

Appendix 62 A508/High Street assessment results

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2018
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
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A508-High Street Mini Roundabout REV1 ARCADY Model.arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\Nhants Gateway

Report generation date: 16/04/2018 10:20:13

- » B1, AM
- » B1, PM
- » H1, AM
- » H1, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B1						
Arm 1	187.97	953.44	1.38	4.00	28.73	0.77
Arm 2	0.68	18.28	0.39	1.13	18.92	0.54
Arm 3	6.36	32.20	0.85	10.16	46.68	0.92
H1						
Arm 1	184.93	936.35	1.37	3.78	27.72	0.76
Arm 2	0.77	18.72	0.43	1.22	19.60	0.55
Arm 3	6.29	31.95	0.85	13.16	58.42	0.95

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

"D1 - B1, AM " model duration: 08:00 - 09:30

"D2 - B1, PM" model duration: 17:00 - 18:30

"D3 - H1, AM" model duration: 08:00 - 09:30

"D4 - H1, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.4.487 at 16/04/2018 10:20:08

File summary

Title	A508 Strafford Road-High Street
Location	Road
Site Number	
Date	29/03/2017
Version	v1
Status	Preliminary
Identifier	M Tatler
Client	
Jobnumber	ADC1475
Enumerator	S Dunhill
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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	PCU	PCU	perHour	s	-Min	perMin

B1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
B1, AM	B1	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	A508 Strafford Road-High Street	Mini-roundabout	1,2,3	509.05	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	A508 (N)	
2	2	High Street	
3	3	A508 (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.60	3.10	5.40	3.50	16.10	5.40	0.00	✓
2	3.20	2.80	3.30	4.30	18.50	13.70	0.00	✓
3	3.10	2.90	4.20	4.70	18.50	17.60	0.00	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.414	699.510
2		(calculated)	(calculated)	0.405	613.674
3		(calculated)	(calculated)	0.575	921.153

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	872.00	100.000
2	ONE HOUR	✓	124.00	100.000
3	ONE HOUR	✓	685.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	53.000	819.000
	2	59.000	0.000	65.000
	3	677.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.06	0.94
	2	0.48	0.00	0.52
	3	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.023	1.152
	2	1.044	1.000	1.114
	3	1.212	1.975	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	1.8	11.7
	2	3.4	0.0	8.8
	3	16.3	75.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	1.38	953.44	187.97	F	800.16	1200.24	8830.58	441.44	98.12	10208.18	510.31
2	0.39	18.28	0.68	C	113.78	170.68	46.06	16.19	0.51	46.08	16.20
3	0.85	32.20	6.36	D	628.57	942.85	300.95	19.15	3.34	301.05	19.16

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	656.49	164.12	619.79	547.10	5.95	0.00	697.04	695.51	0.942	0.00	9.17	42.398	E
2	93.35	23.34	91.96	43.62	582.12	0.00	377.94	349.14	0.247	0.00	0.35	13.531	B
3	515.70	128.93	509.29	630.33	43.76	0.00	895.98	825.59	0.576	0.00	1.60	11.159	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	783.91	195.98	685.81	657.48	7.15	0.00	696.55	695.51	1.125	9.17	33.70	130.201	F
2	111.47	27.87	110.92	48.83	644.12	0.00	352.84	349.14	0.316	0.35	0.49	16.030	C
3	615.80	153.95	611.85	702.27	52.77	0.00	890.79	825.59	0.691	1.60	2.59	15.482	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	960.09	240.02	695.08	797.02	8.65	0.00	695.92	695.51	1.380	33.70	99.95	358.488	F
2	136.53	34.13	135.78	50.90	652.83	0.00	349.31	349.14	0.391	0.49	0.67	18.140	C
3	754.20	188.55	741.07	724.01	64.61	0.00	883.99	825.59	0.853	2.59	5.87	28.293	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	960.09	240.02	695.68	808.40	8.79	0.00	695.87	695.51	1.380	99.95	166.05	697.424	F
2	136.53	34.13	136.49	51.07	653.40	0.00	349.08	349.14	0.391	0.67	0.68	18.276	C
3	754.20	188.55	752.24	724.94	64.94	0.00	883.80	825.59	0.853	5.87	6.36	32.198	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	783.91	195.98	696.23	675.74	7.35	0.00	696.46	695.51	1.126	166.05	187.97	923.260	F
2	111.47	27.87	112.12	49.67	653.91	0.00	348.87	349.14	0.320	0.68	0.52	16.469	C
3	615.80	153.95	629.74	712.69	53.35	0.00	890.46	825.59	0.692	6.36	2.88	17.609	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	656.49	164.12	692.78	558.97	6.08	0.00	696.99	695.51	0.942	187.97	178.90	953.439	F
2	93.35	23.34	93.83	48.18	650.67	0.00	350.19	349.14	0.267	0.52	0.40	15.192	C
3	515.70	128.93	520.41	699.85	44.64	0.00	895.47	825.59	0.576	2.88	1.70	11.828	B

Queueing Delay Results for each time segment

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	98.24	6.55	42.398	E	D
2	4.91	0.33	13.531	B	B
3	22.33	1.49	11.159	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	327.56	21.84	130.201	F	F
2	6.99	0.47	16.030	C	B
3	36.07	2.40	15.482	C	B

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1002.89	66.86	358.488	F	F
2	9.60	0.64	18.140	C	B
3	74.72	4.98	28.293	D	C

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1995.09	133.01	697.424	F	F
2	10.18	0.68	18.276	C	B
3	92.40	6.16	32.198	D	C

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2655.22	177.01	923.260	F	F
2	8.14	0.54	16.469	C	B
3	48.32	3.22	17.609	C	B

Queueing Delay results: (09:15-09:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2751.57	183.44	953.439	F	F
2	6.25	0.42	15.192	C	B
3	27.12	1.81	11.828	B	B

B1, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
B1, FM	B1	FM		ONE HOUR	17:00	18:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	A508 Strafford Road-High Street	Mini-roundabout	1,2,3	36.90	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	A508 (N)	
2	2	High Street	
3	3	A508 (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.60	3.10	5.40	3.50	16.10	5.40	0.00	✓
2	3.20	2.80	3.30	4.30	18.50	13.70	0.00	✓
3	3.10	2.90	4.20	4.70	18.50	17.60	0.00	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.414	699.510
2		(calculated)	(calculated)	0.405	613.674
3		(calculated)	(calculated)	0.575	921.153

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	476.00	100.000
2	ONE HOUR	✓	199.00	100.000
3	ONE HOUR	✓	763.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	16.000	460.000
	2	16.000	0.000	183.000
	3	720.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.03	0.97
	2	0.08	0.00	0.92
	3	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.280
	2	1.000	1.000	1.000
	3	1.130	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	21.5
	2	0.0	0.0	0.0
	3	10.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.77	28.73	4.00	D	436.79	655.18	215.28	19.72	2.39	215.37	19.72
2	0.54	18.92	1.13	C	182.61	273.91	66.17	14.49	0.74	66.18	14.50
3	0.92	46.68	10.16	E	700.14	1050.21	414.57	23.69	4.61	414.70	23.69

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	358.36	89.59	352.99	547.04	31.96	0.00	686.26	678.37	0.522	0.00	1.34	13.488	B
2	149.82	37.45	148.01	43.82	341.12	0.00	475.54	348.20	0.315	0.00	0.45	10.933	B
3	574.43	143.61	567.10	477.23	11.90	0.00	914.31	905.05	0.628	0.00	1.83	11.405	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	427.91	106.98	425.19	656.56	38.36	0.00	683.61	678.37	0.626	1.34	2.02	17.460	C
2	178.90	44.72	178.10	52.65	410.90	0.00	447.28	348.20	0.400	0.45	0.65	13.331	B
3	685.92	171.48	680.59	574.68	14.32	0.00	912.92	905.05	0.751	1.83	3.16	16.982	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	524.09	131.02	517.01	789.13	46.09	0.00	680.41	678.37	0.770	2.02	3.79	26.770	D
2	219.10	54.78	217.33	63.46	499.63	0.00	411.35	348.20	0.533	0.65	1.09	18.383	C
3	840.08	210.02	817.74	699.49	17.47	0.00	911.10	905.05	0.922	3.16	8.75	36.503	E

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	524.09	131.02	523.27	805.00	47.02	0.00	680.02	678.37	0.771	3.79	4.00	28.726	D
2	219.10	54.78	218.97	64.61	505.68	0.00	408.90	348.20	0.536	1.09	1.13	18.924	C
3	840.08	210.02	834.41	707.05	17.61	0.00	911.03	905.05	0.922	8.75	10.16	46.684	E

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	427.91	106.98	434.98	686.37	40.12	0.00	682.88	678.37	0.627	4.00	2.23	18.893	C
2	178.90	44.72	180.63	54.75	420.36	0.00	443.45	348.20	0.403	1.13	0.69	13.788	B
3	685.92	171.48	711.97	586.47	14.52	0.00	912.80	905.05	0.751	10.16	3.65	22.229	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	358.36	89.59	361.57	560.56	32.75	0.00	685.93	678.37	0.522	2.23	1.43	14.207	B
2	149.82	37.45	150.70	44.91	349.41	0.00	472.18	348.20	0.317	0.69	0.47	11.228	B
3	574.43	143.61	581.19	487.99	12.12	0.00	914.18	905.05	0.628	3.65	1.96	12.361	B

Queueing Delay Results for each time segment
Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.62	1.24	13.488	B	B
2	6.42	0.43	10.933	B	B
3	25.33	1.69	11.405	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	28.38	1.89	17.460	C	B
2	9.35	0.62	13.331	B	B
3	43.34	2.89	16.982	C	B

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	50.39	3.36	26.770	D	C
2	15.33	1.02	18.383	C	B
3	103.79	6.92	36.503	E	D

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	58.72	3.91	28.726	D	C
2	16.71	1.11	18.924	C	B
3	143.26	9.55	46.684	E	D

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	36.41	2.43	18.893	C	B
2	10.97	0.73	13.788	B	B
3	67.32	4.49	22.229	C	C

Queueing Delay results: (18:15-18:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.75	1.52	14.207	B	B
2	7.39	0.49	11.228	B	B
3	31.53	2.10	12.361	B	B

H1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
H1, AM	H1	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	A508 Trafford Road-High Street	Mini-roundabout	1,2,3	496.47	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	A508 (N)	
2	2	High Street	
3	3	A508 (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.60	3.10	5.40	3.50	16.10	5.40	0.00	✓
2	3.20	2.80	3.30	4.30	18.50	13.70	0.00	✓
3	3.10	2.90	4.20	4.70	18.50	17.60	0.00	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.414	699.510
2		(calculated)	(calculated)	0.405	613.674
3		(calculated)	(calculated)	0.575	921.153

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	869.00	100.000
2	ONE HOUR	✓	137.00	100.000
3	ONE HOUR	✓	682.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	60.000	809.000
	2	59.000	0.000	78.000
	3	674.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.07	0.93
	2	0.43	0.00	0.57
	3	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.020	1.157
	2	1.109	1.000	1.000
	3	1.230	1.975	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	1.5	12.1
	2	8.4	0.0	0.0
	3	17.7	75.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	1.37	936.35	184.93	F	797.41	1196.11	8685.85	435.70	96.51	10008.80	502.07
2	0.43	18.72	0.77	C	125.71	188.57	51.39	16.35	0.57	51.41	16.36
3	0.85	31.95	6.29	D	625.82	938.72	299.61	19.15	3.33	299.71	19.16

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	654.23	163.56	618.24	544.82	5.95	0.00	697.04	695.45	0.939	0.00	9.00	41.892	E
2	103.14	25.79	101.62	48.63	575.56	0.00	380.60	351.49	0.271	0.00	0.38	13.405	B
3	513.45	128.36	507.00	633.41	43.76	0.00	895.98	834.07	0.573	0.00	1.61	11.259	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	781.21	195.30	685.32	654.79	7.15	0.00	696.55	695.45	1.122	9.00	32.97	127.973	F
2	123.16	30.79	122.52	54.46	638.00	0.00	355.31	351.49	0.347	0.38	0.54	16.103	C
3	613.10	153.28	609.17	707.76	52.76	0.00	890.80	834.07	0.688	1.61	2.59	15.566	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	956.79	239.20	695.04	793.93	8.66	0.00	695.92	695.45	1.375	32.97	98.41	352.734	F
2	150.84	37.71	149.96	56.65	647.05	0.00	351.65	351.49	0.429	0.54	0.76	18.552	C
3	750.90	187.72	738.00	732.43	64.58	0.00	884.00	834.07	0.849	2.59	5.82	28.181	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	956.79	239.20	695.67	805.16	8.79	0.00	695.87	695.45	1.375	98.41	163.68	687.381	F
2	150.84	37.71	150.79	56.82	647.64	0.00	351.41	351.49	0.429	0.76	0.77	18.723	C
3	750.90	187.72	749.00	733.49	64.94	0.00	883.80	834.07	0.850	5.82	6.29	31.947	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	781.21	195.30	696.21	672.77	7.35	0.00	696.46	695.45	1.122	163.68	184.93	909.348	F
2	123.16	30.79	123.93	55.42	648.14	0.00	351.21	351.49	0.351	0.77	0.58	16.600	C
3	613.10	153.28	626.75	718.70	53.37	0.00	890.45	834.07	0.689	6.29	2.88	17.647	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	654.23	163.56	692.70	556.70	6.08	0.00	696.99	695.45	0.939	184.93	175.32	936.353	F
2	103.14	25.79	103.69	53.90	644.87	0.00	352.53	351.49	0.293	0.58	0.44	15.144	C
3	513.45	128.36	518.12	703.90	44.65	0.00	895.46	834.07	0.573	2.88	1.71	11.929	B

Queueing Delay Results for each time segment
Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	96.78	6.45	41.892	E	D
2	5.37	0.36	13.405	B	B
3	22.42	1.49	11.259	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	320.96	21.40	127.973	F	F
2	7.74	0.52	16.103	C	B
3	36.11	2.41	15.566	C	B

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	985.85	65.72	352.734	F	F
2	10.81	0.72	18.552	C	B
3	74.20	4.95	28.181	D	C

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1965.73	131.05	687.381	F	F
2	11.50	0.77	18.723	C	B
3	91.41	6.09	31.947	D	C

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2614.65	174.31	909.348	F	F
2	9.09	0.61	16.600	C	B
3	48.22	3.21	17.647	C	B

Queueing Delay results: (09:15-09:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2701.88	180.13	936.353	F	F
2	6.89	0.46	15.144	C	B
3	27.24	1.82	11.929	B	B

H1, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
H1, PM	H1	PM		ONE HOUR	17:00	18:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	A508 Trafford Road-High Street	Mini-roundabout	1,2,3	43.07	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	A508 (N)	
2	2	High Street	
3	3	A508 (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.60	3.10	5.40	3.50	16.10	5.40	0.00	✓
2	3.20	2.80	3.30	4.30	18.50	13.70	0.00	✓
3	3.10	2.90	4.20	4.70	18.50	17.60	0.00	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.414	699.510
2		(calculated)	(calculated)	0.405	613.674
3		(calculated)	(calculated)	0.575	921.153

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	466.00	100.000
2	ONE HOUR	✓	208.00	100.000
3	ONE HOUR	✓	784.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	18.000	448.000
	2	18.000	0.000	190.000
	3	735.000	49.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.04	0.96
	2	0.09	0.00	0.91
	3	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.143	1.290
	2	1.143	1.000	1.000
	3	1.139	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	11.0	22.3
	2	11.0	0.0	0.0
	3	10.7	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.76	27.72	3.78	D	427.61	641.41	206.57	19.32	2.30	206.65	19.33
2	0.55	19.60	1.22	C	190.86	286.30	71.09	14.90	0.79	71.10	14.90
3	0.95	58.42	13.16	F	719.41	1079.12	498.77	27.73	5.54	498.92	27.74

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	350.83	87.71	345.59	559.28	36.39	0.00	684.43	676.10	0.513	0.00	1.31	13.441	B
2	156.59	39.15	154.67	49.74	332.24	0.00	479.13	350.46	0.327	0.00	0.48	11.152	B
3	590.24	147.56	582.29	473.52	13.38	0.00	913.45	903.71	0.646	0.00	1.99	12.018	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	418.92	104.73	416.33	671.02	43.66	0.00	681.41	676.10	0.615	1.31	1.96	17.250	C
2	186.99	46.75	186.13	59.74	400.25	0.00	451.59	350.46	0.414	0.48	0.70	13.665	B
3	704.80	176.20	698.57	570.27	16.11	0.00	911.89	903.71	0.773	1.99	3.54	18.507	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	513.08	128.27	506.51	801.84	52.15	0.00	677.90	676.10	0.757	1.96	3.60	25.961	D
2	229.01	57.25	227.07	71.71	486.95	0.00	416.48	350.46	0.550	0.70	1.18	19.014	C
3	863.20	215.80	834.34	694.37	19.65	0.00	909.85	903.71	0.949	3.54	10.76	42.607	E

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	513.08	128.27	512.35	820.04	53.35	0.00	677.40	676.10	0.757	3.60	3.78	27.724	D
2	229.01	57.25	228.87	73.14	492.56	0.00	414.21	350.46	0.553	1.18	1.22	19.599	C
3	863.20	215.80	853.58	701.62	19.81	0.00	909.76	903.71	0.949	10.76	13.16	58.424	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	418.92	104.73	425.43	710.65	46.29	0.00	680.33	676.10	0.616	3.78	2.15	18.560	C
2	186.99	46.75	188.89	62.72	409.00	0.00	448.05	350.46	0.417	1.22	0.74	14.142	B
3	704.80	176.20	740.59	581.54	16.35	0.00	911.75	903.71	0.773	13.16	4.22	27.433	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	350.83	87.71	353.88	574.76	37.41	0.00	684.01	676.10	0.513	2.15	1.39	14.123	B
2	156.59	39.15	157.54	51.08	340.21	0.00	475.91	350.46	0.329	0.74	0.50	11.467	B
3	590.24	147.56	598.54	484.12	13.63	0.00	913.31	903.71	0.646	4.22	2.14	13.233	B

Queueing Delay Results for each time segment
Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.17	1.21	13.441	B	B
2	6.84	0.46	11.152	B	B
3	27.30	1.82	12.018	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	27.51	1.83	17.250	C	B
2	9.99	0.67	13.665	B	B
3	48.05	3.20	18.507	C	B

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	48.09	3.21	25.961	D	C
2	16.51	1.10	19.014	C	B
3	122.81	8.19	42.607	E	D

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	55.61	3.71	27.724	D	C
2	18.07	1.20	19.599	C	B
3	181.37	12.09	58.424	F	E

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	35.06	2.34	18.560	C	B
2	11.78	0.79	14.142	B	B
3	84.58	5.64	27.433	D	C

Queueing Delay results: (18:15-18:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.13	1.48	14.123	B	B
2	7.90	0.53	11.467	B	B
3	34.66	2.31	13.233	B	B