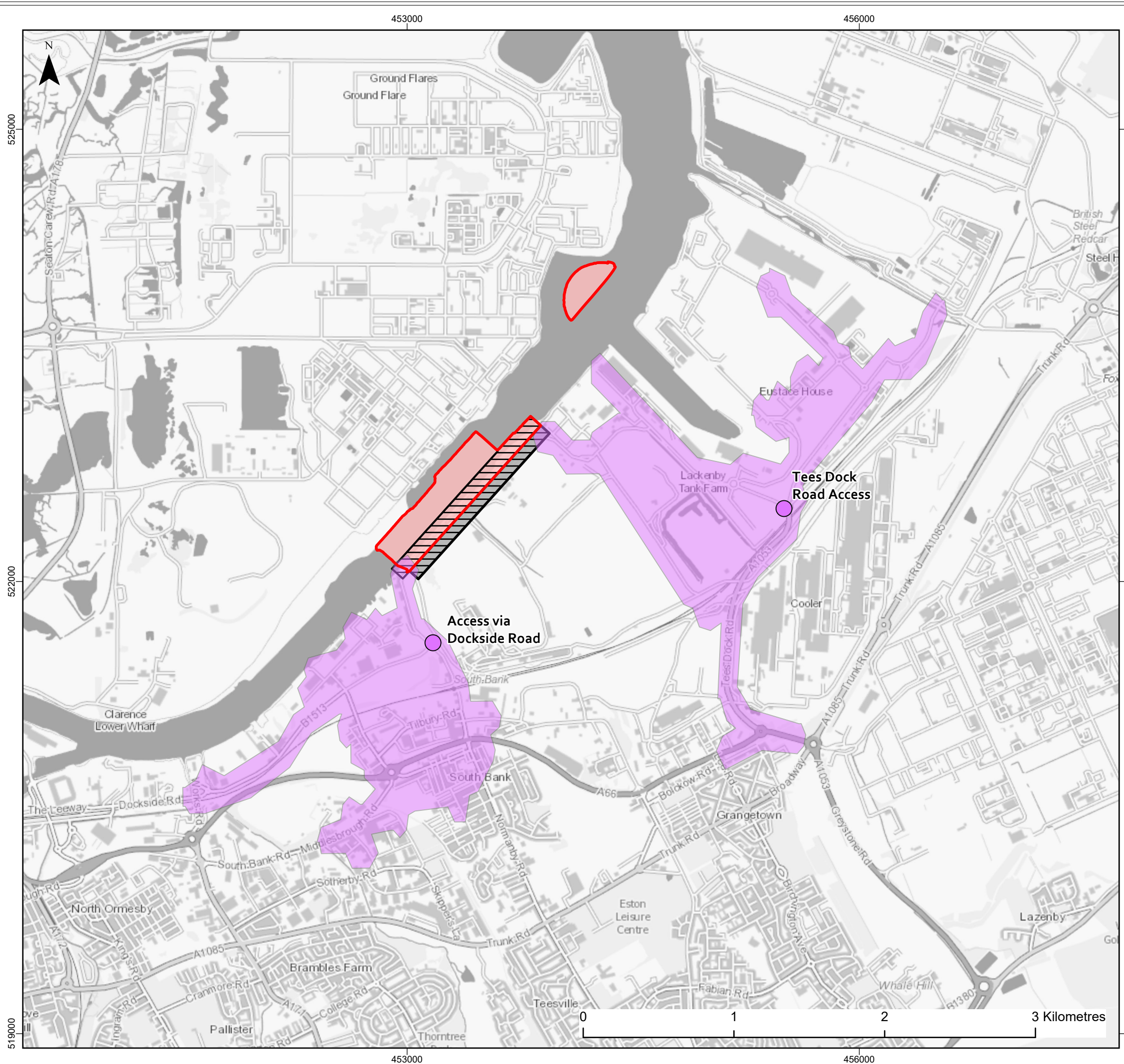
Accessibility by walking

3.3.1 The Chartered Institution of Highways and Transportation (CIHT) document 'Guidelines for Providing for Journeys on Foot', notes that an average walking speed of three miles per hour could be assumed. By this measure, in 15 minutes, a pedestrian could walk approximately 1,200 metres (m) (1.2km) and in 25 minutes, up to 2,000m (2km). **Figure 2** depicts the 2km walking cordon to the proposed scheme footprint.

3.3.2 Adopting the 2km parameter (shown in **Figure 2**), the northern region of South Bank is walkable from the proposed scheme. Within this cordon it is possible to walk to a bus stop, a rail station and local amenities.

¹ AADF values based on 2018 DfT data, source: <https://roadtraffic.dft.gov.uk/#16/53.4416/-2.9969/basemap-countpoints>

² Planning ref R/2017/0788/FF: <https://planning.redcar-cleveland.gov.uk/Planning/Display?applicationNumber=R%2F2017%2F0788%2FFF>



Legend

- Proposed Dredge and Excavation Envelope (including side slopes)
- Proposed Quay Envelope
- Proposed Demolition Area
- 2km Walking Cordon
- Road Access Point

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Title:
Walking Catchment

Figure: 2

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Accessibility by cycling

- 3.3.3 The CIHT guidance 'Cycle Friendly Infrastructure, Guidelines for Planning and Design' states that three quarters of journeys by all modes are 8km (less than 5 miles) and that this distance could be cycled comfortably by a fit person. This distance corresponds to an approximate 25-minute travel time. It is concluded therefore, that 8km represents a maximum realistic range for cycling trips. **Figure 3** depicts the 8km cycling cordon of the site.
- 3.3.4 Adopting the 8km parameter (shown in **Figure 3**), the majority of Middlesbrough is within comfortable cycling distance. In addition, the north western region of Redcar and Cleveland are also within commutable cycling distance.

Accessibility by bus

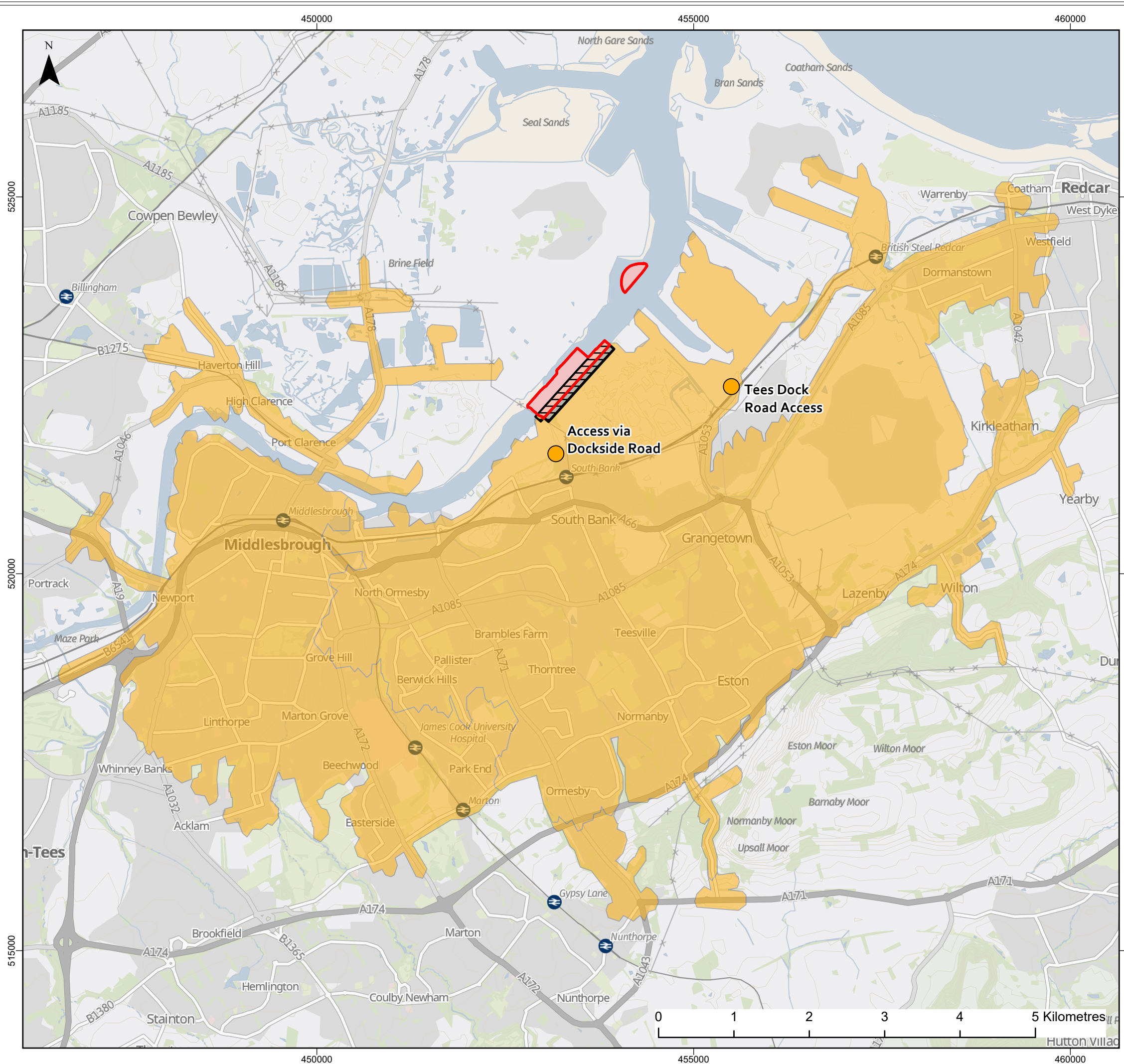
- 3.3.5 The nearest bus stops to the proposed scheme footprint are the South Bank King George's Square bus stops located on the Normanby Road, an approximate walking distance of 800m from the Smith's Dock Road access. A summary of the bus services accessible from the nearby bus stops, including approximate service frequencies, is provided in **Table 3.2**.

Table 3.2: Summary of bus services and approximate daytime frequencies

Service	Route	Approximate daytime frequency								
		Monday - Friday			Saturday			Sunday		
		First	Freq	Last	First	Freq	Last	First	Freq	Last
64	Grangetown (Teesside) - Middlesbrough	05:45	30 mins	18:49	05:45	30 mins	18:49	No service		
64	Middlesbrough - Grangetown (Teesside)	06:37	30 mins	17:34	08:30	30 mins	18:20			
64A	Middlesbrough - Grangetown (Teesside)	07:10	30 mins	23:00	08:10	30 mins	23:00	09:47	60 mins	18:47
64A	Grangetown (Teesside) - Middlesbrough	07:34	30 mins	22:33	07:24	30 mins	22:33	11:24	60 mins	19:24
64B	Lazenby - Middlesbrough Bus Station	06:26	30 mins	06:56	06:26	30 mins	06:56	No service		

Accessibility by rail

- 3.3.6 The CIHT document "Planning for Walking" states that "People will walk up to 800 metres to get to a railway station, which reflects the greater perceived quality or importance of rail services".



Legend

- Proposed Dredge and Excavation Envelope (including side slopes)
- Proposed Quay Envelope
- Proposed Demolition Area
- 8km Cycling Cordon
- Road Access Point

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Title:

Cycling Catchment

Figure: 3

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3.3.7 South Bank railway station is approximately 380m from the Smith's Dock Road access. The station is managed by Northern Trains, a major franchise serving the North of England. Hourly services are provided by the station throughout the day from Monday to Sunday. These services provide links to Middlesbrough, and Redcar Central. Middlesbrough and Redcar Central provide wider connections on a national and city level.

Summary of accessibility

3.3.8 It is demonstrated that the existing scheme footprint benefits from a level of pedestrian and cycle accessibility, as well as bus and rail services which could facilitate connections to the wider area.

3.3.9 However, due to the relatively remote location of the scheme footprint and the nature of the construction activities, it is envisaged that sustainable transport would not be a prominent mode of transport to the site. Typical of a construction workforce, it is envisaged that employees would choose to travel to the site by car.

3.4 Road safety

3.4.1 In order to establish whether there are any inherent safety issues on the highway network within the immediate vicinity of the existing site, personal injury collision data from CrashMap³ for the most recent five-year period available (January 2014 to September 2018) has been reviewed. **Table 3.3** provides a summary of the types of collisions identified within the study area.

Table 3.3: Summary of collisions identified

Location*	Collisions				Summary of collisions
	Slight	Serious	Fatal	Total	
A66 / A171 Roundabout	17	0	0	17	Within the last five years there have been 17 collisions. Of the 17 slight collisions, seven occurred on the A66 approaches to the roundabout. A potential pattern of collisions on the A66 approaches to the roundabout is identified.
A66 between A171 roundabout and B1513 roundabout	2	0	0	2	Within the last five years there have been two collisions. There is no pattern to the location of these collisions.
A66 / B1513 Roundabout	7	0	0	7	Within the last five years there have been seven collisions. As the collisions are spread across the roundabout, there is no pattern to the location of these collisions.
A66 between B1513 roundabout and Normanby Road junction	1	0	0	1	Within the last five years there has been one collision.
A66 / Normanby Road Junction	7	2	0	9	Within the last five years there have been nine collisions of which seven were slight and two were serious. All the collisions occurred at the crossroad junction, hence a potential pattern of collisions at the junction is identified.
A66 between Normanby Road junction and Eston	2	0	0	2	Within the last five years there have been two collisions. There is no pattern to the location of these collisions.

³ Source: CrashMap website: www.crashmap.co.uk/

Location*	Collisions				Summary of collisions
	Slight	Serious	Fatal	Total	
Road junction					
A66 / Eston Road Junction	3	2	0	5	Within the last five years there have been five collisions of which three were slight and two were serious. All the collisions occurred at the crossroad junction, hence a potential pattern of collisions at the junction is identified.
A66 between Eston Road junction and A1053 roundabout	0	0	0	0	No collisions identified.
A66 / A1053 Roundabout	1	0	0	1	Within the last five years there has been one collision.
A1053 between A66 roundabout and A1085 roundabout	1	0	0	1	Within the last five years there has been one collision.
A1053 / A1085 Roundabout	3	0	0	3	Within the last five years there have been three collisions. There is no pattern to the location of these collisions.
Tees Dock Road	0	1	0	1	Within the last five years there has been one collision.
Smith's Dock Road	0	0	0	0	No collisions identified.
Dockside Road	0	0	0	0	No collisions identified.
Old Station Road	0	0	0	0	No collisions identified.

*Includes a 50m buffer for junctions

3.4.2 **Table 3.3** identifies that there are no potential road safety issues on all roads and junctions within the immediate vicinity of the existing scheme footprint accesses. There are four potential clusters of collisions at junctions along the A66 which are typical of the nature of the locations.

3.4.3 In order to inform a judgement regarding potential impact significance of these clusters **Section 4** outlines the proposed additional construction traffic movements.

4 Construction traffic demand

4.1 Introduction

- 4.1.1 This section of this TS provides an overview of the construction phase of the proposed scheme. The construction programme is set out in **Appendix A**.

4.2 Description of construction activities

Demolition

- 4.2.1 The site of the proposed scheme is currently occupied by a dilapidated wharf approximately 750m in length, two jetties immediately downstream, a further jetty at the extreme downstream end of the proposed scheme footprint and various buildings and structures on the riverbank and the adjacent hinterland (including a live substation).
- 4.2.2 Demolition works to be undertaken as part of the proposed scheme which is the subject of this TS are limited to the dilapidated wharf, the three jetties, a live electrical substation on the hinterland and pipework which previously abstracted water from the Tees estuary associated with the pumping station. In addition, it has been assumed that underground utilities and pipework infrastructure would need to be grubbed out / excavated / diverted / capped as part of the demolition process prior to construction of the quay.
- 4.2.3 During demolition, best practice demolition techniques and working methods would be adopted to ensure that transport of debris into the Tees is minimised.

Quay construction

- 4.2.4 The proposed scheme requires the construction of a new solid piled quay structure. Although the useable surface of the quay itself would be up to 30m wide, the overall footprint of the quay would be up to 50m wide due to the proposals to construct an anchor structure further inland of the quay deck. The exact alignment of the quay is unknown at this stage and therefore for the purposes of assessment, a maximum quay envelope of 1,300m x 75m has been assessed.
- 4.2.5 It is proposed that land-based plant would predominantly be utilised for the quay construction.

Excavation of soils

- 4.2.6 There would be a requirement for the excavation of approximately 275,000m³ of existing soils behind the proposed combi-wall in order to install tie rods. Such material would be removed using long reach excavators. At this stage, it is envisaged that the excavated material could be re-used on site, avoiding the requirement for offsite disposal.
- 4.2.7 There is also a requirement to excavate soils/landside materials within the riverbank in order to create the berth pocket (as the berth line has been set approximately 90m inland from the edge of the channel). It is anticipated that such material would be excavated using standard long reach excavators working from the land. This material to be excavated is additional to that which is to be excavated behind the proposed combi-wall in order to install the tie rods to the anchor wall. The total volume of soils / landside materials to be excavated to create the berth pocket is

predicted to be 1,140,000m³ (440,000m³ during Phase 1 and 700,000m³ during Phase 2). It has been assumed that such material would be re-used either on site or within the wider STDC development footprint.

Site access, transportation of materials to site and parking

- 4.2.8 Given the proposals to utilise land-based plant for the proposed quay construction, it is envisaged that access to site for construction plant and personnel will be via Smiths Dock Road and / or Tees Dock Road.
- 4.2.9 All construction materials are predicted to be transported to site by road, with the exception of the following which are anticipated to arrive on site by vessel:
- steel required for piling – delivered using up to six vessels in Phase 1 and six vessels in Phase 2 (12 vessels in total);
 - rock required for the rock blanket in the berth pocket – delivered using up to six vessels in Phase 1 and seven vessels in Phase 2 (13 vessels in total); and,
 - tie rods – delivered using up to one vessel per phase of development (two vessels in total).
- 4.2.10 It is anticipated that the vessels transporting the steel and tie rods would arrive to site by sea, with vessels likely to berth in Tees Dock or at a suitable berth along the river channel. The piles and tie rods would then be offloaded onto HGVs and transported to site using the existing road network. Rock for the rock blanket is anticipated to be placed directly into position on the riverbed.
- 4.2.11 Based on the indicative construction phase costs and the construction phase programme, it is anticipated that a peak of approximately 110 employees would be required to construct the proposed scheme. It is envisaged that the employees would adopt a 24-hour working pattern. Of the 110 employees, 10 would be associated with offshore dredging and would therefore not travel to the site.
- 4.2.12 Within the site, there are sufficient areas of hardstanding which could be utilised as employee parking areas.

4.3 Construction traffic generation

- 4.3.1 The construction traffic generation that has informed this TS has been derived by way of a 'first principles' approach. The first principles approach generates traffic volumes from an understanding of construction material quantities and personnel numbers.
- 4.3.2 **Table 4.1** summarises the predicted material quantities (for those materials to be delivered by road) and associated number of HGVs deliveries and two-way movements envisaged to be required during the construction phase.



Table 4.1: HGV movements associated with the construction phase

Key item	Duration (weeks)	Duration (months)	Tonnage	HGVs*	2021			2022												2023			
					Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Marine demolition																							
Demolition of tarmac and dolphin jetties	8	2	3,584	179	90	90																	
Demolition of South Bank Wharf (Phase 1)	12	3	7,872	394			131	131	131														
Demolition of South Bank Wharf (Phase 2)	30	7.5	23,616	1,181					157	157	157	157	157	157	157	157							
Quay wall																							
King piles and spigot piles	26	6.5	17,443	623		96	96	96	96	96	96	96											
Sheet piles	24	6	1,733	62			10	10	10	10	10	10											
Anchor piles	24	6	3,704	132				22	22	22	22	22	22										
Surfacing	20	5	31,392	1570									314	314	314	314	314						
Rock blanket	6	1.5	Import by sea																	0	0		
Dredging																							
Dredging	20	4	By sea											0	0	0	0						
Total deliveries per month					90	185	237	259	417	286	286	286	493	471	471	471	314	0	0	0	0	0	
Total deliveries per day (assume 24 days per month)					4	8	10	11	17	12	12	12	21	20	20	20	13	0	0	0	0	0	
Total two-way movements per day					7	15	20	22	35	24	24	24	42	39	39	39	26	0	0	0	0	0	
*Assumes an HGV capacity of 20t																							

- 4.3.3 It can be seen from **Table 4.1** that there would be a peak of 21 HGV deliveries per day (42 two-way movements).
- 4.3.4 With regards to construction staff, in order to consider a worst-case scenario, no car sharing or use of sustainable transport has been considered for staff movements. On this basis, the 100 staff working onshore would equate to 200 two-way movements daily (100 arrivals and 100 departures).
- 4.3.5 The shift pattern cannot be informed by early contractor involvement as the procurement process has not commenced at this stage. Taking into consideration the 24-hour working period, this TS adopts a conservative assumption of a two-shift pattern which would translate to 100 two-way movements during a shift change over period (50 arrivals and 50 departures).

4.4 Construction traffic distribution

- 4.4.1 The supply chain for materials and workforce cannot be informed by early contractor involvement as the procurement process has not commenced at this stage. Taking into consideration the connectivity of Dockside Road and Tees Dock Road to the wider highway network, there are a number of suitable routes for the contractor to choose from. On this basis, it is envisaged that the construction traffic distribution would be similar to that of the background flows. **Table 4.2** details the background flows and the potential distribution for the construction traffic.

Table 4.2: Background flows and distribution

Description	2018 Base AADF	Distribution A*	Distribution B**	Distribution C***	Maximum distribution per link
Tees Dock Road	4,830	100%	0%	0%	100%
Old Station Road	5,013	100%	0%	0%	100%
Dockside Road	5,446	100%	0%	0%	100%
A66 (East)	47,977	0%	68%	0%	68%
A66 (West)	22,383	0%	32%	50%	50%
A1053	22,378	0%	0%	50%	50%

* Distribution A, assumes all employees go to one access (either Smiths Dock Rd or Tees Dock Road).

** Distribution B, distributes Dockside Road traffic, A66 (E) and A66 (W) based on background flows.

*** Distribution C, distributes Tees Dock Road traffic, A66 (W) and A1053 roundabout based on background flows.

4.5 Summary of construction traffic demand

- 4.5.1 It is demonstrated that the peak period would generate an AADF of 242 vehicles including 42 HGVs.
- 4.5.2 Whilst it is proposed that works could occur over a 24 hour period, in order to consider a worst case for deliveries, it is assumed that HGV movements would occur between standard working hours, 07:00 to 17:30. Adopting an even profile for the deliveries between 07:00 and 17:30, the construction of the proposed scheme could result in a peak of four two-way HGV movements per hour.
- 4.5.3 Adopting a typical working pattern of two shifts in which all employees arrive prior to the start of a

shift and leave at the end of a shift, there could be an hourly peak of 50 car movements.

4.5.4 Based on **Table 4.2**, **Table 4.3** details the potential increase of traffic on each highway link as a result of the peak construction traffic.

Table 4.3: Percentage Increase

Description	2018 Base AADF	Construction AADF	Percentage Increase
Tees Dock Road	4,830	242	5%
Old Station Road	5,013	242	5%
Dockside Road	5,446	242	4%
A66 (East)	47,977	177	0%
A66 (West)	22,383	141	1%
A1053	22,378	141	1%

4.5.5 **Table 4.3** identifies that the construction of the proposed scheme could result an increase in background traffic flows of up to 5% on local roads and 1% on the wider A road network.

5 Summary and conclusion

5.1 Summary

- 5.1.1 This TS has been prepared by Royal HaskoningDHV on behalf of STDC in association with a planning application and marine licence application to construct a new quay at South Bank. The new quay would support its landside proposals for general industry and storage, or distribution uses within part of the South Industrial Zone.
- 5.1.2 Within the landside application, a TA and ES transport chapter were produced which focused on the operational traffic of that proposed development. The TA outlined that a CTMP would be produced to assess the construction impacts of the landside proposals.
- 5.1.3 The purpose of this TS is to quantify the potential impacts associated with the construction of a new quay at South Bank. It is envisaged that this information would then allow the CTMP for the landside works to include a detailed assessment of the potential for cumulative construction impacts.
- 5.1.4 A review of the existing baseline transport conditions has identified that the site is accessible by sustainable modes of transport. It is however, envisaged that sustainable transport would not be the primary mode of transport for the employees due to the nature of the workforce.
- 5.1.5 A review of the existing road safety conditions identified no local road safety issues. Four potential clusters of collisions at junctions along the A66, however these collision clusters are typical for these kinds of locations. It is envisaged that an increase in traffic of up to 1% on the A66 would not have a significant impact on the road safety.
- 5.1.6 An assessment of vehicular traffic generation associated with the construction of the proposed scheme has demonstrated that during the development's peak construction phase, the scheme could generate a peak of up to four two-way HGV movements per hour and up to 100 car movements per hour between the shift change period.
- 5.1.7 The construction of the proposed scheme could result an increase in background traffic flows of up to 5% on local roads and 1% on the wider A road network.

5.2 Conclusion

- 5.2.1 It is concluded that the forecast demand associated with the proposed scheme would have an indiscernible impact upon the transport network.
- 5.2.2 In accordance with the NPPF, it has been demonstrated that the proposed scheme would not have a "severe" impact and should not be refused planning permission on transport grounds.

6 References

Agilysis, 2020. Crashmap - UK Road Safety Map. [online] Crashmap.co.uk. Available at: <https://www.crashmap.co.uk/> [Accessed 16 September 2020].

Department for Transport, 2020. Map Road Traffic Statistics - Road Traffic Statistics. [online] Roadtraffic.dft.gov.uk. Available at: <https://roadtraffic.dft.gov.uk/#6/55.254/-5.284/basemap-regions-countpoints> [Accessed 16 September 2020].

Middlesbrough Council, 2018. Local Plan. Middlesbrough: Middlesbrough Council.

Ministry of Housing, Communities & Local Government, 2014. Travel Plans, Transport Assessments and Statements. [online] GOV.UK. Available at: <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements> [Accessed 16 September 2020].

Ministry of Housing, Communities and Local Government, 2019. National Planning Policy Framework. London: Ministry of Housing, Communities and Local Government.

Redcar & Cleveland Borough Council, 2018. South Tees Area Supplementary Planning Document (SPD). Redcar & Cleveland: Redcar & Cleveland Borough Council.

Redcar and Cleveland Borough Council, 2011. Local Transport Plan (LTP3) 2011 - 2021. Redcar and Cleveland: Redcar and Cleveland Borough Council.

Redcar and Cleveland Borough Council, 2018. Local Plan. Redcar and Cleveland: Redcar and Cleveland Borough Council.