Appendix H – Model outputs (2022 base flows)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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: 2022 Base-A249_B2231.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODEL USED TAs\London Modelling\Models\Arcady Models\A249_B2231\July 2015 TA - residential application
Report generation date: 07/07/2015 11:55:03

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.14	0.05	0.54	A				
Arm 2	0.53	0.04	0.35	A				
Arm 3	1.52	0.08	0.61	A				
	A1 - Scenario 2							
Arm 1					2.00	0.07	0.67	A
Arm 2					0.87	0.06	0.47	A
Arm 3					0.68	0.05	0.41	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/07/2015 11:55:01

File summary

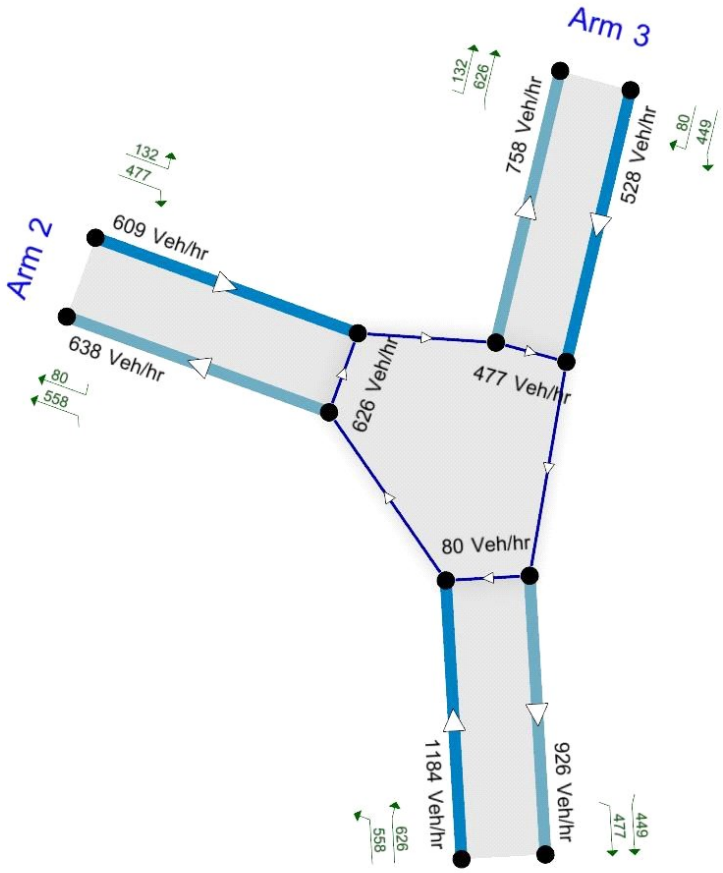
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1365.00	100.000
2	ONE HOUR	✓	724.00	100.000
3	ONE HOUR	✓	1210.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	923.01	993.13		
07:45-07:55	2	489.57	528.17		
07:45-07:55	3	818.20	843.73		
07:55-08:05	1	923.01	993.13		
07:55-08:05	2	489.57	528.17		
07:55-08:05	3	818.20	843.73		
08:05-08:15	1	1156.21	1244.04		
08:05-08:15	2	613.26	661.61		
08:05-08:15	3	1024.92	1056.90		
08:15-08:25	1	1323.53	1424.07		
08:15-08:25	2	702.00	757.36		
08:15-08:25	3	1173.23	1209.85		
08:25-08:35	1	1384.52	1489.70		
08:25-08:35	2	734.35	792.26		
08:25-08:35	3	1227.30	1265.60		
08:35-08:45	1	1323.53	1424.07		
08:35-08:45	2	702.00	757.36		
08:35-08:45	3	1173.23	1209.85		
08:45-08:55	1	1156.21	1244.04		
08:45-08:55	2	613.26	661.61		
08:45-08:55	3	1024.92	1056.90		
08:55-09:05	1	923.01	993.13		
08:55-09:05	2	489.57	528.17		
08:55-09:05	3	818.20	843.73		
09:05-09:15	1	923.01	993.13		
09:05-09:15	2	489.57	528.17		
09:05-09:15	3	818.20	843.73		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	709.000	656.000
	2	641.000	0.000	83.000
	3	1064.000	146.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.89	0.00	0.11
	3	0.88	0.12	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.050
	2	1.080	1.000	1.070
	3	1.030	1.040	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	10.0	5.0
	2	8.0	0.0	7.0
	3	3.0	4.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.54	0.05	1.14	A	1115.11	1672.67	69.87	0.04	0.78	69.87	0.04
2	0.35	0.04	0.53	A	591.46	887.19	33.93	0.04	0.38	33.93	0.04
3	0.61	0.08	1.52	A	988.49	1482.73	84.44	0.06	0.94	84.45	0.06

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	923.01	153.84	919.76	1148.33	98.30	0.00	2616.77	2576.72	0.353	0.00	0.54	0.035	A
2	489.57	81.59	487.91	576.03	442.02	0.00	2255.63	1745.20	0.217	0.00	0.28	0.034	A
3	818.20	136.37	814.64	497.96	431.98	0.00	2190.32	1330.68	0.374	0.00	0.59	0.044	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	923.01	153.84	923.00	1152.90	98.72	0.00	2616.49	2576.72	0.353	0.54	0.54	0.035	A
2	489.57	81.59	489.56	578.15	443.58	0.00	2254.63	1745.20	0.217	0.28	0.28	0.034	A
3	818.20	136.37	818.18	499.70	433.44	0.00	2189.19	1330.68	0.374	0.59	0.59	0.044	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1156.21	192.70	1154.70	1441.79	123.42	0.00	2600.61	2576.72	0.445	0.54	0.79	0.041	A
2	613.26	102.21	612.59	723.19	554.93	0.00	2183.26	1745.20	0.281	0.28	0.39	0.038	A
3	1024.91	170.82	1022.85	625.16	542.36	0.00	2105.08	1330.68	0.487	0.59	0.94	0.055	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1323.53	220.59	1322.08	1650.62	141.28	0.00	2589.11	2576.72	0.511	0.79	1.04	0.047	A
2	702.00	117.00	701.41	827.99	635.37	0.00	2131.70	1745.20	0.329	0.39	0.49	0.042	A
3	1173.23	195.54	1170.91	715.78	621.00	0.00	2044.35	1330.68	0.574	0.94	1.33	0.069	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1384.52	230.75	1383.88	1728.15	147.95	0.00	2584.82	2576.72	0.536	1.04	1.14	0.050	A
2	734.35	122.39	734.10	866.75	665.07	0.00	2112.66	1745.20	0.348	0.49	0.53	0.044	A
3	1227.30	204.55	1226.14	749.23	649.94	0.00	2021.99	1330.68	0.607	1.33	1.52	0.075	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1323.53	220.59	1324.05	1654.18	141.67	0.00	2588.86	2576.72	0.511	1.14	1.06	0.047	A
2	702.00	117.00	702.22	829.40	636.32	0.00	2131.09	1745.20	0.329	0.53	0.49	0.042	A
3	1173.23	195.54	1174.14	716.82	621.71	0.00	2043.80	1330.68	0.574	1.52	1.37	0.069	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1156.21	192.70	1157.70	1446.89	123.96	0.00	2600.26	2576.72	0.445	1.06	0.81	0.042	A
2	613.26	102.21	613.86	725.28	556.37	0.00	2182.34	1745.20	0.281	0.49	0.39	0.038	A
3	1024.91	170.82	1027.36	626.74	543.49	0.00	2104.21	1330.68	0.487	1.37	0.96	0.056	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	923.01	153.84	924.56	1155.42	98.98	0.00	2616.33	2576.72	0.353	0.81	0.55	0.035	A
2	489.57	81.59	490.25	579.21	444.33	0.00	2254.15	1745.20	0.217	0.39	0.28	0.034	A
3	818.20	136.37	820.35	500.53	434.05	0.00	2188.72	1330.68	0.374	0.96	0.60	0.044	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	923.01	153.84	923.02	1152.93	98.73	0.00	2616.49	2576.72	0.353	0.55	0.55	0.035	A
2	489.57	81.59	489.57	578.16	443.59	0.00	2254.63	1745.20	0.217	0.28	0.28	0.034	A
3	818.20	136.37	818.21	499.71	433.45	0.00	2189.19	1330.68	0.374	0.60	0.60	0.044	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.30	0.53	0.035	A	A
2	2.71	0.27	0.034	A	A
3	5.76	0.58	0.044	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.43	0.54	0.035	A	A
2	2.76	0.28	0.034	A	A
3	5.94	0.59	0.044	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.78	0.78	0.041	A	A
2	3.82	0.38	0.038	A	A
3	9.13	0.91	0.055	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.13	1.01	0.047	A	A
2	4.80	0.48	0.042	A	A
3	12.82	1.28	0.069	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.24	1.12	0.050	A	A
2	5.24	0.52	0.044	A	A
3	14.82	1.48	0.075	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.70	1.07	0.047	A	A
2	4.99	0.50	0.042	A	A
3	13.95	1.40	0.069	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.23	0.82	0.042	A	A
2	3.99	0.40	0.038	A	A
3	9.88	0.99	0.056	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.58	0.56	0.035	A	A
2	2.83	0.28	0.034	A	A
3	6.15	0.62	0.044	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.47	0.55	0.035	A	A
2	2.78	0.28	0.034	A	A
3	6.00	0.60	0.044	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1758.00	100.000
2	ONE HOUR	✓	904.00	100.000
3	ONE HOUR	✓	784.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	1188.76	1251.77		
16:45-16:55	2	611.28	655.70		
16:45-16:55	3	530.14	547.64		
16:55-17:05	1	1188.76	1251.77		
16:55-17:05	2	611.28	655.70		
16:55-17:05	3	530.14	547.64		
17:05-17:15	1	1489.09	1568.03		
17:05-17:15	2	765.72	821.36		
17:05-17:15	3	664.08	686.00		
17:15-17:25	1	1704.58	1794.94		
17:15-17:25	2	876.53	940.22		
17:15-17:25	3	760.18	785.27		
17:25-17:35	1	1783.13	1877.66		
17:25-17:35	2	916.92	983.54		
17:25-17:35	3	795.21	821.46		
17:35-17:45	1	1704.58	1794.94		
17:35-17:45	2	876.53	940.22		
17:35-17:45	3	760.18	785.27		
17:45-17:55	1	1489.09	1568.03		
17:45-17:55	2	765.72	821.36		
17:45-17:55	3	664.08	686.00		
17:55-18:05	1	1188.76	1251.77		
17:55-18:05	2	611.28	655.70		
17:55-18:05	3	530.14	547.64		
18:05-18:15	1	1188.76	1251.77		
18:05-18:15	2	611.28	655.70		
18:05-18:15	3	530.14	547.64		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	829.000	929.000
	2	708.000	0.000	196.000
	3	666.000	118.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.47	0.53
	2	0.78	0.00	0.22
	3	0.85	0.15	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.090	1.020
	2	1.090	1.000	1.010
	3	1.030	1.050	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	9.0	2.0
	2	9.0	0.0	1.0
	3	3.0	5.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.67	0.07	2.00	A	1436.17	2154.25	111.78	0.05	1.24	111.79	0.05
2	0.47	0.06	0.87	A	738.51	1107.77	51.81	0.05	0.58	51.81	0.05
3	0.41	0.05	0.68	A	640.48	960.71	41.70	0.04	0.46	41.70	0.04

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1188.76	198.13	1184.02	925.60	79.50	0.00	2685.68	2590.03	0.443	0.00	0.79	0.040	A
2	611.29	101.88	608.93	637.84	625.69	0.00	2161.79	1696.46	0.283	0.00	0.39	0.039	A
3	530.14	88.36	528.18	757.71	476.91	0.00	2148.47	1485.77	0.247	0.00	0.33	0.037	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1188.76	198.13	1188.74	929.08	79.79	0.00	2685.49	2590.03	0.443	0.79	0.79	0.040	A
2	611.29	101.88	611.28	640.35	628.18	0.00	2160.23	1696.46	0.283	0.39	0.39	0.039	A
3	530.14	88.36	530.13	760.71	478.74	0.00	2147.04	1485.77	0.247	0.33	0.33	0.037	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1489.09	248.18	1486.37	1162.17	99.82	0.00	2672.19	2590.02	0.557	0.79	1.24	0.051	A
2	765.73	127.62	764.57	800.73	785.46	0.00	2061.72	1696.47	0.371	0.39	0.59	0.046	A
3	664.08	110.68	663.19	951.23	598.80	0.00	2053.63	1485.76	0.323	0.33	0.47	0.043	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1704.58	284.10	1701.55	1330.63	114.29	0.00	2662.59	2590.02	0.640	1.24	1.75	0.062	A
2	876.54	146.09	875.38	916.67	899.17	0.00	1990.51	1696.47	0.440	0.59	0.78	0.054	A
3	760.18	126.70	759.34	1088.96	685.58	0.00	1986.10	1485.76	0.383	0.47	0.62	0.049	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1783.13	297.19	1781.64	1392.91	119.63	0.00	2659.04	2590.02	0.671	1.75	2.00	0.068	A
2	916.93	152.82	916.40	959.78	941.49	0.00	1964.00	1696.47	0.467	0.78	0.87	0.057	A
3	795.21	132.53	794.84	1140.18	717.71	0.00	1961.10	1485.76	0.405	0.62	0.68	0.051	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1704.58	284.10	1705.74	1332.85	114.46	0.00	2662.47	2590.02	0.640	2.00	1.81	0.063	A
2	876.54	146.09	876.97	918.81	901.38	0.00	1989.12	1696.47	0.441	0.87	0.79	0.054	A
3	760.18	126.70	760.49	1091.52	686.83	0.00	1985.13	1485.76	0.383	0.68	0.63	0.049	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1489.09	248.18	1492.29	1165.50	100.08	0.00	2672.02	2590.02	0.557	1.81	1.27	0.051	A
2	765.73	127.62	766.92	803.78	788.59	0.00	2059.76	1696.47	0.372	0.79	0.60	0.046	A
3	664.08	110.68	664.94	954.87	600.64	0.00	2052.20	1485.76	0.324	0.63	0.48	0.043	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1188.76	198.13	1191.59	930.81	79.93	0.00	2685.39	2590.03	0.443	1.27	0.80	0.040	A
2	611.29	101.88	612.48	641.83	629.69	0.00	2159.28	1696.46	0.283	0.60	0.40	0.039	A
3	530.14	88.36	531.05	762.48	479.68	0.00	2146.30	1485.77	0.247	0.48	0.33	0.037	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1188.76	198.13	1188.77	929.10	79.79	0.00	2685.49	2590.03	0.443	0.80	0.80	0.040	A
2	611.29	101.88	611.29	640.37	628.20	0.00	2160.22	1696.46	0.283	0.40	0.40	0.039	A
3	530.14	88.36	530.15	760.73	478.75	0.00	2147.03	1485.77	0.247	0.33	0.33	0.037	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.67	0.77	0.040	A	A
2	3.83	0.38	0.039	A	A
3	3.19	0.32	0.037	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.90	0.79	0.040	A	A
2	3.93	0.39	0.039	A	A
3	3.27	0.33	0.037	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.09	1.21	0.051	A	A
2	5.74	0.57	0.046	A	A
3	4.66	0.47	0.043	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.90	1.69	0.062	A	A
2	7.62	0.76	0.054	A	A
3	6.03	0.60	0.049	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.49	1.95	0.068	A	A
2	8.53	0.85	0.057	A	A
3	6.67	0.67	0.051	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.44	1.84	0.063	A	A
2	8.06	0.81	0.054	A	A
3	6.33	0.63	0.049	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.11	1.31	0.051	A	A
2	6.09	0.61	0.046	A	A
3	4.90	0.49	0.043	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.19	0.82	0.040	A	A
2	4.05	0.40	0.039	A	A
3	3.35	0.34	0.037	A	A

Queueing Delay results: (18:05-18:15)

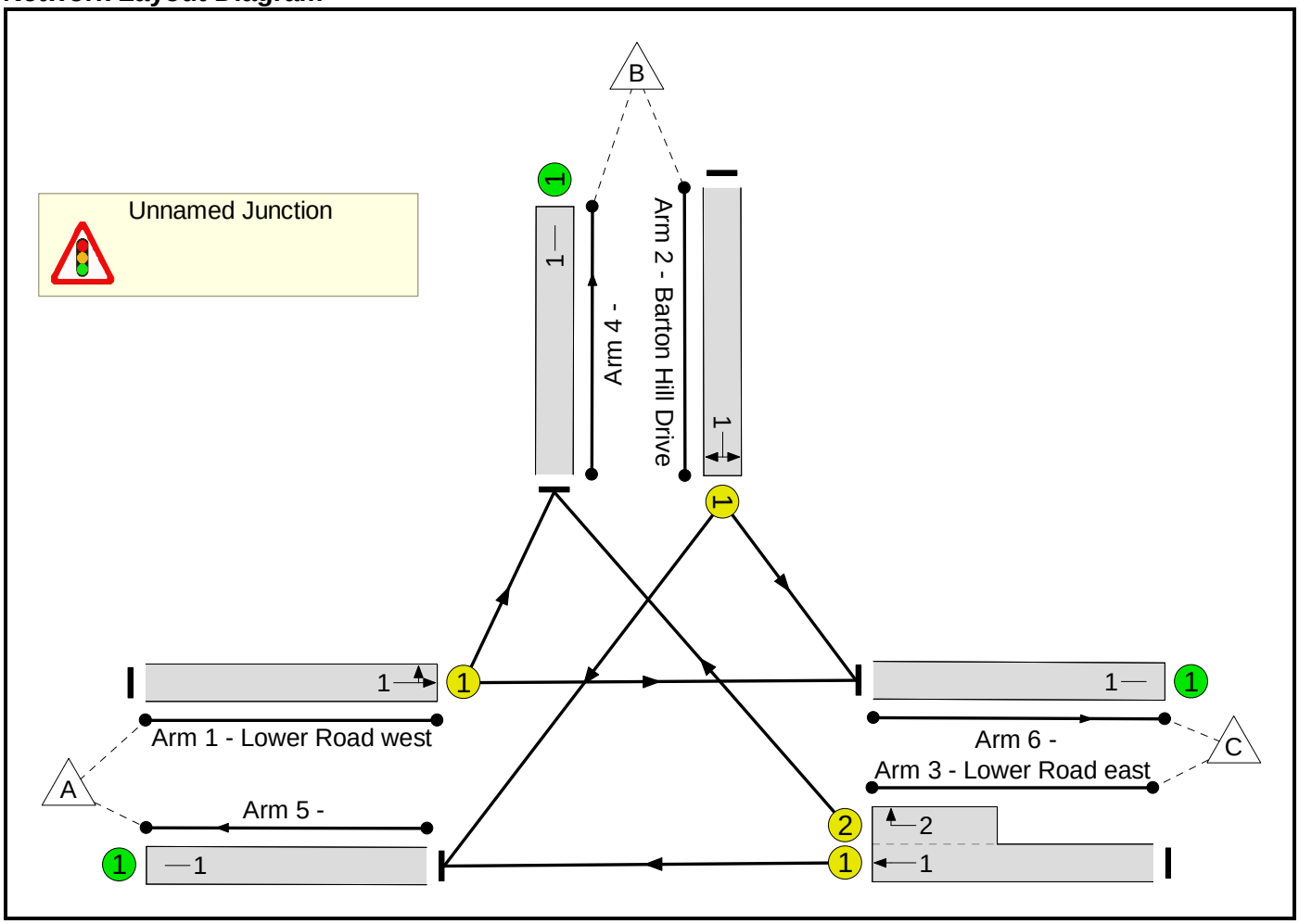
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.98	0.80	0.040	A	A
2	3.96	0.40	0.039	A	A
3	3.29	0.33	0.037	A	A

Full Input Data And Results

Project and User Details

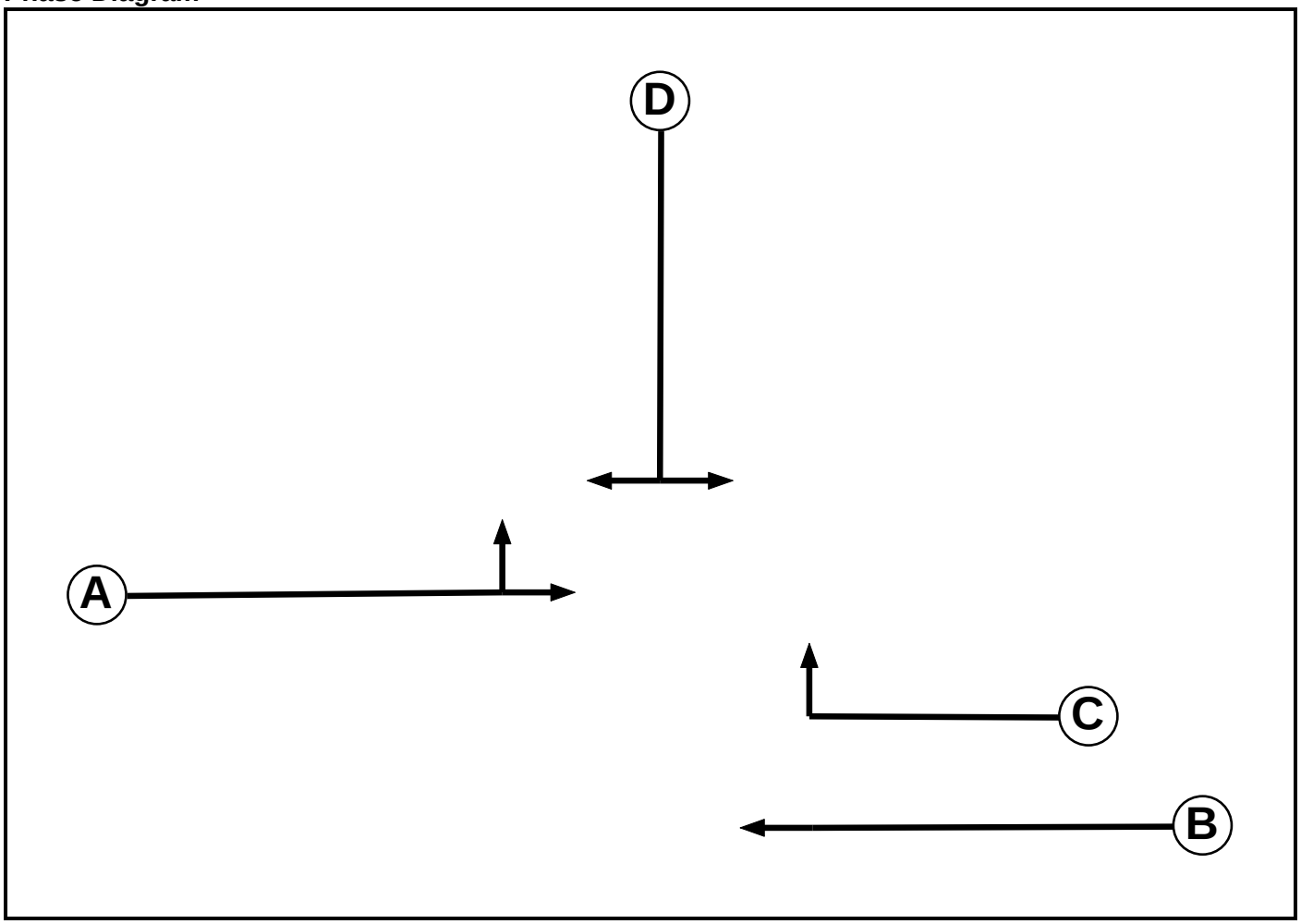
Project:	
Title:	
Location:	
File name:	Lower Road - Barton Hill Drive 006 (NN).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

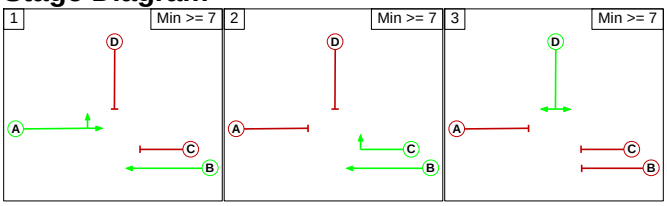
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		-	7	6
	B	-		-	5
	C	5	-		5
	D	6	6	6	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	6
	2	5		5
	3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Lower Road west)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	14.41
											Arm 6 Ahead	Inf
2/1 (Barton Hill Drive)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	17.57
											Arm 6 Left	11.63
3/1 (Lower Road east)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
3/2 (Lower Road east)	U	C	2	3	5.0	Geom	-	3.00	0.00	N	Arm 4 Right	16.18
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
11: '2022 Base AM'	08:00	09:00	01:00	
12: '2022 Base PM'	17:00	18:00	01:00	

Traffic Flows, Desired

FG11: '2022 Base AM'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	268	575	843
	B	602	0	27	629
	C	837	21	0	858
	Tot.	1439	289	602	2330

FG12: '2022 Base PM'

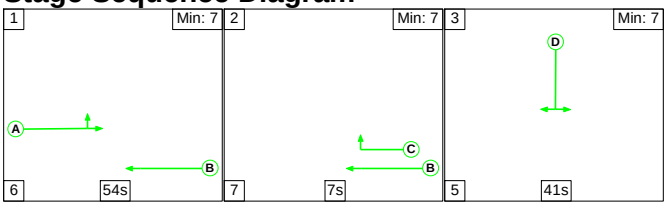
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	476	854	1330
	B	247	0	18	265
	C	639	54	0	693
	Tot.	886	530	872	2288

Full Input Data And Results

Scenario 11: '2022 Base AM' (FG11: '2022 Base AM', Plan 11: '2022 Base AM')

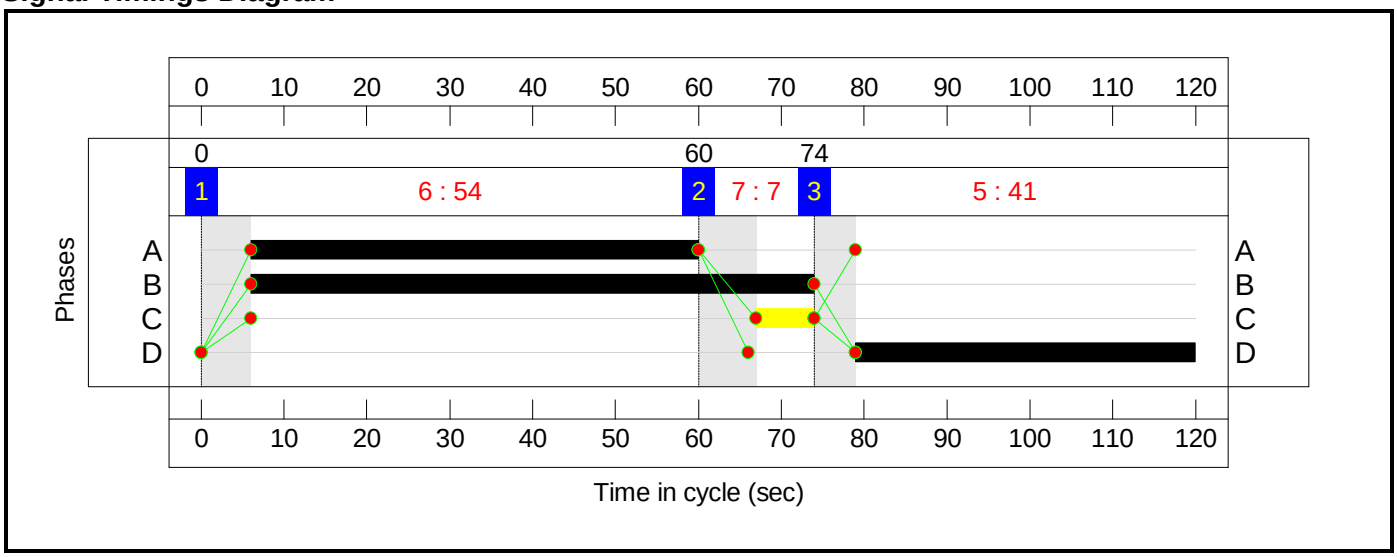
Stage Sequence Diagram



Stage Timings

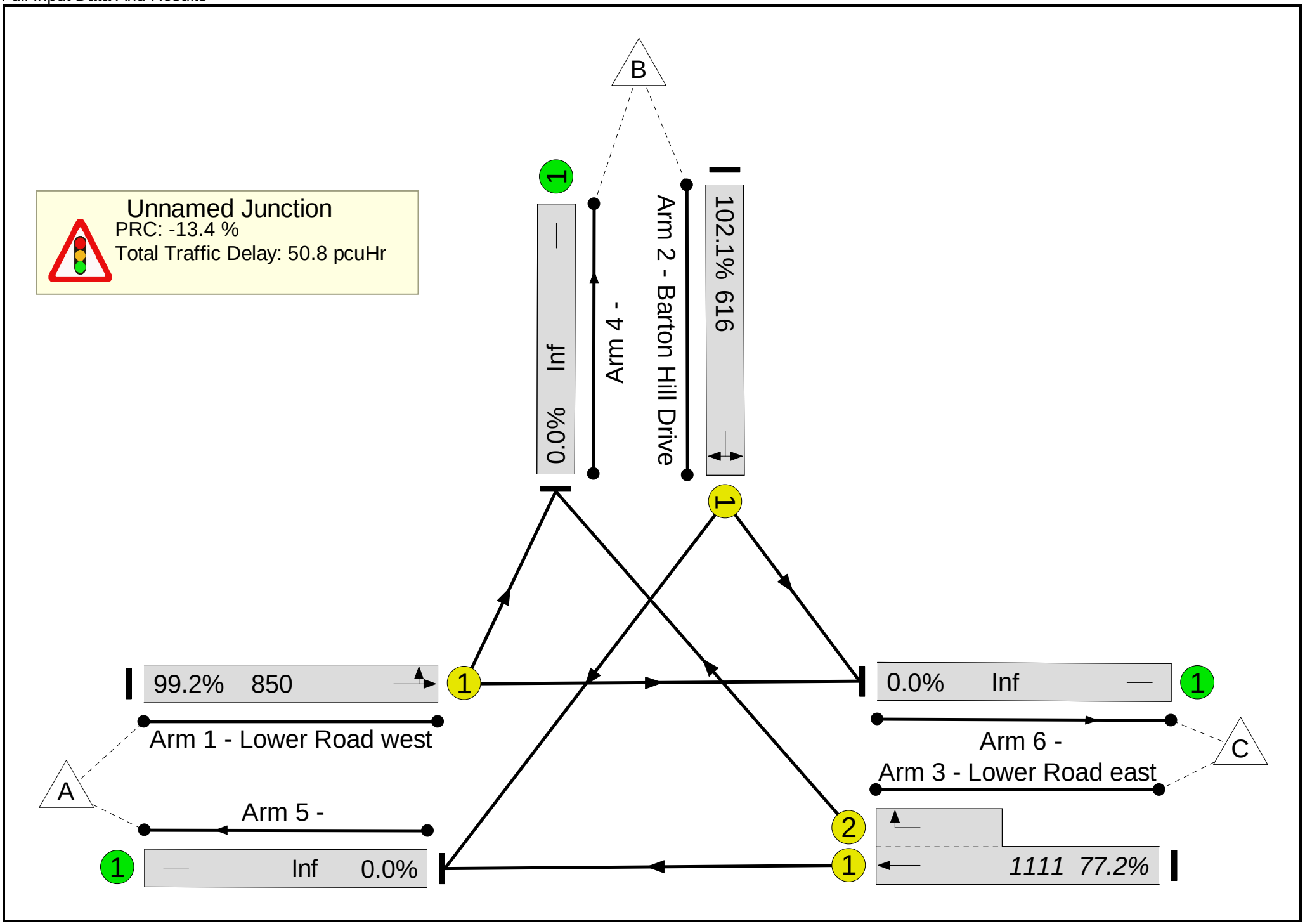
Stage	1	2	3
Duration	54	7	41
Change Point	0	60	74

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -13.4 %
Total Traffic Delay: 50.8 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
102.1% 616
1
99.2% 850
1
0.0% Inf
1
Arm 1 - Lower Road west
Arm 6 -
Arm 3 - Lower Road east
A
C
Arm 5 -
2
1
Inf 0.0%
1111 77.2%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.1%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.1%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	54	-	843	1854	850	99.2%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	41	-	629	1761	616	102.1%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	68:7	-	858	1915:1881	1111	77.2%
4/1		U	N/A	N/A	-		-	-	-	289	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1439	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	602	Inf	Inf	0.0%

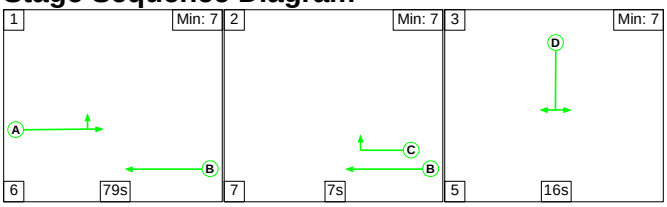
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**20.1**	**30.7**	**0.0**	**50.8**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**20.1**	**30.7**	**0.0**	**50.8**	**-**	**-**	**-**	**-**
1/1	843	843	-	-	-	7.6	12.9	-	20.5	87.5	27.9	12.9	40.8
2/1	629	616	-	-	-	7.7	16.1	-	23.8	136.3	21.4	16.1	37.5
3/1+3/2	858	858	-	-	-	4.8	1.7	-	6.5	27.2	21.6	1.7	23.2
4/1	289	289	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1427	1427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	601	601	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -13.4 Total Delay for Signalled Lanes (pcuHr): 50.78 Cycle Time (s): 120
PRC Over All Lanes (%): -13.4 Total Delay Over All Lanes(pcuHr): 50.78

Full Input Data And Results

Scenario 12: '2022 Base PM' (FG12: '2022 Base PM', Plan 12: '2022 Base PM')

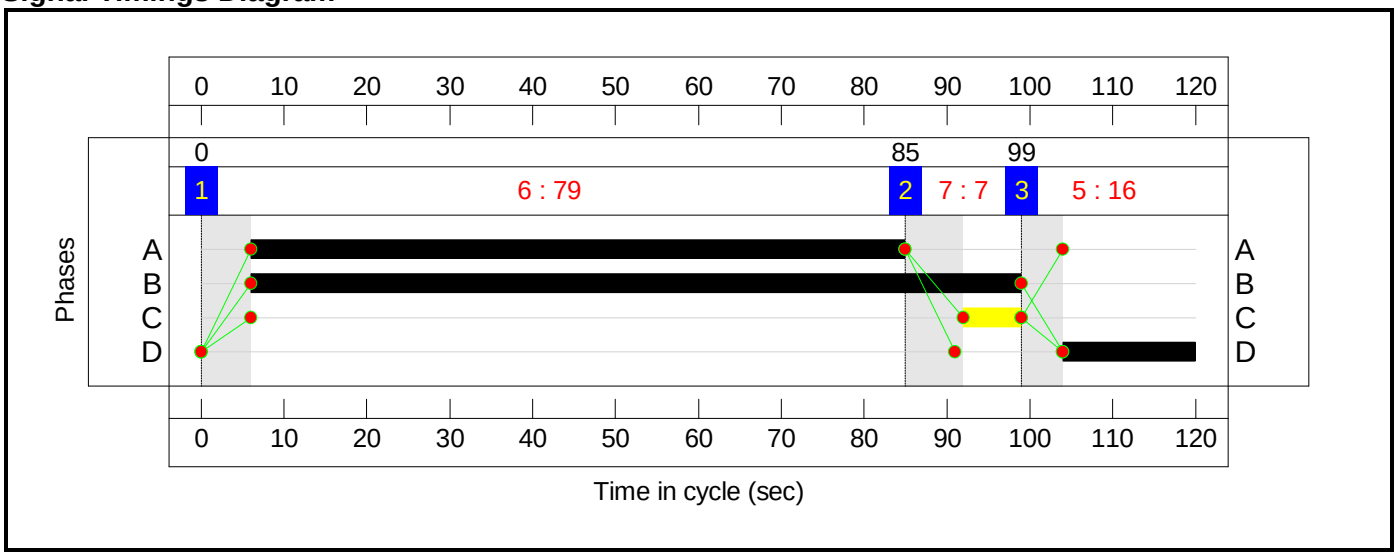
Stage Sequence Diagram



Stage Timings

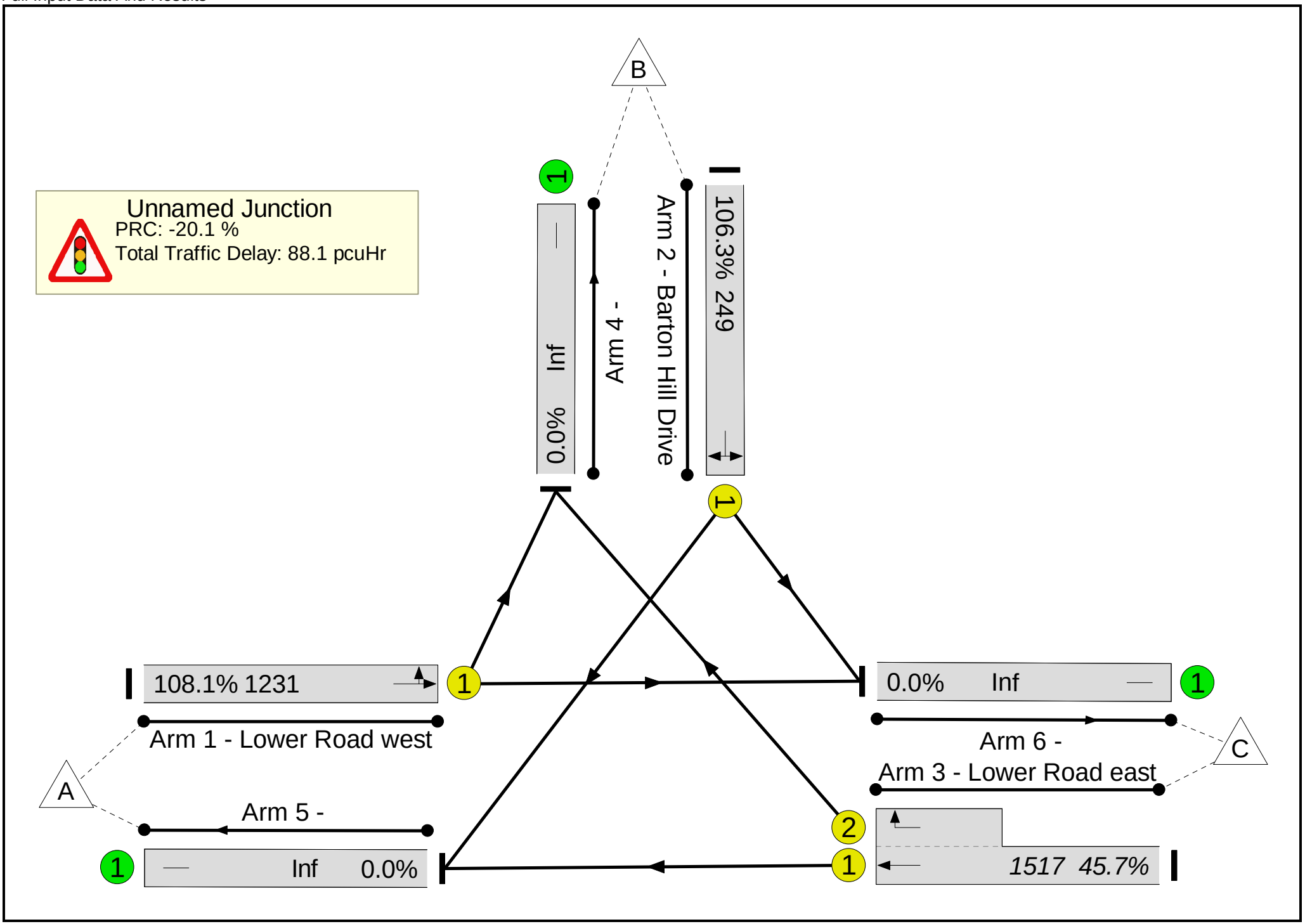
Stage	1	2	3
Duration	79	7	16
Change Point	0	85	99

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -20.1 %
Total Traffic Delay: 88.1 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
106.3% 249
1
108.1% 1231
1
0.0% Inf
1
Arm 1 - Lower Road west
Arm 6 -
Arm 3 - Lower Road east
A
C
Arm 5 -
2
1
1
Inf 0.0%
1517 45.7%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.1%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.1%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1330	1846	1231	108.1%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	265	1760	249	106.3%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	693	1915:1881	1517	45.7%
4/1		U	N/A	N/A	-		-	-	-	530	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	886	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.1**	**69.0**	**0.0**	**88.1**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**19.1**	**69.0**	**0.0**	**88.1**	**-**	**-**	**-**	**-**
1/1	1330	1231	-	-	-	12.7	55.6	-	68.3	185.0	47.6	55.6	103.3
2/1	265	249	-	-	-	4.9	12.9	-	17.8	242.0	9.7	12.9	22.6
3/1+3/2	693	693	-	-	-	1.6	0.4	-	2.0	10.3	6.9	0.4	7.3
4/1	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	871	871	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	807	807	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -20.1 Total Delay for Signalled Lanes (pcuHr): 88.13 Cycle Time (s): 120
PRC Over All Lanes (%): -20.1 Total Delay Over All Lanes(pcuHr): 88.13

Appendix I – Model outputs (2022 'with development' flows)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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: 2022 Base Residential-A249_B2231.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODELLING USED IN SUBMITTED TAs\London Modelling Results\Models\Arcady Models\A249_B2231\July 2015 TA - residential application
Report generation date: 07/07/2015 11:14:30

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.16	0.05	0.54	A				
Arm 2	0.53	0.04	0.35	A				
Arm 3	1.60	0.08	0.62	A				
	A1 - Scenario 2							
Arm 1					2.07	0.07	0.68	A
Arm 2					0.89	0.06	0.47	A
Arm 3					0.69	0.05	0.41	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/07/2015 11:14:28

File summary

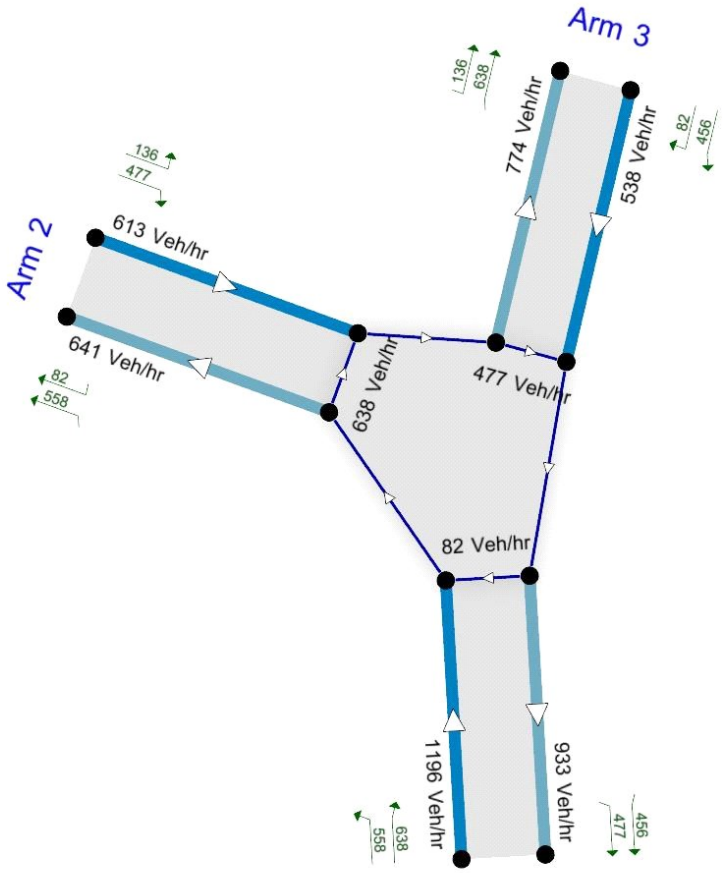
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1372.00	100.000
2	ONE HOUR	✓	726.00	100.000
3	ONE HOUR	✓	1234.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	927.74	998.10		
07:45-07:55	2	490.92	529.62		
07:45-07:55	3	834.43	860.49		
07:55-08:05	1	927.74	998.10		
07:55-08:05	2	490.92	529.62		
07:55-08:05	3	834.43	860.49		
08:05-08:15	1	1162.14	1250.27		
08:05-08:15	2	614.95	663.43		
08:05-08:15	3	1045.24	1077.89		
08:15-08:25	1	1330.31	1431.20		
08:15-08:25	2	703.94	759.43		
08:15-08:25	3	1196.51	1233.87		
08:25-08:35	1	1391.62	1497.15		
08:25-08:35	2	736.38	794.43		
08:25-08:35	3	1251.64	1290.73		
08:35-08:45	1	1330.31	1431.20		
08:35-08:45	2	703.94	759.43		
08:35-08:45	3	1196.51	1233.87		
08:45-08:55	1	1162.14	1250.27		
08:45-08:55	2	614.95	663.43		
08:45-08:55	3	1045.24	1077.89		
08:55-09:05	1	927.74	998.10		
08:55-09:05	2	490.92	529.62		
08:55-09:05	3	834.43	860.49		
09:05-09:15	1	927.74	998.10		
09:05-09:15	2	490.92	529.62		
09:05-09:15	3	834.43	860.49		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	709.000	663.000
	2	641.000	0.000	85.000
	3	1082.000	152.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.88	0.00	0.12
	3	0.88	0.12	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.050
	2	1.080	1.000	1.070
	3	1.030	1.040	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	10.0	5.0
	2	8.0	0.0	7.0
	3	3.0	4.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.54	0.05	1.16	A	1120.83	1681.25	70.68	0.04	0.79	70.69	0.04
2	0.35	0.04	0.53	A	593.09	889.64	34.14	0.04	0.38	34.14	0.04
3	0.62	0.08	1.60	A	1008.10	1512.15	87.97	0.06	0.98	87.98	0.06

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	924.46	1160.41	102.33	0.00	2614.49	2574.42	0.355	0.00	0.55	0.035	A
2	490.92	81.82	489.25	580.06	446.73	0.00	2252.66	1741.57	0.218	0.00	0.28	0.034	A
3	834.43	139.07	830.76	504.02	431.97	0.00	2190.28	1336.41	0.381	0.00	0.61	0.044	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	927.73	1165.07	102.78	0.00	2614.20	2574.42	0.355	0.55	0.55	0.036	A
2	490.92	81.82	490.92	582.20	448.31	0.00	2251.64	1741.57	0.218	0.28	0.28	0.034	A
3	834.43	139.07	834.41	505.79	433.44	0.00	2189.15	1336.41	0.381	0.61	0.61	0.044	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1162.13	193.69	1160.60	1456.95	128.48	0.00	2597.66	2574.42	0.447	0.55	0.80	0.042	A
2	614.95	102.49	614.27	728.24	560.85	0.00	2179.51	1741.57	0.282	0.28	0.39	0.038	A
3	1045.25	174.21	1043.07	632.77	542.35	0.00	2105.04	1336.41	0.497	0.61	0.98	0.056	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1330.31	221.72	1328.83	1667.94	147.08	0.00	2585.70	2574.42	0.514	0.80	1.05	0.048	A
2	703.94	117.32	703.34	833.77	642.14	0.00	2127.40	1741.57	0.331	0.39	0.49	0.042	A
3	1196.51	199.42	1194.03	724.49	620.99	0.00	2044.31	1336.41	0.585	0.98	1.39	0.070	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1391.61	231.94	1390.96	1746.32	154.02	0.00	2581.23	2574.42	0.539	1.05	1.16	0.050	A
2	736.38	122.73	736.13	872.82	672.16	0.00	2108.15	1741.57	0.349	0.49	0.53	0.044	A
3	1251.65	208.61	1250.40	758.35	649.94	0.00	2021.96	1336.41	0.619	1.39	1.60	0.078	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1330.31	221.72	1330.84	1671.68	147.50	0.00	2585.42	2574.42	0.515	1.16	1.07	0.048	A
2	703.94	117.32	704.16	835.24	643.11	0.00	2126.77	1741.57	0.331	0.53	0.50	0.042	A
3	1196.51	199.42	1197.48	725.56	621.71	0.00	2043.76	1336.41	0.585	1.60	1.43	0.071	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1162.13	193.69	1163.65	1462.28	129.07	0.00	2597.28	2574.42	0.447	1.07	0.82	0.042	A
2	614.95	102.49	615.56	730.41	562.32	0.00	2178.56	1741.57	0.282	0.50	0.40	0.038	A
3	1045.25	174.21	1047.86	634.39	543.49	0.00	2104.16	1336.41	0.497	1.43	1.00	0.057	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	929.32	1167.68	103.06	0.00	2614.02	2574.42	0.355	0.82	0.55	0.036	A
2	490.92	81.82	491.61	583.30	449.08	0.00	2251.15	1741.57	0.218	0.40	0.28	0.034	A
3	834.43	139.07	836.69	506.64	434.05	0.00	2188.68	1336.41	0.381	1.00	0.62	0.044	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	927.75	1165.11	102.78	0.00	2614.20	2574.42	0.355	0.55	0.55	0.036	A
2	490.92	81.82	490.92	582.21	448.32	0.00	2251.64	1741.57	0.218	0.28	0.28	0.034	A
3	834.43	139.07	834.44	505.80	433.45	0.00	2189.15	1336.41	0.381	0.62	0.62	0.044	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.35	0.53	0.035	A	A
2	2.72	0.27	0.034	A	A
3	5.94	0.59	0.044	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.48	0.55	0.036	A	A
2	2.78	0.28	0.034	A	A
3	6.13	0.61	0.044	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.87	0.79	0.042	A	A
2	3.85	0.38	0.038	A	A
3	9.47	0.95	0.056	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.26	1.03	0.048	A	A
2	4.84	0.48	0.042	A	A
3	13.41	1.34	0.070	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.40	1.14	0.050	A	A
2	5.27	0.53	0.044	A	A
3	15.55	1.56	0.078	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.84	1.08	0.048	A	A
2	5.03	0.50	0.042	A	A
3	14.64	1.46	0.071	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.33	0.83	0.042	A	A
2	4.02	0.40	0.038	A	A
3	10.28	1.03	0.057	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.64	0.56	0.036	A	A
2	2.84	0.28	0.034	A	A
3	6.36	0.64	0.044	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.52	0.55	0.036	A	A
2	2.80	0.28	0.034	A	A
3	6.19	0.62	0.044	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1776.00	100.000
2	ONE HOUR	✓	910.00	100.000
3	ONE HOUR	✓	799.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	1200.93	1264.19		
16:45-16:55	2	615.34	659.79		
16:45-16:55	3	540.28	553.56		
16:55-17:05	1	1200.93	1264.19		
16:55-17:05	2	615.34	659.79		
16:55-17:05	3	540.28	553.56		
17:05-17:15	1	1504.34	1583.58		
17:05-17:15	2	770.80	826.49		
17:05-17:15	3	676.78	693.42		
17:15-17:25	1	1722.04	1812.75		
17:15-17:25	2	882.35	946.09		
17:15-17:25	3	774.72	793.77		
17:25-17:35	1	1801.39	1896.28		
17:25-17:35	2	923.01	989.69		
17:25-17:35	3	810.42	830.34		
17:35-17:45	1	1722.04	1812.75		
17:35-17:45	2	882.35	946.09		
17:35-17:45	3	774.72	793.77		
17:45-17:55	1	1504.34	1583.58		
17:45-17:55	2	770.80	826.49		
17:45-17:55	3	676.78	693.42		
17:55-18:05	1	1200.93	1264.19		
17:55-18:05	2	615.34	659.79		
17:55-18:05	3	540.28	553.56		
18:05-18:15	1	1200.93	1264.19		
18:05-18:15	2	615.34	659.79		
18:05-18:15	3	540.28	553.56		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	829.000	947.000
	2	708.000	0.000	202.000
	3	677.000	122.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.47	0.53
	2	0.78	0.00	0.22
	3	0.85	0.15	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.090	1.020
	2	1.090	1.000	1.010
	3	1.020	1.050	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	9.0	2.0
	2	9.0	0.0	1.0
	3	2.0	5.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.68	0.07	2.07	A	1450.88	2176.32	114.72	0.05	1.27	114.73	0.05
2	0.47	0.06	0.89	A	743.41	1115.12	52.76	0.05	0.59	52.76	0.05
3	0.41	0.05	0.69	A	652.73	979.09	42.38	0.04	0.47	42.38	0.04

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1196.11	933.00	82.19	0.00	2684.76	2586.42	0.447	0.00	0.80	0.040	A
2	615.34	102.56	612.96	640.51	637.79	0.00	2155.03	1690.57	0.286	0.00	0.40	0.039	A
3	540.28	90.05	538.30	773.85	476.89	0.00	2166.15	1508.46	0.249	0.00	0.33	0.037	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1200.92	936.53	82.50	0.00	2684.56	2586.42	0.447	0.80	0.81	0.040	A
2	615.34	102.56	615.33	643.05	640.35	0.00	2153.43	1690.57	0.286	0.40	0.40	0.039	A
3	540.28	90.05	540.28	776.94	478.74	0.00	2164.70	1508.46	0.250	0.33	0.33	0.037	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1504.34	250.72	1501.53	1171.46	103.20	0.00	2670.81	2586.41	0.563	0.81	1.27	0.051	A
2	770.81	128.47	769.62	804.08	800.65	0.00	2053.00	1690.57	0.375	0.40	0.60	0.047	A
3	676.78	112.80	675.88	971.48	598.78	0.00	2070.54	1508.46	0.327	0.33	0.48	0.043	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1722.04	287.01	1718.88	1341.26	118.16	0.00	2660.88	2586.41	0.647	1.27	1.80	0.063	A
2	882.35	147.06	881.16	920.49	916.54	0.00	1980.39	1690.57	0.446	0.60	0.80	0.055	A
3	774.72	129.12	773.86	1112.14	685.56	0.00	2002.46	1508.46	0.387	0.48	0.63	0.049	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1801.40	300.23	1799.83	1404.06	123.69	0.00	2657.21	2586.41	0.678	1.80	2.07	0.070	A
2	923.01	153.84	922.47	963.80	959.70	0.00	1953.35	1690.57	0.473	0.80	0.89	0.058	A
3	810.42	135.07	810.05	1164.47	717.70	0.00	1977.25	1508.46	0.410	0.63	0.69	0.051	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1722.04	287.01	1723.26	1343.53	118.34	0.00	2660.76	2586.41	0.647	2.07	1.86	0.064	A
2	882.35	147.06	882.80	922.72	918.87	0.00	1978.93	1690.57	0.446	0.89	0.81	0.055	A
3	774.72	129.12	775.04	1114.84	686.84	0.00	2001.46	1508.46	0.387	0.69	0.64	0.049	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1504.34	250.72	1507.70	1174.85	103.47	0.00	2670.63	2586.41	0.563	1.86	1.30	0.052	A
2	770.81	128.47	772.04	807.23	803.93	0.00	2050.94	1690.57	0.376	0.81	0.61	0.047	A
3	676.78	112.80	677.67	975.31	600.66	0.00	2069.06	1508.46	0.327	0.64	0.49	0.043	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1203.87	938.27	82.64	0.00	2684.46	2586.42	0.447	1.30	0.82	0.041	A
2	615.34	102.56	616.57	644.58	641.93	0.00	2152.44	1690.57	0.286	0.61	0.40	0.039	A
3	540.28	90.05	541.21	778.79	479.70	0.00	2163.95	1508.46	0.250	0.49	0.33	0.037	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1200.95	936.55	82.50	0.00	2684.56	2586.42	0.447	0.82	0.81	0.040	A
2	615.34	102.56	615.35	643.07	640.37	0.00	2153.42	1690.57	0.286	0.40	0.40	0.039	A
3	540.28	90.05	540.29	776.96	478.75	0.00	2164.69	1508.46	0.250	0.33	0.33	0.037	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.81	0.78	0.040	A	A
2	3.89	0.39	0.039	A	A
3	3.24	0.32	0.037	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.05	0.81	0.040	A	A
2	3.98	0.40	0.039	A	A
3	3.31	0.33	0.037	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.37	1.24	0.051	A	A
2	5.84	0.58	0.047	A	A
3	4.73	0.47	0.043	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.39	1.74	0.063	A	A
2	7.78	0.78	0.055	A	A
3	6.14	0.61	0.049	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	20.12	2.01	0.070	A	A
2	8.72	0.87	0.058	A	A
3	6.79	0.68	0.051	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.03	1.90	0.064	A	A
2	8.24	0.82	0.055	A	A
3	6.44	0.64	0.049	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.45	1.34	0.052	A	A
2	6.19	0.62	0.047	A	A
3	4.98	0.50	0.043	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.35	0.84	0.041	A	A
2	4.10	0.41	0.039	A	A
3	3.40	0.34	0.037	A	A

Queueing Delay results: (18:05-18:15)

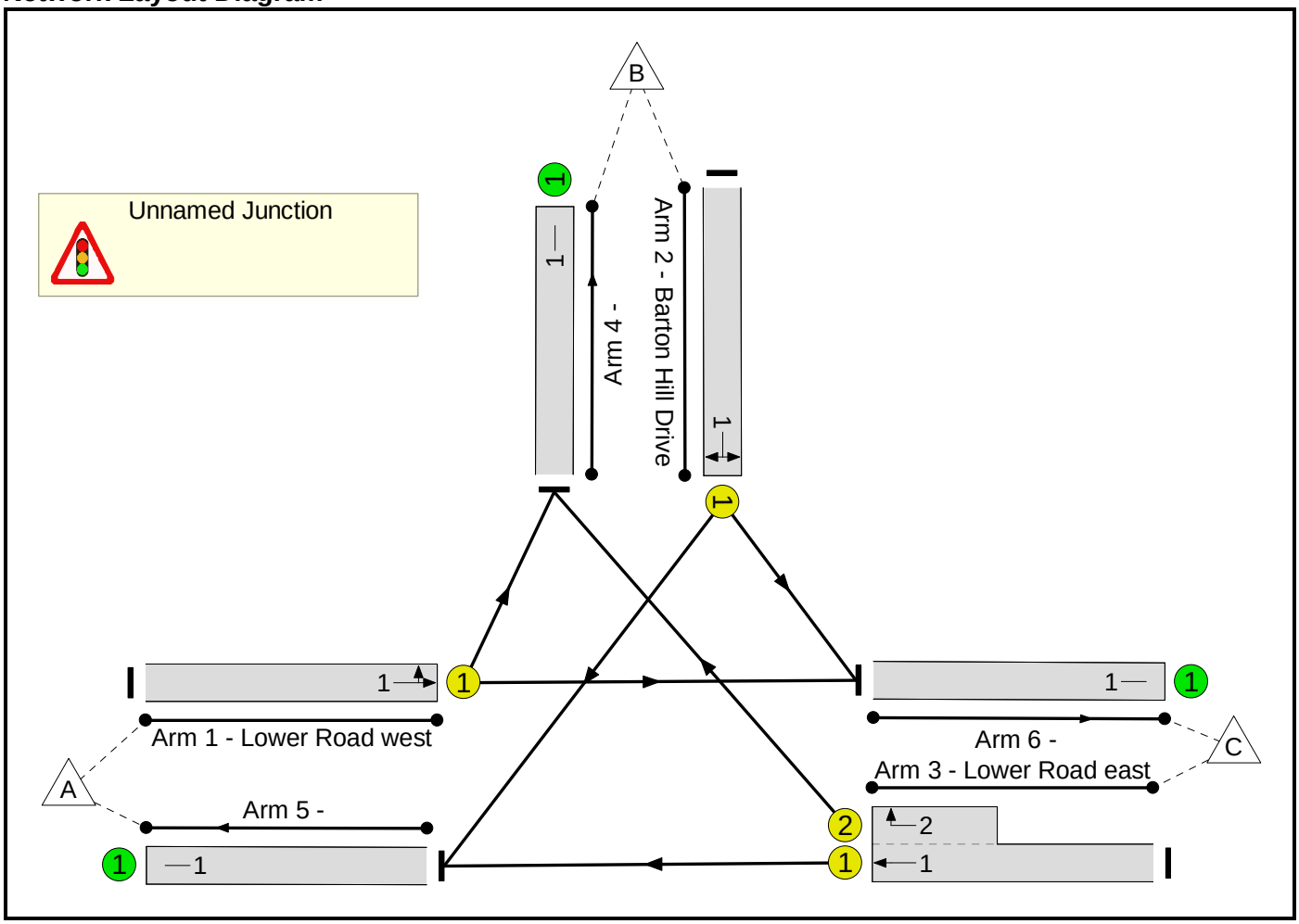
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.14	0.81	0.040	A	A
2	4.02	0.40	0.039	A	A
3	3.34	0.33	0.037	A	A

Full Input Data And Results

Project and User Details

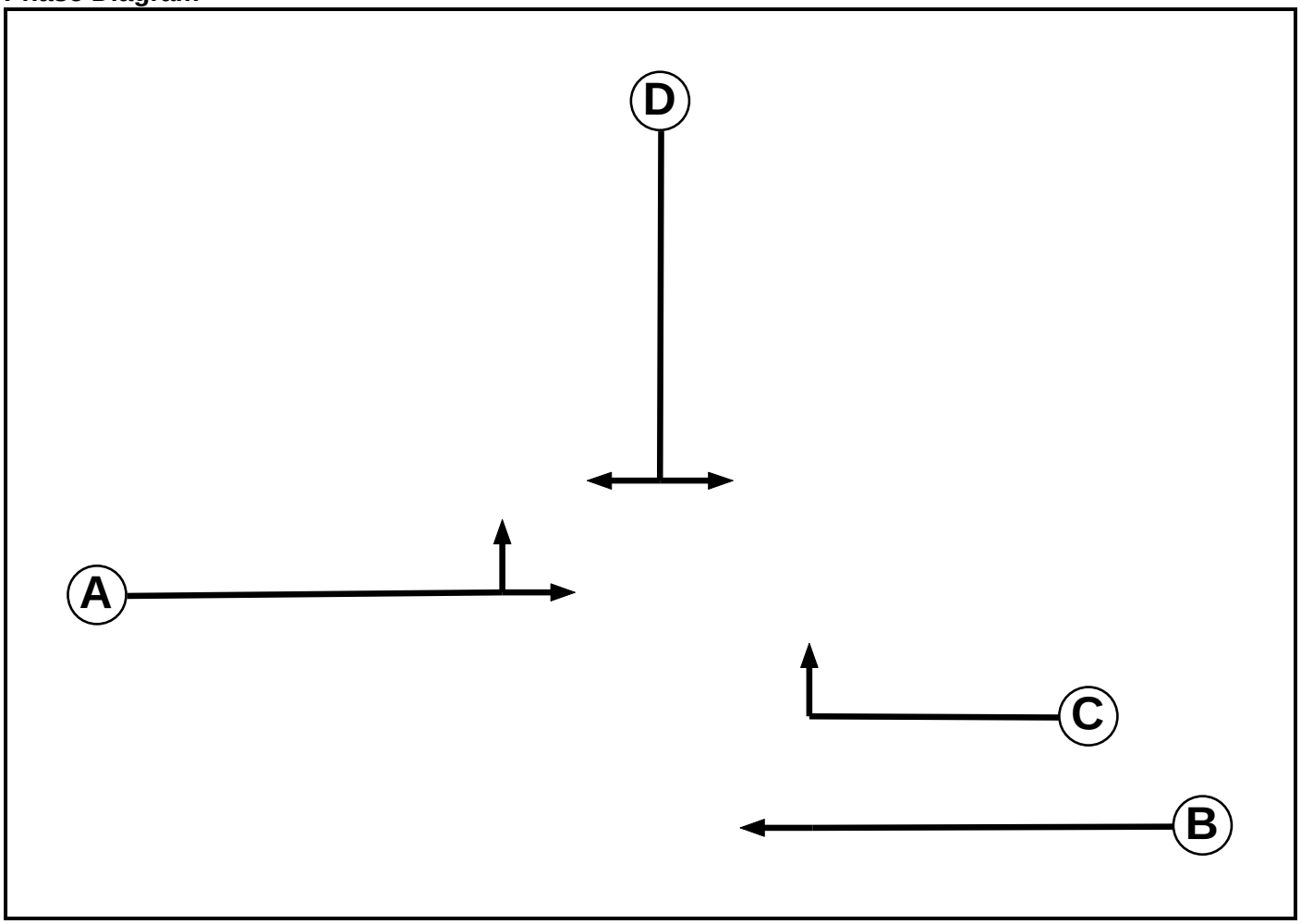
Project:	
Title:	
Location:	
File name:	Lower Road - Barton Hill Drive 006 (NN).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

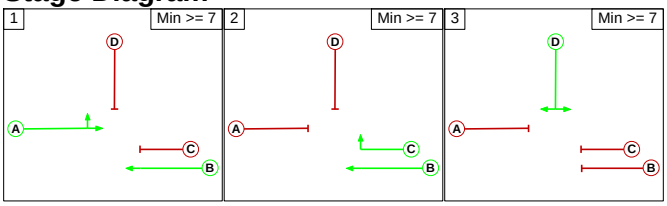
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		-	7	6
	B	-		-	5
	C	5	-		5
	D	6	6	6	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	6
	2	5		5
	3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Lower Road west)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	14.41
											Arm 6 Ahead	Inf
2/1 (Barton Hill Drive)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	17.57
											Arm 6 Left	11.63
3/1 (Lower Road east)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
3/2 (Lower Road east)	U	C	2	3	5.0	Geom	-	3.00	0.00	N	Arm 4 Right	16.18
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
13: '2022 AM Resi Devt'	08:00	09:00	01:00	
14: '2022 PM Resi Devt'	17:00	18:00	01:00	

Traffic Flows, Desired

FG13: '2022 AM Resi Devt'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	268	575	843
	B	602	0	27	629
	C	837	21	0	858
	Tot.	1439	289	602	2330

FG14: '2022 PM Resi Devt'

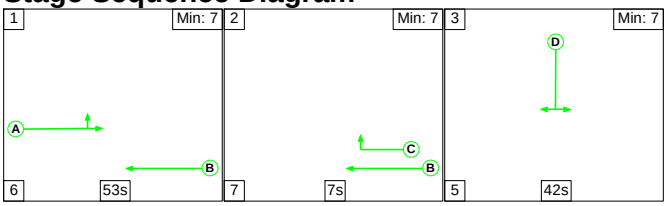
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	475	854	1329
	B	247	0	18	265
	C	639	54	0	693
	Tot.	886	529	872	2287

Full Input Data And Results

Scenario 13: '2022 AM Resi Devt' (FG13: '2022 AM Resi Devt', Plan 13: '2022 AM Resi Devt')

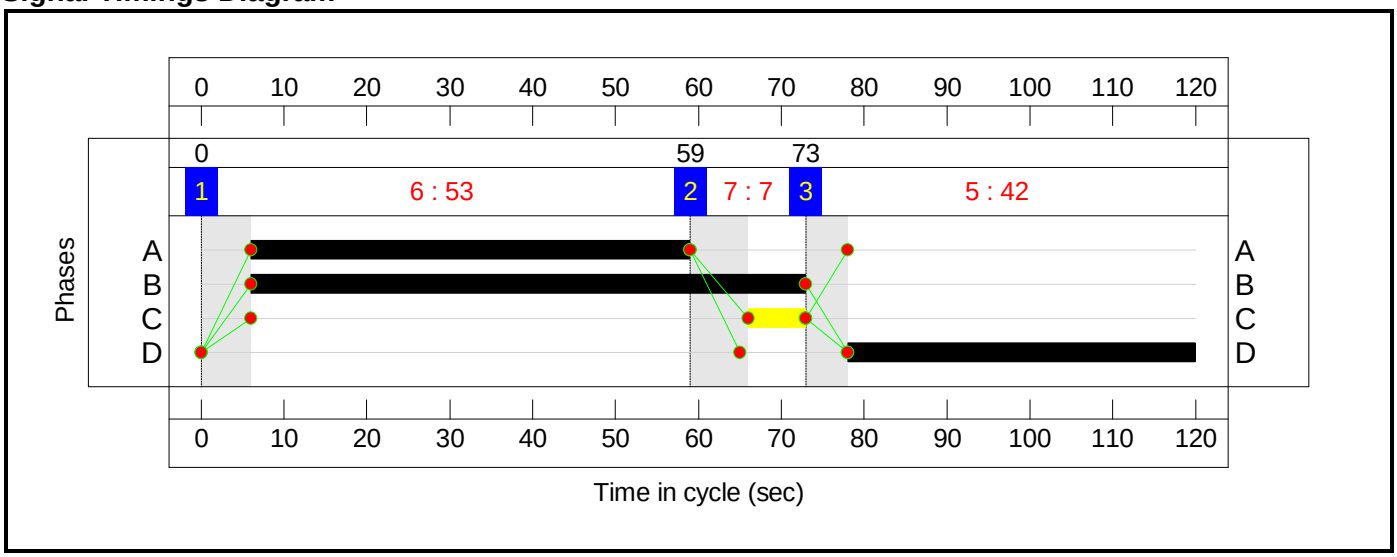
Stage Sequence Diagram



Stage Timings

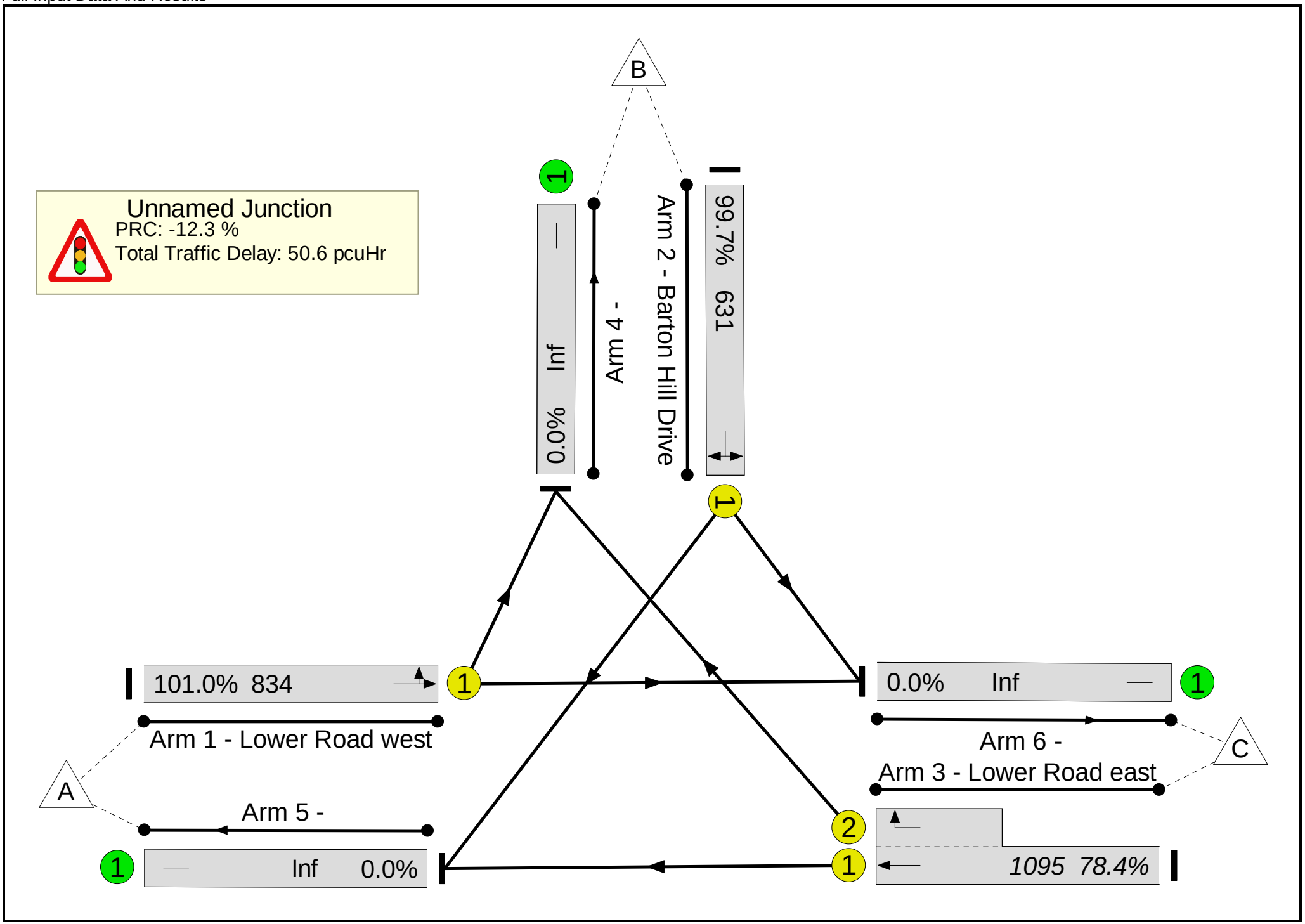
Stage	1	2	3
Duration	53	7	42
Change Point	0	59	73

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -12.3 %
Total Traffic Delay: 50.6 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
99.7% 631
1
101.0% 834
1
0.0% Inf
1
Arm 1 - Lower Road west
A
Arm 6 -
Arm 3 - Lower Road east
C
Arm 5 -
2
1
Inf 0.0%
1
1095 78.4%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**101.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**101.0%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	53	-	843	1854	834	101.0%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	42	-	629	1761	631	99.7%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	67:7	-	858	1915:1881	1095	78.4%
4/1		U	N/A	N/A	-		-	-	-	289	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1439	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	602	Inf	Inf	0.0%

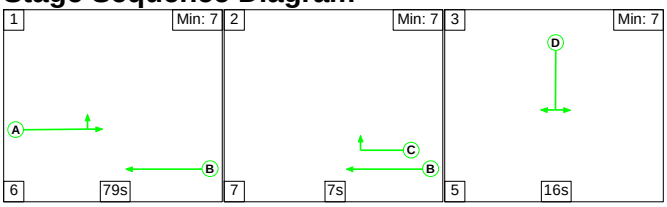
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.9**	**30.7**	**0.0**	**50.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**19.9**	**30.7**	**0.0**	**50.6**	**-**	**-**	**-**	**-**
1/1	843	834	-	-	-	8.2	16.9	-	25.1	107.1	28.4	16.9	45.2
2/1	629	629	-	-	-	6.7	12.0	-	18.8	107.4	20.8	12.0	32.8
3/1+3/2	858	858	-	-	-	5.0	1.8	-	6.8	28.4	22.0	1.8	23.8
4/1	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1439	1439	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -12.3 Total Delay for Signalled Lanes (pcuHr): 50.60 Cycle Time (s): 120
PRC Over All Lanes (%): -12.3 Total Delay Over All Lanes(pcuHr): 50.60

Full Input Data And Results

Scenario 14: '2022 PM Resi Devt' (FG14: '2022 PM Resi Devt', Plan 14: '2022 PM Resi Devt')

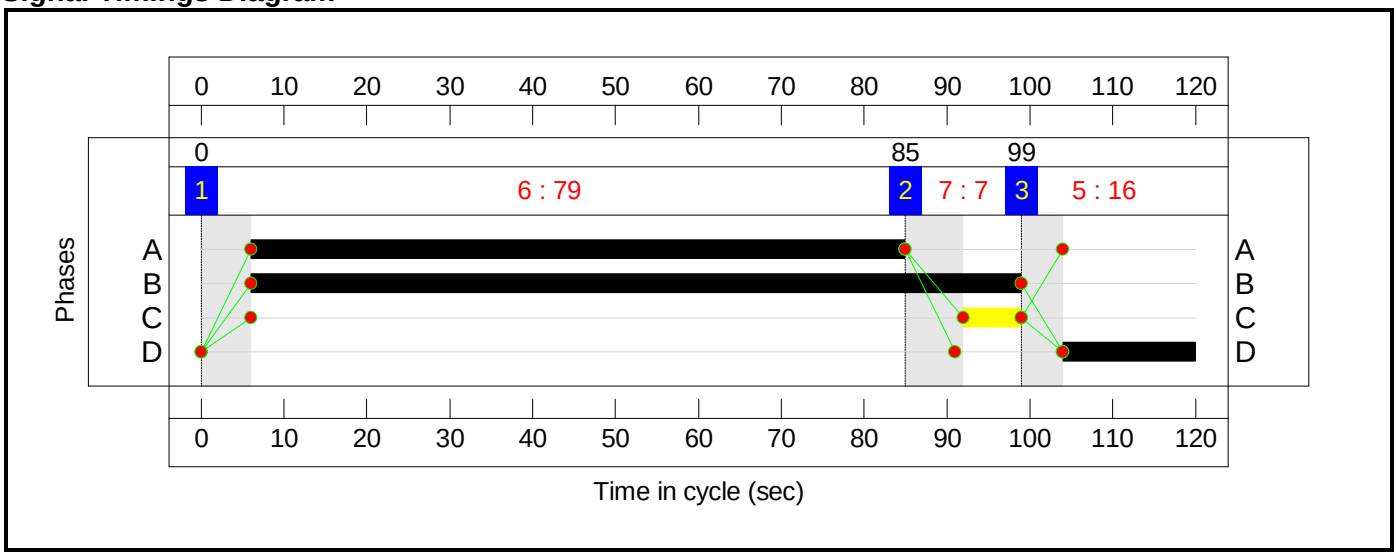
Stage Sequence Diagram



Stage Timings

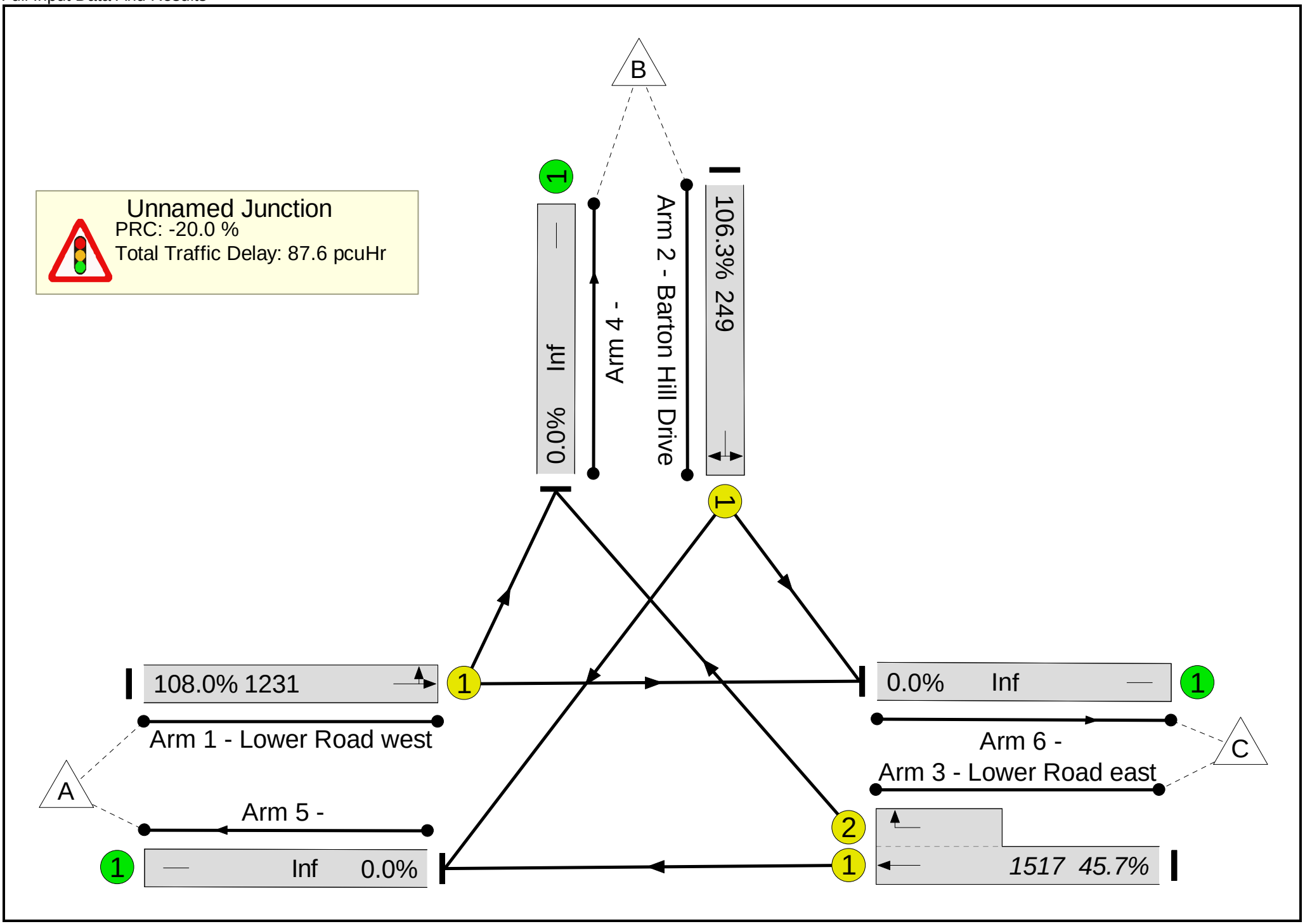
Stage	1	2	3
Duration	79	7	16
Change Point	0	85	99

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -20.0 %
Total Traffic Delay: 87.6 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
106.3% 249
1
108.0% 1231
1
0.0% Inf
1
Arm 1 - Lower Road west
A
Arm 6 -
Arm 3 - Lower Road east
C
Arm 5 -
2
1
Inf 0.0%
1
1517 45.7%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.0%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.0%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1329	1846	1231	108.0%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	265	1760	249	106.3%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	693	1915:1881	1517	45.7%
4/1		U	N/A	N/A	-		-	-	-	529	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	886	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.1**	**68.6**	**0.0**	**87.6**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**19.1**	**68.6**	**0.0**	**87.6**	**-**	**-**	**-**	**-**
1/1	1329	1231	-	-	-	12.6	55.2	-	67.8	183.7	47.6	55.2	102.8
2/1	265	249	-	-	-	4.9	12.9	-	17.8	242.0	9.7	12.9	22.6
3/1+3/2	693	693	-	-	-	1.6	0.4	-	2.0	10.3	6.9	0.4	7.3
4/1	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	871	871	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	808	808	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -20.0 Total Delay for Signalled Lanes (pcuHr): 87.62 Cycle Time (s): 120
PRC Over All Lanes (%): -20.0 Total Delay Over All Lanes(pcuHr): 87.62

Appendix J – Model outputs (sensitivity flows)

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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: 2017 Base Sensitivity-A249_B2231.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODELLING USED IN SUBMITTED TAs\London Modelling Results\Models\Arcady Models\A249_B2231\July 2015 TA - residential application
Report generation date: 07/07/2015 11:15:48

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.00	0.05	0.50	A				
Arm 2	0.47	0.04	0.32	A				
Arm 3	1.28	0.07	0.56	A				
	A1 - Scenario 2							
Arm 1					1.69	0.06	0.63	A
Arm 2					0.71	0.05	0.42	A
Arm 3					0.59	0.05	0.37	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/07/2015 11:15:46

File summary

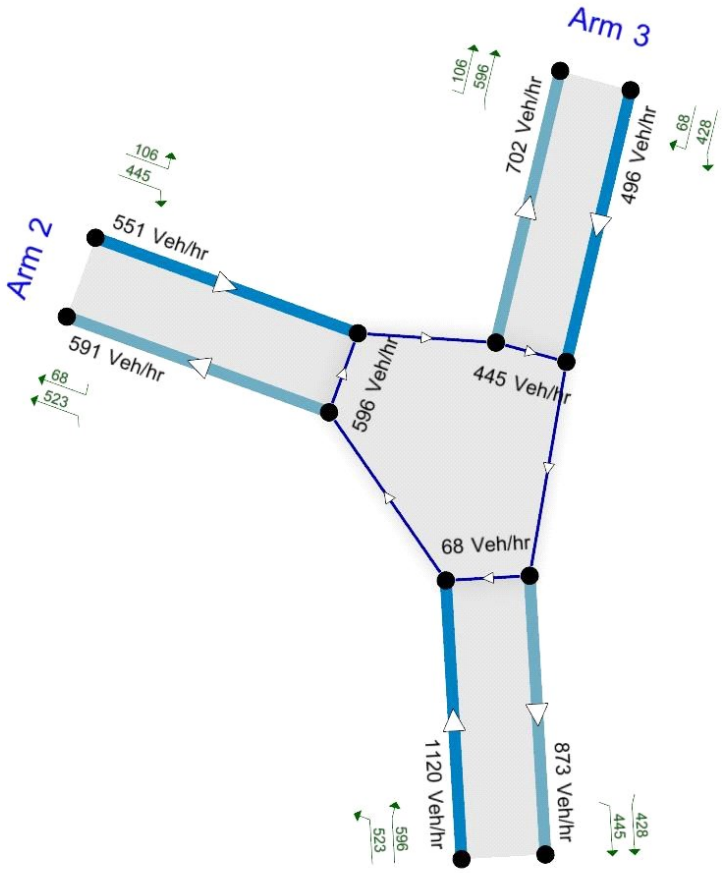
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.05	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1289.00	100.000
2	ONE HOUR	✓	678.00	100.000
3	ONE HOUR	✓	1142.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	871.62	937.72		
07:45-07:55	2	458.46	494.63		
07:45-07:55	3	772.22	796.22		
07:55-08:05	1	871.62	937.72		
07:55-08:05	2	458.46	494.63		
07:55-08:05	3	772.22	796.22		
08:05-08:15	1	1091.83	1174.63		
08:05-08:15	2	574.29	619.59		
08:05-08:15	3	967.32	997.38		
08:15-08:25	1	1249.83	1344.61		
08:15-08:25	2	657.40	709.25		
08:15-08:25	3	1107.30	1141.71		
08:25-08:35	1	1307.43	1406.58		
08:25-08:35	2	687.69	741.94		
08:25-08:35	3	1158.33	1194.33		
08:35-08:45	1	1249.83	1344.61		
08:35-08:45	2	657.40	709.25		
08:35-08:45	3	1107.30	1141.71		
08:45-08:55	1	1091.83	1174.63		
08:45-08:55	2	574.29	619.59		
08:45-08:55	3	967.32	997.38		
08:55-09:05	1	871.62	937.72		
08:55-09:05	2	458.46	494.63		
08:55-09:05	3	772.22	796.22		
09:05-09:15	1	871.62	937.72		
09:05-09:15	2	458.46	494.63		
09:05-09:15	3	772.22	796.22		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	666.000	623.000
	2	602.000	0.000	76.000
	3	1019.000	123.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.89	0.00	0.11
	3	0.89	0.11	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.050
	2	1.080	1.000	1.070
	3	1.030	1.040	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	10.0	5.0
	2	8.0	0.0	7.0
	3	3.0	4.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.50	0.05	1.00	A	1053.03	1579.55	62.48	0.04	0.69	62.48	0.04
2	0.32	0.04	0.47	A	553.88	830.82	30.63	0.04	0.34	30.63	0.04
3	0.56	0.07	1.28	A	932.93	1399.40	73.41	0.05	0.82	73.42	0.05

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	871.62	145.27	868.66	1091.92	82.83	0.00	2627.06	2587.99	0.332	0.00	0.49	0.034	A
2	458.46	76.41	456.95	531.65	419.84	0.00	2269.79	1737.15	0.202	0.00	0.25	0.033	A
3	772.22	128.70	769.02	471.06	405.73	0.00	2210.87	1332.93	0.349	0.00	0.53	0.042	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	871.62	145.27	871.61	1096.10	83.17	0.00	2626.84	2587.99	0.332	0.49	0.50	0.034	A
2	458.46	76.41	458.46	533.51	421.27	0.00	2268.87	1737.15	0.202	0.25	0.25	0.033	A
3	772.22	128.70	772.20	472.66	407.07	0.00	2209.84	1332.93	0.349	0.53	0.54	0.042	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1091.84	181.97	1090.53	1370.97	104.00	0.00	2613.44	2587.99	0.418	0.50	0.71	0.039	A
2	574.29	95.72	573.70	667.45	527.07	0.00	2201.06	1737.15	0.261	0.25	0.35	0.037	A
3	967.31	161.22	965.58	591.38	509.39	0.00	2130.81	1332.93	0.454	0.54	0.82	0.051	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1249.84	208.31	1248.62	1569.64	119.06	0.00	2603.75	2587.99	0.480	0.71	0.92	0.044	A
2	657.40	109.57	656.88	764.20	603.48	0.00	2152.08	1737.15	0.305	0.35	0.44	0.040	A
3	1107.30	184.55	1105.45	677.12	583.25	0.00	2073.76	1332.93	0.534	0.82	1.13	0.062	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1307.43	217.91	1306.91	1643.21	124.66	0.00	2600.14	2587.99	0.503	0.92	1.00	0.046	A
2	687.69	114.62	687.48	799.92	631.65	0.00	2134.02	1737.15	0.322	0.44	0.47	0.041	A
3	1158.32	193.05	1157.45	708.72	610.42	0.00	2052.78	1332.93	0.564	1.13	1.28	0.067	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1249.84	208.31	1250.27	1572.54	119.34	0.00	2603.57	2587.99	0.480	1.00	0.93	0.044	A
2	657.40	109.57	657.58	765.33	604.28	0.00	2151.57	1737.15	0.306	0.47	0.44	0.040	A
3	1107.30	184.55	1108.00	677.99	583.87	0.00	2073.28	1332.93	0.534	1.28	1.16	0.062	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1091.84	181.97	1093.08	1375.22	104.39	0.00	2613.19	2587.99	0.418	0.93	0.72	0.040	A
2	574.29	95.72	574.82	669.16	528.31	0.00	2200.26	1737.15	0.261	0.44	0.35	0.037	A
3	967.31	161.22	969.24	592.74	510.38	0.00	2130.04	1332.93	0.454	1.16	0.84	0.052	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	871.62	145.27	872.96	1098.25	83.37	0.00	2626.72	2587.99	0.332	0.72	0.50	0.034	A
2	458.46	76.41	459.07	534.41	421.92	0.00	2268.46	1737.15	0.202	0.35	0.25	0.033	A
3	772.22	128.70	774.01	473.38	407.61	0.00	2209.42	1332.93	0.350	0.84	0.54	0.042	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	871.62	145.27	871.63	1096.13	83.17	0.00	2626.84	2587.99	0.332	0.50	0.50	0.034	A
2	458.46	76.41	458.47	533.52	421.28	0.00	2268.87	1737.15	0.202	0.25	0.25	0.033	A
3	772.22	128.70	772.23	472.67	407.07	0.00	2209.83	1332.93	0.349	0.54	0.54	0.042	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.84	0.48	0.034	A	A
2	2.47	0.25	0.033	A	A
3	5.20	0.52	0.042	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.95	0.49	0.034	A	A
2	2.52	0.25	0.033	A	A
3	5.35	0.53	0.042	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.99	0.70	0.039	A	A
2	3.46	0.35	0.037	A	A
3	8.03	0.80	0.051	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.97	0.90	0.044	A	A
2	4.31	0.43	0.040	A	A
3	10.99	1.10	0.062	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.89	0.99	0.046	A	A
2	4.68	0.47	0.041	A	A
3	12.51	1.25	0.067	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.42	0.94	0.044	A	A
2	4.47	0.45	0.040	A	A
3	11.81	1.18	0.062	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.36	0.74	0.040	A	A
2	3.60	0.36	0.037	A	A
3	8.61	0.86	0.052	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.08	0.51	0.034	A	A
2	2.58	0.26	0.033	A	A
3	5.53	0.55	0.042	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.98	0.50	0.034	A	A
2	2.54	0.25	0.033	A	A
3	5.40	0.54	0.042	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1662.00	100.000
2	ONE HOUR	✓	818.00	100.000
3	ONE HOUR	✓	736.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	1123.84	1183.10		
16:45-16:55	2	553.13	594.42		
16:45-16:55	3	497.68	513.98		
16:55-17:05	1	1123.84	1183.10		
16:55-17:05	2	553.13	594.42		
16:55-17:05	3	497.68	513.98		
17:05-17:15	1	1407.78	1482.00		
17:05-17:15	2	692.88	744.60		
17:05-17:15	3	623.42	643.83		
17:15-17:25	1	1611.50	1696.47		
17:15-17:25	2	793.15	852.35		
17:15-17:25	3	713.64	737.00		
17:25-17:35	1	1685.76	1774.65		
17:25-17:35	2	829.70	891.63		
17:25-17:35	3	746.52	770.97		
17:35-17:45	1	1611.50	1696.47		
17:35-17:45	2	793.15	852.35		
17:35-17:45	3	713.64	737.00		
17:45-17:55	1	1407.78	1482.00		
17:45-17:55	2	692.88	744.60		
17:45-17:55	3	623.42	643.83		
17:55-18:05	1	1123.84	1183.10		
17:55-18:05	2	553.13	594.42		
17:55-18:05	3	497.68	513.98		
18:05-18:15	1	1123.84	1183.10		
18:05-18:15	2	553.13	594.42		
18:05-18:15	3	497.68	513.98		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	777.000	885.000
	2	661.000	0.000	157.000
	3	635.000	101.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.47	0.53
	2	0.81	0.00	0.19
	3	0.86	0.14	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.090	1.020
	2	1.090	1.000	1.010
	3	1.030	1.050	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	9.0	2.0
	2	9.0	0.0	1.0
	3	3.0	5.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.63	0.06	1.69	A	1357.74	2036.61	97.36	0.05	1.08	97.37	0.05
2	0.42	0.05	0.71	A	668.25	1002.37	43.58	0.04	0.48	43.58	0.04
3	0.37	0.05	0.59	A	601.27	901.90	37.13	0.04	0.41	37.13	0.04

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1123.84	187.31	1119.57	873.18	68.05	0.00	2693.99	2605.92	0.417	0.00	0.71	0.038	A
2	553.13	92.19	551.09	591.46	596.16	0.00	2176.22	1681.46	0.254	0.00	0.34	0.037	A
3	497.68	82.95	495.91	701.94	445.32	0.00	2173.61	1462.73	0.229	0.00	0.30	0.036	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1123.84	187.31	1123.82	876.34	68.30	0.00	2693.83	2605.92	0.417	0.71	0.71	0.038	A
2	553.13	92.19	553.12	593.69	598.43	0.00	2174.80	1681.46	0.254	0.34	0.34	0.037	A
3	497.68	82.95	497.68	704.59	446.96	0.00	2172.33	1462.73	0.229	0.30	0.30	0.036	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1407.77	234.63	1405.49	1096.34	85.45	0.00	2682.45	2605.92	0.525	0.71	1.09	0.047	A
2	692.87	115.48	691.94	742.52	748.41	0.00	2081.05	1681.46	0.333	0.34	0.50	0.043	A
3	623.42	103.90	622.66	881.22	559.14	0.00	2085.03	1462.73	0.299	0.30	0.42	0.041	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1611.49	268.58	1609.08	1255.29	97.83	0.00	2674.22	2605.91	0.603	1.09	1.50	0.056	A
2	793.14	132.19	792.25	850.10	856.83	0.00	2013.28	1681.46	0.394	0.50	0.64	0.049	A
3	713.64	118.94	712.93	1008.89	640.19	0.00	2021.95	1462.73	0.353	0.42	0.54	0.046	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1685.76	280.96	1684.62	1313.95	102.40	0.00	2671.19	2605.91	0.631	1.50	1.69	0.061	A
2	829.69	138.28	829.30	889.98	897.05	0.00	1988.13	1681.46	0.417	0.64	0.71	0.052	A
3	746.53	124.42	746.22	1056.22	670.13	0.00	1998.65	1462.73	0.374	0.54	0.59	0.048	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1611.49	268.58	1612.40	1257.11	97.97	0.00	2674.13	2605.91	0.603	1.69	1.54	0.057	A
2	793.14	132.19	793.47	851.78	858.59	0.00	2012.17	1681.46	0.394	0.71	0.66	0.049	A
3	713.64	118.94	713.90	1010.89	641.18	0.00	2021.18	1462.73	0.353	0.59	0.55	0.046	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1407.77	234.63	1410.29	1099.13	85.65	0.00	2682.31	2605.92	0.525	1.54	1.12	0.047	A
2	692.87	115.48	693.79	744.98	750.97	0.00	2079.45	1681.46	0.333	0.66	0.50	0.043	A
3	623.42	103.90	624.14	884.14	560.63	0.00	2083.87	1462.73	0.299	0.55	0.43	0.041	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1123.84	187.31	1126.21	877.81	68.40	0.00	2693.76	2605.92	0.417	1.12	0.72	0.038	A
2	553.13	92.19	554.09	594.92	599.70	0.00	2174.01	1681.46	0.254	0.50	0.34	0.037	A
3	497.68	82.95	498.47	706.05	447.74	0.00	2171.72	1462.73	0.229	0.43	0.30	0.036	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1123.84	187.31	1123.85	876.36	68.30	0.00	2693.83	2605.92	0.417	0.72	0.72	0.038	A
2	553.13	92.19	553.13	593.71	598.44	0.00	2174.80	1681.46	0.254	0.34	0.34	0.037	A
3	497.68	82.95	497.69	704.61	446.97	0.00	2172.32	1462.73	0.229	0.30	0.30	0.036	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.93	0.69	0.038	A	A
2	3.32	0.33	0.037	A	A
3	2.90	0.29	0.036	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.13	0.71	0.038	A	A
2	3.40	0.34	0.037	A	A
3	2.96	0.30	0.036	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.65	1.07	0.047	A	A
2	4.87	0.49	0.043	A	A
3	4.17	0.42	0.041	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.52	1.45	0.056	A	A
2	6.32	0.63	0.049	A	A
3	5.32	0.53	0.046	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.50	1.65	0.061	A	A
2	7.00	0.70	0.052	A	A
3	5.85	0.58	0.048	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.63	1.56	0.057	A	A
2	6.64	0.66	0.049	A	A
3	5.56	0.56	0.046	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.45	1.14	0.047	A	A
2	5.12	0.51	0.043	A	A
3	4.37	0.44	0.041	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.36	0.74	0.038	A	A
2	3.49	0.35	0.037	A	A
3	3.04	0.30	0.036	A	A

Queueing Delay results: (18:05-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.19	0.72	0.038	A	A
2	3.42	0.34	0.037	A	A
3	2.98	0.30	0.036	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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Report generation date: 12/06/2015 13:16:04

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	2.29	0.30	0.71	C				
Arm 2	7.31	0.72	0.92	E				
Arm 3	1.65	0.27	0.63	C				
	A1 - Scenario 2							
Arm 1					12.05	1.33	0.99	F
Arm 2					1.97	0.26	0.68	C
Arm 3					3.55	0.42	0.80	C

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 12/06/2015 13:16:02

File summary

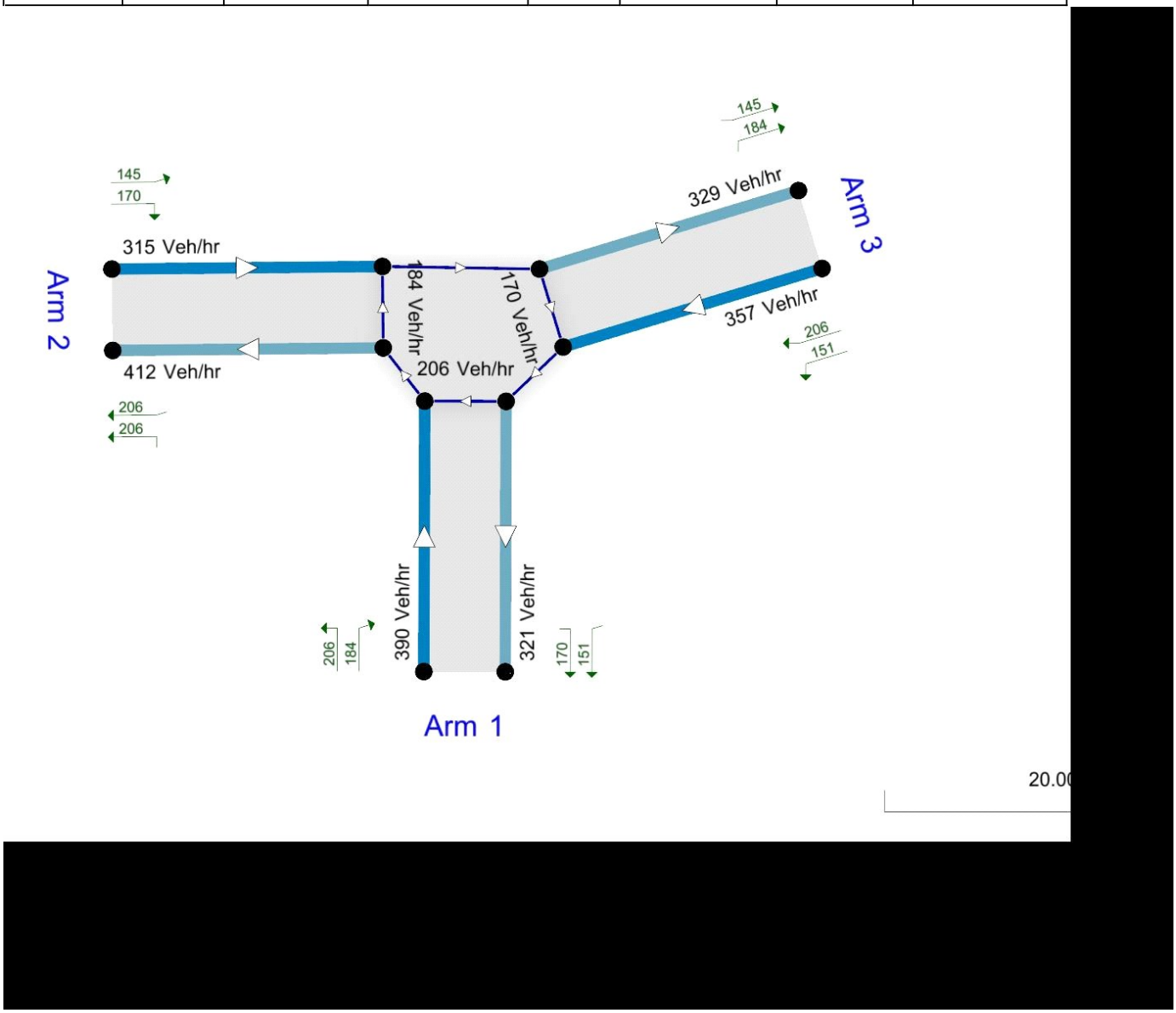
Title	(untitled)
Location	
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Barton Hill Drive / Minstwer Road	Mini-roundabout	1,2,3	0.47	D

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Barton Hill Dr	
2	2	Minster Road east	
3	3	Minster Road west	

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	3.29	3.17	3.58	0.47	10.45	5.42	0.00	
2	3.72	3.27	4.20	11.85	10.45	6.70	0.00	
3	3.35	3.11	3.72	4.32	11.78	11.67	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)	0.518	777.320
2		(calculated)	(calculated)	0.555	870.481
3		(calculated)	(calculated)	0.540	834.780

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	475.00	100.000
2	ONE HOUR	✓	635.00	100.000
3	ONE HOUR	✓	375.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	321.19	327.30		
07:45-07:55	2	429.39	443.86		
07:45-07:55	3	253.57	265.37		
07:55-08:05	1	321.19	327.30		
07:55-08:05	2	429.39	443.86		
07:55-08:05	3	253.57	265.37		
08:05-08:15	1	402.34	409.99		
08:05-08:15	2	537.87	556.00		
08:05-08:15	3	317.64	332.42		
08:15-08:25	1	460.57	469.32		
08:15-08:25	2	615.71	636.47		
08:15-08:25	3	363.61	380.53		
08:25-08:35	1	481.79	490.95		
08:25-08:35	2	644.08	665.79		
08:25-08:35	3	380.36	398.06		
08:35-08:45	1	460.57	469.32		
08:35-08:45	2	615.71	636.47		
08:35-08:45	3	363.61	380.53		
08:45-08:55	1	402.34	409.99		
08:45-08:55	2	537.87	556.00		
08:45-08:55	3	317.64	332.42		
08:55-09:05	1	321.19	327.30		
08:55-09:05	2	429.39	443.86		
08:55-09:05	3	253.57	265.37		
09:05-09:15	1	321.19	327.30		
09:05-09:15	2	429.39	443.86		
09:05-09:15	3	253.57	265.37		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	214.000	261.000
	2	384.000	0.000	251.000
	3	220.000	155.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.45	0.55
	2	0.60	0.00	0.40
	3	0.59	0.41	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.030	1.010
	2	1.010	1.000	1.070
	3	1.030	1.070	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	3.0	1.0
	2	1.0	0.0	7.0
	3	3.0	7.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.71	0.30	2.29	C	388.04	582.07	123.38	0.21	1.37	123.42	0.21
2	0.92	0.72	7.31	E	518.75	778.13	296.17	0.38	3.29	296.24	0.38
3	0.63	0.27	1.65	C	306.35	459.53	90.48	0.20	1.01	90.49	0.20

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.19	53.53	316.33	401.61	103.32	0.00	706.57	629.69	0.455	0.00	0.81	0.152	A
2	429.38	71.56	421.63	245.83	173.82	0.00	747.75	654.31	0.574	0.00	1.29	0.180	B
3	253.58	42.26	249.96	340.47	254.97	0.00	664.88	591.61	0.381	0.00	0.60	0.143	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.19	53.53	321.12	408.27	104.79	0.00	705.77	629.69	0.455	0.81	0.82	0.156	A
2	429.38	71.56	429.20	249.46	176.45	0.00	746.33	654.31	0.575	1.29	1.32	0.189	B
3	253.58	42.26	253.52	346.10	259.55	0.00	662.50	591.61	0.383	0.60	0.61	0.147	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	402.34	67.06	399.31	505.63	130.38	0.00	691.84	629.69	0.582	0.82	1.33	0.203	B
2	537.87	89.64	530.11	310.28	219.41	0.00	723.01	654.31	0.744	1.32	2.62	0.299	C
3	317.64	52.94	315.44	428.95	320.57	0.00	630.72	591.61	0.504	0.61	0.98	0.189	B

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	460.57	76.76	456.88	575.28	149.22	0.00	681.58	629.69	0.676	1.33	1.94	0.262	C
2	615.70	102.62	601.06	355.06	251.04	0.00	705.84	654.31	0.872	2.62	5.06	0.507	D
3	363.61	60.60	361.03	488.63	363.48	0.00	608.37	591.61	0.598	0.98	1.41	0.240	B

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	481.79	80.30	479.72	603.64	156.63	0.00	677.55	629.69	0.711	1.94	2.29	0.299	C
2	644.08	107.35	630.57	372.76	263.59	0.00	699.03	654.31	0.921	5.06	7.31	0.722	E
3	380.36	63.39	378.94	512.85	381.32	0.00	599.08	591.61	0.635	1.41	1.65	0.270	C

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	460.57	76.76	461.20	586.04	150.48	0.00	680.90	629.69	0.676	2.29	2.18	0.275	C
2	615.70	102.62	615.91	358.26	253.42	0.00	704.55	654.31	0.874	7.31	7.27	0.692	E
3	363.61	60.60	364.06	496.87	372.46	0.00	603.70	591.61	0.602	1.65	1.57	0.251	C

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	402.34	67.06	406.69	527.80	132.49	0.00	690.69	629.69	0.583	2.18	1.46	0.214	B
2	537.87	89.64	561.84	315.71	223.47	0.00	720.81	654.31	0.746	7.27	3.28	0.417	D
3	317.64	52.94	320.54	445.55	339.76	0.00	620.73	591.61	0.512	1.57	1.09	0.202	B

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.19	53.53	324.79	416.75	105.92	0.00	705.16	629.69	0.455	1.46	0.86	0.159	A
2	429.38	71.56	440.54	252.24	178.46	0.00	745.23	654.31	0.576	3.28	1.42	0.203	B
3	253.58	42.26	256.26	352.60	266.41	0.00	658.93	591.61	0.385	1.09	0.64	0.150	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.19	53.53	321.27	408.58	104.84	0.00	705.74	629.69	0.455	0.86	0.85	0.156	A
2	429.38	71.56	429.58	249.58	176.53	0.00	746.28	654.31	0.575	1.42	1.39	0.190	B
3	253.58	42.26	253.64	346.33	259.78	0.00	662.38	591.61	0.383	0.64	0.63	0.147	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.53	0.75	0.152	A	A
2	11.76	1.18	0.180	B	B
3	5.64	0.56	0.143	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.18	0.82	0.156	A	A
2	13.12	1.31	0.189	B	B
3	6.08	0.61	0.147	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.39	1.24	0.203	B	B
2	23.19	2.32	0.299	C	B
3	9.21	0.92	0.189	B	B

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.97	1.80	0.262	C	B
2	42.36	4.24	0.507	D	C
3	13.17	1.32	0.240	B	B

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	21.78	2.18	0.299	C	B
2	63.74	6.37	0.722	E	D
3	15.75	1.58	0.270	C	B

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.23	2.22	0.275	C	B
2	72.89	7.29	0.692	E	D
3	15.97	1.60	0.251	C	B

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.65	1.56	0.214	B	B
2	39.40	3.94	0.417	D	C
3	11.56	1.16	0.202	B	B

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.13	0.91	0.159	A	A
2	15.73	1.57	0.203	B	B
3	6.76	0.68	0.150	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.52	0.85	0.156	A	A
2	13.98	1.40	0.190	B	B
3	6.33	0.63	0.147	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Barton Hill Drive / Minstwer Road	Mini-roundabout	1,2,3	0.70	E

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Barton Hill Dr	
2	2	Minster Road east	
3	3	Minster Road west	

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	3.29	3.17	3.58	0.47	10.45	5.42	0.00	
2	3.72	3.27	4.20	11.85	10.45	6.70	0.00	
3	3.35	3.11	3.72	4.32	11.78	11.67	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)	0.518	777.320
2		(calculated)	(calculated)	0.555	870.481
3		(calculated)	(calculated)	0.540	834.780

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	589.00	100.000
2	ONE HOUR	✓	472.00	100.000
3	ONE HOUR	✓	537.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	398.28	404.37		
16:45-16:55	2	319.17	324.08		
16:45-16:55	3	363.12	370.94		
16:55-17:05	1	398.28	404.37		
16:55-17:05	2	319.17	324.08		
16:55-17:05	3	363.12	370.94		
17:05-17:15	1	498.90	506.53		
17:05-17:15	2	399.80	405.96		
17:05-17:15	3	454.86	464.66		
17:15-17:25	1	571.10	579.83		
17:15-17:25	2	457.66	464.71		
17:15-17:25	3	520.68	531.90		
17:25-17:35	1	597.42	606.55		
17:25-17:35	2	478.75	486.12		
17:25-17:35	3	544.68	556.41		
17:35-17:45	1	571.10	579.83		
17:35-17:45	2	457.66	464.71		
17:35-17:45	3	520.68	531.90		
17:45-17:55	1	498.90	506.53		
17:45-17:55	2	399.80	405.96		
17:45-17:55	3	454.86	464.66		
17:55-18:05	1	398.28	404.37		
17:55-18:05	2	319.17	324.08		
17:55-18:05	3	363.12	370.94		
18:05-18:15	1	398.28	404.37		
18:05-18:15	2	319.17	324.08		
18:05-18:15	3	363.12	370.94		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	311.000	278.000
	2	255.000	0.000	217.000
	3	227.000	310.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.53	0.47
	2	0.54	0.00	0.46
	3	0.42	0.58	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.020	1.010
	2	1.020	1.000	1.010
	3	1.010	1.030	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	2.0	1.0
	2	2.0	0.0	1.0
	3	1.0	3.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.99	1.33	12.05	F	481.17	721.76	431.97	0.60	4.80	432.09	0.60
2	0.68	0.26	1.97	C	385.59	578.39	108.10	0.19	1.20	108.13	0.19
3	0.80	0.42	3.55	C	438.69	658.04	170.57	0.26	1.90	170.61	0.26

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	398.28	66.38	389.55	321.15	206.26	0.00	657.13	579.89	0.606	0.00	1.46	0.218	B
2	319.17	53.19	314.88	411.94	183.86	0.00	755.69	706.06	0.422	0.00	0.71	0.135	A
3	363.12	60.52	357.29	328.63	170.12	0.00	725.51	611.65	0.501	0.00	0.97	0.161	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	398.28	66.38	398.00	325.85	209.56	0.00	655.40	579.89	0.608	1.46	1.50	0.232	B
2	319.17	53.19	319.10	419.71	187.85	0.00	753.49	706.06	0.424	0.71	0.73	0.138	A
3	363.12	60.52	363.01	334.55	172.39	0.00	724.28	611.65	0.501	0.97	0.99	0.166	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	498.91	83.15	488.44	404.95	260.00	0.00	628.87	579.89	0.793	1.50	3.25	0.400	C
2	399.80	66.63	397.15	517.90	230.54	0.00	729.90	706.06	0.548	0.73	1.17	0.179	B
3	454.86	75.81	450.38	413.13	214.56	0.00	701.57	611.65	0.648	0.99	1.73	0.235	B

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	571.10	95.18	547.60	462.92	296.82	0.00	609.50	579.89	0.937	3.25	7.16	0.755	E
2	457.66	76.28	454.55	585.96	258.46	0.00	714.48	706.06	0.641	1.17	1.69	0.228	B
3	520.68	86.78	514.17	467.44	245.57	0.00	684.86	611.65	0.760	1.73	2.82	0.338	C

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	597.42	99.57	570.34	486.13	311.90	0.00	601.57	579.89	0.993	7.16	11.68	1.196	F
2	478.75	79.79	477.07	613.04	269.19	0.00	708.55	706.06	0.676	1.69	1.97	0.257	C
3	544.68	90.78	540.28	488.52	257.74	0.00	678.30	611.65	0.803	2.82	3.55	0.416	C

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	571.10	95.18	568.87	468.00	301.11	0.00	607.24	579.89	0.940	11.68	12.05	1.325	F
2	457.66	76.28	458.13	601.48	268.50	0.00	708.93	706.06	0.646	1.97	1.89	0.240	B
3	520.68	86.78	521.60	479.12	247.51	0.00	683.82	611.65	0.761	3.55	3.40	0.375	C

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	498.91	83.15	542.19	413.75	267.52	0.00	624.91	579.89	0.798	12.05	4.84	0.826	E
2	399.80	66.63	403.24	553.80	255.91	0.00	715.89	706.06	0.558	1.89	1.31	0.194	B
3	454.86	75.81	463.41	441.29	217.85	0.00	699.79	611.65	0.650	3.40	1.97	0.262	C

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	398.28	66.38	417.40	330.09	212.85	0.00	653.66	579.89	0.609	4.84	1.65	0.272	C
2	319.17	53.19	322.49	433.24	197.00	0.00	748.43	706.06	0.426	1.31	0.76	0.142	A
3	363.12	60.52	368.71	345.27	174.22	0.00	723.30	611.65	0.502	1.97	1.04	0.172	B

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	398.28	66.38	398.60	326.02	209.68	0.00	655.33	579.89	0.608	1.65	1.60	0.234	B
2	319.17	53.19	319.26	420.15	188.13	0.00	753.33	706.06	0.424	0.76	0.75	0.138	A
3	363.12	60.52	363.22	334.91	172.48	0.00	724.24	611.65	0.501	1.04	1.02	0.166	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.02	1.30	0.218	B	B
2	6.69	0.67	0.135	A	A
3	8.96	0.90	0.161	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.85	1.48	0.232	B	B
2	7.21	0.72	0.138	A	A
3	9.81	0.98	0.166	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	27.80	2.78	0.400	C	C
2	10.96	1.10	0.179	B	B
3	15.90	1.59	0.235	B	B

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	56.35	5.64	0.755	E	D
2	15.72	1.57	0.228	B	B
3	25.26	2.53	0.338	C	C

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	96.11	9.61	1.196	F	E
2	18.81	1.88	0.257	C	B
3	32.93	3.29	0.416	C	C

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	118.71	11.87	1.325	F	E
2	19.17	1.92	0.240	B	B
3	34.62	3.46	0.375	C	C

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	69.26	6.93	0.826	E	D
2	13.99	1.40	0.194	B	B
3	21.64	2.16	0.262	C	B

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.71	1.97	0.272	C	B
2	8.04	0.80	0.142	A	A
3	11.15	1.12	0.172	B	B

Queueing Delay results: (18:05-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.18	1.62	0.234	B	B
2	7.51	0.75	0.138	A	A
3	10.29	1.03	0.166	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: 2017 Base Sensitivity-BartonHillDrive_PloverRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\BartonHillDrive_PloverRoad\June 2015 for use in TA
Report generation date: 12/06/2015 11:27:04

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.36	0.28	0.59	C				
Arm 2	0.74	0.14	0.43	A				
Arm 3	10.56	1.00	0.97	F				
	A1 - Scenario 2							
Arm 1					1.07	0.20	0.53	B
Arm 2					2.02	0.26	0.68	C
Arm 3					2.01	0.26	0.68	C

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 12/06/2015 11:27:02

File summary

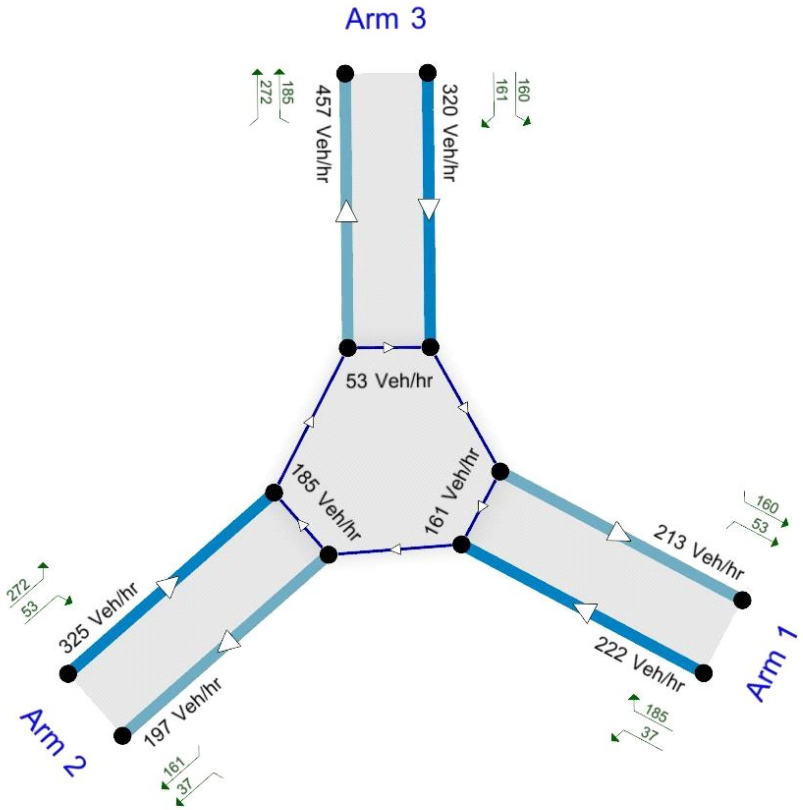
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Plover Road - Barton Hill Drive	Mini-roundabout	1,2,3	0.63	E

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Plover Road	
2	2	Barton Hill Drive South	
3	3	Barton Hill Drive North	

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	3.40	3.40	3.89	1.59	14.39	12.87	0.00	
2	3.40	3.40	4.24	14.73	14.08	10.07	0.00	
3	3.10	3.10	4.11	2.26	12.97	8.68	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)	0.553	785.295
2		(calculated)	(calculated)	0.563	892.683
3		(calculated)	(calculated)	0.532	758.846

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	299.00	100.000
2	ONE HOUR	✓	310.00	100.000
3	ONE HOUR	✓	673.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	60.000	239.000
	2	74.000	0.000	236.000
	3	193.000	480.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.20	0.80
	2	0.24	0.00	0.76
	3	0.29	0.71	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.000	1.010
	2	1.030	1.000	1.040
	3	1.010	1.020	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	1.0
	2	3.0	0.0	4.0
	3	1.0	2.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.59	0.28	1.36	C	244.26	366.40	75.11	0.21	0.83	75.13	0.21
2	0.43	0.14	0.74	A	253.25	379.87	46.68	0.12	0.52	46.69	0.12
3	0.97	1.00	10.56	F	549.80	824.70	410.42	0.50	4.56	410.55	0.50

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	202.18	33.70	199.21	177.22	317.62	0.00	601.43	514.03	0.336	0.00	0.50	0.148	A
2	209.62	34.94	207.42	357.60	159.24	0.00	773.00	635.01	0.271	0.00	0.37	0.106	A
3	455.08	75.85	445.33	317.14	49.51	0.00	719.40	664.44	0.633	0.00	1.62	0.212	B

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	202.18	33.70	202.13	180.46	324.37	0.00	597.65	514.03	0.338	0.50	0.50	0.152	A
2	209.62	34.94	209.60	364.93	161.57	0.00	771.73	635.01	0.272	0.37	0.37	0.107	A
3	455.08	75.85	454.80	321.13	50.03	0.00	719.12	664.44	0.633	1.62	1.67	0.226	B

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	253.26	42.21	251.44	222.93	399.12	0.00	555.85	514.03	0.456	0.50	0.81	0.196	B
2	262.58	43.76	261.63	449.57	200.98	0.00	750.11	635.01	0.350	0.37	0.53	0.123	A
3	570.06	95.01	559.60	400.16	62.45	0.00	712.43	664.44	0.800	1.67	3.42	0.369	C

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	289.92	48.32	287.79	252.69	450.53	0.00	527.10	514.03	0.550	0.81	1.16	0.248	B
2	300.58	50.10	299.68	508.27	230.04	0.00	734.18	635.01	0.409	0.53	0.68	0.138	A
3	652.55	108.76	631.68	458.18	71.54	0.00	707.54	664.44	0.922	3.42	6.90	0.644	E

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	303.28	50.55	302.11	264.61	471.67	0.00	515.27	514.03	0.589	1.16	1.36	0.279	C
2	314.43	52.41	314.04	532.30	241.48	0.00	727.90	635.01	0.432	0.68	0.74	0.145	A
3	682.62	113.77	661.33	480.55	74.96	0.00	705.70	664.44	0.967	6.90	10.44	0.953	F

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	289.92	48.32	290.23	258.74	464.91	0.00	519.05	514.03	0.559	1.36	1.31	0.263	C
2	300.58	50.10	300.81	523.16	231.99	0.00	733.11	635.01	0.410	0.74	0.71	0.139	A
3	652.55	108.76	651.85	460.99	71.81	0.00	707.40	664.44	0.922	10.44	10.56	1.005	F

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	253.26	42.21	255.57	236.40	431.48	0.00	537.75	514.03	0.471	1.31	0.92	0.214	B
2	262.58	43.76	263.52	482.77	204.28	0.00	748.30	635.01	0.351	0.71	0.55	0.124	A
3	570.06	95.01	604.98	404.90	62.91	0.00	712.19	664.44	0.800	10.56	4.74	0.637	E

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	202.18	33.70	204.53	185.81	337.05	0.00	590.56	514.03	0.342	0.92	0.53	0.156	A
2	209.62	34.94	210.65	378.09	163.48	0.00	770.67	635.01	0.272	0.55	0.38	0.107	A
3	455.08	75.85	472.57	323.85	50.28	0.00	718.99	664.44	0.633	4.74	1.83	0.258	C

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	202.18	33.70	202.26	180.64	324.79	0.00	597.42	514.03	0.338	0.53	0.52	0.152	A
2	209.62	34.94	209.64	365.38	161.68	0.00	771.67	635.01	0.272	0.38	0.38	0.107	A
3	455.08	75.85	455.39	321.27	50.04	0.00	719.12	664.44	0.633	1.83	1.78	0.228	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.65	0.46	0.148	A	A
2	3.50	0.35	0.106	A	A
3	14.49	1.45	0.212	B	B

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.01	0.50	0.152	A	A
2	3.69	0.37	0.107	A	A
3	16.54	1.65	0.226	B	B

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.62	0.76	0.196	B	B
2	5.10	0.51	0.123	A	A
3	29.48	2.95	0.369	C	C

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.90	1.09	0.248	B	B
2	6.54	0.65	0.138	A	A
3	55.76	5.58	0.644	E	D

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.02	1.30	0.279	C	B
2	7.28	0.73	0.145	A	A
3	88.63	8.86	0.953	F	E

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.26	1.33	0.263	C	B
2	7.18	0.72	0.139	A	A
3	105.05	10.50	1.005	F	E

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.79	0.98	0.214	B	B
2	5.70	0.57	0.124	A	A
3	61.26	6.13	0.637	E	D

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.62	0.56	0.156	A	A
2	3.93	0.39	0.107	A	A
3	21.25	2.12	0.258	C	B

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.24	0.52	0.152	A	A
2	3.77	0.38	0.107	A	A
3	17.96	1.80	0.228	B	B

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Plover Road - Barton Hill Drive	Mini-roundabout	1,2,3	0.24	B

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Plover Road	
2	2	Barton Hill Drive South	
3	3	Barton Hill Drive North	

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	3.40	3.40	3.89	1.59	14.39	12.87	0.00	
2	3.40	3.40	4.24	14.73	14.08	10.07	0.00	
3	3.10	3.10	4.11	2.26	12.97	8.68	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)	0.553	785.295
2		(calculated)	(calculated)	0.563	892.683
3		(calculated)	(calculated)	0.532	758.846

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	332.00	100.000
2	ONE HOUR	✓	487.00	100.000
3	ONE HOUR	✓	471.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	55.000	277.000
	2	79.000	0.000	408.000
	3	236.000	235.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.17	0.83
	2	0.16	0.00	0.84
	3	0.50	0.50	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.000	1.020
	2	1.010	1.000	1.010
	3	1.020	1.020	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	2.0
	2	1.0	0.0	1.0
	3	2.0	2.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.53	0.20	1.07	B	271.22	406.83	64.18	0.16	0.71	64.19	0.16
2	0.68	0.26	2.02	C	397.85	596.77	108.64	0.18	1.21	108.67	0.18
3	0.68	0.26	2.01	C	384.78	577.16	112.93	0.20	1.25	112.96	0.20

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	224.50	37.42	221.63	209.96	156.57	0.00	685.58	580.95	0.327	0.00	0.48	0.129	A
2	329.31	54.88	325.01	193.29	184.92	0.00	778.64	608.07	0.423	0.00	0.72	0.131	A
3	318.49	53.08	313.81	457.21	52.72	0.00	716.20	692.03	0.445	0.00	0.78	0.147	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	224.50	37.42	224.46	212.96	158.87	0.00	684.31	580.95	0.328	0.48	0.48	0.130	A
2	329.31	54.88	329.25	196.06	187.28	0.00	777.29	608.07	0.424	0.72	0.73	0.134	A
3	318.49	53.08	318.42	463.12	53.41	0.00	715.84	692.03	0.445	0.78	0.79	0.151	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	281.22	46.87	279.80	265.04	197.72	0.00	662.77	580.95	0.424	0.48	0.72	0.156	A
2	412.51	68.75	409.81	244.07	233.45	0.00	751.02	608.07	0.549	0.73	1.18	0.174	B
3	398.95	66.49	396.28	576.78	66.48	0.00	708.96	692.03	0.563	0.79	1.24	0.190	B

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.91	53.65	320.47	303.38	226.34	0.00	646.90	580.95	0.498	0.72	0.96	0.183	B
2	472.20	78.70	468.93	279.43	267.38	0.00	731.72	608.07	0.645	1.18	1.72	0.225	B
3	456.69	76.11	453.65	660.24	76.07	0.00	703.91	692.03	0.649	1.24	1.74	0.237	B

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	336.75	56.12	336.06	318.41	237.56	0.00	640.68	580.95	0.526	0.96	1.07	0.196	B
2	493.96	82.33	492.16	293.24	280.39	0.00	724.32	608.07	0.682	1.72	2.02	0.256	C
3	477.73	79.62	476.14	692.71	79.84	0.00	701.93	692.03	0.681	1.74	2.01	0.263	C

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	321.91	53.65	322.24	305.81	228.12	0.00	645.91	580.95	0.498	1.07	1.02	0.186	B
2	472.20	78.70	472.93	281.51	268.85	0.00	730.88	608.07	0.646	2.02	1.90	0.234	B
3	456.69	76.11	457.22	665.07	76.72	0.00	703.57	692.03	0.649	2.01	1.92	0.245	B

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	281.22	46.87	282.77	269.17	200.79	0.00	661.07	580.95	0.425	1.02	0.76	0.159	A
2	412.51	68.75	416.29	247.63	235.93	0.00	749.61	608.07	0.550	1.90	1.27	0.182	B
3	398.95	66.49	402.43	584.69	67.53	0.00	708.41	692.03	0.563	1.92	1.34	0.198	B

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	224.50	37.42	226.06	215.06	160.46	0.00	683.43	580.95	0.328	0.76	0.50	0.132	A
2	329.31	54.88	332.40	197.91	188.61	0.00	776.53	608.07	0.424	1.27	0.75	0.136	A
3	318.49	53.08	321.60	467.09	53.92	0.00	715.57	692.03	0.445	1.34	0.82	0.153	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	224.50	37.42	224.53	213.04	158.94	0.00	684.27	580.95	0.328	0.50	0.49	0.131	A
2	329.31	54.88	329.36	196.13	187.33	0.00	777.26	608.07	0.424	0.75	0.74	0.134	A
3	318.49	53.08	318.55	463.27	53.43	0.00	715.83	692.03	0.445	0.82	0.81	0.151	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.51	0.45	0.129	A	A
2	6.72	0.67	0.131	A	A
3	7.26	0.73	0.147	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.81	0.48	0.130	A	A
2	7.22	0.72	0.134	A	A
3	7.86	0.79	0.151	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.85	0.68	0.156	A	A
2	11.04	1.10	0.174	B	B
3	11.59	1.16	0.190	B	B

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.13	0.91	0.183	B	B
2	16.02	1.60	0.225	B	B
3	16.26	1.63	0.237	B	B

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.41	1.04	0.196	B	B
2	19.30	1.93	0.256	C	B
3	19.26	1.93	0.263	C	B

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.36	1.04	0.186	B	B
2	19.41	1.94	0.234	B	B
3	19.53	1.95	0.245	B	B

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.94	0.79	0.159	A	A
2	13.51	1.35	0.182	B	B
3	14.28	1.43	0.198	B	B

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.21	0.52	0.132	A	A
2	7.94	0.79	0.136	A	A
3	8.71	0.87	0.153	A	A

Queueing Delay results: (18:05-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.95	0.50	0.131	A	A
2	7.47	0.75	0.134	A	A
3	8.16	0.82	0.151	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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Filename: 2017 Base Sensitivity-Lower_Qb_SW.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODEL USED TAs\London Modelling\Models\Arcady Models\L_Qb_SW\2015 July TA - residential
Report generation date: 07/07/2015 12:22:14

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.73	0.08	0.64	A				
Arm 2	0.14	0.07	0.12	A				
Arm 3	0.50	0.04	0.34	A				
Arm 4	0.17	0.06	0.15	A				
	A1 - Scenario 2							
Arm 1					0.80	0.05	0.45	A
Arm 2					0.26	0.06	0.20	A
Arm 3					1.06	0.06	0.52	A
Arm 4					0.14	0.06	0.12	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/07/2015 12:22:11

File summary

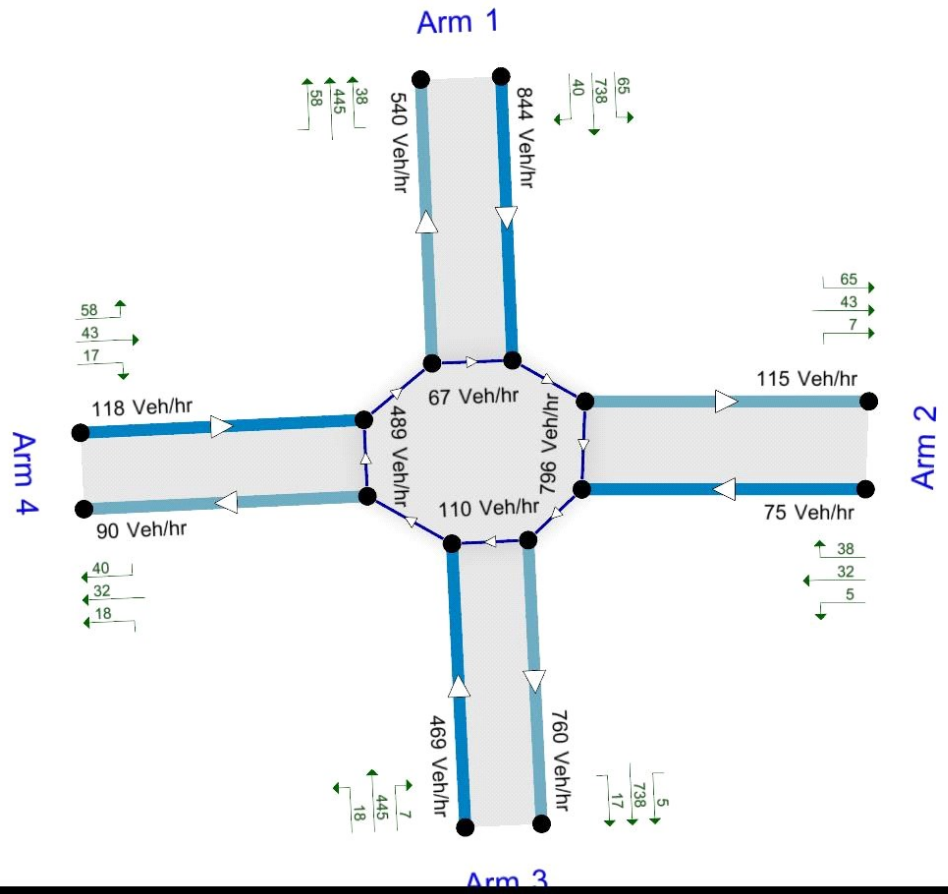
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	B2231 - Lower Road - Sheppey Way	Roundabout	1,2,3,4				0.07	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Lower Road	
2	2	Sheppey Way	
3	3	A249 South	
4	4	Queenborough Road	

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
4	0.00	99999.00		0.00

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	3.58	9.21	22.39	25.70	61.91	22.00	
2	3.88	6.73	12.18	16.39	61.91	25.00	
3	8.04	8.04	0.00	15.72	61.91	39.00	
4	3.52	7.58	27.39	12.95	61.91	45.00	

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)	0.626	2108.493
2		(calculated)	(calculated)	0.545	1680.294
3		(calculated)	(calculated)	0.642	2327.645
4		(calculated)	(calculated)	0.535	1751.504

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1254.00	100.000
2	ONE HOUR	✓	111.00	100.000
3	ONE HOUR	✓	696.00	100.000
4	ONE HOUR	✓	176.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	847.95	864.91		
07:45-07:55	2	75.06	80.81		
07:45-07:55	3	470.63	496.38		
07:45-07:55	4	119.01	131.44		
07:55-08:05	1	847.95	864.91		
07:55-08:05	2	75.06	80.81		
07:55-08:05	3	470.63	496.38		
07:55-08:05	4	119.01	131.44		
08:05-08:15	1	1062.18	1083.43		
08:05-08:15	2	94.02	101.22		
08:05-08:15	3	589.54	621.79		
08:05-08:15	4	149.08	164.65		
08:15-08:25	1	1215.90	1240.22		
08:15-08:25	2	107.63	115.87		
08:15-08:25	3	674.85	711.78		
08:15-08:25	4	170.65	188.47		
08:25-08:35	1	1271.93	1297.37		
08:25-08:35	2	112.59	121.21		
08:25-08:35	3	705.95	744.58		
08:25-08:35	4	178.52	197.16		
08:35-08:45	1	1215.90	1240.22		
08:35-08:45	2	107.63	115.87		
08:35-08:45	3	674.85	711.78		
08:35-08:45	4	170.65	188.47		
08:45-08:55	1	1062.18	1083.43		
08:45-08:55	2	94.02	101.22		
08:45-08:55	3	589.54	621.79		
08:45-08:55	4	149.08	164.65		
08:55-09:05	1	847.95	864.91		
08:55-09:05	2	75.06	80.81		
08:55-09:05	3	470.63	496.38		
08:55-09:05	4	119.01	131.44		
09:05-09:15	1	847.95	864.91		
09:05-09:15	2	75.06	80.81		
09:05-09:15	3	470.63	496.38		
09:05-09:15	4	119.01	131.44		

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.000	97.000	1097.000	60.000
	2	56.000	0.000	7.000	48.000
	3	660.000	10.000	0.000	26.000
	4	86.000	64.000	26.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.08	0.87	0.05
	2	0.50	0.00	0.06	0.43
	3	0.95	0.01	0.00	0.04
	4	0.49	0.36	0.15	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.020	1.020	1.020
	2	1.040	1.000	1.140	1.110
	3	1.050	1.300	1.000	1.080
	4	1.010	1.160	1.280	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	2.0	2.0	2.0
	2	4.0	0.0	14.0	11.0
	3	5.0	30.0	0.0	8.0
	4	1.0	16.0	28.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.64	0.08	1.73	A	1024.43	1536.65	99.36	0.06	1.10	99.37	0.06
2	0.12	0.07	0.14	A	90.68	136.02	8.62	0.06	0.10	8.62	0.06
3	0.34	0.04	0.50	A	568.59	852.88	33.39	0.04	0.37	33.39	0.04
4	0.15	0.06	0.17	A	143.78	215.67	11.48	0.05	0.13	11.48	0.05

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	847.95	141.33	843.64	540.21	67.30	0.00	2017.39	1837.90	0.420	0.00	0.72	0.051	A
2	75.06	12.51	74.64	115.06	795.87	0.00	1147.68	632.16	0.065	0.00	0.07	0.056	A
3	470.64	78.44	468.95	760.22	110.30	0.00	2136.23	1765.94	0.220	0.00	0.28	0.036	A
4	119.01	19.84	118.43	90.16	489.09	0.00	1336.52	557.62	0.089	0.00	0.10	0.049	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	847.95	141.33	847.93	542.31	67.62	0.00	2017.15	1837.90	0.420	0.72	0.72	0.051	A
2	75.06	12.51	75.06	115.63	799.93	0.00	1145.58	632.16	0.066	0.07	0.07	0.056	A
3	470.64	78.44	470.63	764.08	110.89	0.00	2135.85	1765.94	0.220	0.28	0.28	0.036	A
4	119.01	19.84	119.01	90.61	490.92	0.00	1335.59	557.62	0.089	0.10	0.10	0.049	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1062.18	177.03	1059.84	678.56	84.59	0.00	2004.60	1837.90	0.530	0.72	1.11	0.063	A
2	94.02	15.67	93.85	144.58	999.85	0.00	1041.80	632.16	0.090	0.07	0.10	0.063	A
3	589.54	98.26	588.93	955.06	138.64	0.00	2118.07	1765.94	0.278	0.28	0.38	0.039	A
4	149.08	24.85	148.87	113.29	614.28	0.00	1272.69	557.62	0.117	0.10	0.13	0.053	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1215.90	202.65	1213.39	776.99	96.87	0.00	1995.52	1837.89	0.609	1.11	1.53	0.076	A
2	107.63	17.94	107.47	165.54	1144.71	0.00	966.61	632.16	0.111	0.10	0.12	0.070	A
3	674.85	112.48	674.34	1093.44	158.75	0.00	2105.19	1765.94	0.321	0.38	0.47	0.042	A
4	170.65	28.44	170.48	129.72	703.37	0.00	1227.27	557.62	0.139	0.13	0.16	0.057	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1271.93	211.99	1270.73	813.21	101.39	0.00	1992.18	1837.90	0.638	1.53	1.73	0.083	A
2	112.59	18.76	112.52	173.32	1198.79	0.00	938.55	632.16	0.120	0.12	0.14	0.073	A
3	705.95	117.66	705.75	1145.09	166.22	0.00	2100.40	1765.94	0.336	0.47	0.50	0.043	A
4	178.52	29.75	178.45	135.82	736.15	0.00	1210.56	557.62	0.147	0.16	0.17	0.058	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1215.90	202.65	1216.77	777.85	96.99	0.00	1995.43	1837.89	0.609	1.73	1.59	0.077	A
2	107.63	17.94	107.68	165.89	1147.87	0.00	964.98	632.16	0.112	0.14	0.13	0.070	A
3	674.85	112.48	675.03	1096.44	159.11	0.00	2104.96	1765.94	0.321	0.50	0.47	0.042	A
4	170.65	28.44	170.71	130.00	704.13	0.00	1226.88	557.62	0.139	0.17	0.16	0.057	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1062.18	177.03	1064.85	679.98	84.80	0.00	2004.45	1837.90	0.530	1.59	1.14	0.064	A
2	94.02	15.67	94.18	145.12	1004.52	0.00	1039.38	632.16	0.090	0.13	0.10	0.064	A
3	589.54	98.26	590.06	959.51	139.19	0.00	2117.72	1765.94	0.278	0.47	0.39	0.039	A
4	149.08	24.85	149.25	113.72	615.53	0.00	1272.05	557.62	0.117	0.16	0.13	0.053	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	847.95	141.33	850.42	543.09	67.74	0.00	2017.06	1837.90	0.420	1.14	0.73	0.052	A
2	75.06	12.51	75.23	115.91	802.24	0.00	1144.37	632.16	0.066	0.10	0.07	0.056	A
3	470.64	78.44	471.26	766.30	111.18	0.00	2135.67	1765.94	0.220	0.39	0.28	0.036	A
4	119.01	19.84	119.22	90.83	491.61	0.00	1335.24	557.62	0.089	0.13	0.10	0.049	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	847.95	141.33	847.97	542.32	67.62	0.00	2017.15	1837.90	0.420	0.73	0.73	0.051	A
2	75.06	12.51	75.06	115.63	799.96	0.00	1145.56	632.16	0.066	0.07	0.07	0.056	A
3	470.64	78.44	470.64	764.12	110.90	0.00	2135.85	1765.94	0.220	0.28	0.28	0.036	A
4	119.01	19.84	119.01	90.61	490.93	0.00	1335.59	557.62	0.089	0.10	0.10	0.049	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.96	0.70	0.051	A	A
2	0.68	0.07	0.056	A	A
3	2.76	0.28	0.036	A	A
4	0.95	0.10	0.049	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.21	0.72	0.051	A	A
2	0.70	0.07	0.056	A	A
3	2.82	0.28	0.036	A	A
4	0.97	0.10	0.049	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.77	1.08	0.063	A	A
2	0.97	0.10	0.063	A	A
3	3.77	0.38	0.039	A	A
4	1.30	0.13	0.053	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.76	1.48	0.076	A	A
2	1.22	0.12	0.070	A	A
3	4.62	0.46	0.042	A	A
4	1.58	0.16	0.057	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.88	1.69	0.083	A	A
2	1.34	0.13	0.073	A	A
3	4.98	0.50	0.043	A	A
4	1.70	0.17	0.058	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.18	1.62	0.077	A	A
2	1.28	0.13	0.070	A	A
3	4.79	0.48	0.042	A	A
4	1.64	0.16	0.057	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.79	1.18	0.064	A	A
2	1.02	0.10	0.064	A	A
3	3.94	0.39	0.039	A	A
4	1.36	0.14	0.053	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.52	0.75	0.052	A	A
2	0.72	0.07	0.056	A	A
3	2.88	0.29	0.036	A	A
4	1.00	0.10	0.049	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.30	0.73	0.051	A	A
2	0.70	0.07	0.056	A	A
3	2.84	0.28	0.036	A	A
4	0.98	0.10	0.049	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	B2231 - Lower Road - Sheppey Way	Roundabout	1,2,3,4				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Lower Road	
2	2	Sheppey Way	
3	3	A249 South	
4	4	Queenborough Road	

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
4	0.00	99999.00		0.00

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	3.58	9.21	22.39	25.70	61.91	22.00	
2	3.88	6.73	12.18	16.39	61.91	25.00	
3	8.04	8.04	0.00	15.72	61.91	39.00	
4	3.52	7.58	27.39	12.95	61.91	45.00	

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)	0.626	2108.493
2		(calculated)	(calculated)	0.545	1680.294
3		(calculated)	(calculated)	0.642	2327.645
4		(calculated)	(calculated)	0.535	1751.504

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	887.00	100.000
2	ONE HOUR	✓	236.00	100.000
3	ONE HOUR	✓	1068.00	100.000
4	ONE HOUR	✓	129.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	599.79	614.25		
16:45-16:55	2	159.58	163.38		
16:45-16:55	3	722.18	729.75		
16:45-16:55	4	87.23	91.42		
16:55-17:05	1	599.79	614.25		
16:55-17:05	2	159.58	163.38		
16:55-17:05	3	722.18	729.75		
16:55-17:05	4	87.23	91.42		
17:05-17:15	1	751.32	769.43		
17:05-17:15	2	199.90	204.65		
17:05-17:15	3	904.64	914.12		
17:05-17:15	4	109.27	114.51		
17:15-17:25	1	860.05	880.78		
17:15-17:25	2	228.83	234.27		
17:15-17:25	3	1035.55	1046.41		
17:15-17:25	4	125.08	131.08		
17:25-17:35	1	899.68	921.37		
17:25-17:35	2	239.37	245.06		
17:25-17:35	3	1083.27	1094.63		
17:25-17:35	4	130.84	137.12		
17:35-17:45	1	860.05	880.78		
17:35-17:45	2	228.83	234.27		
17:35-17:45	3	1035.55	1046.41		
17:35-17:45	4	125.08	131.08		
17:45-17:55	1	751.32	769.43		
17:45-17:55	2	199.90	204.65		
17:45-17:55	3	904.64	914.12		
17:45-17:55	4	109.27	114.51		
17:55-18:05	1	599.79	614.25		
17:55-18:05	2	159.58	163.38		
17:55-18:05	3	722.18	729.75		
17:55-18:05	4	87.23	91.42		
18:05-18:15	1	599.79	614.25		
18:05-18:15	2	159.58	163.38		
18:05-18:15	3	722.18	729.75		
18:05-18:15	4	87.23	91.42		

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.000	50.000	746.000	91.000
	2	139.000	0.000	17.000	80.000
	3	1030.000	8.000	0.000	30.000
	4	69.000	41.000	19.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.06	0.84	0.10
	2	0.59	0.00	0.07	0.34
	3	0.96	0.01	0.00	0.03
	4	0.53	0.32	0.15	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.020	1.020	1.060
	2	1.010	1.000	1.060	1.040
	3	1.010	1.000	1.000	1.030
	4	1.060	1.050	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	2.0	2.0	6.0
	2	1.0	0.0	6.0	4.0
	3	1.0	0.0	0.0	3.0
	4	6.0	5.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.45	0.05	0.80	A	724.62	1086.93	51.26	0.05	0.57	51.26	0.05
2	0.20	0.06	0.26	A	192.80	289.19	16.56	0.06	0.18	16.56	0.06
3	0.52	0.06	1.06	A	872.48	1308.72	64.37	0.05	0.72	64.37	0.05
4	0.12	0.06	0.14	A	105.38	158.08	9.04	0.06	0.10	9.04	0.06

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	599.79	99.97	597.29	833.55	45.75	0.00	2030.07	1879.91	0.295	0.00	0.42	0.042	A
2	159.58	26.60	158.77	66.64	576.40	0.00	1327.26	628.80	0.120	0.00	0.14	0.051	A
3	722.18	120.36	719.20	526.56	208.61	0.00	2166.72	1795.37	0.333	0.00	0.50	0.041	A
4	87.23	14.54	86.79	135.30	792.51	0.00	1262.77	580.85	0.069	0.00	0.07	0.051	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	599.79	99.97	599.78	837.12	45.98	0.00	2029.93	1879.91	0.295	0.42	0.42	0.042	A
2	159.58	26.60	159.58	66.94	578.82	0.00	1325.94	628.80	0.120	0.14	0.14	0.051	A
3	722.18	120.36	722.17	528.78	209.62	0.00	2166.06	1795.37	0.333	0.50	0.50	0.042	A
4	87.23	14.54	87.23	135.91	795.88	0.00	1261.03	580.85	0.069	0.07	0.07	0.051	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	751.32	125.22	750.31	1047.00	57.51	0.00	2022.67	1879.92	0.371	0.42	0.59	0.047	A
2	199.90	33.32	199.58	83.73	724.08	0.00	1246.80	628.80	0.160	0.14	0.19	0.057	A
3	904.63	150.77	903.24	661.49	262.18	0.00	2131.60	1795.37	0.424	0.50	0.73	0.049	A
4	109.27	18.21	109.09	170.00	995.42	0.00	1158.17	580.85	0.094	0.07	0.10	0.057	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	860.05	143.34	859.15	1198.83	65.85	0.00	2017.42	1879.91	0.426	0.59	0.74	0.052	A
2	228.83	38.14	228.55	95.88	829.12	0.00	1189.58	628.80	0.192	0.19	0.24	0.062	A
3	1035.55	172.59	1034.19	757.44	300.23	0.00	2106.66	1795.37	0.492	0.73	0.96	0.056	A
4	125.08	20.85	124.92	194.67	1139.76	0.00	1083.76	580.85	0.115	0.10	0.13	0.063	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	899.69	149.95	899.31	1255.02	68.94	0.00	2015.48	1879.91	0.446	0.74	0.80	0.054	A
2	239.37	39.90	239.26	100.37	867.87	0.00	1168.46	628.80	0.205	0.24	0.26	0.065	A
3	1083.27	180.54	1082.67	792.85	314.29	0.00	2097.44	1795.37	0.516	0.96	1.06	0.059	A
4	130.84	21.81	130.78	203.78	1193.18	0.00	1056.22	580.85	0.124	0.13	0.14	0.065	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	860.05	143.34	860.35	1200.93	65.96	0.00	2017.35	1879.91	0.426	0.80	0.75	0.052	A
2	228.83	38.14	228.92	96.03	830.28	0.00	1188.94	628.80	0.192	0.26	0.24	0.063	A
3	1035.55	172.59	1036.03	758.51	300.70	0.00	2106.35	1795.37	0.492	1.06	0.98	0.056	A
4	125.08	20.85	125.13	194.97	1141.76	0.00	1082.73	580.85	0.116	0.14	0.13	0.063	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	751.32	125.22	752.25	1050.23	57.68	0.00	2022.56	1879.92	0.371	0.75	0.60	0.047	A
2	199.90	33.32	200.19	83.97	725.96	0.00	1245.78	628.80	0.160	0.24	0.19	0.057	A
3	904.63	150.77	906.03	663.21	262.94	0.00	2131.10	1795.37	0.424	0.98	0.74	0.049	A
4	109.27	18.21	109.43	170.49	998.49	0.00	1156.58	580.85	0.094	0.13	0.10	0.057	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	599.79	99.97	600.83	838.81	46.08	0.00	2029.87	1879.91	0.295	0.60	0.42	0.042	A
2	159.58	26.60	159.91	67.07	579.83	0.00	1325.39	628.80	0.120	0.19	0.14	0.052	A
3	722.18	120.36	723.62	529.71	210.03	0.00	2165.79	1795.37	0.333	0.74	0.50	0.042	A
4	87.23	14.54	87.41	136.17	797.48	0.00	1260.21	580.85	0.069	0.10	0.07	0.051	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	599.79	99.97	599.80	837.14	45.98	0.00	2029.93	1879.91	0.295	0.42	0.42	0.042	A
2	159.58	26.60	159.59	66.94	578.83	0.00	1325.93	628.80	0.120	0.14	0.14	0.051	A
3	722.18	120.36	722.19	528.80	209.62	0.00	2166.05	1795.37	0.333	0.50	0.50	0.042	A
4	87.23	14.54	87.23	135.92	795.90	0.00	1261.02	580.85	0.069	0.07	0.07	0.051	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.07	0.41	0.042	A	A
2	1.33	0.13	0.051	A	A
3	4.85	0.48	0.041	A	A
4	0.72	0.07	0.051	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.18	0.42	0.042	A	A
2	1.36	0.14	0.051	A	A
3	4.98	0.50	0.042	A	A
4	0.74	0.07	0.051	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.75	0.57	0.047	A	A
2	1.86	0.19	0.057	A	A
3	7.14	0.71	0.049	A	A
4	1.02	0.10	0.057	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.22	0.72	0.052	A	A
2	2.32	0.23	0.062	A	A
3	9.33	0.93	0.056	A	A
4	1.27	0.13	0.063	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.88	0.79	0.054	A	A
2	2.53	0.25	0.065	A	A
3	10.39	1.04	0.059	A	A
4	1.39	0.14	0.065	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.58	0.76	0.052	A	A
2	2.43	0.24	0.063	A	A
3	9.91	0.99	0.056	A	A
4	1.33	0.13	0.063	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.07	0.61	0.047	A	A
2	1.96	0.20	0.057	A	A
3	7.60	0.76	0.049	A	A
4	1.07	0.11	0.057	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.30	0.43	0.042	A	A
2	1.40	0.14	0.052	A	A
3	5.14	0.51	0.042	A	A
4	0.76	0.08	0.051	A	A

Queueing Delay results: (18:05-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.21	0.42	0.042	A	A
2	1.37	0.14	0.051	A	A
3	5.02	0.50	0.042	A	A
4	0.75	0.07	0.051	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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Filename: 2017 Base Sensitivity-LowerRoad_ThistleHillWay.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\LowerRoad_ThistleHillWay\2015 June for TA
Report generation date: 12/06/2015 12:13:45

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	0.60	0.06	0.38	A	1.16	0.09	0.54	A
Arm 2	0.68	0.08	0.41	A	0.18	0.06	0.15	A
Arm 3	0.86	0.09	0.47	A	0.96	0.08	0.49	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 1, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 12/06/2015 12:13:43

File summary

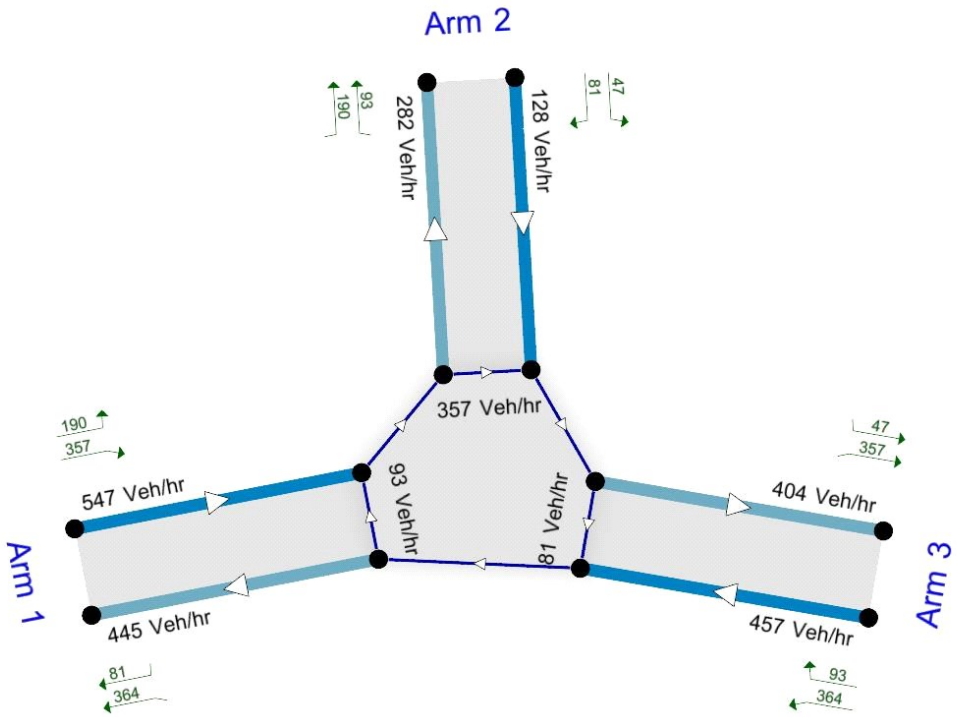
Title	Lower Road / Thistle Hill Way
Location	Minster on Sea
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	26677
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	Lower Road / Thistle Hill Way	Roundabout	1,2,3				0.08	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Lower Road west	
2	2	Thistle Hill Way	
3	3	Lower Road east	

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

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	3.08	7.19	9.49	60.23	39.20	0.00	
2	3.62	7.18	5.47	40.67	39.20	0.00	
3	3.00	6.59	7.10	57.88	39.20	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)	0.676	1652.993
2		(calculated)	(calculated)	0.670	1634.023
3		(calculated)	(calculated)	0.646	1503.675

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	567.00	100.000
2	ONE HOUR	✓	520.00	100.000
3	ONE HOUR	✓	553.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	383.40	403.26		
07:45-07:55	2	351.62	355.81		
07:45-07:55	3	373.94	394.14		
07:55-08:05	1	383.40	403.26		
07:55-08:05	2	351.62	355.81		
07:55-08:05	3	373.94	394.14		
08:05-08:15	1	480.27	505.14		
08:05-08:15	2	440.46	445.70		
08:05-08:15	3	468.41	493.71		
08:15-08:25	1	549.77	578.24		
08:15-08:25	2	504.20	510.20		
08:15-08:25	3	536.20	565.16		
08:25-08:35	1	575.11	604.89		
08:25-08:35	2	527.43	533.71		
08:25-08:35	3	560.91	591.20		
08:35-08:45	1	549.77	578.24		
08:35-08:45	2	504.20	510.20		
08:35-08:45	3	536.20	565.16		
08:45-08:55	1	480.27	505.14		
08:45-08:55	2	440.46	445.70		
08:45-08:55	3	468.41	493.71		
08:55-09:05	1	383.40	403.26		
08:55-09:05	2	351.62	355.81		
08:55-09:05	3	373.94	394.14		
09:05-09:15	1	383.40	403.26		
09:05-09:15	2	351.62	355.81		
09:05-09:15	3	373.94	394.14		

Turning Proportions

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

		To		
		1	2	3
From	1	1.000	106.000	460.000
	2	351.000	1.000	168.000
	3	479.000	74.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.19	0.81
	2	0.68	0.00	0.32
	3	0.87	0.13	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.060	1.050
	2	1.010	2.000	1.010
	3	1.050	1.080	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	6.0	5.0
	2	1.0	100.0	1.0
	3	5.0	8.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.38	0.06	0.60	A	463.20	694.80	39.69	0.06	0.44	39.69	0.06
2	0.41	0.08	0.68	A	424.81	637.21	42.42	0.07	0.47	42.43	0.07
3	0.47	0.09	0.86	A	451.77	677.65	52.75	0.08	0.59	52.75	0.08

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	383.40	63.90	381.42	558.44	50.38	0.00	1536.25	1467.99	0.250	0.00	0.33	0.052	A
2	351.62	58.60	349.63	121.69	310.12	0.00	1399.34	785.55	0.251	0.00	0.33	0.057	A
3	373.94	62.32	371.48	422.40	237.34	0.00	1279.37	1095.10	0.292	0.00	0.41	0.066	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	383.40	63.90	383.40	561.91	50.71	0.00	1536.02	1467.99	0.250	0.33	0.33	0.052	A
2	351.62	58.60	351.62	122.39	311.72	0.00	1398.23	785.55	0.251	0.33	0.33	0.057	A
3	373.94	62.32	373.93	424.64	238.69	0.00	1278.53	1095.10	0.292	0.41	0.41	0.066	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	480.27	80.05	479.53	702.31	63.38	0.00	1527.14	1467.99	0.314	0.33	0.46	0.057	A
2	440.46	73.41	439.57	153.02	389.88	0.00	1343.92	785.55	0.328	0.33	0.48	0.066	A
3	468.41	78.07	467.29	531.05	298.40	0.00	1241.48	1095.10	0.377	0.41	0.60	0.077	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.77	91.63	549.14	804.25	72.58	0.00	1520.68	1467.99	0.362	0.46	0.56	0.062	A
2	504.20	84.03	503.36	175.23	446.48	0.00	1304.60	785.55	0.386	0.48	0.62	0.075	A
3	536.20	89.37	535.12	608.13	341.70	0.00	1214.62	1095.10	0.441	0.60	0.78	0.088	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	575.11	95.85	574.85	842.22	76.01	0.00	1518.27	1467.99	0.379	0.56	0.60	0.064	A
2	527.44	87.91	527.07	183.47	467.38	0.00	1290.08	785.55	0.409	0.62	0.68	0.079	A
3	560.91	93.48	560.43	636.65	357.80	0.00	1204.63	1095.10	0.466	0.78	0.86	0.093	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.77	91.63	549.97	806.23	72.77	0.00	1520.55	1467.99	0.362	0.60	0.57	0.062	A
2	504.20	84.03	504.48	175.58	447.16	0.00	1304.13	785.55	0.387	0.68	0.64	0.075	A
3	536.20	89.37	536.54	609.17	342.46	0.00	1214.15	1095.10	0.442	0.86	0.80	0.089	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	480.27	80.05	480.92	705.45	63.68	0.00	1526.92	1467.99	0.315	0.57	0.46	0.057	A
2	440.46	73.41	441.33	153.59	391.01	0.00	1343.14	785.55	0.328	0.64	0.49	0.067	A
3	468.41	78.07	469.54	532.75	299.59	0.00	1240.74	1095.10	0.378	0.80	0.61	0.078	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	383.40	63.90	384.17	563.57	50.87	0.00	1535.91	1467.99	0.250	0.46	0.33	0.052	A
2	351.62	58.60	352.55	122.69	312.35	0.00	1397.79	785.55	0.252	0.49	0.34	0.057	A
3	373.94	62.32	375.12	425.57	239.32	0.00	1278.14	1095.10	0.293	0.61	0.42	0.067	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	383.40	63.90	383.41	561.94	50.72	0.00	1536.02	1467.99	0.250	0.33	0.33	0.052	A
2	351.62	58.60	351.63	122.39	311.73	0.00	1398.22	785.55	0.251	0.34	0.34	0.057	A
3	373.94	62.32	373.95	424.66	238.70	0.00	1278.52	1095.10	0.292	0.42	0.42	0.066	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.21	0.32	0.052	A	A
2	3.23	0.32	0.057	A	A
3	3.95	0.40	0.066	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.31	0.33	0.052	A	A
2	3.34	0.33	0.057	A	A
3	4.11	0.41	0.066	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.45	0.45	0.057	A	A
2	4.71	0.47	0.066	A	A
3	5.81	0.58	0.077	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.50	0.55	0.062	A	A
2	6.07	0.61	0.075	A	A
3	7.56	0.76	0.088	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.96	0.60	0.064	A	A
2	6.72	0.67	0.079	A	A
3	8.42	0.84	0.093	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.78	0.58	0.062	A	A
2	6.46	0.65	0.075	A	A
3	8.14	0.81	0.089	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.72	0.47	0.057	A	A
2	5.05	0.50	0.067	A	A
3	6.31	0.63	0.078	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.42	0.34	0.052	A	A
2	3.47	0.35	0.057	A	A
3	4.29	0.43	0.067	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.34	0.33	0.052	A	A
2	3.38	0.34	0.057	A	A
3	4.16	0.42	0.066	A	A

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, PM	Scenario 1	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	Lower Road / Thistle Hill Way	Roundabout	1,2,3				0.08	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Lower Road west	
2	2	Thistle Hill Way	
3	3	Lower Road east	

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

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	3.08	7.19	9.49	60.23	39.20	0.00	
2	3.62	7.18	5.47	40.67	39.20	0.00	
3	3.00	6.59	7.10	57.88	39.20	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)	0.676	1652.993
2		(calculated)	(calculated)	0.670	1634.023
3		(calculated)	(calculated)	0.646	1503.675

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	813.00	100.000
2	ONE HOUR	✓	190.00	100.000
3	ONE HOUR	✓	680.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	549.75	562.43		
16:45-16:55	2	128.48	130.10		
16:45-16:55	3	459.81	467.14		
16:55-17:05	1	549.75	562.43		
16:55-17:05	2	128.48	130.10		
16:55-17:05	3	459.81	467.14		
17:05-17:15	1	688.64	704.52		
17:05-17:15	2	160.94	162.97		
17:05-17:15	3	575.99	585.17		
17:15-17:25	1	788.30	806.48		
17:15-17:25	2	184.23	186.55		
17:15-17:25	3	659.34	669.85		
17:25-17:35	1	824.62	843.64		
17:25-17:35	2	192.72	195.15		
17:25-17:35	3	689.72	700.72		
17:35-17:45	1	788.30	806.48		
17:35-17:45	2	184.23	186.55		
17:35-17:45	3	659.34	669.85		
17:45-17:55	1	688.64	704.52		
17:45-17:55	2	160.94	162.97		
17:45-17:55	3	575.99	585.17		
17:55-18:05	1	549.75	562.43		
17:55-18:05	2	128.48	130.10		
17:55-18:05	3	459.81	467.14		
18:05-18:15	1	549.75	562.43		
18:05-18:15	2	128.48	130.10		
18:05-18:15	3	459.81	467.14		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	282.000	531.000
	2	120.000	0.000	70.000
	3	542.000	138.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.35	0.65
	2	0.63	0.00	0.37
	3	0.80	0.20	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.010	1.030
	2	1.020	1.000	1.000
	3	1.020	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	1.0	3.0
	2	2.0	0.0	0.0
	3	2.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.54	0.09	1.16	A	664.17	996.25	70.62	0.07	0.78	70.62	0.07
2	0.15	0.06	0.18	A	155.22	232.83	12.14	0.05	0.13	12.14	0.05
3	0.49	0.08	0.96	A	555.52	833.27	59.67	0.07	0.66	59.67	0.07

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.75	91.63	546.50	445.00	92.74	0.00	1554.47	1469.99	0.354	0.00	0.54	0.059	A
2	128.48	21.41	127.86	282.30	356.94	0.00	1370.52	959.69	0.094	0.00	0.10	0.048	A
3	459.82	76.64	456.99	404.04	80.75	0.00	1427.73	1087.15	0.322	0.00	0.47	0.062	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.75	91.63	549.73	447.63	93.31	0.00	1554.09	1469.99	0.354	0.54	0.54	0.060	A
2	128.48	21.41	128.48	284.00	359.05	0.00	1369.08	959.69	0.094	0.10	0.10	0.048	A
3	459.82	76.64	459.80	406.38	81.14	0.00	1427.48	1087.15	0.322	0.47	0.47	0.062	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	688.64	114.77	687.11	559.62	116.64	0.00	1538.69	1469.99	0.448	0.54	0.80	0.070	A
2	160.94	26.82	160.72	354.97	448.78	0.00	1307.97	959.69	0.123	0.10	0.14	0.052	A
3	575.99	96.00	574.75	507.99	101.51	0.00	1414.28	1087.15	0.407	0.47	0.68	0.071	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	788.30	131.38	786.80	640.85	133.57	0.00	1527.50	1469.99	0.516	0.80	1.05	0.081	A
2	184.23	30.70	184.05	406.49	513.89	0.00	1263.62	959.69	0.146	0.14	0.17	0.056	A
3	659.34	109.89	658.18	581.70	116.24	0.00	1404.73	1087.15	0.469	0.68	0.87	0.080	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	824.63	137.44	823.96	671.02	139.87	0.00	1523.34	1470.00	0.541	1.05	1.16	0.086	A
2	192.72	32.12	192.64	425.67	538.15	0.00	1247.09	959.69	0.155	0.17	0.18	0.057	A
3	689.72	114.95	689.22	609.13	121.67	0.00	1401.21	1087.15	0.492	0.87	0.96	0.084	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	788.30	131.38	788.78	642.21	133.88	0.00	1527.30	1469.99	0.516	1.16	1.08	0.081	A
2	184.23	30.70	184.29	407.48	515.18	0.00	1262.74	959.69	0.146	0.18	0.17	0.056	A
3	659.34	109.89	659.70	583.07	116.39	0.00	1404.63	1087.15	0.469	0.96	0.90	0.081	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	688.64	114.77	690.21	561.81	117.14	0.00	1538.36	1469.99	0.448	1.08	0.82	0.071	A
2	160.94	26.82	161.12	356.55	450.80	0.00	1306.59	959.69	0.123	0.17	0.14	0.052	A
3	575.99	96.00	577.19	510.16	101.76	0.00	1414.11	1087.15	0.407	0.90	0.70	0.072	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.75	91.63	551.36	448.82	93.58	0.00	1553.92	1469.99	0.354	0.82	0.55	0.060	A
2	128.48	21.41	128.70	284.82	360.11	0.00	1368.36	959.69	0.094	0.14	0.10	0.048	A
3	459.82	76.64	461.11	407.53	81.28	0.00	1427.39	1087.15	0.322	0.70	0.48	0.062	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	549.75	91.63	549.77	447.65	93.32	0.00	1554.09	1469.99	0.354	0.55	0.55	0.060	A
2	128.48	21.41	128.48	284.01	359.07	0.00	1369.07	959.69	0.094	0.10	0.10	0.048	A
3	459.82	76.64	459.83	406.40	81.14	0.00	1427.48	1087.15	0.322	0.48	0.48	0.062	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.24	0.52	0.059	A	A
2	1.01	0.10	0.048	A	A
3	4.55	0.46	0.062	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.44	0.54	0.060	A	A
2	1.03	0.10	0.048	A	A
3	4.72	0.47	0.062	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.76	0.78	0.070	A	A
2	1.37	0.14	0.052	A	A
3	6.60	0.66	0.071	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.17	1.02	0.081	A	A
2	1.67	0.17	0.056	A	A
3	8.47	0.85	0.080	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.38	1.14	0.086	A	A
2	1.80	0.18	0.057	A	A
3	9.38	0.94	0.084	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.00	1.10	0.081	A	A
2	1.73	0.17	0.056	A	A
3	9.09	0.91	0.081	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.44	0.84	0.071	A	A
2	1.44	0.14	0.052	A	A
3	7.14	0.71	0.072	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.68	0.57	0.060	A	A
2	1.06	0.11	0.048	A	A
3	4.92	0.49	0.062	A	A

Queueing Delay results: (18:05-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.51	0.55	0.060	A	A
2	1.04	0.10	0.048	A	A
3	4.78	0.48	0.062	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]

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: 2022 Base Sensitivity-A249_B2231.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODELLING USED IN SUBMITTED TAs\London Modelling Results\Models\Arcady Models\A249_B2231\July 2015 TA - residential application
Report generation date: 07/07/2015 11:18:58

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.14	0.05	0.54	A				
Arm 2	0.53	0.04	0.35	A				
Arm 3	1.52	0.08	0.61	A				
	A1 - Scenario 2							
Arm 1					2.04	0.07	0.68	A
Arm 2					0.82	0.06	0.45	A
Arm 3					0.67	0.05	0.40	A

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

"D1 - Scenario 1, AM " model duration: 07:45 - 09:15
"D2 - Scenario 2, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 07/07/2015 11:18:56

File summary

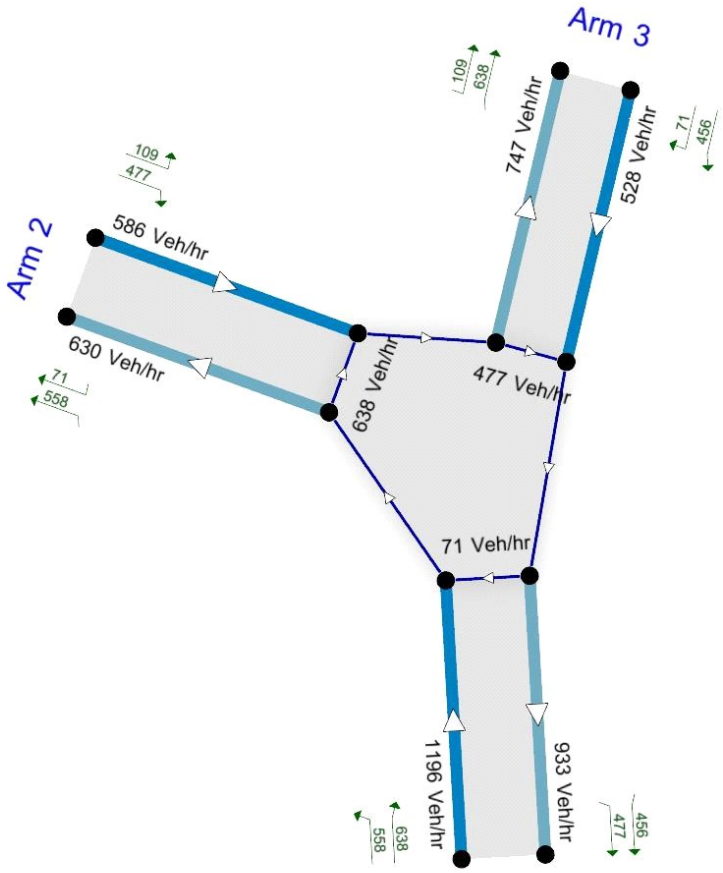
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	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	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, 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
(Default Analysis Set)	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	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1372.00	100.000
2	ONE HOUR	✓	720.00	100.000
3	ONE HOUR	✓	1210.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	927.74	998.10		
07:45-07:55	2	486.86	525.28		
07:45-07:55	3	818.20	843.61		
07:55-08:05	1	927.74	998.10		
07:55-08:05	2	486.86	525.28		
07:55-08:05	3	818.20	843.61		
08:05-08:15	1	1162.14	1250.27		
08:05-08:15	2	609.87	657.99		
08:05-08:15	3	1024.92	1056.75		
08:15-08:25	1	1330.31	1431.20		
08:15-08:25	2	698.12	753.21		
08:15-08:25	3	1173.23	1209.67		
08:25-08:35	1	1391.62	1497.15		
08:25-08:35	2	730.29	787.92		
08:25-08:35	3	1227.30	1265.42		
08:35-08:45	1	1330.31	1431.20		
08:35-08:45	2	698.12	753.21		
08:35-08:45	3	1173.23	1209.67		
08:45-08:55	1	1162.14	1250.27		
08:45-08:55	2	609.87	657.99		
08:45-08:55	3	1024.92	1056.75		
08:55-09:05	1	927.74	998.10		
08:55-09:05	2	486.86	525.28		
08:55-09:05	3	818.20	843.61		
09:05-09:15	1	927.74	998.10		
09:05-09:15	2	486.86	525.28		
09:05-09:15	3	818.20	843.61		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	709.000	663.000
	2	641.000	0.000	79.000
	3	1082.000	128.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.89	0.00	0.11
	3	0.89	0.11	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.050
	2	1.080	1.000	1.070
	3	1.030	1.040	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	10.0	5.0
	2	8.0	0.0	7.0
	3	3.0	4.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.54	0.05	1.14	A	1120.83	1681.25	70.01	0.04	0.78	70.01	0.04
2	0.35	0.04	0.53	A	588.19	882.29	33.75	0.04	0.38	33.75	0.04
3	0.61	0.08	1.52	A	988.49	1482.73	84.42	0.06	0.94	84.42	0.06

Main Results for each time segment

Main results: (07:45-07:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	924.48	1160.45	86.18	0.00	2624.88	2589.80	0.353	0.00	0.54	0.035	A
2	486.86	81.14	485.22	563.92	446.74	0.00	2252.50	1736.69	0.216	0.00	0.27	0.034	A
3	818.20	136.37	814.65	499.98	431.98	0.00	2190.64	1330.09	0.374	0.00	0.59	0.044	A

Main results: (07:55-08:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	927.73	1165.07	86.55	0.00	2624.64	2589.80	0.353	0.54	0.55	0.035	A
2	486.86	81.14	486.86	565.97	448.32	0.00	2251.50	1736.69	0.216	0.27	0.28	0.034	A
3	818.20	136.37	818.18	501.73	433.44	0.00	2189.51	1330.09	0.374	0.59	0.59	0.044	A

Main results: (08:05-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1162.13	193.69	1160.63	1457.01	108.20	0.00	2610.71	2589.80	0.445	0.55	0.80	0.041	A
2	609.87	101.64	609.20	707.97	560.86	0.00	2179.36	1736.69	0.280	0.28	0.39	0.038	A
3	1024.91	170.82	1022.85	627.70	542.36	0.00	2105.39	1330.09	0.487	0.59	0.94	0.055	A

Main results: (08:15-08:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1330.31	221.72	1328.86	1668.05	123.87	0.00	2600.63	2589.80	0.512	0.80	1.04	0.047	A
2	698.13	116.35	697.53	810.58	642.16	0.00	2127.25	1736.69	0.328	0.39	0.49	0.042	A
3	1173.23	195.54	1170.91	718.69	620.99	0.00	2044.65	1330.09	0.574	0.94	1.33	0.068	A

Main results: (08:25-08:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1391.61	231.94	1390.98	1746.38	129.71	0.00	2596.87	2589.80	0.536	1.04	1.14	0.050	A
2	730.30	121.72	730.05	848.52	672.17	0.00	2108.01	1736.69	0.346	0.49	0.53	0.044	A
3	1227.30	204.55	1226.15	752.27	649.94	0.00	2022.29	1330.09	0.607	1.33	1.52	0.075	A

Main results: (08:35-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1330.31	221.72	1330.83	1671.64	124.21	0.00	2600.41	2589.80	0.512	1.14	1.06	0.047	A
2	698.13	116.35	698.34	811.93	643.11	0.00	2126.64	1736.69	0.328	0.53	0.49	0.042	A
3	1173.23	195.54	1174.14	719.73	621.71	0.00	2044.09	1330.09	0.574	1.52	1.37	0.069	A

Main results: (08:45-08:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1162.13	193.69	1163.62	1462.16	108.68	0.00	2610.40	2589.80	0.445	1.06	0.81	0.042	A
2	609.87	101.64	610.47	710.00	562.31	0.00	2178.43	1736.69	0.280	0.49	0.39	0.038	A
3	1024.91	170.82	1027.36	629.29	543.49	0.00	2104.51	1330.09	0.487	1.37	0.96	0.056	A

Main results: (08:55-09:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	929.29	1167.62	86.78	0.00	2624.49	2589.80	0.353	0.81	0.55	0.035	A
2	486.86	81.14	487.55	567.01	449.07	0.00	2251.01	1736.69	0.216	0.39	0.28	0.034	A
3	818.20	136.37	820.35	502.56	434.05	0.00	2189.04	1330.09	0.374	0.96	0.60	0.044	A

Main results: (09:05-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	927.74	154.62	927.75	1165.11	86.55	0.00	2624.64	2589.80	0.353	0.55	0.55	0.035	A
2	486.86	81.14	486.87	565.99	448.32	0.00	2251.49	1736.69	0.216	0.28	0.28	0.034	A
3	818.20	136.37	818.21	501.74	433.45	0.00	2189.51	1330.09	0.374	0.60	0.60	0.044	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-07:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.32	0.53	0.035	A	A
2	2.69	0.27	0.034	A	A
3	5.76	0.58	0.044	A	A

Queueing Delay results: (07:55-08:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.45	0.54	0.035	A	A
2	2.75	0.28	0.034	A	A
3	5.94	0.59	0.044	A	A

Queueing Delay results: (08:05-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.80	0.78	0.041	A	A
2	3.80	0.38	0.038	A	A
3	9.12	0.91	0.055	A	A

Queueing Delay results: (08:15-08:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.14	1.01	0.047	A	A
2	4.78	0.48	0.042	A	A
3	12.82	1.28	0.068	A	A

Queueing Delay results: (08:25-08:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.26	1.13	0.050	A	A
2	5.21	0.52	0.044	A	A
3	14.81	1.48	0.075	A	A

Queueing Delay results: (08:35-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.71	1.07	0.047	A	A
2	4.97	0.50	0.042	A	A
3	13.95	1.39	0.069	A	A

Queueing Delay results: (08:45-08:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.25	0.82	0.042	A	A
2	3.97	0.40	0.038	A	A
3	9.87	0.99	0.056	A	A

Queueing Delay results: (08:55-09:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.60	0.56	0.035	A	A
2	2.81	0.28	0.034	A	A
3	6.15	0.62	0.044	A	A

Queueing Delay results: (09:05-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.49	0.55	0.035	A	A
2	2.77	0.28	0.034	A	A
3	6.00	0.60	0.044	A	A

(Default Analysis Set) - Scenario 2, 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
(Default Analysis Set)	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	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (min)	Junction LOS
1	A249 - B2231	Roundabout	1,2,3				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A249 South	
2	2	A249 East	
3	3	B2231	

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

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	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

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)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1776.00	100.000
2	ONE HOUR	✓	870.00	100.000
3	ONE HOUR	✓	783.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	1200.93	1264.19		
16:45-16:55	2	588.29	632.48		
16:45-16:55	3	529.46	542.20		
16:55-17:05	1	1200.93	1264.19		
16:55-17:05	2	588.29	632.48		
16:55-17:05	3	529.46	542.20		
17:05-17:15	1	1504.34	1583.58		
17:05-17:15	2	736.92	792.27		
17:05-17:15	3	663.23	679.19		
17:15-17:25	1	1722.04	1812.75		
17:15-17:25	2	843.57	906.92		
17:15-17:25	3	759.21	777.48		
17:25-17:35	1	1801.39	1896.28		
17:25-17:35	2	882.44	948.71		
17:25-17:35	3	794.19	813.30		
17:35-17:45	1	1722.04	1812.75		
17:35-17:45	2	843.57	906.92		
17:35-17:45	3	759.21	777.48		
17:45-17:55	1	1504.34	1583.58		
17:45-17:55	2	736.92	792.27		
17:45-17:55	3	663.23	679.19		
17:55-18:05	1	1200.93	1264.19		
17:55-18:05	2	588.29	632.48		
17:55-18:05	3	529.46	542.20		
18:05-18:15	1	1200.93	1264.19		
18:05-18:15	2	588.29	632.48		
18:05-18:15	3	529.46	542.20		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	829.000	947.000
	2	708.000	0.000	162.000
	3	677.000	106.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.47	0.53
	2	0.81	0.00	0.19
	3	0.86	0.14	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.090	1.020
	2	1.090	1.000	1.010
	3	1.020	1.050	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	9.0	2.0
	2	9.0	0.0	1.0
	3	2.0	5.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.68	0.07	2.04	A	1450.88	2176.32	113.74	0.05	1.26	113.75	0.05
2	0.45	0.06	0.82	A	710.73	1066.10	49.27	0.05	0.55	49.27	0.05
3	0.40	0.05	0.67	A	639.66	959.49	41.08	0.04	0.46	41.09	0.04

Main Results for each time segment

Main results: (16:45-16:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1196.14	933.04	71.42	0.00	2691.91	2607.30	0.446	0.00	0.80	0.040	A
2	588.29	98.05	586.05	629.75	637.80	0.00	2149.29	1679.11	0.274	0.00	0.37	0.038	A
3	529.46	88.24	527.53	746.93	476.92	0.00	2167.23	1469.08	0.244	0.00	0.32	0.037	A

Main results: (16:55-17:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1200.92	936.53	71.68	0.00	2691.74	2607.30	0.446	0.80	0.80	0.040	A
2	588.29	98.05	588.29	632.23	640.35	0.00	2147.70	1679.11	0.274	0.37	0.38	0.038	A
3	529.46	88.24	529.46	749.89	478.74	0.00	2165.80	1469.08	0.244	0.32	0.32	0.037	A

Main results: (17:05-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1504.34	250.72	1501.57	1171.50	89.67	0.00	2679.80	2607.29	0.561	0.80	1.27	0.051	A
2	736.92	122.82	735.83	790.57	800.66	0.00	2047.53	1679.12	0.360	0.38	0.56	0.046	A
3	663.23	110.54	662.36	937.68	598.81	0.00	2071.56	1469.08	0.320	0.32	0.47	0.043	A

Main results: (17:15-17:25)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1722.04	287.01	1718.93	1341.32	102.67	0.00	2671.17	2607.29	0.645	1.27	1.78	0.063	A
2	843.57	140.59	842.49	905.03	916.57	0.00	1975.10	1679.12	0.427	0.56	0.74	0.053	A
3	759.21	126.54	758.38	1073.44	685.61	0.00	2003.44	1469.08	0.379	0.47	0.61	0.048	A

Main results: (17:25-17:35)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1801.40	300.23	1799.86	1404.10	107.47	0.00	2667.98	2607.29	0.675	1.78	2.04	0.069	A
2	882.44	147.07	881.95	947.60	959.72	0.00	1948.14	1679.12	0.453	0.74	0.82	0.056	A
3	794.20	132.37	793.84	1123.94	717.73	0.00	1978.23	1469.08	0.401	0.61	0.67	0.051	A

Main results: (17:35-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1722.04	287.01	1723.23	1343.52	102.82	0.00	2671.06	2607.29	0.645	2.04	1.84	0.063	A
2	843.57	140.59	843.97	907.18	918.86	0.00	1973.67	1679.12	0.427	0.82	0.75	0.053	A
3	759.21	126.54	759.51	1076.01	686.82	0.00	2002.49	1469.08	0.379	0.67	0.62	0.048	A

Main results: (17:45-17:55)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1504.34	250.72	1507.63	1174.78	89.90	0.00	2679.64	2607.29	0.561	1.84	1.29	0.051	A
2	736.92	122.82	738.04	793.63	803.90	0.00	2045.50	1679.12	0.360	0.75	0.57	0.046	A
3	663.23	110.54	664.08	941.33	600.61	0.00	2070.15	1469.08	0.320	0.62	0.47	0.043	A

Main results: (17:55-18:05)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1203.83	938.22	71.80	0.00	2691.66	2607.30	0.446	1.29	0.81	0.040	A
2	588.29	98.05	589.42	633.72	641.91	0.00	2146.73	1679.11	0.274	0.57	0.38	0.039	A
3	529.46	88.24	530.36	751.66	479.66	0.00	2165.08	1469.08	0.245	0.47	0.33	0.037	A

Main results: (18:05-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1200.93	200.16	1200.95	936.55	71.68	0.00	2691.74	2607.30	0.446	0.81	0.81	0.040	A
2	588.29	98.05	588.30	632.25	640.37	0.00	2147.69	1679.11	0.274	0.38	0.38	0.038	A
3	529.46	88.24	529.47	749.91	478.75	0.00	2165.79	1469.08	0.244	0.33	0.32	0.037	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-16:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.78	0.78	0.040	A	A
2	3.67	0.37	0.038	A	A
3	3.15	0.32	0.037	A	A

Queueing Delay results: (16:55-17:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.01	0.80	0.040	A	A
2	3.76	0.38	0.038	A	A
3	3.22	0.32	0.037	A	A

Queueing Delay results: (17:05-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.28	1.23	0.051	A	A
2	5.47	0.55	0.046	A	A
3	4.59	0.46	0.043	A	A

Queueing Delay results: (17:15-17:25)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.22	1.72	0.063	A	A
2	7.23	0.72	0.053	A	A
3	5.94	0.59	0.048	A	A

Queueing Delay results: (17:25-17:35)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.89	1.99	0.069	A	A
2	8.07	0.81	0.056	A	A
3	6.56	0.66	0.051	A	A

Queueing Delay results: (17:35-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.82	1.88	0.063	A	A
2	7.63	0.76	0.053	A	A
3	6.23	0.62	0.048	A	A

Queueing Delay results: (17:45-17:55)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.34	1.33	0.051	A	A
2	5.79	0.58	0.046	A	A
3	4.83	0.48	0.043	A	A

Queueing Delay results: (17:55-18:05)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.31	0.83	0.040	A	A
2	3.87	0.39	0.039	A	A
3	3.31	0.33	0.037	A	A

Queueing Delay results: (18:05-18:15)

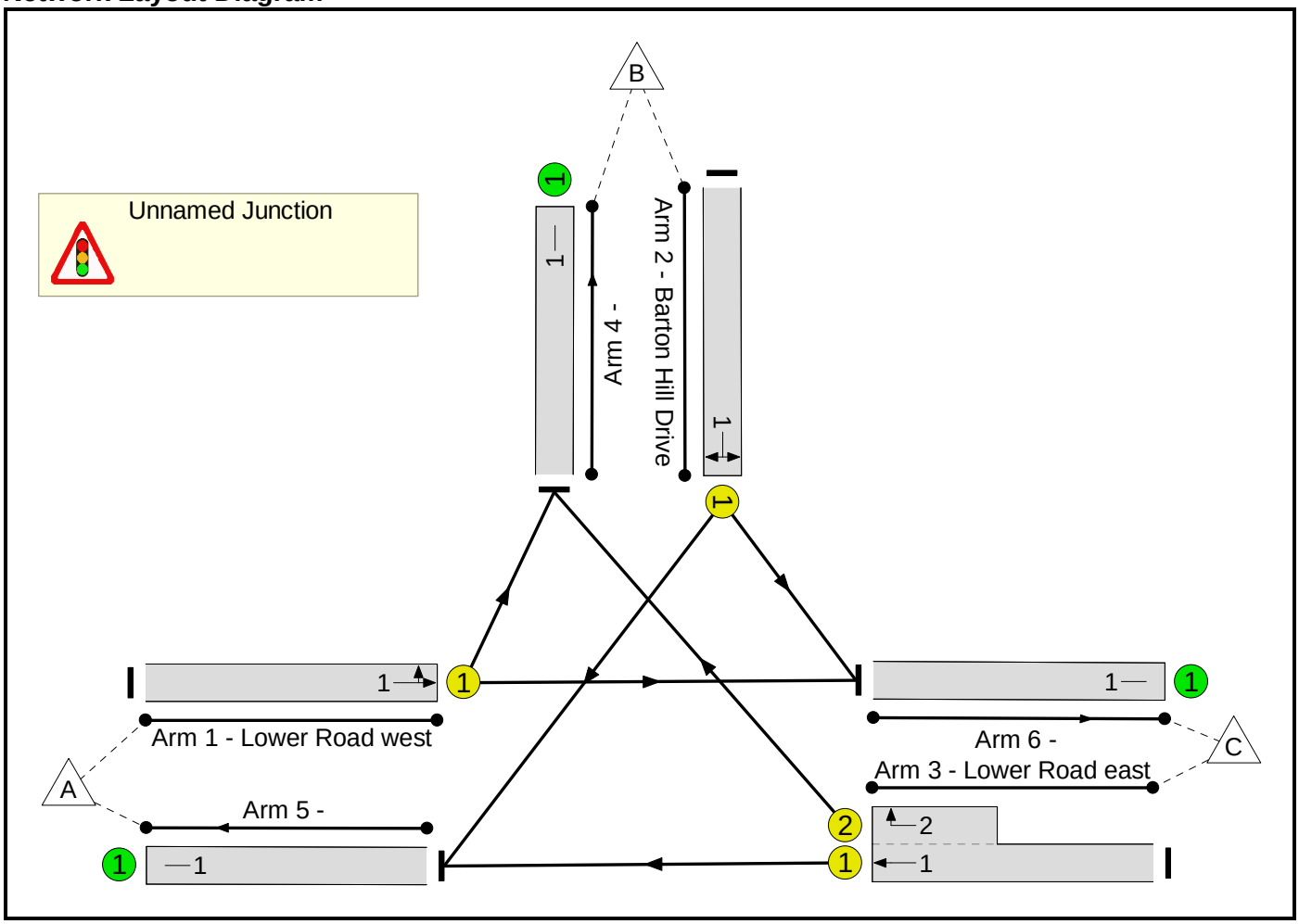
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.10	0.81	0.040	A	A
2	3.79	0.38	0.038	A	A
3	3.25	0.32	0.037	A	A

Full Input Data And Results

Project and User Details

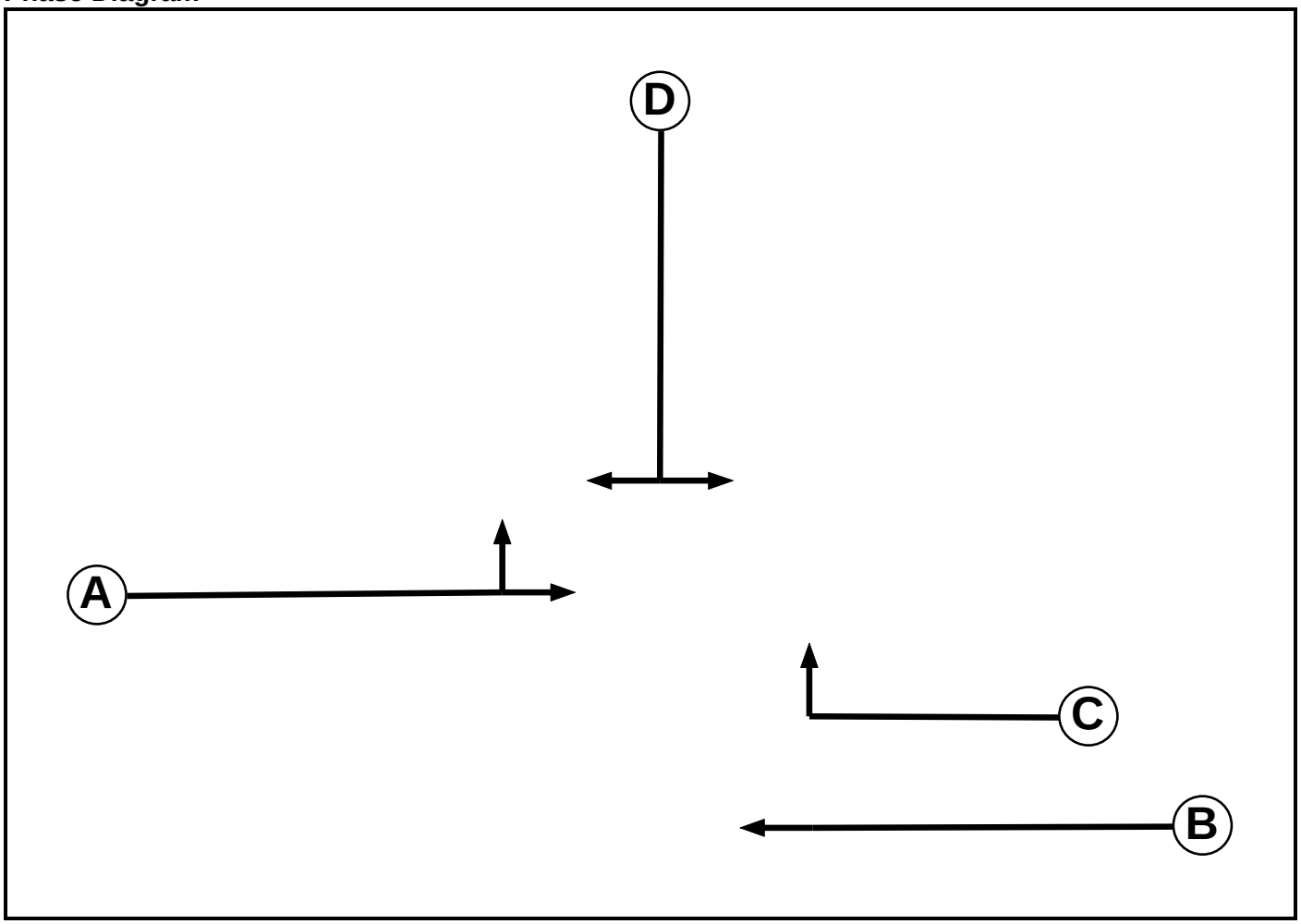
Project:	
Title:	
Location:	
File name:	Lower Road - Barton Hill Drive 006 (NN).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

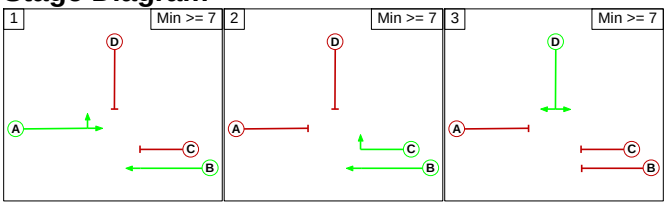
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		-	7	6
	B	-		-	5
	C	5	-		5
	D	6	6	6	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	6
	2	5		5
	3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Lower Road west)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	14.41
											Arm 6 Ahead	Inf
2/1 (Barton Hill Drive)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	17.57
											Arm 6 Left	11.63
3/1 (Lower Road east)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
3/2 (Lower Road east)	U	C	2	3	5.0	Geom	-	3.00	0.00	N	Arm 4 Right	16.18
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
9: '2017 AM Sensitivity'	08:00	09:00	01:00	
10: '2017 PM Sensitivity'	17:00	18:00	01:00	

Traffic Flows, Desired

FG9: '2017 AM Sensitivity'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	265	572	837
	B	548	0	28	576
	C	814	21	0	835
	Tot.	1362	286	600	2248

FG10: '2017 PM Sensitivity'

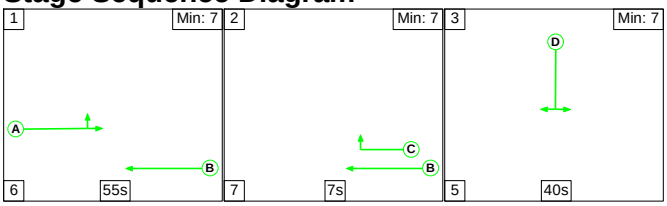
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	407	821	1228
	B	220	0	18	238
	C	619	53	0	672
	Tot.	839	460	839	2138

Full Input Data And Results

Scenario 9: '2017 AM Sensitivity' (FG9: '2017 AM Sensitivity', Plan 9: '2017 AM Sensitivity')

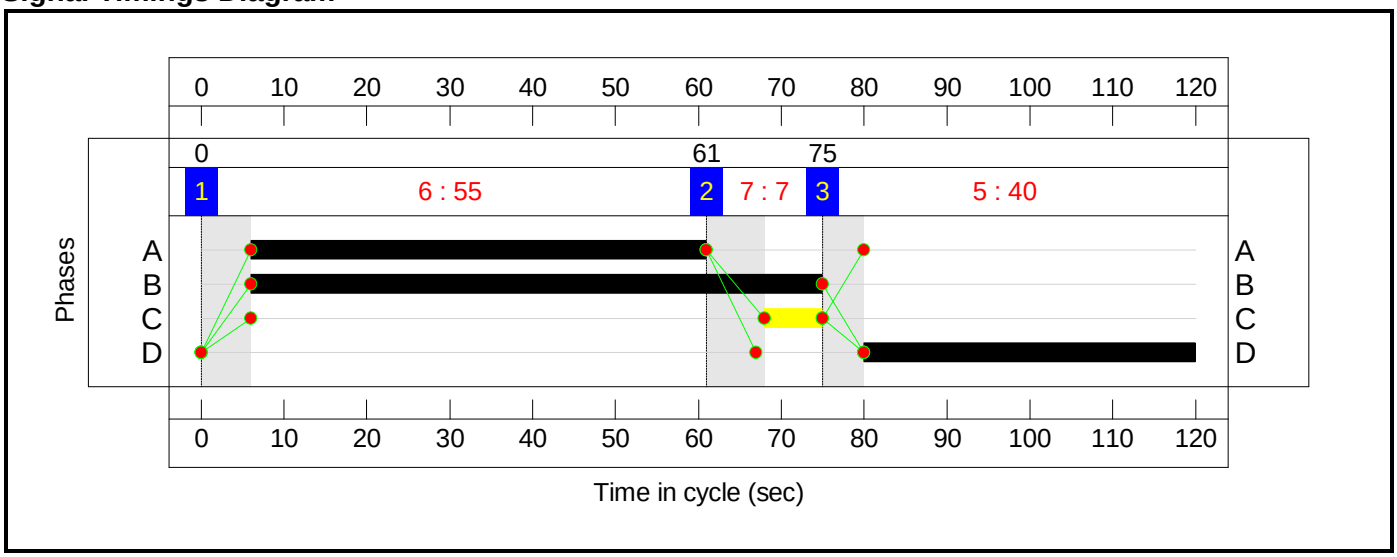
Stage Sequence Diagram



Stage Timings

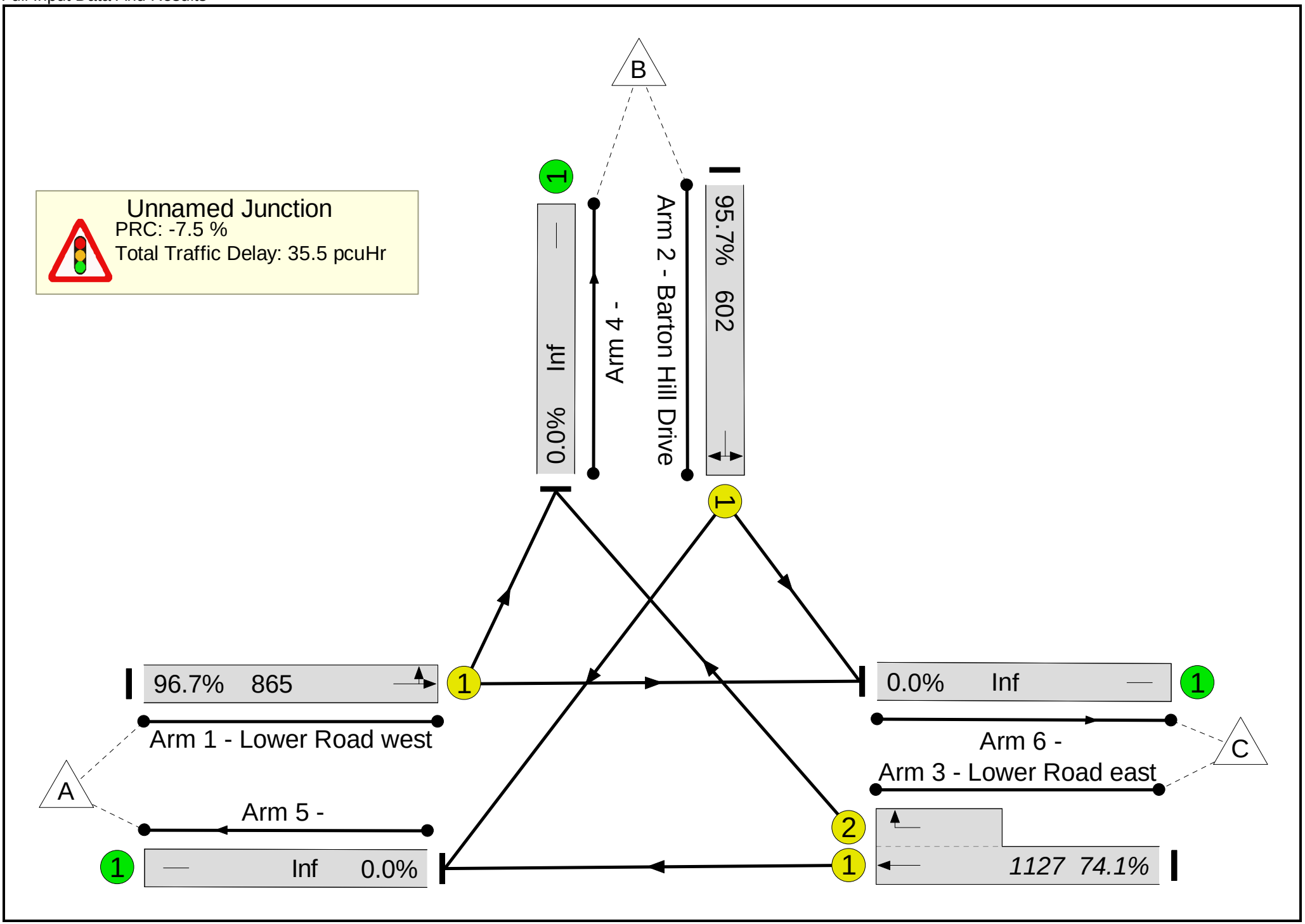
Stage	1	2	3
Duration	55	7	40
Change Point	0	61	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -7.5 %
Total Traffic Delay: 35.5 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
95.7% 602
1
96.7% 865
1
0.0% Inf
1
Arm 1 - Lower Road west
Arm 6 -
Arm 3 - Lower Road east
A
C
Arm 5 -
2
1
Inf 0.0%
1127 74.1%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.7%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**96.7%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	55	-	837	1854	865	96.7%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	40	-	576	1761	602	95.7%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	69:7	-	835	1915:1881	1127	74.1%
4/1		U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1362	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%

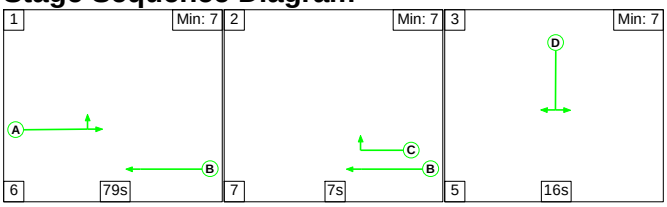
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**17.8**	**17.6**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**17.8**	**17.6**	**0.0**	**35.5**	**-**	**-**	**-**	**-**
1/1	837	837	-	-	-	7.2	9.0	-	16.3	70.0	27.0	9.0	36.0
2/1	576	576	-	-	-	6.2	7.2	-	13.4	83.6	18.7	7.2	25.9
3/1+3/2	835	835	-	-	-	4.4	1.4	-	5.8	25.1	20.1	1.4	21.5
4/1	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1362	1362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -7.5 Total Delay for Signalled Lanes (pcuHr): 35.48 Cycle Time (s): 120
PRC Over All Lanes (%): -7.5 Total Delay Over All Lanes(pcuHr): 35.48

Full Input Data And Results

Scenario 10: '2017 PM Sensitivity' (FG10: '2017 PM Sensitivity', Plan 10: '2017 PM Sensitivity')

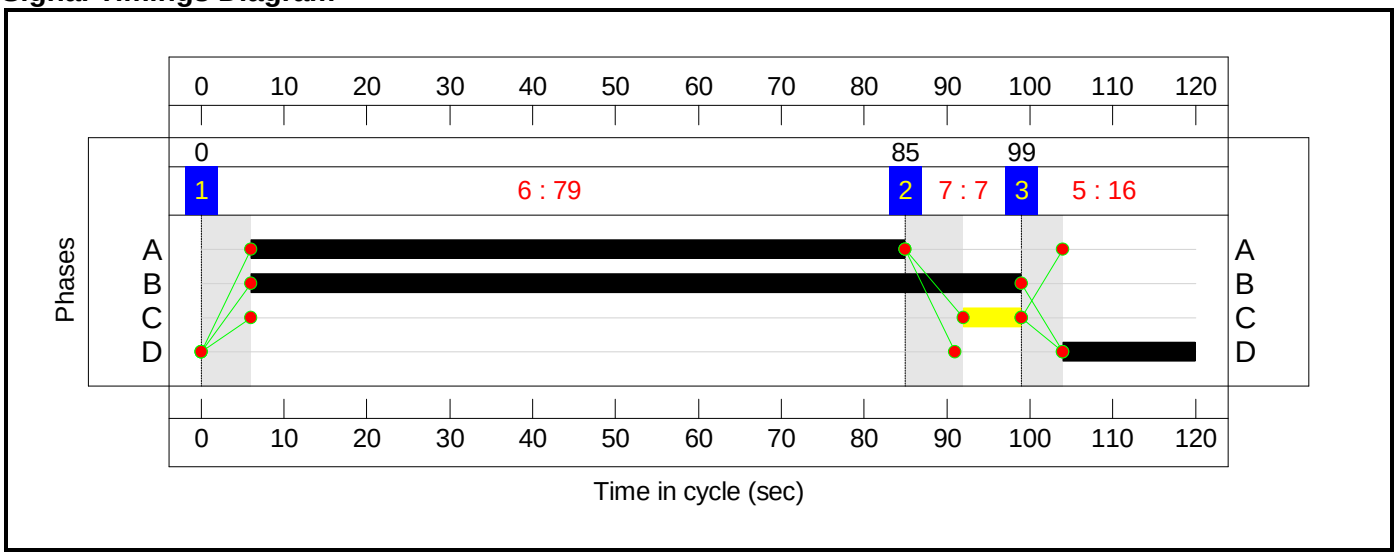
Stage Sequence Diagram



Stage Timings

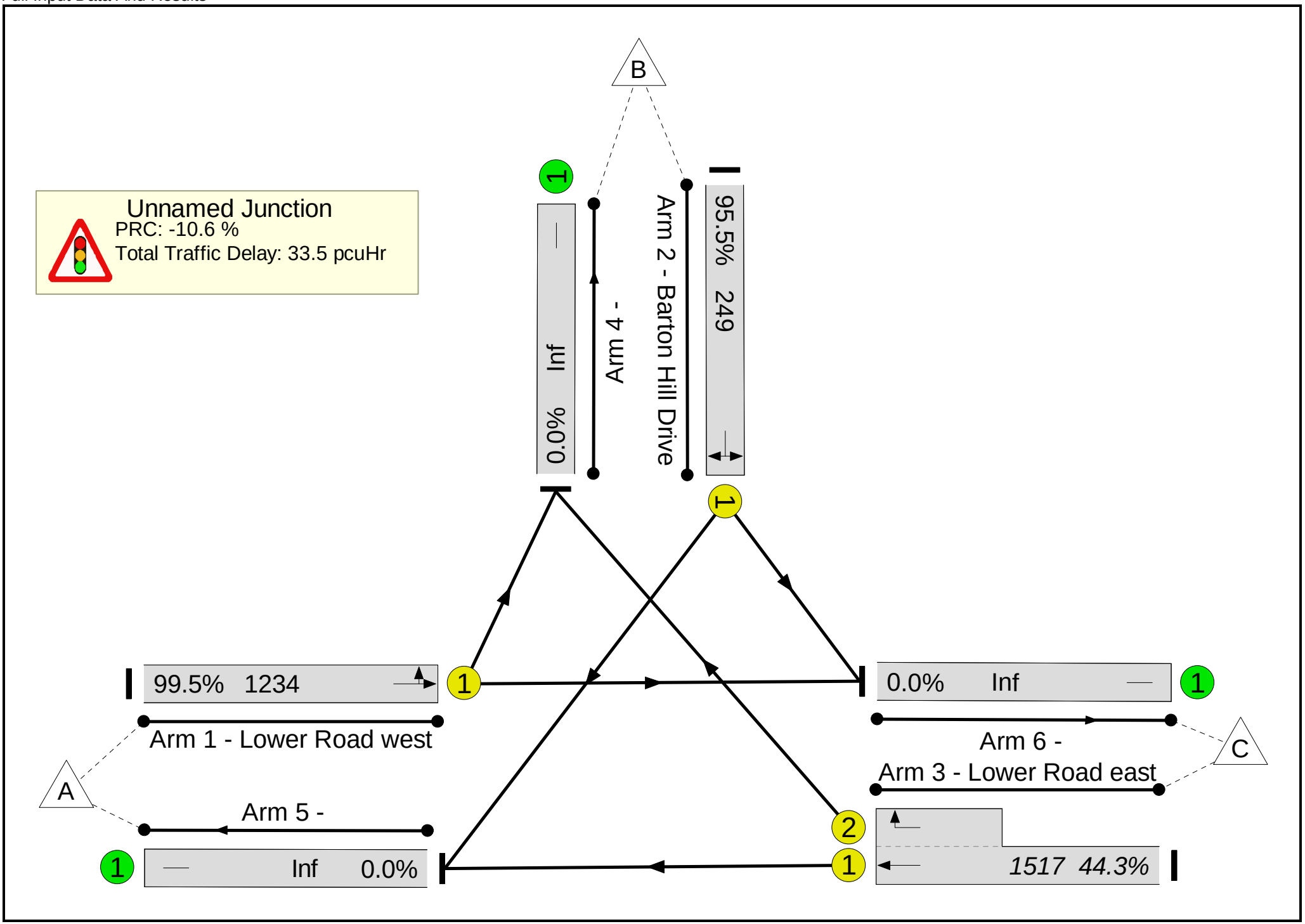
Stage	1	2	3
Duration	79	7	16
Change Point	0	85	99

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -10.6 %
Total Traffic Delay: 33.5 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
95.5% 249
1
99.5% 1234
1
0.0% Inf
1
Arm 1 - Lower Road west
A
Arm 6 -
Arm 3 - Lower Road east
C
Arm 5 -
2
1
Inf 0.0%
1
1517 44.3%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.5%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**99.5%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1228	1851	1234	99.5%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	238	1759	249	95.5%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	672	1915:1881	1517	44.3%
4/1		U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	839	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	839	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.6**	**21.9**	**0.0**	**33.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**11.6**	**21.9**	**0.0**	**33.5**	**-**	**-**	**-**	**-**
1/1	1228	1228	-	-	-	6.8	16.1	-	22.8	67.0	40.3	16.1	56.3
2/1	238	238	-	-	-	3.4	5.4	-	8.8	132.9	7.9	5.4	13.3
3/1+3/2	672	672	-	-	-	1.5	0.4	-	1.9	10.2	6.7	0.4	7.1
4/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	839	839	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	839	839	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

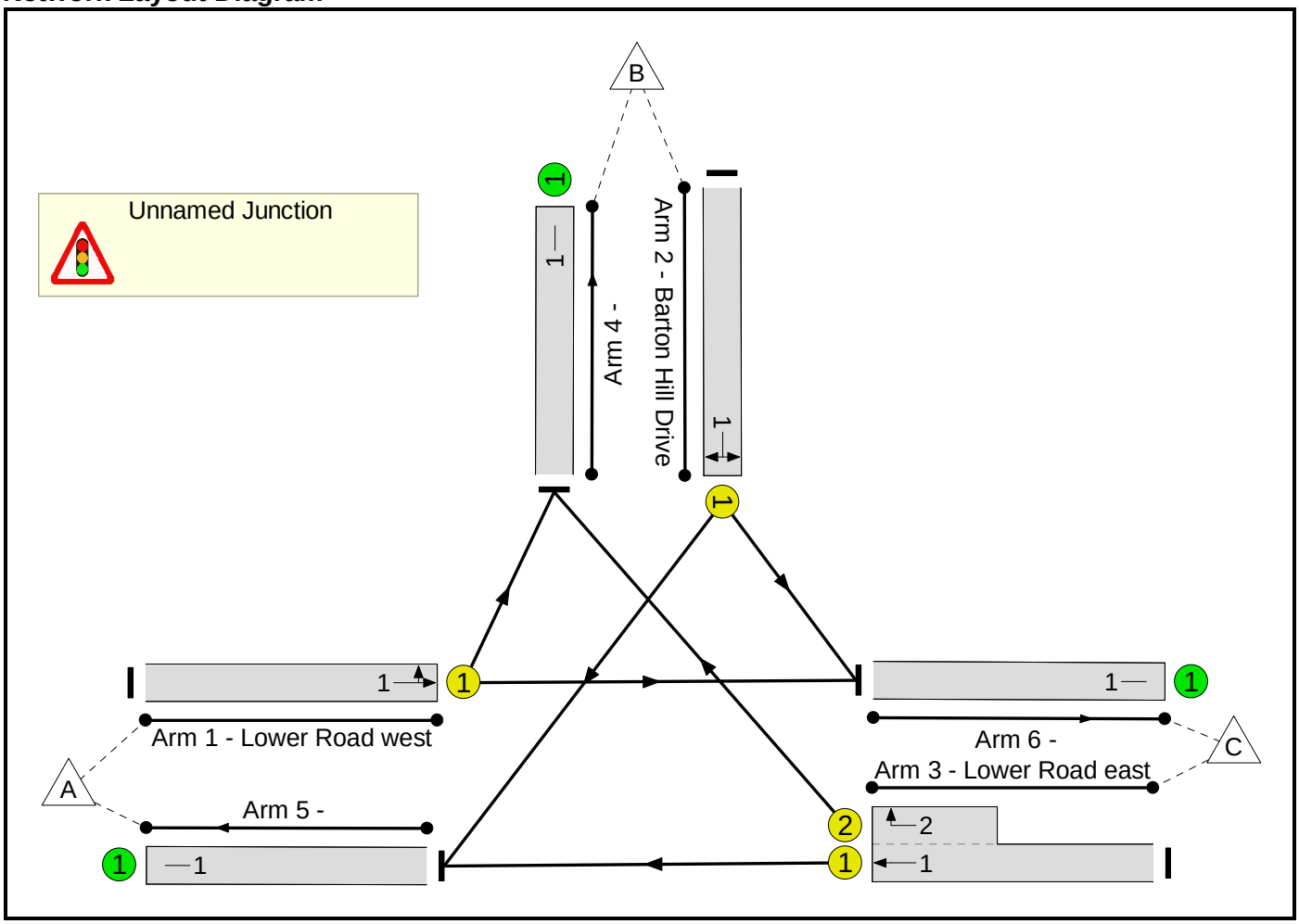
C1 PRC for Signalled Lanes (%): -10.6 Total Delay for Signalled Lanes (pcuHr): 33.53 Cycle Time (s): 120
PRC Over All Lanes (%): -10.6 Total Delay Over All Lanes(pcuHr): 33.53

Full Input Data And Results

Project and User Details

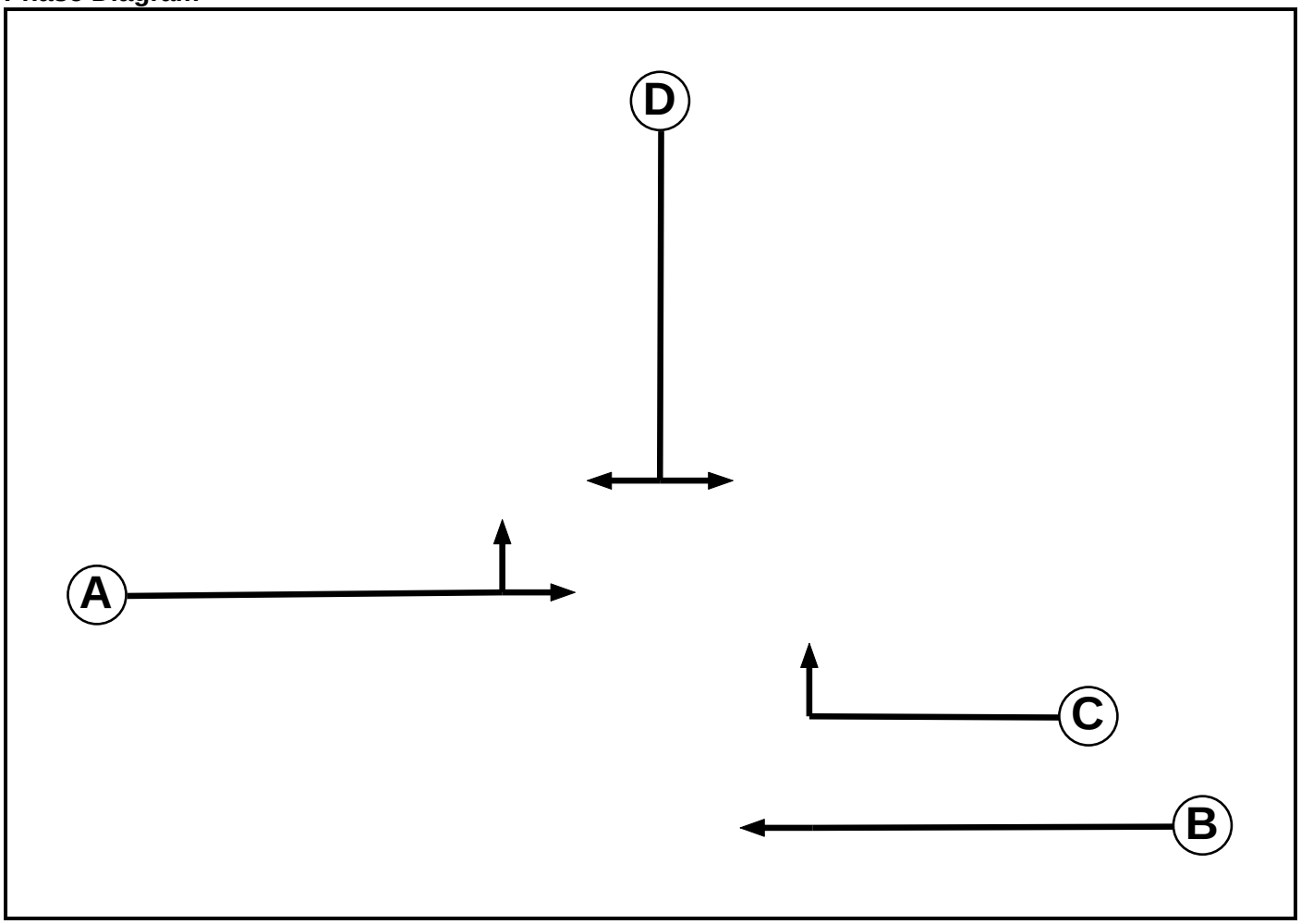
Project:	
Title:	
Location:	
File name:	Lower Road - Barton Hill Drive 006 (NN).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

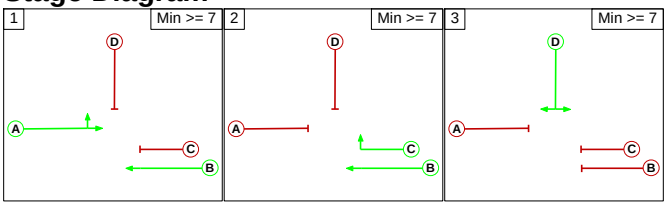
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A		-	7	6
	B	-		-	5
	C	5	-		5
	D	6	6	6	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	6
	2	5		5
	3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Lower Road west)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	14.41
											Arm 6 Ahead	Inf
2/1 (Barton Hill Drive)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	17.57
											Arm 6 Left	11.63
3/1 (Lower Road east)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
3/2 (Lower Road east)	U	C	2	3	5.0	Geom	-	3.00	0.00	N	Arm 4 Right	16.18
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
15: '2022 AM Sensitivity'	08:00	09:00	01:00	
16: '2022 PM Sensitivity'	17:00	18:00	01:00	

Traffic Flows, Desired

FG15: '2022 AM Sensitivity'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	269	575	844
	B	602	0	27	629
	C	837	21	0	858
	Tot.	1439	290	602	2331

FG16: '2022 PM Sensitivity'

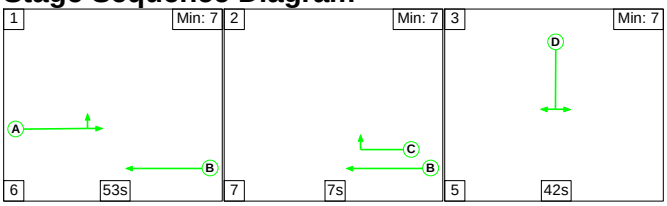
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	481	854	1335
	B	253	0	18	271
	C	639	54	0	693
	Tot.	892	535	872	2299

Full Input Data And Results

Scenario 15: '2022 AM Sensitivity' (FG15: '2022 AM Sensitivity', Plan 15: '2022 AM Sensitivity')

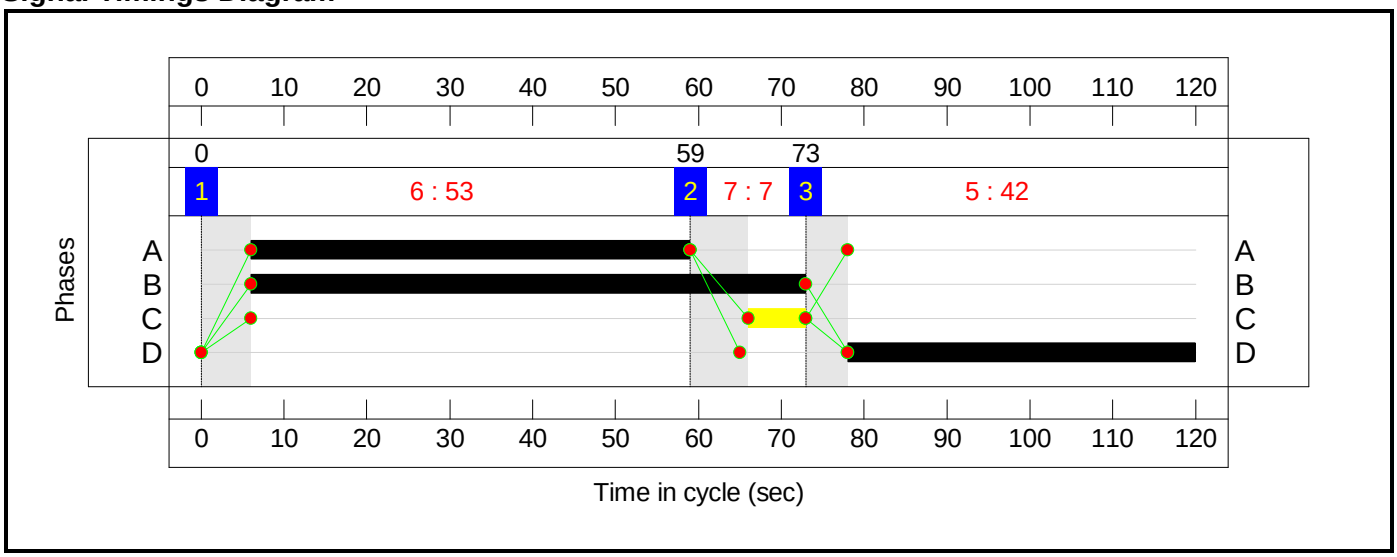
Stage Sequence Diagram



Stage Timings

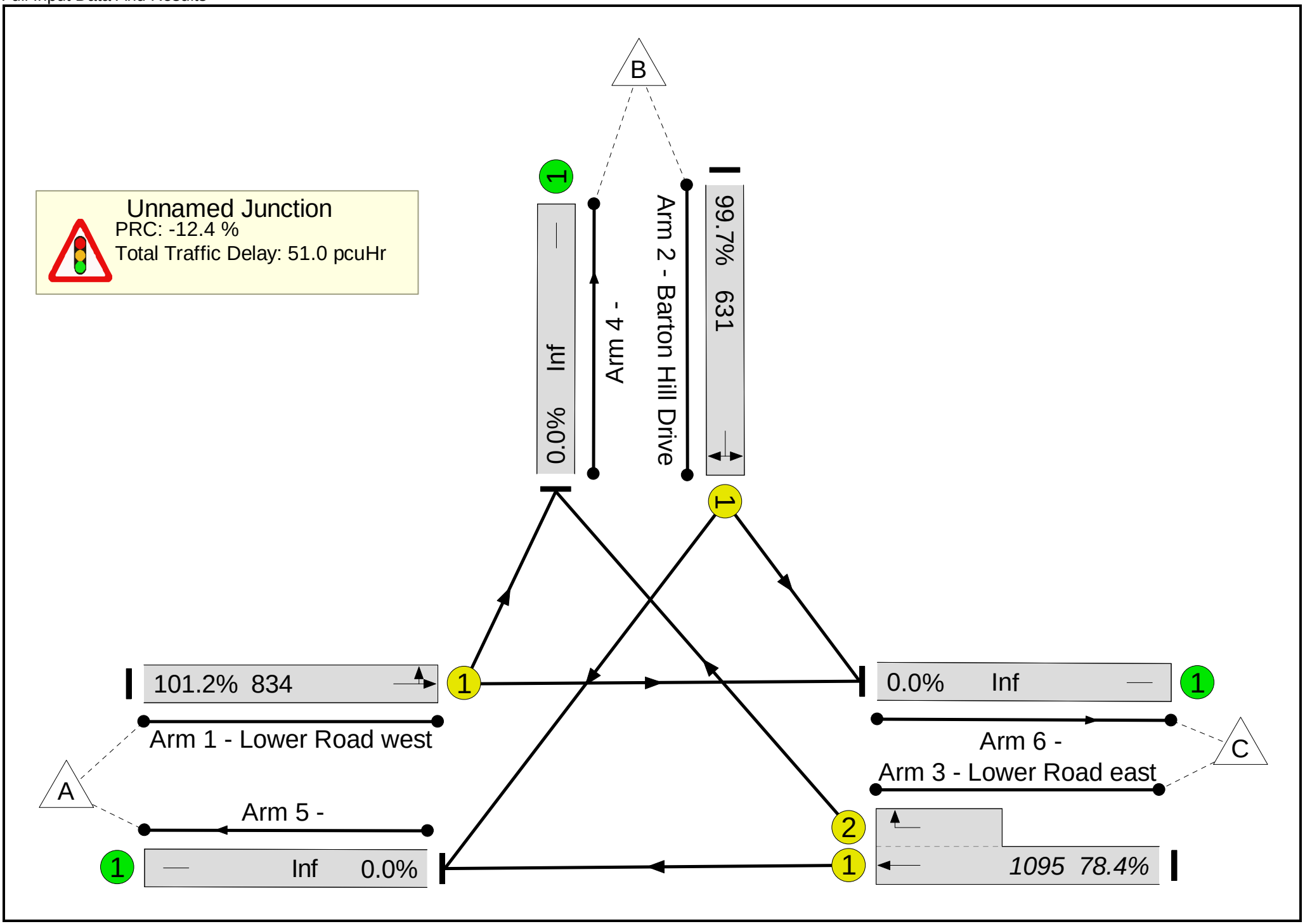
Stage	1	2	3
Duration	53	7	42
Change Point	0	59	73

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -12.4 %
Total Traffic Delay: 51.0 pcuHr
B
1
Inf
0.0%
Arm 4 -
Arm 2 - Barton Hill Drive
99.7% 631
1
101.2% 834
1
0.0% Inf
1
Arm 1 - Lower Road west
A
Arm 6 -
Arm 3 - Lower Road east
C
Arm 5 -
2
1
Inf 0.0%
1095 78.4%

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**101.2%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**101.2%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	53	-	844	1854	834	101.2%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	42	-	629	1761	631	99.7%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	67:7	-	858	1915:1881	1095	78.4%
4/1		U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1439	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	602	Inf	Inf	0.0%

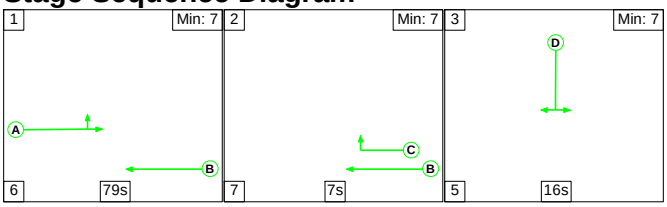
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**20.0**	**31.0**	**0.0**	**51.0**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**20.0**	**31.0**	**0.0**	**51.0**	**-**	**-**	**-**	**-**
1/1	844	834	-	-	-	8.3	17.2	-	25.4	108.5	28.5	17.2	45.6
2/1	629	629	-	-	-	6.7	12.0	-	18.8	107.4	20.8	12.0	32.8
3/1+3/2	858	858	-	-	-	5.0	1.8	-	6.8	28.4	22.0	1.8	23.8
4/1	287	287	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1439	1439	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	595	595	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -12.4 Total Delay for Signalled Lanes (pcuHr): 50.96 Cycle Time (s): 120
PRC Over All Lanes (%): -12.4 Total Delay Over All Lanes(pcuHr): 50.96

Full Input Data And Results

Scenario 16: '2022 PM Sensitivity' (FG16: '2022 PM Sensitivity', Plan 16: '2022 PM Sensitivity')

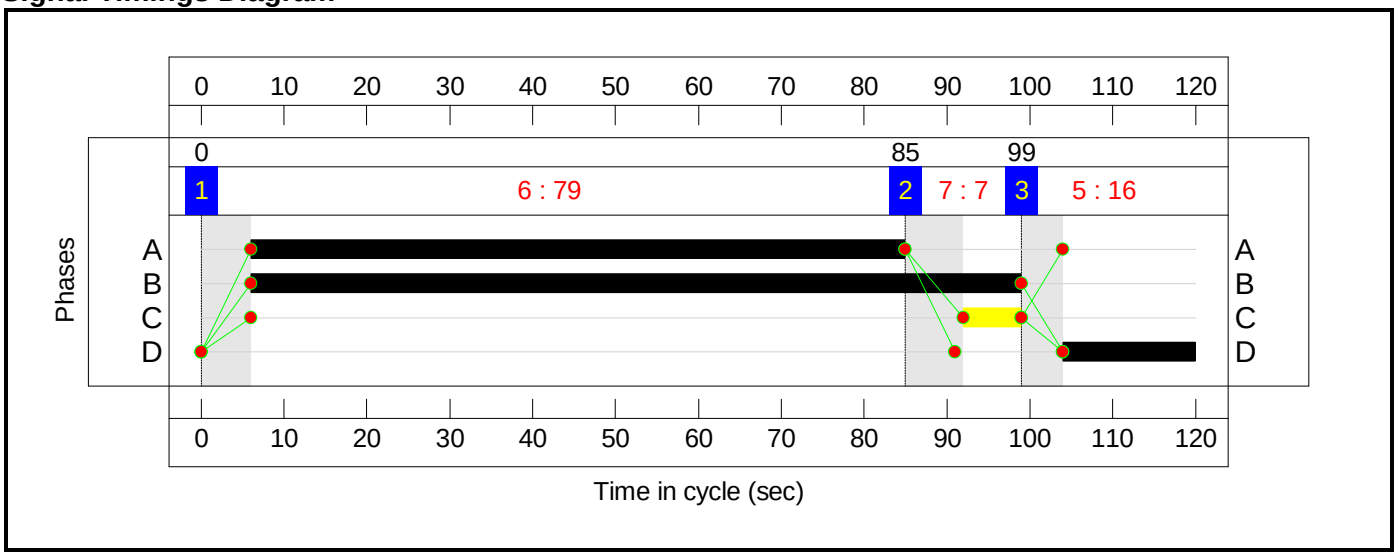
Stage Sequence Diagram



Stage Timings

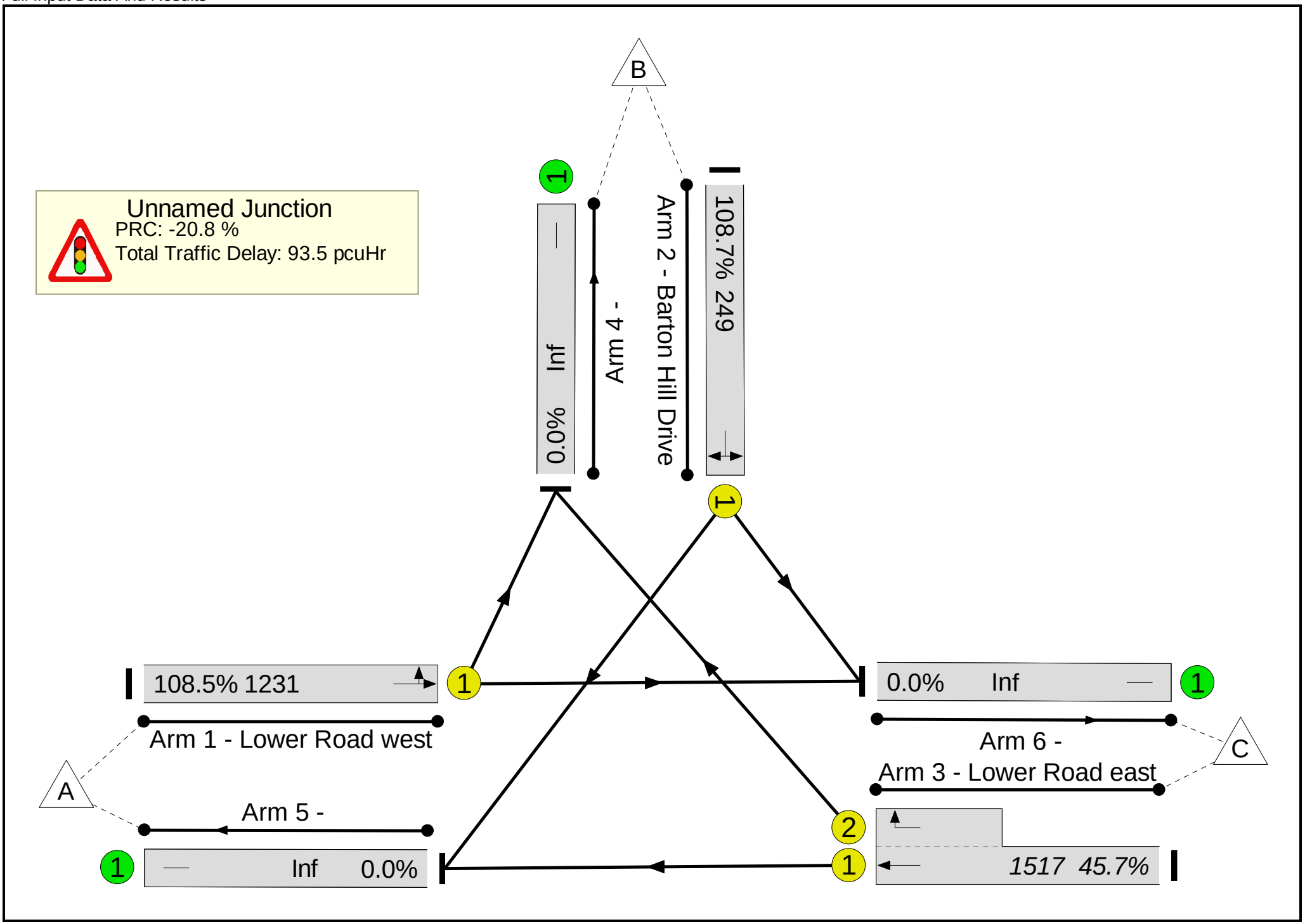
Stage	1	2	3
Duration	79	7	16
Change Point	0	85	99

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -20.8 %
Total Traffic Delay: 93.5 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
108.7% 249
1
108.5% 1231
1
0.0% Inf
1
Arm 1 - Lower Road west
Arm 6 -
Arm 3 - Lower Road east
A
C
Arm 5 -
2
1
Inf 0.0%
1
1517 45.7%

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.7%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.7%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1335	1846	1231	108.5%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	271	1760	249	108.7%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	693	1915:1881	1517	45.7%
4/1		U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	892	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.9**	**73.6**	**0.0**	**93.5**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**19.9**	**73.6**	**0.0**	**93.5**	**-**	**-**	**-**	**-**
1/1	1335	1231	-	-	-	13.0	57.9	-	70.9	191.3	48.0	57.9	105.9
2/1	271	249	-	-	-	5.4	15.3	-	20.6	274.0	10.3	15.3	25.5
3/1+3/2	693	693	-	-	-	1.6	0.4	-	2.0	10.3	6.9	0.4	7.3
4/1	497	497	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	804	804	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -20.8 Total Delay for Signalled Lanes (pcuHr): 93.53 Cycle Time (s): 120
PRC Over All Lanes (%): -20.8 Total Delay Over All Lanes(pcuHr): 93.53