

TRANSPORT AND WORKS ACT 1992
TRANSPORT AND WORKS (INQUIRIES PROCEDURES)
RULES 2004
NETWORK RAIL (LEEDS TO MICKLEFIELD
ENHANCEMENTS) ORDER

APPENDICES TO HIGHWAY DESIGN
PROOF OF EVIDENCE
OF
Ged Stamper

Document Reference	CD 7.09
Author	Ged Stamper
Date	06 February 2024

Contents

Appendix A – Aushorpe Lane Horizontal Alignment	1
Appendix B – Aushorpe Lane Vertical Alignment	2
Appendix C – Austhorpe Lane Forward Visibility	3
Appendix D – Highway Authority Agreement to Bridgeworks	7
Appendix E – Transport Assessment	9

Appendix A – Aushorpe Lane Horizontal Alignment

APPENDIX A: AUSTHORPE LANE HORIZONTAL ALIGNMENT

Design Element	Start chainage	End chainage	Element length (Metres)	Type	Radius	Desirable minimum	2 Steps Below Desirable Minimum	Notes (1)	Notes (2)
Horizontal design (existing)	0.000	21.938	21.938	Straight	N/A	N/A	N/A	Meets desirable minimum	
	21.938	88.639	66.701	Curve (Left)	90.000	520.000	90.000	Departure from 2 steps below desirable minimum with 7% super	
	88.639	121.880	33.241	Straight	N/A	N/A	0.080	Meets desirable minimum	
	121.880	184.262	62.382	Curve (Right)	70.000	520.000	90.000	Departure from 2 steps below desirable minimum with 7% super	
	184.262	192.792	8.530	Straight	N/A	N/A	N/A	Meets desirable minimum	
	192.792	243.772	50.980	Curve (Left)	75.000	520.000	90.000	Departure from 2 steps below desirable minimum with 7% super	
	243.772	304.829	61.057	Straight	N/A	N/A	N/A	Meets desirable minimum	

Design Element	Start chainage	End chainage	Element length (Metres)	Type	Radius	Desirable minimum	2 Steps Below Desirable Minimum	Notes (1)	Notes (2)
Horizontal design (proposed)	0.000	21.975	21.975	Straight	N/A	N/A	N/A		Existing
	21.975	89.477	67.502	Curve (Left)	90.000	520.000	90.000	Departure from 2 steps below desirable minimum with 7% super	Existing
	89.477	119.348	29.871	Straight	N/A	N/A	0.080		Existing
	119.348	165.047	45.699	Curve (Right)	90.000	520.000	90.000	Departure from 2 steps below desirable minimum with 7% super	TIE INTO EXISTING AT APPROX. CHAINAGE 0+143
	165.047	200.001	34.954	Straight	N/A	N/A	N/A		
	200.001	226.411	26.410	Curve (Right)	400.000	520.000	90.000	Complies with minimum radius with 2.5% super (no super proposed)	TIE INTO EXISTING AT APPROX. CHAINAGE 0+225
	226.411	264.059	37.648	Straight	N/A	N/A	N/A		Existing

Appendix B – Aushorpe Lane Vertical Alignment

APPENDIX B AUSTHORPE LANE – VERTICAL ALIGNMENT

Design Element	Start chainage	End chainage	Element length (Metres)	Type	Element value (gradient or K)	Desirable minimum	Permitted Relaxation	Notes (1)	Notes (2)
Vertical design (existing)	48.39	53.06	6.67	Hog curve	11.889	10.0	6.5	Meets desirable minimum	
	53.06	86.17	33.11	Grade	0.80%	6.00%	8.00%	Meets desirable minimum	
	86.17	131.56	45.39	Sag curve	14.0	9.0		Meets desirable minimum	
	131.56	157.92	26.36	Grade	2.50%	6.00%	8.00%	Meets desirable minimum	
	157.92	166.93	9.01	Sag curve	20.0	9.0		Meets desirable minimum	
	166.93	176.72	9.79	Grade	2.90%	6.00%	8.00%	Meets desirable minimum	
	176.72	197.22	20.50	Hog curve	2.63	10.0	6.5	Departure from standard	
	197.22	210.29	13.07	Sag curve	4.0	9.0		Departure from standard	
	210.29	221.45	11.16	Grade	1.80%	6.00%	8.00%	Meets desirable minimum	
	221.45	244.45	23.00	Sag curve	4.385	9.0		Departure from standard	
	244.45	254.10	9.65	Hog curve	1.449	10.0	6.5	Departure from standard	
	254.10	258.95	4.84	Grade	3.30%	6.00%	8.00%	Meets desirable minimum	

Design Element	Start chainage	End chainage	Element length (Metres)	Type	Element value (gradient or K)	Desirable minimum	Permitted Relaxation	Notes (1)	Notes (2)
Vertical design (proposed)	48.84	89.18	40.34	Grade	0.71%	6.00%	8.00%	Meets desirable minimum	Existing
	89.18	130.04	40.86	Sag curve	13.341	9.0		Meets desirable minimum	Existing
	130.04	140.65	10.61	Grade	2.35%	6.00%	8.00%	Meets desirable minimum	Existing
	140.65	155.46	14.81	Sag curve	9.0	9.0		Meets desirable minimum	Existing
	155.46	175.49	20.03	Grade	4.00%	6.00%	8.00%	Meets desirable minimum	TIE INTO EXISTING AT APPROX. CHANAGE 0+142
	175.49	191.49	16.000	Hog curve	2.0	10.0	6.5	Departure from standard	K=10 is not recommended for use in single carriageway roads
	191.49	212.15	20.66	Grade	4.00%	6.00%	8.00%	Meets desirable minimum	
	212.15	241.86	29.71	Sag curve	4.0	9.0		Departure from standard	TIE INTO EXISTING AT APPROX. CHANAGE 0+225
	241.86	243.42	1.56	Grade	3.40%	6.00%	8.00%	Meets desirable minimum	Existing
	243.42	253.07	9.65	Hog curve	1.449	10	6.5	Departure from standard	Existing
	253.07	260.33	7.26	Grade	3.24%	6.00%	8.00%	Meets desirable minimum	Existing

Appendix C – Austhorpe Lane Forward Visibility

APPENDIX C AUSTHORPE LANE – FORWARD VISIBILITY

Centreline Reference:	Austhorpe Lane Overbridge	Design Surface:	DC
Required Sight Distance:	70	Existing Surface:	
Eye Reference:	Austhorpe Lane Overbridge	Object Reference:	Austhorpe Lane Overbridge
Eye Interval:	10	Object Interval:	Not Used
Eye Offset:	-1.5	Object Offset:	-1.5
Eye Height:	1.05	Object Height:	0.25

Design Element	Eye chainage	Object chainage	Eye Level	Object Level	Desirable minimum	One step below desirable minimum	Sight distance achieved	Comment
Forward visibility, northbound (EXISTING)	50.000	120.000	77.636	76.195	70.000	50.000	70.000	Compliant
	60.000	130.000	76.973	76.389	70.000	50.000	70.000	Compliant
	70.000	140.000	76.931	76.645	70.000	50.000	70.000	Compliant
	80.000	150.000	76.861	76.881	70.000	50.000	70.000	Compliant
	90.000	160.000	76.815	77.112	70.000	50.000	70.000	Compliant
	100.000	170.000	76.801	77.380	70.000	50.000	70.000	Compliant
	110.000	180.000	76.854	77.642	70.000	50.000	70.000	Compliant
	120.000	190.000	76.985	77.634	70.000	50.000	61.970	Relaxation
	130.000	200.000	77.179	77.265	70.000	50.000	55.010	Relaxation
	140.000	210.000	77.435	76.986	70.000	50.000	49.520	Departure from standard
	150.000	220.000	77.671	76.799	70.000	50.000	47.760	Departure from standard
	160.000	230.000	77.902	76.735	70.000	50.000	70.000	Compliant
	170.000	240.000	78.170	76.863	70.000	50.000	70.000	Compliant

Centreline Reference:
Required Sight Distance:

Austhorpe Lane Overbridge
70

Design Surface:
Existing Surface:

DC

Eye Reference:
Eye Interval:
Eye Offset:
Eye Height:

Austhorpe Lane Overbridge
10
-1.5
1.05

Object Reference:
Object Interval:
Object Offset:
Object Height:

Austhorpe Lane Overbridge
Not Used
-1.5
0.26

Design Element	Eye chainage	Object chainage	Eye Level	Object Level	Desirable minimum	One step below desirable minimum	Sight distance achieved	Comment
Forward visibility, southbound (EXISTING)	250.000	180.000	77.935	77.854	70.000	50.000	70.000	Compliant
	240.000	170.000	77.844	77.326	70.000	50.000	67.950	Relaxation
	230.000	160.000	77.505	77.080	70.000	50.000	57.920	Relaxation
	220.000	150.000	77.567	76.850	70.000	50.000	47.830	Departure from standard
	210.000	140.000	77.712	76.598	70.000	50.000	37.840	Departure from standard
	200.000	130.000	78.011	76.311	70.000	50.000	27.460	Departure from standard
	190.000	120.000	78.432	76.107	70.000	50.000	17.690	Departure from standard
	180.000	110.000	78.444	75.992	70.000	50.000	21.410	Departure from standard
	170.000	100.000	78.116	75.966	70.000	50.000	70.000	Compliant
	160.000	90.000	77.870	75.975	70.000	50.000	70.000	Compliant
	150.000	80.000	77.640	76.056	70.000	50.000	70.000	Compliant
	140.000	70.000	77.388	76.158	70.000	50.000	70.000	Compliant
	130.000	60.000	77.101	76.261	70.000	50.000	70.000	Compliant

Centreline Reference:	Austhorpe Lane centreline	Design Surface:	Austhorpe Ln proposed triangles
Required Sight Distance:	70	Existing Surface:	
Eye Reference:	Austhorpe Lane centreline	Object Reference:	Austhorpe Lane centreline
Eye Interval:	10	Object Interval:	Not Used
Eye Offset:	-1.5	Object Offset:	-1.5
Eye Height:	1.05	Object Height:	0.26

Design Element	Eye chainage	Object chainage	Eye Level	Object Level	Desirable minimum	One step below desirable minimum	Sight distance achieved	Comment
Forward visibility, northbound (PROPOSED)	50.000	120.000	77.047	76.117	70.000	50.000	70.000	Compliant
	60.000	130.000	76.976	76.315	70.000	50.000	70.000	Compliant
	70.000	140.000	76.905	76.550	70.000	50.000	70.000	Compliant
	80.000	150.000	76.834	76.834	70.000	50.000	70.000	Compliant
	90.000	160.000	76.764	77.217	70.000	50.000	70.000	Compliant
	100.000	170.000	76.737	77.617	70.000	50.000	70.000	Compliant
	110.000	180.000	76.784	77.883	70.000	50.000	64.580	Relaxation
	120.000	190.000	76.907	77.573	70.000	50.000	64.790	Relaxation
	130.000	200.000	77.105	77.292	70.000	50.000	61.620	Relaxation
	140.000	210.000	77.340	77.245	70.000	50.000	59.070	Relaxation
	150.000	220.000	77.624	77.383	70.000	50.000	44.160	Departure from standard
	160.000	230.000	78.007	77.670	70.000	50.000	37.240	Departure from standard
	170.000	240.000	78.407	78.866	70.000	50.000	70.000	Compliant
	180.000	250.000	78.757	77.055	70.000	50.000	70.000	Compliant
	190.000	260.000	78.881	76.764	70.000	50.000	70.000	Compliant

Centreline Reference:
Required Sight Distance:

Austhorpe Lane centreline
70

Design Surface:
Existing Surface:

Austhorpe Ln proposed triangles

Eye Reference:
Eye Interval:
Eye Offset:
Eye Height:

Austhorpe Lane centreline
10
-1.5
1.05

Object Reference:
Object Interval:
Object Offset:
Object Height:

Austhorpe Lane centreline
Not Used
-1.5
0.26

Design Element	Eye chainage	Object chainage	Eye Level	Object Level	Desirable minimum	One step below desirable minimum	Sight distance achieved	Comment
Forward visibility, southbound (PROPOSED)	260.000	190.000	77.554	77.891	70.000	50.000	70.000	Compliant
	250.000	180.000	77.845	77.967	70.000	50.000	70.000	Compliant
	240.000	170.000	77.856	77.617	70.000	50.000	66.490	Relaxation
	230.000	160.000	77.485	77.217	70.000	50.000	55.740	Relaxation
	220.000	150.000	77.563	76.834	70.000	50.000	46.060	Departure from standard
	210.000	140.000	77.886	76.550	70.000	50.000	39.850	Departure from standard
	200.000	130.000	78.286	76.315	70.000	50.000	50.120	Relaxation
	190.000	120.000	78.681	76.117	70.000	50.000	45.060	Departure from standard
	180.000	110.000	78.757	75.994	70.000	50.000	42.460	Departure from standard
	170.000	100.000	78.407	75.947	70.000	50.000	68.100	Relaxation
	160.000	90.000	78.007	75.974	70.000	50.000	70.000	Compliant
	150.000	80.000	77.624	76.044	70.000	50.000	70.000	Compliant
	140.000	70.000	77.340	76.115	70.000	50.000	70.000	Compliant
	130.000	60.000	77.105	76.186	70.000	50.000	70.000	Compliant

Appendix D – Highway Authority Agreement to Bridgeworks

The Network Rail (Leeds to Micklefield Enhancements) Order

xx December 2023

Engineering and Design Proof of Evidence – Highways

APPENDIX B: NR/L2/CIV/003/F006: ROAD/HIGHWAY AUTHORITY AGREEMENT TO BRIDGEWORKS

NR/L2/CIV/003/F006, Issue 2, December 2018

NR/L2/CIV/003/F006: ROAD/HIGHWAY AUTHORITY AGREEMENT TO BRIDGEWORKS			
Document reference		Revision	Page ... of ...
GRIP Stage		Date	

Project Title	
Project Nr	
Location	
ELR	Mileage
Asset Nr	OS grid ref
RRD Reference Nr	Revision & date
DRRD Reference Nr	Revision & date
CR-T Reference Nr	Revision & date

PART 1: DETAILS

1.1 Brief description of existing conditions

1.2 Brief description of proposed Works

PART 2: PROPOSED DESIGN CRITERIA

Complete as applicable

2.1 Design loading

For Structural Assessment based strengthening Works

Full HA. units HB.

No provision made for abnormal loads.

For the Design of new components, use the Traffic Load Model as defined in the UK NA to BS EN 1991-2.

2.2 Other criteria

Design speed of road traffic: mph.

Standard of parapet containment:

Road/footpath layout: as shown on Drawing No.

This shall state the K values and the stopping sight distances that will be used in the producing the Design.

Road profile: as shown on Drawing No.

Specification for road surfacing

Page 1 of 2

NR/L2/CIV/003/F006, Issue 2, December 2018

NR/L2/CIV/003/F006: ROAD/HIGHWAY AUTHORITY AGREEMENT TO BRIDGEWORKS				
Document reference		Revision		Page ... of ...
GRIP Stage		Date		

PART 3: ACCEPTANCE ON BEHALF OF THE ROAD/HIGHWAY AUTHORITY

I confirm that the above proposals are acceptable to the Road/Highway Authority subject to the following amendments and comments.

I confirm that the Road/Highway Authority does/does not ~~delete as applicable~~ wish to contribute towards widening or other improvements to the Bridge in association with the proposed Works.

Signed	Title
Name (print)	Date
For (enter name of Road/Highway Authority)	

Appendix E – Transport Assessment

OFFICIAL



ON TRACK TO **BETTER**

Neville Hill Access Road

Transport Statement

ProjectWise Reference Number:

151666-TRA-E2-HUL4-CNT-W-LP-000172

Version: B01

Issue Date: 19/05/2023



Approval and Authorisation

	Name	Job Title	Signature
Prepared By:	Charlotte Cruthers	Graduate Consultant	
Checked By:	Mark Romanowski	Associate Director	
Approved By:	Steve Moss / Robert Beaumont	Associate Director / Associate Environmental Scientist	
Authorised By:	Daniel Ellis / Simon Winch	Project Manager / Network Rail Project Manager	

Document Identity and Metadata Information

This information is a mandatory requirement.

Document Category: **Report**

Applicable Project Stage(s): **GRIP 5**

Briefing Required: ☐

Security Classification: **OFFICIAL**

Document History

Version	Date	Modification	Originator
B01	19.05.23	First Issue	Charlotte Cruthers

Implementation

The latest version of this document shall supersede any previous versions.

Compliance

This document is mandated across the 'scope' detailed in section document identity, scope and metadata.

Specific authority not to comply with this document can be requested from the Approval Signatory using the Technical Query process found with the Common Data Environment (CDE).

Disclaimer

In issuing this document for its stated purpose, Network Rail make no warranties, expressed or implied that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

All references made within this document were considered correct at time of approval.

Supply

Copies of this document are available electronically via the Common Data Environment but shall be deemed uncontrolled once printed.

Table of Contents

1. INTRODUCTION.....	7
1.1 Purpose	7
1.2 Scope.....	7
2. DEFINITIONS, ABBREVIATIONS AND REFERENCED DOCUMENTS.....	7
2.1 Definitions	7
2.2 Referenced Documents	8
3. REPORT CONTENT	9
3.1 Introduction	9
3.2 Background.....	9
3.3 Policy Context.....	11
3.4 Existing Highway Conditions.....	13
3.5 Sustainable Accessibility.....	19
3.6 Proposed Development	24
3.7 Trip Generation	27
4. CONCLUSIONS/RECOMMENDATIONS	29
APPENDIX A – LCC SCOPING	31
APPENDIX B – COUNT DATA.....	32
APPENDIX C – STAGE 1 ROAD SAFETY AUDIT	33

List of Tables

Table 1: Definitions	7
Table 2: Referenced Documents	8
Table 3: Bridleway Pedestrian and Cycle Counts.....	15
Table 4: ATC 1 - Pontefract Lane (between Cross Green Lane and A63) Peak Flows.....	16
Table 5: ATC 2 - A63 Pontefract Lane (between Knowsthorpe Lane and Pontefract Lane) Peak Flows.....	16
Table 6: ATC 3 - A63 Pontefract Lane (between Newmarket Approach and Newmarket Lane) Peak Flows	16
Table 7: ATC 4 - Newmarket Lane (between Felnax Road and Halton Moor Road) Peak Flows	16
Table 8: ATC 5 - A63 Pontefract Lane (between Knowsthorpe Gate and Thornes Farm Way) Peak Flows	16
Table 9: MCC Junction 1 - A63 Pontefract Lane/Newmarket Lane - Weekday Peak Hour Flows.....	17

Table 10: MCC Junction 2 - A63 Pontefract Lane/Knowsthorpe Gate Roundabout - Weekday Peak Hour Flows	17
Table 11: Personal Incident Data along the A63 (2017-2021)	18
Table 12: CIHT guidance for pedestrian journeys	20
Table 13: Bus Stops near Proposed Development.....	22
Table 14: Bus Services near Proposed Development	23
Table 15: Stage 1 RSA Summary	26
Table 16: Proposed Peak Hour Worker Trips.....	28
Table 17: Proposed Total Peak Hour Trips from Proposed Development	28
Table 18: Proposed Total Peak Hour Trips from Compound	29

List of Figures

Figure 1: Proposed Development Location	9
Figure 2: Existing Depot Access and Proposed Development Location	11
Figure 3: Count Locations	14
Figure 4: Personal Incident Data via Crashmap.com (2017-2021)	18
Figure 5: Local Sustainable Access Routes	19
Figure 6: Accessible Walking Distances from Site	20
Figure 7: Accessible Cycling Distances from Site	21
Figure 8: Existing Location.....	24
Figure 9: Proposed Development Location	25
Figure 10: Proposed Development Layout.....	26

1. INTRODUCTION

1.1 Purpose

The purpose of this Transport Statement (TS) is to provide an independent, comprehensive and systematic review of the transport implications relating to the Proposed Development. It identifies the anticipated transport impacts of the scheme and outlines whether any necessary improvements to accessibility and safety for all modes of travel are required. This TS has been prepared in respect of the proposed Neville Hill Access Road at Neville Hill South Sidings which will support the delivery of the Transpennine Route Upgrade (TRU).

The TS has been prepared in accordance with the relevant Planning Practice Guidance – Travel Plans, Transport Assessments and Statements in Decision Taking (March 2014).

1.2 Scope

The scope of this report has been discussed with Leeds City Council and the agreed scope is summarised as follows:

- description of TRU scheme and the Proposed Development at Neville Hill;
- policy context review;
- description of local existing highway conditions and an assessment of existing accessibility by sustainable travel modes;
- review of baseline traffic counts and road traffic accidents; and
- review of trip generation.

The issued Scoping Note and subsequent agreement with Leeds City Council is provided within Appendix A.

This document has been prepared and checked by suitably qualified professionals (see Approval and Authorisation table above) with at least two years' relevant experience, who can demonstrate competence when performing the role of a transport and logistics professional.

2. DEFINITIONS, ABBREVIATIONS AND REFERENCED DOCUMENTS

2.1 Definitions

Table 1: Definitions

Term to be defined	Concise definition of term
ATC	Automatic Traffic Counts
CTMP	Construction Traffic Management Plan
HGV	Heavy Goods Vehicle(s)
LRN	Local Road Network

MCC	Manual Classified Counts
MSOA	Middle Layer Super Output Area
NPPF	National Planning Policy Framework
PRoW	Public Right(s) of Way
RFC	Ratio of Flow to Capacity
SRN	Strategic Road Network
TRU	Transpennine Route Upgrade
TS	Transport Statement

2.2 Referenced Documents

Table 2: Referenced Documents

Source	Reference	Title
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf	UK Government: National Planning Policy Framework [last updated July 2021]	NPPF (2012)
https://s3-eu-west-2.amazonaws.com/commonplace-customer-assets/leedstransportstrategy/Leeds%20Transport%20Strategy_p11.pdf	Leeds City Council: Connecting Leeds – Transforming Travel: Transport Strategy (2021)	Connecting Leeds Transport Strategy (2021)
https://www.ciht.org.uk/media/4465/planning_for_walking_-_long_-_april_2015.pdf	Charter Institution of Highways and Transportation: Planning for Walking Guidance (2015)	CIHT: Planning for Walking Guidance (2015)
https://www.cycling-embassy.org.uk/document/c07-integrating-cycling-development-proposals	Cycling Embassy of Great Britain – Cycling England: C07 Integrating Cycling Into Development Proposals (2011)	Integrating Cycling Into Development Proposals (2011)
https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements	DfT, Planning Practice Guidance (2014)	Travel Plans, Transport Assessments and Statements in Decision Taking (2014)

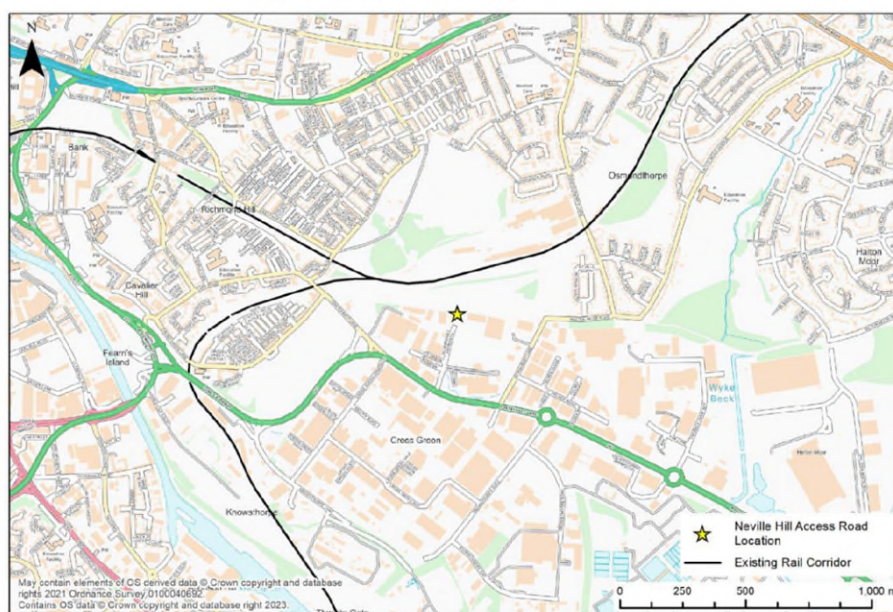
3. REPORT CONTENT

3.1 Introduction

AECOM has been commissioned by Network Rail to produce a TS in support of development at the existing Neville Hill South Sidings site in Leeds, West Yorkshire. This report has been produced in support of the planning application to develop a new access road from Newmarket Approach, to serve a site compound and to subsequently support delivery of TRU works. The access proposals will be referred to from this point as the 'Proposed Development'.

The location of the Proposed Development is shown in Figure 1.

Figure 1: Proposed Development Location



3.2 Background

TRU is a railway enhancement project to improve passenger services between York and Manchester Victoria via Leeds. TRU will provide improved capacity and journey times, and a higher performing railway across the economic centres of the North of England, providing a long-awaited boost to the regional economy.

Work proposed as part of the upgrade includes essential improvements to railway infrastructure (e.g. track and line electrification equipment) along the route. For delivery purposes it has been split into two geographical sections:

- East of Leeds: York to Leeds; and
- West of Leeds: Leeds to Manchester Victoria.

The East of Leeds section is subdivided into defined project areas that will be delivered in phases. The project areas within East of Leeds are:

- Project E1: Church Fenton station (exclusive) to York station (exclusive); and
- Project E2-E4: Leeds station (exclusive) to Church Fenton station.

The E2-E4 project is supported and facilitated by the main construction logistics hub at Gascoigne Wood to the east of Sherburn in Elmet, alongside provision of (at the time of writing) 18 proposed temporary construction compounds along the route, including at Neville Hill.

At Neville Hill, the temporary construction of a compound within the existing Network Rail boundary will facilitate works within the E2 section of the project, which extends from Leeds station to a point just east of Osmondthorpe Lane. Neville Hill is located 2.7km east of Leeds station in Osmondthorpe and the site is within land owned by Network Rail.

A Track Sectioning Cabinet (TSC) will be installed on land to the west of the Development Site and will obstruct the existing vehicular access to the South Sidings area, currently provided via a gated access off Pontefract Lane.

Therefore, a new access has been proposed via Newmarket Approach, which is the focus of this TS. This access to the compound will be a straight road, with the existing length of the road on Newmarket Approach being well utilised by HGVs. The proposed access road design will follow a straight line from Newmarket Approach into the compound, meaning HGVs accessing the compound can manoeuvre onto Network Rail land without turning. As a consequence of this, it has been considered that swept path analysis of vehicle movements using the proposed access road is not required.

The existing access and the Proposed Development are shown in Figure 2.

Figure 2: Existing Depot Access and Proposed Development Location



3.3 Policy Context

3.3.1 National Policy

National Planning Policy Framework (NPPF)

The NPPF (updated in July 2021) supersedes the Planning Policy Guidance Notes that governed national policy and principles relating to specific aspects of the town planning framework. In replacing the previous guidance notes and remaining a material consideration in planning applications, the NPPF provides a framework for local communities and planning authorities to develop relevant, local development plans and strategies.

The NPPF has two key themes:

- Providing a greater level of integration and simplification of the planning policies governing new development nationally.
- Contributing to the achievement of sustainable development from an economic, social and environmental perspective.

Transport specific policies play a key role in supporting and achieving the core planning principles and are intrinsically linked to the objective of sustainable development. The NPPF specifically states in paragraph 111,

that development should only be prevented or refused on transport grounds if there would be an unacceptable impact on highway safety or where the residual cumulative impacts of development are severe.

3.3.2 Local Policy

Connecting Leeds – Transforming Travel: Transport Strategy (2021)

The Connecting Leeds Transport Strategy sets out the action plan for the city of Leeds and greater area, that involves the investment in an improved transport system that will support the development and growth of the city until 2024.

Within this action plan there are aims to focus on improving the existing public transport network, so everyone may have an accessible option to get anywhere in a way that is affordable, accessible and zero-carbon.

The strategy will support and invest in the development and expansion of the rail network to better provide for users, and to become more carbon efficient.

To encourage sustainable transport mode use, the transport strategy aims to encourage travel plans for new developments which will change and challenge behaviour and mitigate the impacts of a new development.

Where relevant this strategy has been considered and used as guidance for this TS.

West Yorkshire Transport Strategy 2040 (2017)

This transport strategy is for combined authorities in West Yorkshire in aiming to integrate the varying road networks and public transport provisions. The objectives for the regional transport strategy ambitions are as follows:

- Economy – create a less congested, more reliable and better-connected transport network;
- Environment – have a positive impact on the built and the natural environment; and
- People and Place – put people first as to create a strong sense of place.

This strategy aims for a more accessible transport system, setting out aims for 2027 which include: 25% more bus trips; 75% more rail trips and 300% more cycling trips. To achieve this, they set out aims to reduce journey times, which they see as a restrictive factor to accessible journeys.

To achieve more rail trips, the strategy sets out aims for major improvements to railway stations and continuing the electrification of railway lines.

The report also states an aim of a zero tolerance of transport related deaths by 2040, and hence aims to create safer road networks.

Transport for the North: Strategic Transport Plan (2019)

This Strategic Transport Plan sees 20 local authorities coming together to create bottom-up management of the regional transport network, where development supports sustainable economic growth. The aims for this plan are:

- Transforming economic performance;
- Increasing efficiency, reliability, integration and resilience in the transport system;
- Improving inclusivity, health, and access to opportunities for all; and
- Promoting and enhancing the built historic and natural environment.

These aims surround an overarching aim of connecting the north more effectively to encourage leisure, but also business and effective trading.

The applied aims will mean:

- creating several strategic development corridors for more effective transport links;
- protecting the environment by decarbonising transport; and
- investment in rail to improve lines, stations, services, and journey times.

The aims of this report are considered relevant until 2050 and are taken into account in this TS.

3.4 Existing Highway Conditions

3.4.1 Introduction

This sub-section of the TS describes existing land uses and highway conditions both at and within the vicinity of the Proposed Development.

3.4.2 Surrounding Highway Network

The key local roads described in this section are:

- Newmarket Approach;
- A63; and
- A64.

Newmarket Approach

Newmarket Approach is accessed via Pontefract Lane through a left in / left out junction and is currently a no-through-road that accommodates several private depots, warehouses and businesses. The road is a single carriageway with a kerbed central reservation. It has streetlights and pedestrian footways on both sides, with pedestrian facilities to allow safe crossing.

A63

The A63 runs eastbound from the A61 at the A63/A61 interchange and is located south of the Neville Hill Depot. It offers junctions of note such as the A63/Pontefract Lane junction, Knowsthorpe Gate Roundabout, and Thornes Farm Roundabout further east. The A63 here is a dual carriageway with a central reserve. The road offers dual pedestrian and cycle access along the westbound lanes. There is a lack of facilities available for pedestrian crossings, particularly of note at the Newmarket Approach junction.

A64

The A64 (York Road) runs to the north of the Neville Hill Depot and provides wider links to Leeds City centre and other key locations to the east such as York. The section of the A64 north of the Neville Hill Depot is a dual carriageway and offers bus only lanes, as well as noted cycle pathways and pedestrian pathways separated by hard shoulder, and accessible signalised crossings and footbridges.

3.4.3 Baseline Traffic Flows

As part of establishing the existing traffic conditions, a data collection exercise has been undertaken to establish current traffic flows on the network.

Automatic Traffic Counts (ATCs) and Manual Classified Counts (MCCs) have been collected as well as a Pedestrian/Cycle count for the junctions and locations shown in Figure 3.

Figure 3: Count Locations



The count locations are described as follows:

- Ped/Cycle count Neville Hill bridleway Eastbound and Westbound;
- ATC 1 - Pontefract Lane (between Cross Green Lane and A63);
- ATC 2 - A63 Pontefract Lane (between Knowsthorpe Lane and Pontefract Lane);
- ATC 3 - A63 Pontefract Lane (between Newmarket Approach and Newmarket Lane);
- ATC 4 - Newmarket Lane (between Felnax Road and Halton Moor Road);
- ATC 5 - A63 Pontefract Lane (between Knowsthorpe Gate and Thornes Farm Way);
- MCC Junction 1 - A63 Pontefract Lane/Newmarket Lane Approach Left in/out priority junction; and
- MCC Junction 2 - A63 Pontefract Lane/Knowsthorpe Gate 3-arm Roundabout.

The counts involved:

- 7-day 24-hour pedestrian / cycle count that was directional and carried out in the same 7-day period as the ATC surveys;
- Pedestrian / cycle count data that was recorded in 15-minute intervals;
- 7-day 24-hour ATC surveys at 5 locations that were directional, classified and included speed data;
- ATC data that was recorded in 15-minute intervals;
- MCC turning counts at 2 locations that were carried out on one weekday in the same 7-day period as the ATC and pedestrian / cycle surveys. MCC counts were directional and recorded turning movements and maximum queue lengths; and
- MCC junction data that was recorded in 15-minute intervals. Maximum queue lengths were collected at 5-minute intervals at each arm. The times of these counts were between 07:00-10:00 hours and 15:00-18:00 hours.

These counts took place in the period of 13th to 19th September 2022, with MCC junction counts occurring on Tuesday 13th September. The following weekday average hourly flows and the peak hour flows are shown below. The full count data is provided in Appendix B.

The pedestrian / cycle count provided the following results:

Table 3: Bridleway Pedestrian and Cycle Counts

Ped / Cycle count	Eastbound			Westbound			Total Flows Both Directions		
	Total Flows	Ped Flows	Cycle Flows	Total Flows	Ped Flows	Cycle Flows	Total Flows	Ped Flows	Cycle Flows
Average Weekday Hourly Flows	6	3	3	7	3	4	13	6	7
Average weekday AM peak hour flows	10	5	5	9	3	6	19	7	12
Average weekday PM peak hour flows	10	6	4	13	5	8	23	11	12

The pedestrian / cycle count sees average weekday peak hourly flows up to 23 two-way flows of both pedestrians and cyclists utilising the non-definitive brideway.

The ATC counts provided the following results:

Table 4: ATC 1 - Pontefract Lane (between Cross Green Lane and A63) Peak Flows

ATC 1	Northwestbound			Southeastbound		
	Total Flows	HGV Flows	All other Flows	Total Flows	HGV Flows	All other Flows
Average Hourly Flows	226	21	210	243	18	224
Average weekday AM peak hour flows	556	54	502	417	26	391
Average weekday PM peak hour flows	497	22	475	543	22	521

Table 5: ATC 2 - A63 Pontefract Lane (between Knowsthorpe Lane and Pontefract Lane) Peak Flows

ATC 2	Westbound			Eastbound		
	Total Flows	HGV Flows	All other Flows	Total Flows	HGV Flows	All other Flows
Average Hourly Flows	421	58	369	361	55	306
Average weekday AM peak hour flows	988	112	876	503	93	410
Average weekday PM peak hour flows	731	54	677	838	63	775

Table 6: ATC 3 - A63 Pontefract Lane (between Newmarket Approach and Newmarket Lane) Peak Flows

ATC 3	Westbound			Eastbound		
	Total Flows	HGV Flows	All other Flows	Total Flows	HGV Flows	All other Flows
Average Hourly Flows	570	67	508	463	57	406
Average weekday AM peak hour flows	1391	152	1239	651	95	556
Average weekday PM peak hour flows	881	58	823	1054	62	993

Table 7: ATC 4 - Newmarket Lane (between Felnax Road and Halton Moor Road) Peak Flows

ATC 4	Northbound			Southbound		
	Total Flows	HGV Flows	All other Flows	Total Flows	HGV Flows	All other Flows
Average Hourly Flows	138	13	131	145	11	134
Average weekday AM peak hour flows	188	22	166	276	22	255
Average weekday PM peak hour flows	331	18	313	271	13	258

Table 8: ATC 5 - A63 Pontefract Lane (between Knowsthorpe Gate and Thornes Farm Way) Peak Flows

ATC 5	Westbound			Eastbound		
	Total Flows	HGV Flows	All other Flows	Total Flows	HGV Flows	All other Flows
Average Hourly Flows	507	62	450	428	60	368
Average weekday AM peak hour flows	1329	112	1217	565	108	456
Average weekday PM peak hour flows	744	61	683	1083	69	1014

The MCC counts provided the following results:

Table 9: MCC Junction 1 - A63 Pontefract Lane/Newmarket Lane - Weekday Peak Hour Flows

J1	Newmarket Approach		A63 Pontefract Lane (west)		A63 Pontefract Lane (east)			
	heading east		heading west		heading north		heading east	
	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs
AM	49	10	1886	174	100	17	761	112
PM	92	1	932	46	31	1	1229	38

Table 10: MCC Junction 2 - A63 Pontefract Lane/Knowsthorpe Gate Roundabout - Weekday Peak Hour Flows

J2	Knowsthorpe Gate				A63 Pontefract Lane (west)						A63 Pontefract Lane (east)					
	heading west		heading east		heading east		heading south		U-turn (west)		U-turn (east)		heading west		heading south	
	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs	Total Flows	HGVs
AM	112	56	115	62	580	72	146	34	260	20	103	11	1468	103	213	70
PM	95	4	173	15	1110	26	37	12	196	3	112	4	645	39	22	8

3.4.4 Highway Safety Analysis

To assess whether there are any underlying highway safety issues, personal incident data has been analysed from the data system Crashmap.co.uk. The data was considered for the last full five-year period (2017-2021) on A63 Pontefract Lane and on Newmarket Approach. The incidents are classified as slight, serious or fatal. The road network with incident data is shown below.

Figure 4: Personal Incident Data via Crashmap.com (2017-2021)



A63 (Pontefract Lane) shows 9 slight incidents over the 5-year period as broken down below.

Table 11: Personal Incident Data along the A63 (2017-2021)

	Slight	Serious	Fatal
2021	2	0	0
2020	2	0	0
2019	1	0	0
2018	0	0	0
2017	4	0	0

There appears to be no indication of identifiable trends along the A63 that could be anticipated to be exacerbated by the future construction traffic activity. Newmarket Approach has no recorded incident data from this 5-year period.

3.4.5 Summary

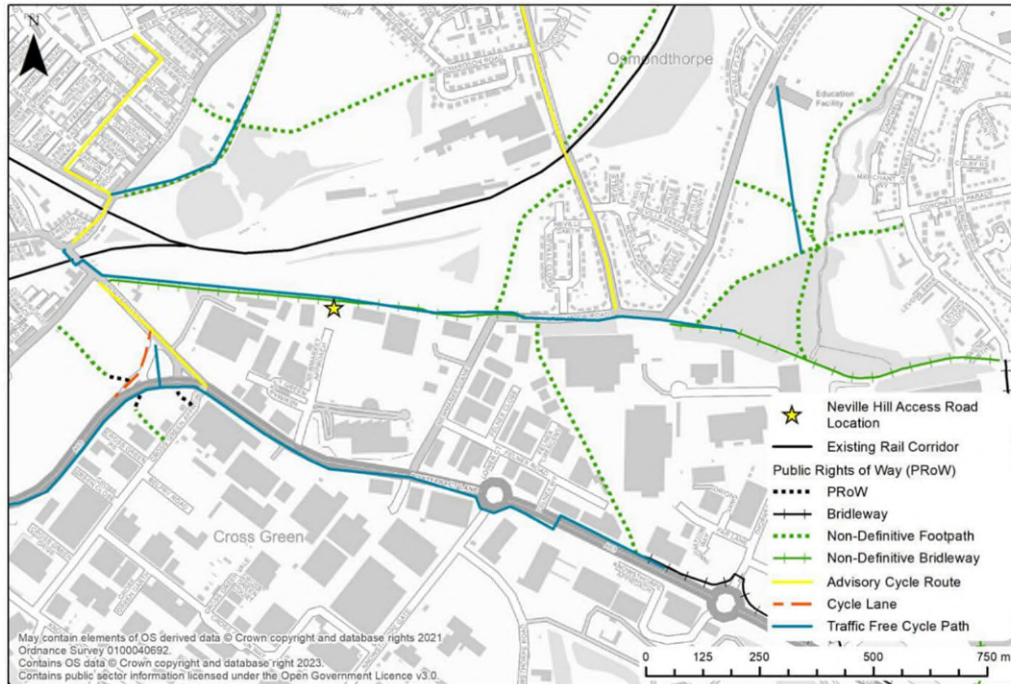
This section has provided an overview of the local road network that will provide access to the Proposed Development Site. Based on the location of the Proposed Development accessed via Newmarket Approach, it can be concluded that the road is well connected to linkages to the Site and wider road access. The collision data demonstrates that there appears to be no underlying issues surrounding the proposed site access and local road network.

3.5 Sustainable Accessibility

3.5.1 Introduction

This sub-section summarises the sustainable accessibility of the Proposed Development, demonstrating the accessibility and connectivity of the Site for potential workers when using sustainable transport modes. The local sustainable access routes are shown in Figure 5.

Figure 5: Local Sustainable Access Routes



3.5.2 Pedestrian Connectivity

Policy states that walking can be an important mode of travel at the local level and offers the potential to replace short car trips, particularly those under 2km.

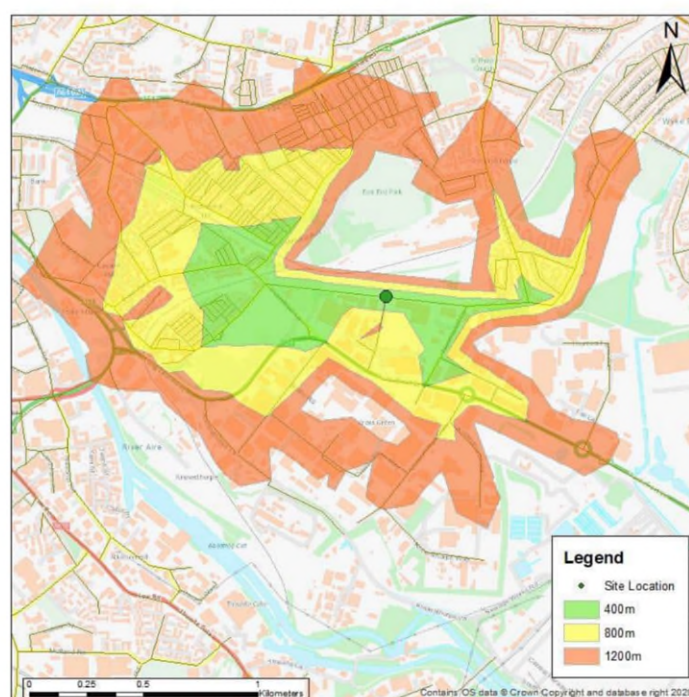
The Planning for Walking Guidance (CIHT), that has been considered as part of this TS, sets out legal frameworks for pedestrianisation and the benefits of walking, as well as suggesting characteristics of pedestrian journeys, specifically the 'Providing for Journeys on Foot' section. This considers desirable, acceptable, and maximum walking distances, both for pedestrian only journeys, and for those who will then further commute by other modes. These guidelines are set out below in Table 12.

Table 12: CIHT guidance for pedestrian journeys

	Town Centres (m)	Commuting (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

The 'elsewhere' distances were applied to the site location, considering the Site lies outside the city centre of Leeds. These distances of 400, 800 and 1200 metres are shown in the figure below. This shows that some local residential areas to the north (Osmondthorpe and some of East End Park areas) are within walking distance to the Site, meaning some workers on site would be able to commute on foot. The non-definitive brideway, which is located to the south of Neville Hill South Sidings, allows for ease of access to these residential areas and creates potential to avoid the A63 road.

Figure 6: Accessible Walking Distances from Site



Close to the site, the proposed point of access to the South Sidings cuts through a non-definitive brideway. It has been proposed that this will be managed by a 'Give Way' zone with right of way for pedestrians and

cyclists. This would provide direct site access for pedestrians. The bridleway is accessible via Pontefract Lane in the west (0.5km) and Halton Moor Road in the east (0.4km).

The surrounding Public Right(s) of Way (PRoW) network may offer alternative routes separate from the road network for pedestrians and could encourage workers at the Proposed Development to commute on foot.

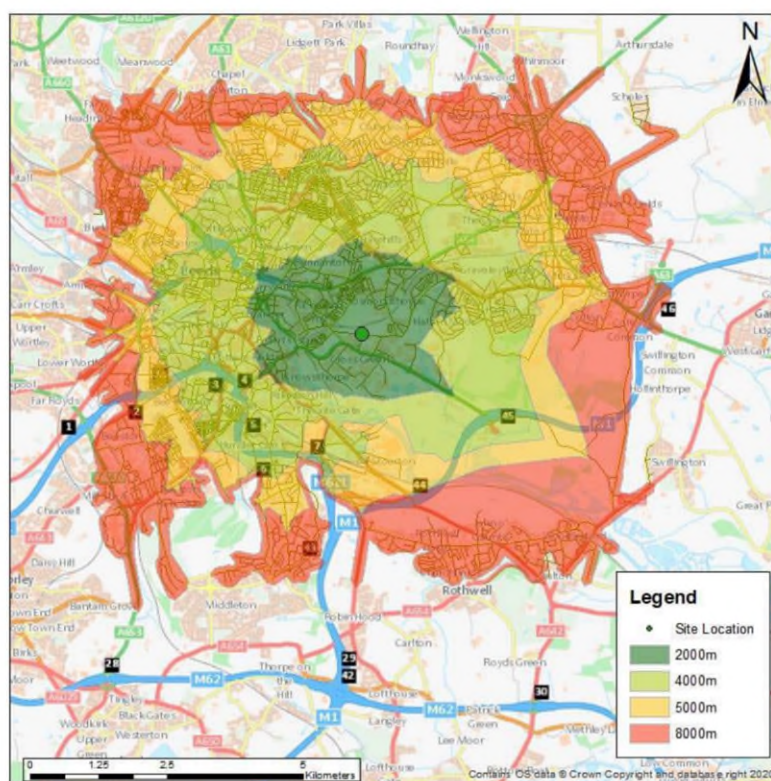
3.5.3 Local Cycle Network

This section outlines the available cycling infrastructure surrounding the Proposed Development.

In respect to cycling distances, the Cycling England document: Integrating Cycling into Development Proposals suggests acceptable cycling distances for non-work purposes as well as for commutes. The documents state that “for work, a distance of 5 miles [8km] should be assumed” with regards to maximum commuting distances.

In light of this, a catchment area of commutable cycling distances of 2, 4, 5 and 8 kilometres is shown surrounding the Proposed Development, to demonstrate the practicability of commuting for potential site workers, as shown in Figure 7.

Figure 7: Accessible Cycling Distances from Site



This implies that a cycling commute to the Proposed Development is indeed possible for much of the wider Leeds area. Areas such as Beeston, Knowsthorpe and Hunslet, are residential areas that may be considered accessible via a bicycle journey to the Proposed Development.

Access to the Proposed Development may also be gained along the footpath and bridleway to the south as referenced in Section 3.5.2, providing more direct access for cyclists who may be less confident on the wider strategic road network due to speed of traffic and number of vehicles. The many accessible PRowS may also be used for a safer cycling commute where possible.

The A63 offers shared use footway facilities, which both pedestrians and cyclists can use.

Currently there are no bike racks or specific cycling facilities close to the Proposed Development. If the requirement is identified for bicycle storage facilities at the Proposed Development, this will be provided in line with Leeds City Council guidelines.

3.5.4 Public Transport Connection

Buses

Bus services run near to the Site on Pontefract Lane, with the nearest stop approximately 400m away from the Proposed Development. The stop consists of a pole and flag arrangement without a shelter, and no real time information. This stop is serviced by bus no. 14 and bus no. X60.

The bus stops and the services provided are summarised below in Table 13.

Table 13: Bus Stops near Proposed Development

Bus Stops	Services	Distance from Proposed Development (km)
Pontefract Lane - Newmarket Lane heading eastbound	14, X60, 61a	0.5km
Pontefract Lane – Newmarket Lane heading westbound	14, X60	0.4km
Pontefract Lane - Cross Green Lane heading southeastbound	BY1, BY2	0.6km
Pontefract Lane - Cross Green Lane heading northwestbound	BY1, BY2	0.5km

Table 14: Bus Services near Proposed Development

Bus Services	Destination stops	Frequency of Services Monday to Friday	Service Provider
14	Pudsey to Logic Business Park via Leeds	Every 20-30 minutes	Leeds City buses
X60	Leeds to Castleford	Every 20 minutes 06:00-07:00. Every 20 minutes 17:00-19:10	Arriva Yorkshire
61	St. James Hospital to South Leeds Stadium	Every 60-80 minutes	Connexions Buses
61A	St James Hospital to Hunslet Centre	Every 60 minutes 06:00-08:00	CT Plus Yorkshire
		Every 60 minutes 16:00-18:30	
BY1	Holbeck to Bishop Young Academy (School Service)	2 services a day – between 07:00-08:00 and 15:00-16:00	Tetley's Coaches
BY2	Middleton Park Circus to Bishop Young Academy (School Service)	2 services a day – between 07:00-08:00 and 15:00-16:00	Tetley's Coaches

The amount of bus stops nearby and frequency of journeys during the week suggest that bus journeys are an accessible mode of transport for those commuting to the Proposed Development. Table 13 sets out the closest bus stops and routes from these bus stops. Those further afield have not been included due to repetition of bus routes. Services go to various residential locations such as Holbeck, Pudsey, Castleford as well as to and through Leeds City Centre, which is further connected by buses heading elsewhere.

Trains

The nearest train station to the Proposed Development is Leeds station. From the Proposed Development, this is a 4.3km journey distance, which means that the station is not considered to be within an accessible distance for pedestrians, but could be accessible for cyclists. Bus service 14 stops at Leeds train station (bus stop Wellington A) and takes approximately 19 minutes to reach the Proposed Development. This may be an option for some commuters coming from further afield. Train services from Leeds run to a wide variety of locations, including long distance trips to Scotland and London as well as Leeds Bradford Airport.

Cross Gates rail station is also a similar distance from the Proposed Development and provides onward journeys to Leeds and York amongst other destinations.

3.5.5 Summary

In summary, there is an ability for workers to access the Proposed Development using sustainable and accessible transport modes. The bridleway provides access for both cyclists and pedestrians and is already utilised daily as shown by the survey data in Table 3.

Pedestrian facilities allow for local access to the Site, as well as access to many bus stop options and hence routes for commuters, particularly due to the non-definitive bridleway that runs south along the site. Cycling facilities may be improved by providing storage facilities on site for bicycles if appropriate.

3.6 Proposed Development

3.6.1 Introduction

This section describes the Proposed Development and considers potential for transport impacts in the context of the existing baseline described within the preceding sections.

3.6.2 Proposed Development

The Proposed Development includes widening of the existing Newmarket Approach road for motorised vehicle access at its most northerly point where it meets the existing bridleway. The Proposed Development will see a 'Give Way' junction being created at the point where the bridleway meets the extended Newmarket Approach, with pedestrians and cyclists given priority. Construction of the Proposed Development is scheduled to take place during 2023.

An image of the existing location where the Proposed Development will be introduced is provided in Figure 8. Following construction of the Proposed Development, this will facilitate access to the Neville Hill site. Continuing operational work as part of TRU will subsequently access the compound via the extended Newmarket Approach road.

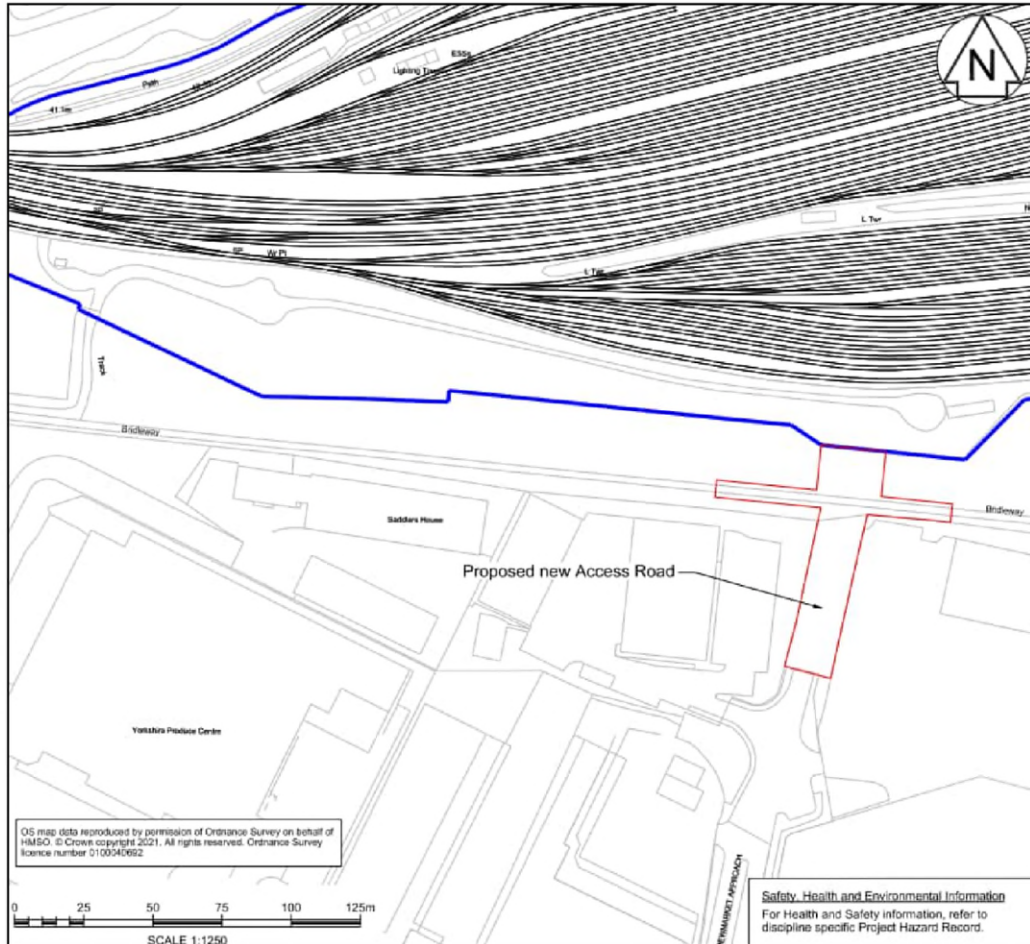
The internal layout of the site within the Network Rail land boundary would be designed appropriately to ensure HGVs are able to arrive / leave the site without needing to reverse onto the public highway or block the public right of way at any time.

Figure 8: Existing Location



The site location and access proposals are shown in Figure 9 and 10.

Figure 9: Proposed Development Location



Key:

- Network Rail boundary
- New road
- New fencing

Existing Network Rail boundary fence

New fencing (type and height to be agreed by planning condition)

Planning application boundary

Combined Footways Crossing Sign

Chicanes

Section location (see drawing 151661-TRA-E2-NHM-DRG-D-HW-001134)

Tactile paving

"Table top" bridleway raised crossing point

Earthworks embankments

Upside-down BN2 kerb laid flush demarcating extent of new access road

New access road

Newmarket

Typical table top crossing point

Section location (see drawing 151661-TRA-E2-NHM-DRG-D-HW-001134)

Combined Footways Crossing Sign

Section Cycle Route Ahead Stop

One Way Stop

Section location (see drawing 151661-TRA-E2-NHM-DRG-D-HW-001134)

North Arrow

Scale bar: 0m, 10m, 20m

Notes: This drawing is a conceptual illustration. It is not intended to be used as a basis for construction or other purposes without the written consent of the author.

A Stage 1 Road Safety Audit (RSA) has been undertaken in respect of the proposed highway works. The Stage 1 RSA can be found within Appendix C.

Table 15: Stage 1 RSA Summary

Issue Identified	Recommendation	Response / Action
Thick vegetation and fencing may impact the intervisibility between cyclists on the existing cycle track and vehicles traveling on Newmarket Approach	Provide visibility splays to demonstrate the required visibility can be achieved.	Visibility splays produced at this location
Risk of pedestrian / cyclist collisions as a result of insufficient warning paving on Newmarket Approach	Ensure shared use tactile paving is provided on the cycle track to delineate the area of shared space in accordance with the relevant design standards	Design incorporates this recommendation
Risk of pedestrian / cycle collisions as a result of masking signing on Newmarket Approach	Vegetation should be cut back so that existing and proposed signing is not	Vegetation will be managed in line with recommendation

	masked, and that a regular maintenance regime is implemented	
--	--	--

As noted the recommendations will be incorporated into the design and maintenance regime where required.

In terms of the visibility splays where the access road crosses the bridleway, due to the nature of the table top crossing, it is expected that vehicles will be stationary / be travelling at walking speed when they cross the bridleway. The chicane barrier will also slow active travel users along the bridleway. All of the access road visibility splays include the full extent of the chicane barriers. Active travel users will therefore be in view of drivers as they progress slowly around the chicane.

Subsequently, based on the above and the assumption that cyclists / other users on the bridleway will be travelling at less than 20 mph, suitable visibility splays in conjunction with this maximum speed have been applied.

3.7 Trip Generation

This section sets out the proposed trips generated by site workers and HGVs for the Proposed Development. As previously explained, the planning application solely relates to the construction of a new section of road along Newmarket Approach. Other than the construction phase of the Proposed Development, this will not generate any other traffic movements.

However, as the new section of road is proposed to support TRU and ultimately serve a new construction compound and Strategic Freight Site, for completeness of assessment, traffic generated by these uses (not subject to this planning application) has also been considered within section 3.7.3.

3.7.1 Construction Workers

A number of workers are expected to be required to facilitate construction of the Proposed Development. The total number and associated shifts are detailed below:

- Day Shift: 07.00 – 17.00 (50 workers)
- Night Shift: 22.00 – 06.00 (100 workers)

The workers will be on site Monday to Saturday each week, with a possible requirement on Sundays (day and night shift) depending on possession.

As a worst-case scenario, it is proposed that all staff associated with the Proposed Development will arrive at the site via their own private car.

For the purposes of this report, the number of worker vehicles travelling inside the local road network peak hours would be as follows:

Table 16: Proposed Peak Hour Worker Trips

Shift	AM Peak (08.00-09.00)		PM Peak (17.00-18.00)	
	Arrivals	Departures	Arrivals	Departures
Day Shift (07.00-17.00)	0	0	0	50
Night Shift (22.00-06.00)	0	0	0	0

From Table 16 it can be seen that based on the shift timings, there would only be 50 vehicle movements departing the site during the PM peak period. All other worker movements would occur outside of the peak hours.

3.7.2 Construction HGVs

In addition, there are expected to be an average of 9 HGV movements per week required for delivery / removal of materials, with a maximum of 12 HGVs per week. To ensure a robust assessment is carried out, the worst-case maximum of 12 per week has been assumed.

This equates to 12 movements in and 12 movements out over the course of the week. Based on a likely delivery pattern of six days per week, this equates to a maximum of approximately 4 HGVs two-way per day (e.g. 2 in and 2 out per day). It is possible that these movements would not be spread evenly across the day and could potentially travel during either peak period, therefore for further robustness of assessment, 2 HGV movements in and 2 movements out have been considered during the peak hours.

The total numbers of vehicles assessed during the peak hours are shown in Table 17.

Table 17: Proposed Total Peak Hour Trips from Proposed Development

Vehicle Type	AM Peak (08.00-09.00)		PM Peak (17.00-18.00)	
	Arrivals	Departures	Arrivals	Departures
Worker Vehicles	0	0	0	50
HGVs	2	2	2	2
Total	2	2	2	52

As shown, the numbers of vehicles associated with the Proposed Development are minimal and would be expected to have minimal impact on the local road network. The Construction Traffic Management Plan (CTMP) will include mitigation measures to manage any residual construction impacts.

3.7.3 Future Use (outside the scope of the planning application)

For completeness, the operational period of the compound following completion of the access road has also been considered. The compound will facilitate the railway upgrade works being carried out (under Permitted Development rights) within the Network Rail land ownership boundary.

TRU Temporary Compound

Based on the current works programme, the compound will generate traffic between June 2023 and March 2027.

The staff numbers expected during this period are anticipated to remain the same as during construction of the access road (e.g., Day Shift: 07.00 – 17.00 (50 workers) and Night Shift: 22.00 – 06.00 (100 workers)).

This, as demonstrated in Table 15, equates to 50 departures in the PM peak hour only. This traffic has again been assessed based on the assumption that all workers will travel to site by private car.

HGV numbers at the peak of compound usage are predicted to be around 20 per week, equating to approximately 4 HGVs in and 4 out per day or 8 two-way flows. It has been assumed that these flows could occur during the peak hours as a worst case, though they will likely be distributed across the day.

The total number of vehicles associated with the compound operation during peak hours is shown in the table below.

Table 18: Proposed Total Peak Hour Trips from Compound

Vehicle Type	AM Peak (08.00-09.00)		PM Peak (17.00-18.00)	
	Arrivals	Departures	Arrivals	Departures
Worker Vehicles	0	0	0	50
HGVs	4	4	4	4
Total	4	4	4	54

Strategic Freight Site

In future the site will also be used as a Strategic Freight Site, for which the proposed access road will also provide access to the compound for ad-hoc maintenance of the TSC. Traffic associated with this use will consist of approximately 80 two-way vehicle movements (e.g. 40 in and 40 out), distributed evenly across a 10 hour working day.

4. CONCLUSIONS/RECOMMENDATIONS

This report has been prepared on behalf of Network Rail, in line with national and regional policy and guidelines, in support of the planning application to develop a new access road from Newmarket Approach, and to subsequently support the delivery of TRU works.

Given the location within close proximity to several bus stop locations, and within walking and cycling distances to residential areas, sustainable transport modes may be feasible for workers travelling to the Site. The location of the Site to the east of Leeds city centre means access to further bus and train links is available for longer journeys if necessary.

The surrounding network has also been assessed in consideration of vehicular and HGV access. The Site is well connected to the wider highway network via the A63. ATCs, MCCs and pedestrian/cycle counts have been conducted at several locations on the surrounding local road network to understand the baseline traffic flows. The Proposed Development will provide direct and straight access into the Neville Hill site, meaning swept path analysis has not been necessary.

Road accident data for the most recent full five-year period (2017-2021) for the surrounding road network has been considered, with no specific incident patterns being identifiable, and no areas of concern that may be exacerbated by traffic associated with the Proposed Development.

In conclusion, considering the minimal construction traffic generated by the Proposed Development and the Site location with regards to bus stops and walking and cycling facilities, traffic associated with the Proposed Development is likely to have a minimal impact upon the wider road network.

APPENDIX A – LCC SCOPING

OFFICIAL

TRANSPENNINE ROUTE

UPGRADE



Transpennine Route Upgrade, E2-4

**Neville Hill Depot - Traffic & Transport
Scoping Note**

ProjectWise Reference No:
xx

Version: 1

Issue Date: 30/06/2022



Approval and Authorisation

	Name	Job Title	Signature
Prepared By:	Mark Romanowski	Principal Consultant	MR

Document Identity and Metadata Information

This information is a mandatory requirement.

Scope of Document:

- ☒ Transpennine Route Upgrade
☐ Northern Powerhouse Rail

Document Category: **Report**

Applicable Grip Stage(s): ALL / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8

Briefing Required: ☐

Security Classification: **OFFICIAL**

Document History

Version	Date	Modification	Originator
1	30/06/22	Original	Mark Romanowski

Implementation

The latest version of this document shall supersede any previous versions.

Compliance

This document is mandated across the 'scope' detailed in section document identity, scope and metadata.

Specific authority not to comply with this document can be requested from the Approval Signatory using the Technical Query process found with the Common Data Environment (CDE).

Disclaimer

In issuing this document for its stated purpose, Network Rail make no warranties, expressed or implied that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

All references made within this document were considered correct at time of approval.

Supply

Copies of this document are available electronically via the Common Data Environment but shall be deemed uncontrolled once printed.

Table of Contents

1. BACKGROUND	6
1.1 Introduction	6
1.2 TRU Scheme	6
1.3 Neville Hill Depot Scheme	6
2. TRANSPORT STATEMENT	7
2.1 Introduction	7
2.2 Policy Context.....	7
2.3 Existing Conditions	7
2.4 Accessibility Analysis	8
2.5 Development Proposals.....	8
2.6 Baseline Traffic Flows.....	8
2.7 Committed Development	9
2.8 Trip Generation.....	9
2.9 Trip Distribution.....	10
2.10 Junction Capacity Assessment.....	10
2.11 Summary and Conclusions	10
APPENDIX A – SITE REDLINE BOUNDARY	11
APPENDIX B – SITE PROPOSALS	12

List of Figures

Figure 1 – Site Location	7
Figure 2 – Accident Study Area	8
Figure 3 – Accident Study Area	9

1. BACKGROUND

1.1 Introduction

This note outlines the scope for the Transport Assessment in support of the planning application for the Neville Hill depot proposals, as part of the wider Transpennine Route Upgrade (TRU) scheme.

Please can you kindly review the proposed scope by Friday 8th July and confirm you are in agreement with the methodology. I would also be happy to have a further discussion to run through any queries you may have.

1.2 TRU Scheme

Work proposed as part of the upgrade includes essential improvements to railway infrastructure (e.g. track and line electrification equipment) along the route. For delivery purposes it has been split into two geographical sections:

- East of Leeds: York to Leeds; and
- West of Leeds: Leeds to Manchester Victoria.

The East of Leeds section is subdivided into defined project areas that will be delivered in phases. The project areas within East of Leeds are:

- Project E1: Church Fenton station (exclusive) to York station (exclusive);
- Project E2-E4: Leeds station (exclusive) to Church Fenton station.

The E2-E4 project is supported, and indeed facilitated, by the main construction logistics hub at Gascoigne Wood to the east of Sherburn in Elmet, alongside provision of around 18 proposed temporary construction compounds along the route, including at the Neville Hill depot.

1.3 Neville Hill Depot Scheme

The development proposals constitute the provision of a temporary construction compound at the Neville Hill rail depot, which is required to facilitate the E2 section of the TRU project, which has a focus on improvements to Leeds station. The compound is located some 2.7km east of Leeds rail station; the indicative redline boundary is identified in **Appendix A**, which contains the Network Rail drawing 'Neville Hill TSC Location Plan'.

The proposals include the provision of a Track Sectioning Cabinet (TSC) which, once constructed, will effectively sterilise the depot's existing vehicular access, which is currently provided via a gated access along a non-definitive bridleway that leads east from a dropped gated access with Pontefract Lane, as indicated in the figure below.



Figure 1 – Site Location

2. TRANSPORT STATEMENT

2.1 Introduction

Provide background information, context and location of the proposed development, alongside a summary of scoping discussions.

2.2 Policy Context

Provide an overview of the development in relation to pertinent National, Regional and Local Policy documents and guidance. This includes the National Planning Policy Framework (NPPF), National Planning Practice Guidelines and the local planning policy adopted by Leeds City Council.

2.3 Existing Conditions

Provide an outline of the site in its current form, current access arrangements, and a description of the local highway network and pedestrian / cycle and public transport infrastructure within the vicinity of the site.

Review of personal injury collisions that have taken place within the immediate vicinity of the site within the most recent five-year period for which data is available and judgement as to whether there are any arising discernible patterns in relation to location and / or causation. Data to be sourced from Crashmap.co.uk and the proposed study area is shown below:



Figure 2 – Accident Study Area

2.4 Accessibility Analysis

Provide an overview of accessibility to the site by sustainable modes of transport, including walking, cycling and public transport. Inclusion of walking and cycling catchment areas in the form of GIS-generated isochrone maps.

2.5 Development Proposals

Provide full details of the development proposals and proposed access strategy.

A new access is to be provided via the construction of a c. 7.3m wide single carriageway access track, which is to extend north from Newmarket Approach adjacent to the existing pedestrian cycle path, which is to be retained.

The proposed access route is to cross the existing non-definitive bridleway which runs east-west between Pontefract Lane and Halton Moor Road, with an at grade, appropriate crossing to be provided. The development proposals (which are currently a work in progress), are provided in **Appendix B** on the Network Rail 'Neville Hill TSC_Proposed Layout' drawing.

2.6 Baseline Traffic Flows

As previously discussed, we intend to conduct traffic surveys and a ped / cycle count to inform the traffic and transport assessment. The scope and location of the proposed traffic surveys are set out below for your comment and agreement:

- 7-day 24 hour ATC surveys at five locations

- MCC turning count junction surveys at two locations (J1: A63 Pontefract Lane / Newmarket Lane Left-in / Left-out Priority Junction & J2: A63 Pontefract Lane / Knowsthorpe Gate 3-arm Roundabout Junction)
- Pedestrian / cycle count at one location
- The ATC surveys are to be conducted over a 24 hour / seven day period. The ATCs will be directional, classified and include speed data
- The MCCs are to be carried out on one weekday (but not a Monday or Friday). The surveyed period will be 07:00 – 10:00hrs and 15:00 – 18:00hrs. All vehicles making each of the turning movements will be recorded over 15 minute intervals. Maximum queue lengths will be collected at 5 minute intervals on each arm of the junctions between the hours of 07:00 - 10:00 and 15:00 – 18:00. The MCCs will be conducted during the seven day ATC survey period
- The pedestrian / cycle count will be carried out on a weekday for 24 hours during the 7-day period and will be directional / classified



Figure 3 – Accident Study Area

2.7 Committed Development

Please confirm whether there are any relevant committed developments that need to be accounted for within the TS.

2.8 Trip Generation

Given the nature of the works, trip generation will be based on first principal assumptions supplied by the contractor.

2.9 Trip Distribution

All vehicular trips are proposed to route between the Strategic Road Network (SRN) and the compound via the A63 Pontefract Lane and Junction 45 M1, from which they will disperse onto the wider highway network as necessary.

2.10 Junction Capacity Assessment

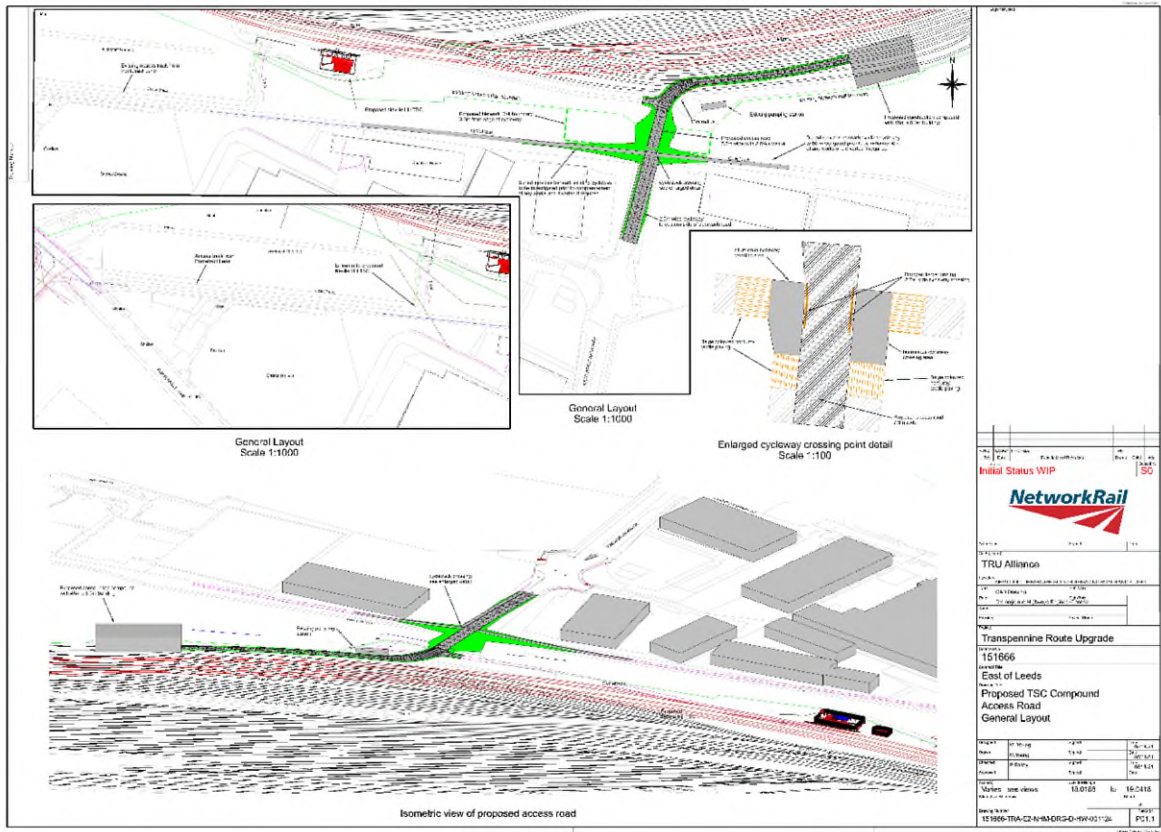
It is proposed to undertake junction capacity assessments to understand the impact of construction traffic at the A63 Pontefract Lane / Newmarket Lane left-in / left-out priority junction & A63 Pontefract Lane / Knowsthorpe Gate 3-arm roundabout junctions, utilising TRL Junctions 10 (PICADY / ARCADY) capacity assessment software. The following assessment years are proposed:

- Existing Baseline Year – 2022
- Opening Year (with and without construction traffic + committed development traffic) – 2023
- Estimated Completion Year (with and without construction traffic + committed development traffic) – 2027
- All future-year baseline traffic to be calculated through the use of Local Growth Factors sourced from the latest version of TEMPro. Traffic flow diagrams for all scenarios to be appended.

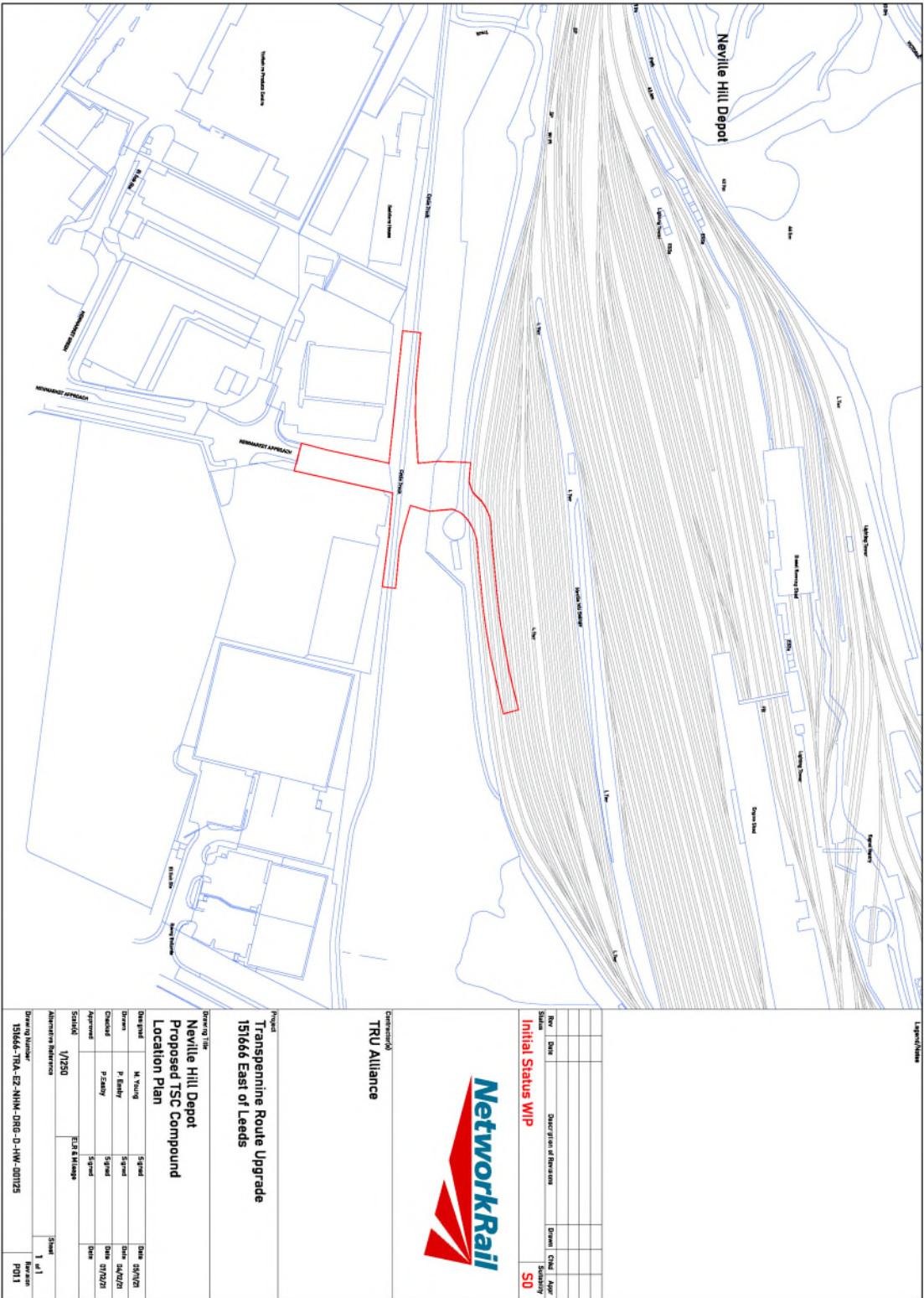
2.11 Summary and Conclusions

Provide a concise summary and conclusions.

APPENDIX A – SITE PROPOSALS



APPENDIX B – TSC SITE PROPOSALS





www.networkrail.co.uk

TRANSPENNINE ROUTE

UPGRADE

This document is the property of Network Rail Infrastructure Limited. It shall not be reproduced in whole or part, nor disclosed to a third party without written permission.

© Network Rail Infrastructure Limited. All rights reserved.

Romanowski, Mark

From: Kimuli, Catherine <Catherine.Kimuli@leeds.gov.uk>
Sent: 31 August 2022 20:14
To: Romanowski, Mark
Subject: [EXTERNAL] RE: Neville Hill Depot - Traffic Counts

Hi Mark,

The scoping note is noted and acceptable, and please note the below list of committed development for consideration

- 15/07655/OT Skelton Gate North
- 18/04404/OT Skelton Gate South
- 19/06507/FU Temple Green Park and Ride Extension; and

Planning application 21/00654/FU is not yet determined but depending on the timing of the planning application could need to be considered.

Regards

Catherine Kimuli BSc Eng (Hons), MSc, MCIHT
Senior Engineer Highways Development
Transport Development Services
Leeds City Council
Merrion House, 8th Floor East Wing
110 Merrion Centre, Leeds, LS2 8BB
T: (0113)3788089
E: catherine.kimuli@leeds.gov.uk
Follow us on Twitter - [@leeds_highways](https://twitter.com/leeds_highways)

From: Romanowski, Mark <Mark.Romanowski@aecom.com>
Sent: 11 August 2022 17:00
To: Kimuli, Catherine <Catherine.Kimuli@leeds.gov.uk>
Cc: Rawling, Sean <sean.rawling@aecom.com>; van der Veen, Joanna <Joanna.vanderVeen@aecom.com>; Pelling, Beth <beth.pelling@aecom.com>; Piper, Tracey <Tracey.Piper@leeds.gov.uk>; Boswell, Heather <Heather.Boswell@aecom.com>
Subject: RE: Neville Hill Depot - Traffic Counts

Some people who received this message don't often get email from mark.romanowski@aecom.com. [Learn why this is important](#)

Hi Catherine,

Please can you provide some feedback on the attached scoping note?

We have a cut off date of **5th Sep** to enable us to commission the traffic surveys to allow our analysis to take place to fit in with project timescales. Many thanks.

Kind regards,

Mark Romanowski BSc (Hons) CMILT
Principal Consultant, Transportation, Consulting
M +44 (0)7921 646241
mark.romanowski@aecom.com

APPENDIX B – COUNT DATA

Newble Hill
Tuesday 13th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	2	0	2
00:15-00:30	0	0	0	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	1	1	0	0	0
Hourly Total	0	1	1	2	0	2
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	0	0	0	0	0
01:45-02:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
02:00-02:15	0	0	0	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	1	0	1
03:30-03:45	1	0	1	0	0	0
03:45-04:00	0	0	0	0	0	0
Hourly Total	1	0	1	1	0	1
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	1	1
Hourly Total	0	0	0	0	1	1
05:00-05:15	2	0	2	0	0	0
05:15-05:30	2	1	3	1	0	1
05:30-05:45	2	1	3	0	1	1
05:45-06:00	1	0	1	0	2	2
Hourly Total	7	2	9	1	3	4
06:00-06:15	1	0	1	0	1	1
06:15-06:30	0	1	1	0	2	2
06:30-06:45	1	1	2	0	2	2
06:45-07:00	0	6	6	2	1	3
Hourly Total	2	8	10	2	6	8
07:00-07:15	0	3	3	3	8	11
07:15-07:30	0	4	4	2	1	3
07:30-07:45	1	2	3	2	5	7
07:45-08:00	4	0	4	4	0	4
Hourly Total	5	9	14	11	14	25
08:00-08:15	0	2	2	0	6	6
08:15-08:30	2	1	3	0	0	0
08:30-08:45	3	2	5	3	3	6
08:45-09:00	0	0	0	1	0	1
Hourly Total	5	5	10	4	9	13
09:00-09:15	1	2	3	0	1	1
09:15-09:30	0	0	0	1	0	1
09:30-09:45	0	0	0	0	1	1
09:45-10:00	0	0	0	1	0	1
Hourly Total	1	2	3	2	2	4
10:00-10:15	3	1	4	2	0	2
10:15-10:30	0	0	0	0	0	0
10:30-10:45	0	0	0	1	2	3
10:45-11:00	0	0	0	0	1	1
Hourly Total	3	1	4	3	3	6
11:00-11:15	0	1	1	0	0	0
11:15-11:30	3	1	4	0	1	1
11:30-11:45	1	2	3	2	0	2
11:45-12:00	1	1	2	0	1	1
Hourly Total	5	4	9	2	2	4
12:00-12:15	1	3	4	0	1	1
12:15-12:30	2	2	4	0	3	3
12:30-12:45	4	1	5	2	1	3
12:45-13:00	1	1	2	0	1	1
Hourly Total	8	7	15	2	5	7
13:00-13:15	0	0	0	4	1	5
13:15-13:30	2	0	2	0	1	1
13:30-13:45	1	1	2	0	0	0
13:45-14:00	4	0	4	1	0	1
Hourly Total	7	1	8	5	2	7
14:00-14:15	3	0	3	0	6	6
14:15-14:30	2	1	3	2	1	3
14:30-14:45	0	1	1	0	4	4
14:45-15:00	0	1	1	1	2	3
Hourly Total	5	3	8	3	13	16
15:00-15:15	0	0	0	1	2	3
15:15-15:30	1	1	2	4	5	9
15:30-15:45	0	2	2	6	3	9
15:45-16:00	0	1	1	1	4	5
Hourly Total	1	4	5	12	14	26
16:00-16:15	1	1	2	2	2	4
16:15-16:30	1	1	2	2	0	2
16:30-16:45	1	1	2	1	0	1
16:45-17:00	2	1	3	1	1	2
Hourly Total	5	3	8	6	3	9
17:00-17:15	1	1	2	4	5	9
17:15-17:30	1	2	3	1	3	4
17:30-17:45	0	0	0	2	2	4
17:45-18:00	0	1	1	1	2	3
Hourly Total	2	4	6	8	10	18
18:00-18:15	4	2	6	1	2	3
18:15-18:30	2	1	3	0	0	0
18:30-18:45	7	2	9	1	3	4
18:45-19:00	1	0	1	0	5	5
Hourly Total	14	5	19	2	10	12
19:00-19:15	3	2	5	1	1	2
19:15-19:30	1	2	3	6	1	7
19:30-19:45	0	0	0	2	0	2
19:45-20:00	0	0	0	1	0	1
Hourly Total	4	4	8	10	2	12
20:00-20:15	2	0	2	0	0	0
20:15-20:30	0	0	0	2	1	3
20:30-20:45	5	1	6	1	1	2
20:45-21:00	0	0	0	0	0	0
Hourly Total	7	1	8	3	2	5
21:00-21:15	0	1	1	1	0	1
21:15-21:30	0	1	1	0	0	0
21:30-21:45	0	0	0	1	0	1
21:45-22:00	1	0	1	0	0	0
Hourly Total	1	2	3	2	0	2
22:00-22:15	0	0	0	0	1	1
22:15-22:30	1	0	1	1	1	2
22:30-22:45	0	0	0	0	0	0
22:45-23:00	0	0	0	0	0	0
Hourly Total	1	0	1	1	2	3
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	1	1	0	0	0
23:30-23:45	0	1	1	2	0	2
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	2	2	2	0	2
TOTAL	66	70	136	80	107	186

Needle Hill
Wednesday 14th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	0	0	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	0	0	0	0	0
01:45-02:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
02:00-02:15	0	0	0	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	0	0
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	1	1
Hourly Total	0	0	0	0	1	1
05:00-05:15	1	0	1	1	0	1
05:15-05:30	4	0	4	0	1	1
05:30-05:45	1	2	3	0	1	1
05:45-06:00	0	0	0	0	1	1
Hourly Total	6	2	8	1	3	4
06:00-06:15	0	0	0	1	1	2
06:15-06:30	2	5	7	0	0	0
06:30-06:45	3	1	4	0	1	1
06:45-07:00	0	3	3	1	3	4
Hourly Total	5	9	14	2	5	7
07:00-07:15	0	2	2	2	6	8
07:15-07:30	1	2	3	0	2	2
07:30-07:45	1	4	5	0	1	1
07:45-08:00	4	1	5	2	0	2
Hourly Total	6	9	15	4	9	13
08:00-08:15	2	3	5	3	4	7
08:15-08:30	1	1	2	2	2	4
08:30-08:45	1	3	4	2	1	3
08:45-09:00	4	1	5	0	0	0
Hourly Total	8	8	16	7	7	14
09:00-09:15	2	2	4	2	1	3
09:15-09:30	1	1	2	1	0	1
09:30-09:45	1	1	2	2	1	3
09:45-10:00	0	0	0	0	1	1
Hourly Total	4	4	8	5	3	8
10:00-10:15	2	2	4	3	1	4
10:15-10:30	0	0	0	0	1	1
10:30-10:45	0	0	0	0	0	0
10:45-11:00	2	0	2	0	0	0
Hourly Total	4	2	6	3	2	5
11:00-11:15	0	0	0	0	2	2
11:15-11:30	0	0	0	0	1	1
11:30-11:45	2	0	2	0	0	0
11:45-12:00	1	2	3	4	1	5
Hourly Total	3	2	5	4	4	8
12:00-12:15	0	1	1	0	1	1
12:15-12:30	1	1	2	4	1	5
12:30-12:45	2	0	2	0	1	1
12:45-13:00	1	1	2	2	1	3
Hourly Total	4	3	7	6	3	9
13:00-13:15	2	0	2	1	2	3
13:15-13:30	1	1	2	2	1	3
13:30-13:45	1	2	3	3	1	4
13:45-14:00	3	0	3	1	1	2
Hourly Total	7	3	10	7	5	12
14:00-14:15	6	2	8	2	2	4
14:15-14:30	2	0	2	1	2	3
14:30-14:45	2	0	2	1	2	3
14:45-15:00	0	1	1	0	2	2
Hourly Total	10	3	13	6	6	12
15:00-15:15	1	1	2	3	2	5
15:15-15:30	2	0	2	2	1	3
15:30-15:45	0	0	0	3	1	4
15:45-16:00	1	1	2	4	2	6
Hourly Total	4	2	6	10	6	16
16:00-16:15	2	1	3	1	2	3
16:15-16:30	4	2	6	2	3	5
16:30-16:45	1	1	2	1	1	2
16:45-17:00	2	4	6	3	2	5
Hourly Total	9	8	17	7	8	15
17:00-17:15	1	2	3	6	5	11
17:15-17:30	5	2	7	0	3	3
17:30-17:45	2	4	6	2	4	6
17:45-18:00	4	1	5	3	4	7
Hourly Total	12	9	21	11	16	27
18:00-18:15	0	2	2	2	2	4
18:15-18:30	4	1	5	1	1	2
18:30-18:45	0	2	2	3	1	4
18:45-19:00	0	0	0	3	0	3
Hourly Total	4	5	9	9	4	13
19:00-19:15	1	0	1	0	2	2
19:15-19:30	1	0	1	0	2	2
19:30-19:45	1	1	2	3	0	3
19:45-20:00	0	1	1	1	0	1
Hourly Total	3	1	4	4	4	8
20:00-20:15	1	0	1	0	1	1
20:15-20:30	1	0	1	1	0	1
20:30-20:45	0	1	1	1	0	1
20:45-21:00	0	0	0	0	1	1
Hourly Total	2	1	3	2	2	4
21:00-21:15	0	0	0	0	1	1
21:15-21:30	2	0	2	0	0	0
21:30-21:45	0	1	1	0	0	0
21:45-22:00	0	4	4	0	0	0
Hourly Total	2	5	7	0	1	1
22:00-22:15	0	0	0	0	4	4
22:15-22:30	0	0	0	0	0	0
22:30-22:45	0	0	0	0	0	0
22:45-23:00	1	0	1	0	1	1
Hourly Total	1	0	1	0	5	5
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	2	2	1	2	3
23:30-23:45	0	0	0	0	0	0
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	2	2	1	2	3
TOTAL	180	84	264	10	102	210

Needle Hill
Thursday 15th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	4	4	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	0	0	0	0	0
Hourly Total	0	4	4	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	1	1	0	0	0
01:45-02:00	0	0	0	0	1	1
Hourly Total	0	1	1	0	1	1
02:00-02:15	0	0	0	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	0	0
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	1	1
Hourly Total	0	0	0	0	1	1
05:00-05:15	0	0	0	0	0	0
05:15-05:30	1	1	2	0	0	0
05:30-05:45	2	2	4	0	0	0
05:45-06:00	1	0	1	1	1	2
Hourly Total	4	3	7	1	1	2
06:00-06:15	0	0	0	1	1	2
06:15-06:30	1	4	5	0	1	1
06:30-06:45	2	3	5	0	4	4
06:45-07:00	0	2	2	1	1	2
Hourly Total	3	9	12	2	6	8
07:00-07:15	1	1	2	3	6	9
07:15-07:30	0	1	1	0	3	3
07:30-07:45	1	3	4	4	1	5
07:45-08:00	2	1	3	3	0	3
Hourly Total	4	5	9	10	10	20
08:00-08:15	1	4	5	0	1	1
08:15-08:30	2	1	3	0	3	3
08:30-08:45	3	2	5	0	3	3
08:45-09:00	0	1	1	0	0	0
Hourly Total	6	8	14	3	7	10
09:00-09:15	0	0	0	0	0	0
09:15-09:30	0	0	0	4	1	5
09:30-09:45	1	3	4	0	0	0
09:45-10:00	1	0	1	0	0	0
Hourly Total	2	3	5	4	1	5
10:00-10:15	0	1	1	0	1	1
10:15-10:30	0	1	1	2	1	3
10:30-10:45	1	0	1	2	0	2
10:45-11:00	0	0	0	2	0	2
Hourly Total	1	2	3	4	2	6
11:00-11:15	1	1	2	1	0	1
11:15-11:30	0	0	0	0	0	0
11:30-11:45	0	0	0	1	0	1
11:45-12:00	0	0	0	0	0	0
Hourly Total	1	1	2	2	0	2
12:00-12:15	0	0	0	0	1	1
12:15-12:30	0	1	1	0	0	0
12:30-12:45	3	0	3	0	0	0
12:45-13:00	1	2	3	1	0	1
Hourly Total	4	3	7	1	1	2
13:00-13:15	1	2	3	1	1	2
13:15-13:30	1	2	3	3	1	4
13:30-13:45	2	1	3	0	1	1
13:45-14:00	1	0	1	1	2	3
Hourly Total	5	5	10	5	4	9
14:00-14:15	6	1	7	2	1	3
14:15-14:30	2	2	4	1	5	6
14:30-14:45	3	2	5	0	3	3
14:45-15:00	1	2	3	1	1	2
Hourly Total	12	7	19	4	10	14
15:00-15:15	0	0	0	0	0	0
15:15-15:30	4	1	5	3	0	3
15:30-15:45	0	3	3	2	3	5
15:45-16:00	0	1	1	4	1	5
Hourly Total	4	4	8	9	4	13
16:00-16:15	1	1	2	4	1	5
16:15-16:30	0	1	1	1	2	3
16:30-16:45	7	2	9	1	1	2
16:45-17:00	4	0	4	1	0	1
Hourly Total	12	4	16	6	4	10
17:00-17:15	1	1	2	6	1	7
17:15-17:30	1	4	5	2	2	4
17:30-17:45	2	0	2	1	1	2
17:45-18:00	1	3	4	1	1	2
Hourly Total	5	8	13	10	5	15
18:00-18:15	0	1	1	2	2	4
18:15-18:30	0	1	1	1	4	5
18:30-18:45	1	1	2	2	7	9
18:45-19:00	2	2	4	0	4	4
Hourly Total	3	5	8	9	17	26
19:00-19:15	0	0	0	0	4	4
19:15-19:30	1	1	2	0	2	2
19:30-19:45	0	0	0	0	1	1
19:45-20:00	1	0	1	0	1	1
Hourly Total	2	1	3	0	7	7
20:00-20:15	0	1	1	0	0	0
20:15-20:30	0	0	0	1	0	1
20:30-20:45	0	0	0	1	0	1
20:45-21:00	1	0	1	0	0	0
Hourly Total	1	1	2	2	0	2
21:00-21:15	1	0	1	0	1	1
21:15-21:30	0	1	1	0	0	0
21:30-21:45	0	1	1	1	0	1
21:45-22:00	0	1	1	0	0	0
Hourly Total	1	3	4	1	1	2
22:00-22:15	0	0	0	0	1	1
22:15-22:30	0	0	0	0	0	0
22:30-22:45	0	0	0	0	0	0
22:45-23:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	1	1	0	0	0
23:30-23:45	0	0	0	2	1	3
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	1	1	2	1	3
TOTAL	72	88	160	80	88	168

Newble Hill
Friday 16th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	1	1	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	2	0	2	0	0	0
Hourly Total	2	1	3	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	0	0	0	0	0
01:45-02:00	0	1	1	0	0	0
Hourly Total	0	1	1	0	0	0
02:00-02:15	0	1	1	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	1	1	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	1	1
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
05:00-05:15	1	0	1	0	0	0
05:15-05:30	2	0	2	0	1	1
05:30-05:45	1	2	3	0	2	2
05:45-06:00	1	0	1	0	1	1
Hourly Total	5	2	7	0	5	5
06:00-06:15	0	0	0	0	0	0
06:15-06:30	1	2	3	0	1	1
06:30-06:45	1	3	4	0	5	5
06:45-07:00	0	6	6	2	0	2
Hourly Total	2	11	13	2	6	8
07:00-07:15	0	3	3	1	0	1
07:15-07:30	1	2	3	2	3	5
07:30-07:45	1	0	1	4	2	6
07:45-08:00	2	0	2	2	1	3
Hourly Total	4	5	9	7	6	13
08:00-08:15	1	3	4	0	2	2
08:15-08:30	1	1	2	0	1	1
08:30-08:45	1	1	2	0	2	2
08:45-09:00	1	1	2	0	0	0
Hourly Total	4	6	10	0	5	5
09:00-09:15	1	0	1	2	2	4
09:15-09:30	1	0	1	3	0	3
09:30-09:45	1	7	8	1	1	2
09:45-10:00	0	0	0	2	0	2
Hourly Total	3	7	10	6	3	9
10:00-10:15	3	0	3	0	1	1
10:15-10:30	2	0	2	1	0	1
10:30-10:45	0	2	2	1	2	3
10:45-11:00	1	0	1	1	0	1
Hourly Total	6	2	8	4	3	7
11:00-11:15	0	0	0	1	2	3
11:15-11:30	1	0	1	0	2	2
11:30-11:45	4	0	4	2	1	3
11:45-12:00	1	0	1	0	1	1
Hourly Total	6	0	6	3	6	9
12:00-12:15	0	1	1	0	0	0
12:15-12:30	1	1	2	0	2	2
12:30-12:45	0	1	1	2	3	5
12:45-13:00	0	0	0	1	2	3
Hourly Total	1	2	3	3	5	8
13:00-13:15	0	2	2	3	0	3
13:15-13:30	4	2	6	1	4	5
13:30-13:45	1	0	1	1	1	2
13:45-14:00	0	0	0	0	0	0
Hourly Total	5	4	9	5	5	10
14:00-14:15	0	2	2	1	1	2
14:15-14:30	1	1	2	0	0	0
14:30-14:45	1	1	2	0	0	0
14:45-15:00	1	1	2	1	1	2
Hourly Total	3	4	7	2	2	4
15:00-15:15	0	1	1	0	1	1
15:15-15:30	2	1	3	0	0	0
15:30-15:45	0	1	1	4	3	7
15:45-16:00	3	2	5	2	2	4
Hourly Total	5	4	9	6	4	10
16:00-16:15	4	1	5	2	4	6
16:15-16:30	1	0	1	2	1	3
16:30-16:45	0	0	0	2	1	3
16:45-17:00	3	1	4	2	2	4
Hourly Total	8	2	10	6	7	13
17:00-17:15	2	2	4	1	3	4
17:15-17:30	3	0	3	1	2	3
17:30-17:45	0	5	5	4	0	4
17:45-18:00	3	0	3	3	0	3
Hourly Total	8	7	15	8	5	13
18:00-18:15	2	0	2	0	2	2
18:15-18:30	0	0	0	3	0	3
18:30-18:45	0	2	2	2	0	2
18:45-19:00	2	0	2	0	1	1
Hourly Total	4	2	6	5	3	8
19:00-19:15	1	1	2	2	3	5
19:15-19:30	0	0	0	0	1	1
19:30-19:45	0	0	0	1	0	1
19:45-20:00	0	0	0	0	0	0
Hourly Total	1	1	2	3	4	7
20:00-20:15	2	0	2	1	0	1
20:15-20:30	0	0	0	1	1	2
20:30-20:45	1	0	1	0	0	0
20:45-21:00	0	0	0	1	0	1
Hourly Total	3	0	3	2	1	3
21:00-21:15	0	0	0	0	0	0
21:15-21:30	0	1	1	1	2	3
21:30-21:45	0	0	0	0	0	0
21:45-22:00	0	0	0	0	0	0
Hourly Total	0	1	1	1	2	3
22:00-22:15	0	0	0	1	1	2
22:15-22:30	0	0	0	0	0	0
22:30-22:45	0	0	0	0	0	0
22:45-23:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	2	2	1	0	1
23:30-23:45	0	0	0	2	0	2
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	2	2	3	0	3
TOTAL	78	71	149	78	78	156

Neville Hill
Saturday 17th September 2022

TIME	Eastbound			Westbound		
	FED	CYCLE	TOTAL	FED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	0	0	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	1	1	0	0	0
01:45-02:00	0	1	1	0	0	0
Hourly Total	0	2	2	0	0	0
02:00-02:15	0	0	0	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	0	0
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	1	1
Hourly Total	0	0	0	0	1	1
05:00-05:15	0	0	0	0	0	0
05:15-05:30	0	0	0	0	0	0
05:30-05:45	0	0	0	0	1	1
05:45-06:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	2	2
06:00-06:15	0	0	0	1	1	2
06:15-06:30	0	0	0	0	1	1
06:30-06:45	1	0	1	0	0	0
Hourly Total	1	0	1	0	2	2
07:00-07:15	0	0	0	0	0	0
07:15-07:30	0	1	1	1	0	1
07:30-07:45	1	0	1	0	0	0
07:45-08:00	0	0	0	0	1	1
Hourly Total	1	0	2	2	1	2
08:00-08:15	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0
08:30-08:45	2	0	2	1	1	2
08:45-09:00	1	0	1	1	0	1
Hourly Total	3	0	3	2	1	2
09:00-09:15	1	0	1	1	1	2
09:15-09:30	1	0	1	0	0	0
09:30-09:45	0	0	0	2	1	2
09:45-10:00	0	0	0	1	0	1
Hourly Total	2	0	2	4	2	6
10:00-10:15	0	0	0	0	1	1
10:15-10:30	0	0	0	0	0	0
10:30-10:45	0	1	1	0	0	0
10:45-11:00	0	0	0	0	1	1
Hourly Total	0	1	1	0	2	2
11:00-11:15	0	0	0	0	0	0
11:15-11:30	0	2	2	0	1	1
11:30-11:45	2	0	2	4	0	4
11:45-12:00	1	0	1	2	9	10
Hourly Total	3	2	5	6	10	16
12:00-12:15	5	1	6	3	1	6
12:15-12:30	2	0	2	3	0	3
12:30-12:45	0	1	1	2	0	2
12:45-13:00	0	0	0	2	2	4
Hourly Total	7	2	9	10	3	13
13:00-13:15	0	0	0	3	2	5
13:15-13:30	0	0	0	1	0	1
13:30-13:45	0	0	0	0	0	0
13:45-14:00	1	0	1	4	6	10
Hourly Total	1	0	1	8	8	16
14:00-14:15	0	0	0	0	1	1
14:15-14:30	3	1	4	2	2	4
14:30-14:45	2	0	2	0	1	1
14:45-15:00	4	6	10	0	0	0
Hourly Total	9	7	16	2	3	5
15:00-15:15	1	0	1	0	0	0
15:15-15:30	0	1	1	0	1	1
15:30-15:45	0	0	0	0	1	1
15:45-16:00	1	1	2	2	1	3
Hourly Total	2	2	4	3	2	5
16:00-16:15	0	1	1	0	0	0
16:15-16:30	0	1	1	0	0	0
16:30-16:45	1	0	1	0	1	1
16:45-17:00	0	0	0	0	0	0
Hourly Total	1	2	3	0	1	1
17:00-17:15	1	1	2	1	0	1
17:15-17:30	1	2	3	0	2	2
17:30-17:45	3	1	4	3	0	3
17:45-18:00	1	4	5	7	1	8
Hourly Total	6	8	14	11	3	14
18:00-18:15	2	0	2	2	1	3
18:15-18:30	0	0	0	0	0	0
18:30-18:45	0	1	1	5	0	5
18:45-19:00	1	1	2	1	4	5
Hourly Total	3	2	5	8	5	13
19:00-19:15	0	1	1	0	1	1
19:15-19:30	1	1	2	0	0	0
19:30-19:45	0	0	0	0	0	0
19:45-20:00	0	0	0	1	0	1
Hourly Total	1	2	3	1	1	2
20:00-20:15	1	1	2	0	0	0
20:15-20:30	0	0	0	0	0	0
20:30-20:45	0	0	0	1	0	1
20:45-21:00	0	0	0	0	0	0
Hourly Total	1	1	2	1	0	1
21:00-21:15	0	0	0	0	0	0
21:15-21:30	0	0	0	0	0	0
21:30-21:45	0	0	0	0	0	0
21:45-22:00	7	1	8	0	0	0
Hourly Total	7	1	8	0	0	0
22:00-22:15	0	0	0	0	0	0
22:15-22:30	0	0	0	0	0	0
22:30-22:45	0	0	0	0	0	0
22:45-23:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
23:00-23:15	0	0	0	4	1	5
23:15-23:30	0	0	0	0	0	0
23:30-23:45	0	1	1	0	0	0
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	1	1	4	1	5
TOTAL	49	34	83	88	56	121

	Eastbound			Westbound		
	FED	CYCLE	TOTAL	FED	CYCLE	TOTAL
00:00-02:00	0	0	0	0	0	0
02:00-02:00	0	2	2	0	0	0
02:00-03:00	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0
04:00-05:00	0	0	0	0	1	1
05:00-06:00	0	0	0	0	2	2
06:00-07:00	2	0	2	1	1	4
07:00-08:00	1	1	2	1	1	3
08:00-09:00	3	0	3	2	1	3
09:00-10:00	2	0	2	4	2	6
10:00-11:00	0	1	1	2	2	4
11:00-12:00	3	2	5	6	10	16
12:00-13:00	7	2	9	10	5	15
13:00-14:00	1	0	1	8	8	16
14:00-15:00	9	7	16	2	6	8
15:00-16:00	2	2	4	3	2	5
16:00-17:00	1	2	3	0	1	2
17:00-18:00	6	8	14	11	3	14
18:00-19:00	1	2	3	8	6	14
19:00-20:00	1	2	3	1	1	2
20:00-21:00	1	1	2	1	0	1
21:00-22:00	7	1	8	0	0	0
22:00-23:00	0	0	0	0	0	0
23:00-00:00	0	1	1	4	1	5

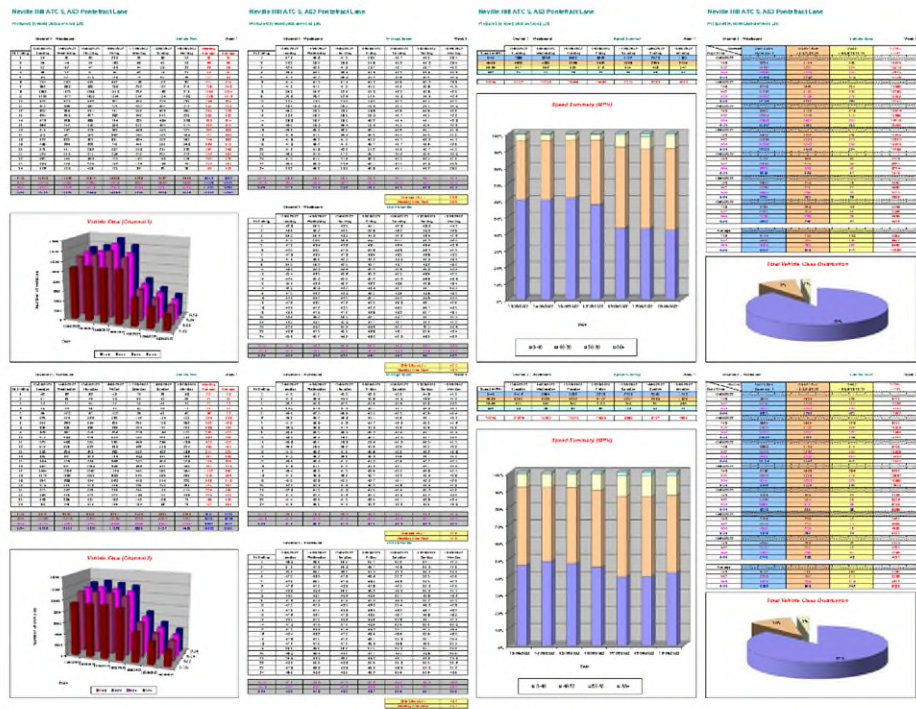
Neville Hill
Sunday 18th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	0	0	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	0	0	0	0	0
01:30-01:45	0	0	0	0	0	0
01:45-02:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
02:00-02:15	0	1	1	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	1	1	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	0	0
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
05:00-05:15	0	0	0	0	0	0
05:15-05:30	0	0	0	0	0	0
05:30-05:45	1	0	1	0	0	0
05:45-06:00	0	0	0	0	0	0
Hourly Total	1	0	1	0	0	0
06:00-06:15	0	0	0	0	0	0
06:15-06:30	0	0	0	0	0	0
06:30-06:45	1	0	1	0	0	0
06:45-07:00	0	0	0	0	0	0
Hourly Total	1	0	1	0	0	0
07:00-07:15	0	0	0	1	0	1
07:15-07:30	0	0	0	0	2	2
07:30-07:45	0	1	1	0	1	1
07:45-08:00	2	1	3	0	0	0
Hourly Total	2	2	4	1	3	4
08:00-08:15	0	0	0	1	0	1
08:15-08:30	0	0	0	0	0	0
08:30-08:45	1	0	1	5	2	7
08:45-09:00	0	0	0	2	1	3
Hourly Total	1	0	1	8	3	11
09:00-09:15	0	1	1	0	0	0
09:15-09:30	0	1	1	3	0	3
09:30-09:45	0	0	0	0	2	2
09:45-10:00	1	0	1	2	0	2
Hourly Total	1	2	3	5	2	7
10:00-10:15	0	0	0	0	0	0
10:15-10:30	0	0	0	0	2	2
10:30-10:45	0	0	0	0	1	1
10:45-11:00	0	0	0	0	4	4
Hourly Total	0	0	0	0	7	7
11:00-11:15	4	0	4	0	0	0
11:15-11:30	2	2	4	1	0	1
11:30-11:45	2	0	2	3	2	5
11:45-12:00	0	0	0	0	0	0
Hourly Total	6	2	8	4	2	6
12:00-12:15	0	0	0	0	0	0
12:15-12:30	0	0	0	2	1	3
12:30-12:45	0	0	0	3	0	3
12:45-13:00	0	0	0	4	2	6
Hourly Total	0	0	0	9	3	12
13:00-13:15	0	1	1	0	0	0
13:15-13:30	0	1	1	2	2	4
13:30-13:45	2	3	5	1	0	1
13:45-14:00	1	0	1	0	1	1
Hourly Total	3	4	7	3	3	6
14:00-14:15	4	0	4	0	0	0
14:15-14:30	0	1	1	0	0	0
14:30-14:45	5	1	6	3	1	4
14:45-15:00	2	0	2	2	0	2
Hourly Total	11	2	13	5	1	6
15:00-15:15	1	0	1	0	0	0
15:15-15:30	0	0	0	2	0	2
15:30-15:45	1	0	1	0	0	0
15:45-16:00	1	1	2	1	1	2
Hourly Total	3	1	4	3	1	4
16:00-16:15	1	0	1	1	1	2
16:15-16:30	1	0	1	0	0	0
16:30-16:45	0	0	0	0	0	0
16:45-17:00	0	0	0	1	0	1
Hourly Total	2	0	2	2	1	3
17:00-17:15	0	1	1	0	2	2
17:15-17:30	0	1	1	0	0	0
17:30-17:45	0	1	1	2	1	3
17:45-18:00	0	1	1	1	1	2
Hourly Total	0	4	4	3	4	7
18:00-18:15	0	2	2	0	1	1
18:15-18:30	0	0	0	0	0	0
18:30-18:45	0	0	0	0	1	1
18:45-19:00	0	3	3	0	1	1
Hourly Total	0	5	5	0	2	2
19:00-19:15	1	2	3	2	0	2
19:15-19:30	0	0	0	0	0	0
19:30-19:45	3	0	3	1	1	2
19:45-20:00	2	0	2	0	0	0
Hourly Total	6	2	8	3	1	4
20:00-20:15	0	1	1	0	0	0
20:15-20:30	1	0	1	0	0	0
20:30-20:45	4	0	4	0	0	0
20:45-21:00	0	0	0	0	0	0
Hourly Total	5	1	6	0	0	0
21:00-21:15	0	0	0	0	0	0
21:15-21:30	0	0	0	0	0	0
21:30-21:45	0	0	0	0	0	0
21:45-22:00	0	1	1	0	0	0
Hourly Total	0	1	1	0	0	0
22:00-22:15	0	0	0	0	0	0
22:15-22:30	0	0	0	0	0	0
22:30-22:45	0	0	0	0	1	1
22:45-23:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	0	0	0	0	0
23:30-23:45	0	0	0	0	0	0
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
TOTAL	44	20	64	40	41	81

	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-01:00	0	0	0	0	0	0
01:00-02:00	0	0	0	0	0	0
02:00-03:00	0	0	0	0	0	0
03:00-04:00	0	0	0	0	0	0
04:00-05:00	0	0	0	0	0	0
05:00-06:00	0	0	0	0	0	0
06:00-07:00	0	0	0	0	0	0
07:00-08:00	0	0	0	0	0	0
08:00-09:00	0	0	0	0	0	0
09:00-10:00	0	0	0	0	0	0
10:00-11:00	0	0	0	0	0	0
11:00-12:00	0	0	0	0	0	0
12:00-13:00	0	0	0	0	0	0
13:00-14:00	0	0	0	0	0	0
14:00-15:00	0	0	0	0	0	0
15:00-16:00	0	0	0	0	0	0
16:00-17:00	0	0	0	0	0	0
17:00-18:00	0	0	0	0	0	0
18:00-19:00	0	0	0	0	0	0
19:00-20:00	0	0	0	0	0	0
20:00-21:00	0	0	0	0	0	0
21:00-22:00	0	0	0	0	0	0
22:00-23:00	0	0	0	0	0	0
23:00-00:00	0	0	0	0	0	0

Newble Hill
Monday 19th September 2022

TIME	Eastbound			Westbound		
	PED	CYCLE	TOTAL	PED	CYCLE	TOTAL
00:00-00:15	0	0	0	0	0	0
00:15-00:30	0	0	0	0	0	0
00:30-00:45	0	0	0	0	0	0
00:45-01:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
01:00-01:15	0	0	0	0	0	0
01:15-01:30	0	1	1	0	0	0
01:30-01:45	0	1	1	0	0	0
01:45-02:00	0	0	0	0	0	0
Hourly Total	0	2	2	0	0	0
02:00-02:15	0	0	0	0	0	0
02:15-02:30	0	0	0	0	0	0
02:30-02:45	0	0	0	0	0	0
02:45-03:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
03:00-03:15	0	0	0	0	0	0
03:15-03:30	0	0	0	0	0	0
03:30-03:45	0	0	0	0	1	1
03:45-04:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1
04:00-04:15	0	0	0	0	0	0
04:15-04:30	0	0	0	0	0	0
04:30-04:45	0	0	0	0	0	0
04:45-05:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
05:00-05:15	0	0	0	0	0	0
05:15-05:30	0	0	0	0	0	0
05:30-05:45	0	0	0	0	1	1
05:45-06:00	1	0	1	0	0	0
Hourly Total	1	0	1	0	1	1
06:00-06:15	4	1	5	0	1	1
06:15-06:30	1	0	1	0	1	1
06:30-06:45	1	1	2	1	0	1
06:45-07:00	0	0	0	0	0	0
Hourly Total	6	2	8	1	2	3
07:00-07:15	0	1	1	1	0	1
07:15-07:30	0	0	0	0	1	1
07:30-07:45	0	0	0	0	2	2
07:45-08:00	0	0	0	0	0	0
Hourly Total	0	1	1	1	3	4
08:00-08:15	0	0	0	0	0	0
08:15-08:30	0	0	0	0	2	2
08:30-08:45	1	0	1	0	0	0
08:45-09:00	0	0	0	0	2	2
Hourly Total	1	0	1	2	2	4
09:00-09:15	1	0	1	0	0	0
09:15-09:30	1	0	1	1	0	1
09:30-09:45	0	0	0	0	2	2
09:45-10:00	0	0	0	0	0	0
Hourly Total	2	0	2	1	2	3
10:00-10:15	4	0	4	0	0	0
10:15-10:30	0	0	0	0	0	0
10:30-10:45	1	0	1	1	0	1
10:45-11:00	0	0	0	1	0	1
Hourly Total	5	0	5	2	0	2
11:00-11:15	0	0	0	0	0	0
11:15-11:30	0	1	1	0	0	0
11:30-11:45	1	1	2	0	1	1
11:45-12:00	0	1	1	0	1	1
Hourly Total	1	2	3	1	2	3
12:00-12:15	1	2	3	0	0	0
12:15-12:30	0	0	0	0	0	0
12:30-12:45	0	1	1	1	0	1
12:45-13:00	0	0	0	1	0	1
Hourly Total	1	3	4	2	0	2
13:00-13:15	2	0	2	0	0	0
13:15-13:30	2	1	3	1	0	1
13:30-13:45	0	2	2	1	0	1
13:45-14:00	2	2	4	1	0	1
Hourly Total	6	3	9	2	0	2
14:00-14:15	1	2	3	0	0	0
14:15-14:30	1	1	2	2	1	3
14:30-14:45	0	1	1	1	4	5
14:45-15:00	1	1	2	1	0	1
Hourly Total	3	4	7	4	5	9
15:00-15:15	4	0	4	0	2	2
15:15-15:30	1	4	5	2	1	3
15:30-15:45	0	3	3	1	3	4
15:45-16:00	0	0	0	2	2	4
Hourly Total	5	7	12	5	6	11
16:00-16:15	0	1	1	0	1	1
16:15-16:30	2	0	2	1	0	1
16:30-16:45	1	5	6	0	1	1
16:45-17:00	0	1	1	0	0	0
Hourly Total	3	7	10	1	1	2
17:00-17:15	1	0	1	1	1	2
17:15-17:30	3	3	6	5	5	10
17:30-17:45	0	0	0	1	3	4
17:45-18:00	2	0	2	0	1	1
Hourly Total	6	3	9	7	9	16
18:00-18:15	0	1	1	0	1	1
18:15-18:30	1	1	2	0	4	4
18:30-18:45	0	0	0	1	0	1
18:45-19:00	2	1	3	2	0	2
Hourly Total	3	2	5	3	5	8
19:00-19:15	3	0	3	0	1	1
19:15-19:30	0	1	1	1	1	2
19:30-19:45	0	1	1	3	0	3
19:45-20:00	0	0	0	0	0	0
Hourly Total	3	2	5	4	2	6
20:00-20:15	0	4	4	0	0	0
20:15-20:30	0	0	0	0	2	2
20:30-20:45	1	0	1	0	4	4
20:45-21:00	0	0	0	0	1	1
Hourly Total	1	4	5	4	7	11
21:00-21:15	0	0	0	0	0	0
21:15-21:30	0	1	1	0	0	0
21:30-21:45	0	1	1	1	0	1
21:45-22:00	0	0	0	0	0	0
Hourly Total	0	2	2	1	0	1
22:00-22:15	0	0	0	0	0	0
22:15-22:30	0	1	1	0	1	1
22:30-22:45	0	0	0	0	0	0
22:45-23:00	0	1	1	0	0	0
Hourly Total	0	2	2	0	1	1
23:00-23:15	0	0	0	0	0	0
23:15-23:30	0	0	0	0	0	0
23:30-23:45	0	0	0	0	0	0
23:45-00:00	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0
TOTAL	53	52	105	47	52	99



Neville Hill
 Tuesday 13th September 2022
 Junction: 1
 Approach: Newmarket Approach

Left to A63 Postdirect Lane (E)										Right to A63 Postdirect Lane (W)									
TIME	CYCLE	M/CYCLE	CAR	LSV	OSV1	OSV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LSV	OSV1	OSV2	BUS	TOTAL	PCUs	
07:00 - 07:15	0	0	1	1	3	5	1	0	9.4	0	0	0	0	0	0	0	0	0.0	
07:15 - 07:30	0	0	2	3	5	1	0	11	14.6	0	0	0	0	0	0	0	0	0.0	
07:30 - 07:45	0	0	2	6	3	0	0	11	12.5	0	0	0	0	0	0	0	0	0.0	
07:45 - 08:00	0	0	5	2	2	2	0	11	14.6	0	0	0	0	0	0	0	0	0.0	
Hourly Total	0	1	19	16	12	3	0	42	51.1	0	0	0	0	0	0	0	0	0.0	
08:00 - 08:15	0	0	7	6	3	1	0	0	18.0	0	0	0	0	0	0	0	0	0.0	
08:15 - 08:30	0	0	4	6	3	0	0	0	13	14.5	0	0	0	0	0	0	0	0.0	
08:30 - 08:45	0	0	3	3	2	1	0	0	9	11.3	0	0	0	0	0	0	0	0.0	
08:45 - 09:00	0	0	4	10	3	0	0	0	17	18.5	0	0	0	0	0	0	0	0.0	
Hourly Total	0	0	14	25	9	1	0	48	54.0	0	0	0	0	0	0	0	0	0.0	
09:00 - 09:15	0	0	6	18	5	0	0	0	29	31.5	0	0	0	0	0	0	0	0.0	
09:15 - 09:30	0	0	9	9	9	0	0	0	27	28.0	0	0	0	0	0	0	0	0.0	
09:30 - 09:45	0	0	6	8	4	0	0	0	18	28.0	0	0	0	0	0	0	0	0.0	
09:45 - 10:00	0	1	6	16	8	0	0	0	31	34.4	0	0	0	0	0	0	0	0.0	
Hourly Total	0	1	29	51	23	0	0	95	105.9	0	0	0	0	0	0	0	0	0.0	
TOTAL	0	2	44	52	44	4	0	186	212.0	0	0	0	0	0	0	0	0	0.0	
15:00 - 15:15	0	0	7	9	1	1	0	0	18	19.0	0	0	0	0	0	0	0	0.0	
15:15 - 15:30	0	0	6	3	1	1	0	11	12.0	0	0	0	0	0	0	0	0	0.0	
15:30 - 15:45	0	1	16	6	2	2	0	0	27	38.0	0	0	0	0	0	0	0	0.0	
15:45 - 16:00	0	1	9	8	1	1	0	0	20	21.2	0	0	0	0	0	0	0	0.0	
Hourly Total	0	2	38	26	5	5	0	76	81.0	0	0	0	0	0	0	0	0	0.0	
16:00 - 16:15	0	0	24	7	2	1	1	0	35	38.3	0	0	0	0	0	0	0	0.0	
16:15 - 16:30	0	0	24	11	0	0	0	1	36	37.6	0	0	0	0	0	0	0	0.0	
16:30 - 16:45	0	0	26	7	1	1	0	0	35	36.8	0	0	0	0	0	0	0	0.0	
16:45 - 17:00	0	0	19	6	1	1	0	0	27	28.0	0	0	0	0	0	0	0	0.0	
Hourly Total	0	0	93	31	4	3	2	133	140.3	0	0	0	0	0	0	0	0	0.0	
17:00 - 17:15	0	1	45	7	0	0	0	0	53	52.4	0	0	0	0	0	0	0	0.0	
17:15 - 17:30	0	0	8	2	0	1	0	0	11	12.3	0	0	0	0	0	0	0	0.0	
17:30 - 17:45	0	0	11	7	0	0	0	0	18	18.0	0	0	0	0	0	0	0	0.0	
17:45 - 18:00	0	0	8	2	0	0	0	0	10	10.0	0	0	0	0	0	0	0	0.0	
Hourly Total	0	1	72	19	0	1	0	92	92.7	0	0	0	0	0	0	0	0	0.0	
18:00 - 18:15	0	0	9	0	0	0	0	0	9	9.0	0	0	0	0	0	0	0	0.0	
18:15 - 18:30	0	0	3	0	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0.0	
18:30 - 18:45	0	0	4	0	0	0	0	0	4	4.0	0	0	0	0	0	0	0	0.0	
18:45 - 19:00	0	0	2	1	0	0	0	0	3	3.0	0	0	0	0	0	0	0	0.0	
Hourly Total	0	0	19	1	0	0	0	19	19.0	0	0	0	0	0	0	0	0	0.0	
TOTAL	0	3	221	76	9	9	2	328	335.4	0	0	0	0	0	0	0	0	0.0	

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LSV	1.0
OSV1	1.5
OSV2	1.3
BUS	2.0

Neville Hill

Tuesday 13th September 2022

Junction: 1

Approach: A63 Pontefract Lane East

Abcetto & G3 Pontefract Lane (W)										Right to Newmarket Approach									
TIME	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB+	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB+	
07:00 - 07:15	0	2	221	58	19	12	3	265	341.9	0	0	0	0	0	0	0	0	0	
07:15 - 07:30	0	0	273	62	19	7	2	363	383.6	0	0	0	0	0	0	0	0	0	
07:30 - 07:45	0	2	314	66	20	15	2	419	449.3	0	0	0	0	0	0	0	0	0	
07:45 - 08:00	0	2	330	66	26	15	2	441	474.3	0	0	0	0	0	0	0	0	0	
Hourly Total	0	6	1138	252	64	49	9	1538	1649.1	0	0	0	0	0	0	0	0	0	
08:00 - 08:15	0	2	337	73	17	19	3	465	583.7	0	0	0	0	0	0	0	0	0	
08:15 - 08:30	0	4	344	80	24	10	2	464	488.0	0	0	0	0	0	0	0	0	0	
08:30 - 08:45	0	0	393	74	31	21	3	522	567.0	0	0	0	0	0	0	0	0	0	
08:45 - 09:00	0	2	256	72	21	9	5	435	461.0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	8	1400	304	102	58	13	1826	2021.1	0	0	0	0	0	0	0	0	0	
09:00 - 09:15	0	0	206	67	25	18	3	319	357.9	0	0	0	0	0	0	0	0	0	
09:15 - 09:30	0	1	182	53	20	18	4	278	314.0	0	0	0	0	0	0	0	0	0	
09:30 - 09:45	0	0	150	47	24	23	3	247	291.0	0	0	0	0	0	0	0	0	0	
09:45 - 10:00	0	0	121	46	33	11	3	214	247.0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	669	213	102	70	13	1058	1212.4	0	0	0	0	0	0	0	0	0	
TOTAL	0	15	3197	708	289	177	35	4482	4862.6	0	0	0	0	0	0	0	0	0	
15:00 - 15:15	0	1	146	47	22	31	4	231	259.7	0	0	0	0	0	0	0	0	0	
15:15 - 15:30	0	2	156	44	13	16	3	236	263.1	0	0	0	0	0	0	0	0	0	
15:30 - 15:45	0	2	152	32	24	17	3	238	266.9	0	0	0	0	0	0	0	0	0	
15:45 - 16:00	0	1	146	45	16	11	3	222	246.7	0	0	0	0	0	0	0	0	0	
Hourly Total	0	6	600	168	75	55	13	917	1036.4	0	0	0	0	0	0	0	0	0	
16:00 - 16:15	0	3	191	44	13	17	3	271	300.0	0	0	0	0	0	0	0	0	0	
16:15 - 16:30	0	1	178	50	8	12	5	262	291.0	0	0	0	0	0	0	0	0	0	
16:30 - 16:45	0	5	196	39	9	4	1	245	252.7	0	0	0	0	0	0	0	0	0	
16:45 - 17:00	0	0	180	44	4	7	3	251	265.1	0	0	0	0	0	0	0	0	0	
Hourly Total	0	9	758	181	34	40	12	1034	1169.6	0	0	0	0	0	0	0	0	0	
17:00 - 17:15	0	2	225	32	5	5	6	275	286.6	0	0	0	0	0	0	0	0	0	
17:15 - 17:30	0	0	190	18	3	4	5	240	251.7	0	0	0	0	0	0	0	0	0	
17:30 - 17:45	0	2	185	10	2	5	4	228	238.3	0	0	0	0	0	0	0	0	0	
17:45 - 18:00	0	5	155	22	4	2	1	188	191.0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	7	765	113	14	16	16	931	979.6	0	0	0	0	0	0	0	0	0	
18:00 - 18:15	0	0	155	11	1	2	6	155	164.1	0	0	0	0	0	0	0	0	0	
18:15 - 18:30	0	0	113	9	1	9	1	138	151.2	0	0	0	0	0	0	0	0	0	
18:30 - 18:45	0	0	101	12	2	4	2	121	129.2	0	0	0	0	0	0	0	0	0	
18:45 - 19:00	0	1	85	16	2	1	3	108	112.7	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	432	55	6	16	12	522	557.2	0	0	0	0	0	0	0	0	0	
TOTAL	0	23	3550	517	129	127	53	3484	3872.8	0	0	0	0	0	0	0	0	0	

PCB Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LOV	1.0
OSV1	1.5
OSV2	2.5
BUS	2.0

Neville Hill

Tuesday 13th September 2022

Junction: 1

Approach: A63 Pontefract Lane West

Left to Roundabout Approach										Ahead to A63 Pontefract Lane (E)									
TIME	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB*	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB*	
07:00 - 07:15	0	0	9	6	0	0	0	15	15.0	1	1	90	37	16	12	2	159	163.2	
07:15 - 07:30	0	0	23	8	1	1	0	33	34.8	0	0	91	43	13	9	2	156	178.2	
07:30 - 07:45	0	0	17	5	2	0	0	24	25.8	0	1	107	39	24	9	4	184	211.1	
07:45 - 08:00	0	0	20	6	1	0	0	27	27.5	0	2	149	42	13	7	1	214	229.4	
Hourly Total	0	0	69	25	4	1	0	99	102.1	1	4	437	167	66	37	9	715	801.9	
08:00 - 08:15	0	0	16	5	2	0	0	23	24.8	1	0	158	42	13	11	3	266	299.8	
08:15 - 08:30	0	0	15	5	1	2	0	23	26.1	1	2	139	33	24	5	3	267	266.5	
08:30 - 08:45	0	0	16	3	6	0	0	25	28.0	0	1	100	36	15	11	3	186	199.2	
08:45 - 09:00	0	0	13	10	5	1	0	29	32.8	0	0	111	45	17	6	3	182	261.3	
Hourly Total	0	0	60	23	14	3	0	108	118.9	2	3	488	156	67	33	12	701	846.8	
09:00 - 09:15	0	0	9	10	3	0	0	22	23.5	0	0	86	32	12	9	4	143	164.7	
09:15 - 09:30	0	0	12	8	9	1	0	31	36.8	0	0	87	31	24	11	3	167	187.6	
09:30 - 09:45	0	1	5	8	10	2	0	26	31.8	0	0	90	37	17	8	5	167	188.9	
09:45 - 10:00	0	0	7	10	7	0	0	24	38.5	0	1	70	41	19	15	1	147	176.4	
Hourly Total	0	1	33	46	29	3	0	106	121.6	0	1	333	141	72	44	13	684	795.6	
TOTAL	0	1	102	88	47	7	0	385	337.8	3	8	1208	458	265	114	34	2069	2307.5	
10:00 - 10:15	0	0	8	4	2	2	0	11	14.6	1	0	140	35	17	10	2	285	227.7	
10:15 - 10:30	0	0	5	6	1	0	0	12	12.5	0	1	138	41	28	6	2	215	239.2	
10:30 - 10:45	0	0	4	8	3	0	0	15	18.5	1	1	161	29	21	11	3	227	251.4	
10:45 - 11:00	0	0	5	9	1	0	0	15	15.5	1	0	152	54	15	15	1	238	286.2	
Hourly Total	0	0	17	27	7	2	0	53	58.1	3	2	591	159	81	42	8	886	985.5	
11:00 - 11:15	0	0	11	8	1	1	1	22	24.8	0	0	208	49	14	2	1	269	278.6	
11:15 - 11:30	0	0	7	6	0	0	1	14	15.8	0	0	258	49	17	10	2	336	368.5	
11:30 - 11:45	0	0	3	2	0	2	0	7	9.8	0	0	255	43	8	7	3	336	362.1	
11:45 - 12:00	0	0	5	6	1	0	0	12	12.5	0	0	274	45	7	4	4	334	346.7	
Hourly Total	0	0	26	22	2	3	2	55	63.9	0	0	1018	185	46	23	16	1215	1337.9	
12:00 - 12:15	0	0	2	1	0	0	0	3	3.8	0	0	278	43	7	2	2	338	338.1	
12:15 - 12:30	0	0	2	3	1	0	0	6	6.5	0	2	296	39	8	3	2	358	368.7	
12:30 - 12:45	0	0	7	2	0	0	0	9	9.8	1	2	246	34	3	2	5	293	388.1	
12:45 - 13:00	0	0	4	1	0	0	0	5	5.8	1	4	222	26	2	0	1	256	254.8	
Hourly Total	0	0	15	7	1	0	0	23	23.5	2	8	1042	139	28	7	11	1229	1252.7	
13:00 - 13:15	0	0	1	0	0	0	0	1	1.8	1	1	197	20	2	2	3	226	231.2	
13:15 - 13:30	0	0	2	1	0	0	0	3	3.8	1	1	150	21	3	4	1	178	184.3	
13:30 - 13:45	0	0	1	0	0	0	0	1	1.8	0	0	117	15	3	0	6	146	150.5	
13:45 - 14:00	0	0	2	1	1	0	0	4	4.5	0	0	96	22	0	4	2	124	131.2	
Hourly Total	0	0	6	2	1	0	0	9	9.5	2	2	560	82	6	18	12	674	689.2	
TOTAL	0	0	64	38	11	5	2	148	154.8	7	12	3283	106	153	82	41	4064	4275.3	

PCB Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LOV	1.0
OSV1	1.5
OSV2	2.5
BUS	2.0

PGA Factors:	
CYCLE	0.2
M/CYCLE	0.4
Q/S	2.8
Q/M	2.8
Q2F1	2.5
Q2F2	2.3
SA/S	2.8

Neville Hill
 Tuesday 13th September 2022
 Junction: 2
 Approach: Knowsthorpe Gate

Left to A63 Part-time Lane (B)										Right to A63 Part-time Lane (E)									
TIME	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB+	CYCLE	M/CYCLE	CAR	LOV	OSV1	OSV2	BUS	TOTAL	PCB+	
07:00 - 07:15	0	0	5	2	9	3	0	19	27.4	0	0	7	2	10	8	0	27	42.4	
07:15 - 07:30	0	0	3	6	5	4	0	18	25.7	0	0	4	2	2	6	0	14	22.8	
07:30 - 07:45	0	0	4	3	6	3	0	16	22.9	0	0	4	10	10	6	0	30	48.8	
07:45 - 08:00	0	0	1	2	6	3	0	12	18.9	0	0	3	6	5	7	0	21	32.6	
Hourly Total	0	0	13	13	26	13	0	65	94.9	0	0	18	20	27	27	0	92	140.6	
08:00 - 08:15	0	0	7	3	19	4	0	29	52.7	0	0	4	7	11	7	0	29	63.6	
08:15 - 08:30	0	0	3	8	6	5	0	22	31.5	0	0	8	5	6	10	0	29	40.9	
08:30 - 08:45	0	0	6	9	10	4	0	29	39.2	0	0	3	9	4	6	0	20	29.8	
08:45 - 09:00	0	0	5	10	5	3	0	23	38.4	0	0	8	11	6	13	0	37	55.6	
Hourly Total	0	0	21	46	48	16	0	122	162.8	0	0	21	32	27	36	0	115	174.8	
09:00 - 09:15	0	0	7	8	10	3	0	28	36.9	0	0	5	9	2	5	0	21	28.5	
09:15 - 09:30	0	0	6	11	7	4	0	28	36.7	0	0	5	8	5	7	0	26	36.6	
09:30 - 09:45	0	0	8	12	6	6	0	32	62.8	0	0	3	7	5	12	0	27	46.1	
09:45 - 10:00	0	0	7	8	8	3	0	26	33.9	0	0	3	5	4	8	1	21	34.4	
Hourly Total	0	0	28	39	31	16	0	114	150.3	0	0	16	29	16	32	1	94	144.6	
TOTAL	0	0	62	97	97	46	0	381	488.8	0	0	55	81	78	94	1	381	489.2	
15:00 - 15:15	0	0	21	4	6	0	0	31	34.8	0	0	34	9	4	7	0	54	69.1	
15:15 - 15:30	0	1	13	6	7	2	0	29	34.5	0	1	18	10	7	6	0	42	52.7	
15:30 - 15:45	0	1	19	4	7	2	0	32	38.5	0	0	33	5	5	8	0	51	63.9	
15:45 - 16:00	0	0	15	8	5	3	0	31	37.4	0	0	39	13	5	5	0	66	75.5	
Hourly Total	0	2	68	22	25	7	0	124	144.4	0	1	124	37	24	26	0	212	257.2	
16:00 - 16:15	0	0	33	3	2	1	0	39	41.3	0	0	65	13	6	2	0	86	91.6	
16:15 - 16:30	0	0	33	3	0	0	0	36	36.8	0	0	24	12	2	2	0	38	53.6	
16:30 - 16:45	0	2	31	3	3	1	0	40	41.6	0	1	60	9	4	6	0	80	95.2	
16:45 - 17:00	0	0	26	6	1	2	0	35	38.1	0	0	33	7	1	4	0	45	58.7	
Hourly Total	0	2	123	15	6	4	0	158	157.8	0	1	182	41	13	14	0	201	205.1	
17:00 - 17:15	0	0	41	4	2	1	0	48	58.3	0	0	65	9	3	1	0	78	88.8	
17:15 - 17:30	0	0	13	0	0	0	0	13	13.8	0	0	31	5	0	4	0	40	46.2	
17:30 - 17:45	0	1	16	1	1	0	0	19	18.9	0	0	26	4	2	2	0	34	37.6	
17:45 - 18:00	0	1	14	0	0	0	0	15	14.4	0	0	16	1	1	1	0	21	24.1	
Hourly Total	0	2	84	5	3	1	0	95	96.6	0	0	138	29	6	9	0	173	187.7	
18:00 - 18:15	0	0	7	3	0	0	0	10	18.0	0	0	30	1	1	1	0	33	34.8	
18:15 - 18:30	0	0	8	1	0	1	0	10	11.5	0	0	4	0	0	2	0	6	8.8	
18:30 - 18:45	0	0	3	1	1	0	0	5	5.5	0	0	6	5	1	3	0	15	19.4	
18:45 - 19:00	0	0	4	1	0	0	0	5	5.8	0	0	8	2	0	2	0	12	14.6	
Hourly Total	0	0	22	6	1	1	0	38	31.8	0	0	48	8	2	6	0	60	77.4	
TOTAL	0	0	6	297	48	35	13	8	389	429.8	0	2	562	106	46	57	0	712	887.4

PCB Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LOV	1.0
OSV1	1.5
OSV2	2.5
BUS	2.0

Abfahrtslauf (Parallel Slalom)													Slalom (Technische Disziplin)													
Zeit		DISC	MOVES	Can	U19	U20	U21	U22	U23	TOTAL	POSS	Can	U19	U20	U21	U22	TOTAL	POSS	Can	U19	U20	U21	U22	TOTAL	POSS	
00:00-00:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:05-00:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:10-00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15-00:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:20-00:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:25-00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30-00:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:35-00:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:40-00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45-00:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:50-00:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:55-01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00-01:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:05-01:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:10-01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15-01:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:20-01:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:25-01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30-01:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:35-01:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:40-01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45-01:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:50-01:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:55-02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00-02:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:05-02:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:10-02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15-02:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:20-02:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:25-02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30-02:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:35-02:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:40-02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45-02:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:50-02:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:55-03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00-03:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:05-03:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:10-03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15-03:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:20-03:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:25-03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30-03:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:35-03:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:40-03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45-03:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:50-03:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:55-04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00-04:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:05-04:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:10-04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15-04:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:20-04:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:25-04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30-04:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:35-04:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:40-04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45-04:50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:50-04:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:55-05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00-05:05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:05-05:10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:10-05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15-05:20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:20-05:25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:25-05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30-05:35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:35-05:40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:40-05:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45-05:																										

PGA Factory	
CYCLE	0.2
M/CYCLE	0.4
CLK	1.0
LGW	1.0
OP#1	1.5
OP#2	2.0
BAVE	2.0

APPENDIX C – STAGE 1 ROAD SAFETY AUDIT

OFFICIAL



ON TRACK TO **BETTER**

Neville Hill Access Road

Stage 1 Road Safety Audit

ProjectWise Reference Number:

151666-TRA-E2-000-REP-W-EN-000147

Version: B01

Issue Date: 04/10/2022



Approval and Authorisation

	Name	Job Title	Signature
Prepared By:	Rob Norfolk	Associate Director	
Checked By:	Tom Langridge	Associate Director	
Approved By:	Daniel Ellis	Project Manager	
Authorised By:	Simon Winch	Network Rail Project Manager	

Document Identity and Metadata Information

This information is a mandatory requirement.

Document Category: **Report**

Applicable Project Stage(s): **GRIP 4**

Briefing Required: ☐

Security Classification: **OFFICIAL**

Document History

Version	Date	Modification	Originator
B01	04/10/2022	First Issue	Rob Norfolk

Implementation

The latest version of this document shall supersede any previous versions.

Compliance

This document is mandated across the 'scope' detailed in section document identity, scope and metadata.

Specific authority not to comply with this document can be requested from the Approval Signatory using the Technical Query process found with the Common Data Environment (CDE).

Disclaimer

In issuing this document for its stated purpose, Network Rail make no warranties, expressed or implied that compliance with all or any documents it issues is sufficient on its own to ensure safe systems of work or operation. Users are reminded of their own duties under health and safety legislation.

All references made within this document were considered correct at time of approval.

Supply

Copies of this document are available electronically via the Common Data Environment but shall be deemed uncontrolled once printed.

Table of Contents

1. INTRODUCTION.....	6
1.1 Purpose	6
1.2 Site Description.....	7
1.3 Scheme overview.....	7
2. DEFINITIONS, ABBREVIATIONS AND REFERENCED DOCUMENTS.....	8
2.1 Abbreviations	8
2.2 Referenced Documents	8
3. ISSUES OUTSTANDING FROM PREVIOUS ROAD SAFETY AUDITS	9
4. ITEMS RESULTING FROM THIS STAGE 1 ROAD SAFETY AUDIT	9
4.1 Local Alignment	9
4.2 General	9
4.3 Junctions.....	9
4.4 Walking Cycling and Horse Riding.....	10
4.5 Traffic Signs, Carriageway Markings and Lighting	14
5. CONCLUSIONS / RECOMMENDATIONS	15
5.1 We certify that this Audit has been carried out based on the principles of	15
DMRB GG / 119 'Road Safety Audit'	15
No others were involved in this Stage 1 RSA	15
APPENDIX A – DOCUMENTS ISSUED TO THE AUDIT TEAM.....	16
APPENDIX B – DOCUMENTS ISSUED TO THE AUDIT TEAM.....	17

List of Tables

Table 1 - Abbreviations	8
Table 2 - Referenced Documents	8

List of Figures

Figure 4-1 - Site photo showing vegetation and fencing at junction.....	10
Figure 4-2 - Extract from Drg: 151666-TRA-E2-NHM-DRG-D-HW-001121 showing proposed junction11	
Figure 4-3 - Extract from Drg: 151666-TRA-E2-NHM-DRG-D-HW-001121 showing proposed junction12	
Figure 4-4 - Site photo showing masked existing shared use sign	14

1. INTRODUCTION

1.1 Purpose

This Stage 1 Road Safety Audit (RSA) has been carried out in respect of the proposed highway works on Newmarket Approach, Leeds. The proposed works are associated with the proposed development to the railway in the area of Neville Hill South Sidings.

The Audit was carried out by approved, experienced, Road Safety Engineers who have not been involved with the design process on behalf of the client, Network Rail. The members of the Audit Team were:

Rob Norfolk – BSc (Hons) Civil Engineering MICT – Audit Team Leader
Associate Director,
AECOM Leeds

Tom Langridge – MSc Eng. BEng (Hons) GMICE – Audit Team Member
Associate Director,
AECOM Leeds

The RSA was undertaken in accordance with the RSA Brief and comprised an examination of the documents provided by the Design Team, which are listed in **Appendix A**.

The RSA took place in September 2022 and the site was examined by both members of the RSA Team together between 14:30hrs and 15:30hrs, on Friday 16th September 2022. Weather conditions during the visit were dry and bright. The existing footway surface was dry throughout the site inspection. Photographs and notes were taken to document impressions of the scheme prior to the preparation of this report.

The terms of reference of the Audit are as described in the Design Manual for Roads and Bridges (DMRB) document GG119 'Road Safety Audit'. The advice issued in the DMRB applies to trunk road and motorway highway improvement schemes; however, it has been used in this report to define the scope of this Audit.

The content of this Audit should not be regarded as a direct instruction to include or remove a measure from within the proposed development. Responsibility for designing the proposed development lies with the designer and as such the Audit Team accepts no design responsibility for any changes made to the proposed development as a result of this Audit.

Collision data for this Stage 1 RSA has not been provided to the Audit Team, although given the nature of the proposed development (i.e. to develop vacant land) it is unlikely that such data exists.

The Audit Team has been notified that there are no departures / relaxations from standards.

All traffic sign and road marking diagram number references are made to The Traffic Signs Regulations and General Directions 2016, (TSRGD).

Unless general to the proposed development, each problem has been identified with reference to key features and highlighted on the problem location plans in **Appendix B**.

1.2 Site Description

Newmarket Approach is located in a light industrial area, to the east of Leeds city centre. It is a no through road leading from the A63 / Pontefract Lane. Newmarket Approach serves several industrial units. To the north of Newmarket Approach is a Sustrans cycleway / bridleway running east to west. This is bounded to the north by the railway boundary and Neville Hill South Sidings, the Leeds to York Main line and Neville Hill Maintenance Depot.

The topography of the site is generally flat or of slight gradient falling towards the Sustrans cycleway from the railway boundary.

1.3 Scheme overview

The Transpennine Route is a key transport link across the North of England, with the core linking Manchester and York, via Huddersfield and Leeds. The main rail operators on the link are Transpennine Express (TPE) and Northern. TPE services provide frequent, fast and semi-fast services between towns and city centres across the North and Yorkshire. Northern provides key local and commuter services into towns and cities whilst also providing key links for freight movement.

The Transpennine Route Upgrade (TRU) is a phased programme of interventions to deliver upgraded and renewed rail infrastructure across the rail route between Manchester and York. The programme will provide a key first step in the transformation of rail travel in the north and aims to:

- increase capacity through service frequency and train capacity;
- provide performance improvements;
- provide journey time improvements; and
- result in positive / non-adverse environmental impacts.

The proposed development at Neville Hill South Sidings is to provide a new vehicle access to the South Sidings via an extension to Newmarket Approach.

The proposed works include:

- a two-way carriageway between Newmarket Approach and the Neville Hill South Sidings, 7.3m wide by 83m long;
- a 2.0m wide footpath on the western sides of the proposed carriageway;
- a 3.0m wide shared footpath and cycleway along the eastern side of the proposed carriageway; and
- a priority controlled junction between the proposed carriageway and the existing east/west cycle track.

2. DEFINITIONS, ABBREVIATIONS AND REFERENCED DOCUMENTS

2.1 Abbreviations

Table 1 - Abbreviations

Abbreviation	Full terminology
RSA	Road Safety Audit
TPE	TransPennine Express
TRU	Transpennine Route Upgrade

2.2 Referenced Documents

Table 2 - Referenced Documents

Source	Reference	Title
Design Manual for Roads and Bridges	GG119	GG 119 Road safety audit (formerly HD 19/15) Revision 2

3. ISSUES OUTSTANDING FROM PREVIOUS ROAD SAFETY AUDITS

The Audit Team has not been made aware of any previous Road Safety Audits being undertaken.

4. ITEMS RESULTING FROM THIS STAGE 1 ROAD SAFETY AUDIT

The following road safety issues were considered during this Stage 1 Road Safety Audit.

4.1 Local Alignment

No Local Alignment issues were identified at this Stage 1 Road Safety Audit.

4.2 General

No General issues were identified at this Stage 1 Road Safety Audit.

4.3 Junctions

No Junction issues were identified at this Stage 1 Road Safety Audit.

4.4 Walking Cycling and Horse Riding

Problem: 4.4.1

Location: Newmarket Approach.

Drawing: 151666-TRA-E2-NHM-DRG-D-HW-001121.

Summary: Risk of pedestrian / cycle / vehicle collisions as a result of proposed priority at access road intersection.

Description:

Drawing 151666-TRA-E2-NHM-DRG-D-HW-001121 shows the General Arrangement for the proposed access road. The proposals include a new vehicle access to the Neville Hill South Sidings through an extension to Newmarket Approach. The proposed access road intersects an existing east / west cycle track with cyclists having priority over vehicles at the junction.

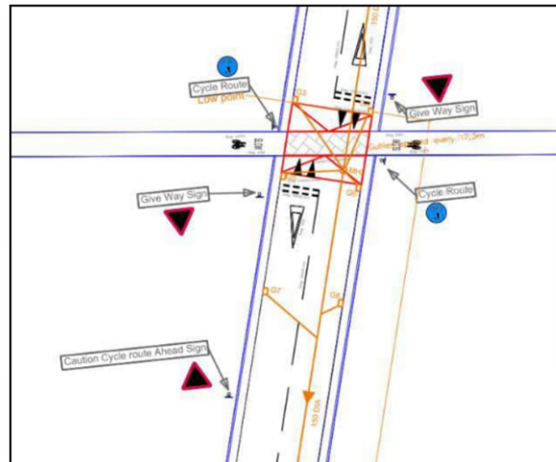
During the site inspection the Audit Team noted that there was thick vegetation on the northern and southern side of the existing cycle track as well as existing fencing along the eastern and western sides of Newmarket Approach.

The Audit Team has concerns that this thick vegetation and fencing may impact the intervisibility between cyclists on the existing cycle track and vehicles traveling on Newmarket Approach.

Should visibility be impacted there may be an increased risk of cycle / vehicle collisions.



Figure 4-1 - Site photo showing vegetation and fencing at junction



OS map data reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright 2021. All rights reserved. Ordnance Survey licence number 0100040692

Figure 4-2 - Extract from Drg: 151666-TRA-E2-NHM-DRG-D-HW-001121 showing proposed junction

Recommendation:

It is recommended that the Design Team provide visibility splays to demonstrate the required visibility can be achieved. Alternatively, it is recommended that the priority is changed at the junction to give priority to Newmarket Approach.

Problem: 4.4.2

Location: Newmarket Approach.

Drawing: 151666-TRA-E2-NHM-DRG-D-HW-001121.

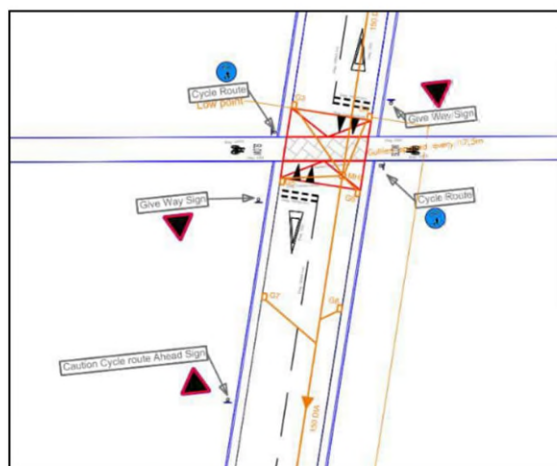
Summary: Risk of pedestrian / cyclist collisions as a result of insufficient warning paving.

Description:

Drawing 151666-TRA-E2-NHM-DRG-D-HW-001121 shows the General Arrangement for the proposed access road. The proposals include a new vehicle access to the Neville Hill South Sidings through an extension to Newmarket Approach. The proposed access road intersects an existing east / west cycle track with cycles having priority over vehicles at the junction. A footway is proposed on the western side of the proposed access road, continuing beyond the cycle track towards the Neville Hill South Sidings. On the eastern side, a shared footpath and cycleway is proposed which terminates at the existing cycle track.

From the information provided to the Audit Team the area where the cycle track meets the proposed footways is proposed to be shared use, with shared use signing provided on the cycle track approaches. Shared use paving has not been proposed as part of the design.

The Audit Team has concerns that without associated shared use paving there may be an increased risk of pedestrian / cycle collisions.



OS map data reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright 2021. All rights reserved. Ordnance Survey licence number 0100040692

Figure 4-3 - Extract from Drg: 151666-TRA-E2-NHM-DRG-D-HW-001121 showing proposed junction

Recommendation:

It is recommended that shared use tactile paving is provided on the cycle track to delineate the area of shared space in accordance with the relevant design standards.

4.5 Traffic Signs, Carriageway Markings and Lighting

Problem: 4.5.1

Location: Newmarket Approach.

Drawing: 151666-TRA-E2-NHM-DRG-D-HW-001121.

Summary: Risk of pedestrian / cycle collisions as a result of masking signing

Description:

Drawing 151666-TRA-E2-NHM-DRG-D-HW-001121 shows the General Arrangement for the proposed access road. The proposals include a new vehicle access to the Neville Hill South Sidings through an extension to Newmarket Approach. The proposed access road intersects an existing east / west cycle track with cycles having priority over vehicles at the junction. An existing shared use cycle / pedestrian route is located on the eastern side of the site with the proposed works retaining a shared use footway in the same location.

During the site inspection it was noted that the existing shared use signing was masked by dense vegetation.

The Audit Team has concerns that should the shared use signing not be visible, there may be an increased risk of pedestrian / cyclist collisions with users unaware that they are in an area of shared space.



Figure 4-4 - Site photo showing masked existing shared use sign

Recommendation:

It is recommended that vegetation is cut back so that existing and proposed signing is not masked, and that a regular maintenance regime is implemented.

5. CONCLUSIONS / RECOMMENDATIONS

5.1 We certify that this Audit has been carried out based on the principles of DMRB GG / 119 'Road Safety Audit'.

AUDIT TEAM LEADER

Rob Norfolk BSc (Hons) Civil Engineering, MICT

AECOM Ltd
2 City Walk
Leeds
West Yorkshire
LS11 9AR

Signed:



Date: 4th October 2022

AUDIT TEAM MEMBER

Tom Langridge MSc Eng. BEng (Hons) GMICE

AECOM Ltd
2 City Walk
Leeds
West Yorkshire
LS11 9AR

Signed:



Date: 4th October 2022

OTHERS INVOLVED

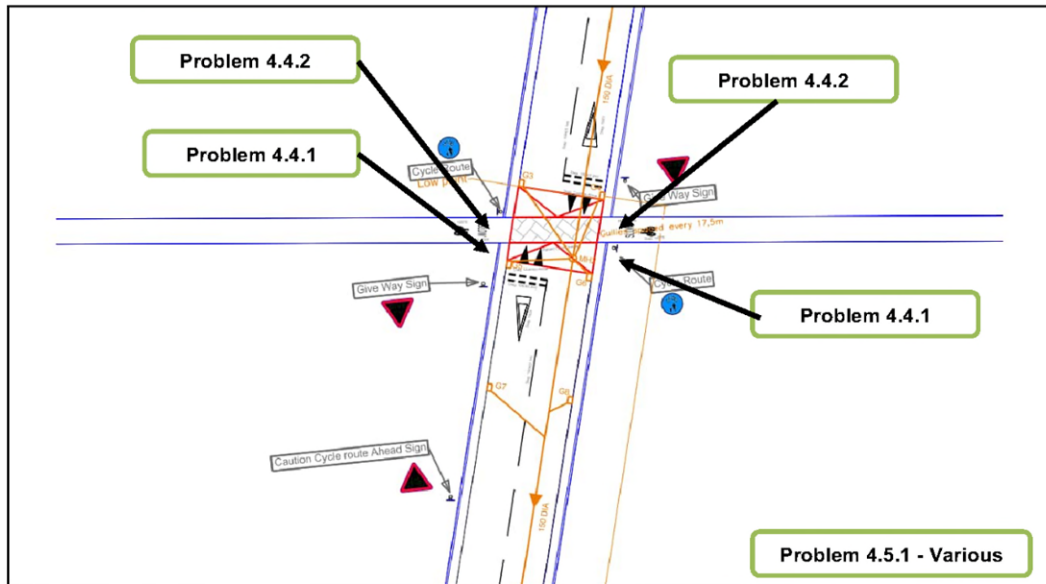
No others were involved in this Stage 1 RSA

APPENDIX A – DOCUMENTS ISSUED TO THE AUDIT TEAM

DOCUMENT NO.	REV	DESCRIPTION	DATE
151666-TRA-76-HUL4-DRG-C-CV-200610	P01	Highway Access Point	08/22
151666-TRA-76-HUL4-DRG-C-CV-200612	P01	Utilities Protection Slab	08/22
151666-TRA-76-HUL4-DRG-E-EP-000451	P01	Street Lighting	08/22
151666-TRA-E2-NHM-DRG-D-HW-001121	P01	General Arrangement	08/22
151666-TRA-E2-NHM-DRG-D-HW-001124	P01	Cross Sections	08/22
151666-TRA-E2-NHM-DRG-D-HW-001125	P01	Long Sections	08/22
151666-TRA-E2-NHM-DRG-D-HW-001126	P01	Typical Cross Section	08/22
151666-TRA-00-TRU-REP-W-MF-800321	-	Road Safety Audit Brief	09/22



APPENDIX B – DOCUMENTS ISSUED TO THE AUDIT TEAM



OS map data reproduced by permission of Ordnance Survey on behalf of
HMSO. © Crown copyright 2021. All rights reserved. Ordnance Survey
licence number 0100040692



 **TRANSPENNINE
ROUTE UPGRADE**

NetworkRail


www.networkrail.co.uk

This document is the property of Network Rail Infrastructure Limited. It shall not be reproduced in whole or part, nor disclosed to a third party without written permission.

© Network Rail Infrastructure Limited. All rights reserved.



 **TRANSPENNINE
ROUTE UPGRADE**

NetworkRail


www.networkrail.co.uk

This document is the property of Network Rail Infrastructure Limited. It shall not be reproduced in whole or part, nor disclosed to a third party without written permission.

© Network Rail Infrastructure Limited. All rights reserved.