APPENDIX C

Sanderson Drawings

SGMSCP-FHT-Z0-SL-DR-H-00002 P03 - Non Motorised User Plans

SGMSCP-FHT-Z0-SL-DR-H-00005 P03 – Areas of highway to be Stopped – up and Created

SGMSCP-FHT-Z0-SL-DR-H-00007 P03 – Proposed Access Arrangements Option 2

SGMSCP-FHT-Z0-SL-DR-H-00008 P03 - Swept Path Analysis of Garbutt Square Proposals

SGMSCP-FHT-Z0-SL-DR-H-00009 P03 – Swept Path Analysis of Proposal Access Arrangements

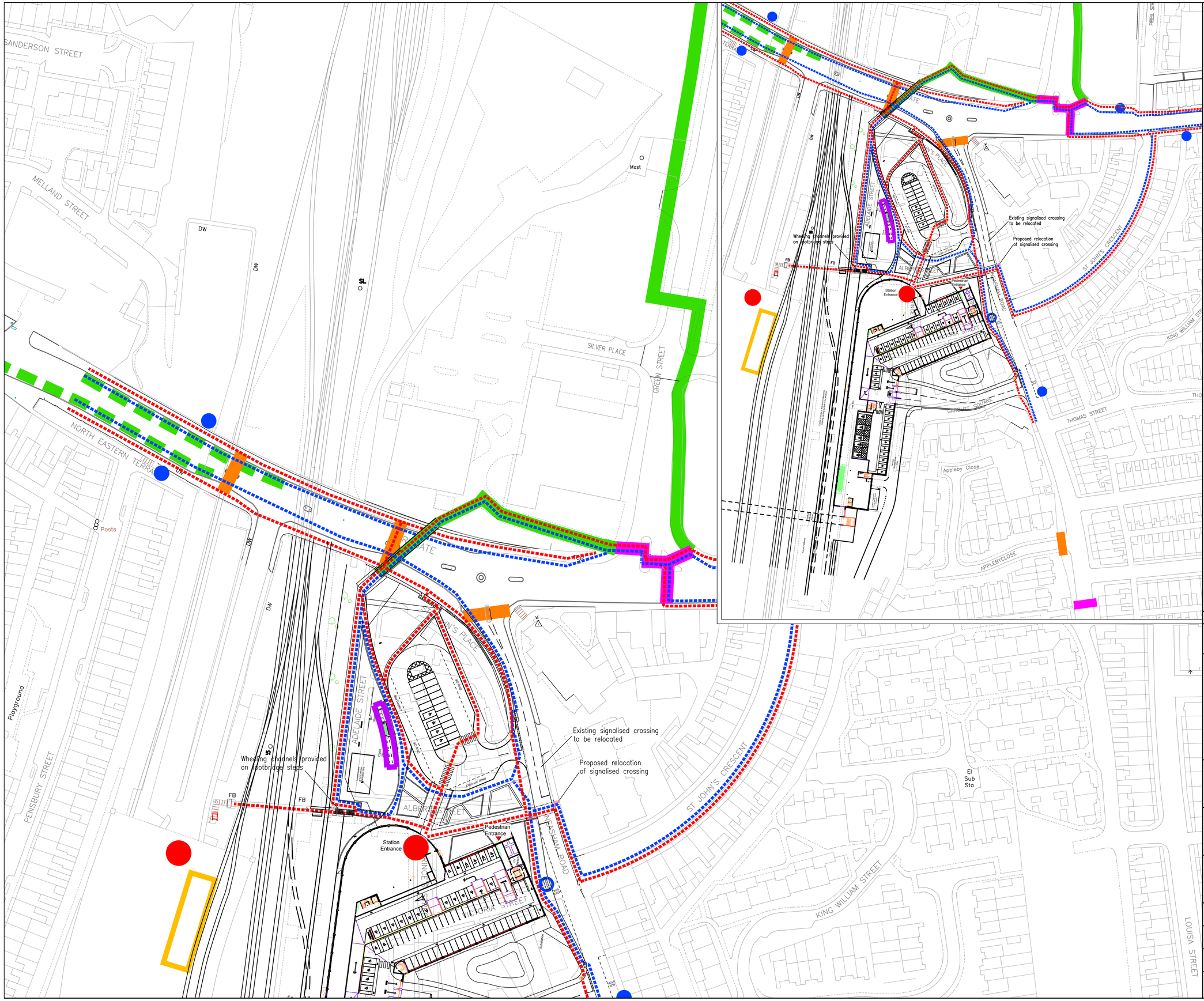
SGMSCP-FHT-Z0-SL-DR-H-00010 P03 – Proposed Access Arrangements Swept Path Analysis of Neasham Road to Parkgate

SGMSCP-FHT-Z0-SL-DR-H-00011 P02 - Swept Path Analysis of Garbutt Square Proposals

Architect Drawings

SGMSCP-NAP-Z1-ZZ-DR-A-00001 Rev P2 – Location Plan

SGMSCP-NAP-Z1-00-DR-A-00010 Rev P5 – Site Plan



Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.2021	DJC
P02	Layout updated	AA	20.04.2021	DJC
P01	Layout updated	AA	23.03.2021	DJC

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Client
WILLMOTT DIXON

Project Title
Gateway MSCP
Darlington Railway Station

Drawing Title
Non Motorised User Plan

Scale	Drawn By
NTS	AA
Drawing Size	**Checked By**
A1	DJC
Date	**Approved By**
29.01.2021	DJC

Drawing Number	Rev
SGMSCP-FHT-Z0-SL-DR-H-00002	P03

FILE REF:

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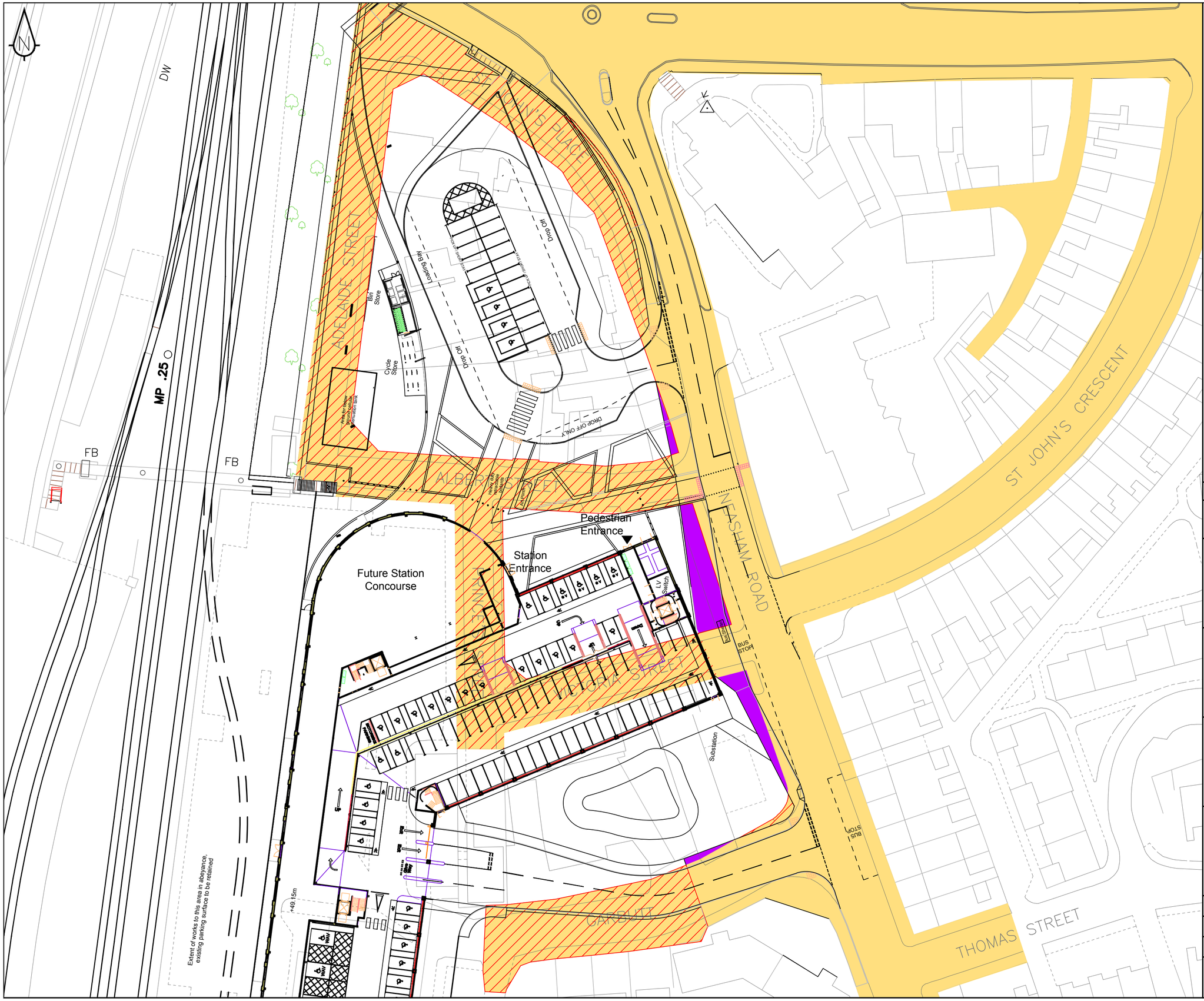

Key

- Existing adopted highway
- Highway to be stopped up
- Area to be offered for adoption

Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.21	DJC
P02	Layout updated	AA	20.04.21	DJC
P01	Layout updated	AA	23.03.21	DJC

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Client

WILLMOTT DIXON

Project Title

Gateway MSCP
Darlington Railway Station

Drawing Title

Areas of Highway to be Stopped-Up and Created

Scale	1:500	Drawn By	AA
Drawing Size	A2	Checked By	KS
Date	09.12.2020	Approved By	KS
Drawing Number	SGMSCP-FHT-Z0-SL-DR-H-00005	Rev	P03

FILE REF:

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+49.15m

WAV

WAV

Give Way

MOTORCYCLE PARKING

Future Station Concourse

Station Entrance

Area for below ground cellular attenuation tank

Bin Store

Cycle Store

Loading Bay

Drop Off

PICK UP / SHORT STAY

Possible Police / Ambulance parking area

Heavy duty retractable bollards

Art Plinth

Drop Off

Indicative top of banking

2.4 x 43m visibility splay measured to traffic island

2.5m

3.0m

4.1m

3.0m

DROP OFF ONLY

Proposed back of footway

R10.0m

3.0m

4.0m

R6.0m

6.3m

6.6m

Existing section of retaining wall to be removed to accommodate visibility splay

Pedestrian Entrance

LV Switch

2.4 x tangential visibility splay

6.5m

20m

Existing dropped kerbs

4.0m

7.0m

3.0m

1.35 x 4.5m shelter

4.0m

Bus Shelter

Substation

BUS STOP

7.25m

3.0m

3.0m

2.4 x 43m visibility splay

Existing signalised crossing to be relocated

Proposed relocation of signalised crossing (Toucan proposed)

Existing dropped kerbs retained

Potential for St Johns Crescent to be made one way (Eastbound)

Dropped Kerbs and appropriate signage / lining for cyclist access

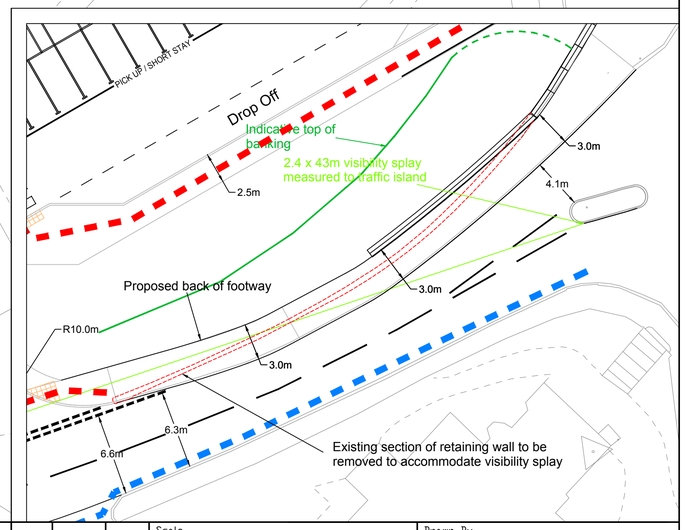
BUS STOP

Existing bus stop

Key

pedestrian access route

cyclist access route



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Client: WILLMOTT DIXON

Project Title: Gateway MSCP, Darlington Railway Station

Drawing Title: Proposed Access Arrangements Option 2

Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.2021	DJC
P02	Layout updated	AA	20.04.2021	DJC
P01	Layout updated	AA	23.03.2021	DJC

Scale: 1:250	Drawn By: AA
Drawing Size: A1	Checked By: DJC
Date: 29.01.2021	Approved By: DJC
Drawing Number: SGMSCP-FHT-ZO-SL-DR-H-00007	Rev: P03

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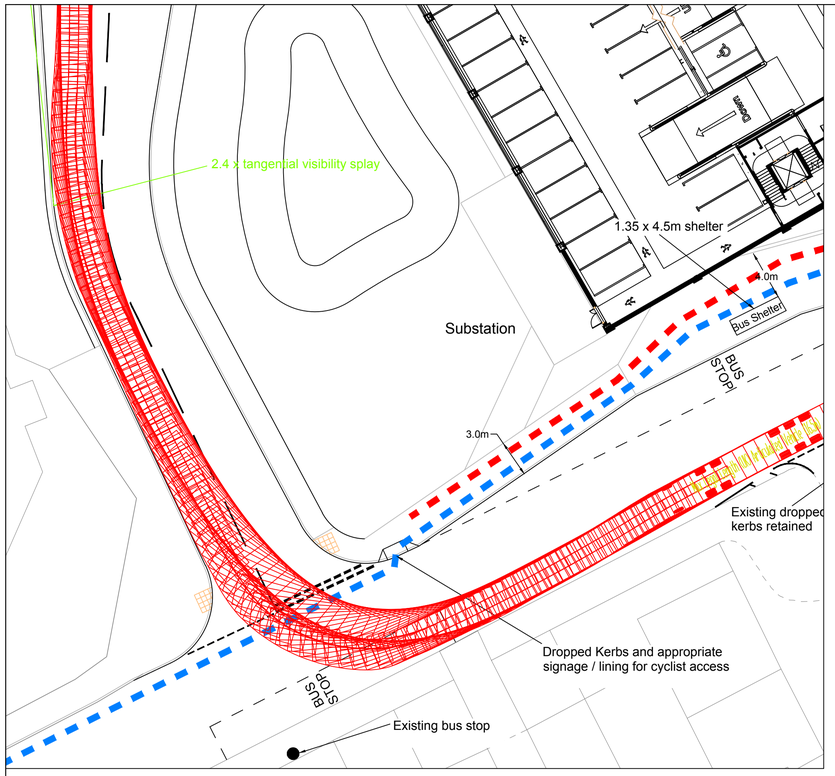

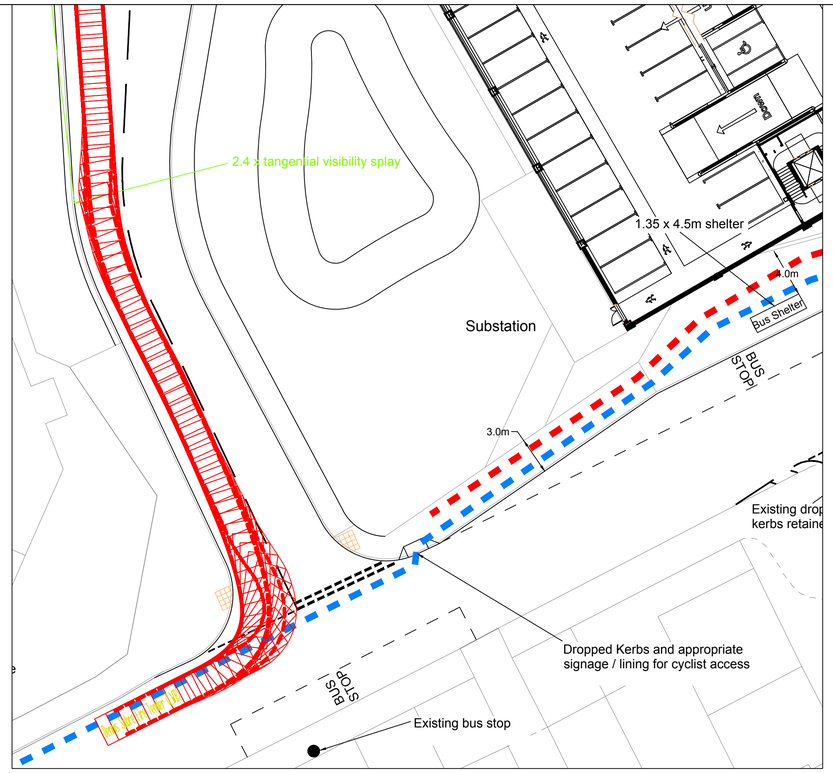

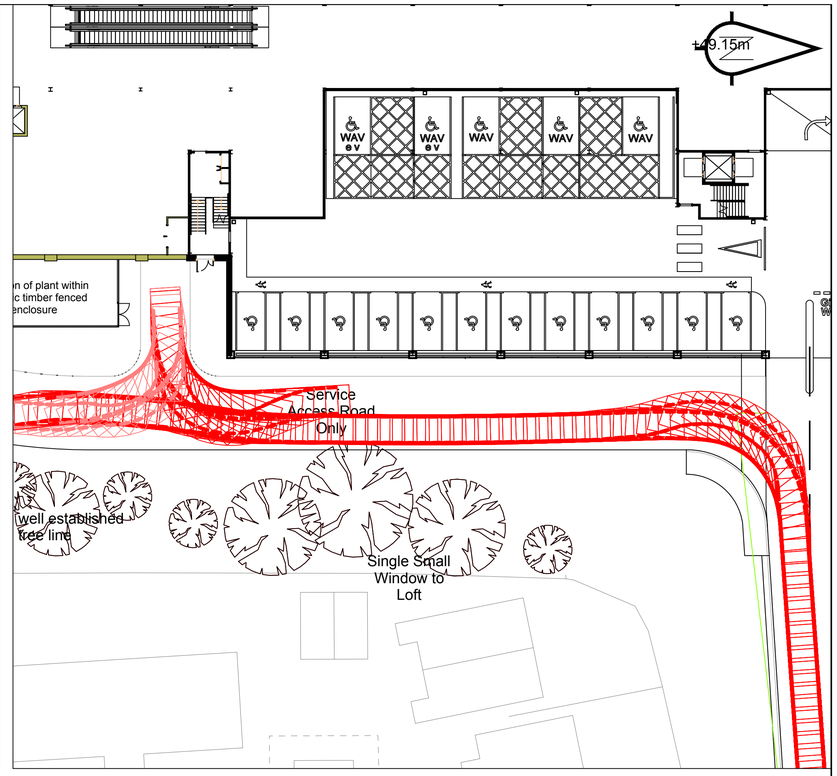

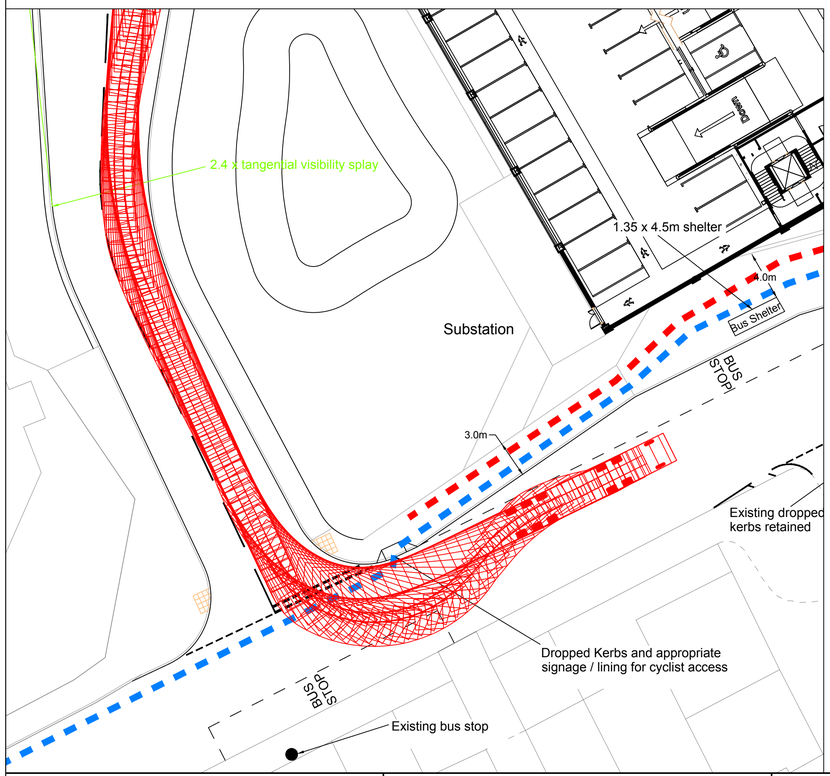

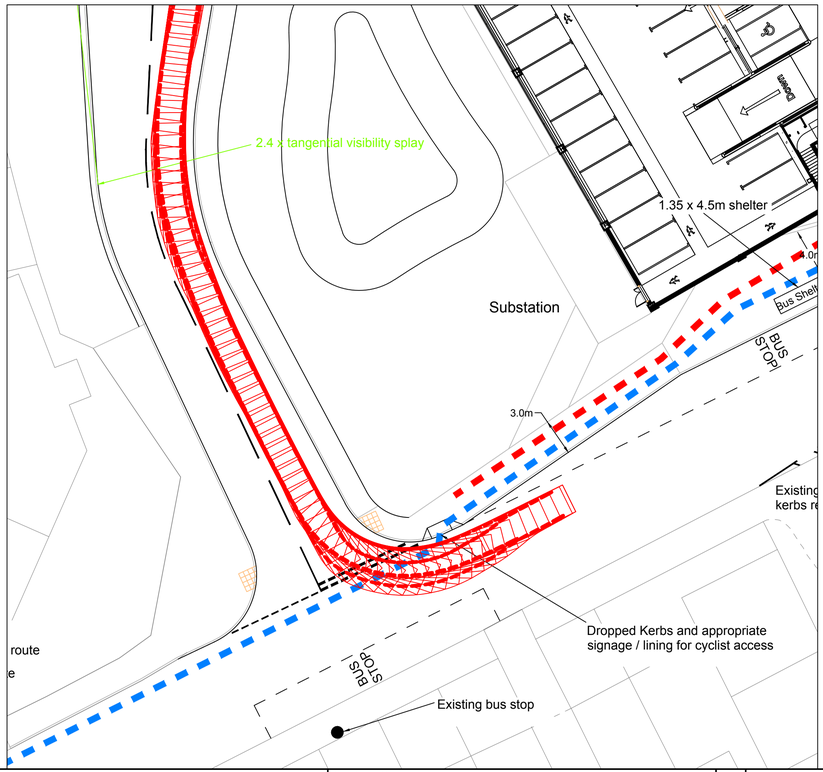

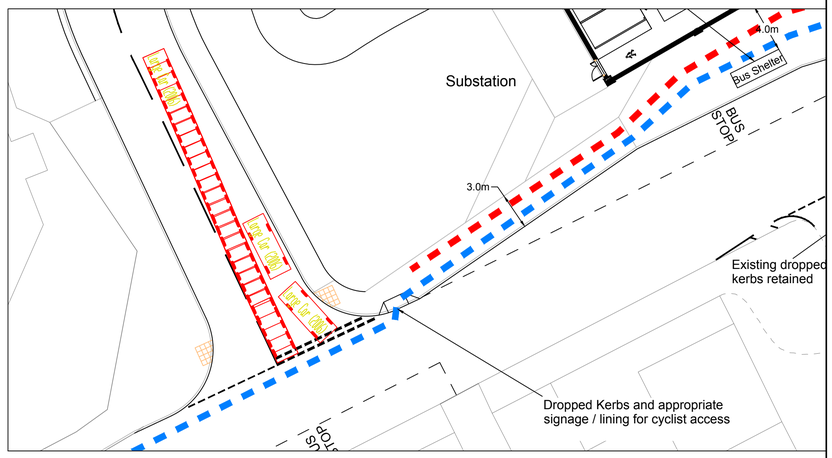

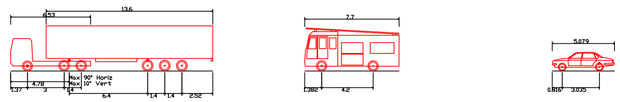

Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Dennis Sabre Fire Tender (LWB)

Overall Length	7.700m
Overall Width	2.430m
Overall Body Height	3.515m
Min Body Ground Clearance	0.397m
Track Width	2.380m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	7.400m

Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.505m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

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Client: WILLMOTT DIXON

Project Title: Gateway MSCP, Darlington Railway Station

Drawing Title: Swept Path Analysis of Garbutt Square Proposals

Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.2021	DJC
P02	Layout updated	AA	20.04.2021	DJC
P01	Layout updated	AA	23.03.2021	DJC

Scale: 1:250	Drawn By: AA
Drawing Size: A1	Checked By: KS
Date: 26.01.2021	Approved By: KS
Drawing Number: SGMSCP-FHT-Z0-SL-DR-H-00008	Rev: P03

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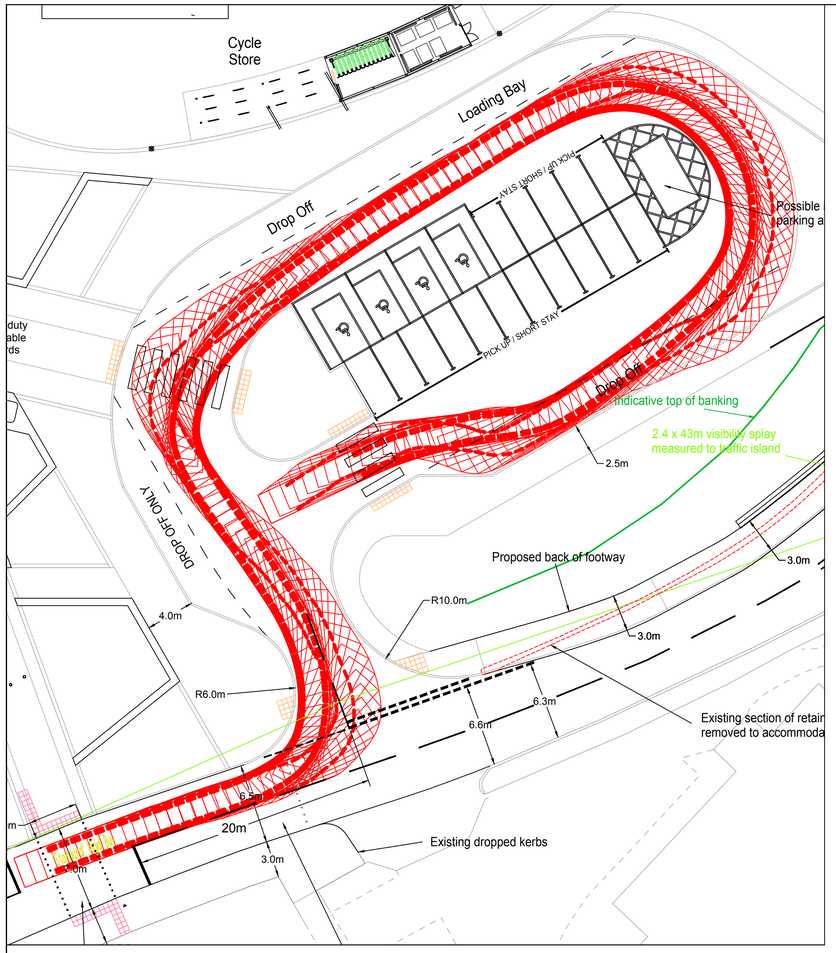
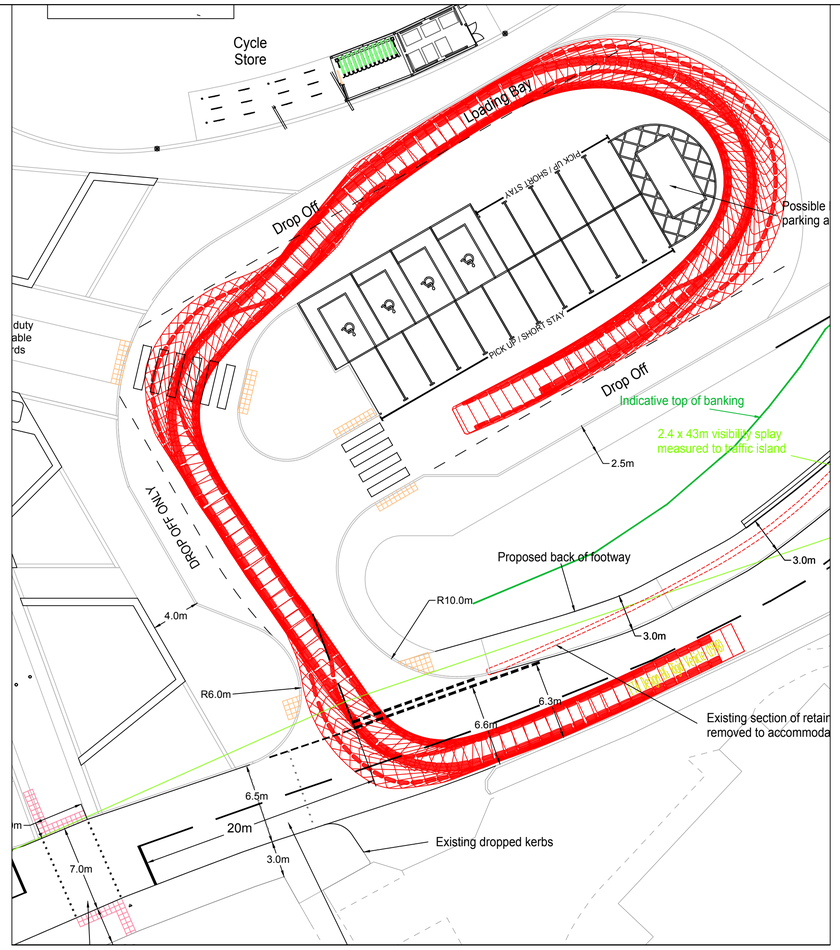
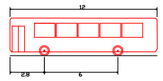
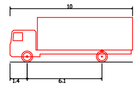






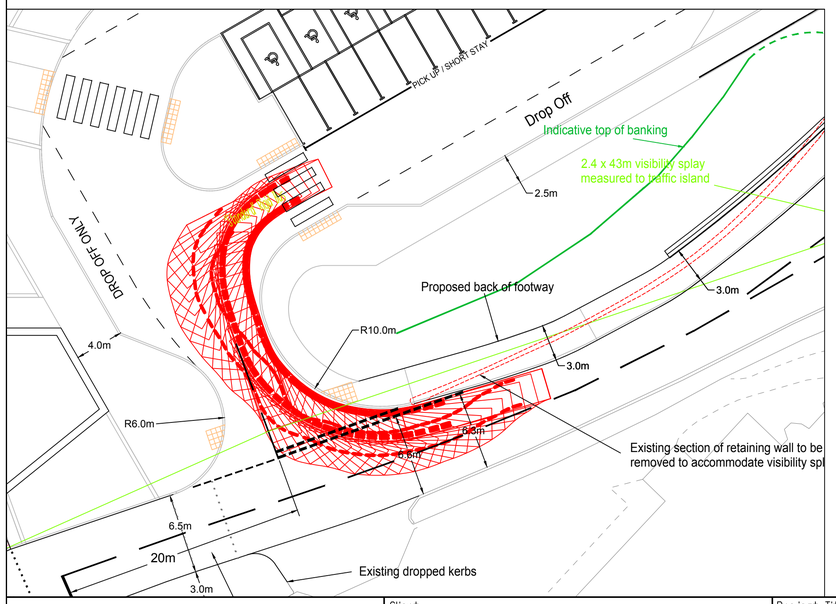
'Standard' Rigid Bus

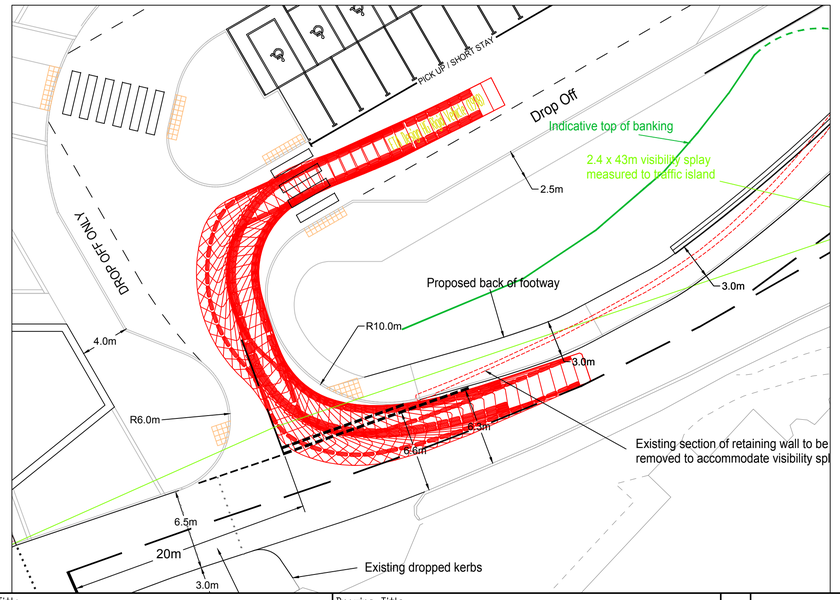
Overall Length	12.000m
Overall Width	2.350m
Overall Body Height	3.069m
Min Body Ground Clearance	0.309m
Track Width	2.350m
Lock to lock time	4.00s
Wall to Wall Turning Radius	10.771m

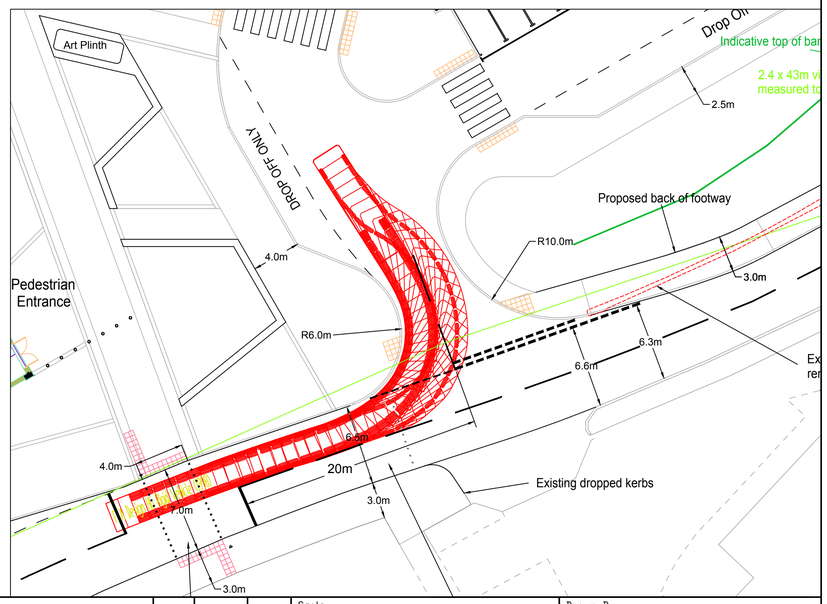


FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.425m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m







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F 01924 844081 www.sandersonassociates.co.uk

Client: WILLMOTT DIXON

Project Title: Gateway MSCP, Darlington Railway Station

Drawing Title: Swept Path Analysis of Proposal Access Arrangements

Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.2021	DJC
P02	Layout updated	AA	20.04.2021	DJC
P01	Layout updated	AA	23.03.2021	DJC

Scale: 1:250	Drawn By: AA
Drawing Size: A1	Checked By: KS
Date: 29.01.2021	Approved By: KS
Drawing Number: SGMSCP-FHT-ZO-SL-DR-H-00009	Rev: P03

FILE REF:

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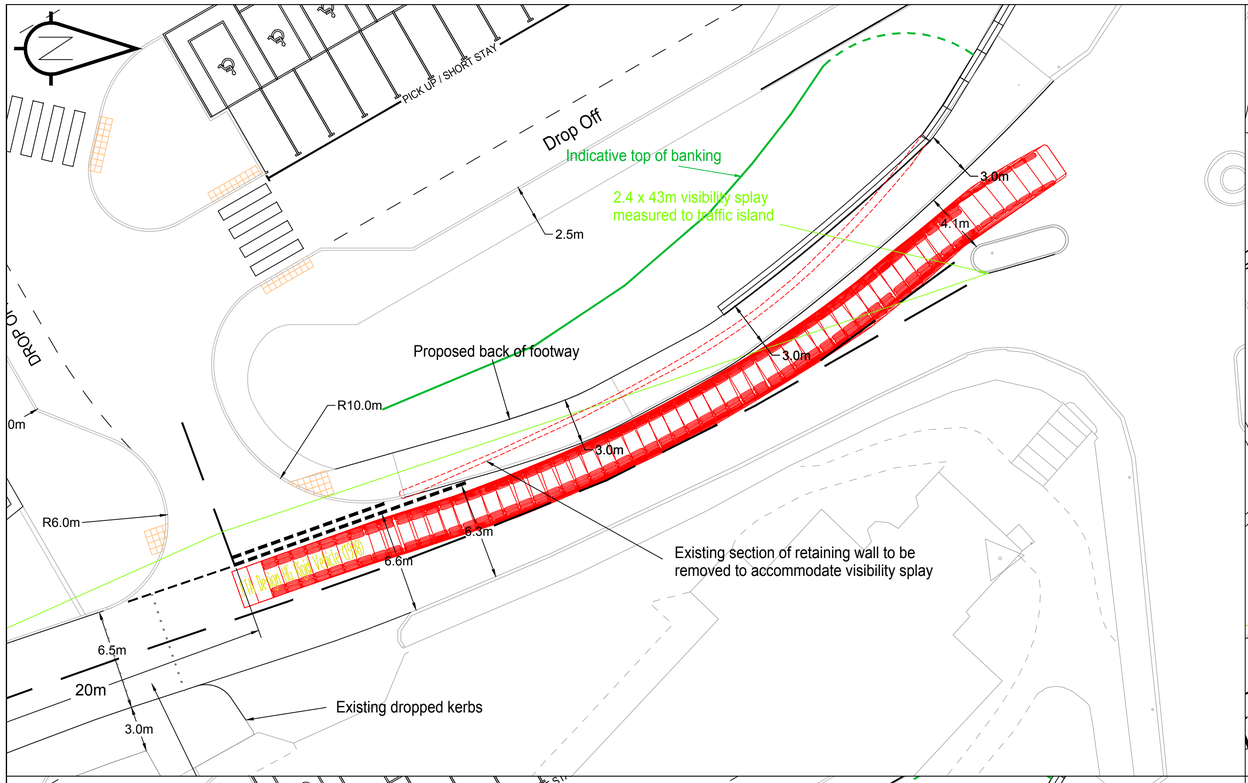
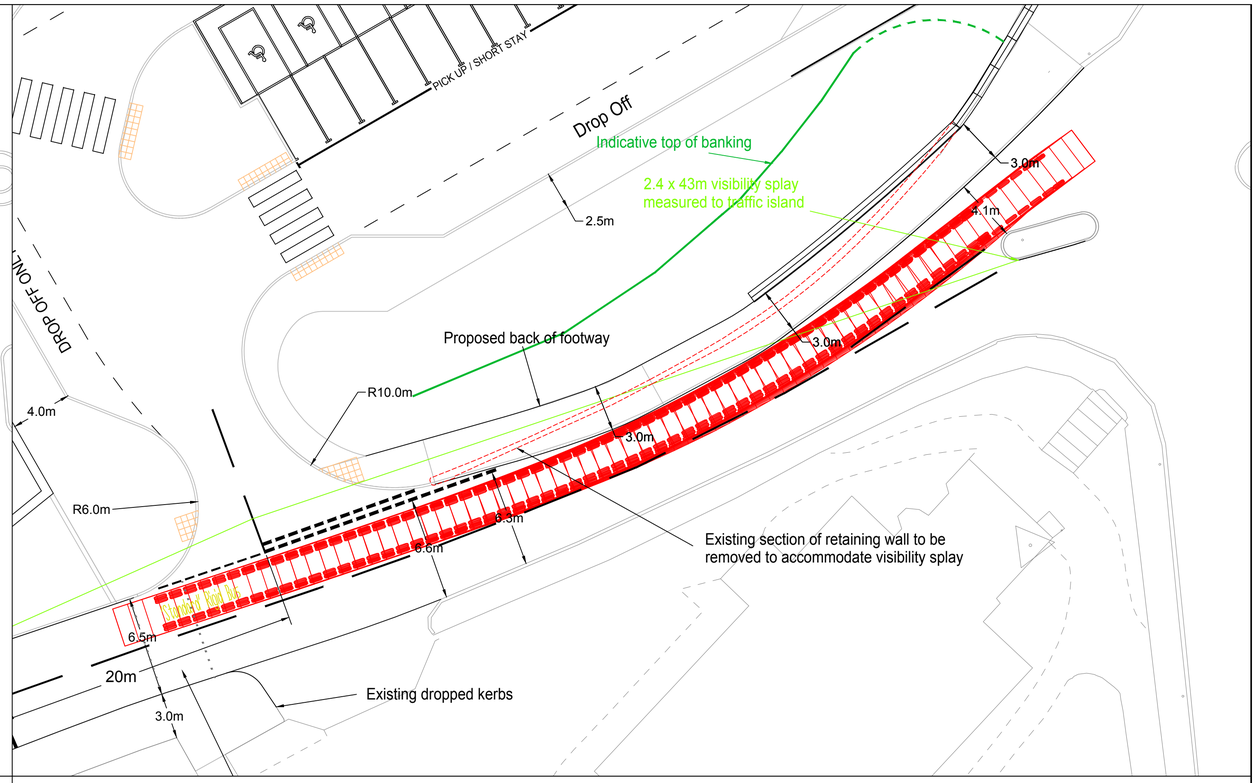
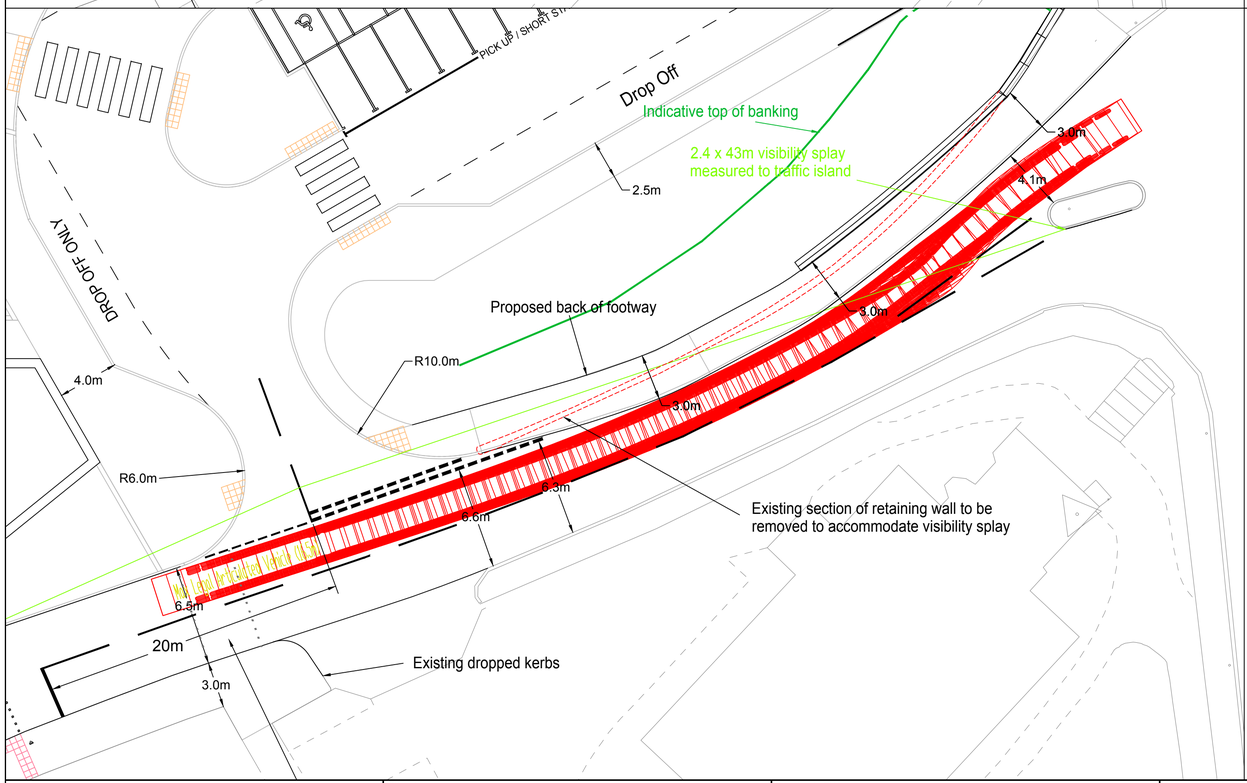
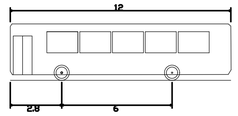


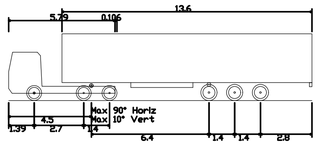






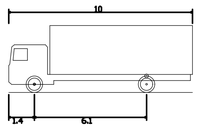
'Standard' Rigid Bus

Overall Length	12.000m
Overall Width	2.550m
Overall Body Height	3.069m
Min Body Ground Clearance	0.309m
Track Width	2.350m
Lock to lock time	4.00s
Wall to Wall Turning Radius	10.771m



Max Legal Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.500m
Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.870m



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

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Client: WILLMOTT DIXON

Project Title: Gateway MSCP, Darlington Railway Station

Drawing Title: Proposed Access Arrangements
Swept path analysis of Neasham Road
to Parkgate

Rev	Amendment	Drawn	Date	Checked
P03	Layout updated	AA	28.05.2021	DJC
P02	Layout updated	AA	20.04.2021	DJC
P01	Layout updated	AA	23.03.2021	DJC

Scale: 1:250	Drawn By: JT
Drawing Size: A1	Checked By: DJC
Date: 29.01.2021	Approved By: DJC
Drawing Number: SGMSCP-FHT-Z0-SL-DR-H-00010	Rev: P03

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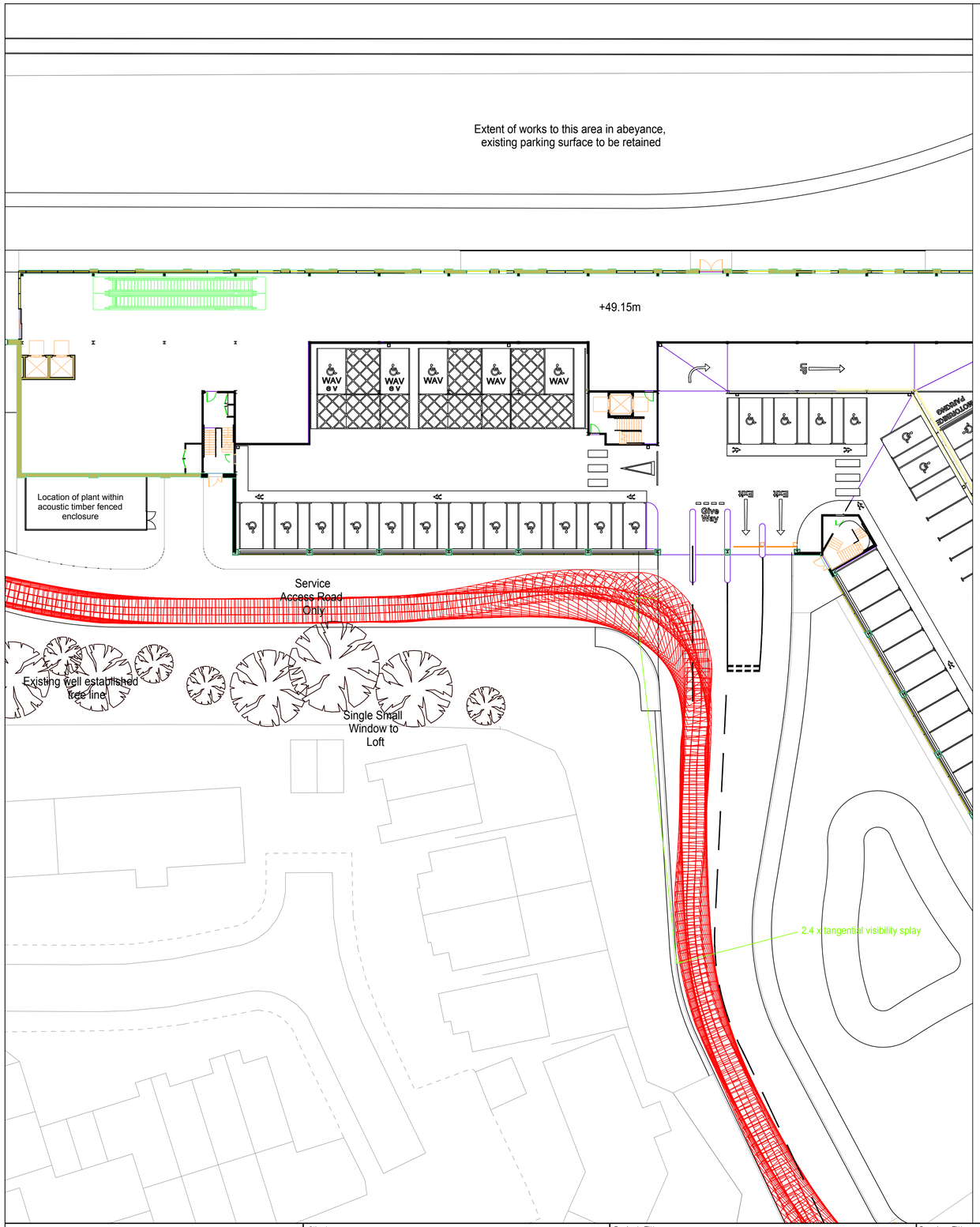

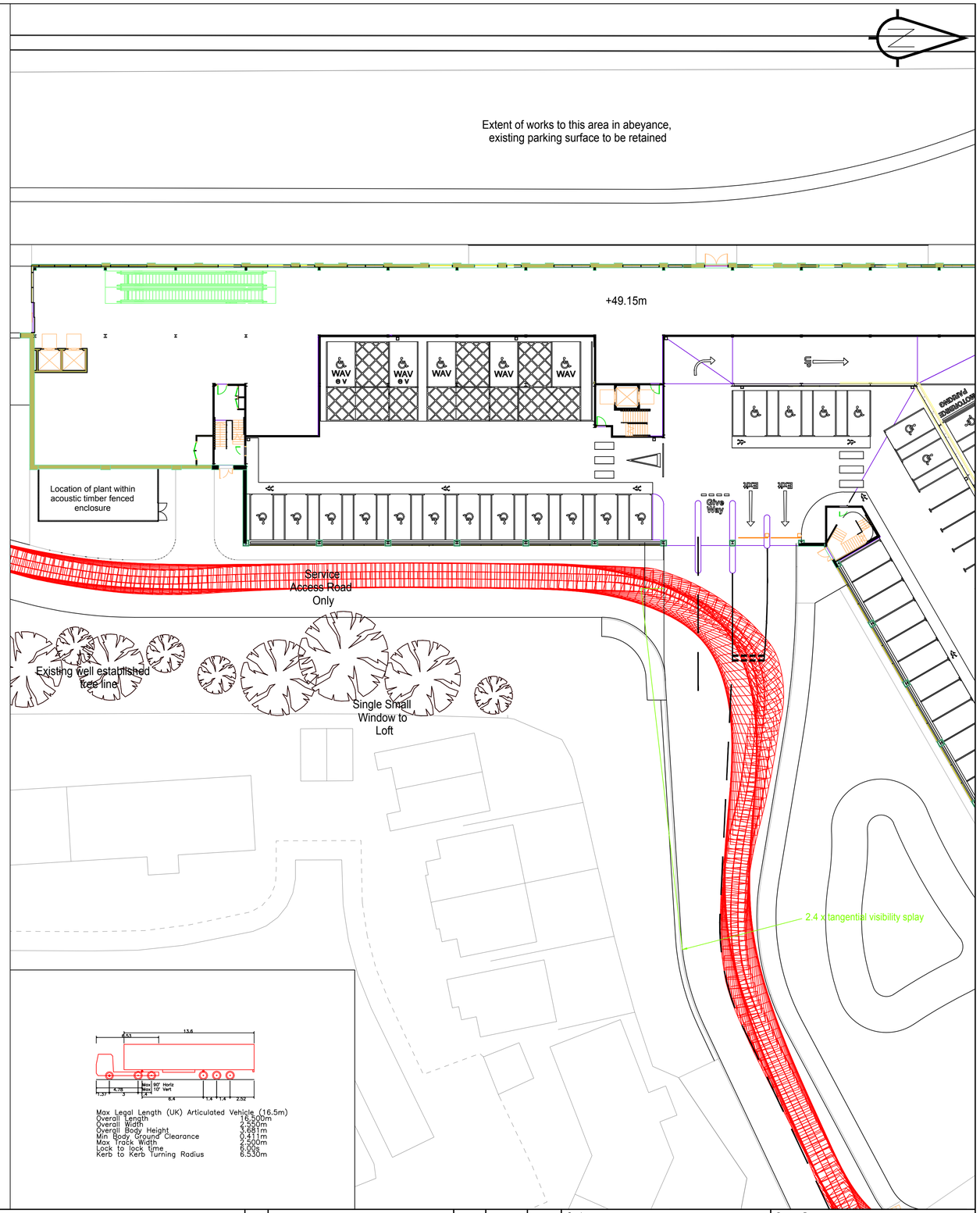

Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.0sec
Kerb to Kerb Turning Radius	6.530m

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Client: WILLMOTT DIXON

Project Title: Gateway MSCP, Darlington Railway Station

Drawing Title: Swept Path Analysis of Garbutt Square Proposals

Rev	Amendment	Drawn	Date	Checked
P02	Layout updated	AA	28.05.2021	DJC
P01	Layout updated	AA	20.04.2021	DJC

Scale: 1:250	Drawn By: AA
Drawing Size: A1	Checked By: KS
Date: 26.01.2021	Approved By: KS
Drawing Number: SGMSCP-FHT-ZO-SL-DR-H-00011	Rev: P02

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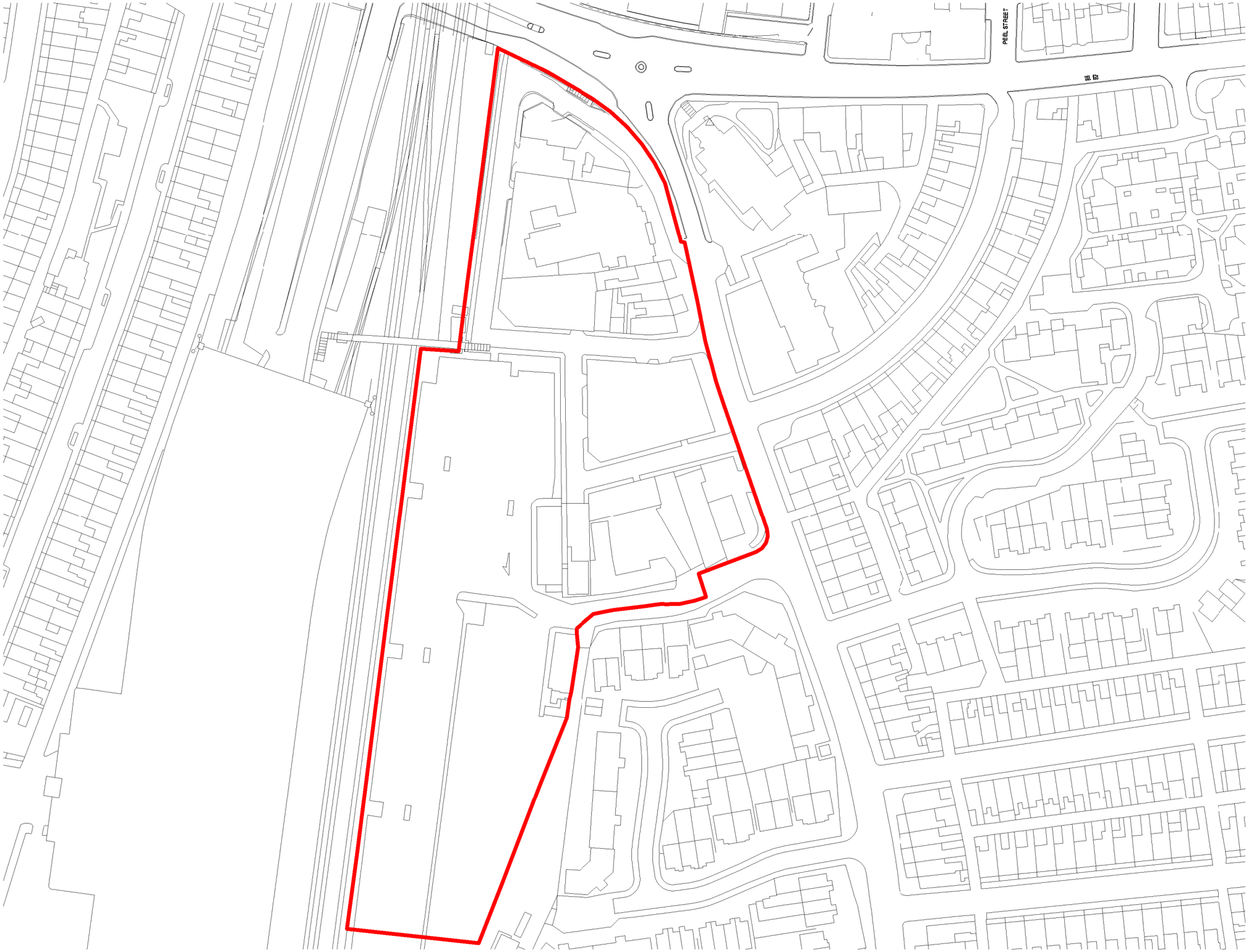

P_LOCATION PLAN

1 : 1250

0 62.50m 125.0m

Notes:

OS Licence No: 100006354

All dimensions to be checked on site.

DO NOT SCALE FROM DRAWING.

Discrepancies ambiguities and/or omissions between this drawing and information given elsewhere must be reported immediately to the architect before proceeding.

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This drawing is to be read in conjunction with drawings:-

C	R	DATE	N	AMENDMENT
JT	AR	02/06/2021	P2	Planning Issue
JT	AR	12/01/2021	P1	First Issue

NAPPER

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3 Waterloo Square
Newcastle Upon Tyne
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Tel: 0191 2610491

First Floor, 6 Bakers Yard
London
EC1R 3DD
Tel: 0203 9066814

Project : **Darlington Station MSCP**

Client : **Willmott Dixon**

_Location Plan

Scale : **1 : 1250 @ A3**

Internal Project No. : **201019**

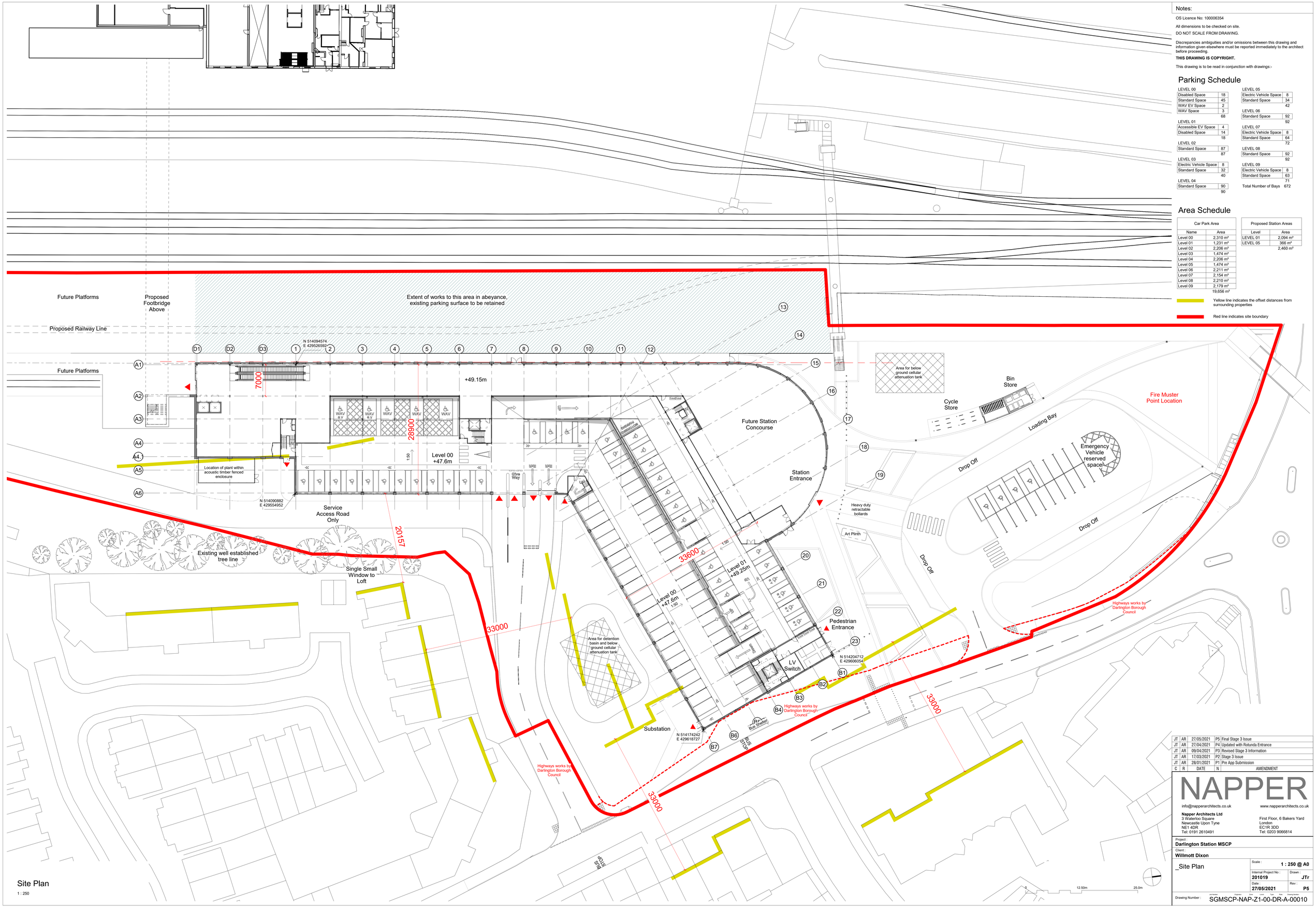
Drawn : **JTr**

Date : **02/06/2021**

Rev : **P2**

Drawing Number : Job Number: Originator: Zone: Level: Type: Role: Drawing Number:

SGMSCP-NAP-Z1-ZZ-DR-A-00001



Site Plan

1 : 250

Notes:

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Parking Schedule

LEVEL 00	
Disabled Space	18
Standard Space	45
WAV EV Space	2
WAV Space	3
	68
LEVEL 01	
Accessible EV Space	4
Disabled Space	14
	18
LEVEL 02	
Standard Space	87
	87
LEVEL 03	
Electric Vehicle Space	8
Standard Space	32
	40
LEVEL 04	
Standard Space	90
	90
LEVEL 05	
Electric Vehicle Space	8
Standard Space	34
	42
LEVEL 06	
Standard Space	92
	92
LEVEL 07	
Electric Vehicle Space	8
Standard Space	64
	72
LEVEL 08	
Standard Space	92
	92
LEVEL 09	
Electric Vehicle Space	8
Standard Space	63
	71
Total Number of Bays	672

Area Schedule

Car Park Area	
Name	Area
Level 00	2,310 m²
Level 01	1,231 m²
Level 02	2,206 m²
Level 03	1,474 m²
Level 04	2,206 m²
Level 05	1,474 m²
Level 06	2,211 m²
Level 07	2,154 m²
Level 08	2,210 m²
Level 09	2,179 m²
	19,656 m²

Proposed Station Areas	
Level	Area
LEVEL 01	2,094 m²
LEVEL 05	366 m²
	2,460 m²

Yellow line indicates the offset distances from surrounding properties

Red line indicates site boundary

C	R	DATE	N	AMENDMENT
JT	AR	27/05/2021	P5	Final Stage 3 Issue
JT	AR	27/04/2021	P4	Updated with Rotunda Entrance
JT	AR	09/04/2021	P3	Revised Stage 3 Information
JT	AR	17/03/2021	P2	Stage 3 Issue
JT	AR	28/01/2021	P1	Pre App Submission

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Project :
Darlington Station MSCP

Client :
Willmott Dixon

_Site Plan

Scale : **1 : 250 @ A0**

Internal Project No : **201019**

Drawn : **JTr**

Date : **27/05/2021**

Rev : **P5**

Drawing Number : SGMSCP-NAP-Z1-00-DR-A-00010

APPENDIX D

Junctions 9 Output - Neasham Road / Garbutt Square

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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Filename: Neasham Road - Garbutt Square.j9
Path: J:\11000\11500\11590_GatewayMSCPDesignFee\engineering\Traffic_Programs\Picady
Report generation date: 07/04/2021 13:59:45

»Neasham Road - Garbutt Square - 2021 + Dev, AM
»Neasham Road - Garbutt Square - 2021 + Dev, PM
»Neasham Road - Garbutt Square - 2021 + Dev, SAT
»Neasham Road - Garbutt Square - 2023 + Dev, AM
»Neasham Road - Garbutt Square - 2023 + Dev, PM
»Neasham Road - Garbutt Square - 2023 + Dev, SAT
»Neasham Road - Garbutt Square - 2027 + Dev, AM
»Neasham Road - Garbutt Square - 2027 + Dev, PM
»Neasham Road - Garbutt Square - 2027 + Dev, SAT

Summary of junction performance

	AM			PM			SAT		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Neasham Road - Garbutt Square - 2021 + Dev								
Stream B-C	0.0	6.89	0.01	0.1	7.27	0.06	0.1	7.60	0.07
Stream B-A	0.0	12.70	0.02	0.1	12.66	0.10	0.1	12.67	0.11
Stream C-AB	0.5	5.62	0.21	0.1	4.39	0.04	0.3	4.82	0.12
	Neasham Road - Garbutt Square - 2023 + Dev								
Stream B-C	0.0	6.93	0.01	0.1	7.31	0.06	0.1	7.64	0.07
Stream B-A	0.0	12.86	0.02	0.1	12.81	0.11	0.1	12.81	0.11
Stream C-AB	0.5	5.61	0.21	0.1	4.37	0.04	0.3	4.80	0.12
	Neasham Road - Garbutt Square - 2027 + Dev								
Stream B-C	0.0	6.99	0.01	0.1	7.37	0.06	0.1	7.71	0.07
Stream B-A	0.0	13.17	0.02	0.1	13.11	0.11	0.1	13.09	0.11
Stream C-AB	0.6	5.60	0.22	0.1	4.34	0.04	0.3	4.78	0.13

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

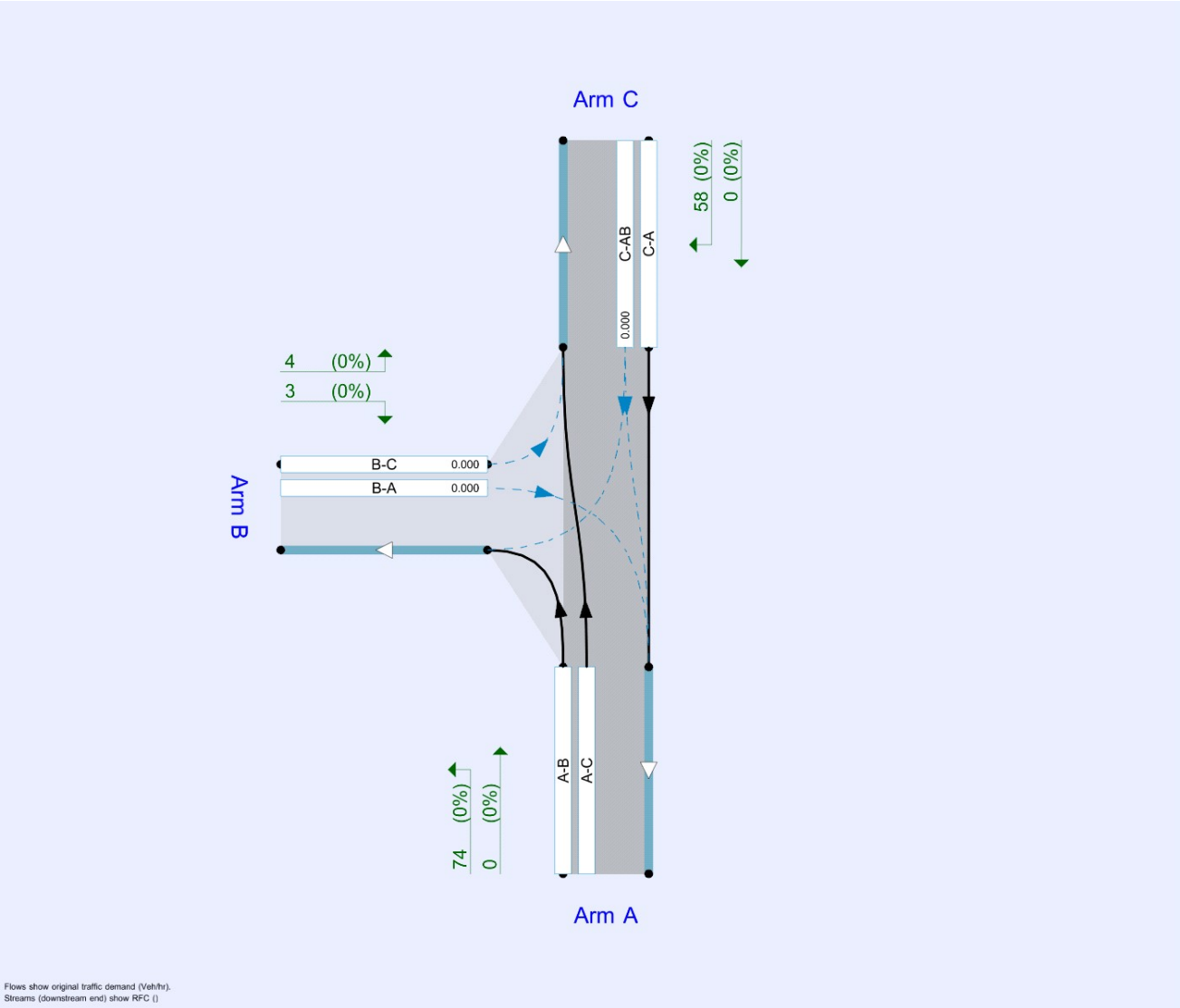
File summary

File Description

Title	Neasham Road - Garbutt Square
Location	Darlington
Site number	
Date	18/11/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SANDERSONASSOC\carly.hoyle
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2020	AM	ONE HOUR	00:00	01:30	15			
D2	2020	PM	ONE HOUR	14:45	16:15	15			
D3	2020	SAT	ONE HOUR	12:15	13:45	15			
D4	2020 COVID	AM	ONE HOUR	00:00	01:30	15		Simple	D1*1.06477
D5	2021	AM	ONE HOUR	00:00	01:30	15		Simple	D4*1.0119
D6	2021	PM	ONE HOUR	14:45	16:15	15		Simple	D2*1.0104
D7	2021	SAT	ONE HOUR	12:15	13:45	15		Simple	D3*1.0095
D8	2021 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D5+D40
D9	2021 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D6+D50
D10	2021 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D7+D60
D11	2023	AM	ONE HOUR	00:00	01:30	15		Simple	D4*1.0299
D12	2023	PM	ONE HOUR	14:45	16:15	15		Simple	D2*1.0271
D13	2023	SAT	ONE HOUR	12:15	13:45	15		Simple	D3*1.0264
D14	2023 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D11+D40
D15	2023 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D12+D50
D16	2023 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D13+D60
D17	2027	AM	ONE HOUR	00:00	01:30	15		Simple	D4*1.0641
D18	2027	PM	ONE HOUR	14:45	16:15	15		Simple	D2*1.0590
D19	2027	SAT	ONE HOUR	12:15	13:45	15		Simple	D3*1.0583
D20	2027 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D17+D40
D21	2027 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D18+D50
D22	2027 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D19+D60
D40	Development	AM	ONE HOUR	00:00	01:30	15			
D50	Development	PM	ONE HOUR	14:45	16:15	15			
D60	Development	SAT	ONE HOUR	12:15	13:45	15			

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Neasham Road - Garbutt Square	✓	100.000	100.000

Neasham Road - Garbutt Square - 2021 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Neasham Road (south)		Major
B	Garbutt Square		Minor
C	Neasham Road (North)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.50			120.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.00	4.60	4.35	4.10	✓	2.00	50	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	506	0.082	0.207	0.131	0.296
B-C	681	0.093	0.235	-	-
C-B	643	0.222	0.222	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D8	2021 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D5+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	605	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	477	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	83	523
	B	4	0	6
	C	411	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	6.89	0.0	A	6	8
B-A	0.02	12.70	0.0	B	4	6
C-AB	0.21	5.62	0.5	A	123	184
C-A					315	473
A-B					76	114
A-C					480	719

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	577	0.008	5	0.0	0.0	6.284	A
B-A	3	0.77	357	0.009	3	0.0	0.0	10.171	B
C-AB	85	21	748	0.114	85	0.0	0.2	5.428	A
C-A	274	68			274				
A-B	62	16			62				
A-C	393	98			393				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	557	0.010	6	0.0	0.0	6.526	A
B-A	4	0.92	328	0.011	4	0.0	0.0	11.098	B
C-AB	115	29	773	0.149	115	0.2	0.3	5.466	A
C-A	314	78			314				
A-B	74	19			74				
A-C	470	117			470				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	529	0.013	7	0.0	0.0	6.891	A
B-A	4	1	288	0.016	4	0.0	0.0	12.694	B
C-AB	167	42	810	0.206	166	0.3	0.5	5.592	A
C-A	358	90			358				
A-B	91	23			91				
A-C	575	144			575				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	529	0.013	7	0.0	0.0	6.892	A
B-A	4	1	288	0.016	4	0.0	0.0	12.698	B
C-AB	167	42	810	0.207	167	0.5	0.5	5.620	A
C-A	358	89			358				
A-B	91	23			91				
A-C	575	144			575				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	557	0.010	6	0.0	0.0	6.531	A
B-A	4	0.92	328	0.011	4	0.0	0.0	11.105	B
C-AB	116	29	773	0.149	116	0.5	0.3	5.519	A
C-A	313	78			313				
A-B	74	19			74				
A-C	470	117			470				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	577	0.008	5	0.0	0.0	6.287	A
B-A	3	0.77	357	0.009	3	0.0	0.0	10.177	B
C-AB	86	21	748	0.115	86	0.3	0.2	5.468	A
C-A	273	68			273				
A-B	62	16			62				
A-C	393	98			393				

Neasham Road - Garbutt Square - 2021 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D9	2021 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D6+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	446	100.000
B		ONE HOUR	✓	58	100.000
C		ONE HOUR	✓	554	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	9	436
	B	30	0	28
	C	542	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	3	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	7.27	0.1	A	26	39
B-A	0.10	12.66	0.1	B	28	41
C-AB	0.04	4.39	0.1	A	26	39
C-A					482	723
A-B					8	12
A-C					401	601

Main Results for each time segment

14:45 - 15:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	568	0.037	21	0.0	0.0	6.581	A
B-A	23	6	378	0.060	22	0.0	0.1	10.117	B
C-AB	18	4	839	0.021	18	0.0	0.0	4.381	A
C-A	399	100			399				
A-B	7	2			7				
A-C	329	82			329				

15:00 - 15:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	550	0.046	25	0.0	0.0	6.855	A
B-A	27	7	353	0.077	27	0.1	0.1	11.053	B
C-AB	24	6	881	0.028	24	0.0	0.0	4.194	A
C-A	473	118			473				
A-B	8	2			8				
A-C	392	98			392				

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	526	0.059	31	0.0	0.1	7.272	A
B-A	33	8	317	0.104	33	0.1	0.1	12.654	B
C-AB	36	9	942	0.038	36	0.0	0.1	3.967	A
C-A	573	143			573				
A-B	10	2			10				
A-C	481	120			481				

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	526	0.059	31	0.1	0.1	7.275	A
B-A	33	8	317	0.104	33	0.1	0.1	12.662	B
C-AB	36	9	942	0.039	36	0.1	0.1	3.975	A
C-A	573	143			573				
A-B	10	2			10				
A-C	481	120			481				

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	550	0.046	25	0.1	0.0	6.863	A
B-A	27	7	353	0.077	27	0.1	0.1	11.063	B
C-AB	24	6	881	0.028	24	0.1	0.0	4.211	A
C-A	473	118			473				
A-B	8	2			8				
A-C	392	98			392				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	567	0.037	21	0.0	0.0	6.589	A
B-A	23	6	378	0.060	23	0.1	0.1	10.133	B
C-AB	18	4	839	0.021	18	0.0	0.0	4.392	A
C-A	399	100			399				
A-B	7	2			7				
A-C	329	82			329				

Neasham Road - Garbutt Square - 2021 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D10	2021 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D7+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	496	100.000
B		ONE HOUR	✓	65	100.000
C		ONE HOUR	✓	519	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	40	456
	B	32	0	33
	C	479	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	3
	B	0	0	3
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.07	7.60	0.1	A	30	45
B-A	0.11	12.67	0.1	B	29	44
C-AB	0.12	4.82	0.3	A	79	119
C-A					397	595
A-B					37	55
A-C					419	628

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	553	0.045	25	0.0	0.0	6.808	A
B-A	24	6	383	0.063	24	0.0	0.1	10.024	B
C-AB	55	14	803	0.068	54	0.0	0.1	4.807	A
C-A	336	84			336				
A-B	30	8			30				
A-C	344	86			344				

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	535	0.055	30	0.0	0.1	7.121	A
B-A	29	7	356	0.081	29	0.1	0.1	10.992	B
C-AB	74	19	838	0.088	74	0.1	0.2	4.708	A
C-A	392	98			392				
A-B	36	9			36				
A-C	410	103			410				

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	510	0.071	36	0.1	0.1	7.602	A
B-A	35	9	319	0.110	35	0.1	0.1	12.659	B
C-AB	109	27	889	0.122	108	0.2	0.3	4.609	A
C-A	462	116			462				
A-B	44	11			44				
A-C	502	126			502				

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	510	0.071	36	0.1	0.1	7.604	A
B-A	35	9	319	0.110	35	0.1	0.1	12.673	B
C-AB	109	27	889	0.122	109	0.3	0.3	4.619	A
C-A	462	116			462				
A-B	44	11			44				
A-C	502	126			502				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	535	0.055	30	0.1	0.1	7.129	A
B-A	29	7	356	0.081	29	0.1	0.1	11.009	B
C-AB	74	19	839	0.089	75	0.3	0.2	4.727	A
C-A	392	98			392				
A-B	36	9			36				
A-C	410	103			410				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	553	0.045	25	0.1	0.0	6.816	A
B-A	24	6	383	0.063	24	0.1	0.1	10.044	B
C-AB	55	14	803	0.068	55	0.2	0.1	4.819	A
C-A	335	84			335				
A-B	30	8			30				
A-C	344	86			344				

Neasham Road - Garbutt Square - 2023 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D14	2023 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D11+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	615	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	485	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	83	532
	B	4	0	6
	C	418	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	6.93	0.0	A	6	9
B-A	0.02	12.86	0.0	B	4	6
C-AB	0.21	5.61	0.5	A	125	187
C-A					320	480
A-B					76	114
A-C					488	732

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	576	0.008	5	0.0	0.0	6.303	A
B-A	3	0.77	355	0.009	3	0.0	0.0	10.240	B
C-AB	87	22	750	0.115	86	0.0	0.2	5.421	A
C-A	278	70			278				
A-B	62	16			62				
A-C	400	100			400				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	555	0.010	6	0.0	0.0	6.550	A
B-A	4	0.92	325	0.011	4	0.0	0.0	11.196	B
C-AB	117	29	776	0.151	117	0.2	0.3	5.453	A
C-A	319	80			319				
A-B	74	19			74				
A-C	478	120			478				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	527	0.013	7	0.0	0.0	6.925	A
B-A	5	1	285	0.016	4	0.0	0.0	12.851	B
C-AB	170	43	813	0.209	169	0.3	0.5	5.585	A
C-A	363	91			363				
A-B	91	23			91				
A-C	586	146			586				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	527	0.013	7	0.0	0.0	6.926	A
B-A	5	1	285	0.016	5	0.0	0.0	12.856	B
C-AB	171	43	814	0.210	171	0.5	0.5	5.614	A
C-A	363	91			363				
A-B	91	23			91				
A-C	586	146			586				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	555	0.010	6	0.0	0.0	6.555	A
B-A	4	0.92	325	0.011	4	0.0	0.0	11.202	B
C-AB	117	29	776	0.151	118	0.5	0.3	5.512	A
C-A	318	80			318				
A-B	74	19			74				
A-C	478	120			478				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	575	0.008	5	0.0	0.0	6.309	A
B-A	3	0.77	354	0.009	3	0.0	0.0	10.245	B
C-AB	87	22	750	0.116	88	0.3	0.2	5.460	A
C-A	278	69			278				
A-B	62	16			62				
A-C	400	100			400				

Neasham Road - Garbutt Square - 2023 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D15	2023 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D12+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	453	100.000
B		ONE HOUR	✓	58	100.000
C		ONE HOUR	✓	563	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	9	444
	B	30	0	28
	C	551	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	3	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	7.31	0.1	A	26	39
B-A	0.11	12.81	0.1	B	28	41
C-AB	0.04	4.37	0.1	A	27	40
C-A					490	734
A-B					8	12
A-C					407	611

Main Results for each time segment

14:45 - 15:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	567	0.037	21	0.0	0.0	6.598	A
B-A	23	6	376	0.060	22	0.0	0.1	10.186	B
C-AB	18	4	843	0.021	18	0.0	0.0	4.364	A
C-A	406	101			406				
A-B	7	2			7				
A-C	334	84			334				

15:00 - 15:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	549	0.046	25	0.0	0.0	6.877	A
B-A	27	7	350	0.077	27	0.1	0.1	11.150	B
C-AB	25	6	886	0.028	25	0.0	0.0	4.175	A
C-A	481	120			481				
A-B	8	2			8				
A-C	399	100			399				

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	524	0.059	31	0.0	0.1	7.303	A
B-A	33	8	314	0.106	33	0.1	0.1	12.806	B
C-AB	37	9	948	0.039	37	0.0	0.1	3.947	A
C-A	582	146			582				
A-B	10	2			10				
A-C	489	122			489				

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	524	0.059	31	0.1	0.1	7.305	A
B-A	33	8	314	0.106	33	0.1	0.1	12.814	B
C-AB	37	9	948	0.039	37	0.1	0.1	3.953	A
C-A	582	146			582				
A-B	10	2			10				
A-C	489	122			489				

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	548	0.046	25	0.1	0.0	6.882	A
B-A	27	7	350	0.077	27	0.1	0.1	11.160	B
C-AB	25	6	886	0.028	25	0.1	0.0	4.192	A
C-A	481	120			481				
A-B	8	2			8				
A-C	399	100			399				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	566	0.037	21	0.0	0.0	6.608	A
B-A	23	6	376	0.060	23	0.1	0.1	10.203	B
C-AB	18	5	843	0.021	18	0.0	0.0	4.375	A
C-A	406	101			406				
A-B	7	2			7				
A-C	334	84			334				

Neasham Road - Garbutt Square - 2023 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D16	2023 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D13+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	504	100.000
B		ONE HOUR	✓	65	100.000
C		ONE HOUR	✓	527	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	40	464
	B	32	0	33
	C	487	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	3
	B	0	0	3
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.07	7.64	0.1	A	30	45
B-A	0.11	12.81	0.1	B	29	44
C-AB	0.12	4.80	0.3	A	80	121
C-A					403	604
A-B					37	55
A-C					426	639

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	552	0.045	25	0.0	0.0	6.828	A
B-A	24	6	381	0.063	24	0.0	0.1	10.084	B
C-AB	55	14	806	0.068	55	0.0	0.1	4.791	A
C-A	341	85			341				
A-B	30	8			30				
A-C	349	87			349				

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	533	0.056	30	0.0	0.1	7.147	A
B-A	29	7	354	0.081	29	0.1	0.1	11.079	B
C-AB	75	19	842	0.089	75	0.1	0.2	4.689	A
C-A	398	100			398				
A-B	36	9			36				
A-C	417	104			417				

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	508	0.072	36	0.1	0.1	7.638	A
B-A	35	9	316	0.111	35	0.1	0.1	12.799	B
C-AB	110	28	894	0.124	110	0.2	0.3	4.589	A
C-A	469	117			469				
A-B	44	11			44				
A-C	511	128			511				

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	507	0.072	36	0.1	0.1	7.640	A
B-A	35	9	316	0.111	35	0.1	0.1	12.813	B
C-AB	111	28	894	0.124	111	0.3	0.3	4.600	A
C-A	469	117			469				
A-B	44	11			44				
A-C	511	128			511				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	533	0.056	30	0.1	0.1	7.155	A
B-A	29	7	354	0.081	29	0.1	0.1	11.094	B
C-AB	75	19	843	0.089	76	0.3	0.2	4.708	A
C-A	398	99			398				
A-B	36	9			36				
A-C	417	104			417				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	551	0.045	25	0.1	0.0	6.839	A
B-A	24	6	381	0.063	24	0.1	0.1	10.105	B
C-AB	56	14	806	0.069	56	0.2	0.1	4.804	A
C-A	341	85			341				
A-B	30	8			30				
A-C	349	87			349				

Neasham Road - Garbutt Square - 2027 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D20	2027 + Dev	AM	ONE HOUR	00:00	01:30	15	✓	Simple	D17+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	633	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	499	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	83	550
	B	4	0	6
	C	432	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	6.99	0.0	A	6	9
B-A	0.02	13.17	0.0	B	4	6
C-AB	0.22	5.60	0.6	A	129	193
C-A					329	493
A-B					76	114
A-C					504	756

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	573	0.008	5	0.0	0.0	6.339	A
B-A	3	0.78	350	0.009	3	0.0	0.0	10.372	B
C-AB	89	22	755	0.117	88	0.0	0.2	5.392	A
C-A	287	72			287				
A-B	63	16			63				
A-C	414	103			414				

00:15 - 00:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	551	0.010	6	0.0	0.0	6.597	A
B-A	4	0.93	320	0.012	4	0.0	0.0	11.387	B
C-AB	120	30	781	0.154	120	0.2	0.3	5.434	A
C-A	328	82			328				
A-B	75	19			75				
A-C	494	124			494				

00:30 - 00:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	522	0.013	7	0.0	0.0	6.990	A
B-A	5	1	278	0.016	5	0.0	0.0	13.161	B
C-AB	176	44	821	0.215	176	0.3	0.6	5.571	A
C-A	373	93			373				
A-B	91	23			91				
A-C	605	151			605				

00:45 - 01:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	7	2	522	0.013	7	0.0	0.0	6.991	A
B-A	5	1	278	0.016	5	0.0	0.0	13.166	B
C-AB	177	44	821	0.215	177	0.6	0.6	5.603	A
C-A	372	93			372				
A-B	91	23			91				
A-C	605	151			605				

01:00 - 01:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	551	0.010	6	0.0	0.0	6.602	A
B-A	4	0.93	320	0.012	4	0.0	0.0	11.396	B
C-AB	121	30	782	0.154	122	0.6	0.4	5.494	A
C-A	328	82			328				
A-B	75	19			75				
A-C	494	124			494				

01:15 - 01:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	572	0.008	5	0.0	0.0	6.345	A
B-A	3	0.78	350	0.009	3	0.0	0.0	10.379	B
C-AB	89	22	755	0.118	90	0.4	0.2	5.441	A
C-A	286	72			286				
A-B	63	16			63				
A-C	414	103			414				

Neasham Road - Garbutt Square - 2027 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D21	2027 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D18+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	467	100.000
B		ONE HOUR	✓	59	100.000
C		ONE HOUR	✓	580	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	9	457
	B	30	0	28
	C	568	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	4	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	7.37	0.1	A	26	39
B-A	0.11	13.11	0.1	B	28	42
C-AB	0.04	4.34	0.1	A	28	42
C-A					504	756
A-B					8	13
A-C					420	630

Main Results for each time segment

14:45 - 15:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	564	0.038	21	0.0	0.0	6.629	A
B-A	23	6	371	0.061	23	0.0	0.1	10.320	B
C-AB	19	5	850	0.022	19	0.0	0.0	4.332	A
C-A	418	104			418				
A-B	7	2			7				
A-C	344	86			344				

15:00 - 15:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	6	546	0.047	26	0.0	0.0	6.919	A
B-A	27	7	345	0.079	27	0.1	0.1	11.338	B
C-AB	26	6	894	0.029	26	0.0	0.0	4.139	A
C-A	496	124			496				
A-B	8	2			8				
A-C	411	103			411				

15:15 - 15:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	520	0.060	31	0.0	0.1	7.363	A
B-A	33	8	308	0.108	33	0.1	0.1	13.104	B
C-AB	39	10	959	0.041	39	0.0	0.1	3.908	A
C-A	599	150			599				
A-B	10	3			10				
A-C	504	126			504				

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	520	0.060	31	0.1	0.1	7.365	A
B-A	33	8	308	0.108	33	0.1	0.1	13.115	B
C-AB	39	10	959	0.041	39	0.1	0.1	3.915	A
C-A	599	150			599				
A-B	10	3			10				
A-C	504	126			504				

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	6	545	0.047	26	0.1	0.0	6.927	A
B-A	27	7	345	0.079	27	0.1	0.1	11.349	B
C-AB	26	6	894	0.029	26	0.1	0.0	4.155	A
C-A	495	124			495				
A-B	8	2			8				
A-C	411	103			411				

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	564	0.038	21	0.0	0.0	6.640	A
B-A	23	6	371	0.061	23	0.1	0.1	10.337	B
C-AB	19	5	850	0.022	19	0.0	0.0	4.342	A
C-A	418	104			418				
A-B	7	2			7				
A-C	344	86			344				

Neasham Road - Garbutt Square - 2027 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.97	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D22	2027 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D19+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	519	100.000
B		ONE HOUR	✓	65	100.000
C		ONE HOUR	✓	542	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	40	478
	B	32	0	33
	C	502	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	3
	B	0	0	3
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.07	7.71	0.1	A	30	46
B-A	0.11	13.09	0.1	B	29	44
C-AB	0.13	4.78	0.3	A	83	124
C-A					414	622
A-B					37	55
A-C					439	658

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	549	0.045	25	0.0	0.0	6.866	A
B-A	24	6	377	0.064	24	0.0	0.1	10.200	B
C-AB	56	14	812	0.069	56	0.0	0.1	4.762	A
C-A	351	88			351				
A-B	30	8			30				
A-C	360	90			360				

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	530	0.056	30	0.0	0.1	7.196	A
B-A	29	7	349	0.082	29	0.1	0.1	11.246	B
C-AB	77	19	849	0.091	77	0.1	0.2	4.659	A
C-A	410	102			410				
A-B	36	9			36				
A-C	430	108			430				

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	503	0.072	36	0.1	0.1	7.706	A
B-A	35	9	310	0.114	35	0.1	0.1	13.072	B
C-AB	114	29	903	0.126	114	0.2	0.3	4.557	A
C-A	482	121			482				
A-B	44	11			44				
A-C	527	132			527				

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	36	9	503	0.072	36	0.1	0.1	7.710	A
B-A	35	9	310	0.114	35	0.1	0.1	13.087	B
C-AB	114	29	904	0.127	114	0.3	0.3	4.567	A
C-A	482	121			482				
A-B	44	11			44				
A-C	527	132			527				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	30	7	530	0.056	30	0.1	0.1	7.202	A
B-A	29	7	349	0.083	29	0.1	0.1	11.261	B
C-AB	77	19	850	0.091	78	0.3	0.2	4.679	A
C-A	410	102			410				
A-B	36	9			36				
A-C	430	108			430				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	549	0.045	25	0.1	0.0	6.878	A
B-A	24	6	377	0.064	24	0.1	0.1	10.221	B
C-AB	57	14	812	0.070	57	0.2	0.1	4.776	A
C-A	351	88			351				
A-B	30	8			30				
A-C	360	90			360				

APPENDIX E

Junctions 9 Output - Yarm Road / Neasham Road / B6280 mini roundabout

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462
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Filename: Parkgate - Neasham Road - Yarm Road April 2021 (Covid Factors).j9
Path: J:\11000\11500\11590_GatewayMSCPDesignFee\engineering\Traffic_Programs\Arcady
Report generation date: 15/04/2021 10:48:27

»Parkgate - Neasham Road - Yarm Road - 2021, AM
»Parkgate - Neasham Road - Yarm Road - 2021, PM
»Parkgate - Neasham Road - Yarm Road - 2021, SAT
»Parkgate - Neasham Road - Yarm Road - 2021 + Dev, AM
»Parkgate - Neasham Road - Yarm Road - 2021 + Dev, PM
»Parkgate - Neasham Road - Yarm Road - 2021 + Dev, SAT
»Parkgate - Neasham Road - Yarm Road - 2023, AM
»Parkgate - Neasham Road - Yarm Road - 2023, PM
»Parkgate - Neasham Road - Yarm Road - 2023, SAT
»Parkgate - Neasham Road - Yarm Road - 2023 + Dev, AM
»Parkgate - Neasham Road - Yarm Road - 2023 + Dev, PM
»Parkgate - Neasham Road - Yarm Road - 2023 + Dev, SAT
»Parkgate - Neasham Road - Yarm Road - 2027, AM
»Parkgate - Neasham Road - Yarm Road - 2027, PM
»Parkgate - Neasham Road - Yarm Road - 2027, SAT
»Parkgate - Neasham Road - Yarm Road - 2027 + Dev, AM
»Parkgate - Neasham Road - Yarm Road - 2027 + Dev, PM
»Parkgate - Neasham Road - Yarm Road - 2027 + Dev, SAT

Summary of junction performance

	AM			PM			SAT		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Parkgate - Neasham Road - Yarm Road - 2021									
Arm 1	1.3	5.09	0.58	1.7	5.81	0.63	1.5	5.29	0.60
Arm 2	2.4	12.68	0.71	2.7	13.92	0.73	2.3	11.73	0.70
Arm 3	31.7	187.58	1.09	7.5	57.88	0.91	5.3	43.07	0.86
Parkgate - Neasham Road - Yarm Road - 2021 + Dev									
Arm 1	1.5	5.44	0.60	1.8	5.90	0.64	1.7	5.59	0.62
Arm 2	2.9	14.75	0.75	2.7	14.18	0.74	2.6	12.94	0.73
Arm 3	33.4	195.42	1.09	10.4	75.41	0.95	8.2	62.12	0.92
Parkgate - Neasham Road - Yarm Road - 2023									
Arm 1	1.4	5.21	0.59	1.8	5.99	0.64	1.6	5.44	0.61
Arm 2	2.6	13.45	0.73	2.9	14.85	0.75	2.5	12.37	0.72
Arm 3	38.7	223.40	1.12	9.1	68.39	0.93	6.2	49.82	0.88
Parkgate - Neasham Road - Yarm Road - 2023 + Dev									
Arm 1	1.6	5.58	0.61	1.8	6.08	0.65	1.7	5.76	0.64
Arm 2	3.1	15.80	0.76	2.9	15.15	0.75	2.8	13.72	0.74
Arm 3	40.5	231.79	1.13	12.8	89.86	0.97	9.9	73.39	0.94
Parkgate - Neasham Road - Yarm Road - 2027									
Arm 1	1.5	5.45	0.60	2.0	6.36	0.67	1.7	5.74	0.63
Arm 2	3.0	15.21	0.76	3.4	17.00	0.78	2.8	13.80	0.74
Arm 3	53.3	299.68	1.18	13.5	95.21	0.98	8.7	67.66	0.93
Parkgate - Neasham Road - Yarm Road - 2027 + Dev									
Arm 1	1.7	5.86	0.63	2.0	6.46	0.67	1.9	6.09	0.65
Arm 2	3.7	18.26	0.79	3.4	17.39	0.78	3.2	15.48	0.77
Arm 3	55.2	308.80	1.19	19.4	125.54	1.02	14.8	102.33	0.99

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

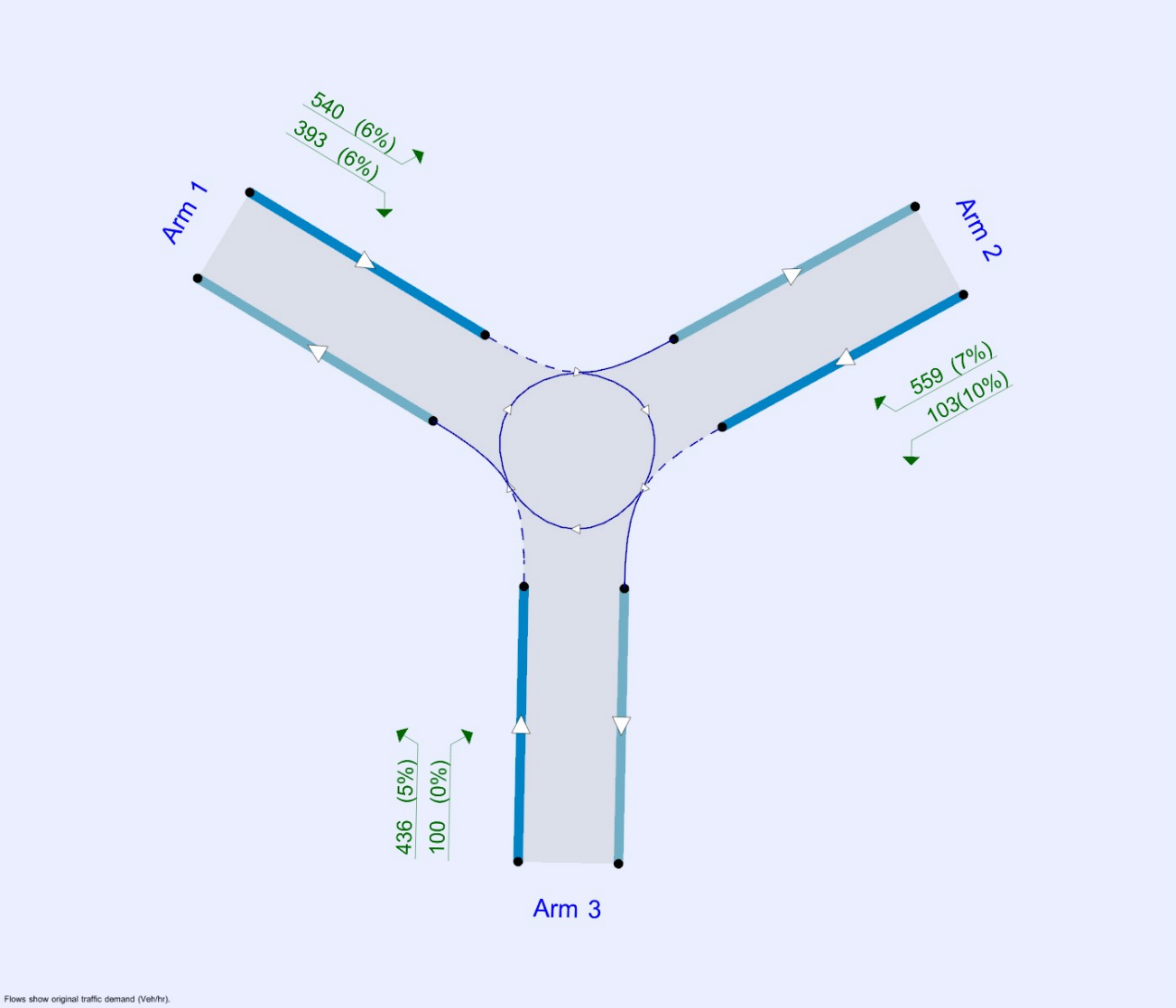
File summary

File Description

Title	Parkgate - Neasham Road - Yarm Road
Location	Darlington
Site number	
Date	18/11/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SANDERSONASSOC\carly.hoyle
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2020	AM	ONE HOUR	08:00	09:30	15			
D2	2020	PM	ONE HOUR	14:45	16:15	15			
D3	2020	SAT	ONE HOUR	12:15	13:45	15			
D4	2020 Covid	AM	ONE HOUR	08:00	09:30	15		Simple	D1*1.06477
D5	2021	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0119
D6	2021	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0104
D7	2021	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0095
D8	2021 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D5+D40
D9	2021 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D6+D50
D10	2021 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D7+D60
D11	2023	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0299
D12	2023	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0271
D13	2023	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0264
D14	2023 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D11+D40
D15	2023 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D12+D50
D16	2023 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D13+D60
D17	2027	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0641
D18	2027	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0590
D19	2027	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0583
D20	2027 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D17+D40
D21	2027 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D18+D50
D22	2027 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D19+D60
D40	Development	AM	ONE HOUR	08:00	09:30	15			
D50	Development	PM	ONE HOUR	14:45	16:15	15			
D60	Development	SAT	ONE HOUR	12:15	13:45	15			

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Parkgate - Neasham Road - Yarm Road	✓	100.000	100.000

Parkgate - Neasham Road - Yarm Road - 2021, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	53.59	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Parkgate	
2	Yarm Road	
3	Neasham Road	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	5.80	5.80	6.60	40.0	20.00	20.00	0.0	✓
2	2.75	2.75	7.10	45.0	11.60	7.50	0.0	✓
3	2.40	2.40	8.50	5.0	18.00	17.00	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.918	1866
2	0.596	1296
3	0.571	920

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D5	2021	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0119

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	871	100.000
2		ONE HOUR	✓	639	100.000
3		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	530	340
	2	549	0	89
	3	426	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	7
	2	7	0	11
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.58	5.09	1.3	A	799	1198
2	0.71	12.68	2.4	B	586	879
3	1.09	187.58	31.7	F	480	719

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	655	164	72	1687	0.388	653	726	0.0	0.6	3.471	A
2	481	120	255	1058	0.455	478	469	0.0	0.8	6.172	A
3	393	98	411	643	0.612	387	322	0.0	1.5	13.790	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	783	196	86	1675	0.467	782	869	0.6	0.9	4.024	A
2	574	144	306	1028	0.559	573	562	0.8	1.2	7.881	A
3	470	117	493	595	0.789	463	386	1.5	3.3	25.828	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	959	240	95	1667	0.575	957	1019	0.9	1.3	5.051	A
2	703	176	374	987	0.713	699	678	1.2	2.4	12.304	B
3	575	144	601	532	1.082	513	472	3.3	18.9	97.395	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	959	240	97	1666	0.575	958	1032	1.3	1.3	5.090	A
2	703	176	375	987	0.713	703	681	2.4	2.4	12.680	B
3	575	144	605	530	1.086	524	473	18.9	31.7	187.580	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	783	196	106	1658	0.472	784	965	1.3	0.9	4.131	A
2	574	144	307	1027	0.559	579	584	2.4	1.3	8.110	A
3	470	117	498	592	0.794	573	388	31.7	5.9	127.315	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	655	164	76	1684	0.389	656	749	0.9	0.6	3.509	A
2	481	120	257	1057	0.455	483	476	1.3	0.8	6.291	A
3	393	98	415	640	0.614	410	324	5.9	1.7	16.722	C

Parkgate - Neasham Road - Yarm Road - 2021, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	19.80	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D6	2021	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0104

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	974	100.000
2		ONE HOUR	✓	639	100.000
3		ONE HOUR	✓	457	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	541	433
	2	521	0	117
	3	372	85	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.63	5.81	1.7	A	894	1341
2	0.73	13.92	2.7	B	586	879
3	0.91	57.88	7.5	F	419	629

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	733	183	63	1718	0.427	730	666	0.0	0.7	3.634	A
2	481	120	325	1053	0.457	477	468	0.0	0.8	6.221	A
3	344	86	390	657	0.523	340	413	0.0	1.1	11.201	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	876	219	76	1707	0.513	874	799	0.7	1.0	4.318	A
2	574	144	389	1014	0.566	572	561	0.8	1.3	8.113	A
3	411	103	467	613	0.670	407	494	1.1	1.9	17.204	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1072	268	90	1694	0.633	1070	965	1.0	1.7	5.744	A
2	703	176	476	961	0.731	698	684	1.3	2.6	13.396	B
3	503	126	570	555	0.906	485	604	1.9	6.3	43.685	E

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1072	268	93	1692	0.634	1072	979	1.7	1.7	5.809	A
2	703	176	477	961	0.732	703	688	2.6	2.7	13.918	B
3	503	126	574	552	0.910	498	606	6.3	7.5	57.881	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	876	219	80	1703	0.514	878	825	1.7	1.1	4.379	A
2	574	144	391	1013	0.567	579	568	2.7	1.3	8.398	A
3	411	103	473	610	0.673	432	497	7.5	2.2	22.329	C

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	733	183	65	1717	0.427	735	677	1.1	0.8	3.669	A
2	481	120	327	1052	0.457	483	472	1.3	0.9	6.345	A
3	344	86	394	654	0.525	348	415	2.2	1.1	11.904	B

Parkgate - Neasham Road - Yarm Road - 2021, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	15.41	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D7	2021	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0095

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	943	100.000
2		ONE HOUR	✓	656	100.000
3		ONE HOUR	✓	431	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	586	357
	2	543	0	113
	3	337	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	4
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.60	5.29	1.5	A	865	1298
2	0.70	11.73	2.3	B	602	903
3	0.86	43.07	5.3	E	396	593

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	710	177	70	1749	0.406	707	657	0.0	0.7	3.447	A
2	494	124	268	1104	0.447	491	509	0.0	0.8	5.836	A
3	325	81	406	660	0.492	321	353	0.0	0.9	10.493	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	848	212	84	1736	0.488	847	788	0.7	0.9	4.041	A
2	590	147	321	1073	0.550	588	609	0.8	1.2	7.408	A
3	388	97	487	614	0.631	385	422	0.9	1.6	15.491	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1038	260	101	1721	0.603	1036	956	0.9	1.5	5.237	A
2	722	181	393	1029	0.702	718	744	1.2	2.3	11.420	B
3	475	119	594	553	0.858	462	516	1.6	4.7	35.571	E

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1038	260	103	1719	0.604	1038	967	1.5	1.5	5.286	A
2	722	181	393	1029	0.702	722	747	2.3	2.3	11.730	B
3	475	119	598	551	0.861	472	518	4.7	5.3	43.066	E

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	848	212	87	1733	0.489	850	806	1.5	1.0	4.087	A
2	590	147	322	1072	0.550	594	615	2.3	1.2	7.604	A
3	388	97	492	612	0.634	401	424	5.3	1.8	18.154	C

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	710	177	71	1747	0.406	711	667	1.0	0.7	3.478	A
2	494	124	269	1104	0.448	496	513	1.2	0.8	5.940	A
3	325	81	410	658	0.493	328	355	1.8	1.0	11.009	B

Parkgate - Neasham Road - Yarm Road - 2021 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	55.35	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D8	2021 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D5+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	917	100.000
2		ONE HOUR	✓	651	100.000
3		ONE HOUR	✓	527	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	530	386
	2	549	0	101
	3	429	98	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	6
	2	6	0	10
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.60	5.44	1.5	A	841	1262
2	0.75	14.75	2.9	B	597	896
3	1.09	195.42	33.4	F	483	725

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	690	173	73	1692	0.408	687	728	0.0	0.7	3.574	A
2	490	123	290	1040	0.471	487	470	0.0	0.9	6.467	A
3	396	99	411	643	0.616	390	366	0.0	1.5	13.925	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	824	206	87	1680	0.490	823	872	0.7	1.0	4.195	A
2	585	146	347	1006	0.582	583	563	0.9	1.4	8.475	A
3	473	118	492	595	0.795	466	438	1.5	3.4	26.357	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1009	252	96	1672	0.603	1007	1019	1.0	1.5	5.395	A
2	717	179	425	960	0.746	711	678	1.4	2.8	14.136	B
3	580	145	600	532	1.089	515	535	3.4	19.7	100.196	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1009	252	98	1670	0.604	1009	1032	1.5	1.5	5.442	A
2	717	179	425	960	0.747	716	681	2.8	2.9	14.749	B
3	580	145	605	530	1.094	525	537	19.7	33.4	195.418	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	824	206	107	1663	0.496	826	966	1.5	1.0	4.313	A
2	585	146	348	1005	0.582	591	585	2.9	1.4	8.804	A
3	473	118	499	592	0.800	574	440	33.4	8.1	138.792	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	690	173	79	1687	0.409	691	759	1.0	0.7	3.621	A
2	490	123	291	1039	0.472	492	478	1.4	0.9	6.611	A
3	396	99	415	640	0.619	422	368	8.1	1.7	18.284	C

Parkgate - Neasham Road - Yarm Road - 2021 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	24.24	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D9	2021 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D6+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	980	100.000
2		ONE HOUR	✓	640	100.000
3		ONE HOUR	✓	478	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	541	439
	2	521	0	118
	3	389	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.64	5.90	1.8	A	899	1349
2	0.74	14.18	2.7	B	587	880
3	0.95	75.41	10.4	F	438	658

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	738	184	66	1716	0.430	735	679	0.0	0.7	3.658	A
2	482	120	330	1050	0.458	478	471	0.0	0.8	6.254	A
3	360	90	390	658	0.546	355	418	0.0	1.2	11.701	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	881	220	79	1704	0.517	880	813	0.7	1.1	4.359	A
2	575	144	395	1011	0.569	573	564	0.8	1.3	8.185	A
3	429	107	467	614	0.699	425	500	1.2	2.2	18.666	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1079	270	93	1692	0.638	1076	978	1.1	1.7	5.825	A
2	704	176	483	958	0.735	699	687	1.3	2.6	13.629	B
3	526	131	570	556	0.946	502	612	2.2	8.2	52.170	F

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1079	270	96	1689	0.639	1079	995	1.7	1.8	5.897	A
2	704	176	484	957	0.736	704	691	2.6	2.7	14.179	B
3	526	131	574	554	0.950	517	614	8.2	10.4	75.406	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	881	220	86	1699	0.519	884	848	1.8	1.1	4.432	A
2	575	144	396	1010	0.569	580	573	2.7	1.3	8.481	A
3	429	107	473	611	0.703	461	504	10.4	2.6	28.068	D

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	738	184	68	1714	0.430	739	691	1.1	0.8	3.698	A
2	482	120	331	1049	0.459	483	476	1.3	0.9	6.385	A
3	360	90	394	656	0.548	365	421	2.6	1.2	12.585	B

Parkgate - Neasham Road - Yarm Road - 2021 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	20.38	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D10	2021 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D7+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	973	100.000
2		ONE HOUR	✓	665	100.000
3		ONE HOUR	✓	462	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	586	387
	2	543	0	122
	3	361	101	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.62	5.59	1.7	A	893	1339
2	0.73	12.94	2.6	B	610	916
3	0.92	62.12	8.2	F	424	636

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	732	183	75	1746	0.420	730	675	0.0	0.7	3.532	A
2	501	125	290	1092	0.459	497	514	0.0	0.8	6.024	A
3	348	87	406	662	0.526	344	382	0.0	1.1	11.173	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	875	219	90	1732	0.505	873	809	0.7	1.0	4.185	A
2	598	149	348	1057	0.566	596	616	0.8	1.3	7.779	A
3	415	104	487	616	0.675	412	457	1.1	2.0	17.356	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1071	268	107	1717	0.624	1069	977	1.0	1.6	5.531	A
2	732	183	426	1010	0.725	727	750	1.3	2.5	12.508	B
3	509	127	594	555	0.917	490	559	2.0	6.8	45.779	E

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1071	268	110	1714	0.625	1071	991	1.6	1.7	5.593	A
2	732	183	426	1010	0.725	732	754	2.5	2.6	12.935	B
3	509	127	598	552	0.921	503	561	6.8	8.2	62.120	F

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	875	219	96	1727	0.506	877	836	1.7	1.0	4.249	A
2	598	149	349	1056	0.566	603	624	2.6	1.3	8.026	A
3	415	104	492	613	0.678	439	460	8.2	2.2	23.176	C

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	732	183	77	1744	0.420	734	686	1.0	0.7	3.569	A
2	501	125	292	1091	0.459	503	518	1.3	0.9	6.140	A
3	348	87	410	659	0.528	352	384	2.2	1.1	11.886	B

Parkgate - Neasham Road - Yarm Road - 2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	62.93	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D11	2023	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0299

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	886	100.000
2		ONE HOUR	✓	650	100.000
3		ONE HOUR	✓	532	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	540	347
	2	559	0	91
	3	433	99	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	7
	2	7	0	11
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.59	5.21	1.4	A	813	1220
2	0.73	13.45	2.6	B	597	895
3	1.12	223.40	38.7	F	488	732

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	667	167	73	1686	0.396	664	739	0.0	0.7	3.514	A
2	490	122	260	1055	0.464	486	478	0.0	0.9	6.290	A
3	400	100	418	639	0.627	394	328	0.0	1.6	14.369	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	797	199	87	1674	0.476	796	884	0.7	0.9	4.093	A
2	585	146	311	1025	0.571	583	572	0.9	1.3	8.114	A
3	478	120	501	590	0.810	470	393	1.6	3.7	28.138	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	95	1668	0.585	974	1028	0.9	1.4	5.172	A
2	716	179	381	983	0.728	711	688	1.3	2.5	12.994	B
3	586	146	611	526	1.114	511	480	3.7	22.4	111.108	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	96	1666	0.585	976	1039	1.4	1.4	5.211	A
2	716	179	382	983	0.729	716	690	2.5	2.6	13.454	B
3	586	146	616	523	1.119	520	482	22.4	38.7	223.405	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	797	199	106	1658	0.480	798	973	1.4	0.9	4.198	A
2	585	146	312	1024	0.571	590	592	2.6	1.4	8.383	A
3	478	120	507	587	0.815	572	395	38.7	15.3	175.802	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	667	167	84	1677	0.398	668	793	0.9	0.7	3.572	A
2	490	122	261	1054	0.464	491	491	1.4	0.9	6.421	A
3	400	100	423	636	0.630	454	330	15.3	1.8	25.527	D

Parkgate - Neasham Road - Yarm Road - 2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	22.50	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D12	2023	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0271

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	990	100.000
2		ONE HOUR	✓	649	100.000
3		ONE HOUR	✓	464	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	549	441
	2	530	0	119
	3	378	86	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.64	5.99	1.8	A	909	1363
2	0.75	14.85	2.9	B	596	893
3	0.93	68.39	9.1	F	426	639

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	745	186	64	1717	0.434	742	677	0.0	0.8	3.683	A
2	489	122	330	1050	0.466	485	476	0.0	0.9	6.340	A
3	350	87	396	653	0.535	345	419	0.0	1.1	11.523	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	890	223	77	1706	0.522	889	812	0.8	1.1	4.399	A
2	584	146	396	1010	0.578	582	570	0.9	1.3	8.361	A
3	417	104	475	609	0.686	414	502	1.1	2.1	18.109	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1090	273	91	1693	0.644	1087	978	1.1	1.8	5.916	A
2	715	179	484	957	0.747	709	695	1.3	2.8	14.193	B
3	511	128	579	550	0.930	490	614	2.1	7.3	48.843	E

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1090	273	94	1691	0.645	1090	994	1.8	1.8	5.990	A
2	715	179	485	956	0.748	714	699	2.8	2.9	14.847	B
3	511	128	583	547	0.934	504	616	7.3	9.1	68.386	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	890	223	83	1701	0.523	893	843	1.8	1.1	4.470	A
2	584	146	397	1009	0.578	589	578	2.9	1.4	8.692	A
3	417	104	481	605	0.690	444	506	9.1	2.4	25.478	D

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	745	186	66	1716	0.434	747	689	1.1	0.8	3.719	A
2	489	122	332	1049	0.466	491	480	1.4	0.9	6.476	A
3	350	87	401	651	0.537	354	422	2.4	1.2	12.330	B

Parkgate - Neasham Road - Yarm Road - 2023, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	17.13	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D13	2023	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0264

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	959	100.000
2		ONE HOUR	✓	667	100.000
3		ONE HOUR	✓	438	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	595	363
	2	552	0	115
	3	343	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	4
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.61	5.44	1.6	A	880	1320
2	0.72	12.37	2.5	B	612	918
3	0.88	49.82	6.2	E	402	603

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	722	180	71	1748	0.413	719	668	0.0	0.7	3.491	A
2	502	126	272	1102	0.456	499	517	0.0	0.8	5.941	A
3	330	82	413	656	0.503	326	358	0.0	1.0	10.774	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	862	215	85	1735	0.497	861	801	0.7	1.0	4.112	A
2	600	150	326	1069	0.561	598	620	0.8	1.3	7.612	A
3	394	98	495	610	0.646	391	429	1.0	1.7	16.230	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1056	264	102	1720	0.614	1053	970	1.0	1.6	5.379	A
2	735	184	399	1025	0.716	730	756	1.3	2.4	12.002	B
3	483	121	604	548	0.881	468	525	1.7	5.4	39.466	E

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1056	264	104	1718	0.614	1055	983	1.6	1.6	5.435	A
2	735	184	400	1025	0.717	734	760	2.4	2.5	12.373	B
3	483	121	608	546	0.884	479	527	5.4	6.2	49.815	E

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	862	215	90	1731	0.498	864	822	1.6	1.0	4.164	A
2	600	150	328	1069	0.561	604	626	2.5	1.3	7.834	A
3	394	98	500	607	0.649	411	432	6.2	2.0	19.808	C

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	722	180	73	1746	0.413	723	678	1.0	0.7	3.523	A
2	502	126	274	1101	0.456	504	522	1.3	0.8	6.050	A
3	330	82	417	654	0.505	334	361	2.0	1.0	11.359	B

Parkgate - Neasham Road - Yarm Road - 2023 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	64.75	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D14	2023 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D11+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	932	100.000
2		ONE HOUR	✓	662	100.000
3		ONE HOUR	✓	536	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	540	393
	2	559	0	103
	3	436	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	6
	2	7	0	10
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.61	5.58	1.6	A	855	1283
2	0.76	15.80	3.1	C	608	912
3	1.13	231.79	40.5	F	492	738

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	702	175	74	1691	0.415	699	741	0.0	0.7	3.618	A
2	499	125	294	1037	0.481	495	478	0.0	0.9	6.597	A
3	403	101	418	639	0.632	397	371	0.0	1.6	14.515	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	838	209	88	1679	0.499	837	886	0.7	1.0	4.270	A
2	595	149	352	1003	0.594	593	572	0.9	1.4	8.747	A
3	482	120	501	590	0.816	473	445	1.6	3.8	28.748	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1026	257	95	1672	0.614	1024	1028	1.0	1.6	5.531	A
2	729	182	431	956	0.763	723	688	1.4	3.0	15.035	C
3	590	147	610	527	1.121	512	544	3.8	23.2	114.113	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1026	257	97	1671	0.614	1026	1039	1.6	1.6	5.581	A
2	729	182	432	956	0.763	729	691	3.0	3.1	15.801	C
3	590	147	615	524	1.127	521	546	23.2	40.5	231.794	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	838	209	106	1663	0.504	840	974	1.6	1.0	4.388	A
2	595	149	354	1002	0.594	602	593	3.1	1.5	9.138	A
3	482	120	508	586	0.822	572	447	40.5	18.0	188.796	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	702	175	87	1680	0.418	703	804	1.0	0.7	3.692	A
2	499	125	296	1036	0.481	501	494	1.5	0.9	6.755	A
3	403	101	423	636	0.634	468	374	18.0	1.8	29.411	D

Parkgate - Neasham Road - Yarm Road - 2023 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	27.90	D

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D15	2023 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D12+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	996	100.000
2		ONE HOUR	✓	650	100.000
3		ONE HOUR	✓	485	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	549	447
	2	530	0	120
	3	395	90	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.65	6.08	1.8	A	914	1371
2	0.75	15.15	2.9	C	597	895
3	0.97	89.86	12.8	F	445	668

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	750	187	67	1715	0.437	747	690	0.0	0.8	3.705	A
2	489	122	335	1047	0.467	486	479	0.0	0.9	6.375	A
3	365	91	396	655	0.558	360	425	0.0	1.2	12.049	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	895	224	80	1703	0.526	894	826	0.8	1.1	4.442	A
2	584	146	401	1007	0.580	583	574	0.9	1.4	8.437	A
3	436	109	475	610	0.715	432	509	1.2	2.3	19.723	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1097	274	94	1691	0.649	1094	990	1.1	1.8	5.999	A
2	716	179	490	953	0.751	710	697	1.4	2.8	14.463	B
3	534	134	579	551	0.970	506	622	2.3	9.5	58.545	F

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1097	274	97	1688	0.650	1097	1007	1.8	1.8	6.080	A
2	716	179	492	952	0.752	715	702	2.8	2.9	15.145	C
3	534	134	583	548	0.975	521	624	9.5	12.8	89.858	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	895	224	89	1696	0.528	898	869	1.8	1.1	4.530	A
2	584	146	403	1006	0.581	591	584	2.9	1.4	8.785	A
3	436	109	481	606	0.720	476	512	12.8	2.8	34.184	D

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	750	187	69	1713	0.438	751	703	1.1	0.8	3.746	A
2	489	122	337	1046	0.468	492	484	1.4	0.9	6.516	A
3	365	91	401	652	0.560	371	428	2.8	1.3	13.086	B

Parkgate - Neasham Road - Yarm Road - 2023 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	23.19	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D16	2023 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D13+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	989	100.000
2		ONE HOUR	✓	676	100.000
3		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	595	393
	2	552	0	124
	3	367	102	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.64	5.76	1.7	A	907	1361
2	0.74	13.72	2.8	B	620	931
3	0.94	73.39	9.9	F	431	646

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	744	186	76	1745	0.427	741	686	0.0	0.7	3.577	A
2	509	127	295	1089	0.467	506	523	0.0	0.9	6.136	A
3	353	88	413	658	0.537	349	388	0.0	1.1	11.492	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	889	222	91	1731	0.513	888	822	0.7	1.0	4.261	A
2	608	152	353	1054	0.577	606	626	0.9	1.3	8.002	A
3	422	105	495	611	0.690	418	464	1.1	2.1	18.276	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1089	272	108	1716	0.634	1086	989	1.0	1.7	5.687	A
2	744	186	432	1006	0.740	739	762	1.3	2.7	13.200	B
3	517	129	604	549	0.941	494	568	2.1	7.8	51.254	F

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1089	272	111	1713	0.635	1088	1005	1.7	1.7	5.758	A
2	744	186	433	1006	0.740	744	766	2.7	2.8	13.720	B
3	517	129	608	547	0.945	508	569	7.8	9.9	73.388	F

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	889	222	99	1725	0.515	891	854	1.7	1.1	4.334	A
2	608	152	355	1053	0.577	613	635	2.8	1.4	8.286	A
3	422	105	501	608	0.694	452	467	9.9	2.4	26.759	D

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	744	186	78	1743	0.427	746	697	1.1	0.8	3.613	A
2	509	127	297	1088	0.468	511	527	1.4	0.9	6.263	A
3	353	88	417	655	0.539	358	390	2.4	1.2	12.312	B

Parkgate - Neasham Road - Yarm Road - 2027, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	82.86	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D17	2027	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D4*1.0641

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	915	100.000
2		ONE HOUR	✓	672	100.000
3		ONE HOUR	✓	550	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	557	358
	2	578	0	94
	3	448	102	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	7
	2	7	0	11
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.60	5.45	1.5	A	840	1260
2	0.76	15.21	3.0	C	617	925
3	1.18	299.68	53.3	F	504	756

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	689	172	75	1684	0.409	686	763	0.0	0.7	3.599	A
2	506	126	268	1050	0.482	502	493	0.0	0.9	6.530	A
3	414	103	432	631	0.656	406	339	0.0	1.8	15.607	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	823	206	90	1672	0.492	822	911	0.7	1.0	4.229	A
2	604	151	321	1018	0.593	602	590	0.9	1.4	8.602	A
3	494	124	518	580	0.851	483	406	1.8	4.6	33.572	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1008	252	94	1669	0.604	1006	1042	1.0	1.5	5.414	A
2	740	185	393	976	0.758	734	706	1.4	2.9	14.524	B
3	605	151	631	514	1.176	505	496	4.6	29.6	140.946	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1008	252	95	1668	0.604	1008	1051	1.5	1.5	5.454	A
2	740	185	394	975	0.759	739	708	2.9	3.0	15.212	C
3	605	151	636	512	1.183	510	498	29.6	53.3	299.681	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	823	206	105	1659	0.496	825	986	1.5	1.0	4.327	A
2	604	151	323	1018	0.594	610	607	3.0	1.5	8.965	A
3	494	124	525	576	0.857	566	408	53.3	35.4	282.377	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	689	172	101	1662	0.415	690	882	1.0	0.7	3.708	A
2	506	126	270	1049	0.482	508	522	1.5	0.9	6.682	A
3	414	103	437	628	0.659	547	341	35.4	2.2	85.666	F

Parkgate - Neasham Road - Yarm Road - 2027, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	29.26	D

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D18	2027	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D2*1.0590

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1021	100.000
2		ONE HOUR	✓	669	100.000
3		ONE HOUR	✓	479	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	567	454
	2	546	0	123
	3	390	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.67	6.36	2.0	A	937	1405
2	0.78	17.00	3.4	C	614	921
3	0.98	95.21	13.5	F	439	659

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	66	1715	0.448	765	698	0.0	0.8	3.777	A
2	504	126	341	1044	0.483	500	491	0.0	0.9	6.585	A
3	360	90	408	646	0.558	355	432	0.0	1.2	12.185	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	79	1704	0.539	916	836	0.8	1.2	4.563	A
2	602	150	408	1003	0.600	600	588	0.9	1.5	8.877	A
3	430	108	489	600	0.717	426	518	1.2	2.4	20.105	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	92	1692	0.664	1121	1001	1.2	1.9	6.268	A
2	737	184	499	948	0.778	730	714	1.5	3.2	16.019	C
3	527	132	596	540	0.976	497	633	2.4	9.8	60.870	F

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	95	1689	0.665	1124	1018	1.9	2.0	6.363	A
2	737	184	500	947	0.778	736	719	3.2	3.4	17.003	C
3	527	132	601	537	0.982	512	635	9.8	13.5	95.207	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	88	1696	0.541	921	882	2.0	1.2	4.662	A
2	602	150	410	1002	0.601	609	599	3.4	1.5	9.332	A
3	430	108	497	596	0.722	473	522	13.5	2.9	36.661	E

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	68	1714	0.449	770	712	1.2	0.8	3.823	A
2	504	126	343	1042	0.483	506	495	1.5	0.9	6.744	A
3	360	90	413	644	0.560	367	436	2.9	1.3	13.272	B

Parkgate - Neasham Road - Yarm Road - 2027, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	21.53	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D19	2027	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D3*1.0583

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	988	100.000
2		ONE HOUR	✓	688	100.000
3		ONE HOUR	✓	452	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	614	375
	2	569	0	119
	3	353	98	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	4
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.63	5.74	1.7	A	907	1361
2	0.74	13.80	2.8	B	631	947
3	0.93	67.66	8.7	F	415	622

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	744	186	73	1746	0.426	741	688	0.0	0.7	3.573	A
2	518	129	281	1097	0.472	514	533	0.0	0.9	6.146	A
3	340	85	426	649	0.524	336	370	0.0	1.1	11.346	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	889	222	88	1733	0.513	887	825	0.7	1.0	4.252	A
2	618	155	336	1063	0.582	616	639	0.9	1.4	8.023	A
3	406	102	510	601	0.676	403	443	1.1	2.0	17.818	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1088	272	104	1718	0.633	1086	996	1.0	1.7	5.668	A
2	757	189	411	1018	0.744	752	778	1.4	2.8	13.260	B
3	498	124	622	537	0.926	477	541	2.0	7.1	48.598	E

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1088	272	107	1715	0.634	1088	1011	1.7	1.7	5.737	A
2	757	189	412	1017	0.745	757	783	2.8	2.8	13.796	B
3	498	124	627	535	0.930	491	543	7.1	8.7	67.664	F

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	889	222	94	1727	0.515	891	854	1.7	1.1	4.320	A
2	618	155	338	1062	0.582	624	648	2.8	1.4	8.315	A
3	406	102	517	597	0.680	432	445	8.7	2.3	24.633	C

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	744	186	75	1744	0.427	745	700	1.1	0.7	3.611	A
2	518	129	283	1096	0.473	520	538	1.4	0.9	6.276	A
3	340	85	430	646	0.526	345	372	2.3	1.1	12.099	B

Parkgate - Neasham Road - Yarm Road - 2027 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	84.75	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D20	2027 + Dev	AM	ONE HOUR	08:00	09:30	15	✓	Simple	D17+D40

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	961	100.000
2		ONE HOUR	✓	684	100.000
3		ONE HOUR	✓	554	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	557	404
	2	578	0	106
	3	451	103	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	7	6
	2	6	0	10
	3	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.63	5.86	1.7	A	882	1323
2	0.79	18.26	3.7	C	628	941
3	1.19	308.80	55.2	F	508	762

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	724	181	76	1689	0.429	721	765	0.0	0.7	3.709	A
2	515	129	303	1032	0.499	511	494	0.0	1.0	6.860	A
3	417	104	432	631	0.661	409	382	0.0	1.8	15.776	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	864	216	90	1677	0.516	863	913	0.7	1.1	4.419	A
2	615	154	363	997	0.617	612	591	1.0	1.6	9.313	A
3	498	124	517	581	0.857	486	458	1.8	4.7	34.373	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1059	265	94	1673	0.633	1056	1042	1.1	1.7	5.808	A
2	753	188	444	949	0.794	745	707	1.6	3.5	17.061	C
3	609	152	630	515	1.183	507	559	4.7	30.5	144.278	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1059	265	95	1673	0.633	1059	1051	1.7	1.7	5.862	A
2	753	188	445	948	0.794	752	709	3.5	3.7	18.258	C
3	609	152	636	512	1.191	510	561	30.5	55.2	308.798	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	864	216	105	1664	0.520	867	987	1.7	1.1	4.532	A
2	615	154	364	996	0.617	623	608	3.7	1.7	9.857	A
3	498	124	526	576	0.864	565	461	55.2	38.3	297.032	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	724	181	104	1665	0.435	725	894	1.1	0.8	3.836	A
2	515	129	305	1031	0.499	517	525	1.7	1.0	7.047	A
3	417	104	437	628	0.664	561	385	38.3	2.3	100.037	F

Parkgate - Neasham Road - Yarm Road - 2027 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	36.87	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D21	2027 + Dev	PM	ONE HOUR	14:45	16:15	15	✓	Simple	D18+D50

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1027	100.000
2		ONE HOUR	✓	670	100.000
3		ONE HOUR	✓	500	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	567	460
	2	546	0	124
	3	407	93	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	2
	3	5	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.67	6.46	2.0	A	942	1413
2	0.78	17.39	3.4	C	615	923
3	1.02	125.54	19.4	F	459	688

Main Results for each time segment

14:45 - 15:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	773	193	69	1713	0.451	770	710	0.0	0.8	3.803	A
2	505	126	345	1041	0.485	501	494	0.0	0.9	6.621	A
3	376	94	408	648	0.581	371	438	0.0	1.3	12.776	B

15:00 - 15:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	923	231	83	1701	0.543	922	851	0.8	1.2	4.609	A
2	603	151	413	1000	0.603	600	591	0.9	1.5	8.962	A
3	449	112	489	602	0.747	444	524	1.3	2.7	22.071	C

15:15 - 15:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1131	283	95	1690	0.669	1127	1010	1.2	2.0	6.357	A
2	738	185	505	944	0.782	731	717	1.5	3.3	16.340	C
3	550	138	596	541	1.017	510	640	2.7	12.9	73.101	F

15:30 - 15:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1131	283	97	1688	0.670	1131	1028	2.0	2.0	6.455	A
2	738	185	507	943	0.783	737	721	3.3	3.4	17.393	C
3	550	138	601	538	1.023	524	643	12.9	19.4	125.541	F

15:45 - 16:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	923	231	95	1690	0.546	926	915	2.0	1.2	4.735	A
2	603	151	415	999	0.603	610	606	3.4	1.6	9.442	A
3	449	112	497	597	0.752	513	528	19.4	3.5	58.115	F

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	773	193	72	1711	0.452	775	726	1.2	0.8	3.851	A
2	505	126	347	1040	0.485	507	499	1.6	1.0	6.787	A
3	376	94	413	645	0.583	384	441	3.5	1.4	14.227	B

Parkgate - Neasham Road - Yarm Road - 2027 + Dev, SAT

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Set Relationship	D5 - 2021, AM	Demand Set relationships are chained. This may slow down the file.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	30.26	D

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	Relationship type	Relationship
D22	2027 + Dev	SAT	ONE HOUR	12:15	13:45	15	✓	Simple	D19+D60

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1018	100.000
2		ONE HOUR	✓	697	100.000
3		ONE HOUR	✓	483	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	614	405
	2	569	0	128
	3	377	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	0
	3	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.65	6.09	1.9	A	935	1402
2	0.77	15.48	3.2	C	639	959
3	0.99	102.33	14.8	F	443	665

Main Results for each time segment

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	767	192	78	1743	0.440	764	706	0.0	0.8	3.664	A
2	525	131	303	1084	0.484	521	539	0.0	0.9	6.353	A
3	364	91	426	650	0.559	359	399	0.0	1.2	12.143	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	916	229	94	1729	0.530	914	846	0.8	1.1	4.412	A
2	626	157	363	1048	0.598	624	645	0.9	1.5	8.459	A
3	434	109	510	602	0.721	429	477	1.2	2.4	20.277	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1121	280	109	1715	0.654	1118	1012	1.1	1.9	6.002	A
2	767	192	444	999	0.768	761	783	1.5	3.1	14.715	B
3	532	133	622	539	0.987	499	584	2.4	10.5	63.804	F

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1121	280	112	1712	0.655	1121	1029	1.9	1.9	6.090	A
2	767	192	445	998	0.769	767	788	3.1	3.2	15.485	C
3	532	133	627	536	0.992	515	586	10.5	14.8	102.329	F

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	916	229	105	1719	0.533	918	894	1.9	1.2	4.516	A
2	626	157	365	1047	0.598	633	659	3.2	1.5	8.841	A
3	434	109	517	598	0.726	482	481	14.8	2.9	39.713	E

13:30 - 13:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	767	192	81	1741	0.441	768	720	1.2	0.8	3.709	A
2	525	131	305	1083	0.485	527	544	1.5	1.0	6.502	A
3	364	91	431	648	0.561	370	402	2.9	1.3	13.244	B

APPENDIX F

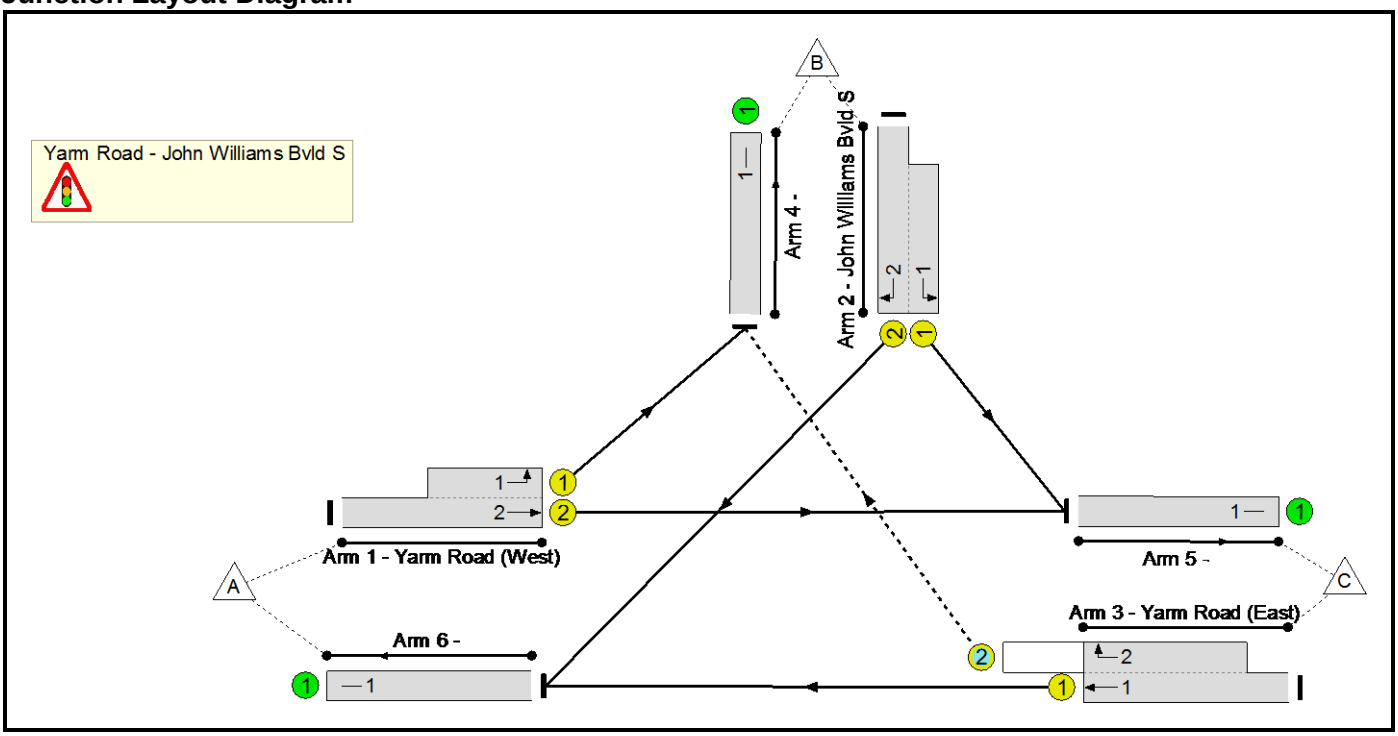
Linsig Output Data - John Williams Boulevard / Yarm Road

11590 Darlington MSCP

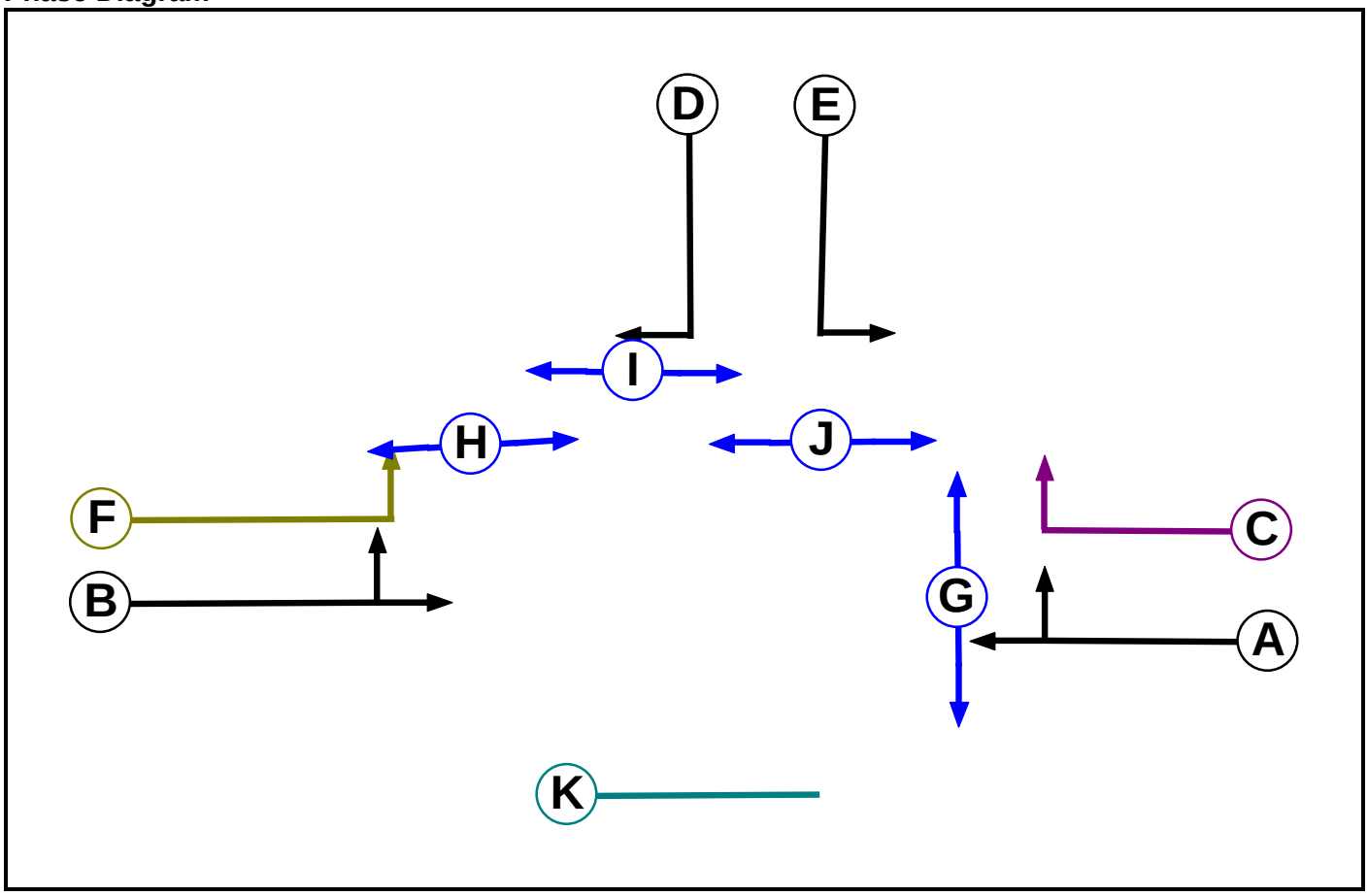
User and Project Details

Project:	**11590 - MSCP Darlington**
Title:	
Location:	Yarm Road - John Williams Bvld S
Client:	Willmott Dixon
Additional detail:	
File name:	Yarm Road - John Williams Blvd S.lsg3x
Author:	
Company:	Sanderson Associates
Address:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	A	4	4
D	Traffic		7	7
E	Traffic		7	7
F	Filter	B	7	2
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7
K	Dummy		5	5

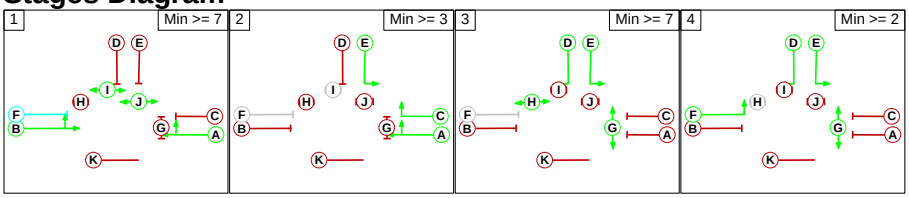
Phase Intergreens Matrix

Terminating Phase	Starting Phase										
	A	B	C	D	E	F	G	H	I	J	K
A		-	-	5	-	-	6	9	-	-	3
B	-		6	5	7	-	8	7	-	-	3
C	-	7		5	-	-	6	9	-	-	3
D	6	5	6		-	-	-	-	6	-	3
E	-	5	-	-		-	-	-	-	6	3
F	-	-	-	-	-		-	-	-	-	-
G	5	5	5	-	-	-		-	-	-	3
H	5	5	5	-	-	-	-		-	-	3
I	-	-	-	5	-	-	-	-		-	3
J	-	-	-	-	5	-	-	-	-		-
K	2	2	2	2	2	-	2	2	2	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B I J
2	A C E
3	D E G H
4	D E F G

Stages Diagram



Network Control Plans

Plan	Controller	Sequence Name	Sequence
Network Control Plan 1	C1	Stage Sequence No. 1	1,2,3,4

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Changes

		To Stage			
		1	2	3	4
From Stage	1		7	9	8
	2	7		9	6
	3	6	6		0
	4	6	X	X	

Lane Input Data

Junction: Yarm Road - John Williams Bvld S												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Yarm Road (West))	U	B F	2	3	5.7	Geom	-	3.30	0.00	Y	Arm 4 Left	17.00
1/2 (Yarm Road (West))	U	B	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 5 Ahead	Inf
2/1 (John Williams Bvld S)	U	E	2	3	7.5	Geom	-	3.80	0.00	Y	Arm 5 Left	30.00
2/2 (John Williams Bvld S)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 6 Right	12.00
3/1 (Yarm Road (East))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
3/2 (Yarm Road (East))	O	A C	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 4 Right	10.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2020 AM Base'	08:15	09:15	01:00	
2: '2020 AM Base Adj'	08:15	09:15	01:00	F1*1.06477
3: '2020 PM Base'	15:00	16:00	01:00	
4: '2020 SAT Base'	12:30	13:30	01:00	
5: '2021 AM Base'	08:15	09:15	01:00	F2*1.0119
6: '2021 PM Base'	15:00	16:00	01:00	F3*1.0104
7: '2021 SAT Base'	12:30	13:30	01:00	F4*1.0095
8: '2023 AM Base'	08:15	09:15	01:00	F2*1.0299
9: '2023 PM Base'	15:00	16:00	01:00	F3*1.0271
10: '2023 SAT Base'	12:30	13:30	01:00	F4*1.0264
11: '2027 AM Base'	08:15	09:15	01:00	F2*1.0641
12: '2027 PM Base'	15:00	16:00	01:00	F3*1.0590
13: '2027 SAT Base'	12:30	13:30	01:00	F4*1.0583
14: '2033 AM Base'	08:15	09:15	01:00	F2*1.1159
15: '2033 PM Base'	15:00	16:00	01:00	F3*1.1074
16: '2033 SAT Base'	12:30	13:30	01:00	F4*1.1062
17: 'AM Development'	08:15	09:15	01:00	
18: 'PM Development'	15:00	16:00	01:00	
19: 'SAT Development'	12:30	13:30	01:00	
20: '2021 AM Base + Dev'	08:15	09:15	01:00	F5+F17
21: '2021 PM Base + Dev'	15:00	16:00	01:00	F6+F18
22: '2021 SAT Base + Dev'	12:30	13:30	01:00	F7+F19
23: '2023 AM Base + Dev'	08:15	09:15	01:00	F8+F17
24: '2023 PM Base + Dev'	15:00	16:00	01:00	F9+F18
25: '2023 SAT Base + Dev'	12:30	13:30	01:00	F10+F19
26: '2027 AM Base + Dev'	08:15	09:15	01:00	F11+F17
27: '2027 PM Base + Dev'	15:00	16:00	01:00	F12+F18
28: '2027 SAT Base + Dev'	12:30	13:30	01:00	F13+F19

Link Results

Scenario 1: '2021 AM Base' (FG5: '2021 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**50.9%**	**2.4**	**3.5**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**50.9%**	**2.4**	**3.5**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	654	1186+98	50.9 : 50.9%	1.4	2.0	8.4
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	18	276+138	4.4 : 4.4%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	685	1391+57	47.3 : 47.3%	0.8	1.3	6.8

C1 PRC for Signalled Lanes (%): 76.7 Total Delay for Signalled Lanes (pcuHr): 3.45 Cycle Time (s): 90
PRC Over All Lanes (%): 76.7 Total Delay Over All Lanes(pcuHr): 3.45

Scenario 2: '2021 PM Base' (FG6: '2021 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**50.7%**	**2.5**	**3.5**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**50.7%**	**2.5**	**3.5**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	644	1253+16	50.7 : 50.7%	1.5	2.0	8.8
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	28	276+131	6.9 : 6.9%	0.2	0.3	0.4
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	640	1424+18	44.4 : 44.4%	0.8	1.2	6.4

C1 PRC for Signalled Lanes (%): 77.4 Total Delay for Signalled Lanes (pcuHr): 3.48 Cycle Time (s): 90
PRC Over All Lanes (%): 77.4 Total Delay Over All Lanes(pcuHr): 3.48

Scenario 3: '2021 SAT Base' (FG7: '2021 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**54.9%**	**2.6**	**3.7**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**54.9%**	**2.6**	**3.7**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	690	1253+4	54.9 : 54.9%	1.7	2.3	10.0
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	12	144+433	2.1 : 2.1%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	675	1419+24	46.8 : 46.8%	0.8	1.3	6.9

C1 PRC for Signalled Lanes (%): 64.0 Total Delay for Signalled Lanes (pcuHr): 3.69 Cycle Time (s): 90
PRC Over All Lanes (%): 64.0 Total Delay Over All Lanes(pcuHr): 3.69

Scenario 4: '2021 AM Base + Dev' (FG20: '2021 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.0%**	**2.5**	**3.5**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.0%**	**2.5**	**3.5**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	655	1186+98	51.0 : 51.0%	1.4	2.0	8.4
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	18	276+138	4.4 : 4.4%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	697	1391+56	48.2 : 48.2%	0.9	1.4	7.0

C1 PRC for Signalled Lanes (%): 76.4 Total Delay for Signalled Lanes (pcuHr): 3.50 Cycle Time (s): 90
PRC Over All Lanes (%): 76.4 Total Delay Over All Lanes(pcuHr): 3.50

Scenario 5: '2021 PM Base + Dev' (FG21: '2021 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.1%**	**2.5**	**3.5**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.1%**	**2.5**	**3.5**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	648	1253+16	51.1 : 51.1%	1.5	2.0	8.9
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	28	276+131	6.9 : 6.9%	0.2	0.3	0.4
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	641	1424+18	44.5 : 44.5%	0.8	1.2	6.4

C1 PRC for Signalled Lanes (%): 76.3 Total Delay for Signalled Lanes (pcuHr): 3.50 Cycle Time (s): 90
PRC Over All Lanes (%): 76.3 Total Delay Over All Lanes(pcuHr): 3.50

Scenario 6: '2021 SAT Base + Dev' (FG22: '2021 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**55.4%**	**2.7**	**3.8**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**55.4%**	**2.7**	**3.8**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	697	1253+4	55.4 : 55.4%	1.7	2.3	10.1
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	12	144+433	2.1 : 2.1%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	684	1419+23	47.4 : 47.4%	0.9	1.3	7.0

C1 PRC for Signalled Lanes (%): 62.3 Total Delay for Signalled Lanes (pcuHr): 3.76 Cycle Time (s): 90
PRC Over All Lanes (%): 62.3 Total Delay Over All Lanes(pcuHr): 3.76

Scenario 7: '2023 AM Base' (FG8: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.8%**	**2.5**	**3.5**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.8%**	**2.5**	**3.5**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	665	1187+97	51.8 : 51.8%	1.5	2.0	8.6
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	18	276+138	4.4 : 4.4%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	697	1390+58	48.1 : 48.1%	0.9	1.4	7.0

C1 PRC for Signalled Lanes (%): 73.8 Total Delay for Signalled Lanes (pcuHr): 3.55 Cycle Time (s): 90
PRC Over All Lanes (%): 73.8 Total Delay Over All Lanes(pcuHr): 3.55

Scenario 8: '2023 PM Base' (FG9: '2023 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.5%**	**2.6**	**3.6**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.5%**	**2.6**	**3.6**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	654	1253+16	51.5 : 51.5%	1.5	2.1	9.0
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	29	276+124	7.3 : 7.3%	0.2	0.3	0.5
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	650	1424+18	45.1 : 45.1%	0.8	1.2	6.5

C1 PRC for Signalled Lanes (%): 74.6 Total Delay for Signalled Lanes (pcuHr): 3.57 Cycle Time (s): 90
PRC Over All Lanes (%): 74.6 Total Delay Over All Lanes(pcuHr): 3.57

Scenario 9: '2023 SAT Base' (FG10: '2023 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**55.8%**	**2.7**	**3.8**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**55.8%**	**2.7**	**3.8**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	702	1253+4	55.8 : 55.8%	1.7	2.4	10.2
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	12	144+433	2.1 : 2.1%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	686	1420+23	47.6 : 47.6%	0.9	1.3	7.0

C1 PRC for Signalled Lanes (%): 61.2 Total Delay for Signalled Lanes (pcuHr): 3.79 Cycle Time (s): 90
PRC Over All Lanes (%): 61.2 Total Delay Over All Lanes(pcuHr): 3.79

Scenario 10: '2023 AM Base + Dev' (FG23: '2023 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.9%**	**2.5**	**3.6**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.9%**	**2.5**	**3.6**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	666	1187+96	51.9 : 51.9%	1.5	2.0	8.6
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	18	276+138	4.4 : 4.4%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	709	1390+57	49.0 : 49.0%	0.9	1.4	7.1

C1 PRC for Signalled Lanes (%): 73.5 Total Delay for Signalled Lanes (pcuHr): 3.59 Cycle Time (s): 90
PRC Over All Lanes (%): 73.5 Total Delay Over All Lanes(pcuHr): 3.59

Scenario 11: '2023 PM Base + Dev' (FG24: '2023 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.9%**	**2.6**	**3.6**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**51.9%**	**2.6**	**3.6**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	658	1253+15	51.9 : 51.9%	1.6	2.1	9.2
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	29	276+124	7.3 : 7.3%	0.2	0.3	0.5
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	651	1424+18	45.1 : 45.1%	0.8	1.2	6.5

C1 PRC for Signalled Lanes (%): 73.6 Total Delay for Signalled Lanes (pcuHr): 3.59 Cycle Time (s): 90
PRC Over All Lanes (%): 73.6 Total Delay Over All Lanes(pcuHr): 3.59

Scenario 12: '2023 SAT Base + Dev' (FG25: '2023 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**56.4%**	**2.7**	**3.9**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**56.4%**	**2.7**	**3.9**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	709	1253+4	56.4 : 56.4%	1.8	2.4	10.5
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	12	144+433	2.1 : 2.1%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	695	1420+23	48.2 : 48.2%	0.9	1.4	7.1

C1 PRC for Signalled Lanes (%): 59.6 Total Delay for Signalled Lanes (pcuHr): 3.87 Cycle Time (s): 90
PRC Over All Lanes (%): 59.6 Total Delay Over All Lanes(pcuHr): 3.87

Scenario 13: '2027 AM Base' (FG11: '2027 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.5%**	**2.6**	**3.8**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.5%**	**2.6**	**3.8**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	687	1187+97	53.5 : 53.5%	1.6	2.1	8.9
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	19	276+127	4.7 : 4.7%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	721	1390+58	49.8 : 49.8%	0.9	1.4	7.4

C1 PRC for Signalled Lanes (%): 68.2 Total Delay for Signalled Lanes (pcuHr): 3.75 Cycle Time (s): 90
PRC Over All Lanes (%): 68.2 Total Delay Over All Lanes(pcuHr): 3.75

Scenario 14: '2027 PM Base' (FG12: '2027 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.1%**	**2.7**	**3.7**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.1%**	**2.7**	**3.7**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	674	1253+15	53.1 : 53.1%	1.6	2.2	9.4
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	30	276+138	7.3 : 7.3%	0.3	0.3	0.5
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	670	1425+17	46.5 : 46.5%	0.8	1.3	6.9

C1 PRC for Signalled Lanes (%): 69.4 Total Delay for Signalled Lanes (pcuHr): 3.75 Cycle Time (s): 90
PRC Over All Lanes (%): 69.4 Total Delay Over All Lanes(pcuHr): 3.75

Scenario 15: '2027 SAT Base' (FG13: '2027 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**57.6%**	**2.8**	**4.0**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**57.6%**	**2.8**	**4.0**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	724	1253+3	57.6 : 57.6%	1.8	2.5	10.7
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	13	131+437	2.3 : 2.3%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	708	1418+24	49.1 : 49.1%	0.9	1.4	7.4

C1 PRC for Signalled Lanes (%): 56.2 Total Delay for Signalled Lanes (pcuHr): 4.01 Cycle Time (s): 90
PRC Over All Lanes (%): 56.2 Total Delay Over All Lanes(pcuHr): 4.01

Scenario 16: '2027 AM Base + Dev' (FG26: '2027 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.6%**	**2.7**	**3.8**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.6%**	**2.7**	**3.8**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	688	1187+97	53.6 : 53.6%	1.6	2.1	9.0
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	19	276+127	4.7 : 4.7%	0.2	0.2	0.3
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	733	1390+57	50.6 : 50.6%	0.9	1.5	7.6

C1 PRC for Signalled Lanes (%): 68.0 Total Delay for Signalled Lanes (pcuHr): 3.80 Cycle Time (s): 90
PRC Over All Lanes (%): 68.0 Total Delay Over All Lanes(pcuHr): 3.80

Scenario 17: '2027 PM Base + Dev' (FG27: '2027 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.5%**	**2.7**	**3.8**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**53.5%**	**2.7**	**3.8**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	678	1253+15	53.5 : 53.5%	1.6	2.2	9.5
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	30	276+138	7.3 : 7.3%	0.3	0.3	0.5
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	671	1425+17	46.5 : 46.5%	0.8	1.3	6.9

C1 PRC for Signalled Lanes (%): 68.4 Total Delay for Signalled Lanes (pcuHr): 3.77 Cycle Time (s): 90
PRC Over All Lanes (%): 68.4 Total Delay Over All Lanes(pcuHr): 3.77

Scenario 18: '2027 SAT Base + Dev' (FG28: '2027 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.2%**	**2.9**	**4.1**	**-**
Yarm Road - John Williams Bvld S	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.2%**	**2.9**	**4.1**	**-**
1/2+1/1	Yarm Road (West) Left Ahead	U	B	F	1	57:64	7	731	1253+3	58.2 : 58.2%	1.8	2.5	11.0
2/2+2/1	John Williams Bvld S Left Right	U	D E		1	13:21	-	13	131+437	2.3 : 2.3%	0.1	0.1	0.2
3/1+3/2	Yarm Road (East) Right Ahead	U+O	A	C	1	66	4	717	1419+24	49.7 : 49.7%	0.9	1.4	7.5

C1 PRC for Signalled Lanes (%): 54.7 Total Delay for Signalled Lanes (pcuHr): 4.08 Cycle Time (s): 90
PRC Over All Lanes (%): 54.7 Total Delay Over All Lanes(pcuHr): 4.08

APPENDIX G

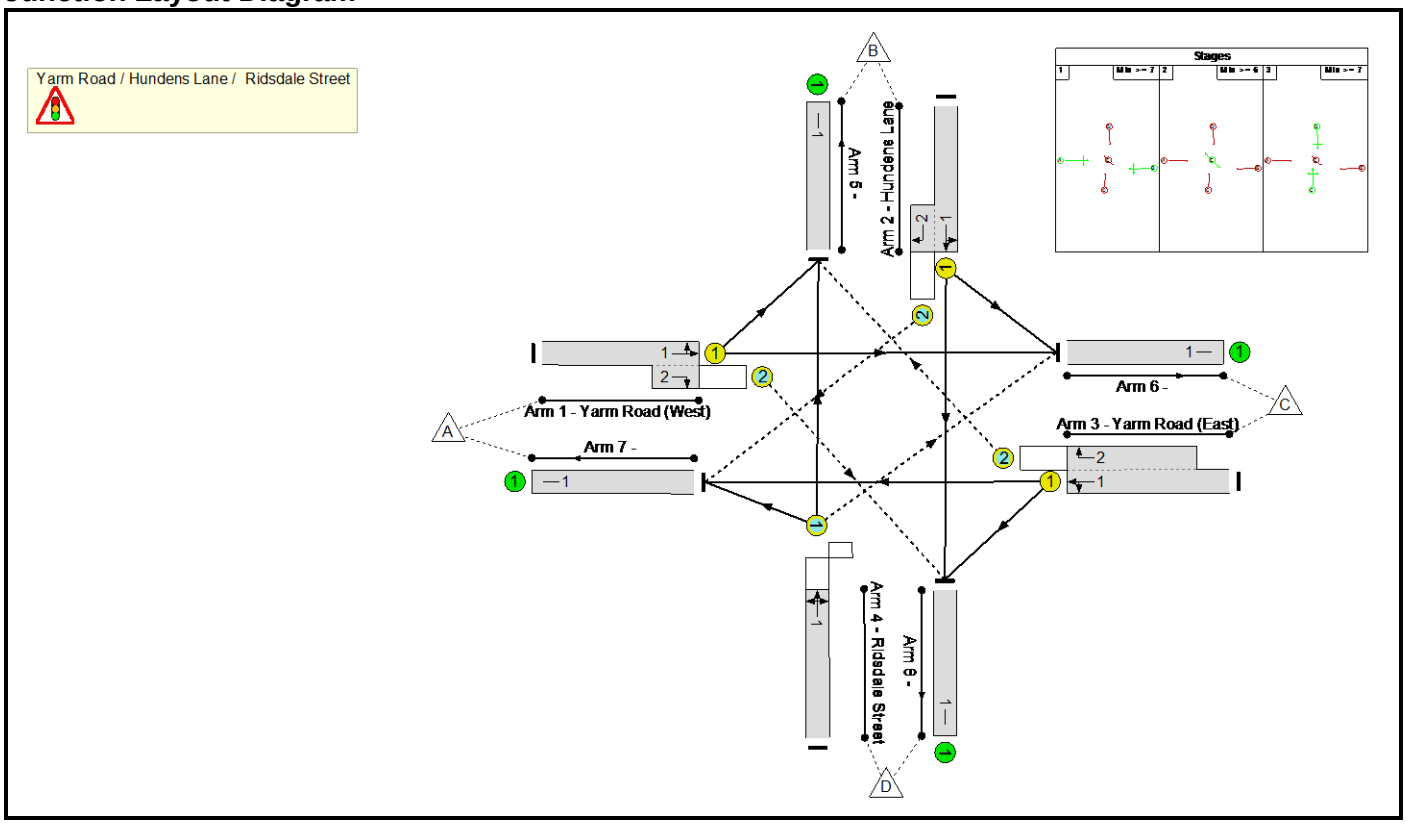
Linsig Output Data - Hundens Lane / B6280 / Ridsdale Street

11590 - Darlington MSCP

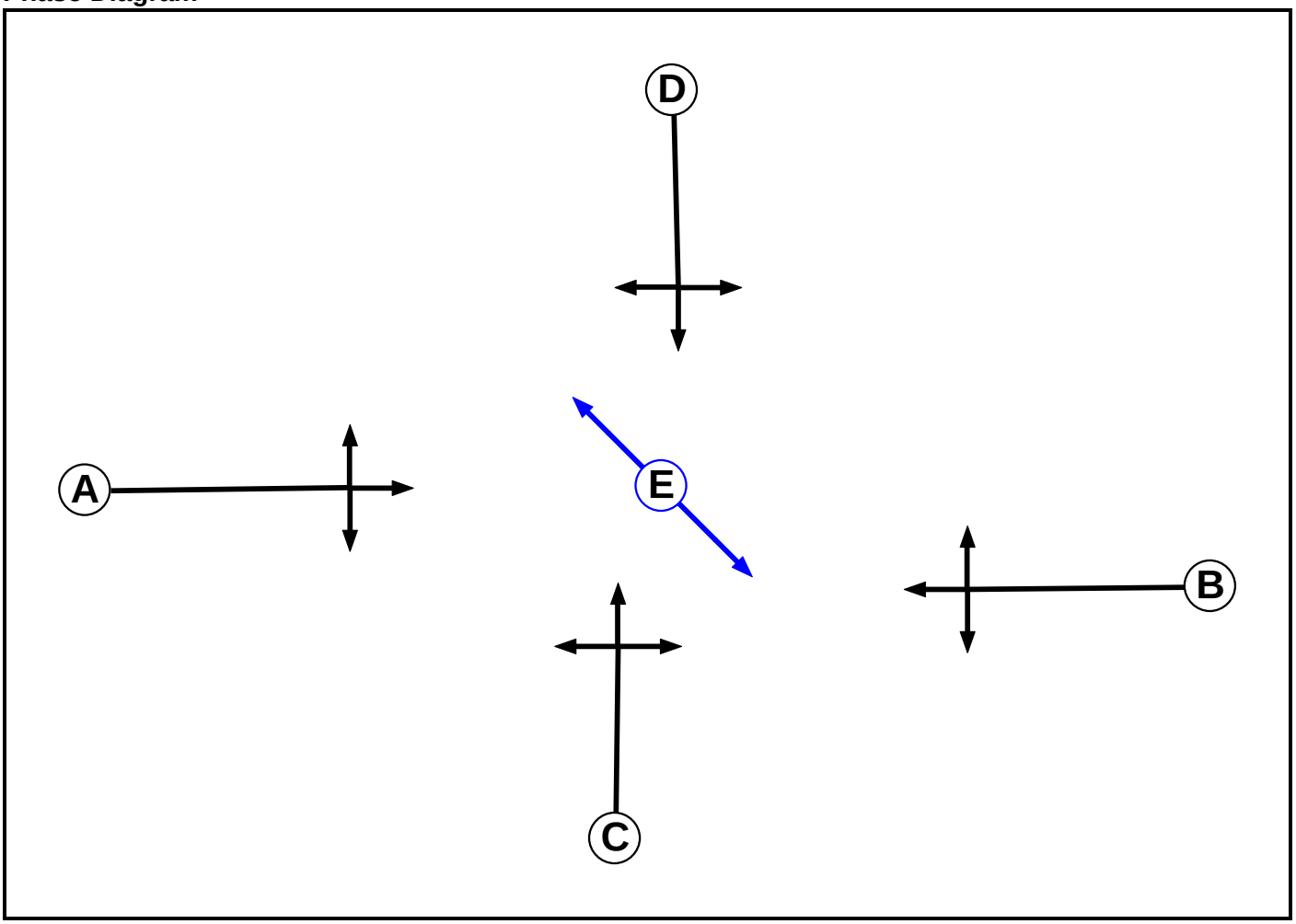
User and Project Details

Project:	**11590**
Title:	**MSCP Darlington**
Location:	
Additional detail:	
File name:	Yarm Road - Hundens Road - Ridsdale Street.lsg3x
Author:	
Company:	Sanderson Associates
Address:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		6	6

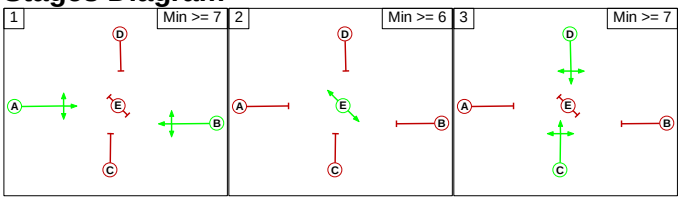
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D	E
	A		-	6	6	10
	B	-		-	-	10
	C	6	6		-	10
	D	6	6	-		10
	E	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	E
3	C D

Stages Diagram



Network Control Plans

Plan	Controller	Sequence Name	Sequence
Network Control Plan 1	C1	Stage Sequence No. 1	1,2,3

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Changes

From Stage	To Stage		
	1	2	3
1		10	6
2	2		2
3	6	10	

Lane Input Data

Junction: Yarm Road / Hundens Lane / Ridsdale Street

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Yarm Road (West))	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Left	18.00
											Arm 6 Ahead	Inf
1/2 (Yarm Road (West))	O	A	2	3	3.0	Geom	-	3.50	0.00	Y	Arm 8 Right	15.00
2/1 (Hundens Lane)	U	D	2	3	60.0	Geom	-	2.90	0.00	Y	Arm 6 Left	13.00
											Arm 8 Ahead	Inf
2/2 (Hundens Lane)	O	D	2	3	3.0	Geom	-	2.90	0.00	Y	Arm 7 Right	25.00
3/1 (Yarm Road (East))	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Ahead	Inf
											Arm 8 Left	8.00
3/2 (Yarm Road (East))	O	B	2	3	9.0	Geom	-	2.90	0.00	Y	Arm 5 Right	20.00
4/1 (Ridsdale Street)	O	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	15.00
											Arm 7 Left	8.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

11590 - Darlington MSCP

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2020 AM Base'	08:15	09:15	01:00	
2: '2020 AM Base Adj'	08:15	09:15	01:00	F1*1.011
3: '2020 PM Base'	15:00	16:00	01:00	
4: '2020 SAT Base'	12:30	13:30	01:00	
5: '2021 AM Base'	08:15	09:15	01:00	F2*1.0119
6: '2021 PM Base'	15:00	16:00	01:00	F3*1.0104
7: '2021 SAT Base'	12:30	13:30	01:00	F4*1.0095
8: '2023 AM Base'	08:15	09:15	01:00	F2*1.0299
9: '2023 PM Base'	15:00	16:00	01:00	F3*1.0271
10: '2023 SAT Base'	12:30	13:30	01:00	F4*1.0264
11: '2027 AM Base'	08:15	09:15	01:00	F2*1.0641
12: '2027 PM Base'	15:00	16:00	01:00	F3*1.0590
13: '2027 SAT Base'	12:30	13:30	01:00	F4*1.0583
14: '2033 AM Base'	08:15	09:15	01:00	F2*1.1159
15: '2033 PM Base'	15:00	16:00	01:00	F3*1.1074
16: '2033 SAT Base'	12:30	13:30	01:00	F4*1.1062
17: 'AM Development'	08:15	09:15	01:00	
18: 'PM Development'	15:00	16:00	01:00	
19: 'SAT Development'	12:30	13:30	01:00	
20: '2021 AM Base + Dev'	08:15	09:15	01:00	F5+F17
21: '2021 PM Base + Dev'	15:00	16:00	01:00	F6+F18
22: '2021 SAT Base + Dev'	12:30	13:30	01:00	F7+F19
23: '2023 AM Base + Dev'	08:15	09:15	01:00	F8+F17
24: '2023 PM Base + Dev'	15:00	16:00	01:00	F9+F18
25: '2023 SAT Base + Dev'	12:30	13:30	01:00	F10+F19
26: '2027 AM Base + Dev'	08:15	09:15	01:00	F11+F17
27: '2027 PM Base + Dev'	15:00	16:00	01:00	F12+F18
28: '2027 SAT Base + Dev'	12:30	13:30	01:00	F13+F19

Link Results

Scenario 1: '2021 AM Base' (FG5: '2021 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.0%**	**7.3**	**10.1**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.0%**	**7.3**	**10.1**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	586	1051+4	55.5 : 55.5%	2.1	2.7	10.1
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	247	271+152	58.4 : 58.4%	2.1	2.9	4.4
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	682	926+210	60.0 : 60.0%	2.3	3.4	9.4
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	89	297	30.0%	0.7	1.0	2.1

C1 PRC for Signalled Lanes (%): 49.9 Total Delay for Signalled Lanes (pcuHr): 10.07 Cycle Time (s): 90
PRC Over All Lanes (%): 49.9 Total Delay Over All Lanes(pcuHr): 10.07

Scenario 2: '2021 PM Base' (FG6: '2021 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**57.7%**	**6.8**	**9.5**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**57.7%**	**6.8**	**9.5**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	633	1088+9	57.7 : 57.7%	2.1	2.8	10.7
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	223	239+156	56.5 : 56.5%	2.0	2.7	3.6
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	653	949+236	55.1 : 55.1%	1.9	3.0	8.2
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	82	280	29.2%	0.7	1.0	2.0

C1 PRC for Signalled Lanes (%): 55.9 Total Delay for Signalled Lanes (pcuHr): 9.49 Cycle Time (s): 90
PRC Over All Lanes (%): 55.9 Total Delay Over All Lanes(pcuHr): 9.49

Scenario 3: '2021 SAT Base' (FG7: '2021 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.2%**	**6.3**	**8.8**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.2%**	**6.3**	**8.8**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	688	1159+3	59.2 : 59.2%	2.1	2.8	11.2
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	198	197+154	56.4 : 56.4%	1.9	2.6	3.2
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	686	1053+169	56.1 : 56.1%	1.8	2.7	8.8
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	50	209	23.9%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 52.1 Total Delay for Signalled Lanes (pcuHr): 8.78 Cycle Time (s): 90
PRC Over All Lanes (%): 52.1 Total Delay Over All Lanes(pcuHr): 8.78

Scenario 4: '2021 AM Base + Dev' (FG20: '2021 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**61.0%**	**7.3**	**10.2**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**61.0%**	**7.3**	**10.2**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	587	1051+4	55.6 : 55.6%	2.1	2.7	10.1
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	249	269+155	58.6 : 58.6%	2.2	2.9	4.4
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	692	928+207	61.0 : 61.0%	2.3	3.5	9.6
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	89	297	30.0%	0.7	1.0	2.1

C1 PRC for Signalled Lanes (%): 47.6 Total Delay for Signalled Lanes (pcuHr): 10.19 Cycle Time (s): 90
PRC Over All Lanes (%): 47.6 Total Delay Over All Lanes(pcuHr): 10.19

Scenario 5: '2021 PM Base + Dev' (FG21: '2021 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.1%**	**6.8**	**9.5**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.1%**	**6.8**	**9.5**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	637	1088+9	58.1 : 58.1%	2.2	2.8	10.8
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	223	239+156	56.5 : 56.5%	2.0	2.7	3.6
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	654	949+235	55.2 : 55.2%	1.9	3.0	8.2
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	82	280	29.2%	0.7	1.0	2.0

C1 PRC for Signalled Lanes (%): 54.9 Total Delay for Signalled Lanes (pcuHr): 9.54 Cycle Time (s): 90
PRC Over All Lanes (%): 54.9 Total Delay Over All Lanes(pcuHr): 9.54

Scenario 6: '2021 SAT Base + Dev' (FG22: '2021 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.8%**	**6.3**	**8.9**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.8%**	**6.3**	**8.9**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	695	1159+3	59.8 : 59.8%	2.1	2.8	11.3
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	199	196+156	56.5 : 56.5%	1.9	2.6	3.2
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	694	1054+167	56.8 : 56.8%	1.8	2.8	9.0
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	50	209	23.9%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 50.6 Total Delay for Signalled Lanes (pcuHr): 8.91 Cycle Time (s): 90
PRC Over All Lanes (%): 50.6 Total Delay Over All Lanes(pcuHr): 8.91

Scenario 7: '2023 AM Base ' (FG8: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**61.3%**	**7.5**	**10.4**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**61.3%**	**7.5**	**10.4**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	596	1051+4	56.5 : 56.5%	2.2	2.8	10.2
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	253	271+152	59.8 : 59.8%	2.2	3.0	4.6
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	696	925+211	61.3 : 61.3%	2.3	3.6	9.6
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	91	297	30.7%	0.8	1.0	2.1

C1 PRC for Signalled Lanes (%): 46.9 Total Delay for Signalled Lanes (pcuHr): 10.42 Cycle Time (s): 90
PRC Over All Lanes (%): 46.9 Total Delay Over All Lanes(pcuHr): 10.42

Scenario 8: '2023 PM Base' (FG9: '2023 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.7%**	**6.9**	**9.8**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**58.7%**	**6.9**	**9.8**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	644	1088+9	58.7 : 58.7%	2.2	2.9	10.9
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	227	240+155	57.6 : 57.6%	2.1	2.8	3.8
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	664	949+235	56.1 : 56.1%	2.0	3.1	8.3
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	84	280	30.0%	0.7	1.0	2.0

C1 PRC for Signalled Lanes (%): 53.3 Total Delay for Signalled Lanes (pcuHr): 9.77 Cycle Time (s): 90
PRC Over All Lanes (%): 53.3 Total Delay Over All Lanes(pcuHr): 9.77

Scenario 9: '2023 SAT Base' (FG10: '2023 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.2%**	**6.4**	**9.0**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.2%**	**6.4**	**9.0**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	700	1159+3	60.2 : 60.2%	2.1	2.9	11.4
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	201	197+153	57.4 : 57.4%	2.0	2.7	3.2
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	698	1053+168	57.2 : 57.2%	1.8	2.8	9.0
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	51	208	24.5%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 49.5 Total Delay for Signalled Lanes (pcuHr): 9.03 Cycle Time (s): 90
PRC Over All Lanes (%): 49.5 Total Delay Over All Lanes(pcuHr): 9.03

Scenario 10: '2023 AM Base + Dev' (FG23: '2023 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.2%**	**7.5**	**10.5**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.2%**	**7.5**	**10.5**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	597	1051+4	56.6 : 56.6%	2.2	2.8	10.3
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	255	270+155	60.1 : 60.1%	2.2	3.0	4.6
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	706	928+207	62.2 : 62.2%	2.4	3.6	10.0
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	91	297	30.7%	0.8	1.0	2.1

C1 PRC for Signalled Lanes (%): 44.7 Total Delay for Signalled Lanes (pcuHr): 10.54 Cycle Time (s): 90
PRC Over All Lanes (%): 44.7 Total Delay Over All Lanes(pcuHr): 10.54

Scenario 11: '2023 PM Base + Dev' (FG24: '2023 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.1%**	**7.0**	**9.8**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**59.1%**	**7.0**	**9.8**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	648	1088+8	59.1 : 59.1%	2.2	2.9	11.0
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	227	240+155	57.6 : 57.6%	2.1	2.8	3.8
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	665	949+235	56.2 : 56.2%	2.0	3.1	8.3
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	84	280	30.0%	0.7	1.0	2.0

C1 PRC for Signalled Lanes (%): 52.3 Total Delay for Signalled Lanes (pcuHr): 9.81 Cycle Time (s): 90
PRC Over All Lanes (%): 52.3 Total Delay Over All Lanes(pcuHr): 9.81

Scenario 12: '2023 SAT Base + Dev' (FG25: '2023 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.8%**	**6.5**	**9.2**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.8%**	**6.5**	**9.2**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	707	1159+3	60.8 : 60.8%	2.1	2.9	11.8
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	202	197+155	57.5 : 57.5%	2.0	2.7	3.2
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	706	1054+166	57.9 : 57.9%	1.9	2.9	9.3
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	51	208	24.5%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 48.0 Total Delay for Signalled Lanes (pcuHr): 9.15 Cycle Time (s): 90
PRC Over All Lanes (%): 48.0 Total Delay Over All Lanes(pcuHr): 9.15

Scenario 13: '2027 AM Base ' (FG11: '2027 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**63.3%**	**7.8**	**11.0**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**63.3%**	**7.8**	**11.0**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	616	1051+3	58.4 : 58.4%	2.3	3.0	10.8
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	261	271+152	61.7 : 61.7%	2.3	3.1	4.9
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	719	926+210	63.3 : 63.3%	2.4	3.8	10.5
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	94	297	31.6%	0.8	1.1	2.2

C1 PRC for Signalled Lanes (%): 42.2 Total Delay for Signalled Lanes (pcuHr): 10.99 Cycle Time (s): 90
PRC Over All Lanes (%): 42.2 Total Delay Over All Lanes(pcuHr): 10.99

Scenario 14: '2027 PM Base' (FG12: '2027 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.5%**	**7.2**	**10.3**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.5%**	**7.2**	**10.3**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	664	1088+8	60.5 : 60.5%	2.3	3.1	11.4
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	234	239+155	59.3 : 59.3%	2.1	2.9	4.0
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	686	948+237	57.9 : 57.9%	2.0	3.3	8.8
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	87	280	31.0%	0.8	1.0	2.1

C1 PRC for Signalled Lanes (%): 48.6 Total Delay for Signalled Lanes (pcuHr): 10.29 Cycle Time (s): 90
PRC Over All Lanes (%): 48.6 Total Delay Over All Lanes(pcuHr): 10.29

Scenario 15: '2027 SAT Base' (FG13: '2027 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.1%**	**6.7**	**9.5**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.1%**	**6.7**	**9.5**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	722	1160+3	62.1 : 62.1%	2.2	3.0	12.0
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	208	197+153	59.4 : 59.4%	2.0	2.8	3.4
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	719	1053+168	58.9 : 58.9%	1.9	3.0	9.5
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	53	209	25.4%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 44.9 Total Delay for Signalled Lanes (pcuHr): 9.53 Cycle Time (s): 90
PRC Over All Lanes (%): 44.9 Total Delay Over All Lanes(pcuHr): 9.53

Scenario 16: '2027 AM Base + Dev' (FG26: '2027 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**64.2%**	**7.9**	**11.1**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**64.2%**	**7.9**	**11.1**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	49	-	617	1052+3	58.5 : 58.5%	2.3	3.0	10.8
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	17	-	263	270+155	62.0 : 62.0%	2.3	3.2	4.9
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	49	-	729	928+207	64.2 : 64.2%	2.5	3.9	10.7
4/1	Ridsdale Street Ahead Right Left	O	C		1	17	-	94	297	31.6%	0.8	1.1	2.2

C1 PRC for Signalled Lanes (%): 40.1 Total Delay for Signalled Lanes (pcuHr): 11.12 Cycle Time (s): 90
PRC Over All Lanes (%): 40.1 Total Delay Over All Lanes(pcuHr): 11.12

Scenario 17: '2027 PM Base + Dev' (FG27: '2027 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.9%**	**7.3**	**10.3**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**60.9%**	**7.3**	**10.3**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	51	-	668	1088+8	60.9 : 60.9%	2.3	3.1	11.5
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	15	-	234	239+155	59.3 : 59.3%	2.1	2.9	4.0
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	51	-	687	948+236	58.0 : 58.0%	2.0	3.3	8.8
4/1	Ridsdale Street Ahead Right Left	O	C		1	15	-	87	280	31.0%	0.8	1.0	2.1

C1 PRC for Signalled Lanes (%): 47.7 Total Delay for Signalled Lanes (pcuHr): 10.33 Cycle Time (s): 90
PRC Over All Lanes (%): 47.7 Total Delay Over All Lanes(pcuHr): 10.33

Scenario 18: '2027 SAT Base + Dev' (FG28: '2027 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network: MSCP Darlington	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.7%**	**6.8**	**9.7**	**-**
Yarm Road / Hundens Lane / Ridsdale Street	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**62.7%**	**6.8**	**9.7**	**-**
1/1+1/2	Yarm Road (West) Left Ahead Right	U+O	A		1	54	-	729	1160+3	62.7 : 62.7%	2.3	3.1	12.4
2/1+2/2	Hundens Lane Left Right Ahead	U+O	D		1	12	-	209	197+155	59.5 : 59.5%	2.0	2.8	3.4
3/1+3/2	Yarm Road (East) Right Ahead Left	U+O	B		1	54	-	727	1055+166	59.6 : 59.6%	2.0	3.1	9.9
4/1	Ridsdale Street Ahead Right Left	O	C		1	12	-	53	209	25.4%	0.5	0.7	1.3

C1 PRC for Signalled Lanes (%): 43.5 Total Delay for Signalled Lanes (pcuHr): 9.66 Cycle Time (s): 90
PRC Over All Lanes (%): 43.5 Total Delay Over All Lanes(pcuHr): 9.66

APPENDIX H

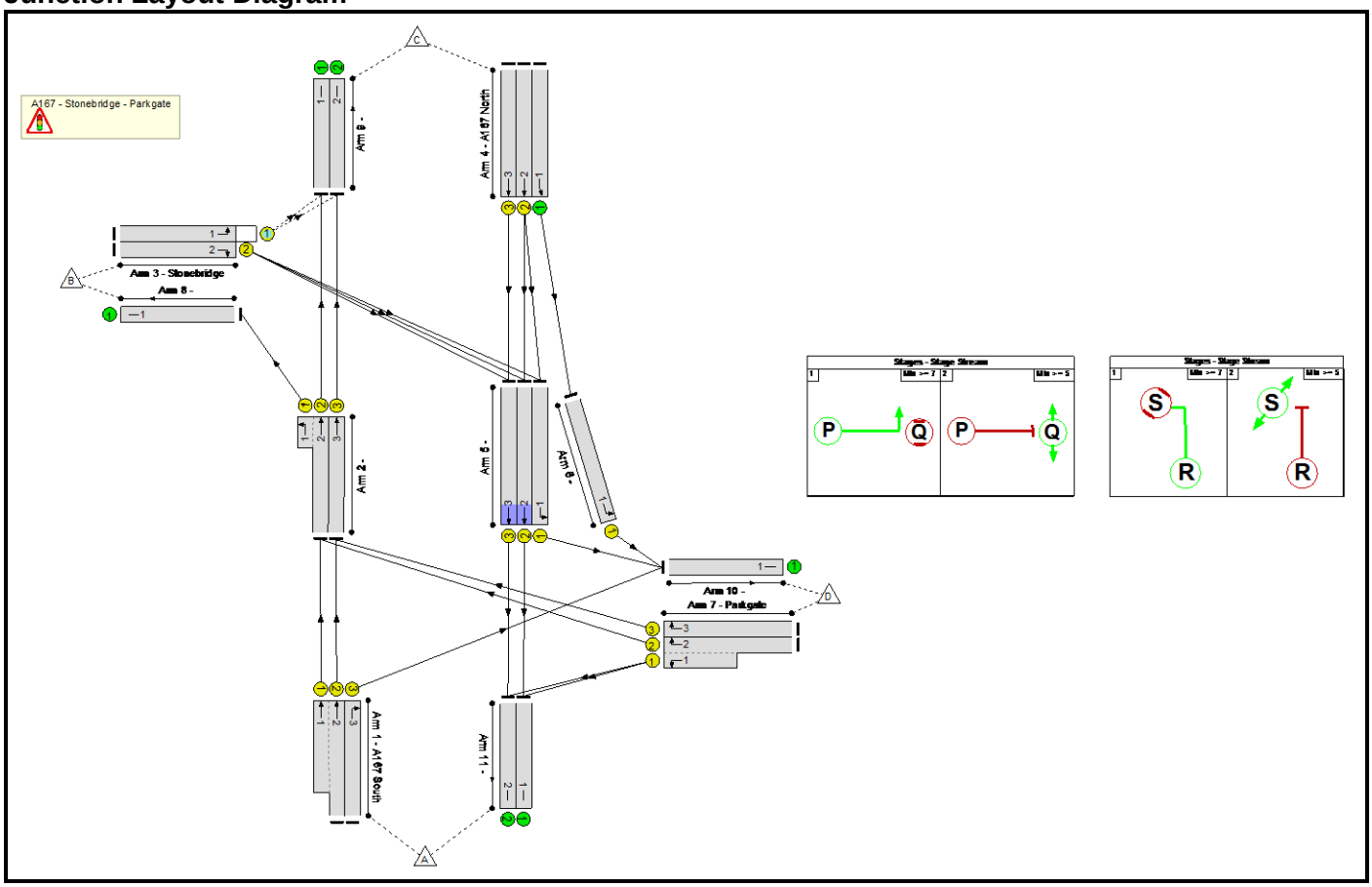
Linsig Output Data - A167 / Parkgate / Stonebridge

11590 - Darlington MSCP

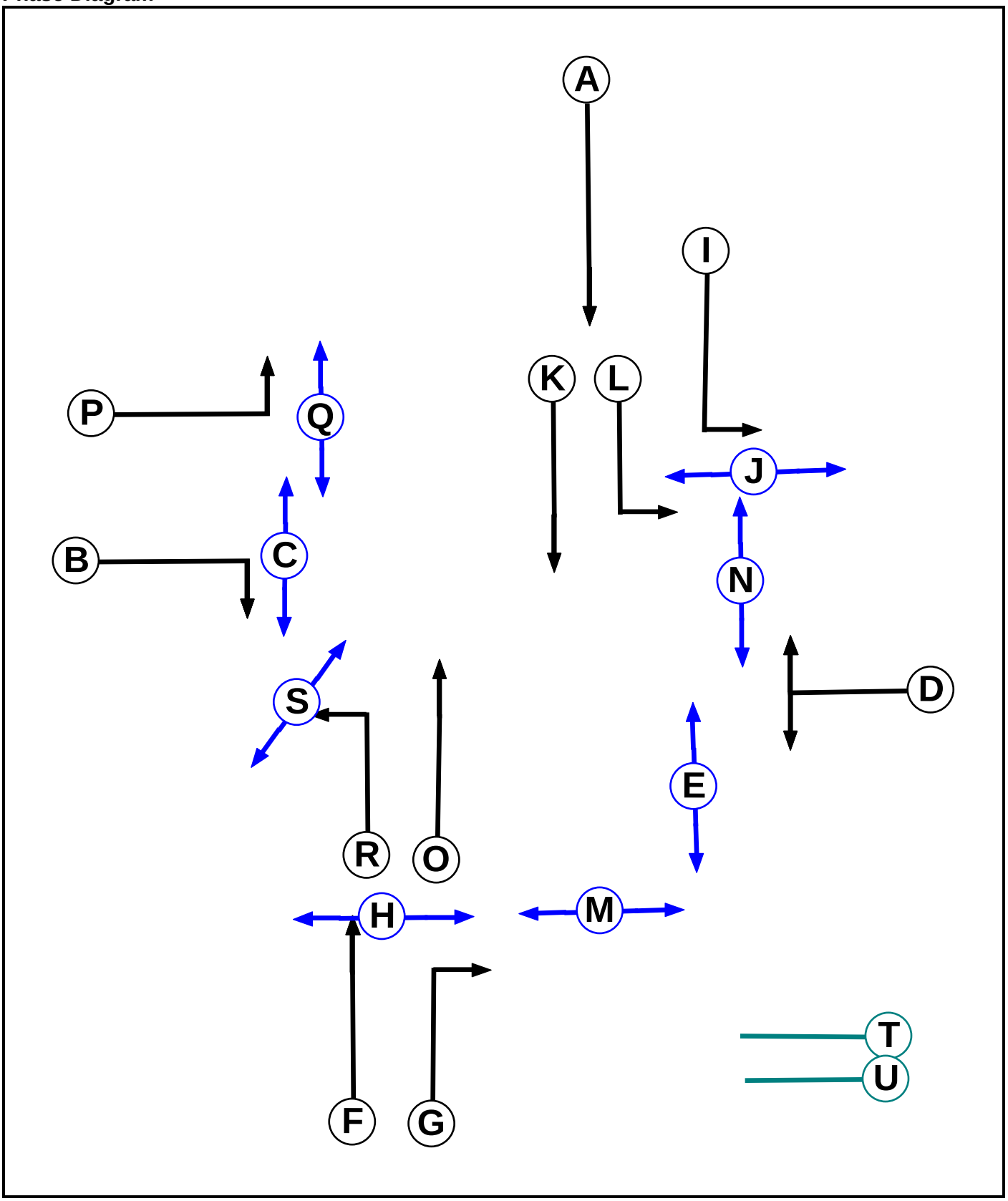
User and Project Details

Project:	**11590 - MSCP Darlington**
Title:	
Location:	
Site Ref(s):	Inner Ring Road /Parkgate
Additional detail:	
File name:	A167 - Stonebridge - Parkgate.lsg3x
Author:	Sanderson Assoicates
Company:	Sanderson Assoicates
Address:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		5	5
D	Traffic	1		7	7
E	Pedestrian	1		7	7
F	Traffic	1		7	7
G	Traffic	1		7	7
H	Pedestrian	1		7	7
I	Traffic	1		7	7
J	Pedestrian	1		7	7
K	Traffic	1		7	7
L	Traffic	1		7	7
M	Pedestrian	1		7	7
N	Pedestrian	1		5	5
O	Traffic	1		7	7
P	Traffic	2		7	7
Q	Pedestrian	2		5	5
R	Traffic	3		7	7
S	Pedestrian	3		5	5
T	Dummy	1		3	3
U	Dummy	1		7	7

Phase Intergreens Matrix

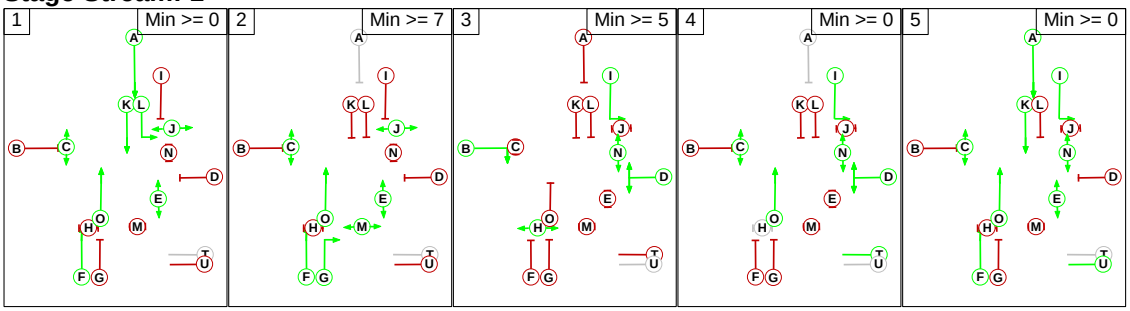
Terminating Phase	Starting Phase																					
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
	A		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	6		6	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	6	-
	C	-	7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	D	-	-	-		6	6	6	-	-	-	5	-	7	-	-	-	-	-	-	-	-
	E	-	-	-	5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	5	-		-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
	G	-	-	-	5	-	-		6	9	-	7	8	-	9	-	-	-	-	-	-	9
	H	-	-	-	-	-	5	5		-	-	-	-	-	-	-	-	-	-	-	-	-
	I	-	-	-	-	-	-	5	-		6	-	5	-	-	-	-	-	-	-	-	-
	J	-	-	-	-	-	-	-	-	5		-	-	-	-	-	-	-	-	-	-	5
	K	-	-	-	6	-	-	5	-	-	-		-	8	-	-	-	-	-	-	-	-
	L	-	-	-	-	-	-	5	-	6	-	-		-	7	-	-	-	-	-	-	6
	M	-	-	-	5	-	-	-	-	-	-	5	-		-	-	-	-	-	-	-	-
	N	-	-	-	-	-	-	5	-	-	-	-	5	-		-	-	-	-	-	-	-
	O	-	5	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		6	-	-	-	-
	Q	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5		-	-	-	-
	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		6	-	-
	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5		-	-
	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Phases in Stage

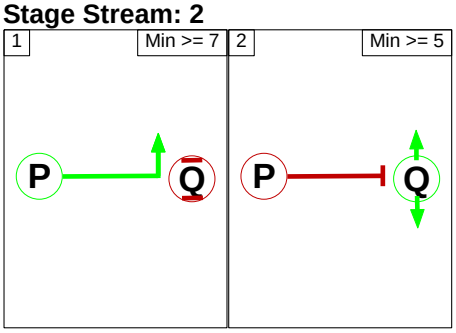
Stream	Stage No.	Phases in Stage
1	1	A C E F J K L O
1	2	C E F G J M O
1	3	B D H I N
1	4	C D I N O T
1	5	A C E F I K N O U
2	1	P
2	2	Q
3	1	R
3	2	S

Stages Diagram

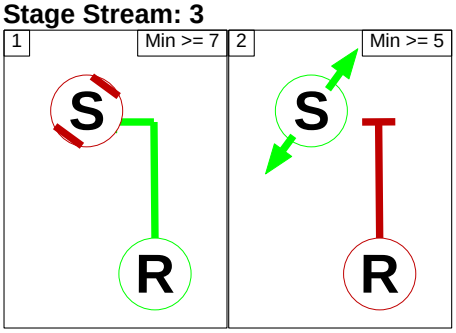
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Network Control Plans

Plan	Controller	Sequence Name	Sequence
Network Control Plan 1	C1	Stage Sequence No. 1	Stream 1: 1,2,3,4,5 Stream 2: 1,2 Stream 3: 1,2

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	K	Losing	5	5
1	2	L	Losing	5	5
1	3	K	Losing	5	5
1	3	L	Losing	5	5
1	3	O	Losing	5	5
1	4	K	Losing	5	5
1	4	L	Losing	5	5
2	3	O	Losing	5	5
3	1	F	Gaining absolute	14	14
3	5	F	Gaining absolute	14	14
5	1	I	Losing	2	2

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Changes

Stage Stream: 1

		To Stage				
		1	2	3	4	5
From Stage	1		13	12	12	7
	2	8		10	9	9
	3	14	7		6	14
	4	6	7	7		6
	5	8	8	7	6	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		6
	2	5	

11590 - Darlington MSCP

Stage Stream: 3

	To Stage		
From Stage		1	2
	1		6
	2	5	

Lane Input Data

Junction: A167 - Stonebridge - Parkgate												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A167 South)	U	F	2	3	16.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead	Inf
1/2 (A167 South)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead	Inf
1/3 (A167 South)	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Right	20.00
2/1	U	R	2	3	3.0	Geom	-	4.50	0.00	Y	Arm 8 Left	25.00
2/2	U	O	2	3	4.7	Geom	-	3.25	0.00	Y	Arm 9 Ahead	Inf
2/3	U	O	2	3	4.7	Geom	-	3.25	0.00	Y	Arm 9 Ahead	Inf
3/1 (Stonebridge)	O	P	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 9 Left	30.00
3/2 (Stonebridge)	U	B	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 Right	12.00
4/1 (A167 North)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A167 North)	U	A	2	3	60.0	Geom	-	3.75	0.00	Y	Arm 5 Ahead	Inf
4/3 (A167 North)	U	A	2	3	60.0	Geom	-	3.75	0.00	Y	Arm 5 Ahead	Inf
5/1	U	L	2	3	5.0	Geom	-	4.00	0.00	Y	Arm 10 Left	25.00
5/2	U	K	2	3	5.0	Geom	-	3.25	0.00	Y	Arm 11 Ahead	Inf
5/3	U	K	2	3	5.0	Geom	-	3.50	0.00	Y	Arm 11 Ahead	Inf
6/1	U	I	2	3	60.0	Geom	-	4.25	0.00	Y	Arm 10 Left	40.00
7/1 (Parkgate)	U	D	2	3	7.0	Geom	-	3.60	0.00	Y	Arm 11 Left	18.00
7/2 (Parkgate)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Right	30.00

7/3 (Parkgate)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Right	25.00
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2020 AM Base'	08:15	09:15	01:00	
2: '2020 AM Adj'	08:15	09:15	01:00	F1*1.06477
3: '2020 PM Base'	15:00	16:00	01:00	
4: '2020 SAT Base'	12:30	13:30	01:00	
5: '2021 AM Base'	08:15	09:15	01:00	F2*1.0199
6: '2021 PM Base'	15:00	16:00	01:00	F3*1.0104
7: '2021 SAT Base'	12:30	13:30	01:00	F4*1.0095
8: '2023 AM Base'	08:15	09:15	01:00	F2*1.0299
9: '2023 PM Base'	15:00	16:00	01:00	F3*1.0271
10: '2023 SAT Base'	12:30	13:30	01:00	F4*1.0264
11: '2027 AM Base'	08:15	09:15	01:00	F2*1.0641
12: '2027 PM Base'	15:00	16:00	01:00	F3*1.0590
13: '2027 SAT Base'	12:30	13:30	01:00	F4*1.0583
14: '2033 AM Base'	08:15	09:15	01:00	F2*1.1159
15: '2033 PM Base'	15:00	16:00	01:00	F3*1.1074
16: '2033 SAT Base'	12:30	13:30	01:00	F4*1.1062
17: 'AM Development'	08:00	09:00	01:00	
18: 'PM Development'	16:00	17:00	01:00	
19: 'SAT Development'	12:30	13:30	01:00	
20: '2021 AM Base + Dev'	08:15	09:15	01:00	F5+F17
21: '2021 PM Base + Dev'	15:00	16:00	01:00	F6+F18
22: '2021 SAT Base + Dev'	12:30	13:30	01:00	F7+F19
23: '2023 AM Base + Dev'	08:15	09:15	01:00	F8+F17
24: '2023 PM Base + Dev'	15:00	16:00	01:00	F9+F18
25: '2023 SAT Base + Dev'	12:30	13:30	01:00	F10+F19
26: '2027 AM Base + Dev'	08:15	09:15	01:00	F11+F17
27: '2027 PM Base + Dev'	15:00	16:00	01:00	F12+F18
28: '2027 SAT Base + Dev'	12:30	13:30	01:00	F13+F19
29: '2033 AM Base + Dev'	08:15	09:15	01:00	F14+F17
30: '2033 PM Base + Dev'	15:00	16:00	01:00	F15+F18
31: '2033 SAT Base + Dev'	12:30	13:30	01:00	F16+F19

Link Results

Scenario 1: '2021 AM Base' (FG5: '2021 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**73.7%**	**23.2**	**33.0**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**73.7%**	**23.2**	**33.0**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	554	755+783	36.0 : 36.0%	2.2	2.5	4.5
1/3	A167 South Right	U	G		1	17	-	266	361	73.7%	2.5	3.9	7.6
2/2+2/1	Left Ahead	U	O R		1	72:74	-	709	1325+264	44.6 : 44.6%	1.1	1.5	9.8
2/3	Ahead	U	O		1	72	-	721	1574	45.8%	1.3	1.7	10.9
3/1	Stonebridge Left	O	P		1	74	-	138	645	21.4%	0.1	0.3	0.7
3/2	Stonebridge Right	U	B		1	7	-	44	159	27.6%	0.5	0.7	1.2
4/2	A167 North Ahead	U	A		1	19	-	299	442	67.6%	2.7	3.7	7.8
4/3	A167 North Ahead	U	A		1	19	-	301	442	68.1%	2.7	3.7	7.9
5/1	Left	U	L		1	12	-	40	275	14.6%	0.4	0.5	1.1
5/2	Ahead	U	K		1	21	-	301	474	63.5%	0.1	0.9	1.0
5/3	Ahead	U	K		1	21	-	303	480	63.1%	0.1	0.9	1.0
6/1	Left	U	I		1	42	-	653	939	69.5%	3.3	4.5	13.8
7/2+7/1	Parkgate Right Left	U	D		1	37	-	717	586+398	72.8 : 72.8%	3.8	5.1	10.3
7/3	Parkgate Right	U	D		1	37	-	449	783	57.4%	2.5	3.1	9.2

C1	Stream: 1 PRC for Signalled Lanes (%):	22.1	Total Delay for Signalled Lanes (pcuHr):	32.77	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	320.8	Total Delay for Signalled Lanes (pcuHr):	0.26	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	22.1	Total Delay Over All Lanes(pcuHr):	33.02		

Scenario 2: '2021 PM Base' (FG6: '2021 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.4%**	**21.7**	**29.8**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.4%**	**21.7**	**29.8**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	453	763+794	29.1 : 29.1%	1.7	1.9	3.5
1/3	A167 South Right	U	G		1	16	-	234	341	68.6%	2.2	3.3	6.5
2/2+2/1	Left Ahead	U	O R		1	72:74	-	630	1347+239	39.7 : 39.7%	1.0	1.4	9.1
2/3	Ahead	U	O		1	72	-	641	1574	40.7%	1.2	1.6	10.1
3/1	Stonebridge Left	O	P		1	74	-	168	678	24.8%	0.1	0.3	0.9
3/2	Stonebridge Right	U	B		1	7	-	49	159	30.8%	0.5	0.7	1.4
4/2	A167 North Ahead	U	A		1	21	-	276	486	56.7%	2.3	2.9	6.6
4/3	A167 North Ahead	U	A		1	21	-	278	486	57.1%	2.3	3.0	6.8
5/1	Left	U	L		1	12	-	46	275	16.8%	0.5	0.6	1.3
5/2	Ahead	U	K		1	23	-	278	517	53.7%	0.1	0.6	0.7
5/3	Ahead	U	K		1	23	-	279	524	53.2%	0.1	0.6	0.7
6/1	Left	U	I		1	43	-	696	961	72.4%	3.5	4.8	15.0
7/2+7/1	Parkgate Right Left	U	D		1	36	-	715	555+440	71.9 : 71.9%	3.9	5.1	9.3
7/3	Parkgate Right	U	D		1	36	-	419	762	55.0%	2.3	3.0	8.5

C1	Stream: 1 PRC for Signalled Lanes (%):	24.3	Total Delay for Signalled Lanes (pcuHr):	29.54	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	263.4	Total Delay for Signalled Lanes (pcuHr):	0.30	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	24.3	Total Delay Over All Lanes(pcuHr):	29.84		

Scenario 3: '2021 SAT Base' (FG7: '2021 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**69.3%**	**21.3**	**29.9**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**69.3%**	**21.3**	**29.9**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	468	756+783	30.4 : 30.4%	1.8	2.0	3.7
1/3	A167 South Right	U	G		1	15	-	220	321	68.6%	2.1	3.2	6.2
2/2+2/1	Left Ahead	U	O R		1	72:74	-	632	1124+494	39.0 : 39.0%	0.9	1.2	8.1
2/3	Ahead	U	O		1	72	-	613	1574	39.0%	1.1	1.4	8.9
3/1	Stonebridge Left	O	P		1	74	-	205	702	29.2%	0.1	0.3	1.1
3/2	Stonebridge Right	U	B		1	7	-	45	159	28.3%	0.5	0.7	1.2
4/2	A167 North Ahead	U	A		1	21	-	317	486	65.2%	2.7	3.6	8.0
4/3	A167 North Ahead	U	A		1	21	-	319	486	65.6%	2.7	3.7	8.0
5/1	Left	U	L		1	12	-	44	275	16.0%	0.5	0.6	1.2
5/2	Ahead	U	K		1	23	-	317	517	61.3%	0.1	0.8	0.9
5/3	Ahead	U	K		1	23	-	320	524	61.1%	0.1	0.8	0.9
6/1	Left	U	I		1	44	-	681	983	69.3%	3.3	4.4	14.0
7/2+7/1	Parkgate Right Left	U	D		1	37	-	695	571+436	69.0 : 69.0%	3.6	4.7	8.5
7/3	Parkgate Right	U	D		1	37	-	383	783	48.9%	2.0	2.5	7.4

C1	Stream: 1 PRC for Signalled Lanes (%):	29.9	Total Delay for Signalled Lanes (pcuHr):	29.60	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	208.0	Total Delay for Signalled Lanes (pcuHr):	0.35	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	29.9	Total Delay Over All Lanes(pcuHr):	29.95		

Scenario 4: '2021 AM Base + Dev' (FG20: '2021 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.6%**	**23.9**	**34.2**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.6%**	**23.9**	**34.2**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	554	760+794	35.6 : 35.6%	2.1	2.4	4.4
1/3	A167 South Right	U	G		1	18	-	279	381	73.2%	2.6	3.9	7.8
2/2+2/1	Left Ahead	U	O R		1	72:74	-	709	1325+264	44.6 : 44.6%	1.1	1.5	9.9
2/3	Ahead	U	O		1	72	-	723	1574	45.9%	1.3	1.8	11.2
3/1	Stonebridge Left	O	P		1	74	-	138	645	21.4%	0.1	0.3	0.7
3/2	Stonebridge Right	U	B		1	7	-	46	159	28.9%	0.5	0.7	1.3
4/2	A167 North Ahead	U	A		1	19	-	299	442	67.6%	2.7	3.7	7.8
4/3	A167 North Ahead	U	A		1	19	-	301	442	68.1%	2.7	3.7	7.9
5/1	Left	U	L		1	12	-	42	275	15.3%	0.5	0.5	1.1
5/2	Ahead	U	K		1	21	-	301	474	63.5%	0.1	0.9	1.0
5/3	Ahead	U	K		1	21	-	303	480	63.1%	0.1	0.9	1.0
6/1	Left	U	I		1	41	-	684	917	74.6%	3.7	5.2	15.3
7/2+7/1	Parkgate Right Left	U	D		1	36	-	717	573+392	74.3 : 74.3%	3.9	5.4	10.6
7/3	Parkgate Right	U	D		1	36	-	452	762	59.3%	2.6	3.3	9.5

C1	Stream: 1 PRC for Signalled Lanes (%):	20.7	Total Delay for Signalled Lanes (pcuHr):	33.95	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	320.7	Total Delay for Signalled Lanes (pcuHr):	0.26	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	20.7	Total Delay Over All Lanes(pcuHr):	34.21		

Scenario 5: '2021 PM Base + Dev' (FG21: '2021 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.8%**	**21.9**	**30.3**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.8%**	**21.9**	**30.3**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	453	758+782	29.4 : 29.4%	1.7	2.0	3.6
1/3	A167 South Right	U	G		1	16	-	236	341	69.2%	2.2	3.3	6.5
2/2+2/1	Left Ahead	U	O R		1	72:74	-	635	1347+240	40.0 : 40.0%	1.0	1.4	9.1
2/3	Ahead	U	O		1	72	-	649	1574	41.2%	1.2	1.6	10.2
3/1	Stonebridge Left	O	P		1	74	-	168	734	22.9%	0.1	0.3	0.9
3/2	Stonebridge Right	U	B		1	7	-	49	159	30.8%	0.5	0.7	1.4
4/2	A167 North Ahead	U	A		1	20	-	276	464	59.4%	2.4	3.1	6.9
4/3	A167 North Ahead	U	A		1	20	-	278	464	59.9%	2.4	3.1	6.9
5/1	Left	U	L		1	12	-	46	275	16.8%	0.5	0.6	1.3
5/2	Ahead	U	K		1	22	-	278	496	56.1%	0.1	0.7	0.7
5/3	Ahead	U	K		1	22	-	279	502	55.6%	0.1	0.7	0.7
6/1	Left	U	I		1	43	-	700	961	72.8%	3.6	4.9	15.1
7/2+7/1	Parkgate Right Left	U	D		1	37	-	726	567+449	71.5 : 71.5%	3.8	5.0	9.0
7/3	Parkgate Right	U	D		1	37	-	426	783	54.4%	2.3	2.9	8.5

C1	Stream: 1 PRC for Signalled Lanes (%):	23.6	Total Delay for Signalled Lanes (pcuHr):	30.00	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	293.1	Total Delay for Signalled Lanes (pcuHr):	0.28	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	23.6	Total Delay Over All Lanes(pcuHr):	30.28		

Scenario 6: '2021 SAT Base + Dev' (FG22: '2021 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**70.7%**	**22.1**	**31.2**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**70.7%**	**22.1**	**31.2**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	468	756+783	30.4 : 30.4%	1.8	2.0	3.7
1/3	A167 South Right	U	G		1	15	-	227	321	70.7%	2.2	3.4	6.5
2/2+2/1	Left Ahead	U	O R		1	72:74	-	639	1125+494	39.5 : 39.5%	0.9	1.2	8.3
2/3	Ahead	U	O		1	72	-	623	1574	39.6%	1.1	1.4	9.2
3/1	Stonebridge Left	O	P		1	74	-	205	699	29.3%	0.1	0.4	1.1
3/2	Stonebridge Right	U	B		1	7	-	67	159	42.1%	0.7	1.1	1.9
4/2	A167 North Ahead	U	A		1	21	-	317	486	65.2%	2.7	3.6	8.0
4/3	A167 North Ahead	U	A		1	21	-	319	486	65.6%	2.7	3.7	8.0
5/1	Left	U	L		1	12	-	66	275	24.0%	0.8	0.9	1.8
5/2	Ahead	U	K		1	23	-	318	517	61.5%	0.1	0.9	0.9
5/3	Ahead	U	K		1	23	-	319	524	60.9%	0.1	0.8	0.8
6/1	Left	U	I		1	44	-	682	983	69.4%	3.3	4.4	14.0
7/2+7/1	Parkgate Right Left	U	D		1	37	-	709	571+438	70.3 : 70.3%	3.7	4.9	9.0
7/3	Parkgate Right	U	D		1	37	-	393	783	50.2%	2.1	2.6	7.6

C1	Stream: 1 PRC for Signalled Lanes (%):	27.2	Total Delay for Signalled Lanes (pcuHr):	30.86	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	206.7	Total Delay for Signalled Lanes (pcuHr):	0.35	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	27.2	Total Delay Over All Lanes(pcuHr):	31.21		

Scenario 7: '2023 AM Base' (FG8: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.5%**	**23.4**	**33.6**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.5%**	**23.4**	**33.6**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	560	755+783	36.4 : 36.4%	2.2	2.5	4.6
1/3	A167 South Right	U	G		1	17	-	269	361	74.5%	2.5	3.9	7.7
2/2+2/1	Left Ahead	U	O R		1	72:74	-	715	1323+267	45.0 : 45.0%	1.1	1.5	9.8
2/3	Ahead	U	O		1	72	-	730	1574	46.4%	1.3	1.8	11.1
3/1	Stonebridge Left	O	P		1	74	-	139	642	21.6%	0.1	0.3	0.8
3/2	Stonebridge Right	U	B		1	7	-	44	159	27.6%	0.5	0.7	1.2
4/2	A167 North Ahead	U	A		1	19	-	302	442	68.3%	2.7	3.8	7.9
4/3	A167 North Ahead	U	A		1	19	-	304	442	68.7%	2.7	3.8	8.0
5/1	Left	U	L		1	12	-	40	275	14.6%	0.4	0.5	1.1
5/2	Ahead	U	K		1	21	-	304	474	64.1%	0.1	1.0	1.0
5/3	Ahead	U	K		1	21	-	306	480	63.7%	0.1	0.9	1.0
6/1	Left	U	I		1	42	-	659	939	70.2%	3.4	4.5	14.0
7/2+7/1	Parkgate Right Left	U	D		1	37	-	722	586+398	73.3 : 73.3%	3.8	5.2	10.6
7/3	Parkgate Right	U	D		1	37	-	455	783	58.1%	2.5	3.2	9.3

C1	Stream: 1 PRC for Signalled Lanes (%):	20.8	Total Delay for Signalled Lanes (pcuHr):	33.33	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	315.9	Total Delay for Signalled Lanes (pcuHr):	0.26	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	20.8	Total Delay Over All Lanes(pcuHr):	33.59		

Scenario 8: '2023 PM Base' (FG9: '2023 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**73.7%**	**22.2**	**30.7**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**73.7%**	**22.2**	**30.7**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	461	763+794	29.6 : 29.6%	1.7	1.9	3.6
1/3	A167 South Right	U	G		1	16	-	238	341	69.8%	2.3	3.4	6.7
2/2+2/1	Left Ahead	U	O R		1	72:74	-	639	1348+238	40.3 : 40.3%	1.1	1.4	9.2
2/3	Ahead	U	O		1	72	-	653	1574	41.5%	1.3	1.6	10.3
3/1	Stonebridge Left	O	P		1	74	-	170	674	25.2%	0.1	0.3	0.9
3/2	Stonebridge Right	U	B		1	7	-	50	159	31.4%	0.5	0.8	1.4
4/2	A167 North Ahead	U	A		1	21	-	280	486	57.6%	2.3	3.0	6.8
4/3	A167 North Ahead	U	A		1	21	-	283	486	58.2%	2.4	3.0	6.9
5/1	Left	U	L		1	12	-	47	275	17.1%	0.5	0.6	1.3
5/2	Ahead	U	K		1	23	-	282	517	54.5%	0.1	0.7	0.7
5/3	Ahead	U	K		1	23	-	284	524	54.2%	0.1	0.6	0.7
6/1	Left	U	I		1	43	-	708	961	73.7%	3.6	5.0	15.3
7/2+7/1	Parkgate Right Left	U	D		1	36	-	725	555+441	72.8 : 72.8%	3.9	5.3	9.5
7/3	Parkgate Right	U	D		1	36	-	427	762	56.0%	2.4	3.0	8.7

C1	Stream: 1 PRC for Signalled Lanes (%):	22.2	Total Delay for Signalled Lanes (pcuHr):	30.35	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	257.0	Total Delay for Signalled Lanes (pcuHr):	0.31	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	22.2	Total Delay Over All Lanes(pcuHr):	30.67		

Scenario 9: '2023 SAT Base' (FG10: '2023 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**70.5%**	**21.8**	**30.8**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**70.5%**	**21.8**	**30.8**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	475	754+783	30.9 : 30.9%	1.8	2.1	3.8
1/3	A167 South Right	U	G		1	15	-	224	321	69.8%	2.2	3.3	6.4
2/2+2/1	Left Ahead	U	O R		1	72:74	-	642	1125+494	39.7 : 39.7%	0.9	1.2	8.2
2/3	Ahead	U	O		1	72	-	624	1574	39.7%	1.1	1.4	9.1
3/1	Stonebridge Left	O	P		1	74	-	208	698	29.8%	0.1	0.4	1.1
3/2	Stonebridge Right	U	B		1	7	-	46	159	28.9%	0.5	0.7	1.3
4/2	A167 North Ahead	U	A		1	21	-	322	486	66.2%	2.7	3.7	8.2
4/3	A167 North Ahead	U	A		1	21	-	325	486	66.8%	2.8	3.8	8.3
5/1	Left	U	L		1	12	-	45	275	16.4%	0.5	0.6	1.2
5/2	Ahead	U	K		1	23	-	322	517	62.2%	0.1	0.9	0.9
5/3	Ahead	U	K		1	23	-	326	524	62.2%	0.1	0.9	0.9
6/1	Left	U	I		1	44	-	693	983	70.5%	3.3	4.5	14.5
7/2+7/1	Parkgate Right Left	U	D		1	37	-	706	571+437	70.0 : 70.0%	3.7	4.8	8.9
7/3	Parkgate Right	U	D		1	37	-	391	783	49.9%	2.1	2.6	7.6

C1	Stream: 1 PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	30.48	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	202.0	Total Delay for Signalled Lanes (pcuHr):	0.36	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	27.7	Total Delay Over All Lanes(pcuHr):	30.84		

Scenario 10: '2023 AM Base + Dev' (FG23: '2023 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**75.2%**	**24.2**	**34.8**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**75.2%**	**24.2**	**34.8**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	560	761+794	36.0 : 36.0%	2.1	2.4	4.5
1/3	A167 South Right	U	G		1	18	-	282	381	74.0%	2.6	4.0	8.0
2/2+2/1	Left Ahead	U	O R		1	72:74	-	715	1323+267	45.0 : 45.0%	1.1	1.5	10.1
2/3	Ahead	U	O		1	72	-	732	1574	46.5%	1.4	1.8	11.4
3/1	Stonebridge Left	O	P		1	74	-	139	643	21.6%	0.1	0.3	0.8
3/2	Stonebridge Right	U	B		1	7	-	46	159	28.9%	0.5	0.7	1.3
4/2	A167 North Ahead	U	A		1	19	-	302	442	68.3%	2.7	3.8	7.9
4/3	A167 North Ahead	U	A		1	19	-	304	442	68.7%	2.7	3.8	8.0
5/1	Left	U	L		1	12	-	42	275	15.3%	0.5	0.5	1.1
5/2	Ahead	U	K		1	21	-	304	474	64.1%	0.1	1.0	1.0
5/3	Ahead	U	K		1	21	-	306	480	63.7%	0.1	0.9	1.0
6/1	Left	U	I		1	41	-	690	917	75.2%	3.8	5.3	15.5
7/2+7/1	Parkgate Right Left	U	D		1	36	-	722	573+392	74.8 : 74.8%	4.0	5.4	10.7
7/3	Parkgate Right	U	D		1	36	-	458	762	60.1%	2.6	3.4	9.7

C1	Stream: 1 PRC for Signalled Lanes (%):	19.7	Total Delay for Signalled Lanes (pcuHr):	34.54	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	316.2	Total Delay for Signalled Lanes (pcuHr):	0.26	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	19.7	Total Delay Over All Lanes(pcuHr):	34.80		

Scenario 11: '2023 PM Base + Dev' (FG24: '2023 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.1%**	**22.4**	**31.1**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.1%**	**22.4**	**31.1**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	461	763+794	29.6 : 29.6%	1.7	1.9	3.6
1/3	A167 South Right	U	G		1	16	-	240	341	70.4%	2.3	3.4	6.8
2/2+2/1	Left Ahead	U	O R		1	72:74	-	643	1347+239	40.5 : 40.5%	1.1	1.4	9.3
2/3	Ahead	U	O		1	72	-	662	1574	42.1%	1.3	1.6	10.7
3/1	Stonebridge Left	O	P		1	74	-	170	672	25.3%	0.1	0.3	0.9
3/2	Stonebridge Right	U	B		1	7	-	50	159	31.4%	0.5	0.8	1.4
4/2	A167 North Ahead	U	A		1	21	-	280	486	57.6%	2.3	3.0	6.8
4/3	A167 North Ahead	U	A		1	21	-	283	486	58.2%	2.4	3.0	6.9
5/1	Left	U	L		1	12	-	47	275	17.1%	0.5	0.6	1.3
5/2	Ahead	U	K		1	23	-	282	517	54.5%	0.1	0.7	0.7
5/3	Ahead	U	K		1	23	-	284	524	54.2%	0.1	0.6	0.7
6/1	Left	U	I		1	43	-	712	961	74.1%	3.6	5.1	15.7
7/2+7/1	Parkgate Right Left	U	D		1	36	-	734	554+443	73.6 : 73.6%	4.0	5.4	9.8
7/3	Parkgate Right	U	D		1	36	-	436	762	57.2%	2.5	3.1	9.0

C1	Stream: 1 PRC for Signalled Lanes (%):	21.5	Total Delay for Signalled Lanes (pcuHr):	30.74	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	256.0	Total Delay for Signalled Lanes (pcuHr):	0.32	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	21.5	Total Delay Over All Lanes(pcuHr):	31.06		

Scenario 12: '2023 SAT Base + Dev' (FG25: '2023 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.0%**	**22.6**	**32.1**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.0%**	**22.6**	**32.1**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	475	754+783	30.9 : 30.9%	1.8	2.1	3.8
1/3	A167 South Right	U	G		1	15	-	231	321	72.0%	2.2	3.5	6.6
2/2+2/1	Left Ahead	U	O R		1	72:74	-	648	1124+495	40.0 : 40.0%	0.9	1.2	8.5
2/3	Ahead	U	O		1	72	-	635	1574	40.4%	1.1	1.5	9.5
3/1	Stonebridge Left	O	P		1	74	-	208	695	29.9%	0.1	0.4	1.1
3/2	Stonebridge Right	U	B		1	7	-	68	159	42.7%	0.7	1.1	2.0
4/2	A167 North Ahead	U	A		1	21	-	322	486	66.2%	2.7	3.7	8.2
4/3	A167 North Ahead	U	A		1	21	-	325	486	66.8%	2.8	3.8	8.3
5/1	Left	U	L		1	12	-	67	275	24.4%	0.8	0.9	1.8
5/2	Ahead	U	K		1	23	-	322	517	62.2%	0.1	0.9	0.9
5/3	Ahead	U	K		1	23	-	326	524	62.2%	0.1	0.9	0.9
6/1	Left	U	I		1	44	-	694	983	70.6%	3.4	4.5	14.5
7/2+7/1	Parkgate Right Left	U	D		1	37	-	719	570+440	71.2 : 71.2%	3.7	5.0	9.2
7/3	Parkgate Right	U	D		1	37	-	402	783	51.4%	2.1	2.7	7.9

C1	Stream: 1 PRC for Signalled Lanes (%):	25.0	Total Delay for Signalled Lanes (pcuHr):	31.75	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	200.7	Total Delay for Signalled Lanes (pcuHr):	0.37	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	25.0	Total Delay Over All Lanes(pcuHr):	32.11		

Scenario 13: '2027 AM Base' (FG11: '2027 AM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.7%**	**24.7**	**35.9**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.7%**	**24.7**	**35.9**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	578	757+795	37.3 : 37.3%	2.2	2.5	4.7
1/3	A167 South Right	U	G		1	18	-	278	381	73.0%	2.6	3.9	7.7
2/2+2/1	Left Ahead	U	O R		1	72:74	-	735	1321+268	46.2 : 46.2%	1.1	1.6	10.1
2/3	Ahead	U	O		1	72	-	757	1574	48.1%	1.4	1.9	12.0
3/1	Stonebridge Left	O	P		1	74	-	144	697	20.6%	0.1	0.3	0.8
3/2	Stonebridge Right	U	B		1	7	-	45	159	28.3%	0.5	0.7	1.2
4/2	A167 North Ahead	U	A		1	19	-	312	442	70.6%	2.8	4.0	8.4
4/3	A167 North Ahead	U	A		1	19	-	314	442	71.0%	2.8	4.0	8.4
5/1	Left	U	L		1	12	-	41	275	14.9%	0.4	0.5	1.1
5/2	Ahead	U	K		1	21	-	314	474	66.2%	0.1	1.0	1.1
5/3	Ahead	U	K		1	21	-	316	480	65.8%	0.1	1.0	1.1
6/1	Left	U	I		1	41	-	681	917	74.2%	3.7	5.1	15.2
7/2+7/1	Parkgate Right Left	U	D		1	36	-	741	572+394	76.7 : 76.7%	4.1	5.7	11.4
7/3	Parkgate Right	U	D		1	36	-	475	762	62.3%	2.8	3.6	10.2

C1	Stream: 1 PRC for Signalled Lanes (%):	17.4	Total Delay for Signalled Lanes (pcuHr):	35.60	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	335.8	Total Delay for Signalled Lanes (pcuHr):	0.27	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	17.4	Total Delay Over All Lanes(pcuHr):	35.86		

Scenario 14: '2027 PM Base' (FG12: '2027 PM Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.0%**	**23.1**	**32.3**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.0%**	**23.1**	**32.3**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	475	758+794	30.6 : 30.6%	1.8	2.0	3.7
1/3	A167 South Right	U	G		1	16	-	246	341	72.2%	2.3	3.6	7.0
2/2+2/1	Left Ahead	U	O R		1	72:74	-	656	1347+239	41.4 : 41.4%	1.1	1.4	9.5
2/3	Ahead	U	O		1	72	-	676	1574	43.0%	1.3	1.7	10.9
3/1	Stonebridge Left	O	P		1	74	-	176	668	26.4%	0.1	0.3	1.0
3/2	Stonebridge Right	U	B		1	7	-	52	159	32.7%	0.6	0.8	1.5
4/2	A167 North Ahead	U	A		1	21	-	289	486	59.4%	2.4	3.1	7.1
4/3	A167 North Ahead	U	A		1	21	-	291	486	59.8%	2.4	3.2	7.1
5/1	Left	U	L		1	12	-	49	275	17.8%	0.6	0.7	1.3
5/2	Ahead	U	K		1	23	-	291	517	56.3%	0.1	0.7	0.8
5/3	Ahead	U	K		1	23	-	292	524	55.7%	0.1	0.7	0.7
6/1	Left	U	I		1	43	-	730	961	76.0%	3.8	5.3	16.4
7/2+7/1	Parkgate Right Left	U	D		1	36	-	744	554+444	74.6 : 74.6%	4.1	5.5	10.3
7/3	Parkgate Right	U	D		1	36	-	444	762	58.3%	2.5	3.2	9.2

C1	Stream: 1 PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	31.98	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	241.4	Total Delay for Signalled Lanes (pcuHr):	0.34	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	18.5	Total Delay Over All Lanes(pcuHr):	32.32		

Scenario 15: '2027 SAT Base' (FG13: '2027 SAT Base', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.6%**	**22.7**	**32.5**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**72.6%**	**22.7**	**32.5**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	490	752+783	31.9 : 31.9%	1.9	2.1	3.9
1/3	A167 South Right	U	G		1	15	-	231	321	72.0%	2.2	3.5	6.6
2/2+2/1	Left Ahead	U	O R		1	72:74	-	659	1123+496	40.7 : 40.7%	0.9	1.3	8.6
2/3	Ahead	U	O		1	72	-	646	1574	41.1%	1.2	1.5	9.6
3/1	Stonebridge Left	O	P		1	74	-	215	691	31.1%	0.1	0.4	1.2
3/2	Stonebridge Right	U	B		1	7	-	48	159	30.2%	0.5	0.7	1.3
4/2	A167 North Ahead	U	A		1	21	-	332	486	68.3%	2.8	3.9	8.5
4/3	A167 North Ahead	U	A		1	21	-	335	486	68.9%	2.9	4.0	8.6
5/1	Left	U	L		1	12	-	47	275	17.1%	0.6	0.7	1.3
5/2	Ahead	U	K		1	23	-	332	517	64.2%	0.1	0.9	1.0
5/3	Ahead	U	K		1	23	-	336	524	64.1%	0.1	1.0	1.0
6/1	Left	U	I		1	44	-	714	983	72.6%	3.5	4.8	15.2
7/2+7/1	Parkgate Right Left	U	D		1	37	-	724	570+439	71.7 : 71.7%	3.8	5.0	9.5
7/3	Parkgate Right	U	D		1	37	-	406	783	51.9%	2.2	2.7	8.0

C1	Stream: 1 PRC for Signalled Lanes (%):	23.9	Total Delay for Signalled Lanes (pcuHr):	32.11	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	189.4	Total Delay for Signalled Lanes (pcuHr):	0.39	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	23.9	Total Delay Over All Lanes(pcuHr):	32.51		

Scenario 16: '2027 AM Base + Dev' (FG26: '2027 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**77.6%**	**25.2**	**36.9**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**77.6%**	**25.2**	**36.9**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	578	757+795	37.3 : 37.3%	2.2	2.5	4.7
1/3	A167 South Right	U	G		1	18	-	291	381	76.4%	2.7	4.3	8.4
2/2+2/1	Left Ahead	U	O R		1	72:74	-	736	1322+268	46.3 : 46.3%	1.2	1.6	10.3
2/3	Ahead	U	O		1	72	-	758	1574	48.2%	1.4	1.9	12.0
3/1	Stonebridge Left	O	P		1	74	-	144	697	20.7%	0.1	0.3	0.8
3/2	Stonebridge Right	U	B		1	7	-	47	159	29.5%	0.5	0.7	1.3
4/2	A167 North Ahead	U	A		1	19	-	312	442	70.6%	2.8	4.0	8.4
4/3	A167 North Ahead	U	A		1	19	-	314	442	71.0%	2.8	4.0	8.4
5/1	Left	U	L		1	12	-	43	275	15.7%	0.5	0.6	1.2
5/2	Ahead	U	K		1	21	-	314	474	66.2%	0.1	1.0	1.1
5/3	Ahead	U	K		1	21	-	316	480	65.8%	0.1	1.0	1.1
6/1	Left	U	I		1	41	-	712	917	77.6%	4.0	5.7	16.5
7/2+7/1	Parkgate Right Left	U	D		1	36	-	743	572+394	76.9 : 76.9%	4.1	5.8	11.5
7/3	Parkgate Right	U	D		1	36	-	476	762	62.5%	2.8	3.6	10.2

C1	Stream: 1 PRC for Signalled Lanes (%):	16.0	Total Delay for Signalled Lanes (pcuHr):	36.66	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	335.5	Total Delay for Signalled Lanes (pcuHr):	0.27	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	16.0	Total Delay Over All Lanes(pcuHr):	36.93		

Scenario 17: '2027 PM Base + Dev' (FG27: '2027 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.4%**	**23.3**	**32.8**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**76.4%**	**23.3**	**32.8**	**-**
1/2+1/1	A167 South Ahead	U	F		1	43	-	475	758+794	30.6 : 30.6%	1.8	2.0	3.7
1/3	A167 South Right	U	G		1	16	-	248	341	72.7%	2.4	3.7	7.1
2/2+2/1	Left Ahead	U	O R		1	72:74	-	661	1346+240	41.7 : 41.7%	1.1	1.5	9.6
2/3	Ahead	U	O		1	72	-	684	1574	43.5%	1.3	1.7	11.2
3/1	Stonebridge Left	O	P		1	74	-	176	665	26.5%	0.1	0.3	1.0
3/2	Stonebridge Right	U	B		1	7	-	52	159	32.7%	0.6	0.8	1.5
4/2	A167 North Ahead	U	A		1	21	-	289	486	59.4%	2.4	3.1	7.1
4/3	A167 North Ahead	U	A		1	21	-	291	486	59.8%	2.4	3.2	7.1
5/1	Left	U	L		1	12	-	49	275	17.8%	0.6	0.7	1.3
5/2	Ahead	U	K		1	23	-	291	517	56.3%	0.1	0.7	0.8
5/3	Ahead	U	K		1	23	-	292	524	55.7%	0.1	0.7	0.7
6/1	Left	U	I		1	43	-	734	961	76.4%	3.8	5.4	16.5
7/2+7/1	Parkgate Right Left	U	D		1	36	-	754	553+445	75.5 : 75.5%	4.1	5.7	10.4
7/3	Parkgate Right	U	D		1	36	-	452	762	59.3%	2.6	3.3	9.5

C1	Stream: 1 PRC for Signalled Lanes (%):	17.9	Total Delay for Signalled Lanes (pcuHr):	32.41	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	239.9	Total Delay for Signalled Lanes (pcuHr):	0.35	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	17.9	Total Delay Over All Lanes(pcuHr):	32.75		

Scenario 18: '2027 SAT Base + Dev' (FG28: '2027 SAT Base + Dev', Plan 1: 'Network Control Plan 1')

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.2%**	**23.5**	**33.8**	**-**
A167 - Stonebridge - Parkgate	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**74.2%**	**23.5**	**33.8**	**-**
1/2+1/1	A167 South Ahead	U	F		1	42	-	490	746+784	32.0 : 32.0%	1.9	2.1	3.9
1/3	A167 South Right	U	G		1	15	-	238	321	74.2%	2.3	3.7	7.0
2/2+2/1	Left Ahead	U	O R		1	72:74	-	666	1123+496	41.1 : 41.1%	0.9	1.3	8.7
2/3	Ahead	U	O		1	72	-	656	1574	41.7%	1.2	1.6	9.9
3/1	Stonebridge Left	O	P		1	74	-	215	688	31.2%	0.1	0.4	1.2
3/2	Stonebridge Right	U	B		1	7	-	70	159	44.0%	0.8	1.1	2.0
4/2	A167 North Ahead	U	A		1	21	-	332	486	68.3%	2.8	3.9	8.5
4/3	A167 North Ahead	U	A		1	21	-	335	486	68.9%	2.9	4.0	8.6
5/1	Left	U	L		1	12	-	69	275	25.1%	0.8	1.0	1.9
5/2	Ahead	U	K		1	23	-	332	517	64.2%	0.1	0.9	1.0
5/3	Ahead	U	K		1	23	-	336	524	64.1%	0.1	1.0	1.0
6/1	Left	U	I		1	44	-	715	983	72.7%	3.5	4.8	15.2
7/2+7/1	Parkgate Right Left	U	D		1	37	-	737	569+442	72.9 : 72.9%	3.9	5.2	9.8
7/3	Parkgate Right	U	D		1	37	-	417	783	53.3%	2.2	2.8	8.3

C1	Stream: 1 PRC for Signalled Lanes (%):	21.3	Total Delay for Signalled Lanes (pcuHr):	33.43	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	188.0	Total Delay for Signalled Lanes (pcuHr):	0.40	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	90
	PRC Over All Lanes (%):	21.3	Total Delay Over All Lanes(pcuHr):	33.83		

APPENDIX I

October ATC data summary sites 38, 41 & 13

Merchant Gate Car Park Data

site 38	tempro AM factor	1.0297		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
14th Oct 2020	north	348		
0800-0900	south	475		
	2 way	823		
10th Oct 2018	north	341		
	south	489		
	2 way	830	1.0085055	1.03846
3rd Oct 2018	north	328		
	south	490		
	2 way	818	0.9939247	1.02344
17th Oct 2018	north	355		
	south	477		
	2 way	832	1.0109356	1.04096
24th Oct 2018	north	340		
	south	489		
	2 way	829	1.0072904	1.03721
31th Oct 2018	north	213		
	south	409		
	2 way	622	0.7557716	0.77822
		average	0.95529	0.98366

site 13	tempro AM factor	1.0452		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
14th Oct 2020	east	800		
0800-0900	west	1082		
1755	2 way	1882		
11th Oct 2017	east	891		
	west	916		
	2 way	1807	0.9601488	1.00355
4th Oct 2017	east	882		
	west	910		
	2 way	1792	0.9521785	0.99522
18th Oct 2017	east	851		
	west	923		
	2 way	1774	0.9426142	0.98522
25th Oct 2017	east	735		
	west	793		
	2 way	1528	0.8119022	0.84860
	average		0.9167109	0.95815

site 41	tempro AM factor	1.0297		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
7th Oct 2020	east	678		
0800-0900	west	543		
1186	2 way	1221		
10th Oct 2018	east	890		
	west	592		
	2 way	1482	1.2137592	1.24981
3rd Oct 2018	east	912		
	west	616		
	2 way	1528	1.2514333	1.28860
17th Oct 2018	east	919		
	west	580		
	2 way	1499	1.2276822	1.26414
24th Oct 2018	east	911		
	west	583		
	2 way	1494	1.2235872	1.25993
31st Oct 2018	east	811		
	west	612		
	2 way	1423	1.1654382	1.20005
	average		1.21638	1.25251

		Average Tempro Factor
overall average	1.02946	1.06477

site 38	tempro PM factor	1.0266		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
14th Oct 2020	north	500		
1500-1600	south	446		
	2 way	946		
10th Oct 2018	north	412		
	south	396		
	2 way	808	0.85412	0.87684
3rd Oct 2018	north	477		
	south	445		
	2 way	922	1.14109	1.00056
17th Oct 2018	north	436		
	south	435		
	2 way	871	0.94469	0.94521
24th Oct 2018	north	488		
	south	417		
	2 way	905	1.03904	0.98211
31th Oct 2018	north	419		
	south	415		
	2 way	834	0.92155	0.90506
		average	0.98010	0.94195

site 13	tempro PM factor	1.0403		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
14th Oct 2020	east	958		
1500-1600	west	1093		
	2 way	2051		
11th Oct 2017	east	963		
	west	836		
	2 way	1799	0.87713	0.91248
4th Oct 2017	east	950		
	west	896		
	2 way	1846	0.94861	0.93632
18th Oct 2017	east	918		
	west	851		
	2 way	1769	0.90904	0.89727
25th Oct 2017	east	998		
	west	863		
	2 way	1861	0.95632	0.94393
	average		0.92278	0.92250

site 41	tempro PM factor	1.0266		
Wednesday	Traffic Data		Covid Factor	Adjusted for tempro factor
14th Oct 2020	east	655		
1500-1600	west	724		
	2 way	1379		
10th Oct 2018	east	669		
	west	746		
	2 way	1415	1.02611	1.05340
3rd Oct 2018	east	720		
	west	817		
	2 way	1537	1.11458	1.14422
17th Oct 2018	east	720		
	west	771		
	2 way	1491	1.08122	1.10998
24th Oct 2018	east	693		
	west	762		
	2 way	1455	1.05511	1.08318
31st Oct 2018	east	772		
	west	829		
	2 way	1601	1.16099	1.19187
	average		1.08760	1.11653

		Average Tempro Factor
overall average	0.99682443	0.99366

site 38	tempro Sat factor		1.0245	
Saturday	Traffic Data		Covid Factor	Adjusted for tempro factor
17th Oct 2020	north	441		
1200-1300	south	452		
	2 way	893		
13th Oct 2018	north	477		
	south	461		
	2 way	938	1.0503919	1.07613
6th Oct 2018	north	469		
	south	502		
	2 way	971	1.189951	1.11399
20th Oct 2018	north	433		
	south	466		
	2 way	899	1.1017157	1.03138
27th Oct 2018	north	452		
	south	442		
	2 way	894	1.0955882	1.02565
		average	1.10941	1.06179

site 13	tempro Sat factor		1.0373	
Saturday	Traffic Data		Covid Factor	Adjusted for tempro factor
17th Oct 2020	east	1018		
1200-1300	west	941		
1755	2 way	1959		
14th Oct 2017	east	1030		
	west	876		
	2 way	1906	0.9729454	1.00924
7th Oct 2017	east	1037		
	west	831		
	2 way	1868	0.9535477	0.98912
21st Oct 2017	east	1000		
	west	889		
	2 way	1889	0.9642675	1.00023
28th Oct 2017	east	1040		
	west	849		
	2 way	1889	0.9642675	1.00023
		average	0.963757	0.999705156

site 41	tempro Sat factor		1.0245	
Saturday	Traffic Data		Covid Factor	Adjusted for tempro factor
10th Oct 2020	east	801		
1200-1300	west	868		
	2 way	1669		
13th Oct 2018	east	906		
	west	593		
	2 way	1499	0.8981426	0.92015
6th Oct 2018	east	889		
	west	609		
	2 way	1498	0.8975434	0.91953
20th Oct 2018	east	917		
	west	572		
	2 way	1489	0.892151	0.91401
27th Oct 2018	east	891		
	west	588		
	2 way	1479	0.8861594	0.90787
		average	0.89350	0.91539

		Tempro Factor
overall average	0.98889	0.99229

Vehicles in car park at start 5

	Monday								Wed								Fri				Sat				Sun			
Date		22.09.14				23.09.14				24.09.14				25.09.14				26.09.14				27.09.14				28.09.14		
Hour	Entry	Exit	Accum	2way	Entry	Exit	Accum	2 way	Entry	Exit	Accum	2 way	Entry	Exit	Accum	2 way	Entry	Exit	Accum	2 way	Entry	Exit	Accum	2 way	Entry	Exit	Accum	2 way
0	0	5	0	5	1	4	150	5	0	6	229	6	0	4	231	4	0	3	121	3	1	5	67	6	0	4	77	4
1	0	0	0	0	1	0	151	1	1	0	230	1	0	0	231	0	0	0	121	0	1	0	68	1	0	1	76	1
2	0	0	0	0	0	0	151	0	0	0	230	0	0	0	231	0	0	0	121	0	0	0	68	0	0	0	76	0
3	0	0	0	0	0	0	151	0	0	0	230	0	0	0	231	0	0	0	121	0	0	0	68	0	1	0	77	1
4	6	0	6	6	8	0	159	8	4	0	234	4	6	0	237	6	2	0	123	2	4	0	72	4	0	0	77	0
5	25	0	31	25	39	0	198	39	32	0	266	32	37	0	274	37	12	0	135	12	8	0	80	8	0	0	77	0
6	103	1	133	104	131	0	329	131	132	1	397	133	116	0	390	116	71	0	206	71	12	0	92	12	2	0	79	2
7	104	5	232	109	155	4	480	159	152	4	545	156	139	4	525	143	96	3	299	99	9	0	101	9	9	1	87	10
8	143	5	370	148	155	6	629	161	155	8	692	163	141	4	662	145	91	4	386	95	21	2	120	23	7	1	93	8
9	85	6	449	91	78	7	700	85	91	10	773	101	71	9	724	80	45	7	424	52	15	4	131	19	6	5	94	11
10	27	10	466	37	33	16	717	49	35	11	797	46	43	9	758	52	23	14	433	37	11	4	138	15	4	1	97	5
11	28	19	475	47	28	17	728	45	30	19	808	49	24	31	751	55	21	17	437	38	13	6	145	19	11	2	106	13
12	25	17	483	42	29	21	736	50	33	28	813	61	44	31	764	75	20	28	429	48	17	14	148	31	6	9	103	15
13	25	26	482	51	26	25	737	51	33	43	803	76	25	34	755	59	29	27	431	56	11	5	154	16	9	9	103	18
14	21	24	479	45	23	25	735	48	25	30	798	55	18	35	738	53	12	28	415	40	11	11	154	22	8	11	100	19
15	14	22	471	36	13	30	718	43	20	34	784	54	15	55	698	70	14	48	381	62	8	13	149	21	6	11	95	17
16	13	68	416	81	8	85	641	93	8	87	705	95	7	99	606	106	15	89	307	104	5	12	142	17	9	11	93	20
17	7	108	315	115	15	151	505	166	9	144	570	153	11	145	472	156	9	106	210	115	2	14	130	16	12	15	90	27
18	11	58	268	69	6	96	415	102	5	109	466	114	4	117	359	121	7	64	153	71	1	9	122	10	13	16	87	29
19	4	47	225	51	4	73	346	77	9	96	379	105	9	96	272	105	7	40	120	47	2	11	113	13	27	10	104	37
20	1	37	189	38	0	63	283	63	1	72	308	73	4	94	182	98	2	30	92	32	3	21	95	24	9	13	100	22
21	1	24	166	25	1	35	249	36	0	57	251	57	1	41	142	42	0	15	77	15	0	7	88	7	2	15	87	17
22	1	10	157	11	1	10	240	11	2	16	237	18	1	19	124	20	3	7	73	10	1	7	82	8	0	7	80	7
23	0	4	153	4	0	5	235	5	0	2	235	2	1	1	124	2	1	3	71	4	0	1	81	1	0	39	41	39
																								0				
	644	496	483		755	673	737		777	777	813		717	828	764		480	533	437		156	146	154	302	141	181	106	322
		Max	483			Max	737			Max	813			Max	764			Max	437			Max	154			Max	106	
		occupancy	33.38%			occupancy	50.93%			occupancy	56.19%			occupancy	52.80%			occupancy	30.20%			occupancy	10.64%			occupancy	7.33%	

merchants gate	1447	spaces
Darlington MSCP	690	