



Morven Hawthorn Pit Grid Connection Project

Preliminary Environmental Information Report

Volume 3, Annex 5.1: Description of network links
and sensitivity

MVCNS-J4029-WSP-00037
October 2026
B01

Document status

Version	Purpose of document	Authored by	Checked by	Approved by	Date
B01	PEIR	CW	GH	LS	October 2026

Prepared by:	Prepared for:
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Glossary

Term	Meaning
Marine Directorate Licensing Operations Team (MD-LOT)	The part of the Scottish Government's Marine Directorate responsible for assessing and administering applications for marine licences for Scottish waters and Section 36 consent (offshore) in Scotland.
Marine Management Organisation (MMO)	The MMO, as a UK government body, is responsible for licensing, regulating and overseeing activities in the marine environment for English waters. For a DCO and deemed marine licence, the MMO acts as a statutory consultee, advising on marine planning, environmental impacts, habitats and compliance with marine licensing regulations.
Morven Hawthorn Pit Grid Connection Project (hereafter MHPGC Project)	"The MHPGC Project is comprised of the offshore export cables in Scottish and English waters from the Morven North or the Morven South offshore substation platform(s) (OSP), landfall, onshore export cables, the onshore land substation (LSS) and AC connection cables. Also referred to in this report as the MHPGC Project, for ease of reading.
MHPGC Project Scoping Opinions	Separate scoping opinions received from PINS (on behalf of the Secretary of State) and MD-LOT (on behalf of the Scottish Ministers) in response to the MHPGC Project Scoping Report. The MHPGC Project Scoping Opinions contain the range of issues that PINS, and MD-LOT in consultation with statutory stakeholders, have identified should be considered within the EIA process.
MHPGC Project Scoping Report	A Scoping Report for the MHPGC Project, scoping the likely significant effects of the project on the environment, was submitted and accepted by Planning Inspectorate (PINS) and submitted to the Scottish Ministers, via the Marine Directorate – Licensing Operations Team (MD-LOT) in February 2025.
MHPGC PEIR Red Line Boundary: Onshore	Spatial extent used to define the environmental assessment within the PEIR. The area within which all onshore components of the MHPGC Project will be located landward of MHWS, including areas required on a temporary basis during construction and/or decommissioning (e.g. construction compounds).
MHPGC Project Preliminary Environmental Information Report (PEIR)	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project and which helps to inform consultation responses.

Term	Meaning
Planning Inspectorate (PINS)	The PINS is an executive agency of the UK Government responsible for administering and examining DCO applications for NSIPs in England. PINS manages the application process, oversees consultation and examination, and makes a recommendation to the relevant Secretary of State on whether consent should be granted.

Acronyms

Unit	Meaning
DMRB	Design Manual for Roads and Bridges
EATM	Environmental Assessment of Traffic and Movement
EIA	Environmental Impact Assessment
HGV	Heavy Goods Vehicle
IEMA	Institute of Environmental Management and Assessment
MD-LOT	Marine Directorate Licensing Operations Team
MHPGC	Morven Hawthorn Pit Grid Connection
MMO	Marine Management Organisation
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
SoS	Secretary of State

Units

Unit	Meaning
m	Metre (distance)
mph	Miles per hour

Executive summary

This report presents the Description of Network Links and Sensitivity for the Morven Hawthorn Pit Grid Connection (MHPGC) Project and forms **Volume 3, Annex 5.1: Description of network links and sensitivity of the Preliminary Environmental Information Report (PEIR)**. It supports the assessment of traffic and transport impacts for the MHPGC Project by outlining key road network links within the Study Area and evaluating their sensitivity to growth in traffic through construction traffic relating to the MHPGC Project.

The document sets out the Study Area, which includes roads within (and in close proximity to) the MHPGC Project PEIR Red Line Boundary: Onshore and the wider criteria used to identify network links for assessment.

A total of 30 network links has been identified and assigned a sensitivity level, based on the susceptibility of users and receptors to changes in traffic, movement and accessibility. This has been undertaken in accordance with Environmental Assessment of Traffic and Movement (EATM) guidance published by the Institute of Environmental Management and Assessment (ISEP formerly IEMA) in 2023.

Links have been assigned a sensitivity score ranging from 'high' (reflecting high sensitivity to changes in traffic flows) to 'negligible' (reflecting only negligible sensitivity to changes in traffic flows).

This assessment is foundational for the traffic and transport baseline and informs the impact assessment in **Volume 3, Chapter 5: Traffic and Transport, of the PEIR**.

1 Introduction

1.1 Overview

- 1.1.1.1 This report presents the Description of Network Links and Sensitivity for the Morven Hawthorn Pit Grid Connection Project (hereafter 'the MHPGC Project'). It forms **Volume 3, Annex 5.1: Description of Network Links and Sensitivity, of the Preliminary Environmental Information Report (PEIR)** prepared for the MHPGC Project and supports **Volume 3, Chapter 5: Traffic and Transport, of the PEIR**.
- 1.1.1.2 The Description of Network Links and Sensitivity presents the key highway links within the Study Area and identifies their respective sensitivities in relation to the MHPGC Project.
- 1.1.1.3 The report is informed by the following technical chapters:
- **Volume 1, Chapter 2: Project Description, of the PEIR**

2 Methodology

2.1 Overview

- 2.1.1.1 The assessment of the Traffic & Transport environmental effects of the MHPGC Project considers the interaction between the magnitude of the impacts and the sensitivity of the receptors in the vicinity of the transport corridors. This requires an assessment of how construction flows could potentially impact on the baseline traffic flows.
- 2.1.1.2 The first stage in this assessment is to identify which traffic routes (and the links and key junctions along these) will be impacted by the growth in traffic from construction. The next stage is to assess how sensitive each of these links is to the increase in traffic. The Description of Network Links and Sensitivity present the findings of this analysis.

2.2 Study Area

- 2.2.1.1 The Study Area is shown in **Figure 3.1**. This represents the extent of the links/junctions that are likely to experience material change in traffic flows as a result of the MHPGC Project. This includes links that could be used for workforce and construction traffic (including Heavy Goods Vehicles (HGVs) and abnormal loads).
- 2.2.1.2 The Study Area has been determined through the application of the criteria below and shared with the Expert Working Group (EWG) for Traffic and Transport for comment and agreement.
- The road network within the MHPGC Project PEIR Red Line Boundary: Onshore;
 - A 500m buffer around the MHPGC Project PEIR Red Line Boundary: Onshore, in accordance with Design Manual for Roads and Bridges (DMRB) LA 112 guidance for Population and Human Health;
 - Strategic and local roads likely to experience a $\geq 30\%$ increase in traffic (or $\geq 10\%$ in sensitive areas), in line with Institute of Sustainability and Environment Professionals (ISEP formerly IEMA)) guidelines - including routes expected to carry HGVs and workforce vehicles accessing temporary construction compounds, laydown areas, or cable landing points.

2.3 Identification of network links and sensitivity

- 2.3.1.1 Network links represent distinct sections of the strategic and local roads identified within the Study Area. A total of 30 network links has been identified reflecting changes in character/land use, the layout, size and the use of the road. A single road may therefore be formed of multiple network links.
- 2.3.1.2 Details of the links included within this analysis are shown in **Table 3.1**. Each link description includes consideration of the following attributes:
- Link type;
 - Typical carriageway width;
 - Forward visibility;
 - Provision of footways;
 - Presence of street lighting;
 - On-street parking;
 - Posted speed limit;
 - Nature of frontage access.
- 2.3.1.3 In accordance with the Environmental Assessment of Traffic and Movement (EATM) guidelines published by ISEP (formerly IEMA) in 2023, each link has been assigned a sensitivity level. This is based on the susceptibility of users and receptors to changes in traffic, movement and accessibility. These include pedestrians, cyclists, equestrians, public transport users, local residents and businesses.
- 2.3.1.4 The assessment of the impact of traffic is dependent upon a wide range of factors, including the volume of traffic, traffic speeds and traffic composition (such as percentage of HGVs of total traffic). Additionally, the EATM guidance states that the perception of changes in traffic can vary according to factors such as:

- Existing traffic levels;
- The location of traffic movements;
- The time of day;
- Temporal and seasonal variation of traffic;
- Design and layout of the road and pavement;
- Crossing points;
- Landscape/townscape character, designated status, land use activities adjacent to the route;
- Ambient conditions of adjacent land uses.

2.3.1.5 Each link has been assigned a sensitivity score (ranging from 'high' to 'negligible' sensitivity). This assessment has been based on professional judgement and experience, guided by the ISEP guidelines. The criteria used in this assessment are set out in **Table 2.1**.

Table 2.1: Sensitivity criteria

Sensitivity	Definition
High	Links with a high sensitivity to changes in traffic flows. These include links within highly built-up areas; links with high levels of pedestrian, cyclist or other vulnerable road user activity (including routes with schools, colleges or playgrounds); narrow roads with high numbers of pedestrian/cycle users, but with narrow/no existing footway provision; links which are already subject to congestion, delay or stress; and links with accident blackspots.
Medium	Links with a medium sensitivity to changes in traffic flows. These include links with congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycleways, community centres, parks, recreation facilities, roads with accident rates close to the national average.
Low	Links with a low sensitivity to changes in traffic flows. These include those which are sufficiently distant from affected roads and junctions or where no receptors are present. Examples include places of worship, public open space, nature conservation areas, listed buildings, tourist attractions, urban/residential/built-up areas with good footway provision commensurate for its use.
Negligible	Links with negligible sensitivity to changes in traffic flows. These include routes with no sensitive receptors and very few land uses alongside them (or where these land uses have no direct access or sufficiently set back from the carriageway); links with no/very limited pedestrian/cyclist uses; and/or links which can easily accommodate changes in traffic flow with no impact on congestion, delay or stress.

2.3.1.6 Public Rights of Way (PRoW) have also been included where there is potential for routes to be impacted. Relevant elements within Table 3.11 of DMRB LA 112 Guidance has been used to establish sensitivity of the PRoW with regards to crossing roads, for the Severance and Fear and Intimidation categories of assessment. The criteria used are set out in **Table 2.2**.

Table 2.2: Environmental value (sensitivity) and descriptions

Receptor value (sensitivity)	Description for Walkers, Cyclists and Horse-riders (WCH)
Very high	Rights of way for WCH crossing roads at grade with >16,000 vehicles per day.
High	Rights of way for WCH crossing roads at grade with >8,000 to 16,000 vehicles per day.
Medium	Rights of way for WCH crossing roads at grade with >4,000 to 8,000 vehicles per day.
Low	Rights of way for WCH crossing roads at grade with ≤4000 vehicles per day.
Negligible	N/A.

2.3.1.7 Further details on the assessment method and how this supports the wider assessment of transport environmental impacts is provided in **Volume 3, Chapter 5: Traffic and Transport, of the PEIR**.

3 Baseline characterisation

3.1.1.1 The links are set out in **Table 3.1** and the location of each link is shown in **Figure 3.1**.

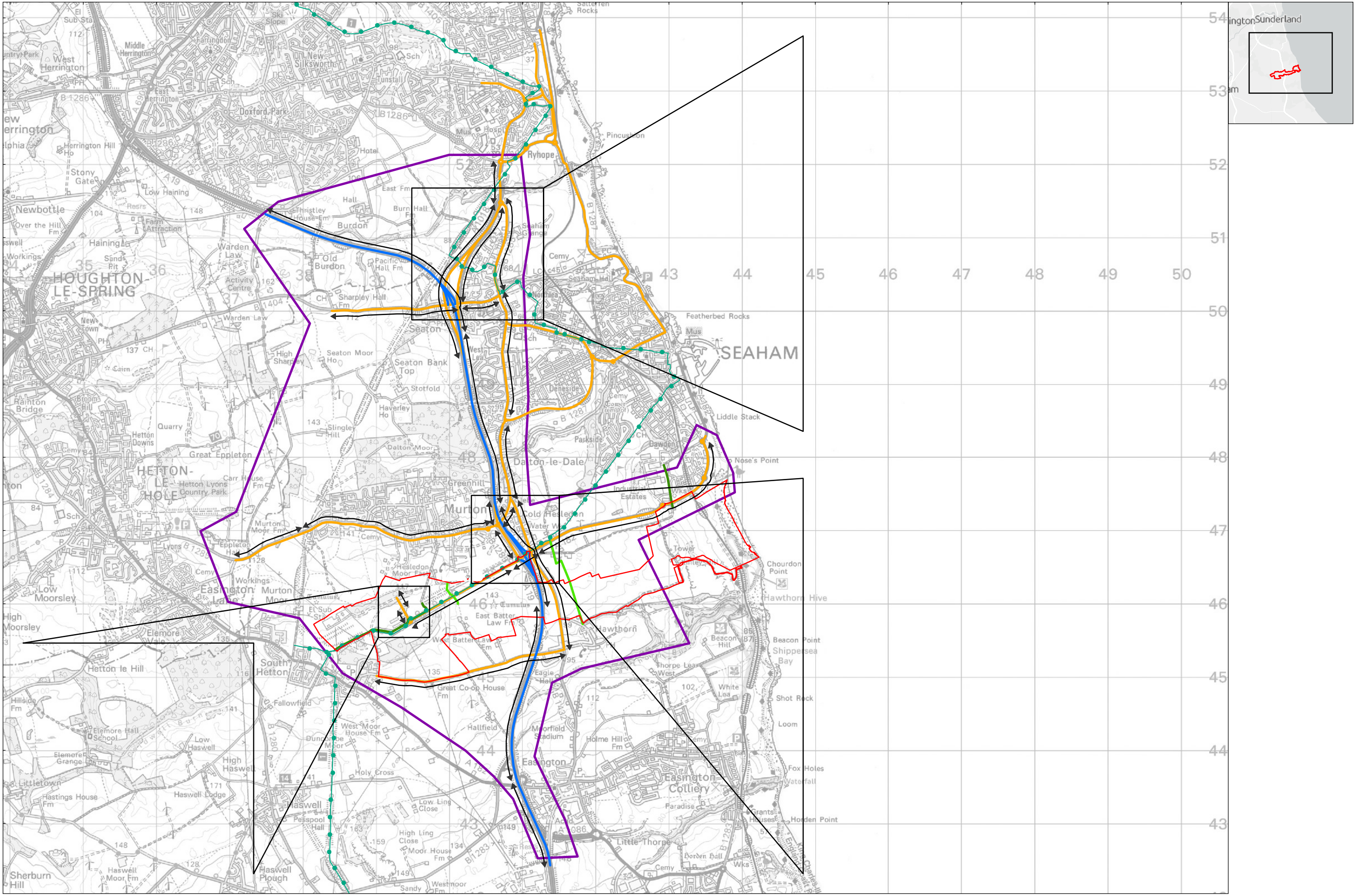


Table 3.1: Description of network links and sensitivity

Link reference	Description	Link type	Typical width (m)	Forward visibility	Footways	Street lighting	On-street parking	Speed limit (mph)	Frontage access	Sensitivity	Qualification
L1	A19: from Burdon Lane to Seaton Lane	Dual Carriageway Road	7.2m	Good	No (N)	N	N	70mph	N	Negligible	70mph dual carriageway with no frontage or pedestrian facilities.
L2	A19: from Seaton Lane to B1285	Dual Carriageway Road	7.2m	Good	N	N	N	70mph	N	Negligible	70mph dual carriageway with no frontage or pedestrian facilities.
L3	A19: from B1285 to A182	Dual Carriageway Road	7.0m	Good	N	Yes (Y)	N	70mph	N	Negligible	70mph dual carriageway with no frontage or pedestrian facilities.
L4	A19: from A182 to Hall Walks	Dual Carriageway Road	7.2m	Good	N	Y	N	70mph	N	Negligible	70mph dual carriageway with no frontage or pedestrian facilities.
L5	A19: from Hall Walks to the south	Dual Carriageway Road	8.0m	Good	N	Y	N	70mph	N	Negligible	70mph dual carriageway with no frontage or pedestrian facilities.
L6	A1018 Stockton Road: from St Benedict's Way roundabout to B1285 roundabout	Dual Carriageway Road	7.2m	Good	N	Y	N	50mph	N	Low	50mph dual carriageway distributor road with limited frontage, footway separated from highway and low likelihood of pedestrian activity.
L7	A1018 Stockton Road: from A19 to B1285 roundabout (northbound)	Dual Carriageway Road	7.2m	Good	N	N	N	50mph	N	Negligible	50mph distributor road with limited frontage, no footways.
L8	A1018 Stockton Road: from B1285 roundabout to A19 (southbound)	One-Way Single Carriageway Road	7.2m	Good	N	N	N	50mph	N	Negligible	50mph one-way strategic link road, with no frontage access, no footways.
L9	B1285 Stockton Road: from roundabout to Lord Byron's Walk	Single Carriageway Road	10.8m	Good	Y	Y	Y	40mph	Y	Medium	40mph single carriageway road, with frontage, footways, small section of cycleway and on-street parking.
L10	B1404 Seaton Lane: west of A19 slips	Single Carriageway Road	6.5m	Good	Y	Y	N	30mph	Y	Medium	Residential corridor with frontage and footways; medium sensitivity.
L11	B1404 Seaton Lane: east of A19 slips	Single Carriageway Road	9.2m	Good	Y	Y	Y	30mph	Y	Medium	Residential corridor with frontage and footways; medium sensitivity.
L12	Westlea Road (B1285): from Lord Byron's Walk to Graham Way roundabout	Single Carriageway Road	9.2m	Good	Y	Y	Y	30mph	Y	High	30mph residential street with direct frontage, parking and pedestrian activity.
L13	Westlea Road (B1285): from Graham Way roundabout to B1432 Stockton Road	Single Carriageway Road	6.5m	Good	N	N	N	40mph	Y	Low	Low density residential context with frontage.
L14	B1285 between Stockton Road junction and A19 slips signal junction	Single Carriageway Road southbound, dual Carriageway Road northbound	8.75m	Good	Y	Y	N	50mph	N	Low	Mixed-use corridor with footway.
L15	B1285 Church Street from B1285 (signal junction) to Briar Glen	Single Carriageway Road	6.5m	Good	Y	Y	Y	30mph	Y	High	30mph single carriageway road in residential setting with frontage, lighting and footways.
L16	B1285 Church Street: from Briar Glen to the west	Single Carriageway Road	9m	Good	Y	Y	N	60mph	Y	Low	60mph single carriageway road in rural/edge-of-settlement, with some frontage and footways.
L17	B1285: from B1285 Church Street to A182	Single Carriageway Road	9m	Good	Y	N	N	50mph	Y	Low	50mph semi-strategic single carriageway road with pedestrian routes.
L18	A182: from A19 roundabouts to the east	Single Carriageway Road	9.5m	Good	Y	Y	N	60/50mph (reduces to 40mph near junctions)	N	Low	50mph semi-strategic single carriageway road with limited frontage, footways, lighting and pedestrian presence.

Link reference	Description	Link type	Typical width (m)	Forward visibility	Footways	Street lighting	On-street parking	Speed limit (mph)	Frontage access	Sensitivity	Qualification
L19	A182: link road between A19 slips / B1285 Link Road	Dual Carriageway Road	14m	Good	Y	Y	N	50mph	N	Low	50mph single carriageway distributor link with lighting. Cycling and pedestrian facilities on a separated bridge.
L20	Access Road: from A182 to Jade Business Park	Single Carriageway Road	7.2m	Good	Y	Y	N	50mph	N	Low	50mph single carriageway employment access road with separated shared use path, limited lighting and no frontage.
L21	B1432 Stockton Road: from A182/B1285 junction to West Lane	Single Carriageway Road	7.2m	Good	Y	Y	N	60mph	Y	Low	60mph single carriageway with low density residential frontage and pedestrian facilities.
L22	West Lane	Single Carriageway Road	5.5m	Good	Y	Y	Y	30mph	Y	High	30mph narrow residential street with direct frontage, footways and parking
L23	A19 Slip	One-Way Single Carriageway Road	7.2m	Good	N	Y	N	70mph	N	Negligible	70mph, one-way strategic link; no frontage, no footways.
L24	Jade Access Road 1	Single Carriageway Road	7.2m	Good	Y	Y	N	30mph	N	Low	30mph employment access road. Footways and lighting.
L25	Jade Access Road 2	Single Carriageway Road	7.2m	Good	Y	Y	N	30mph	N	Low	30mph employment access road. Footways and lighting.
L26	Footpath 9 north and south of the A182	PRoW	N/A	N/A	N/A	N	N/A	N/A	N/A	High	PRoW where crossing road at grade with >8,000 to 16,000 vehicles a day
L27	Bridleway 16 north and south of the A182	PRoW	N/A	N/A	N/A	N	N/A	N/A	N/A	High	PRoW where crossing road at grade with >8,000 to 16,000 vehicles a day
L28	Footpath 28 crossing Jade Access Road	PRoW	N/A	N/A	N/A	N	N/A	N/A	N/A	Low	PRoW where crossing road at grade with <4,000 vehicles a day
L29	Bridleway 29 crossing of Jade Business Park entrance road in proximity of Jade Access Road	PRoW	2.6m	N/A	N/A	On some sections	N/A	N/A	N/A	Low	PRoW where crossing road at grade with <4,000 vehicles a day
L30	National Cycle Route 1: South Hetton to Ryhope crossing of Jade Business Park entrance road and in proximity of A182 link road between A19 slips / B1285 Link Road	Cycle Route	2.6m	N/A	N/A	On some sections	N/A	N/A	N/A	Low	PRoW where crossing road at grade with <4,000 vehicles a day

4 Summary

4.1.1.1 This assessment has identified 30 network links within the Study Area, with five of these assessed as having 'high' sensitivity and three as 'medium' sensitivity (see **Table 4.1**).

Table 4.1: Summary of total links by sensitivity

Sensitivity	Total links
High	5
Medium	3
Low	14
Negligible	8
Total	30 links

- 4.1.1.2 Three of the five 'high' sensitivity links typically feature high levels of pedestrian activity, often in residential areas or near schools, colleges, and playgrounds. Many have footways, direct frontage with residential or commercial properties, street lighting, and on-street parking and lower speed limits. Two of the five 'high' sensitivity links are PRow's, assigned with regards to crossing roads, for the Severance and Fear and Intimidation categories of assessment.
- 4.1.1.3 The three 'medium' sensitivity links generally have moderate levels of pedestrian activity in mixed-use areas like commercial districts or semi-residential roads.
- 4.1.1.4 The 14 'low' sensitivity links typically have limited pedestrian activity and are often semi-strategic or rural roads with fewer direct frontages and pedestrian presence.
- 4.1.1.5 Eight links have been identified as having 'negligible' sensitivity. These are sections of high-speed dual carriageway with good visibility, no sensitive receptors, very few land uses alongside them, and no pedestrian facilities. They are located along the A19, A19 slip and the A1018 Stockton Road linking into the A19.

5 References

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