Annex M

Junctions Modelling
Analysis Report

TPP
transport planning practice

Leopard Guernsey Anchor Propco Ltd

Anchor and Hope Lane Sites
Junction Modelling Analysis

30821/D007b
December 2016

TPP
transport planning practice

Contents

Drawings

Appendices

A	TfL Signal Timing Data
B	Bugsby's Way/Gallions Road LinSig Results
C	Gallions Road/Woolwich Road PICADY Results
D	Anchor and Hope Lane/Access Road PICADY Results
E	Anchor and Hope Lane North/Bugsby's Way ARCADY Results
F	Woolwich Road/Anchor and Hope Lane/Charlton Church Lane LinSig Results
G	Woolwich Road/Retail Park Access Road/Gallon Close ARCADY Results

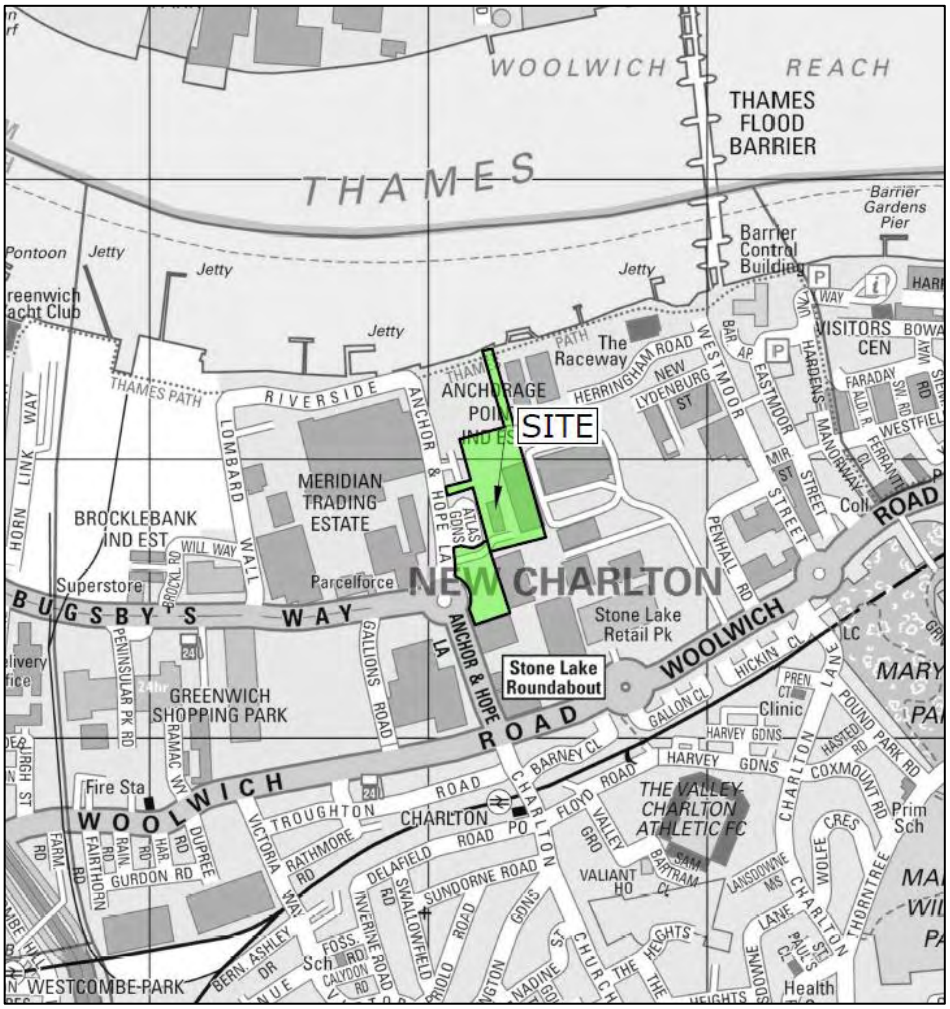
1 INTRODUCTION

1.1 Background Context

1.1.1 Transport Planning Practice (TPP) has been appointed by Leopard Guernsey Anchor Propco Ltd to provide transport advice in relation to the proposed redevelopment of the VIP Trading Estate site located within the Charlton Riverside area of the Royal Borough of Greenwich (RBG).

1.1.2 The site sits within a currently, predominately industrial area between Woolwich Road (A206) and the southern bank of the River Thames. The main access to the site is from Anchor & Hope Lane which runs between Woolwich Road and Bugsby's Way. The site comprises two plots with a narrow strip connecting to Anchor & Hope Lane to the west and another to the north towards Thames Path. Figure 1.1 shows the location of the site in the context of the surrounding area.

Figure 1.1 – Site location



1.1.3 The proposed development will provide 975 units residential as well as commercial space (A1, A3, B1, D1 and D2 use classes). The opening year is expected to be 2023. The description of development is as follows:

> *"Demolition of existing buildings and erection of 9 buildings ranging from 2 to 28 storeys in height for Class C3 residential use, with Class B1 employment space and flexible uses comprising Class A1 (retail), Class A3 (Café / Restaurant), Class D1 (Community Use) and Class D2 (Leisure) at ground floor and first floor level, alterations to existing vehicular access and creation of new pedestrian access from Anchor and Hope Lane and the riverside, creation of new areas of open space and landscaping together with the provision of associated car parking, cycle space, refuse and recycling storage, plant and all other associated works".*

1.1.4 The scheme will provide the following:

- 975 residential units provided within 9 buildings ranging in height from 2 to 28 storeys, including extensive private gardens and roof terraces;
- 1,560 sqm (GIA) of office space;
- Ancillary residential facilities including gym, swimming pool, changing rooms totalling 864 sqm (GIA);
- 690 sqm (GIA) of flexible retail/restaurant/café/leisure use;
- 407 sqm (GIA) of community uses;
- Extensive external public realm improvements and landscaping; and
- Parking, services, plant and circulation.

1.2 Report Structure

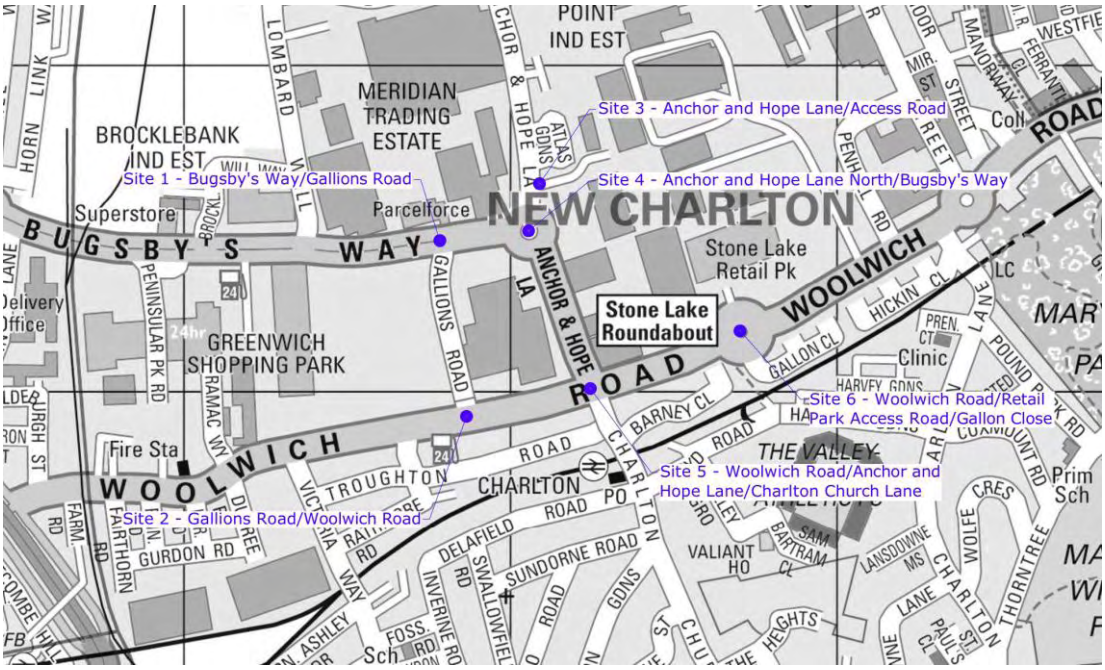
1.2.1 The purpose of this report is to summarise the highway impact of the proposed development on the capacity of six existing junctions in the vicinity of the site. The junctions have been assessed using PICADY/ARCADY/LinSig modelling programmes. The junctions assessed are listed below:

1. Bugsby's Way/Gallions Road signalised junction

2. Gallions Road/Woolwich Road priority junction
3. Anchor and Hope Lane/Access Road priority junction
4. Anchor and Hope Lane North/Bugsby's Way roundabout
5. Woolwich Road/Anchor and Hope Lane/Charlton Church Lane signalised junction
6. Woolwich Road/Retail Park Access Road/Gallon Close roundabout

1.2.2 Figure 1.2 overleaf shows the locations of the modelled junctions.

Figure 1.2 – Location of modelled junctions



1.2.3 This report is structured as follows:

- **Chapter 2: Model Development** – summarises how the traffic models has been developed.
- **Chapter 3: Assessment Scenarios** – sets out the scenarios which have been used to assess the impact of the proposed development.
- **Chapter 4: Evaluation of Model Results** – evaluates the results from the /PICADY/ARCADY/LinSig modelling work.

2 MODEL DEVELOPMENT

2.1 Introduction

2.1.1 This chapter summarises how the PICADY/ARCADY/LinSig models have been developed to assess the impact of the proposed Charlton Riverside development.

2.2 Assessed Junctions

2.2.1 Vehicle access to the existing site is via Anchor & Hope Lane. As part of the proposed scheme, future trips will continue to use this access and this would be enhanced as part of the scheme and used as the main access.

2.3 PICADY Models

2.3.1 PICADY models were constructed for the Gallions Road/Woolwich Road and Anchor and Hope Lane/Access Road priority junctions. The geometry of the existing junctions has been taken from ordnance survey mapping along with site observations and aerial photography.

2.3.2 The Gallions Road/Woolwich Road priority junction has three arms. The major arm is Woolwich Road. The minor arm is Gallions Road. There is a central island along Woolwich Road which prevents vehicles from both turning right into and right out of Gallions Road. Therefore this model will test any potential queue for left turning traffic from Gallions Road to Woolwich Road.

2.3.3 The Anchor and Hope Lane/Access Road priority junction has three arms. The major arm is Anchor and Hope Lane. The minor arm is the Access Road. All movements are permitted.

2.4 ARCADY models

2.4.1 ARCADY models were constructed for the Anchor and Hope Lane North/Bugsby's Way and Woolwich Road/Retail Park Access Road/Gallon Close roundabout junctions. The geometry of the existing roundabouts have been taken from ordnance survey mapping along with site observations and aerial photography.

2.4.2 The Anchor and Hope Lane North/Bugsby's Way roundabout junction has three arms. The main flow on the roundabout comes from Anchor and Hope Lane which has two entry lanes from the south and three from the north.

2.4.3 The third arm is from Bugsby's Way which has three entry lanes from the west.

2.4.4 The Woolwich Road/Retail Park Access Road/Gallon Close roundabout junction has four arms. The main flow on the roundabout comes from Woolwich Road which joins the roundabout from both the east and west. Both the eastern and western arms have two entry lanes.

2.4.5 From the north the Retail Park Access has two entry lanes and from the south Gallons Close has one entry lane. Both these arms have significantly low flows.

2.4.6 All movements are permitted at both junctions.

2.5 LINSIG Models

2.5.1 LinSig models were constructed for Bugsby's Way/Gallions Road and Woolwich Road/Anchor and Hope Lane/Charlton Church Lane. Saturation flows were provided for most of the arms on the two signalised junctions although due to the low flow on some arms it was not possible to give an accurate reading of all saturation flows. Therefore saturation flows have been taken using the RR67 prediction of saturation flows for road junctions. The geometry of the existing junctions has been taken from ordnance survey mapping along with site observations. The signal timings, staging and phasing have been based on Signal Timing data received from TfL, which is included in Appendix A.

2.5.2 Bugsby's Way/Gallions Road is a three arm signalised junction. The major arm is Bugsby's Road which has three entry lanes from both the east and west. The left turn lane approaching from the east turns into a bus lane upon exit, this mandates that all non-bus traffic in this lane must turn left into Gallions Road.

2.5.3 Gallions Road joins the junction from the south and has two entry lanes. All movements are permitted.

2.5.4 All arms of the junction have advanced cycle stops line (ASL) and this has been taken into account when modelling the junction.

2.5.5 The Woolwich Road/Anchor and Hope Lane/Charlton Church Lane is a four arm signalised junction. The main flow is on Woolwich Road which has four entry lanes from the east and tow from the west. Anchor and Hope Lane joins the junction from the north and has three entry lanes. The two nearside lanes are for general traffic and both turn left with the offside lane for buses only. Charlton Church Lane joins from the south and has two entry lanes.

2.5.6 The latest version of LinSig (LinSig V3) has been used to assess the impact of the Charlton Riverside development and, where necessary, checks were undertaken and minor amendments made to refine the model operation.

3 ASSESSMENT SCENARIOS

3.1.1 The traffic flow scenarios which have been used to assess the impact of the development on each junction are described as follows:

- 2016 Baseline
- Baseline Plus Proposed Development
- Baseline Plus Other Cumulative Developments
- Cumulative Development Scenario

3.1.2 Details of the trip generation and distribution for the proposed site are set out in the Transport Assessment along with the traffic flow diagrams for the above scenarios.

3.1.3 It has been agreed with TfL that background traffic growth is not applied and future traffic increases once related to committed, cumulative developments.

4 EVALUATION OF MODEL RESULTS

4.1 Introduction

4.1.1 This section provides an evaluation of the results from the modelling work.

4.2 Bugsby's Way/Gallions Road

4.2.1 The LinSig results for the Bugsby's Way/Gallions Road junction are included in Appendix B.

2016 Baseline

4.2.2 In the baseline scenario, the junction operates within capacity with maximum degree of saturations of 40% and 64% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 8 PCUs. All queues are within stacking capacity and are clearing in the green period.

4.2.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that the queues are clearing within the green period.

Baseline Plus Proposed Development

4.2.4 In the baseline + development scenario, the junction continues to perform within capacity with maximum degree of saturations of 42% and 65% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 9 PCUs. All queues are within stacking capacity and are clearing in the green period.

Baseline Plus Other Cumulative Developments

4.2.5 In the baseline + other cumulative development scenario, the junction continues to perform within capacity with maximum degree of saturations of 42% and 69% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 9 PCUs. All queues are within stacking capacity and are clearing in the green period.

Cumulative Development Scenario

4.2.6 In the cumulative development scenario, the junction continues to perform within capacity with maximum degree of saturations of 45% and 70% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 9 PCUs. All queues are within stacking capacity and are clearing in the green period.

4.3 Gallions Road/Woolwich Road

4.3.1 The PICADY results for the Gallions Road/Woolwich Road junction are included in Appendix C. As mentioned in paragraph 2.3.2 this model will only test the left turning vehicles from Gallions Road as Woolwich Road has a central island prohibiting right turns.

2016 Baseline

4.3.2 In the baseline scenario, the Gallions Road arm operates within capacity with maximum RFCs of 11% and 32% in the AM and PM peak respectively. There is a minimal queue of one vehicle or less.

4.3.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that there is minimal queuing, as would be expected with a junction of this layout and flow.

Baseline Plus Proposed Development

4.3.4 In the baseline + development scenario, the Gallions Road arm operates within capacity with maximum RFCs of 11% and 32% in the AM and PM peak respectively. There is a minimal queue of one vehicle or less.

Baseline Plus Other Cumulative Developments

4.3.5 In the baseline + other cumulative development scenario, the Gallions Road arm operates within capacity with maximum RFCs of 11% and 33% in the AM and PM peak respectively. There is a minimal queue of one vehicle or less.

Cumulative Development Scenario

4.3.6 In the cumulative development scenario, the Gallions Road arm operates within capacity with maximum RFCs of 11% and 33% in the AM and PM peak respectively. There is a minimal queue of one vehicle or less.

4.4 Anchor and Hope Lane/Access Road

4.4.1 The PICADY results for the Anchor and Hope Lane/Access Road junction are included in Appendix D. This junction is where the development will take access and we would expect to see an increase to RFC on the minor arm (Access Road).

2016 Baseline

4.4.2 In the baseline scenario, the junction operates within capacity with maximum RFCs of 11% and 15% in the AM and PM peaks respectively. There are minimal queues of one vehicle or less on all arms.

4.4.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that there is minimal queuing on the minor arm (Access Road) and on right-turning vehicles into the minor arm.

Baseline Plus Proposed Development

4.4.4 In the baseline + development scenario, the junction continues to perform within capacity with maximum RFCs of 24% and 17% in the AM and PM peaks respectively. There are minimal queues of one vehicle or less on all arms.

Baseline Plus Other Cumulative Developments

4.4.5 In the baseline + other cumulative development scenario, the junction performs within capacity with maximum RFCs of 11% and 15% in the AM and PM peaks respectively. There are minimal queues of one vehicle or less on all arms.

Cumulative Development Scenario

4.4.6 In the cumulative development scenario, the junction continues to perform within capacity with maximum RFCs of 24% and 17% in the AM and PM peaks respectively. There are minimal queues of one vehicle or less on all arms.

4.5 Anchor and Hope Lane North/Bugsby's Way

4.5.1 The ARCADY results for the Anchor and Hope Lane North/Bugsby's Way roundabout are included in Appendix E.

2016 Baseline

4.5.2 In the baseline scenario, the junction operates within capacity with maximum RFCs of 51% and 54% in the AM and PM peaks respectively. There are minimal queues 1.2 vehicles or less on all arms.

4.5.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that there is minimal queuing on all arms.

Baseline Plus Proposed Development

4.5.4 In the baseline + development scenario, the junction continues to perform within capacity with maximum RFCs of 52% and 57% in the AM and PM peaks respectively. There are minimal queues 1.3 vehicles or less on all arms.

Baseline Plus Other Cumulative Developments

4.5.5 In the baseline + other cumulative development scenario, the junction performs within capacity with maximum RFCs of 53% and 58% in the AM and PM peaks respectively. There are minimal queues 1.4 vehicles or less on all arms.

Cumulative Development Scenario

4.5.6 In the cumulative development scenario, the junction continues to perform within capacity with maximum RFCs of 54% and 61% in the AM and PM peaks respectively. There are minimal queues 1.5 vehicles or less on all arms.

4.6 Woolwich Road/Anchor and Hope Lane/Charlton Church Lane

4.6.1 The LinSig results for the Woolwich Road/Anchor and Hope Lane/Charlton Church Lane junction are included in Appendix F.

2016 Baseline

4.6.2 In the baseline scenario, the junction operates within capacity with maximum degree of saturations of 73% and 68% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 12 PCUs. All queues are within stacking capacity and are clearing in the green period.

4.6.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that the queues are clearing within the green period.

Baseline Plus Proposed Development

4.6.4 In the baseline + development scenario, the junction continues to perform within capacity with maximum degree of saturations of 73% and 70% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 12 PCUs. All queues are within stacking capacity and are clearing in the green period.

Baseline Plus Other Cumulative Developments

4.6.5 In the baseline + other cumulative development scenario, the junction continues to perform within capacity with maximum degree of saturations of 78% and 74% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 15 PCUs. All queues are within stacking capacity and are clearing in the green period.

Cumulative Development Scenario

4.6.6 In the cumulative development scenario, the junction continues to perform within capacity with maximum degree of saturations of 78% and 74% in the AM and PM peaks respectively. There are minimal queues across most of the arms with the longest queue being of around 15 PCUs. All queues are within stacking capacity and are clearing in the green period.

4.7 Woolwich Road/Retail Park Access Road/Gallon Close

4.7.1 The ARCADY results for the Woolwich Road/Retail Park Access Road/Gallon Close roundabout are included in Appendix G.

2016 Baseline

4.7.2 In the baseline scenario, the junction operates within capacity with maximum RFCs of 59% and 64% in the AM and PM peaks respectively. There are minimal queues 2.3 vehicles or less on all arms.

4.7.3 Comparisons have been made with the existing observed queues on-site and the queues within the model. Video surveys confirm that there is minimal queuing on all arms.

Baseline Plus Proposed Development

4.7.4 In the baseline + development scenario, the junction continues to perform within capacity with maximum RFCs of 59% and 70% in the AM and PM peaks respectively. There are minimal queues 2.3 vehicles or less on all arms.

Baseline Plus Other Cumulative Developments

4.7.5 In the baseline + other cumulative development scenario, the junction performs within capacity with maximum RFCs of 63% and 75% in the AM and PM peaks respectively. There are minimal queues 3 vehicles or less on all arms.

Cumulative Development Scenario

4.7.6 In the cumulative development scenario, the junction continues to perform within capacity with maximum RFCs of 63% and 75% in the AM and PM peaks respectively. There are minimal queues 3 vehicles or less on all arms.

5 SUMMARY AND CONCLUSION

Summary

5.1.1 TPP has been appointed by Leopard Guernsey Anchor Propco Ltd to provide transport advice in relation to the proposed redevelopment of the VIP Trading Estate site located within the Charlton Riverside area of the RBG.

5.1.2 The purpose of this report is to assess the impact of the proposed development on the capacity of six existing junctions in the vicinity of the site. These junctions are listed below:

1. Bugsby's Way/Gallions Road signalised junction
2. Gallions Road/Woolwich Road priority junction
3. Anchor and Hope Lane/Access Road priority junction
4. Anchor and Hope Lane North/Bugsby's Way roundabout
5. Woolwich Road/Anchor and Hope Lane/Charlton Church Lane signalised junction
6. Woolwich Road/Retail Park Access Road/Gallon Close roundabout

5.1.3 The traffic flow scenarios which have been used to assess the impact of the development on each junction are described as follows:

- 2016 Baseline
- Baseline Plus Proposed Development
- Baseline Plus Other Cumulative Developments
- Cumulative Development Scenario

5.1.4 The baseline situation models have been compared with the observed queues. Video surveys confirm that the models are in-line with what has been observed on-site.

5.1.5 Saturation flows for the signalised junctions have been taken using the RR67 prediction of saturation flows for road junctions.

Conclusion

5.1.6 The above assessment confirms that the proposed development can be accommodated within the highway network and would not have a significant adverse impact on the capacity of critical links. Therefore no mitigation will be required to improve junction capacity to accommodate the proposed development.

Appendix A
TfL Signal Timing Data

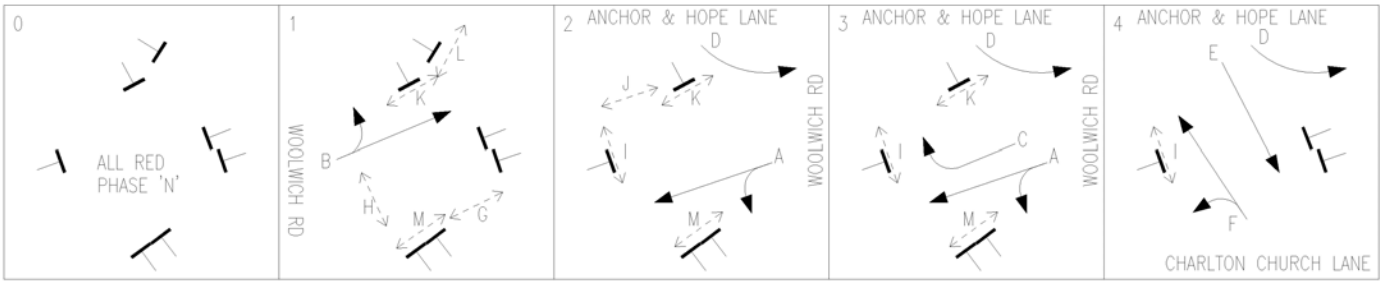
London Borough Of	Grid Reference	UTC Cell	Bt Line No	Issue	Date Implemented	Initials	Site Number
GREENWICH	541120/178502	SOUT	LLLS1304053	41	19-APR-2016	ALDRIDGED	06/000031/U

Address

A206 WOOLWICH ROAD - CHARLTON CHURCH LANE - ANCHOR AND HOPE LANE

PDU Rate	Controller Installed Date	Engineer Responsible	Linking
68	22-MAR-2006	FC_PC	

Computer Takeover Date	Grp/Reg	Control Grp	Control Subgrp	Concentr Subgrp	Prom Number	Firmware	Controller Type
30-JUL-2009		432	06/000031/U		EM67690V6	PB800-24	STCL T800 MK 1 UTC Cntr, Integral Facilities



Stage Diagram for Issue No 38

TFL Drg No PRO/06/031/07 HI Signal YES

Sig Drg No PRO/06/031/02A Dimming 160 Volts

UTC - Control and Reply bits

CONTROL

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1F1	#1F2	1F3	#1F4	1DX				1TS	1EP																						

REPLY

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1G1	1G2	1G3	1G4	1JD	1JL	1RF1	1RF2	1RT	1EC	1SB01	SB11	SB21	SB31	SB41	PR01	PR1															

Please refer to Spec for the following :-

*** Total no of Detectors - 41 (limited to 36)**

Issue	Site Number
41	06/000031/U

Phase Timings

Phase	Min	Ext	Max	Ped Black	Phase Type	Alternative Maximums
A	7	.4	30		T	
B	7	.4	30		T	
C	7	.4	20		T	
D	7	.4	10		T	
E	7	.4	7		T	
F	7	.4	20		T	
G	6			4	P	
H	6			4	P	
I	6			4	P	
J	6			4	P	
K	6			3	P	
L	6			5	P	
M	6			4	P	
N	3				D	

Phase Intergreens

To Phase

From Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N
A					5	7	7	9						3
B			5	9	8	5			6	10				3
C		7			5	5				11				3
D		5										5		3
E	7	5	6				9				5			3
F	5	7	5					8		10			5	3
G	10				10									4
H	9					9								4
I		10												4
J		9	9			9								4
K					8									3
L				11										5
M						10								4
N	2	2	2	2	2	2	2	2	2	2	2	2	2	

Mode Proirity	
UTC	
Hand Control	
Manual Select	
Hurry (1)	
Hurry (2)	
VA	
CLF	
Fix Time	
Bus Priority	

CLF PLAN1		CLF PLAN2		CLF PLAN3		CLF PLAN8	
Time Of Operation	Day Type	Time Of Operation	Day Type	Time Of Operation	Day Type	Time Of Operation	Day Type
05:30	9	10:00	9	15:30	9	19:00	9
		07:00	0				
		07:00	1				
Cycle Time		Cycle Time		Cycle Time		Cycle Time	
120		112		120		88	

Issue	Site Number
41	06/000031/U

Phase Delays

Stage From	Stage To	Phase Associated	Delay Period
1	2	B	1
1	3	B	2
1	4	B	2
2	1	A	1
2	1	D	5
2	4	A	3
3	1	A	1
3	1	C	3
3	1	D	5
3	4	A	3
4	1	D	5
4	1	E	1
4	1	F	1
4	3	F	2

DET	Function	Phase
ASMVD2	CEX	A
BSMVD15	CEX	B
CSMVD3	CEX	C
DSMVD21	CEX	D
ESMVD20	CEX	E
FSMVD10	CEX	F
PB P6	CAL	G
PB P7	CAL	G
PB P8	CAL	M
PB P10	CAL	M
PB P11	CAL	H
PB P12	CAL	H
PB P14	CAL	I
PB P15	CAL	I
PB P16	CAL	J
PB P17	CAL	J
PB P19	CAL	K
PB P20	CAL	K
PB P21	CAL	L
PB P23	CAL	L
iSB0	BUS	A
iSB1	BUS	B
iSB2	BUS	D
iSB3	BUS	E
iSB4	BUS	N
AIRD P3	CAL	A
PB P24	CAL	G
PB P9	CAL	M
PB P18	CAL	K
PB P22	CAL	L
PB P25	CAL	H
PB P26	CAL	I
PB P27	CAL	J
iSB5		
SD0	SCT	A
SD1	SCT	A

Issue	Historical Amendments
41	TIMING CHANGE - PUSH BUTTON ON POLE 18 MOVED TO NEW DFM GROUP WITH ACTIVE TIME = 30 MINS & INACTIVE TIME = 254 HOURS. 19-APR-2016 ALDRIDGED
40	NEW PROM (TFL SPEC ISSUE 14) INSTALLED & UTC COMMISSIONED FOR ADDITIONAL SHORT POLE & PBU 10-MAR-2016 WEBSTERG
39.2	SNAGGING COMPLETED. TACTILES INSTALLED. 08-JAN-2016. WEBSTERG
39.1	MVD & IRD REPLACED AFTER FAULT - EQUIPMENT VERSION UPLOADED 12-OCT-2015 WORBEYD
39	NEW PROM (TFL SPEC ISSUE 13) INSTALLED & UTC COMMISSIONED. ADDITIONAL SHORT POLES WITH PUSH BUTTONS & TACTILES INSTALLED. 05-OCT-2015 WEBSTERG
38.2	iSB5 ADDED P CALLAWAY 25-DEC-2014
38.1	UTC LINE NO. DETAILS UPDATED. 24-DEC-2014 DTA_BM
38	NEW PROM (TFL SPEC ISSUE 11) INSTALLED & UTC COMMISSIONED FOR REVISED SIGNAL LAYOUT ACROSS CHARLTON CHURCH LANE.

Remarks

Version No	14
Linking	C.L.F.
Comments	TFL SPEC ISSUE 14. iBUS LINE NO. 020 8269 2840. UTC REPLY BITS: 17-1PR1.
Det Strategy	SMVDs - IRD - PUSHBUTTONS / TACTILES - SCOOT LOOPS - iBUS (TSN 1571)
Amendment	TIMING CHANGE - PUSH BUTTON ON POLE 18 MOVED TO NEW DFM GROUP WITH ACTIVE TIME = 30 MINS & INACTIVE TIME = 254 HOURS. 19-APR-2016 ALDRIDGED

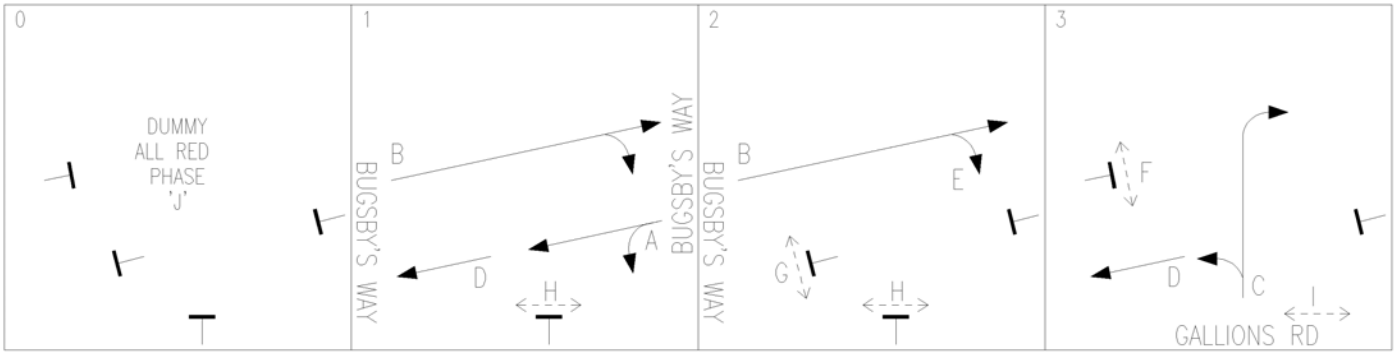
London Borough Of	Grid Reference	UTC Cell	Bt Line No	Issue	Date Implemented	Initials	Site Number
GREENWICH	540898/178732	SOUT	IPOTU	2	10-NOV-2015	DAHERH	06/000328/U

Address

BUGSBY'S WAY - GALLIONS ROAD

PDU Rate	Controller Installed Date	Engineer Responsible	Linking
67	06-JAN-2015	DAHERH	06/000828/

Computer Takeover Date	Grp/Reg	Control Grp	Control Subgrp	Concentr Subgrp	Prom Number	Firmware	Controller Type
26-AUG-2015					EM31387 V3	PB801-13	STCL ELV T900 MK 1 UTC Semi VA Controller



Stage Diagram for Issue No 1

TFL Drg No

Sig Drg No PRO/06/000328/01

HI Signal NO

Dimming 28 Volts

UTC - Control and Reply bits

CONTROL

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
IF1	#1F2	#1F3	1DX				1TS	1EP																							

REPLY

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1G1	1G2	1G3	1JD	1JL	1RF1	1RF2	1RT	1EC	1SB01	SB11	PR01	PR1																			

Issue	Site Number
2	06/000328/U

Phase Timings

Phase	Min	Ext	Max	Ped Black	Phase Type	Alternative Maximums
A	7				T	
B	7				T	
C	7				T	
D	7				T	
E	4				F	
F	6			5	P	
G	6			5	P	
H	6			3	P	
I	6			3	P	
J	3				D	

Phase Intergreens

From Phase \ To Phase	A	B	C	D	E	F	G	H	I	J
A			6		5				9	3
B			6			6			15	3
C	6	6			5			6		3
D							5			3
E	10		6			6			15	3
F		11			11					5
G				11						5
H			8							3
I	8	8			8					3
J	2	2	2	2	2	2	2	2	2	

Mode Proirity	
UTC	
Hand Control	
Manual Select	
Hurry (1)	
Hurry (2)	
VA	
CLF	
Fix Time	
Bus Priority	

CLF PLAN1		CLF PLAN2		CLF PLAN3		CLF PLAN5		CLF PLAN8	
Time Of Operation	Day Type	Time Of Operation	Day Type	Time Of Operation	Day Type	Time Of Operation	Day Type	Time Of Operation	Day Type
05:30	9	10:30	9	15:00	9	01:00	7	22:00	7
				09:30	0				
				09:30	1				
Cycle Time		Cycle Time		Cycle Time		Cycle Time		Cycle Time	
96		88		96		64		72	

Issue	Site Number
2	06/000328/U

Phase Delays

Stage From	Stage To	Phase Associated	Delay Period
1	2	D	5
3	1	C	5

DET	Function	Phase	DET	Function	Phase	DET	Function	Phase	DET	Function	Phase
CIRD14	CAL	C	PB P11	CAL	I	SD1	SCM	A			
CSMVD16	CAL	C	PB P12	CAL	I	SD2	SCM	A			
EIRD6	CAN	E	PB P13	CAL	I	SD3	SCM	A			
PB P1	CAL	G	PB P14	CAL	H	SD4	SCM	A			
PB P3	CAL	G	PB P15	CAL	H	SD5	SCM	A			
PB P4	CAL	G	PB P16	CAL	H	SD6	SCM	A			
PB P5	CAL	F	iSB0	BUS		SD7	SCM	A			
PB P6	CAL	F	iSB1	BUS		SD0 (828	SCM	A			
PB P7	CAL	F	SD0	SCM	A	SD1 (828	SCM	A			

Issue	Historical Amendments
2	NEW PROM (TFL SPEC ISSUE 4) INSTALLED & UTC COMMISSIONED. SCOOT (MAGNETOMETERS) COMMISSIONED. 26-AUG-2015 CUBIC
1.1	CONTROLLER BASE REINSTATED - SNAGGING UPDATED. 09-NOV-2015 RICHESK
1	NEW JUNCTION INSTALLED & COMMISSIONED TO TFL SPEC ISSUE 3. 06-JAN-2015 DAHERH

Remarks

Version No	4
Linking	NONE
Comments	TFL SPEC ISSUE 4. **2ND OTU AT 06/828.**
Det Strategy	SMVD - IRDs - PUSH BUTTONS / TACTILES - SCOOT (MAGNETOMETERS)
Amendment	NEW PROM (TFL SPEC ISSUE 4) INSTALLED & UTC COMMISSIONED. SCOOT (MAGNETOMETERS) COMMISSIONED. 26-AUG-2015 CUBIC

Appendix B
Bugsby's Way/Gallions Road
LinSig Results

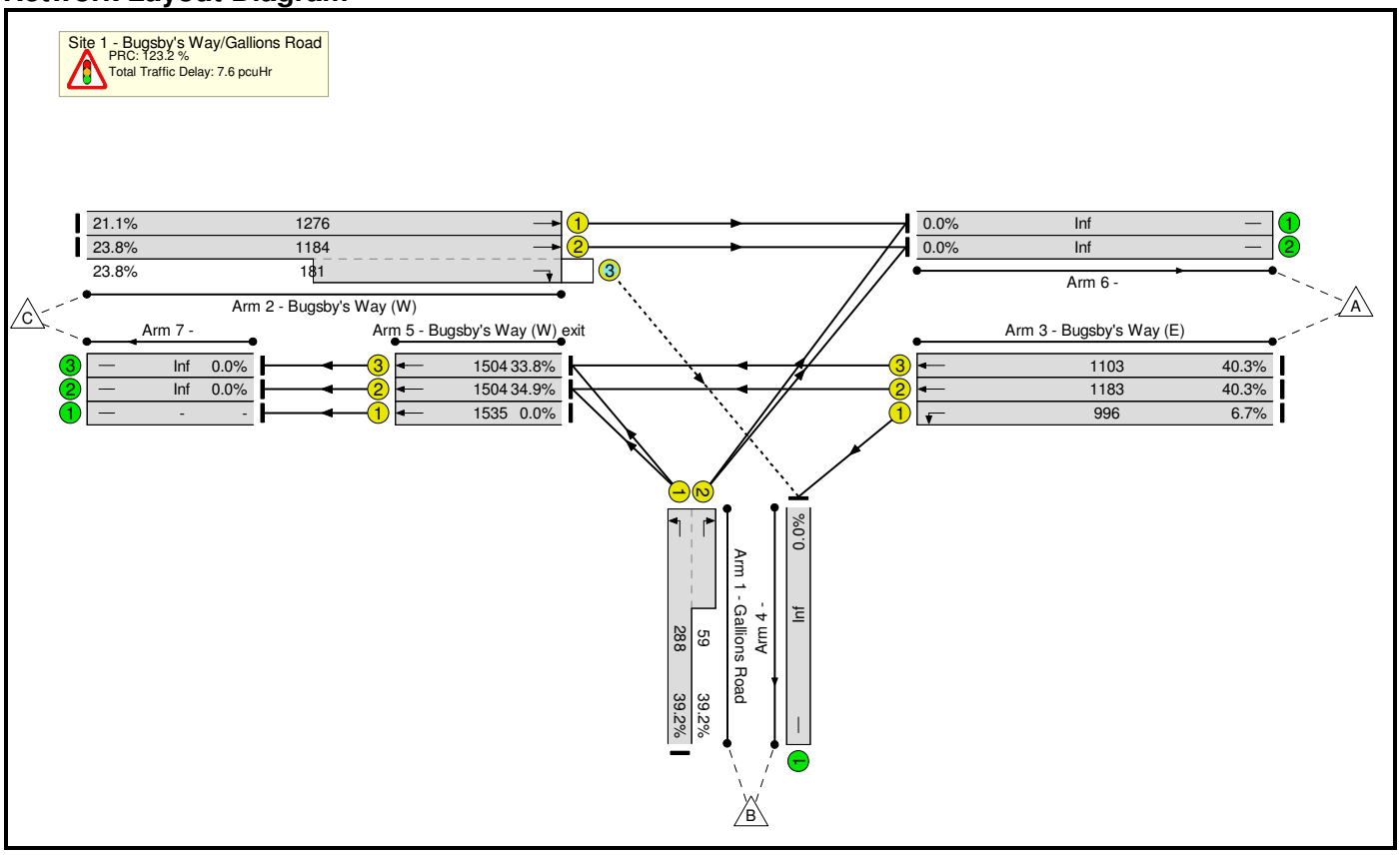
Basic Results Summary

Project and User Details

Project:	**Charlton Riverside**
Title:	
Location:	
File name:	Site 1 - Bugsby's Way - Gallions Road.lsg3x
Author:	
Company:	
Address:	
Notes:	
Linsig Version:	3, 2, 28, 0

Scenario 1: 'Baseline AM Peak' (FG1: 'Baseline AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**40.3%**	**38**	**4**	**1**	**7.6**	-	-
Site 1 - Bugsby's Way/Gallions Road	-	-	-		-	-	-	-	-	-	**40.3%**	**38**	**4**	**1**	**7.6**	-	-
1/1+1/2	Gallions Road Left Right	U	C		1	15	-	136	1729:1691	288+59	39.2 : 39.2%	-	-	-	1.7	43.9	3.0
2/1	Bugsby's Way (W) Ahead	U	B		1	62	-	269	1945	1276	21.1%	-	-	-	0.6	8.4	3.0
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	62	0	325	1945:1757	1184+181	23.8 : 23.8%	38	4	1	0.8	8.9	3.1
3/1	Bugsby's Way (E) Left	U	A		1	54	-	67	1739	996	6.7%	-	-	-	0.2	11.1	0.8
3/2	Bugsby's Way (E) Ahead	U	A		1	54	-	477	2065	1183	40.3%	-	-	-	1.8	13.9	7.4
3/3	Bugsby's Way (E) Ahead	U	A		1	54	-	444	1925	1103	40.3%	-	-	-	1.7	14.1	6.9
5/1	Bugsby's Way (W) exit Ahead	U	D		1	74	-	0	1965	1535	0.0%	-	-	-	0.0	0.0	0.0
5/2	Bugsby's Way (W) exit Ahead	U	D		1	74	-	525	1925	1504	34.9%	-	-	-	0.4	2.5	5.8
5/3	Bugsby's Way (W) exit Ahead	U	D		1	74	-	509	1925	1504	33.8%	-	-	-	0.3	2.3	1.0

C1

PRC for Signalled Lanes (%): 123.2
PRC Over All Lanes (%): 123.2

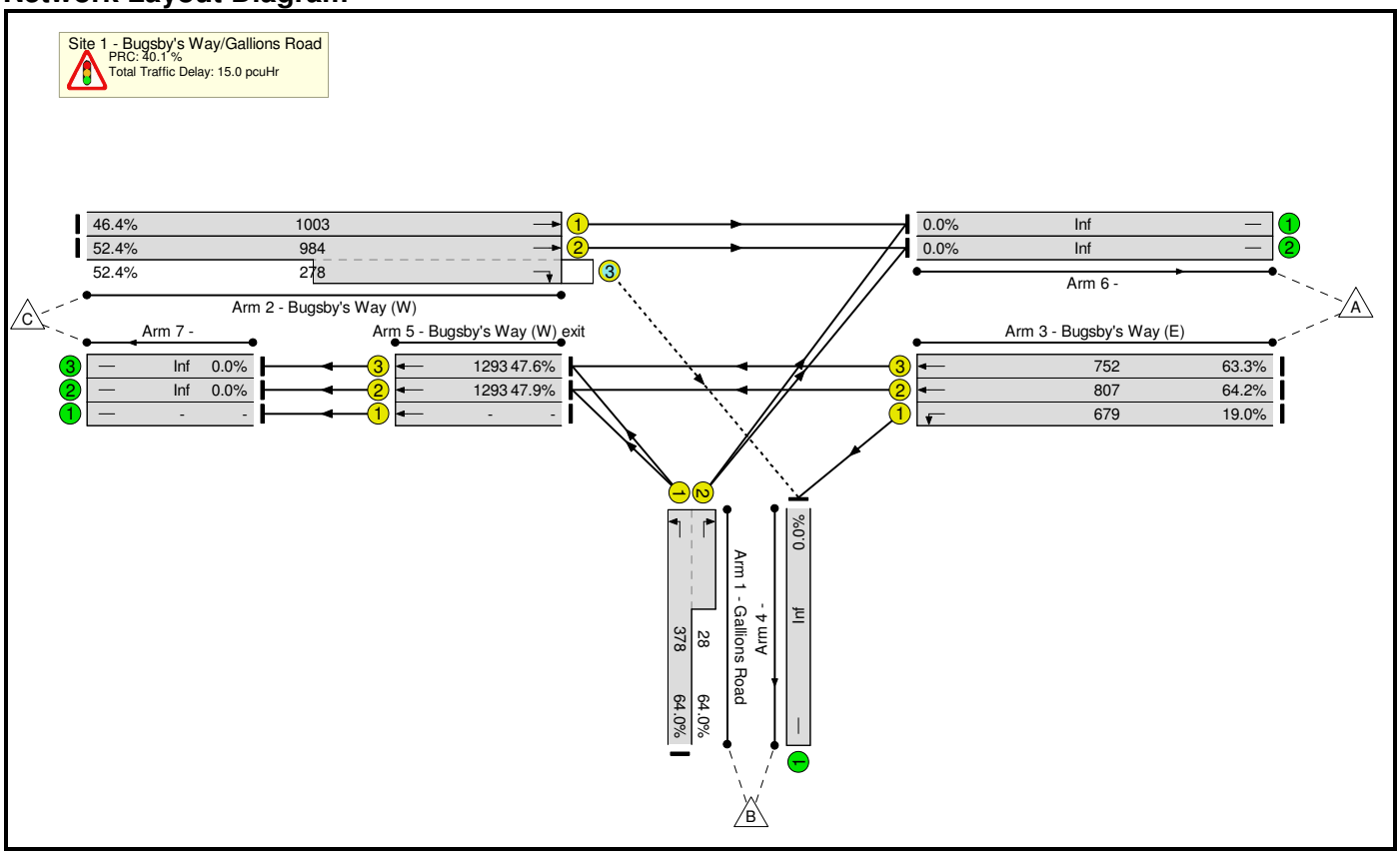
Total Delay for Signalled Lanes (pcuHr): 7.57
Total Delay Over All Lanes(pcuHr): 7.57

Cycle Time (s): 96

Basic Results Summary

Scenario 2: 'Baseline PM Peak' (FG2: 'Baseline PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

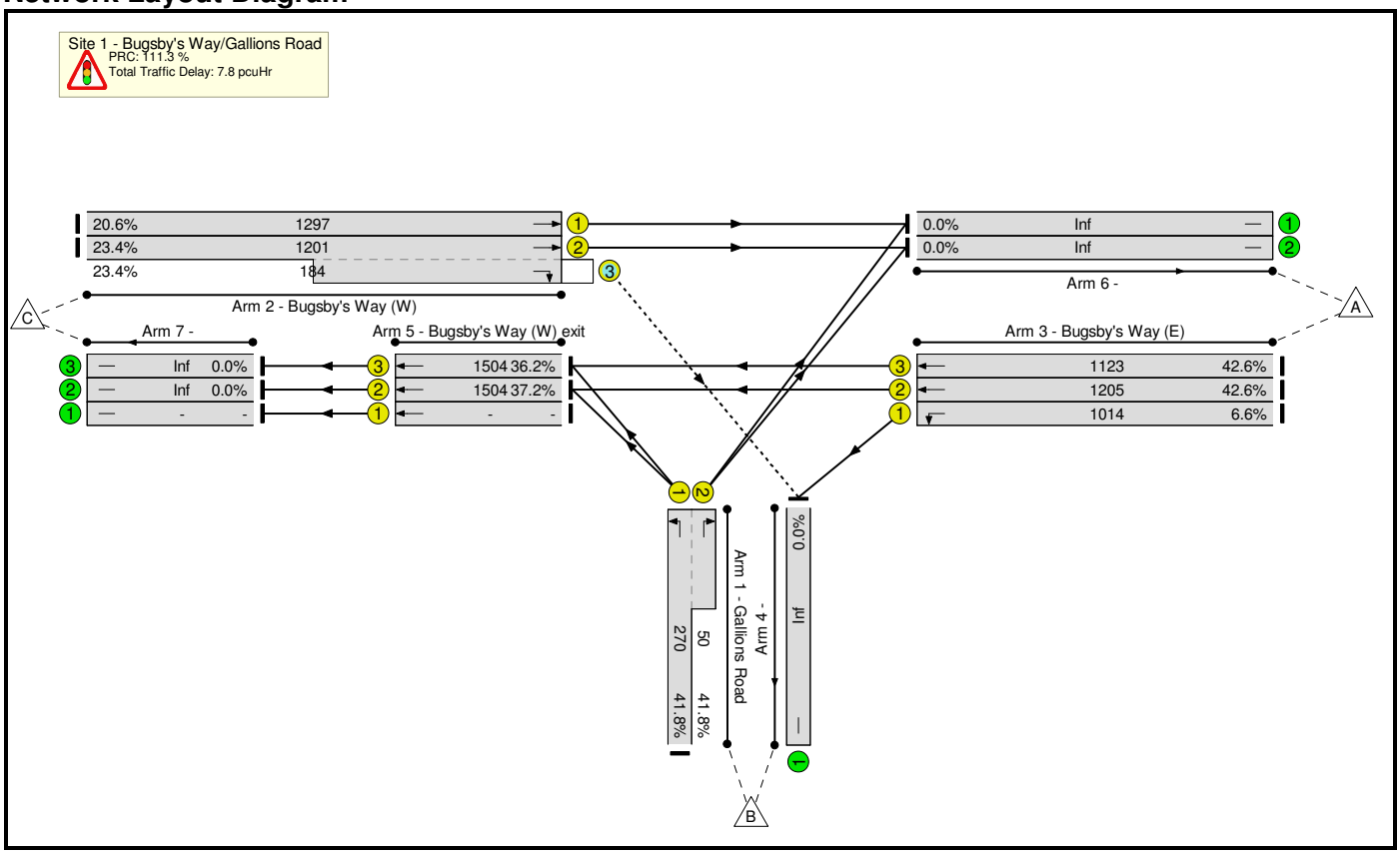
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.2%**	**39**	**103**	**5**	**15.0**	**-**	**-**
Site 1 - Bugsby's Way/Gallions Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.2%**	**39**	**103**	**5**	**15.0**	**-**	**-**
1/1+1/2	Gallions Road Left Right	U	C		1	13	-	260	1729:1691	378+28	64.0 : 64.0%	-	-	-	2.5	34.7	4.8
2/1	Bugsby's Way (W) Ahead	U	B		1	32	-	465	1945	1003	46.4%	-	-	-	1.7	13.2	5.6
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	32	0	662	1945:1757	984+278	52.4 : 52.4%	39	103	5	2.9	15.7	6.6
3/1	Bugsby's Way (E) Left	U	A		1	24	-	129	1739	679	19.0%	-	-	-	0.6	16.1	1.6
3/2	Bugsby's Way (E) Ahead	U	A		1	24	-	518	2065	807	64.2%	-	-	-	3.2	22.1	8.4
3/3	Bugsby's Way (E) Ahead	U	A		1	24	-	476	1925	752	63.3%	-	-	-	2.9	22.3	7.6
5/1	Bugsby's Way (W) exit Ahead	U	D		1	42	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	42	-	620	1925	1293	47.9%	-	-	-	0.6	3.6	6.5
5/3	Bugsby's Way (W) exit Ahead	U	D		1	42	-	616	1925	1293	47.6%	-	-	-	0.6	3.3	1.2

C1 PRC for Signalled Lanes (%): 40.1 Total Delay for Signalled Lanes (pcuHr): 14.98 Cycle Time (s): 64
PRC Over All Lanes (%): 40.1 Total Delay Over All Lanes(pcuHr): 14.98

Basic Results Summary

Scenario 3: 'Baseline Plus Proposed Development AM Peak' (FG3: 'Baseline Plus Proposed Development AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**42.6%**	**38**	**4**	**1**	**7.8**	-	-
Site 1 - Bugsby's Way/Gallions Road	-	-	-		-	-	-	-	-	-	**42.6%**	**38**	**4**	**1**	**7.8**	-	-
1/1+1/2	Gallions Road Left Right	U	C		1	14	-	134	1729:1691	270+50	41.8 : 41.8%	-	-	-	1.7	45.9	3.1
2/1	Bugsby's Way (W) Ahead	U	B		1	63	-	267	1945	1297	20.6%	-	-	-	0.6	7.9	2.9
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	63	0	324	1945:1757	1201+184	23.4 : 23.4%	38	4	1	0.8	8.6	3.0
3/1	Bugsby's Way (E) Left	U	A		1	55	-	67	1739	1014	6.6%	-	-	-	0.2	10.6	0.8
3/2	Bugsby's Way (E) Ahead	U	A		1	55	-	513	2065	1205	42.6%	-	-	-	2.0	13.7	7.9
3/3	Bugsby's Way (E) Ahead	U	A		1	55	-	478	1925	1123	42.6%	-	-	-	1.8	13.9	7.4
5/1	Bugsby's Way (W) exit Ahead	U	D		1	74	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	74	-	560	1925	1504	37.2%	-	-	-	0.4	2.6	6.4
5/3	Bugsby's Way (W) exit Ahead	U	D		1	74	-	544	1925	1504	36.2%	-	-	-	0.4	2.4	1.0

C1

PRC for Signalled Lanes (%): 111.3
PRC Over All Lanes (%): 111.3

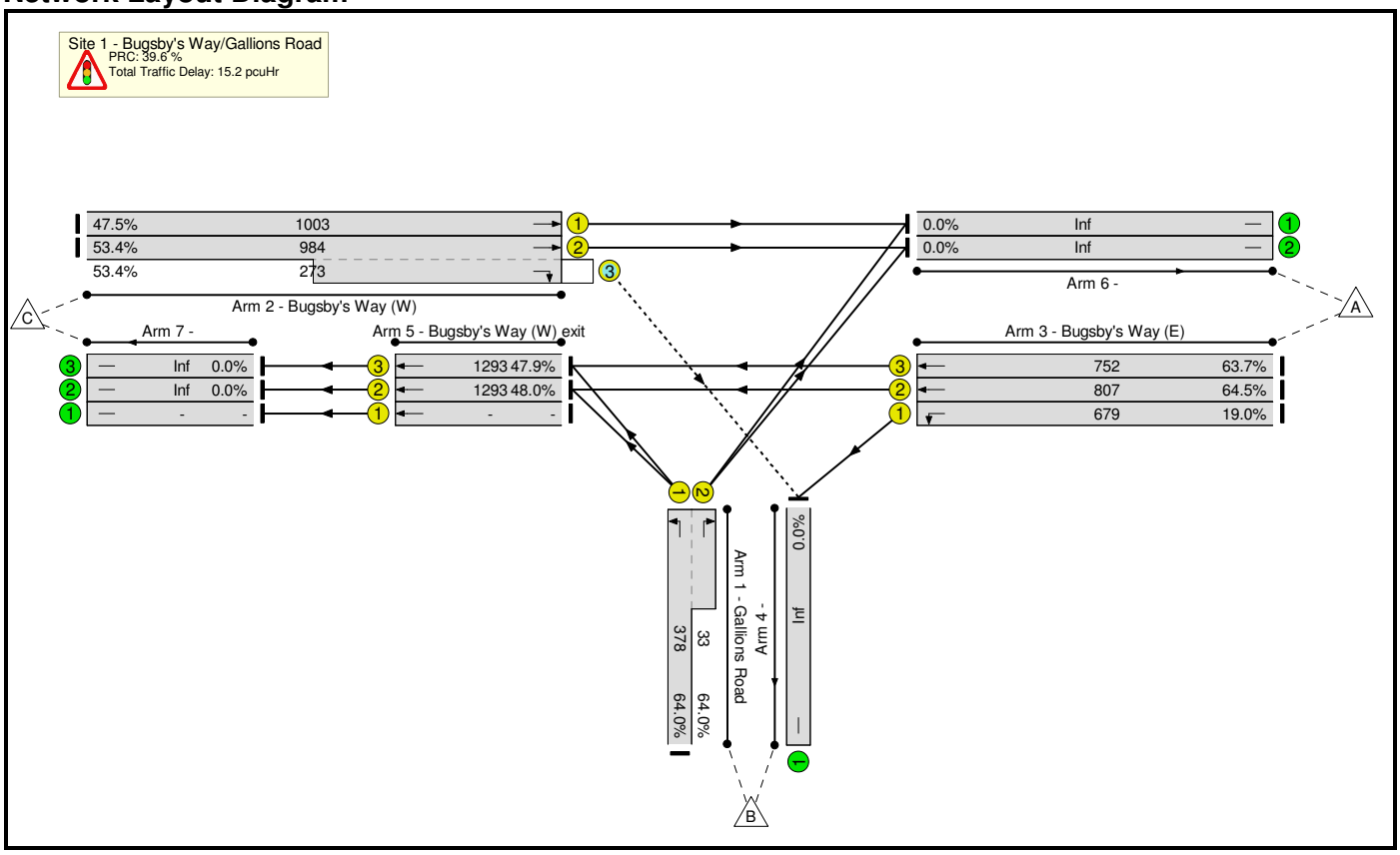
Total Delay for Signalled Lanes (pcuHr): 7.82
Total Delay Over All Lanes(pcuHr): 7.82

Cycle Time (s): 96

Basic Results Summary

Scenario 4: 'Baseline Plus Proposed Development PM Peak' (FG4: 'Baseline Plus Proposed Development PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

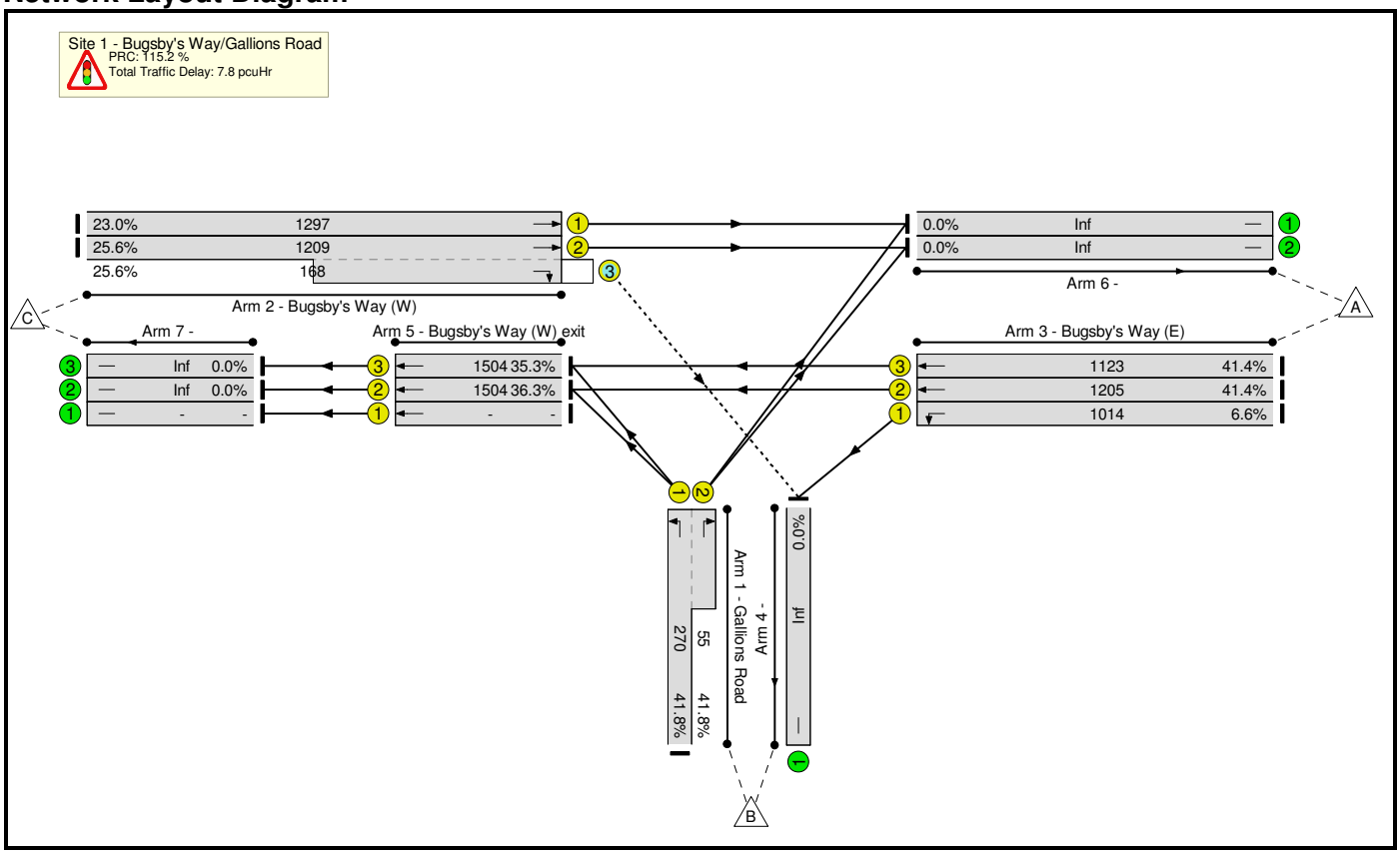
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.5%**	**36**	**105**	**5**	**15.2**	**-**	**-**
Site 1 - Bugsby's Way/Gallions Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.5%**	**36**	**105**	**5**	**15.2**	**-**	**-**
1/1+1/2	Gallions Road Left Right	U	C		1	13	-	263	1729:1691	378+33	64.0 : 64.0%	-	-	-	2.5	34.5	4.8
2/1	Bugsby's Way (W) Ahead	U	B		1	32	-	476	1945	1003	47.5%	-	-	-	1.8	13.4	5.9
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	32	0	672	1945:1757	984+273	53.4 : 53.4%	36	105	5	3.0	15.8	6.7
3/1	Bugsby's Way (E) Left	U	A		1	24	-	129	1739	679	19.0%	-	-	-	0.6	16.1	1.6
3/2	Bugsby's Way (E) Ahead	U	A		1	24	-	520	2065	807	64.5%	-	-	-	3.2	22.1	8.4
3/3	Bugsby's Way (E) Ahead	U	A		1	24	-	479	1925	752	63.7%	-	-	-	3.0	22.4	7.7
5/1	Bugsby's Way (W) exit Ahead	U	D		1	42	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	42	-	621	1925	1293	48.0%	-	-	-	0.6	3.6	6.5
5/3	Bugsby's Way (W) exit Ahead	U	D		1	42	-	620	1925	1293	47.9%	-	-	-	0.6	3.4	1.2

C1 PRC for Signalled Lanes (%): 39.6 Total Delay for Signalled Lanes (pcuHr): 15.19 Cycle Time (s): 64
PRC Over All Lanes (%): 39.6 Total Delay Over All Lanes(pcuHr): 15.19

Basic Results Summary

Scenario 5: 'Baseline Plus Other Cumulative Developments AM Peak' (FG5: 'Baseline Plus Other Cumulative Developments AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**41.8%**	**38**	**4**	**1**	**7.8**	-	-
Site 1 - Bugsby's Way/Gallions Road	-	-	-		-	-	-	-	-	-	**41.8%**	**38**	**4**	**1**	**7.8**	-	-
1/1+1/2	Gallions Road Left Right	U	C		1	14	-	136	1729:1691	270+55	41.8 : 41.8%	-	-	-	1.7	45.7	3.1
2/1	Bugsby's Way (W) Ahead	U	B		1	63	-	298	1945	1297	23.0%	-	-	-	0.7	8.1	3.2
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	63	0	353	1945:1757	1209+168	25.6 : 25.6%	38	4	1	0.8	8.6	3.4
3/1	Bugsby's Way (E) Left	U	A		1	55	-	67	1739	1014	6.6%	-	-	-	0.2	10.6	0.8
3/2	Bugsby's Way (E) Ahead	U	A		1	55	-	499	2065	1205	41.4%	-	-	-	1.9	13.5	7.6
3/3	Bugsby's Way (E) Ahead	U	A		1	55	-	465	1925	1123	41.4%	-	-	-	1.8	13.7	7.1
5/1	Bugsby's Way (W) exit Ahead	U	D		1	74	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	74	-	546	1925	1504	36.3%	-	-	-	0.4	2.5	6.2
5/3	Bugsby's Way (W) exit Ahead	U	D		1	74	-	531	1925	1504	35.3%	-	-	-	0.3	2.4	1.0

C1

PRC for Signalled Lanes (%): 115.2
PRC Over All Lanes (%): 115.2

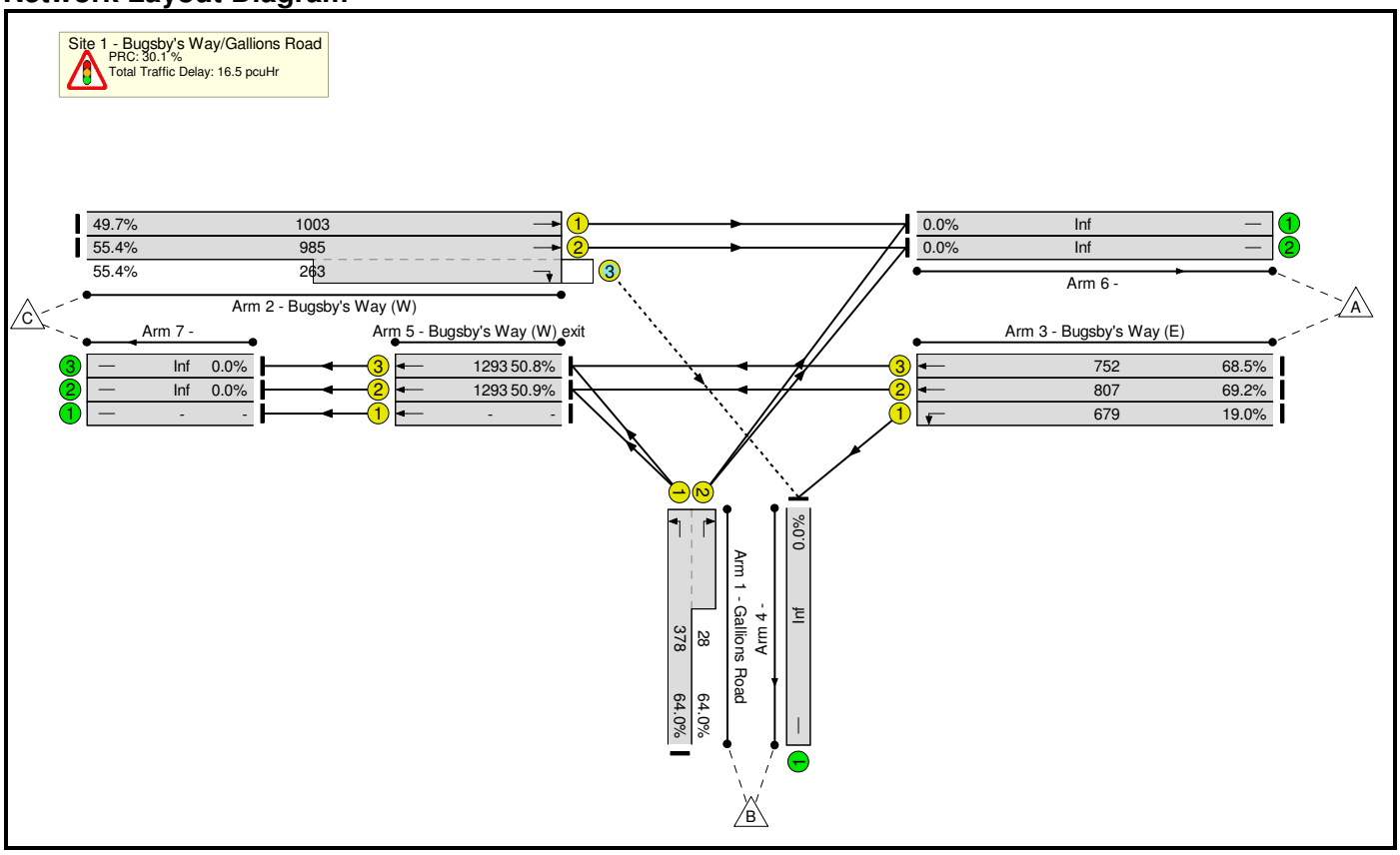
Total Delay for Signalled Lanes (pcuHr): 7.82
Total Delay Over All Lanes(pcuHr): 7.82

Cycle Time (s): 96

Basic Results Summary

Scenario 6: 'Baseline Plus Other Cumulative Developments PM Peak' (FG6: 'Baseline Plus Other Cumulative Developments PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

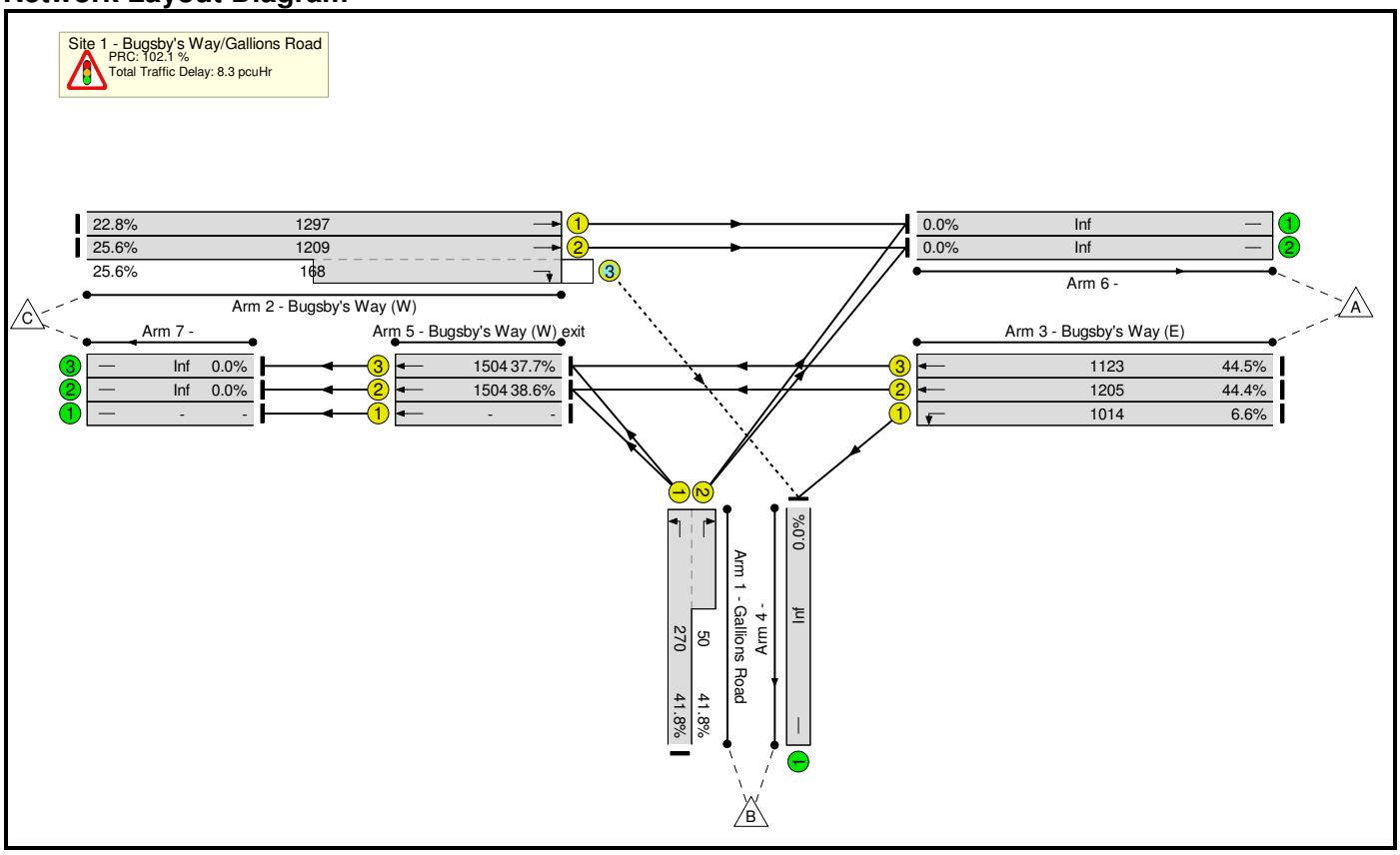
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.2%**	**20**	**121**	**5**	**16.5**	**-**	**-**
Site 1 - Bugsby's Way/Gallions Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.2%**	**20**	**121**	**5**	**16.5**	**-**	**-**
1/1+1/2	Gallions Road Left Right	U	C		1	13	-	260	1729:1691	378+28	64.0 : 64.0%	-	-	-	2.5	34.7	4.8
2/1	Bugsby's Way (W) Ahead	U	B		1	32	-	498	1945	1003	49.7%	-	-	-	1.9	13.7	6.2
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	32	0	692	1945:1757	985+263	55.4 : 55.4%	20	121	5	3.1	16.2	7.1
3/1	Bugsby's Way (E) Left	U	A		1	24	-	129	1739	679	19.0%	-	-	-	0.6	16.1	1.6
3/2	Bugsby's Way (E) Ahead	U	A		1	24	-	558	2065	807	69.2%	-	-	-	3.6	23.5	9.3
3/3	Bugsby's Way (E) Ahead	U	A		1	24	-	515	1925	752	68.5%	-	-	-	3.4	23.8	8.7
5/1	Bugsby's Way (W) exit Ahead	U	D		1	42	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	42	-	658	1925	1293	50.9%	-	-	-	0.7	3.8	7.5
5/3	Bugsby's Way (W) exit Ahead	U	D		1	42	-	657	1925	1293	50.8%	-	-	-	0.6	3.5	1.3

C1 PRC for Signalled Lanes (%): 30.1 Total Delay for Signalled Lanes (pcuHr): 16.46 Cycle Time (s): 64
PRC Over All Lanes (%): 30.1 Total Delay Over All Lanes(pcuHr): 16.46

Basic Results Summary

Scenario 7: 'Cumulative Development Scenario AM Peak' (FG7: 'Cumulative Development Scenario AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

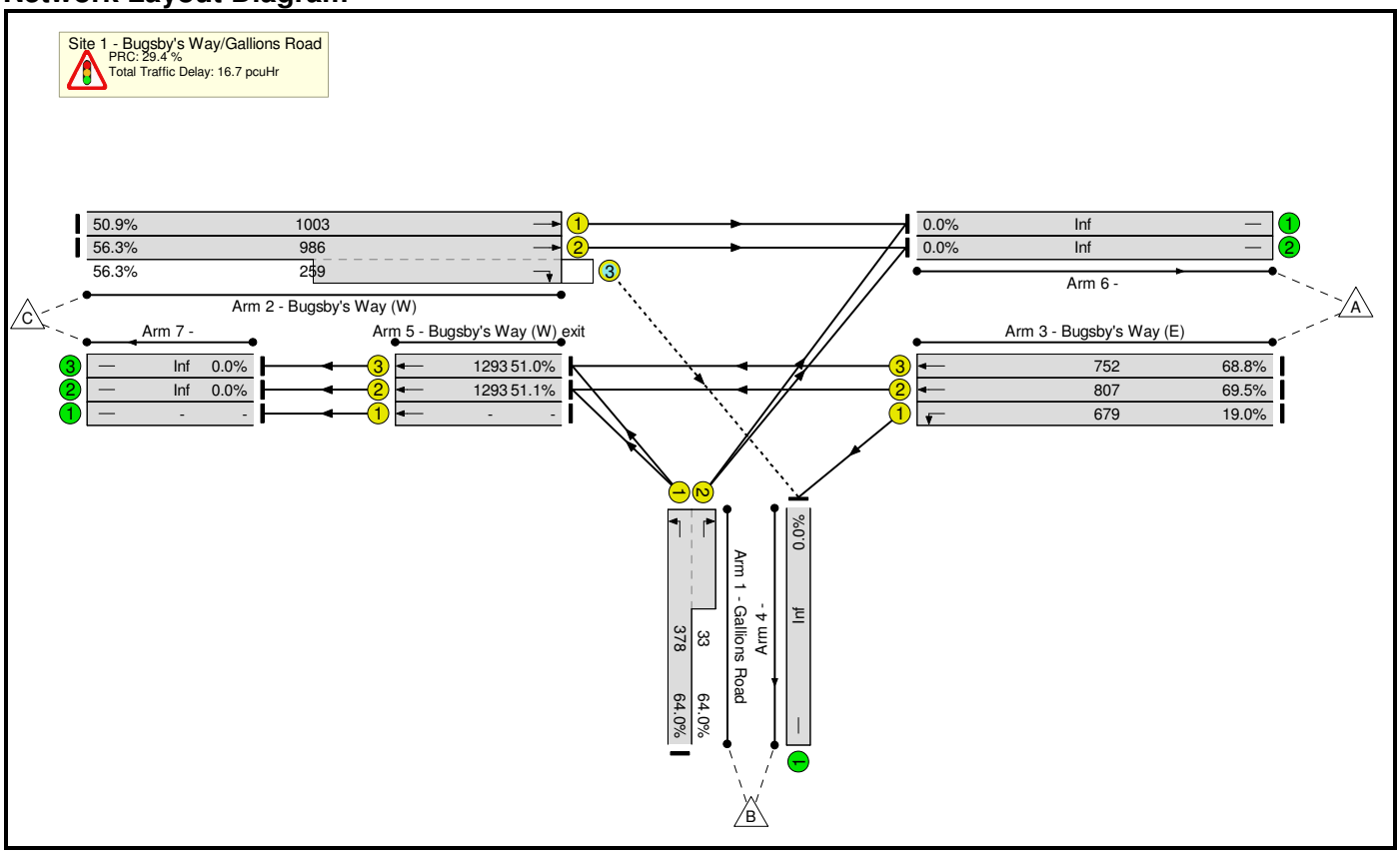
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**44.5%**	**38**	**4**	**1**	**8.3**	-	-
Site 1 - Bugsby's Way/Gallions Road	-	-	-		-	-	-	-	-	-	**44.5%**	**38**	**4**	**1**	**8.3**	-	-
1/1+1/2	Gallions Road Left Right	U	C		1	14	-	134	1729:1691	270+50	41.8 : 41.8%	-	-	-	1.7	45.9	3.1
2/1	Bugsby's Way (W) Ahead	U	B		1	63	-	296	1945	1297	22.8%	-	-	-	0.7	8.1	3.2
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	63	0	352	1945:1757	1209+168	25.6 : 25.6%	38	4	1	0.9	8.8	3.4
3/1	Bugsby's Way (E) Left	U	A		1	55	-	67	1739	1014	6.6%	-	-	-	0.2	10.6	0.8
3/2	Bugsby's Way (E) Ahead	U	A		1	55	-	535	2065	1205	44.4%	-	-	-	2.1	13.9	8.3
3/3	Bugsby's Way (E) Ahead	U	A		1	55	-	500	1925	1123	44.5%	-	-	-	2.0	14.1	7.9
5/1	Bugsby's Way (W) exit Ahead	U	D		1	74	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	74	-	581	1925	1504	38.6%	-	-	-	0.4	2.6	6.9
5/3	Bugsby's Way (W) exit Ahead	U	D		1	74	-	567	1925	1504	37.7%	-	-	-	0.4	2.4	1.1

C1 PRC for Signalled Lanes (%): 102.1 Total Delay for Signalled Lanes (pcuHr): 8.27 Cycle Time (s): 96
PRC Over All Lanes (%): 102.1 Total Delay Over All Lanes(pcuHr): 8.27

Basic Results Summary

Scenario 8: 'Cumulative Development Scenario PM Peak' (FG8: 'Cumulative Development Scenario PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**69.5%**	**19**	**122**	**5**	**16.7**	-	-
Site 1 - Bugsby's Way/Gallions Road	-	-	-		-	-	-	-	-	-	**69.5%**	**19**	**122**	**5**	**16.7**	-	-
1/1+1/2	Gallions Road Left Right	U	C		1	13	-	263	1729:1691	378+33	64.0 : 64.0%	-	-	-	2.5	34.5	4.8
2/1	Bugsby's Way (W) Ahead	U	B		1	32	-	510	1945	1003	50.9%	-	-	-	2.0	13.8	6.5
2/2+2/3	Bugsby's Way (W) Right Ahead	U+O	B	E	1	32	0	701	1945:1757	986+259	56.3 : 56.3%	19	122	5	3.2	16.3	7.3
3/1	Bugsby's Way (E) Left	U	A		1	24	-	129	1739	679	19.0%	-	-	-	0.6	16.1	1.6
3/2	Bugsby's Way (E) Ahead	U	A		1	24	-	561	2065	807	69.5%	-	-	-	3.7	23.6	9.4
3/3	Bugsby's Way (E) Ahead	U	A		1	24	-	517	1925	752	68.8%	-	-	-	3.4	23.8	8.7
5/1	Bugsby's Way (W) exit Ahead	U	D		1	42	-	0	1965	-	-	-	-	-	-	-	-
5/2	Bugsby's Way (W) exit Ahead	U	D		1	42	-	661	1925	1293	51.1%	-	-	-	0.7	3.8	7.5
5/3	Bugsby's Way (W) exit Ahead	U	D		1	42	-	659	1925	1293	51.0%	-	-	-	0.6	3.5	1.3

C1 PRC for Signalled Lanes (%): 29.4 Total Delay for Signalled Lanes (pcuHr): 16.68 Cycle Time (s): 64
PRC Over All Lanes (%): 29.4 Total Delay Over All Lanes(pcuHr): 16.68

Appendix C
Gallions Road/Woolwich Road
PICADY Results

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Site 2 - Woolwich Road - Gallions Road.j9
Path: T:\30000_Projects\30821 Charlton Riverside, Greenwich\Junction modelling\Site 2
Report generation date: 19/10/2016 11:21:56

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2016 Baseline							
Stream B-C	0.1	7.49	0.11	A	0.5	8.88	0.32	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
	Baseline Plus Proposed Development							
Stream B-C	0.1	7.49	0.11	A	0.5	8.91	0.32	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
	Baseline Plus Other Cumulative Developments							
Stream B-C	0.1	7.84	0.11	A	0.5	9.20	0.33	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
	Cumulative Development Scenario							
Stream B-C	0.1	7.85	0.11	A	0.5	9.23	0.33	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								

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

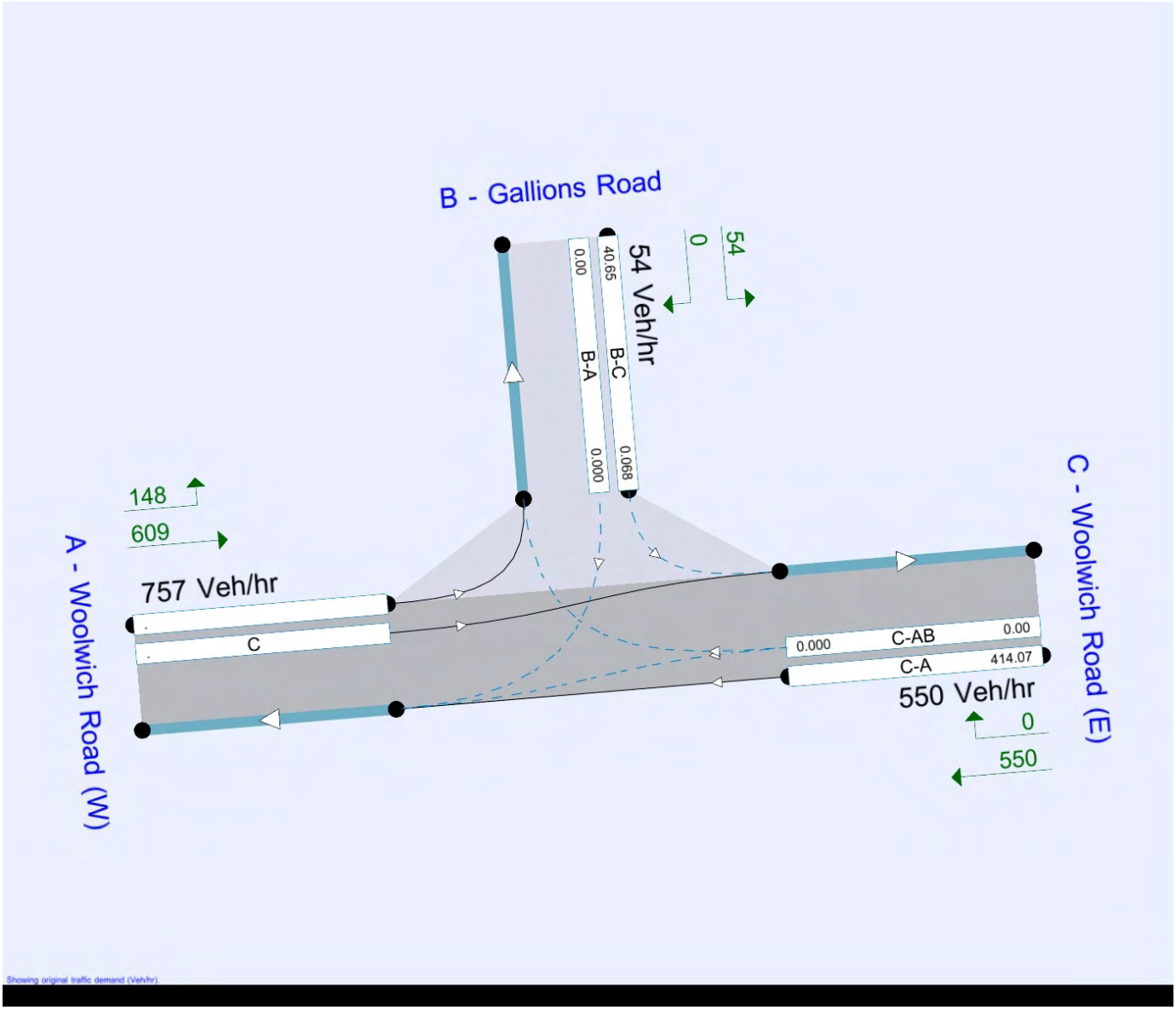
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TPP111"techuser
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
2016 Baseline	AM	ONE HOUR	08:00	09:30	15
2016 Baseline	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15
Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15
Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

2016 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Woolwich Road (W)		Major
B	Gallions Road		Minor
C	Woolwich Road (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Woolwich Road (E)	9.45	✓	2.20		0.0	✓	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 - Gallions Road	One lane plus flare	10.00	5.20	4.20	4.20	4.20	✓	1.00	0	38

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	499.894	0.074	0.186	0.117	0.266
1	B-C	746.739	0.097	0.246	-	-
1	C-B	573.963	0.189	0.189	-	-

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	2016 Baseline	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	757.00	100.000
B - Gallions Road		✓	54.00	100.000
C - Woolwich Road (E)		✓	550.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
From		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
	A - Woolwich Road (W)	0.000	148.000	609.000
	B - Gallions Road	0.000	0.000	54.000
	C - Woolwich Road (E)	550.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	1	9
	B - Gallions Road	0	0	2
	C - Woolwich Road (E)	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.49	0.1	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	600.89	0.068	40.37	0.1	6.420	A
B-A	0.00	343.06	0.000	0.00	0.0	0.000	A
C-AB	0.00	428.26	0.000	0.00	0.0	0.000	A
C-A	414.07			414.07			
A-B	111.42			111.42			
A-C	458.49			458.49			

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	575.42	0.084	48.47	0.1	6.831	A
B-A	0.00	312.62	0.000	0.00	0.0	0.000	A
C-AB	0.00	407.27	0.000	0.00	0.0	0.000	A
C-A	494.44			494.44			
A-B	133.05			133.05			
A-C	547.48			547.48			

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	540.20	0.110	59.33	0.1	7.484	A
B-A	0.00	270.53	0.000	0.00	0.0	0.000	A
C-AB	0.00	378.24	0.000	0.00	0.0	0.000	A
C-A	605.56			605.56			
A-B	162.95			162.95			
A-C	670.52			670.52			

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	540.20	0.110	59.45	0.1	7.487	A
B-A	0.00	270.53	0.000	0.00	0.0	0.000	A
C-AB	0.00	378.24	0.000	0.00	0.0	0.000	A
C-A	605.56			605.56			
A-B	162.95			162.95			
A-C	670.52			670.52			

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	575.42	0.084	48.67	0.1	6.835	A
B-A	0.00	312.62	0.000	0.00	0.0	0.000	A
C-AB	0.00	407.27	0.000	0.00	0.0	0.000	A
C-A	494.44			494.44			
A-B	133.05			133.05			
A-C	547.48			547.48			

Main results: (09:15-09:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	600.89	0.068	40.73	0.1	6.426	A
B-A	0.00	343.06	0.000	0.00	0.0	0.000	A
C-AB	0.00	428.26	0.000	0.00	0.0	0.000	A
C-A	414.07			414.07			
A-B	111.42			111.42			
A-C	458.49			458.49			

2016 Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.00	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	2016 Baseline	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	653.00	100.000
B - Gallions Road		✓	174.00	100.000
C - Woolwich Road (E)		✓	665.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	216.000	437.000
	B - Gallions Road	0.000	0.000	174.000
	C - Woolwich Road (E)	665.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	0	7
	B - Gallions Road	0	0	0
	C - Woolwich Road (E)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.32	8.88	0.5	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	644.36	0.203	129.99	0.3	6.987	A
B-A	0.00	361.20	0.000	0.00	0.0	0.000	A
C-AB	0.00	467.35	0.000	0.00	0.0	0.000	A
C-A	500.65			500.65			
A-B	162.62			162.62			
A-C	329.00			329.00			

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	624.48	0.250	156.11	0.3	7.682	A
B-A	0.00	334.28	0.000	0.00	0.0	0.000	A
C-AB	0.00	448.84	0.000	0.00	0.0	0.000	A
C-A	597.82			597.82			
A-B	194.18			194.18			
A-C	392.85			392.85			

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	597.01	0.321	191.04	0.5	8.856	A
B-A	0.00	297.06	0.000	0.00	0.0	0.000	A
C-AB	0.00	423.24	0.000	0.00	0.0	0.000	A
C-A	732.18			732.18			
A-B	237.82			237.82			
A-C	481.15			481.15			

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	597.01	0.321	191.56	0.5	8.879	A
B-A	0.00	297.06	0.000	0.00	0.0	0.000	A
C-AB	0.00	423.24	0.000	0.00	0.0	0.000	A
C-A	732.18			732.18			
A-B	237.82			237.82			
A-C	481.15			481.15			

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	624.48	0.250	156.95	0.3	7.708	A
B-A	0.00	334.28	0.000	0.00	0.0	0.000	A
C-AB	0.00	448.84	0.000	0.00	0.0	0.000	A
C-A	597.82			597.82			
A-B	194.18			194.18			
A-C	392.85			392.85			

Main results: (18:15-18:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	644.36	0.203	131.32	0.3	7.020	A
B-A	0.00	361.20	0.000	0.00	0.0	0.000	A
C-AB	0.00	467.35	0.000	0.00	0.0	0.000	A
C-A	500.65			500.65			
A-B	162.62			162.62			
A-C	329.00			329.00			

Baseline Plus Proposed Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.28	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	757.00	100.000
B - Gallions Road		✓	54.00	100.000
C - Woolwich Road (E)		✓	550.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	147.000	610.000
	B - Gallions Road	0.000	0.000	54.000
	C - Woolwich Road (E)	550.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	1	9
	B - Gallions Road	0	0	2
	C - Woolwich Road (E)	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.49	0.1	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	600.76	0.068	40.37	0.1	6.421	A
B-A	0.00	342.96	0.000	0.00	0.0	0.000	A
C-AB	0.00	428.25	0.000	0.00	0.0	0.000	A
C-A	414.07			414.07			
A-B	110.67			110.67			
A-C	459.24			459.24			

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	575.27	0.084	48.47	0.1	6.833	A
B-A	0.00	312.50	0.000	0.00	0.0	0.000	A
C-AB	0.00	407.25	0.000	0.00	0.0	0.000	A
C-A	494.44			494.44			
A-B	132.15			132.15			
A-C	548.38			548.38			

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	540.02	0.110	59.33	0.1	7.487	A
B-A	0.00	270.38	0.000	0.00	0.0	0.000	A
C-AB	0.00	378.23	0.000	0.00	0.0	0.000	A
C-A	605.56			605.56			
A-B	161.85			161.85			
A-C	671.62			671.62			

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	540.02	0.110	59.45	0.1	7.490	A
B-A	0.00	270.38	0.000	0.00	0.0	0.000	A
C-AB	0.00	378.23	0.000	0.00	0.0	0.000	A
C-A	605.56			605.56			
A-B	161.85			161.85			
A-C	671.62			671.62			

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	575.27	0.084	48.67	0.1	6.837	A
B-A	0.00	312.50	0.000	0.00	0.0	0.000	A
C-AB	0.00	407.25	0.000	0.00	0.0	0.000	A
C-A	494.44			494.44			
A-B	132.15			132.15			
A-C	548.38			548.38			

Main results: (09:15-09:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	600.76	0.068	40.73	0.1	6.430	A
B-A	0.00	342.96	0.000	0.00	0.0	0.000	A
C-AB	0.00	428.25	0.000	0.00	0.0	0.000	A
C-A	414.07			414.07			
A-B	110.67			110.67			
A-C	459.24			459.24			

Baseline Plus Proposed Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	1.00	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	661.00	100.000
B - Gallions Road		✓	174.00	100.000
C - Woolwich Road (E)		✓	665.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	220.000	441.000
	B - Gallions Road	0.000	0.000	174.000
	C - Woolwich Road (E)	665.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	0	7
	B - Gallions Road	0	0	0
	C - Woolwich Road (E)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.32	8.91	0.5	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	643.27	0.204	129.98	0.3	7.003	A
B-A	0.00	360.38	0.000	0.00	0.0	0.000	A
C-AB	0.00	466.19	0.000	0.00	0.0	0.000	A
C-A	500.65			500.65			
A-B	165.63			165.63			
A-C	332.01			332.01			

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	623.19	0.251	156.11	0.3	7.701	A
B-A	0.00	333.30	0.000	0.00	0.0	0.000	A
C-AB	0.00	447.46	0.000	0.00	0.0	0.000	A
C-A	597.82			597.82			
A-B	197.78			197.78			
A-C	396.45			396.45			

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	595.42	0.322	191.03	0.5	8.888	A
B-A	0.00	295.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	421.56	0.000	0.00	0.0	0.000	A
C-A	732.18			732.18			
A-B	242.22			242.22			
A-C	485.55			485.55			

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	595.42	0.322	191.56	0.5	8.913	A
B-A	0.00	295.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	421.56	0.000	0.00	0.0	0.000	A
C-A	732.18			732.18			
A-B	242.22			242.22			
A-C	485.55			485.55			

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	623.19	0.251	156.95	0.3	7.731	A
B-A	0.00	333.30	0.000	0.00	0.0	0.000	A
C-AB	0.00	447.46	0.000	0.00	0.0	0.000	A
C-A	597.82			597.82			
A-B	197.78			197.78			
A-C	396.45			396.45			

Main results: (18:15-18:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	643.27	0.204	131.32	0.3	7.038	A
B-A	0.00	360.38	0.000	0.00	0.0	0.000	A
C-AB	0.00	466.19	0.000	0.00	0.0	0.000	A
C-A	500.65			500.65			
A-B	165.63			165.63			
A-C	332.01			332.01			

Baseline Plus Other Cumulative Developments, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.27	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D5	Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	839.00	100.000
B - Gallions Road		✓	54.00	100.000
C - Woolwich Road (E)		✓	590.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	148.000	691.000
	B - Gallions Road	0.000	0.000	54.000
	C - Woolwich Road (E)	590.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	1	8
	B - Gallions Road	0	0	2
	C - Woolwich Road (E)	13	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.84	0.1	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	585.92	0.069	40.36	0.1	6.596	A
B-A	0.00	327.98	0.000	0.00	0.0	0.000	A
C-AB	0.00	419.25	0.000	0.00	0.0	0.000	A
C-A	444.18			444.18			
A-B	111.42			111.42			
A-C	520.22			520.22			

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	557.54	0.087	48.46	0.1	7.071	A
B-A	0.00	294.61	0.000	0.00	0.0	0.000	A
C-AB	0.00	396.02	0.000	0.00	0.0	0.000	A
C-A	530.40			530.40			
A-B	133.05			133.05			
A-C	621.19			621.19			

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	518.31	0.115	59.32	0.1	7.840	A
B-A	0.00	248.47	0.000	0.00	0.0	0.000	A
C-AB	0.00	363.90	0.000	0.00	0.0	0.000	A
C-A	649.60			649.60			
A-B	162.95			162.95			
A-C	760.81			760.81			

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	518.31	0.115	59.45	0.1	7.845	A
B-A	0.00	248.47	0.000	0.00	0.0	0.000	A
C-AB	0.00	363.90	0.000	0.00	0.0	0.000	A
C-A	649.60			649.60			
A-B	162.95			162.95			
A-C	760.81			760.81			

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	557.54	0.087	48.68	0.1	7.078	A
B-A	0.00	294.61	0.000	0.00	0.0	0.000	A
C-AB	0.00	396.02	0.000	0.00	0.0	0.000	A
C-A	530.40			530.40			
A-B	133.05			133.05			
A-C	621.19			621.19			

Main results: (09:15-09:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	585.92	0.069	40.74	0.1	6.606	A
B-A	0.00	327.98	0.000	0.00	0.0	0.000	A
C-AB	0.00	419.25	0.000	0.00	0.0	0.000	A
C-A	444.18			444.18			
A-B	111.42			111.42			
A-C	520.22			520.22			

Baseline Plus Other Cumulative Developments, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.93	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	706.00	100.000
B - Gallions Road		✓	174.00	100.000
C - Woolwich Road (E)		✓	772.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	216.000	490.000
	B - Gallions Road	0.000	0.000	174.000
	C - Woolwich Road (E)	772.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	0	6
	B - Gallions Road	0	0	0
	C - Woolwich Road (E)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.33	9.20	0.5	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	634.77	0.206	129.97	0.3	7.117	A
B-A	0.00	344.10	0.000	0.00	0.0	0.000	A
C-AB	0.00	460.12	0.000	0.00	0.0	0.000	A
C-A	581.20			581.20			
A-B	162.62			162.62			
A-C	368.90			368.90			

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	613.03	0.255	156.10	0.3	7.873	A
B-A	0.00	313.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	440.21	0.000	0.00	0.0	0.000	A
C-A	694.01			694.01			
A-B	194.18			194.18			
A-C	440.50			440.50			

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	582.98	0.329	191.00	0.5	9.170	A
B-A	0.00	272.05	0.000	0.00	0.0	0.000	A
C-AB	0.00	412.67	0.000	0.00	0.0	0.000	A
C-A	849.99			849.99			
A-B	237.82			237.82			
A-C	539.50			539.50			

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	582.98	0.329	191.56	0.5	9.197	A
B-A	0.00	272.05	0.000	0.00	0.0	0.000	A
C-AB	0.00	412.67	0.000	0.00	0.0	0.000	A
C-A	849.99			849.99			
A-B	237.82			237.82			
A-C	539.50			539.50			

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	613.03	0.255	156.98	0.3	7.903	A
B-A	0.00	313.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	440.21	0.000	0.00	0.0	0.000	A
C-A	694.01			694.01			
A-B	194.18			194.18			
A-C	440.50			440.50			

Main results: (18:15-18:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	634.77	0.206	131.33	0.3	7.157	A
B-A	0.00	344.10	0.000	0.00	0.0	0.000	A
C-AB	0.00	460.12	0.000	0.00	0.0	0.000	A
C-A	581.20			581.20			
A-B	162.62			162.62			
A-C	368.90			368.90			

Cumulative Development Scenario, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.27	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D7	Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	839.00	100.000
B - Gallions Road		✓	54.00	100.000
C - Woolwich Road (E)		✓	590.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	147.000	692.000
	B - Gallions Road	0.000	0.000	54.000
	C - Woolwich Road (E)	590.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	1	8
	B - Gallions Road	0	0	2
	C - Woolwich Road (E)	13	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.85	0.1	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	585.79	0.069	40.36	0.1	6.597	A
B-A	0.00	327.88	0.000	0.00	0.0	0.000	A
C-AB	0.00	419.24	0.000	0.00	0.0	0.000	A
C-A	444.18			444.18			
A-B	110.67			110.67			
A-C	520.97			520.97			

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	557.40	0.087	48.46	0.1	7.073	A
B-A	0.00	294.49	0.000	0.00	0.0	0.000	A
C-AB	0.00	396.01	0.000	0.00	0.0	0.000	A
C-A	530.40			530.40			
A-B	132.15			132.15			
A-C	622.09			622.09			

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	518.13	0.115	59.32	0.1	7.843	A
B-A	0.00	248.33	0.000	0.00	0.0	0.000	A
C-AB	0.00	363.89	0.000	0.00	0.0	0.000	A
C-A	649.60			649.60			
A-B	161.85			161.85			
A-C	761.91			761.91			

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	59.46	518.13	0.115	59.45	0.1	7.848	A
B-A	0.00	248.33	0.000	0.00	0.0	0.000	A
C-AB	0.00	363.89	0.000	0.00	0.0	0.000	A
C-A	649.60			649.60			
A-B	161.85			161.85			
A-C	761.91			761.91			

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	48.54	557.40	0.087	48.68	0.1	7.077	A
B-A	0.00	294.49	0.000	0.00	0.0	0.000	A
C-AB	0.00	396.01	0.000	0.00	0.0	0.000	A
C-A	530.40			530.40			
A-B	132.15			132.15			
A-C	622.09			622.09			

Main results: (09:15-09:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	40.65	585.79	0.069	40.74	0.1	6.605	A
B-A	0.00	327.88	0.000	0.00	0.0	0.000	A
C-AB	0.00	419.24	0.000	0.00	0.0	0.000	A
C-A	444.18			444.18			
A-B	110.67			110.67			
A-C	520.97			520.97			

Cumulative Development Scenario, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	0.93	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D8	Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Woolwich Road (W)		✓	714.00	100.000
B - Gallions Road		✓	174.00	100.000
C - Woolwich Road (E)		✓	772.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0.000	220.000	494.000
	B - Gallions Road	0.000	0.000	174.000
	C - Woolwich Road (E)	772.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A - Woolwich Road (W)	B - Gallions Road	C - Woolwich Road (E)
From	A - Woolwich Road (W)	0	0	6
	B - Gallions Road	0	0	0
	C - Woolwich Road (E)	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.33	9.23	0.5	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	633.69	0.207	129.96	0.3	7.132	A
B-A	0.00	343.28	0.000	0.00	0.0	0.000	A
C-AB	0.00	458.97	0.000	0.00	0.0	0.000	A
C-A	581.20			581.20			
A-B	165.63			165.63			
A-C	371.91			371.91			

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	611.74	0.256	156.10	0.3	7.895	A
B-A	0.00	312.89	0.000	0.00	0.0	0.000	A
C-AB	0.00	438.83	0.000	0.00	0.0	0.000	A
C-A	694.01			694.01			
A-B	197.78			197.78			
A-C	444.10			444.10			

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	581.41	0.330	191.00	0.5	9.207	A
B-A	0.00	270.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	410.99	0.000	0.00	0.0	0.000	A
C-A	849.99			849.99			
A-B	242.22			242.22			
A-C	543.90			543.90			

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	191.58	581.41	0.330	191.56	0.5	9.234	A
B-A	0.00	270.86	0.000	0.00	0.0	0.000	A
C-AB	0.00	410.99	0.000	0.00	0.0	0.000	A
C-A	849.99			849.99			
A-B	242.22			242.22			
A-C	543.90			543.90			

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	156.42	611.74	0.256	156.98	0.3	7.927	A
B-A	0.00	312.89	0.000	0.00	0.0	0.000	A
C-AB	0.00	438.83	0.000	0.00	0.0	0.000	A
C-A	694.01			694.01			
A-B	197.78			197.78			
A-C	444.10			444.10			

Main results: (18:15-18:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	131.00	633.69	0.207	131.33	0.3	7.173	A
B-A	0.00	343.28	0.000	0.00	0.0	0.000	A
C-AB	0.00	458.97	0.000	0.00	0.0	0.000	A
C-A	581.20			581.20			
A-B	165.63			165.63			
A-C	371.91			371.91			

Appendix D
Anchor and Hope Lane/Access Road PICADY Results

TPP
transport planning practice

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Site 3 - Anchor and Hope Lane-Business Park Access.j9
Path: T:\30000_Projects\30821 Charlton Riverside, Greenwich\Junction modelling\Site 3
Report generation date: 19/10/2016 12:38:37

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2016 Baseline							
Stream B-C	0.0	6.01	0.04	A	0.2	5.91	0.15	A
Stream B-A	0.0	9.39	0.02	A	0.0	8.44	0.00	A
Stream C-AB	0.1	6.70	0.11	A	0.0	7.69	0.03	A
Stream C-A								
Stream A-B								
Stream A-C								
	Baseline Plus Proposed Development							
Stream B-C	0.3	6.53	0.24	A	0.2	5.95	0.16	A
Stream B-A	0.0	9.19	0.01	A	0.0	8.83	0.00	A
Stream C-AB	0.1	6.56	0.10	A	0.2	7.20	0.17	A
Stream C-A								
Stream A-B								
Stream A-C								
	Baseline Plus Other Cumulative Developments							
Stream B-C	0.0	6.01	0.04	A	0.2	5.91	0.15	A
Stream B-A	0.0	9.39	0.02	A	0.0	8.44	0.00	A
Stream C-AB	0.1	6.70	0.11	A	0.0	7.69	0.03	A
Stream C-A								
Stream A-B								
Stream A-C								
	Cumulative Development Scenario							
Stream B-C	0.3	6.53	0.24	A	0.2	5.95	0.16	A
Stream B-A	0.0	9.19	0.01	A	0.0	8.83	0.00	A
Stream C-AB	0.1	6.56	0.10	A	0.2	7.20	0.17	A
Stream C-A								
Stream A-B								
Stream A-C								

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

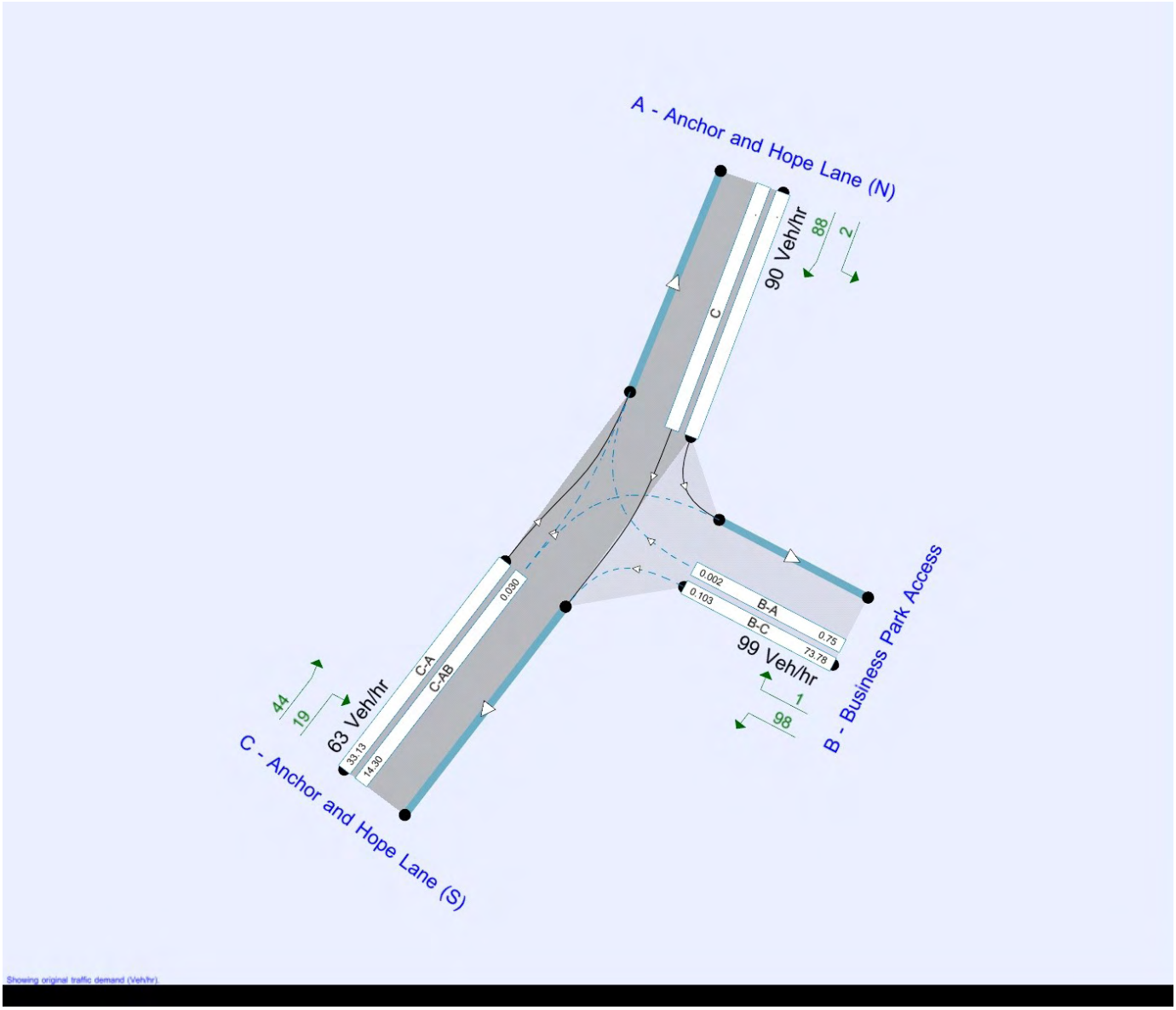
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TPP111"techuser
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	2016 Baseline	PM	ONE HOUR	17:00	18:30	15

2016 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - untitled	untitled	T-Junction	Two-way	2.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Anchor and Hope Lane (N)		Major
B	Business Park Access		Minor
C	Anchor and Hope Lane (S)		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 - Anchor and Hope Lane (S)	11.35			80.7	✓	5.00

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 - Business Park Access	One lane plus flare	10.00	6.30	5.10	4.30	4.00	✓	2.00	34	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	453.222	0.063	0.160	0.101	0.229
1	B-C	738.937	0.087	0.220	-	-
1	C-B	620.697	0.185	0.185	-	-

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

Vehicle mix varies over time	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Anchor and Hope Lane (N)		✓	90.00	100.000
B - Business Park Access		✓	99.00	100.000
C - Anchor and Hope Lane (S)		✓	63.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0.000	2.000	88.000
	B - Business Park Access	1.000	0.000	98.000
	C - Anchor and Hope Lane (S)	44.000	19.000	0.000

Vehicle Mix

(17:00-17:15)

Heavy Vehicle proportion

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	3
	B - Business Park Access	0	0	1
	C - Anchor and Hope Lane (S)	9	26	0

(17:15-17:30)

Heavy Vehicle proportion

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	0
	B - Business Park Access	0	0	0
	C - Anchor and Hope Lane (S)	0	0	0

(17:30-17:45)

Heavy Vehicle proportion

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	0
	B - Business Park Access	0	0	0
	C - Anchor and Hope Lane (S)	0	0	0

(17:45-18:00)

Heavy Vehicle proportion

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	0
	B - Business Park Access	0	0	0
	C - Anchor and Hope Lane (S)	0	0	0

(18:00-18:15)

Heavy Vehicle proportion

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	0
	B - Business Park Access	0	0	0
	C - Anchor and Hope Lane (S)	0	0	0

Heavy Vehicle proportion

(18:15-18:30)

		To		
		A - Anchor and Hope Lane (N)	B - Business Park Access	C - Anchor and Hope Lane (S)
From	A - Anchor and Hope Lane (N)	0	0	0
	B - Business Park Access	0	0	0
	C - Anchor and Hope Lane (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
B-C	0.15	5.91	0.2	A
B-A	0.00	8.44	0.0	A
C-AB	0.03	7.69	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	73.78	716.34	0.103	73.32	0.1	5.595	A
B-A	0.75	434.39	0.002	0.75	0.0	8.301	A
C-AB	14.30	482.40	0.030	14.18	0.0	7.687	A
C-A	33.13			33.13			
A-B	1.51			1.51			
A-C	66.25			66.25			

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	88.10	720.99	0.122	88.00	0.1	5.716	A
B-A	0.90	432.42	0.002	0.90	0.0	8.342	A
C-AB	17.08	604.66	0.028	17.07	0.0	6.862	A
C-A	39.56			39.56			
A-B	1.80			1.80			
A-C	79.11			79.11			

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	107.90	717.00	0.150	107.75	0.2	5.907	A
B-A	1.10	427.66	0.003	1.10	0.0	8.439	A
C-AB	20.92	602.41	0.035	20.91	0.0	6.190	A
C-A	48.44			48.44			
A-B	2.20			2.20			
A-C	96.89			96.89			

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	107.90	717.00	0.150	107.90	0.2	5.909	A
B-A	1.10	427.65	0.003	1.10	0.0	8.439	A
C-AB	20.92	602.41	0.035	20.92	0.0	6.190	A
C-A	48.44			48.44			
A-B	2.20			2.20			
A-C	96.89			96.89			

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	88.10	721.02	0.122	88.25	0.1	5.692	A
B-A	0.90	432.42	0.002	0.90	0.0	8.343	A
C-AB	17.08	605.77	0.028	17.11	0.0	6.117	A
C-A	39.56			39.56			
A-B	1.80			1.80			
A-C	79.11			79.11			

Main results: (18:15-18:30)

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-C	73.78	723.94	0.102	73.88	0.1	5.538	A
B-A	0.75	435.84	0.002	0.75	0.0	8.275	A
C-AB	14.30	608.20	0.024	14.32	0.0	6.061	A
C-A	33.13			33.13			
A-B	1.51			1.51			
A-C	66.25			66.25			

Appendix E
Anchor and Hope Lane North/Bugsby's Way ARCADY Results

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.0.4211 []

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Site 4 - Anchor and hop Lane - Bugsy's Way.j9
Path: T:\30000_Projects\30821 Charlton Riverside, Greenwich\Junction modelling\Site 4
Report generation date: 19/10/2016 15:44:31

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2016 Baseline							
1 - Anchor and Hope Lane (N)	0.1	3.30	0.08	A	0.2	4.10	0.20	A
2 - Anchor and Hope Lane (S)	1.0	3.36	0.51	A	1.0	3.15	0.49	A
3 - Bugsby's Way	0.5	3.49	0.34	A	1.2	4.23	0.54	A
	Baseline Plus Proposed Development							
1 - Anchor and Hope Lane (N)	0.2	3.30	0.18	A	0.3	4.09	0.20	A
2 - Anchor and Hope Lane (S)	1.1	3.54	0.52	A	1.1	3.29	0.51	A
3 - Bugsby's Way	0.5	3.47	0.34	A	1.3	4.54	0.57	A
	Baseline Plus Other Cumulative Developments							
1 - Anchor and Hope Lane (N)	0.1	3.41	0.08	A	0.3	4.33	0.21	A
2 - Anchor and Hope Lane (S)	1.1	3.52	0.53	A	1.1	3.40	0.53	A
3 - Bugsby's Way	0.6	3.61	0.37	A	1.4	4.61	0.58	A
	Cumulative Development Scenario							
1 - Anchor and Hope Lane (N)	0.2	3.42	0.18	A	0.3	4.32	0.21	A
2 - Anchor and Hope Lane (S)	1.2	3.71	0.54	A	1.2	3.57	0.55	A
3 - Bugsby's Way	0.6	3.59	0.37	A	1.5	4.98	0.61	A

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

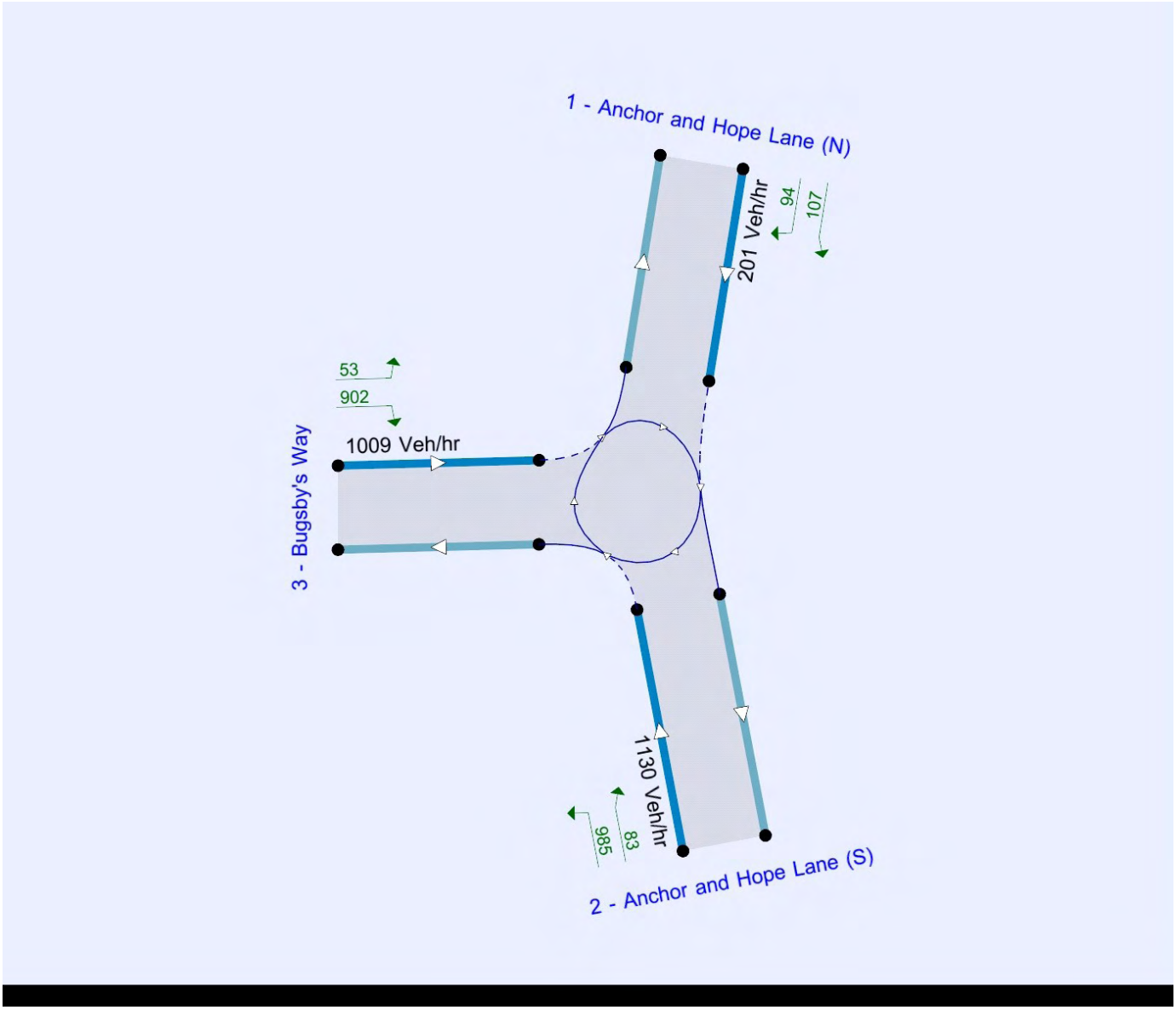
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TPP111"techuser
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
2016 Baseline	AM	ONE HOUR	08:00	09:30	15
2016 Baseline	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15
Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15
Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

2016 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Anchor and Hope Lane (N)	
2	Anchor and Hope Lane (S)	
3	Bugsby's Way	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1 - Anchor and Hope Lane (N)	0.00	99999.00
2 - Anchor and Hope Lane (S)	0.00	99999.00
3 - Bugsby's Way	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Anchor and Hope Lane (N)	4.50	7.10	22.9	18.0	40.0	42.0	
2 - Anchor and Hope Lane (S)	7.40	8.90	17.1	29.0	40.0	48.0	
3 - Bugsby's Way	5.00	8.30	8.8	42.0	40.0	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Anchor and Hope Lane (N)	0.658	1849.969
2 - Anchor and Hope Lane (S)	0.782	2474.283
3 - Bugsby's Way	0.728	2060.952

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	2016 Baseline	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	84.00	100.000
2 - Anchor and Hope Lane (S)		✓	998.00	100.000
3 - Bugsby's Way		✓	482.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	25.000	59.000
	2 - Anchor and Hope Lane (S)	101.000	82.000	815.000
	3 - Bugsby's Way	73.000	348.000	61.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	16	22
	2 - Anchor and Hope Lane (S)	6	1	8
	3 - Bugsby's Way	10	17	66

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.08	3.30	0.1	A
2 - Anchor and Hope Lane (S)	0.51	3.36	1.0	A
3 - Bugsby's Way	0.34	3.49	0.5	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	63.24	368.49	1296.17	0.049	63.04	0.1	2.919	A
2 - Anchor and Hope Lane (S)	751.35	90.05	2212.79	0.340	749.30	0.5	2.457	A
3 - Bugsby's Way	362.88	137.40	1602.38	0.226	361.71	0.3	2.899	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	75.51	441.06	1248.36	0.060	75.46	0.1	3.068	A
2 - Anchor and Hope Lane (S)	897.19	107.80	2194.10	0.409	896.48	0.7	2.773	A
3 - Bugsby's Way	433.31	164.38	1585.69	0.273	432.98	0.4	3.123	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	92.49	540.03	1183.17	0.078	92.40	0.1	3.299	A
2 - Anchor and Hope Lane (S)	1098.82	132.00	2168.61	0.507	1097.50	1.0	3.356	A
3 - Bugsby's Way	530.69	201.24	1562.89	0.340	530.14	0.5	3.484	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	92.49	540.60	1182.80	0.078	92.49	0.1	3.301	A
2 - Anchor and Hope Lane (S)	1098.82	132.12	2168.48	0.507	1098.81	1.0	3.364	A
3 - Bugsby's Way	530.69	201.48	1562.75	0.340	530.69	0.5	3.487	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	75.51	441.96	1247.77	0.061	75.59	0.1	3.070	A
2 - Anchor and Hope Lane (S)	897.19	108.00	2193.88	0.409	898.50	0.7	2.783	A
3 - Bugsby's Way	433.31	164.75	1585.46	0.273	433.85	0.4	3.129	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	63.24	370.00	1295.18	0.049	63.29	0.1	2.924	A
2 - Anchor and Hope Lane (S)	751.35	90.42	2212.40	0.340	752.07	0.5	2.467	A
3 - Bugsby's Way	362.88	137.90	1602.07	0.227	363.21	0.3	2.908	A

2016 Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.71	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	2016 Baseline	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	197.00	100.000
2 - Anchor and Hope Lane (S)		✓	1003.00	100.000
3 - Bugsby's Way		✓	920.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	109.000	88.000
	2 - Anchor and Hope Lane (S)	35.000	62.000	906.000
	3 - Bugsby's Way	27.000	839.000	54.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	3	1
	2 - Anchor and Hope Lane (S)	20	3	4
	3 - Bugsby's Way	7	6	6

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.20	4.10	0.2	A
2 - Anchor and Hope Lane (S)	0.49	3.15	1.0	A
3 - Bugsby's Way	0.54	4.23	1.2	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	148.31	716.62	1323.47	0.112	147.81	0.1	3.060	A
2 - Anchor and Hope Lane (S)	755.11	106.55	2285.74	0.330	753.14	0.5	2.346	A
3 - Bugsby's Way	692.63	72.84	1889.18	0.367	690.32	0.6	2.998	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	177.10	857.69	1227.34	0.144	176.93	0.2	3.426	A
2 - Anchor and Hope Lane (S)	901.67	127.53	2269.57	0.397	901.01	0.7	2.629	A
3 - Bugsby's Way	827.06	87.14	1878.47	0.440	826.24	0.8	3.417	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	216.90	1049.86	1096.39	0.198	216.59	0.2	4.091	A
2 - Anchor and Hope Lane (S)	1104.32	156.11	2247.56	0.491	1103.10	1.0	3.143	A
3 - Bugsby's Way	1012.94	106.68	1863.82	0.543	1011.35	1.2	4.215	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	216.90	1051.45	1095.31	0.198	216.90	0.2	4.098	A
2 - Anchor and Hope Lane (S)	1104.32	156.34	2247.38	0.491	1104.31	1.0	3.148	A
3 - Bugsby's Way	1012.94	106.80	1863.74	0.544	1012.92	1.2	4.231	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	177.10	860.13	1225.68	0.144	177.40	0.2	3.434	A
2 - Anchor and Hope Lane (S)	901.67	127.88	2269.30	0.397	902.87	0.7	2.638	A
3 - Bugsby's Way	827.06	87.32	1878.33	0.440	828.63	0.8	3.436	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	148.31	719.83	1321.28	0.112	148.48	0.1	3.069	A
2 - Anchor and Hope Lane (S)	755.11	107.03	2285.36	0.330	755.78	0.5	2.356	A
3 - Bugsby's Way	692.63	73.09	1888.99	0.367	693.47	0.6	3.015	A

Baseline Plus Proposed Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.49	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	212.00	100.000
2 - Anchor and Hope Lane (S)		✓	994.00	100.000
3 - Bugsby's Way		✓	478.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	82.000	130.000
	2 - Anchor and Hope Lane (S)	97.000	82.000	815.000
	3 - Bugsby's Way	69.000	348.000	61.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	5	9
	2 - Anchor and Hope Lane (S)	6	1	8
	3 - Bugsby's Way	10	17	66

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.18	3.30	0.2	A
2 - Anchor and Hope Lane (S)	0.52	3.54	1.1	A
3 - Bugsby's Way	0.34	3.47	0.5	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	159.60	368.49	1450.10	0.110	159.11	0.1	2.789	A
2 - Anchor and Hope Lane (S)	748.34	143.35	2174.51	0.344	746.25	0.5	2.517	A
3 - Bugsby's Way	359.86	134.38	1602.95	0.225	358.71	0.3	2.890	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	190.58	441.06	1396.62	0.136	190.45	0.2	2.984	A
2 - Anchor and Hope Lane (S)	893.59	171.58	2148.31	0.416	892.85	0.7	2.866	A
3 - Bugsby's Way	429.71	160.78	1586.64	0.271	429.39	0.4	3.110	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	233.42	540.02	1323.69	0.176	233.19	0.2	3.301	A
2 - Anchor and Hope Lane (S)	1094.42	210.09	2112.57	0.518	1092.99	1.1	3.526	A
3 - Bugsby's Way	526.29	196.83	1564.38	0.336	525.75	0.5	3.464	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	233.42	540.60	1323.27	0.176	233.41	0.2	3.302	A
2 - Anchor and Hope Lane (S)	1094.42	210.29	2112.38	0.518	1094.40	1.1	3.535	A
3 - Bugsby's Way	526.29	197.08	1564.22	0.336	526.28	0.5	3.467	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	190.58	441.97	1395.95	0.137	190.80	0.2	2.987	A
2 - Anchor and Hope Lane (S)	893.59	171.91	2148.00	0.416	895.01	0.7	2.878	A
3 - Bugsby's Way	429.71	161.17	1586.40	0.271	430.24	0.4	3.114	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	159.60	370.00	1448.99	0.110	159.74	0.1	2.794	A
2 - Anchor and Hope Lane (S)	748.34	143.92	2173.97	0.344	749.09	0.5	2.529	A
3 - Bugsby's Way	359.86	134.90	1602.63	0.225	360.19	0.3	2.897	A

Baseline Plus Proposed Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.91	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	201.00	100.000
2 - Anchor and Hope Lane (S)		✓	1051.00	100.000
3 - Bugsby's Way		✓	946.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	107.000	94.000
	2 - Anchor and Hope Lane (S)	83.000	62.000	906.000
	3 - Bugsby's Way	53.000	839.000	54.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	2	1
	2 - Anchor and Hope Lane (S)	6	3	4
	3 - Bugsby's Way	1	6	6

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.20	4.09	0.3	A
2 - Anchor and Hope Lane (S)	0.51	3.29	1.1	A
3 - Bugsby's Way	0.57	4.54	1.3	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	151.32	716.54	1331.02	0.114	150.81	0.1	3.048	A
2 - Anchor and Hope Lane (S)	791.25	111.04	2291.06	0.345	789.15	0.5	2.394	A
3 - Bugsby's Way	712.20	108.87	1870.93	0.381	709.75	0.6	3.093	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	180.70	857.62	1234.34	0.146	180.52	0.2	3.415	A
2 - Anchor and Hope Lane (S)	944.83	132.92	2274.16	0.415	944.10	0.7	2.705	A
3 - Bugsby's Way	850.43	130.25	1855.52	0.458	849.52	0.8	3.575	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	221.31	1049.66	1102.74	0.201	220.99	0.2	4.082	A
2 - Anchor and Hope Lane (S)	1157.17	162.70	2251.15	0.514	1155.80	1.0	3.282	A
3 - Bugsby's Way	1041.56	159.46	1834.46	0.568	1039.73	1.3	4.520	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	221.31	1051.45	1101.51	0.201	221.30	0.3	4.089	A
2 - Anchor and Hope Lane (S)	1157.17	162.95	2250.96	0.514	1157.16	1.1	3.290	A
3 - Bugsby's Way	1041.56	159.65	1834.32	0.568	1041.53	1.3	4.540	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	180.70	860.32	1232.49	0.147	181.01	0.2	3.423	A
2 - Anchor and Hope Lane (S)	944.83	133.30	2273.87	0.416	946.18	0.7	2.713	A
3 - Bugsby's Way	850.43	130.54	1855.31	0.458	852.25	0.9	3.597	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	151.32	719.90	1328.71	0.114	151.50	0.1	3.057	A
2 - Anchor and Hope Lane (S)	791.25	111.56	2290.66	0.345	791.99	0.5	2.404	A
3 - Bugsby's Way	712.20	109.27	1870.65	0.381	713.13	0.6	3.111	A

Baseline Plus Other Cumulative Developments, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.55	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D5	Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	84.00	100.000
2 - Anchor and Hope Lane (S)		✓	1041.00	100.000
3 - Bugsby's Way		✓	538.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	25.000	59.000
	2 - Anchor and Hope Lane (S)	101.000	82.000	858.000
	3 - Bugsby's Way	73.000	404.000	61.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	16	22
	2 - Anchor and Hope Lane (S)	6	1	8
	3 - Bugsby's Way	10	15	66

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.08	3.41	0.1	A
2 - Anchor and Hope Lane (S)	0.53	3.52	1.1	A
3 - Bugsby's Way	0.37	3.61	0.6	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	63.24	410.50	1272.60	0.050	63.03	0.1	2.976	A
2 - Anchor and Hope Lane (S)	783.72	90.05	2212.11	0.354	781.53	0.5	2.513	A
3 - Bugsby's Way	405.03	137.39	1629.56	0.249	403.72	0.3	2.934	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	75.51	491.34	1220.15	0.062	75.46	0.1	3.144	A
2 - Anchor and Hope Lane (S)	935.83	107.80	2193.43	0.427	935.06	0.7	2.859	A
3 - Bugsby's Way	483.65	164.38	1612.59	0.300	483.26	0.4	3.188	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	92.49	601.57	1148.64	0.081	92.40	0.1	3.407	A
2 - Anchor and Hope Lane (S)	1146.16	131.99	2167.96	0.529	1144.67	1.1	3.514	A
3 - Bugsby's Way	592.35	201.22	1589.41	0.373	591.69	0.6	3.606	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	92.49	602.25	1148.21	0.081	92.49	0.1	3.409	A
2 - Anchor and Hope Lane (S)	1146.16	132.12	2167.81	0.529	1146.14	1.1	3.522	A
3 - Bugsby's Way	592.35	201.48	1589.25	0.373	592.34	0.6	3.610	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	75.51	492.42	1219.46	0.062	75.60	0.1	3.149	A
2 - Anchor and Hope Lane (S)	935.83	108.01	2193.20	0.427	937.31	0.7	2.871	A
3 - Bugsby's Way	483.65	164.77	1612.34	0.300	484.30	0.4	3.192	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	63.24	412.21	1271.49	0.050	63.29	0.1	2.979	A
2 - Anchor and Hope Lane (S)	783.72	90.43	2211.71	0.354	784.50	0.6	2.525	A
3 - Bugsby's Way	405.03	137.91	1629.23	0.249	405.43	0.3	2.944	A

Baseline Plus Other Cumulative Developments, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	4.01	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	197.00	100.000
2 - Anchor and Hope Lane (S)		✓	1082.00	100.000
3 - Bugsby's Way		✓	983.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	109.000	88.000
	2 - Anchor and Hope Lane (S)	35.000	62.000	985.000
	3 - Bugsby's Way	27.000	902.000	54.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	3	1
	2 - Anchor and Hope Lane (S)	20	3	4
	3 - Bugsby's Way	7	6	6

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.21	4.33	0.3	A
2 - Anchor and Hope Lane (S)	0.53	3.40	1.1	A
3 - Bugsby's Way	0.58	4.61	1.4	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	148.31	763.79	1291.27	0.115	147.79	0.1	3.146	A
2 - Anchor and Hope Lane (S)	814.59	106.53	2286.56	0.356	812.38	0.6	2.439	A
3 - Bugsby's Way	740.06	72.83	1889.22	0.392	737.50	0.6	3.119	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	177.10	914.18	1188.78	0.149	176.92	0.2	3.557	A
2 - Anchor and Hope Lane (S)	972.70	127.52	2270.38	0.428	971.92	0.7	2.771	A
3 - Bugsby's Way	883.70	87.13	1878.51	0.470	882.74	0.9	3.612	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	216.90	1118.86	1049.29	0.207	216.56	0.3	4.321	A
2 - Anchor and Hope Lane (S)	1191.31	156.09	2248.37	0.530	1189.82	1.1	3.396	A
3 - Bugsby's Way	1082.31	106.67	1863.87	0.581	1080.36	1.4	4.584	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	216.90	1120.81	1047.96	0.207	216.90	0.3	4.331	A
2 - Anchor and Hope Lane (S)	1191.31	156.34	2248.18	0.530	1191.29	1.1	3.405	A
3 - Bugsby's Way	1082.31	106.80	1863.77	0.581	1082.28	1.4	4.606	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	177.10	917.12	1186.77	0.149	177.43	0.2	3.569	A
2 - Anchor and Hope Lane (S)	972.70	127.91	2270.08	0.428	974.17	0.8	2.780	A
3 - Bugsby's Way	883.70	87.33	1878.36	0.470	885.63	0.9	3.635	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	148.31	767.41	1288.80	0.115	148.49	0.1	3.159	A
2 - Anchor and Hope Lane (S)	814.59	107.04	2286.16	0.356	815.38	0.6	2.450	A
3 - Bugsby's Way	740.06	73.10	1889.02	0.392	741.05	0.6	3.137	A

Cumulative Development Scenario, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.64	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D7	Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	212.00	100.000
2 - Anchor and Hope Lane (S)		✓	1037.00	100.000
3 - Bugsby's Way		✓	534.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	82.000	130.000
	2 - Anchor and Hope Lane (S)	97.000	82.000	858.000
	3 - Bugsby's Way	69.000	404.000	61.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	5	9
	2 - Anchor and Hope Lane (S)	6	1	8
	3 - Bugsby's Way	10	15	66

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.18	3.42	0.2	A
2 - Anchor and Hope Lane (S)	0.54	3.71	1.2	A
3 - Bugsby's Way	0.37	3.59	0.6	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	159.60	410.50	1423.73	0.112	159.10	0.1	2.844	A
2 - Anchor and Hope Lane (S)	780.71	143.34	2173.87	0.359	778.48	0.6	2.575	A
3 - Bugsby's Way	402.02	134.38	1630.47	0.247	400.72	0.3	2.925	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	190.58	491.34	1365.05	0.140	190.44	0.2	3.064	A
2 - Anchor and Hope Lane (S)	932.25	171.57	2147.67	0.434	931.43	0.8	2.958	A
3 - Bugsby's Way	480.05	160.78	1613.88	0.297	479.67	0.4	3.174	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	233.42	601.57	1285.06	0.182	233.18	0.2	3.422	A
2 - Anchor and Hope Lane (S)	1141.76	210.08	2111.96	0.541	1140.15	1.2	3.698	A
3 - Bugsby's Way	587.94	196.80	1591.25	0.369	587.30	0.6	3.584	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	233.42	602.25	1284.56	0.182	233.41	0.2	3.423	A
2 - Anchor and Hope Lane (S)	1141.76	210.29	2111.75	0.541	1141.74	1.2	3.710	A
3 - Bugsby's Way	587.94	197.08	1591.07	0.370	587.94	0.6	3.587	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	190.58	492.42	1364.28	0.140	190.82	0.2	3.070	A
2 - Anchor and Hope Lane (S)	932.25	171.92	2147.35	0.434	933.85	0.8	2.972	A
3 - Bugsby's Way	480.05	161.19	1613.62	0.298	480.69	0.4	3.178	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	159.60	412.21	1422.49	0.112	159.75	0.1	2.852	A
2 - Anchor and Hope Lane (S)	780.71	143.93	2173.32	0.359	781.55	0.6	2.589	A
3 - Bugsby's Way	402.02	134.91	1630.13	0.247	402.41	0.3	2.932	A

Cumulative Development Scenario, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	4.25	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D8	Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Anchor and Hope Lane (N)		✓	201.00	100.000
2 - Anchor and Hope Lane (S)		✓	1130.00	100.000
3 - Bugsby's Way		✓	1009.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0.000	107.000	94.000
	2 - Anchor and Hope Lane (S)	83.000	62.000	985.000
	3 - Bugsby's Way	53.000	902.000	54.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		1 - Anchor and Hope Lane (N)	2 - Anchor and Hope Lane (S)	3 - Bugsby's Way
From	1 - Anchor and Hope Lane (N)	0	2	1
	2 - Anchor and Hope Lane (S)	6	3	4
	3 - Bugsby's Way	1	6	6

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Anchor and Hope Lane (N)	0.21	4.32	0.3	A
2 - Anchor and Hope Lane (S)	0.55	3.57	1.2	A
3 - Bugsby's Way	0.61	4.98	1.5	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	151.32	763.70	1298.64	0.117	150.80	0.1	3.134	A
2 - Anchor and Hope Lane (S)	850.72	111.03	2291.23	0.371	848.37	0.6	2.490	A
3 - Bugsby's Way	759.63	108.86	1870.64	0.406	756.91	0.7	3.224	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	180.70	914.10	1195.57	0.151	180.51	0.2	3.546	A
2 - Anchor and Hope Lane (S)	1015.85	132.91	2274.32	0.447	1014.99	0.8	2.857	A
3 - Bugsby's Way	907.07	130.24	1855.23	0.489	906.00	0.9	3.789	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	221.31	1118.60	1055.41	0.210	220.96	0.3	4.312	A
2 - Anchor and Hope Lane (S)	1244.15	162.67	2251.33	0.553	1242.47	1.2	3.562	A
3 - Bugsby's Way	1110.93	159.43	1834.18	0.606	1108.67	1.5	4.945	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	221.31	1120.80	1053.90	0.210	221.30	0.3	4.323	A
2 - Anchor and Hope Lane (S)	1244.15	162.95	2251.11	0.553	1244.13	1.2	3.574	A
3 - Bugsby's Way	1110.93	159.65	1834.03	0.606	1110.89	1.5	4.978	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	180.70	917.38	1193.31	0.151	181.04	0.2	3.556	A
2 - Anchor and Hope Lane (S)	1015.85	133.33	2274.00	0.447	1017.52	0.8	2.870	A
3 - Bugsby's Way	907.07	130.57	1854.99	0.489	909.32	1.0	3.817	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Anchor and Hope Lane (N)	151.32	767.50	1296.04	0.117	151.51	0.1	3.147	A
2 - Anchor and Hope Lane (S)	850.72	111.57	2290.81	0.371	851.60	0.6	2.502	A
3 - Bugsby's Way	759.63	109.28	1870.34	0.406	760.74	0.7	3.249	A

Appendix F
Woolwich Road/Anchor and Hope Lane/Charlton Church Lane LinSig Results

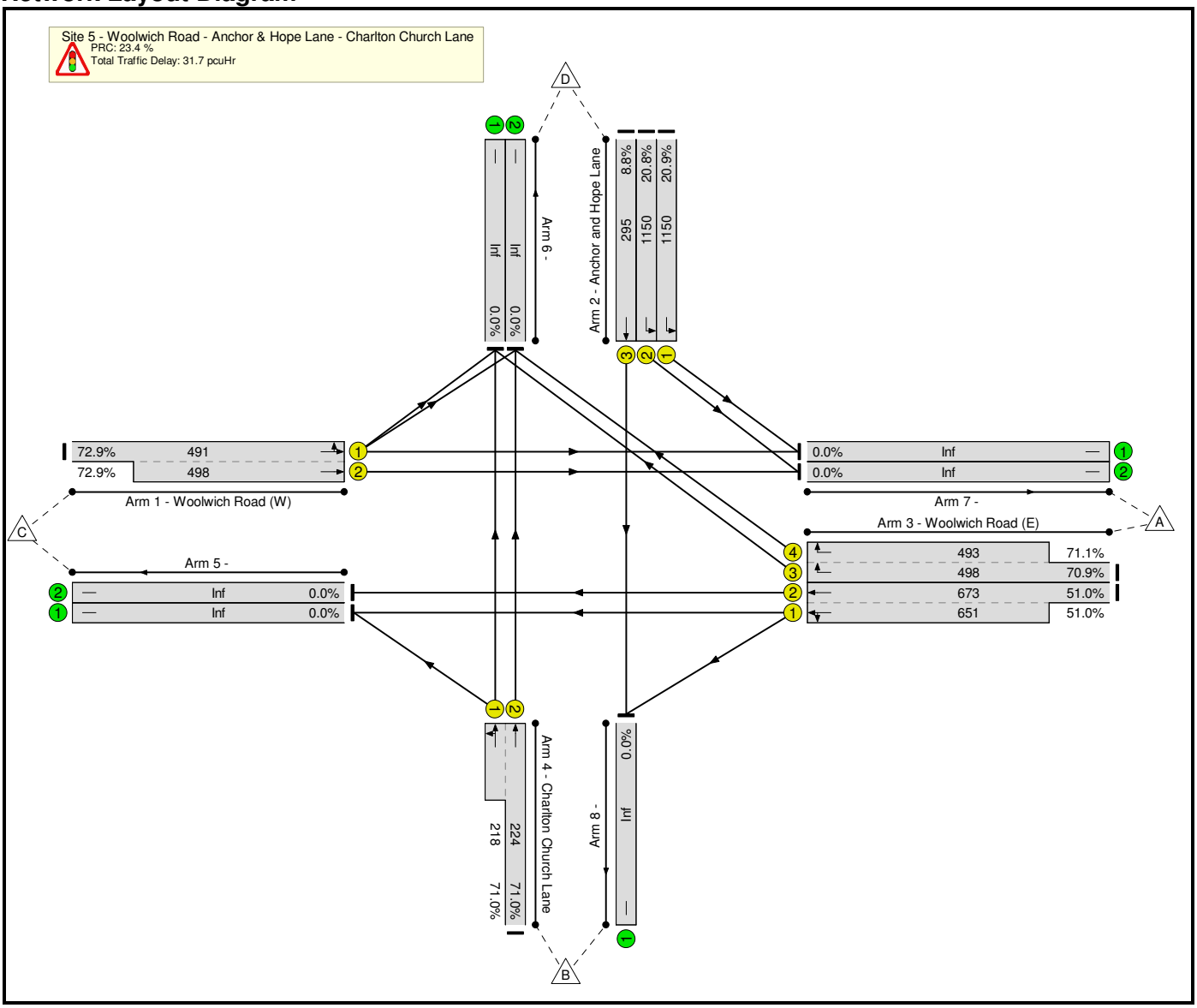
Basic Results Summary

Project and User Details

Project:	
Title:	
Location:	
File name:	Site 5 - Woolwich Road - Anchor & Hope Lane - Charlton Church Lane.lsg3x
Author:	
Company:	
Address:	
Notes:	
Linsig Version:	3, 2, 28, 0

Scenario 1: 'Baseline AM Peak' (FG1: 'Baseline AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

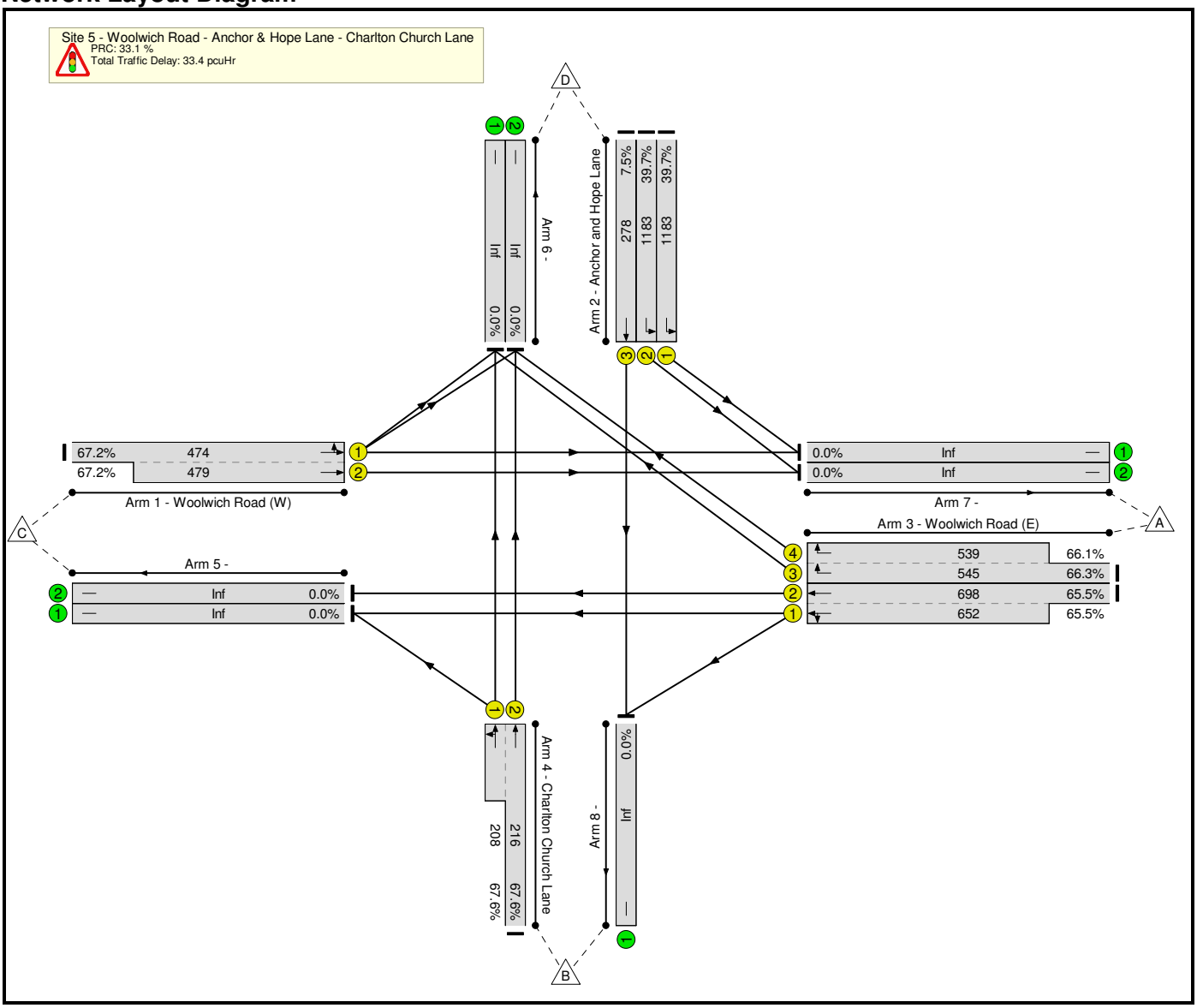
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**72.9%**	**0**	**0**	**0**	**31.7**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**72.9%**	**0**	**0**	**0**	**31.7**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	29	-	721	2030:2055	491+498	72.9 : 72.9%	-	-	-	9.5	47.6	12.3
2/1	Anchor and Hope Lane Left	U	D		1	70	-	240	1944	1150	20.9%	-	-	-	0.9	13.4	3.8
2/2	Anchor and Hope Lane Left	U	D		1	70	-	239	1944	1150	20.8%	-	-	-	0.9	13.4	3.8
2/3	Anchor and Hope Lane Ahead	U	E		1	17	-	26	1965	295	8.8%	-	-	-	0.4	50.7	0.8
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	46	-	675	2005:1939	673+651	51.0 : 51.0%	-	-	-	5.5	29.6	8.9
3/3+3/4	Woolwich Road (E) Right	U	C		1	31	-	703	1868:1847	498+493	70.9 : 71.1%	-	-	-	9.0	46.0	11.8
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	15	-	314	1985:1926	224+218	71.0 : 71.0%	-	-	-	5.5	62.8	6.2

C1 PRC for Signalled Lanes (%): 23.4 Total Delay for Signalled Lanes (pcuHr): 31.69 Cycle Time (s): 120
PRC Over All Lanes (%): 23.4 Total Delay Over All Lanes(pcuHr): 31.69

Basic Results Summary

Scenario 2: 'Baseline PM Peak' (FG2: 'Baseline PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

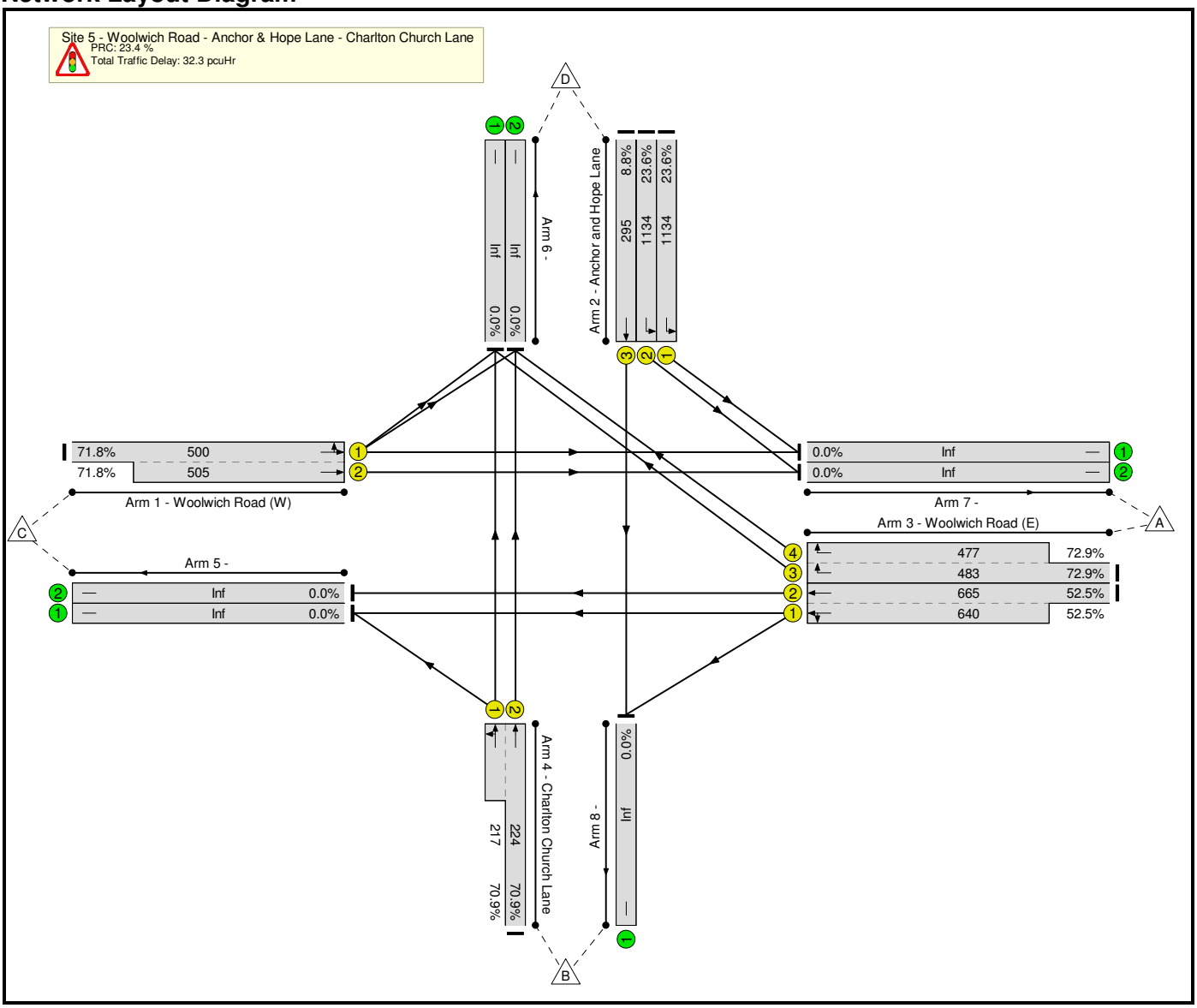
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**67.6%**	**0**	**0**	**0**	**33.4**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**67.6%**	**0**	**0**	**0**	**33.4**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	27	-	641	2033:2055	474+479	67.2 : 67.2%	-	-	-	8.5	47.6	10.8
2/1	Anchor and Hope Lane Left	U	D		1	72	-	470	1944	1183	39.7%	-	-	-	1.9	14.7	8.3
2/2	Anchor and Hope Lane Left	U	D		1	72	-	469	1944	1183	39.7%	-	-	-	1.9	14.7	8.3
2/3	Anchor and Hope Lane Ahead	U	E		1	16	-	21	1965	278	7.5%	-	-	-	0.3	51.7	0.6
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	49	-	884	2005:1871	698+652	65.5 : 65.5%	-	-	-	7.4	30.3	12.4
3/3+3/4	Woolwich Road (E) Right	U	C		1	34	-	717	1868:1847	545+539	66.3 : 66.1%	-	-	-	8.4	42.2	11.5
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	14	-	287	1985:1904	216+208	67.6 : 67.6%	-	-	-	5.0	62.5	5.6

C1 PRC for Signalled Lanes (%): 33.1 Total Delay for Signalled Lanes (pcuHr): 33.42 Cycle Time (s): 120
PRC Over All Lanes (%): 33.1 Total Delay Over All Lanes(pcuHr): 33.42

Basic Results Summary

Scenario 3: 'Baseline Plus Proposed Development AM Peak' (FG3: 'Baseline Plus Proposed Development AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

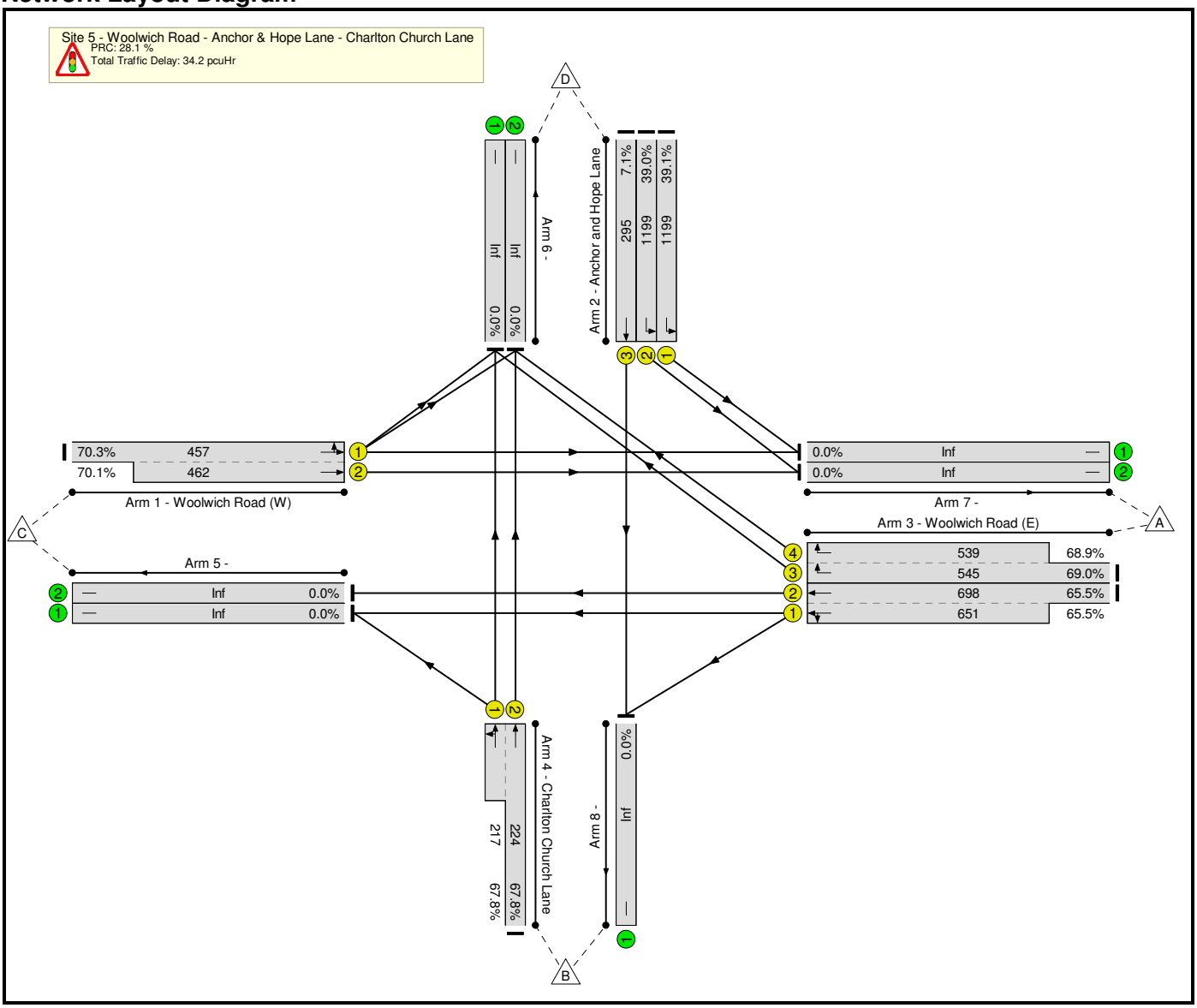
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**72.9%**	**0**	**0**	**0**	**32.3**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**72.9%**	**0**	**0**	**0**	**32.3**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	30	-	722	2030:2055	500+505	71.8 : 71.8%	-	-	-	9.3	46.4	12.2
2/1	Anchor and Hope Lane Left	U	D		1	69	-	268	1944	1134	23.6%	-	-	-	1.1	14.2	4.4
2/2	Anchor and Hope Lane Left	U	D		1	69	-	268	1944	1134	23.6%	-	-	-	1.1	14.2	4.4
2/3	Anchor and Hope Lane Ahead	U	E		1	17	-	26	1965	295	8.8%	-	-	-	0.4	50.7	0.8
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	45	-	685	2005:1933	665+640	52.5 : 52.5%	-	-	-	5.8	30.5	9.2
3/3+3/4	Woolwich Road (E) Right	U	C		1	30	-	700	1868:1847	483+477	72.9 : 72.9%	-	-	-	9.2	47.5	12.0
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	15	-	313	1985:1926	224+217	70.9 : 70.9%	-	-	-	5.5	62.7	6.2

C1 PRC for Signalled Lanes (%): 23.4 Total Delay for Signalled Lanes (pcuHr): 32.28 Cycle Time (s): 120
PRC Over All Lanes (%): 23.4 Total Delay Over All Lanes(pcuHr): 32.28

Basic Results Summary

Scenario 4: 'Baseline Plus Proposed Development PM Peak' (FG4: 'Baseline Plus Proposed Development PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

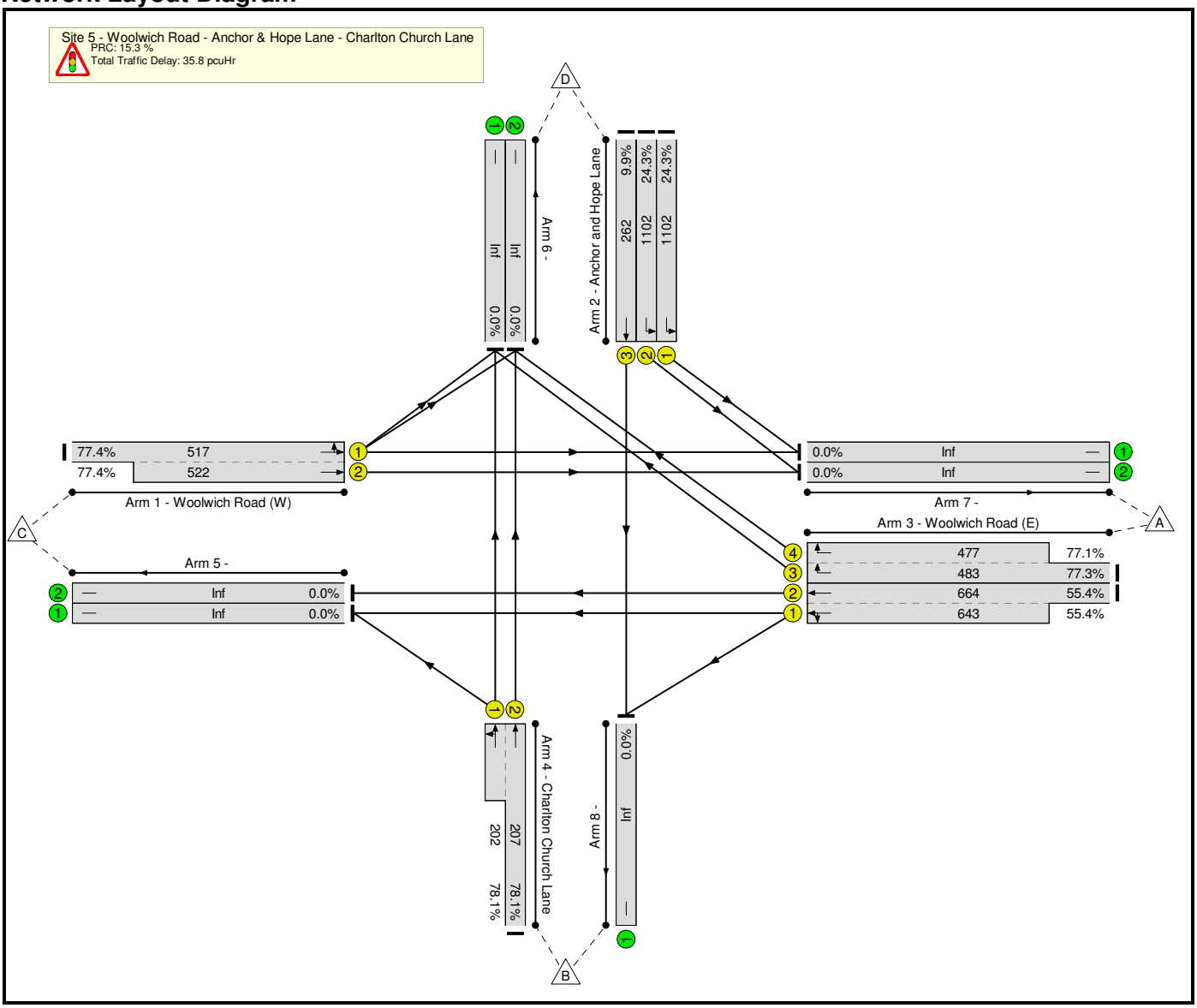
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**70.3%**	**0**	**0**	**0**	**34.2**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**70.3%**	**0**	**0**	**0**	**34.2**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	26	-	645	2030:2055	457+462	70.3 : 70.1%	-	-	-	8.8	49.3	11.1
2/1	Anchor and Hope Lane Left	U	D		1	73	-	469	1944	1199	39.1%	-	-	-	1.8	14.1	8.1
2/2	Anchor and Hope Lane Left	U	D		1	73	-	468	1944	1199	39.0%	-	-	-	1.8	14.1	8.1
2/3	Anchor and Hope Lane Ahead	U	E		1	17	-	21	1965	295	7.1%	-	-	-	0.3	50.4	0.6
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	49	-	883	2005:1872	698+651	65.5 : 65.5%	-	-	-	7.4	30.3	12.4
3/3+3/4	Woolwich Road (E) Right	U	C		1	34	-	747	1868:1847	545+539	69.0 : 68.9%	-	-	-	8.9	43.0	12.2
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	15	-	299	1985:1907	224+217	67.8 : 67.8%	-	-	-	5.1	61.3	5.8

C1 PRC for Signalled Lanes (%): 28.1 Total Delay for Signalled Lanes (pcuHr): 34.24 Cycle Time (s): 120
PRC Over All Lanes (%): 28.1 Total Delay Over All Lanes(pcuHr): 34.24

Basic Results Summary

Scenario 5: 'Baseline Plus Other Cumulative Developments AM Peak' (FG5: 'Baseline Plus Other Cumulative Developments AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

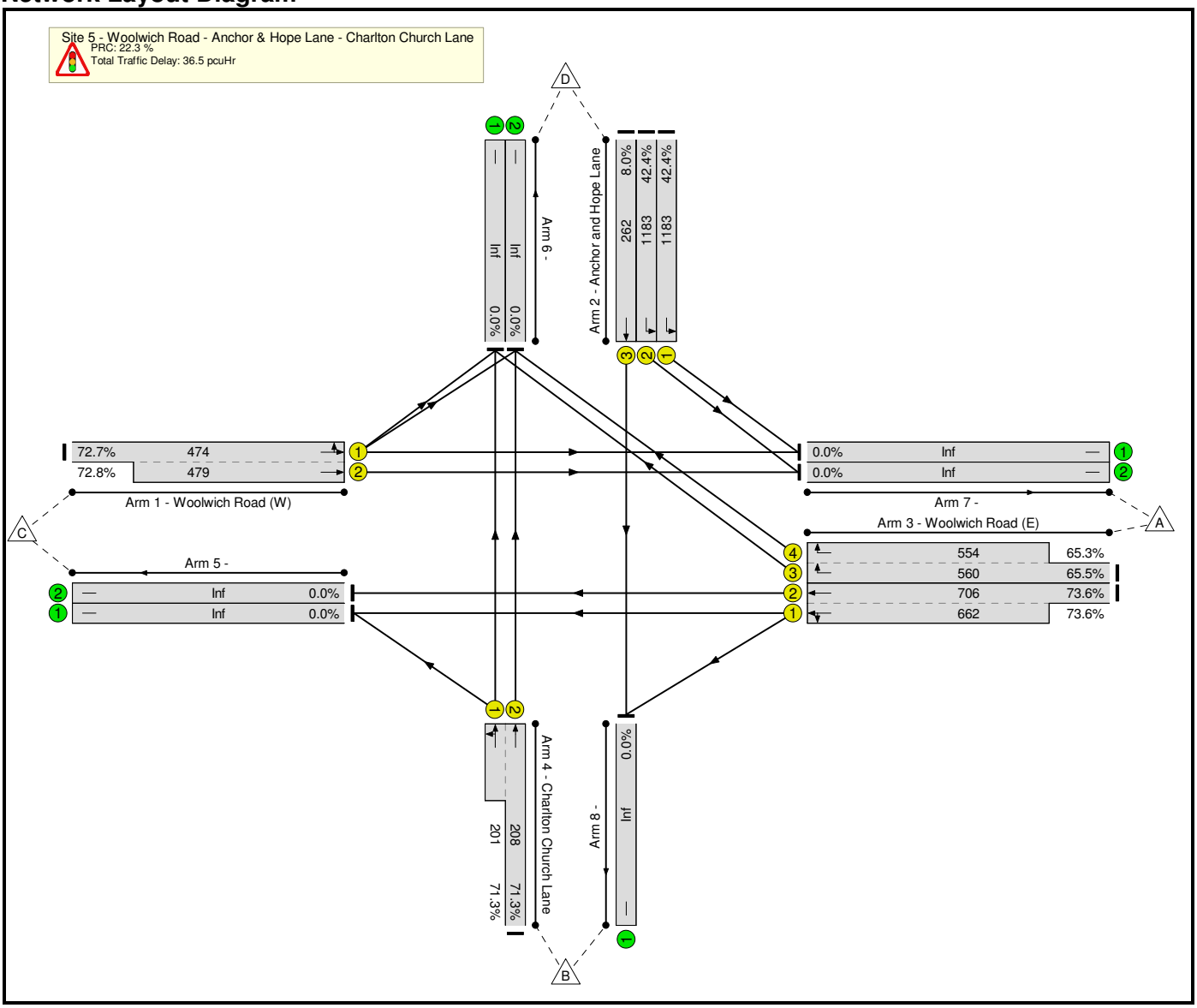
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**78.1%**	**0**	**0**	**0**	**35.8**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**78.1%**	**0**	**0**	**0**	**35.8**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	32	-	804	2033:2055	517+522	77.4 : 77.4%	-	-	-	10.5	46.8	13.8
2/1	Anchor and Hope Lane Left	U	D		1	67	-	268	1944	1102	24.3%	-	-	-	1.1	15.2	4.6
2/2	Anchor and Hope Lane Left	U	D		1	67	-	268	1944	1102	24.3%	-	-	-	1.1	15.2	4.6
2/3	Anchor and Hope Lane Ahead	U	E		1	15	-	26	1965	262	9.9%	-	-	-	0.4	53.4	0.8
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	45	-	724	2005:1938	664+643	55.4 : 55.4%	-	-	-	6.2	31.0	9.8
3/3+3/4	Woolwich Road (E) Right	U	C		1	30	-	741	1868:1847	483+477	77.3 : 77.1%	-	-	-	10.2	49.3	13.2
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	13	-	320	1985:1927	207+202	78.1 : 78.1%	-	-	-	6.2	70.3	6.9

C1 PRC for Signalled Lanes (%): 15.3 Total Delay for Signalled Lanes (pcuHr): 35.75 Cycle Time (s): 120
PRC Over All Lanes (%): 15.3 Total Delay Over All Lanes(pcuHr): 35.75

Basic Results Summary

Scenario 6: 'Baseline Plus Other Cumulative Developments PM Peak' (FG6: 'Baseline Plus Other Cumulative Developments PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

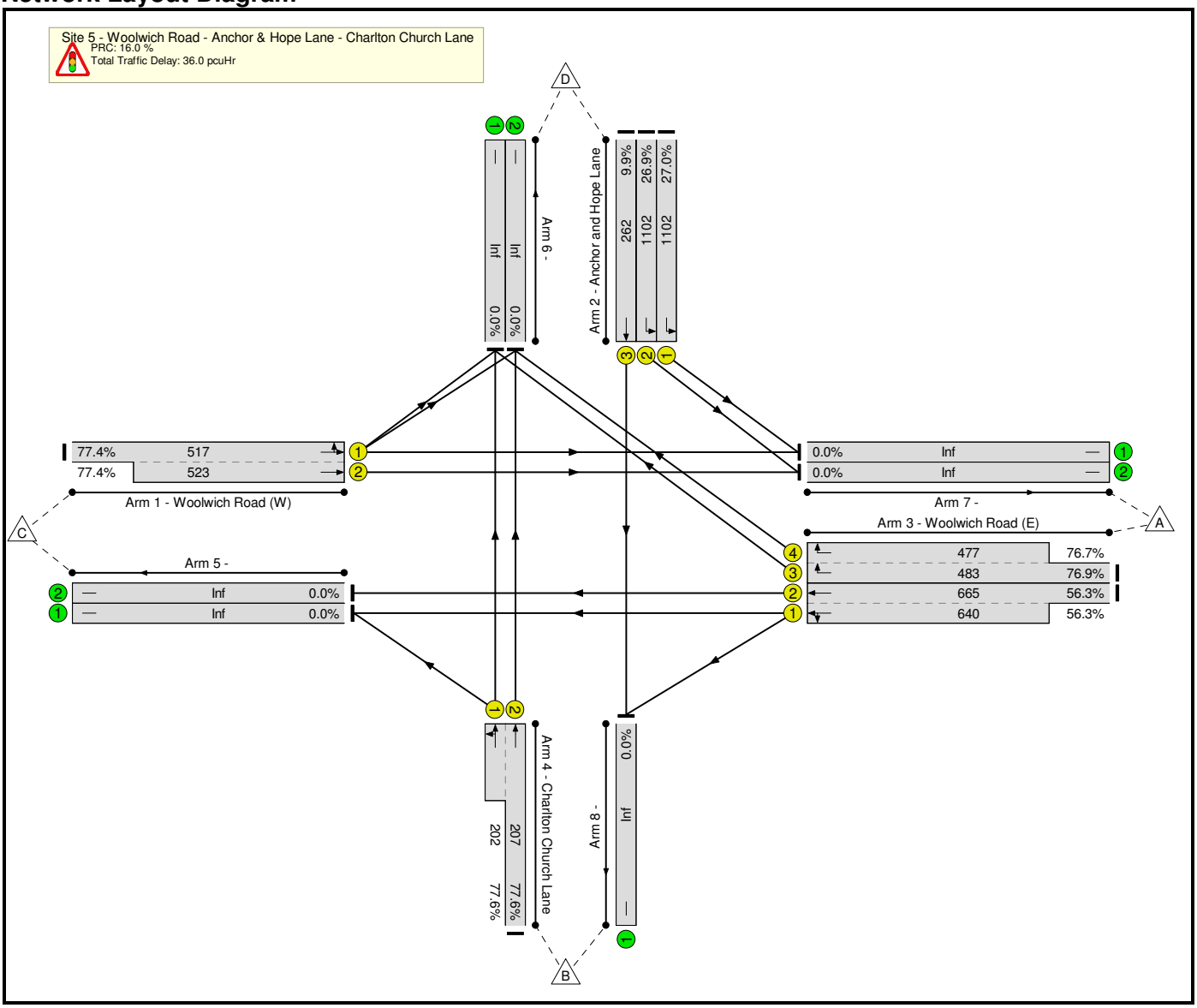
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**73.6%**	**0**	**0**	**0**	**36.5**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**73.6%**	**0**	**0**	**0**	**36.5**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	27	-	694	2034:2055	474+479	72.7 : 72.8%	-	-	-	9.5	49.3	12.0
2/1	Anchor and Hope Lane Left	U	D		1	72	-	501	1944	1183	42.4%	-	-	-	2.1	15.0	9.1
2/2	Anchor and Hope Lane Left	U	D		1	72	-	501	1944	1183	42.4%	-	-	-	2.1	15.0	9.1
2/3	Anchor and Hope Lane Ahead	U	E		1	15	-	21	1965	262	8.0%	-	-	-	0.3	53.1	0.7
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	50	-	1007	2005:1880	706+662	73.6 : 73.6%	-	-	-	8.9	31.7	14.8
3/3+3/4	Woolwich Road (E) Right	U	C		1	35	-	729	1868:1847	560+554	65.5 : 65.3%	-	-	-	8.3	41.2	11.5
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	13	-	291	1985:1905	208+201	71.3 : 71.3%	-	-	-	5.3	65.7	5.9

C1 PRC for Signalled Lanes (%): 22.3 Total Delay for Signalled Lanes (pcuHr): 36.54 Cycle Time (s): 120
PRC Over All Lanes (%): 22.3 Total Delay Over All Lanes(pcuHr): 36.54

Basic Results Summary

Scenario 7: 'Cumulative Development Scenario AM Peak' (FG7: 'Cumulative Development Scenario AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

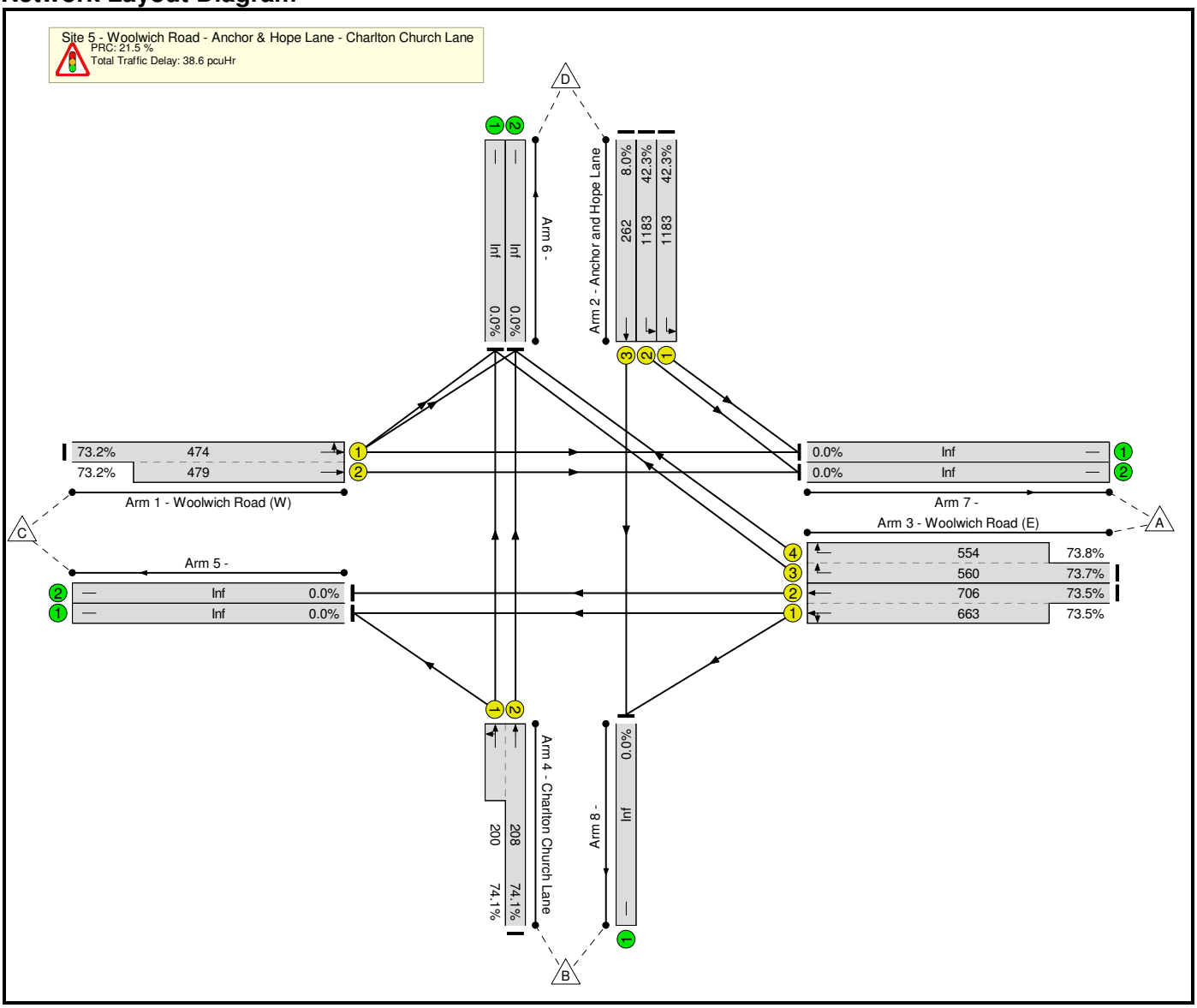
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**77.6%**	**0**	**0**	**0**	**36.0**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**77.6%**	**0**	**0**	**0**	**36.0**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	32	-	805	2032:2055	517+523	77.4 : 77.4%	-	-	-	10.5	46.8	13.8
2/1	Anchor and Hope Lane Left	U	D		1	67	-	297	1944	1102	27.0%	-	-	-	1.3	15.5	5.2
2/2	Anchor and Hope Lane Left	U	D		1	67	-	296	1944	1102	26.9%	-	-	-	1.3	15.5	5.2
2/3	Anchor and Hope Lane Ahead	U	E		1	15	-	26	1965	262	9.9%	-	-	-	0.4	53.4	0.8
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	45	-	734	2005:1933	665+640	56.3 : 56.3%	-	-	-	6.4	31.2	10.0
3/3+3/4	Woolwich Road (E) Right	U	C		1	30	-	737	1868:1847	483+477	76.9 : 76.7%	-	-	-	10.1	49.1	13.1
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	13	-	318	1985:1927	207+202	77.6 : 77.6%	-	-	-	6.2	69.9	6.8

C1 PRC for Signalled Lanes (%): 16.0 Total Delay for Signalled Lanes (pcuHr): 36.01 Cycle Time (s): 120
PRC Over All Lanes (%): 16.0 Total Delay Over All Lanes(pcuHr): 36.01

Basic Results Summary

Scenario 8: 'Cumulative Development Scenario PM Peak' (FG8: 'Cumulative Development Scenario PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**74.1%**	**0**	**0**	**0**	**38.6**	-	-
Site 5 - Woolwich Road - Anchor && Hope Lane - Charlton Church Lane	-	-	-		-	-	-	-	-	-	**74.1%**	**0**	**0**	**0**	**38.6**	-	-
1/1+1/2	Woolwich Road (W) Left Ahead	U	B		1	27	-	698	2032:2055	474+479	73.2 : 73.2%	-	-	-	9.6	49.5	12.1
2/1	Anchor and Hope Lane Left	U	D		1	72	-	500	1944	1183	42.3%	-	-	-	2.1	15.0	9.1
2/2	Anchor and Hope Lane Left	U	D		1	72	-	500	1944	1183	42.3%	-	-	-	2.1	15.0	9.1
2/3	Anchor and Hope Lane Ahead	U	E		1	15	-	21	1965	262	8.0%	-	-	-	0.3	53.1	0.7
3/2+3/1	Woolwich Road (E) Ahead Left	U	A		1	50	-	1006	2005:1880	706+663	73.5 : 73.5%	-	-	-	8.9	31.7	14.8
3/3+3/4	Woolwich Road (E) Right	U	C		1	35	-	822	1868:1847	560+554	73.7 : 73.8%	-	-	-	10.0	43.9	13.7
4/2+4/1	Charlton Church Lane Left Ahead	U	F		1	13	-	302	1985:1908	208+200	74.1 : 74.1%	-	-	-	5.7	67.4	6.3

C1 PRC for Signalled Lanes (%): 21.5 Total Delay for Signalled Lanes (pcuHr): 38.60 Cycle Time (s): 120
PRC Over All Lanes (%): 21.5 Total Delay Over All Lanes(pcuHr): 38.60

Appendix G
Woolwich Road/Retail Park Access/Gallon Close ARCADY Results

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Site 6 - Woolwich Road - Retail Park - Gallon Close.j9
Path: T:\30000_Projects\30821 Charlton Riverside, Greenwich\Junction modelling\Site 6
Report generation date: 19/10/2016 16:02:50

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2016 Baseline							
1 - Stone Lake Retail Park	0.0	5.01	0.01	A	0.2	9.01	0.18	A
2 - Woolwich Road (E)	1.4	3.96	0.59	A	1.8	4.54	0.64	A
3 - York Terrace	0.0	9.68	0.03	A	0.0	14.05	0.02	B
4 - Woolwich Road (W)	1.0	3.14	0.50	A	2.3	4.88	0.70	A
	Baseline Plus Proposed Development							
1 - Stone Lake Retail Park	0.0	5.24	0.01	A	0.2	8.98	0.18	A
2 - Woolwich Road (E)	1.4	3.98	0.59	A	1.9	4.74	0.66	A
3 - York Terrace	0.0	9.78	0.03	A	0.0	15.17	0.02	C
4 - Woolwich Road (W)	1.1	3.26	0.53	A	2.3	4.87	0.70	A
	Baseline Plus Other Cumulative Developments							
1 - Stone Lake Retail Park	0.0	5.76	0.01	A	0.3	11.17	0.22	B
2 - Woolwich Road (E)	1.7	4.31	0.63	A	2.8	6.22	0.74	A
3 - York Terrace	0.0	11.11	0.03	B	0.0	26.43	0.04	D
4 - Woolwich Road (W)	1.3	3.59	0.57	A	3.0	5.94	0.75	A
	Cumulative Development Scenario							
1 - Stone Lake Retail Park	0.0	6.06	0.01	A	0.3	11.14	0.22	B
2 - Woolwich Road (E)	1.7	4.33	0.63	A	2.9	6.37	0.75	A
3 - York Terrace	0.0	11.22	0.03	B	0.0	28.64	0.04	D
4 - Woolwich Road (W)	1.4	3.75	0.59	A	3.0	5.93	0.75	A

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

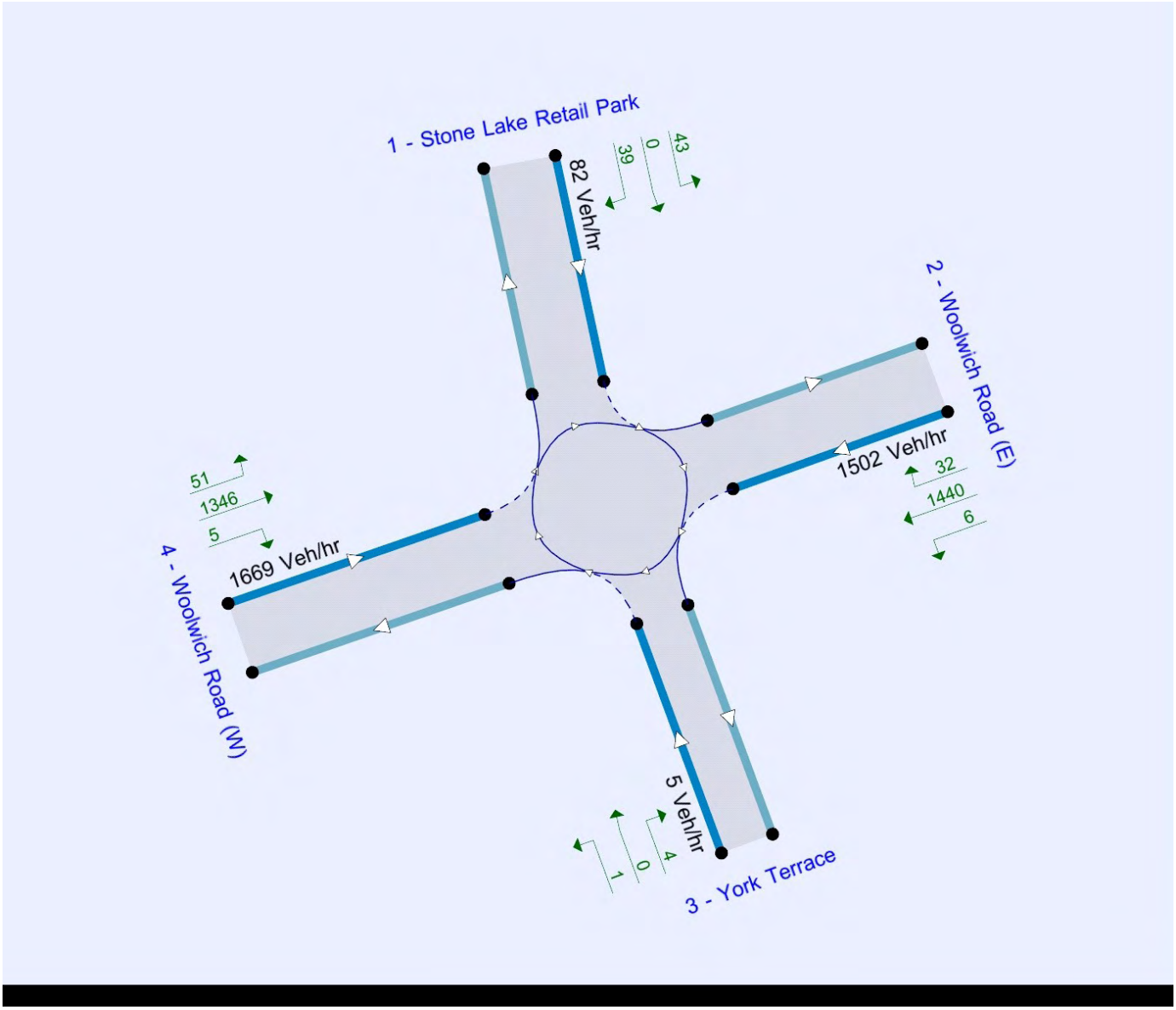
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TPP111"techuser
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
2016 Baseline	AM	ONE HOUR	08:00	09:30	15
2016 Baseline	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15
Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15
Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15
Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15
Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

2016 Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Stone Lake Retail Park	
2	Woolwich Road (E)	
3	York Terrace	
4	Woolwich Road (W)	

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1 - Stone Lake Retail Park	0.00	99999.00
2 - Woolwich Road (E)	0.00	99999.00
3 - York Terrace	0.00	99999.00
4 - Woolwich Road (W)	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Stone Lake Retail Park	3.70	7.50	9.3	23.0	46.0	56.0	
2 - Woolwich Road (E)	8.90	10.60	3.2	20.0	46.0	62.0	
3 - York Terrace	2.70	5.00	10.2	9.0	46.0	15.0	
4 - Woolwich Road (W)	8.80	10.90	3.7	21.0	46.0	56.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Stone Lake Retail Park	0.558	1484.246
2 - Woolwich Road (E)	0.760	2566.852
3 - York Terrace	0.528	1213.468
4 - Woolwich Road (W)	0.781	2638.129

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	2016 Baseline	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	8.00	100.000
2 - Woolwich Road (E)		✓	1198.00	100.000
3 - York Terrace		✓	9.00	100.000
4 - Woolwich Road (W)		✓	1055.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	2.000	0.000	6.000
	2 - Woolwich Road (E)	6.000	54.000	3.000	1135.000
	3 - York Terrace	0.000	3.000	0.000	6.000
	4 - Woolwich Road (W)	13.000	951.000	4.000	87.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	19	0	11
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	12	0	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.01	5.01	0.0	A
2 - Woolwich Road (E)	0.59	3.96	1.4	A
3 - York Terrace	0.03	9.68	0.0	A
4 - Woolwich Road (W)	0.50	3.14	1.0	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	825.21	968.19	0.006	6.00	0.0	3.740	A
2 - Woolwich Road (E)	901.92	72.83	2252.49	0.400	899.26	0.7	2.656	A
3 - York Terrace	6.78	966.84	646.38	0.010	6.73	0.0	5.627	A
4 - Woolwich Road (W)	794.26	47.28	2324.58	0.342	792.19	0.5	2.346	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	987.25	866.86	0.008	7.18	0.0	4.187	A
2 - Woolwich Road (E)	1076.98	87.14	2241.85	0.480	1075.96	0.9	3.084	A
3 - York Terrace	8.09	1156.81	534.95	0.015	8.07	0.0	6.832	A
4 - Woolwich Road (W)	948.42	56.58	2317.02	0.409	947.73	0.7	2.627	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1208.66	728.39	0.012	8.79	0.0	5.002	A
2 - Woolwich Road (E)	1319.02	106.68	2227.30	0.592	1316.95	1.4	3.946	A
3 - York Terrace	9.91	1415.93	382.97	0.026	9.87	0.0	9.647	A
4 - Woolwich Road (W)	1161.57	69.25	2306.71	0.504	1160.30	1.0	3.138	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1210.01	727.55	0.012	8.81	0.0	5.008	A
2 - Woolwich Road (E)	1319.02	106.80	2227.21	0.592	1318.99	1.4	3.963	A
3 - York Terrace	9.91	1418.09	381.70	0.026	9.91	0.0	9.682	A
4 - Woolwich Road (W)	1161.57	69.36	2306.62	0.504	1161.56	1.0	3.143	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	989.33	865.55	0.008	7.21	0.0	4.195	A
2 - Woolwich Road (E)	1076.98	87.32	2241.71	0.480	1079.03	0.9	3.103	A
3 - York Terrace	8.09	1160.06	533.05	0.015	8.13	0.0	6.857	A
4 - Woolwich Road (W)	948.42	56.75	2316.88	0.409	949.68	0.7	2.635	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	828.13	966.36	0.006	6.03	0.0	3.747	A
2 - Woolwich Road (E)	901.92	73.09	2252.30	0.400	902.96	0.7	2.669	A
3 - York Terrace	6.78	970.78	644.07	0.011	6.80	0.0	5.650	A
4 - Woolwich Road (W)	794.26	47.49	2324.41	0.342	794.96	0.5	2.356	A

2016 Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	4.86	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	2016 Baseline	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	82.00	100.000
2 - Woolwich Road (E)		✓	1280.00	100.000
3 - York Terrace		✓	5.00	100.000
4 - Woolwich Road (W)		✓	1552.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	43.000	0.000	39.000
	2 - Woolwich Road (E)	32.000	24.000	6.000	1218.000
	3 - York Terrace	0.000	4.000	0.000	1.000
	4 - Woolwich Road (W)	51.000	1235.000	5.000	261.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	4	0	5
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	7	0	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.18	9.01	0.2	A
2 - Woolwich Road (E)	0.64	4.54	1.8	A
3 - York Terrace	0.02	14.05	0.0	B
4 - Woolwich Road (W)	0.70	4.88	2.3	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1147.55	806.43	0.077	61.40	0.1	4.829	A
2 - Woolwich Road (E)	963.65	228.85	2281.17	0.422	960.74	0.7	2.721	A
3 - York Terrace	3.76	1181.33	564.63	0.007	3.74	0.0	6.417	A
4 - Woolwich Road (W)	1168.43	45.02	2461.19	0.475	1164.84	0.9	2.768	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1372.92	673.31	0.109	73.56	0.1	6.001	A
2 - Woolwich Road (E)	1150.69	273.83	2248.28	0.512	1149.44	1.0	3.274	A
3 - York Terrace	4.49	1413.40	437.17	0.010	4.48	0.0	8.320	A
4 - Woolwich Road (W)	1395.22	53.87	2454.55	0.568	1393.59	1.3	3.389	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1679.60	492.17	0.183	89.88	0.2	8.939	A
2 - Woolwich Road (E)	1409.30	334.95	2203.59	0.640	1406.47	1.8	4.500	A
3 - York Terrace	5.51	1729.34	263.64	0.021	5.46	0.0	13.942	B
4 - Woolwich Road (W)	1708.79	65.90	2445.53	0.699	1704.90	2.3	4.836	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1683.37	489.94	0.184	90.27	0.2	9.007	A
2 - Woolwich Road (E)	1409.30	335.79	2202.97	0.640	1409.25	1.8	4.535	A
3 - York Terrace	5.51	1732.94	261.67	0.021	5.50	0.0	14.052	B
4 - Woolwich Road (W)	1708.79	66.06	2445.41	0.699	1708.71	2.3	4.884	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1378.39	670.09	0.110	74.12	0.1	6.043	A
2 - Woolwich Road (E)	1150.69	275.05	2247.39	0.512	1153.52	1.1	3.301	A
3 - York Terrace	4.49	1418.65	434.29	0.010	4.54	0.0	8.379	A
4 - Woolwich Road (W)	1395.22	54.10	2454.39	0.568	1399.10	1.3	3.425	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1152.78	803.35	0.077	61.90	0.1	4.857	A
2 - Woolwich Road (E)	963.65	229.98	2280.34	0.423	964.93	0.7	2.741	A
3 - York Terrace	3.76	1186.63	561.72	0.007	3.78	0.0	6.451	A
4 - Woolwich Road (W)	1168.43	45.24	2461.03	0.475	1170.11	0.9	2.793	A

Baseline Plus Proposed Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.66	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Baseline Plus Proposed Development	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	8.00	100.000
2 - Woolwich Road (E)		✓	1195.00	100.000
3 - York Terrace		✓	9.00	100.000
4 - Woolwich Road (W)		✓	1112.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	2.000	0.000	6.000
	2 - Woolwich Road (E)	6.000	54.000	3.000	1132.000
	3 - York Terrace	0.000	3.000	0.000	6.000
	4 - Woolwich Road (W)	13.000	998.000	4.000	97.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	19	0	11
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	11	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.01	5.24	0.0	A
2 - Woolwich Road (E)	0.59	3.98	1.4	A
3 - York Terrace	0.03	9.78	0.0	A
4 - Woolwich Road (W)	0.53	3.26	1.1	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	867.98	946.14	0.006	6.00	0.0	3.828	A
2 - Woolwich Road (E)	899.66	80.33	2247.33	0.400	897.00	0.7	2.660	A
3 - York Terrace	6.78	972.08	643.73	0.011	6.73	0.0	5.651	A
4 - Woolwich Road (W)	837.17	47.28	2345.27	0.357	834.96	0.6	2.381	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1038.42	840.47	0.009	7.18	0.0	4.319	A
2 - Woolwich Road (E)	1074.28	96.12	2235.68	0.481	1073.26	0.9	3.094	A
3 - York Terrace	8.09	1163.09	531.78	0.015	8.07	0.0	6.873	A
4 - Woolwich Road (W)	999.67	56.58	2337.64	0.428	998.91	0.7	2.687	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1271.26	696.12	0.013	8.79	0.0	5.237	A
2 - Woolwich Road (E)	1315.72	117.67	2219.75	0.593	1313.63	1.4	3.964	A
3 - York Terrace	9.91	1423.60	379.09	0.026	9.86	0.0	9.748	A
4 - Woolwich Road (W)	1224.34	69.24	2327.25	0.526	1222.91	1.1	3.255	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1272.76	695.19	0.013	8.81	0.0	5.244	A
2 - Woolwich Road (E)	1315.72	117.81	2219.65	0.593	1315.68	1.4	3.982	A
3 - York Terrace	9.91	1425.79	377.81	0.026	9.91	0.0	9.784	A
4 - Woolwich Road (W)	1224.34	69.36	2327.15	0.526	1224.32	1.1	3.263	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1040.73	839.04	0.009	7.21	0.0	4.327	A
2 - Woolwich Road (E)	1074.28	96.33	2235.52	0.481	1076.34	0.9	3.112	A
3 - York Terrace	8.09	1166.37	529.85	0.015	8.14	0.0	6.902	A
4 - Woolwich Road (W)	999.67	56.75	2337.50	0.428	1001.09	0.8	2.698	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	871.12	944.19	0.006	6.03	0.0	3.839	A
2 - Woolwich Road (E)	899.66	80.63	2247.11	0.400	900.70	0.7	2.677	A
3 - York Terrace	6.78	976.06	641.40	0.011	6.80	0.0	5.674	A
4 - Woolwich Road (W)	837.17	47.49	2345.10	0.357	837.95	0.6	2.391	A

Baseline Plus Proposed Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	4.94	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Baseline Plus Proposed Development	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	82.00	100.000
2 - Woolwich Road (E)		✓	1312.00	100.000
3 - York Terrace		✓	5.00	100.000
4 - Woolwich Road (W)		✓	1550.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	43.000	0.000	39.000
	2 - Woolwich Road (E)	32.000	24.000	6.000	1250.000
	3 - York Terrace	0.000	4.000	0.000	1.000
	4 - Woolwich Road (W)	51.000	1234.000	5.000	260.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	4	0	5
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	7	0	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.18	8.98	0.2	A
2 - Woolwich Road (E)	0.66	4.74	1.9	A
3 - York Terrace	0.02	15.17	0.0	C
4 - Woolwich Road (W)	0.70	4.87	2.3	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1146.06	807.30	0.076	61.40	0.1	4.824	A
2 - Woolwich Road (E)	987.74	228.10	2281.64	0.433	984.70	0.8	2.770	A
3 - York Terrace	3.76	1204.55	551.75	0.007	3.74	0.0	6.568	A
4 - Woolwich Road (W)	1166.92	45.02	2461.13	0.474	1163.33	0.9	2.765	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1371.14	674.35	0.109	73.56	0.1	5.990	A
2 - Woolwich Road (E)	1179.46	272.94	2248.85	0.524	1178.12	1.1	3.357	A
3 - York Terrace	4.49	1441.18	421.76	0.011	4.48	0.0	8.627	A
4 - Woolwich Road (W)	1393.41	53.87	2454.49	0.568	1391.79	1.3	3.384	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1677.42	493.43	0.183	89.89	0.2	8.911	A
2 - Woolwich Road (E)	1444.54	333.86	2204.30	0.655	1441.42	1.9	4.700	A
3 - York Terrace	5.51	1763.20	244.86	0.022	5.46	0.0	15.032	C
4 - Woolwich Road (W)	1706.58	65.89	2445.47	0.698	1702.70	2.3	4.822	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1681.18	491.21	0.184	90.27	0.2	8.978	A
2 - Woolwich Road (E)	1444.54	334.69	2203.69	0.656	1444.48	1.9	4.741	A
3 - York Terrace	5.51	1767.06	242.74	0.023	5.50	0.0	15.173	C
4 - Woolwich Road (W)	1706.58	66.06	2445.34	0.698	1706.50	2.3	4.870	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1376.57	671.14	0.110	74.11	0.1	6.033	A
2 - Woolwich Road (E)	1179.46	274.14	2247.97	0.525	1182.56	1.1	3.387	A
3 - York Terrace	4.49	1446.78	418.68	0.011	4.54	0.0	8.695	A
4 - Woolwich Road (W)	1393.41	54.11	2454.31	0.568	1397.27	1.3	3.419	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1151.26	804.23	0.077	61.90	0.1	4.852	A
2 - Woolwich Road (E)	987.74	229.23	2280.81	0.433	989.12	0.8	2.791	A
3 - York Terrace	3.76	1210.05	548.73	0.007	3.78	0.0	6.608	A
4 - Woolwich Road (W)	1166.92	45.24	2460.96	0.474	1168.59	0.9	2.788	A

Baseline Plus Other Cumulative Developments, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	3.99	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D5	Baseline Plus Other Cumulative Developments	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	8.00	100.000
2 - Woolwich Road (E)		✓	1279.00	100.000
3 - York Terrace		✓	9.00	100.000
4 - Woolwich Road (W)		✓	1202.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	2.000	0.000	6.000
	2 - Woolwich Road (E)	6.000	54.000	3.000	1216.000
	3 - York Terrace	0.000	3.000	0.000	6.000
	4 - Woolwich Road (W)	13.000	1094.000	4.000	91.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	19	0	10
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	11	0	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.01	5.76	0.0	A
2 - Woolwich Road (E)	0.63	4.31	1.7	A
3 - York Terrace	0.03	11.11	0.0	B
4 - Woolwich Road (W)	0.57	3.59	1.3	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	935.44	903.94	0.007	6.00	0.0	4.009	A
2 - Woolwich Road (E)	962.89	75.82	2269.99	0.424	959.96	0.7	2.742	A
3 - York Terrace	6.78	1030.53	613.90	0.011	6.73	0.0	5.928	A
4 - Woolwich Road (W)	904.93	47.28	2342.90	0.386	902.42	0.6	2.495	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1119.16	789.96	0.009	7.18	0.0	4.598	A
2 - Woolwich Road (E)	1149.79	90.72	2258.81	0.509	1148.60	1.0	3.240	A
3 - York Terrace	8.09	1233.03	496.09	0.016	8.07	0.0	7.376	A
4 - Woolwich Road (W)	1080.57	56.57	2335.28	0.463	1079.65	0.9	2.866	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1369.95	634.38	0.014	8.79	0.0	5.754	A
2 - Woolwich Road (E)	1408.20	111.05	2243.54	0.628	1405.66	1.7	4.284	A
3 - York Terrace	9.91	1509.01	335.53	0.030	9.85	0.0	11.053	B
4 - Woolwich Road (W)	1323.42	69.23	2324.91	0.569	1321.61	1.3	3.582	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1371.84	633.20	0.014	8.81	0.0	5.764	A
2 - Woolwich Road (E)	1408.20	111.20	2243.42	0.628	1408.16	1.7	4.309	A
3 - York Terrace	9.91	1511.65	333.99	0.030	9.91	0.0	11.107	B
4 - Woolwich Road (W)	1323.42	69.36	2324.80	0.569	1323.40	1.3	3.594	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1122.03	788.18	0.009	7.21	0.0	4.609	A
2 - Woolwich Road (E)	1149.79	90.95	2258.63	0.509	1152.31	1.0	3.263	A
3 - York Terrace	8.09	1236.96	493.80	0.016	8.15	0.0	7.415	A
4 - Woolwich Road (W)	1080.57	56.77	2335.12	0.463	1082.37	0.9	2.879	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	939.04	901.70	0.007	6.03	0.0	4.020	A
2 - Woolwich Road (E)	962.89	76.12	2269.77	0.424	964.11	0.7	2.759	A
3 - York Terrace	6.78	1034.95	611.33	0.011	6.80	0.0	5.956	A
4 - Woolwich Road (W)	904.93	47.49	2342.72	0.386	905.86	0.6	2.506	A

Baseline Plus Other Cumulative Developments, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	6.23	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D6	Baseline Plus Other Cumulative Developments	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	82.00	100.000
2 - Woolwich Road (E)		✓	1471.00	100.000
3 - York Terrace		✓	5.00	100.000
4 - Woolwich Road (W)		✓	1670.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	43.000	0.000	39.000
	2 - Woolwich Road (E)	32.000	24.000	6.000	1409.000
	3 - York Terrace	0.000	4.000	0.000	1.000
	4 - Woolwich Road (W)	51.000	1347.000	5.000	267.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	4	0	5
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	7	0	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.22	11.17	0.3	B
2 - Woolwich Road (E)	0.74	6.22	2.8	A
3 - York Terrace	0.04	26.43	0.0	D
4 - Woolwich Road (W)	0.75	5.94	3.0	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1235.84	753.89	0.082	61.38	0.1	5.196	A
2 - Woolwich Road (E)	1107.44	233.29	2277.44	0.486	1103.68	0.9	3.056	A
3 - York Terrace	3.76	1328.72	483.07	0.008	3.73	0.0	7.509	A
4 - Woolwich Road (W)	1257.26	45.00	2459.63	0.511	1253.11	1.0	2.974	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1478.55	610.45	0.121	73.53	0.1	6.703	A
2 - Woolwich Road (E)	1322.39	279.15	2243.91	0.589	1320.47	1.4	3.891	A
3 - York Terrace	4.49	1589.76	339.58	0.013	4.47	0.0	10.743	B
4 - Woolwich Road (W)	1501.30	53.85	2453.00	0.612	1499.21	1.6	3.766	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1807.78	415.87	0.217	89.74	0.3	11.019	B
2 - Woolwich Road (E)	1619.59	341.24	2198.52	0.737	1614.36	2.7	6.108	A
3 - York Terrace	5.51	1943.54	145.10	0.038	5.40	0.0	25.752	D
4 - Woolwich Road (W)	1838.70	65.78	2444.05	0.752	1833.10	3.0	5.839	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1813.23	412.66	0.219	90.27	0.3	11.166	B
2 - Woolwich Road (E)	1619.59	342.38	2197.68	0.737	1619.45	2.8	6.221	A
3 - York Terrace	5.51	1949.73	141.70	0.039	5.50	0.0	26.429	D
4 - Woolwich Road (W)	1838.70	66.05	2443.85	0.752	1838.55	3.0	5.943	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1486.23	605.91	0.122	74.27	0.1	6.777	A
2 - Woolwich Road (E)	1322.39	280.76	2242.74	0.590	1327.65	1.5	3.955	A
3 - York Terrace	4.49	1598.48	334.78	0.013	4.60	0.0	10.907	B
4 - Woolwich Road (W)	1501.30	54.22	2452.72	0.612	1506.91	1.6	3.830	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1242.10	750.18	0.082	61.93	0.1	5.233	A
2 - Woolwich Road (E)	1107.44	234.59	2276.50	0.486	1109.43	1.0	3.091	A
3 - York Terrace	3.76	1335.73	479.22	0.008	3.79	0.0	7.574	A
4 - Woolwich Road (W)	1257.26	45.27	2459.43	0.511	1259.43	1.1	3.004	A

Cumulative Development Scenario, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	4.07	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D7	Cumulative Development Scenario	AM	ONE HOUR	08:00	09:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	8.00	100.000
2 - Woolwich Road (E)		✓	1276.00	100.000
3 - York Terrace		✓	9.00	100.000
4 - Woolwich Road (W)		✓	1258.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	2.000	0.000	6.000
	2 - Woolwich Road (E)	6.000	54.000	3.000	1213.000
	3 - York Terrace	0.000	3.000	0.000	6.000
	4 - Woolwich Road (W)	13.000	1141.000	4.000	100.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	19	0	10
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	10	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.01	6.06	0.0	A
2 - Woolwich Road (E)	0.63	4.33	1.7	A
3 - York Terrace	0.03	11.22	0.0	B
4 - Woolwich Road (W)	0.59	3.75	1.4	A

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	977.44	883.16	0.007	6.00	0.0	4.103	A
2 - Woolwich Road (E)	960.64	82.57	2265.39	0.424	957.71	0.7	2.747	A
3 - York Terrace	6.78	1035.03	611.69	0.011	6.73	0.0	5.950	A
4 - Woolwich Road (W)	947.09	47.28	2363.90	0.401	944.43	0.7	2.532	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1169.41	765.11	0.009	7.18	0.0	4.749	A
2 - Woolwich Road (E)	1147.10	98.80	2253.30	0.509	1145.91	1.0	3.248	A
3 - York Terrace	8.09	1238.42	493.44	0.016	8.07	0.0	7.416	A
4 - Woolwich Road (W)	1130.92	56.57	2356.21	0.480	1129.91	0.9	2.932	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1431.38	604.01	0.015	8.79	0.0	6.047	A
2 - Woolwich Road (E)	1404.91	120.93	2236.80	0.628	1402.35	1.7	4.301	A
3 - York Terrace	9.91	1515.58	332.29	0.030	9.85	0.0	11.164	B
4 - Woolwich Road (W)	1385.09	69.23	2345.75	0.590	1383.05	1.4	3.731	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	8.81	1433.49	602.71	0.015	8.81	0.0	6.060	A
2 - Woolwich Road (E)	1404.91	121.11	2236.67	0.628	1404.86	1.7	4.327	A
3 - York Terrace	9.91	1518.26	330.73	0.030	9.91	0.0	11.220	B
4 - Woolwich Road (W)	1385.09	69.36	2345.64	0.591	1385.06	1.4	3.746	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	7.19	1172.60	763.15	0.009	7.21	0.0	4.763	A
2 - Woolwich Road (E)	1147.10	99.07	2253.10	0.509	1149.64	1.0	3.269	A
3 - York Terrace	8.09	1242.40	491.13	0.016	8.15	0.0	7.456	A
4 - Woolwich Road (W)	1130.92	56.77	2356.05	0.480	1132.94	0.9	2.947	A

Main results: (09:15-09:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	6.02	981.29	880.80	0.007	6.03	0.0	4.116	A
2 - Woolwich Road (E)	960.64	82.91	2265.15	0.424	961.86	0.7	2.764	A
3 - York Terrace	6.78	1039.49	609.10	0.011	6.80	0.0	5.978	A
4 - Woolwich Road (W)	947.09	47.49	2363.72	0.401	948.12	0.7	2.544	A

Cumulative Development Scenario, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1 - untitled	untitled	Standard Roundabout	6.29	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D8	Cumulative Development Scenario	PM	ONE HOUR	17:00	18:30	15

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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Stone Lake Retail Park		✓	82.00	100.000
2 - Woolwich Road (E)		✓	1502.00	100.000
3 - York Terrace		✓	5.00	100.000
4 - Woolwich Road (W)		✓	1669.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0.000	43.000	0.000	39.000
	2 - Woolwich Road (E)	32.000	24.000	6.000	1440.000
	3 - York Terrace	0.000	4.000	0.000	1.000
	4 - Woolwich Road (W)	51.000	1346.000	5.000	267.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Stone Lake Retail Park	2 - Woolwich Road (E)	3 - York Terrace	4 - Woolwich Road (W)
From	1 - Stone Lake Retail Park	0	0	0	0
	2 - Woolwich Road (E)	0	4	0	4
	3 - York Terrace	0	0	0	0
	4 - Woolwich Road (W)	0	7	0	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS
1 - Stone Lake Retail Park	0.22	11.14	0.3	B
2 - Woolwich Road (E)	0.75	6.37	2.9	A
3 - York Terrace	0.04	28.64	0.0	D
4 - Woolwich Road (W)	0.75	5.93	3.0	A

Main Results for each time segment

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1235.08	754.33	0.082	61.38	0.1	5.193	A
2 - Woolwich Road (E)	1130.78	233.29	2298.40	0.492	1126.93	1.0	3.063	A
3 - York Terrace	3.76	1351.98	475.89	0.008	3.73	0.0	7.624	A
4 - Woolwich Road (W)	1256.51	45.00	2459.65	0.511	1252.36	1.0	2.972	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1477.65	610.98	0.121	73.53	0.1	6.697	A
2 - Woolwich Road (E)	1350.26	279.15	2264.56	0.596	1348.27	1.5	3.920	A
3 - York Terrace	4.49	1617.55	331.00	0.014	4.47	0.0	11.025	B
4 - Woolwich Road (W)	1500.40	53.85	2453.02	0.612	1498.32	1.6	3.763	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1806.69	416.52	0.217	89.74	0.3	10.997	B
2 - Woolwich Road (E)	1653.73	341.25	2218.74	0.745	1648.17	2.9	6.248	A
3 - York Terrace	5.51	1977.35	134.71	0.041	5.39	0.0	27.816	D
4 - Woolwich Road (W)	1837.61	65.77	2444.08	0.752	1832.03	3.0	5.828	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	90.28	1812.12	413.31	0.218	90.27	0.3	11.143	B
2 - Woolwich Road (E)	1653.73	342.38	2217.91	0.746	1653.57	2.9	6.375	A
3 - York Terrace	5.51	1983.85	131.16	0.042	5.50	0.0	28.645	D
4 - Woolwich Road (W)	1837.61	66.05	2443.87	0.752	1837.46	3.0	5.932	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	73.72	1485.33	606.45	0.122	74.27	0.1	6.770	A
2 - Woolwich Road (E)	1350.26	280.76	2263.38	0.597	1355.85	1.5	3.990	A
3 - York Terrace	4.49	1626.68	326.02	0.014	4.61	0.0	11.203	B
4 - Woolwich Road (W)	1500.40	54.24	2452.73	0.612	1506.00	1.6	3.826	A

Main results: (18:15-18:30)

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
1 - Stone Lake Retail Park	61.73	1241.34	750.64	0.082	61.93	0.1	5.230	A
2 - Woolwich Road (E)	1130.78	234.58	2297.44	0.492	1132.86	1.0	3.096	A
3 - York Terrace	3.76	1359.14	471.97	0.008	3.79	0.0	7.689	A
4 - Woolwich Road (W)	1256.51	45.27	2459.45	0.511	1258.68	1.1	3.002	A