

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	459.94	76.66	452.73	369.19	260.34	0.00	628.61	569.82	0.732	1.24	2.45	0.328	C
2	386.25	64.37	383.93	505.46	207.60	0.00	738.88	709.36	0.523	0.67	1.06	0.168	B
3	431.99	72.00	428.30	390.31	201.23	0.00	704.56	612.17	0.613	0.89	1.51	0.214	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	526.50	87.75	513.00	422.35	297.58	0.00	609.02	569.82	0.865	2.45	4.70	0.553	D
2	442.15	73.69	439.52	575.33	235.24	0.00	723.69	709.36	0.611	1.06	1.50	0.209	B
3	494.50	82.42	489.56	444.40	230.36	0.00	688.78	612.17	0.718	1.51	2.33	0.293	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	550.77	91.79	538.28	443.36	312.58	0.00	601.13	569.82	0.916	4.70	6.78	0.785	E
2	462.52	77.09	461.14	604.02	246.83	0.00	717.31	709.36	0.645	1.50	1.73	0.232	B
3	517.29	86.22	514.25	466.28	241.69	0.00	682.64	612.17	0.758	2.33	2.84	0.347	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	526.50	87.75	526.60	426.26	301.09	0.00	607.17	569.82	0.867	6.78	6.76	0.757	E
2	442.15	73.69	442.65	586.21	241.48	0.00	720.26	709.36	0.614	1.73	1.64	0.217	B
3	494.50	82.42	495.34	452.13	232.00	0.00	687.89	612.17	0.719	2.84	2.70	0.315	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	459.94	76.66	481.84	375.78	266.30	0.00	625.47	569.82	0.735	6.76	3.11	0.461	D
2	386.25	64.37	389.17	527.19	220.95	0.00	731.54	709.36	0.528	1.64	1.16	0.177	B
3	431.99	72.00	438.11	406.15	203.97	0.00	703.07	612.17	0.614	2.70	1.68	0.231	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	367.18	61.20	377.82	300.03	212.33	0.00	653.85	569.82	0.562	3.11	1.34	0.225	B
2	308.35	51.39	311.08	416.90	173.25	0.00	757.76	709.36	0.407	1.16	0.70	0.135	A
3	344.86	57.48	349.32	321.29	163.04	0.00	725.25	612.17	0.476	1.68	0.93	0.161	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	367.18	61.20	367.38	296.92	209.67	0.00	655.25	569.82	0.560	1.34	1.31	0.209	B
2	308.35	51.39	308.41	408.58	168.47	0.00	760.40	709.36	0.406	0.70	0.69	0.133	A
3	344.86	57.48	344.95	315.23	161.64	0.00	726.00	612.17	0.475	0.93	0.92	0.158	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	10.98	1.10	0.198	B	B
2	6.24	0.62	0.130	A	A
3	8.13	0.81	0.153	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	12.31	1.23	0.208	B	B
2	6.70	0.67	0.133	A	A
3	8.85	0.89	0.157	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	21.63	2.16	0.328	C	B
2	10.00	1.00	0.168	B	B
3	13.94	1.39	0.214	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	39.33	3.93	0.553	D	C
2	14.06	1.41	0.209	B	B
3	21.23	2.12	0.293	C	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	59.13	5.91	0.785	E	D
2	16.60	1.66	0.232	B	B
3	26.67	2.67	0.347	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	67.70	6.77	0.757	E	D
2	16.73	1.67	0.217	B	B
3	27.51	2.75	0.315	C	B

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

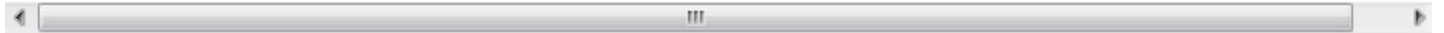
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	37.35	3.74	0.461	D	C
2	12.25	1.22	0.177	B	B
3	18.17	1.82	0.231	B	B

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	14.93	1.49	0.225	B	B
2	7.38	0.74	0.135	A	A
3	9.94	0.99	0.161	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	13.19	1.32	0.209	B	B
2	6.94	0.69	0.133	A	A
3	9.24	0.92	0.158	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 Base-LowerRoad_QueensboroughRoad_SheppeyWay.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORTMODEL USED TAs\London Modelling\Models\Arcady Models\Lower Rd_Queensb Rd_Sheppey W\2015 July TA - residential
Report generation date: 07/07/2015 12:13:15

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 2, PM

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	0.33	A				
Arm 4	0.17	0.06	0.15	A				
A1 - Scenario 2								
Arm 1					0.77	0.05	0.44	A
Arm 2					0.25	0.06	0.20	A
Arm 3					1.00	0.06	0.50	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 12:13:13

File summary

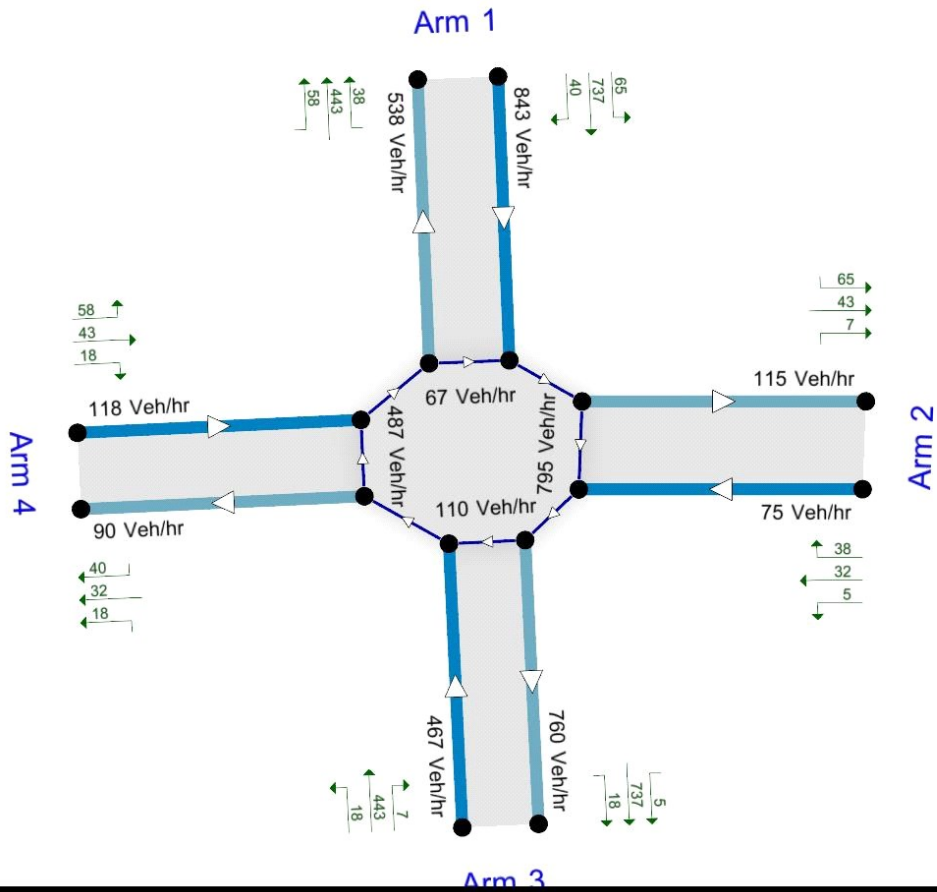
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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)	I' - 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	✓	1253.00	100.000
2	ONE HOUR	✓	111.00	100.000
3	ONE HOUR	✓	693.00	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	847.28	864.22		
07:45-07:55	2	75.06	80.81		
07:45-07:55	3	468.61	494.25		
07:45-07:55	4	119.01	131.44		
07:55-08:05	1	847.28	864.22		
07:55-08:05	2	75.06	80.81		
07:55-08:05	3	468.61	494.25		
07:55-08:05	4	119.01	131.44		
08:05-08:15	1	1061.34	1082.56		
08:05-08:15	2	94.02	101.22		
08:05-08:15	3	587.00	619.12		
08:05-08:15	4	149.08	164.65		
08:15-08:25	1	1214.93	1239.23		
08:15-08:25	2	107.63	115.87		
08:15-08:25	3	671.94	708.72		
08:15-08:25	4	170.65	188.47		
08:25-08:35	1	1270.91	1296.33		
08:25-08:35	2	112.59	121.21		
08:25-08:35	3	702.91	741.38		
08:25-08:35	4	178.52	197.16		
08:35-08:45	1	1214.93	1239.23		
08:35-08:45	2	107.63	115.87		
08:35-08:45	3	671.94	708.72		
08:35-08:45	4	170.65	188.47		
08:45-08:55	1	1061.34	1082.56		
08:45-08:55	2	94.02	101.22		
08:45-08:55	3	587.00	619.12		
08:45-08:55	4	149.08	164.65		
08:55-09:05	1	847.28	864.22		
08:55-09:05	2	75.06	80.81		
08:55-09:05	3	468.61	494.25		
08:55-09:05	4	119.01	131.44		
09:05-09:15	1	847.28	864.22		
09:05-09:15	2	75.06	80.81		
09:05-09:15	3	468.61	494.25		
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	1096.000	60.000
	2	56.000	0.000	7.000	48.000
	3	657.000	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	1023.62	1535.43	99.18	0.06	1.10	99.19	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	0.33	0.04	0.50	A	566.14	849.20	33.19	0.04	0.37	33.20	0.04
4	0.15	0.06	0.17	A	143.78	215.67	11.47	0.05	0.13	11.47	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	847.28	141.21	842.97	538.20	67.30	0.00	2017.39	1837.75	0.420	0.00	0.72	0.051	A
2	75.06	12.51	74.64	115.06	795.21	0.00	1148.02	632.27	0.065	0.00	0.07	0.056	A
3	468.61	78.10	466.93	759.55	110.30	0.00	2136.19	1765.80	0.219	0.00	0.28	0.036	A
4	119.01	19.84	118.43	90.16	487.06	0.00	1337.55	557.79	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	847.28	141.21	847.26	540.28	67.62	0.00	2017.15	1837.75	0.420	0.72	0.72	0.051	A
2	75.06	12.51	75.06	115.63	799.25	0.00	1145.93	632.27	0.066	0.07	0.07	0.056	A
3	468.61	78.10	468.60	763.41	110.89	0.00	2135.81	1765.80	0.219	0.28	0.28	0.036	A
4	119.01	19.84	119.01	90.61	488.89	0.00	1336.62	557.79	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	1061.34	176.89	1059.00	676.02	84.59	0.00	2004.60	1837.75	0.529	0.72	1.11	0.063	A
2	94.02	15.67	93.85	144.58	999.02	0.00	1042.24	632.27	0.090	0.07	0.10	0.063	A
3	587.00	97.83	586.39	954.22	138.64	0.00	2118.03	1765.80	0.277	0.28	0.38	0.039	A
4	149.08	24.85	148.87	113.29	611.74	0.00	1273.98	557.79	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	1214.93	202.49	1212.42	774.08	96.87	0.00	1995.52	1837.74	0.609	1.11	1.53	0.076	A
2	107.63	17.94	107.47	165.54	1143.74	0.00	967.11	632.28	0.111	0.10	0.12	0.070	A
3	671.95	111.99	671.44	1092.47	158.75	0.00	2105.15	1765.80	0.319	0.38	0.47	0.042	A
4	170.65	28.44	170.48	129.72	700.47	0.00	1228.75	557.79	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	1270.91	211.82	1269.72	810.17	101.39	0.00	1992.18	1837.75	0.638	1.53	1.73	0.083	A
2	112.59	18.76	112.52	173.33	1197.79	0.00	939.07	632.27	0.120	0.12	0.14	0.073	A
3	702.91	117.15	702.71	1144.07	166.23	0.00	2100.36	1765.80	0.335	0.47	0.50	0.043	A
4	178.52	29.75	178.45	135.82	733.11	0.00	1212.10	557.79	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	1214.93	202.49	1215.80	774.94	96.99	0.00	1995.43	1837.74	0.609	1.73	1.58	0.077	A
2	107.63	17.94	107.68	165.89	1146.89	0.00	965.48	632.28	0.111	0.14	0.13	0.070	A
3	671.95	111.99	672.12	1095.47	159.11	0.00	2104.92	1765.80	0.319	0.50	0.47	0.042	A
4	170.65	28.44	170.71	130.00	701.23	0.00	1228.36	557.79	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	1061.34	176.89	1063.99	677.44	84.80	0.00	2004.45	1837.75	0.529	1.58	1.14	0.064	A
2	94.02	15.67	94.18	145.12	1003.67	0.00	1039.82	632.27	0.090	0.13	0.10	0.063	A
3	587.00	97.83	587.51	958.67	139.19	0.00	2117.68	1765.80	0.277	0.47	0.39	0.039	A
4	149.08	24.85	149.25	113.72	612.99	0.00	1273.35	557.79	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	847.28	141.21	849.73	541.06	67.74	0.00	2017.06	1837.75	0.420	1.14	0.73	0.052	A
2	75.06	12.51	75.23	115.91	801.57	0.00	1144.73	632.27	0.066	0.10	0.07	0.056	A
3	468.61	78.10	469.23	765.62	111.18	0.00	2135.63	1765.80	0.219	0.39	0.28	0.036	A
4	119.01	19.84	119.22	90.83	489.58	0.00	1336.27	557.79	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	847.28	141.21	847.30	540.29	67.62	0.00	2017.15	1837.75	0.420	0.73	0.73	0.051	A
2	75.06	12.51	75.06	115.63	799.28	0.00	1145.91	632.27	0.066	0.07	0.07	0.056	A
3	468.61	78.10	468.61	763.45	110.90	0.00	2135.81	1765.80	0.219	0.28	0.28	0.036	A
4	119.01	19.84	119.01	90.61	488.90	0.00	1336.62	557.79	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	6.95	0.70	0.051	A	A
2	0.68	0.07	0.056	A	A
3	2.74	0.27	0.036	A	A
4	0.95	0.09	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	7.20	0.72	0.051	A	A
2	0.70	0.07	0.056	A	A
3	2.80	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	10.75	1.08	0.063	A	A
2	0.97	0.10	0.063	A	A
3	3.75	0.38	0.039	A	A
4	1.29	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	14.73	1.47	0.076	A	A
2	1.22	0.12	0.070	A	A
3	4.59	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	16.85	1.68	0.083	A	A
2	1.33	0.13	0.073	A	A
3	4.95	0.49	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	16.14	1.61	0.077	A	A
2	1.28	0.13	0.070	A	A
3	4.76	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	11.77	1.18	0.064	A	A
2	1.02	0.10	0.063	A	A
3	3.91	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	7.51	0.75	0.052	A	A
2	0.72	0.07	0.056	A	A
3	2.87	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	7.29	0.73	0.051	A	A
2	0.70	0.07	0.056	A	A
3	2.82	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)	I' - 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	✓	866.00	100.000
2	ONE HOUR	✓	236.00	100.000
3	ONE HOUR	✓	1039.00	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	585.59	599.76		
16:45-16:55	2	159.58	163.38		
16:45-16:55	3	702.57	709.95		
16:45-16:55	4	87.23	91.42		
16:55-17:05	1	585.59	599.76		
16:55-17:05	2	159.58	163.38		
16:55-17:05	3	702.57	709.95		
16:55-17:05	4	87.23	91.42		
17:05-17:15	1	733.53	751.29		
17:05-17:15	2	199.90	204.65		
17:05-17:15	3	880.07	889.31		
17:05-17:15	4	109.27	114.51		
17:15-17:25	1	839.69	860.01		
17:15-17:25	2	228.83	234.27		
17:15-17:25	3	1007.43	1018.01		
17:15-17:25	4	125.08	131.08		
17:25-17:35	1	878.38	899.64		
17:25-17:35	2	239.37	245.06		
17:25-17:35	3	1053.86	1064.92		
17:25-17:35	4	130.84	137.12		
17:35-17:45	1	839.69	860.01		
17:35-17:45	2	228.83	234.27		
17:35-17:45	3	1007.43	1018.01		
17:35-17:45	4	125.08	131.08		
17:45-17:55	1	733.53	751.29		
17:45-17:55	2	199.90	204.65		
17:45-17:55	3	880.07	889.31		
17:45-17:55	4	109.27	114.51		
17:55-18:05	1	585.59	599.76		
17:55-18:05	2	159.58	163.38		
17:55-18:05	3	702.57	709.95		
17:55-18:05	4	87.23	91.42		
18:05-18:15	1	585.59	599.76		
18:05-18:15	2	159.58	163.38		
18:05-18:15	3	702.57	709.95		
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	725.000	91.000
	2	139.000	0.000	17.000	80.000
	3	1001.000	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	0.11
	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	0.44	0.05	0.77	A	707.47	1061.20	49.34	0.05	0.55	49.35	0.05
2	0.20	0.06	0.25	A	192.80	289.19	16.40	0.06	0.18	16.40	0.06
3	0.50	0.06	1.00	A	848.79	1273.19	61.33	0.05	0.68	61.33	0.05
4	0.12	0.06	0.14	A	105.38	158.08	8.93	0.06	0.10	8.93	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	585.59	97.60	583.17	814.06	45.76	0.00	2029.87	1878.85	0.288	0.00	0.40	0.041	A
2	159.58	26.60	158.77	66.64	562.28	0.00	1334.92	630.46	0.120	0.00	0.13	0.051	A
3	702.57	117.10	699.71	512.44	208.62	0.00	2166.69	1791.28	0.324	0.00	0.48	0.041	A
4	87.23	14.54	86.79	135.31	773.02	0.00	1272.82	583.13	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	585.59	97.60	585.58	817.51	45.98	0.00	2029.73	1878.85	0.289	0.40	0.40	0.042	A
2	159.58	26.60	159.58	66.94	564.62	0.00	1333.65	630.46	0.120	0.13	0.14	0.051	A
3	702.57	117.10	702.56	514.58	209.62	0.00	2166.04	1791.28	0.324	0.48	0.48	0.041	A
4	87.23	14.54	87.23	135.91	776.26	0.00	1271.14	583.13	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	733.54	122.26	732.57	1022.53	57.51	0.00	2022.48	1878.85	0.363	0.40	0.57	0.047	A
2	199.90	33.32	199.59	83.74	706.34	0.00	1256.43	630.46	0.159	0.14	0.19	0.057	A
3	880.07	146.68	878.76	643.74	262.19	0.00	2131.57	1791.28	0.413	0.48	0.70	0.048	A
4	109.27	18.21	109.10	170.01	970.94	0.00	1170.79	583.13	0.093	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	839.69	139.95	838.84	1170.81	65.85	0.00	2017.22	1878.85	0.416	0.57	0.71	0.051	A
2	228.83	38.14	228.55	95.88	808.81	0.00	1200.60	630.47	0.191	0.19	0.23	0.062	A
3	1007.43	167.91	1006.17	737.12	300.24	0.00	2106.63	1791.28	0.478	0.70	0.91	0.054	A
4	125.08	20.85	124.93	194.67	1111.74	0.00	1098.21	583.13	0.114	0.10	0.13	0.062	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	878.38	146.40	878.03	1225.66	68.94	0.00	2015.28	1878.85	0.436	0.71	0.77	0.053	A
2	239.37	39.90	239.26	100.37	846.60	0.00	1180.01	630.46	0.203	0.23	0.25	0.064	A
3	1053.86	175.64	1053.30	771.57	314.29	0.00	2097.42	1791.28	0.502	0.91	1.00	0.057	A
4	130.84	21.81	130.78	203.78	1163.81	0.00	1071.36	583.13	0.122	0.13	0.14	0.064	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	839.69	139.95	839.97	1172.78	65.96	0.00	2017.15	1878.85	0.416	0.77	0.72	0.051	A
2	228.83	38.14	228.92	96.03	809.91	0.00	1200.00	630.47	0.191	0.25	0.24	0.062	A
3	1007.43	167.91	1007.88	738.13	300.70	0.00	2106.33	1791.28	0.478	1.00	0.93	0.055	A
4	125.08	20.85	125.13	194.97	1113.60	0.00	1097.24	583.13	0.114	0.14	0.13	0.062	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	733.54	122.26	734.41	1025.57	57.68	0.00	2022.37	1878.85	0.363	0.72	0.57	0.047	A
2	199.90	33.32	200.18	83.97	708.12	0.00	1255.46	630.46	0.159	0.24	0.19	0.057	A
3	880.07	146.68	881.37	645.37	262.93	0.00	2131.09	1791.28	0.413	0.93	0.71	0.048	A
4	109.27	18.21	109.42	170.48	973.82	0.00	1169.30	583.13	0.093	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	585.59	97.60	586.58	819.12	46.07	0.00	2029.67	1878.85	0.289	0.57	0.41	0.042	A
2	159.58	26.60	159.91	67.07	565.59	0.00	1333.12	630.46	0.120	0.19	0.14	0.051	A
3	702.57	117.10	703.93	515.47	210.02	0.00	2165.77	1791.28	0.324	0.71	0.48	0.041	A
4	87.23	14.54	87.41	136.17	777.78	0.00	1270.36	583.13	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	585.59	97.60	585.60	817.54	45.98	0.00	2029.73	1878.85	0.289	0.41	0.41	0.042	A
2	159.58	26.60	159.59	66.94	564.63	0.00	1333.64	630.46	0.120	0.14	0.14	0.051	A
3	702.57	117.10	702.58	514.60	209.62	0.00	2166.03	1791.28	0.324	0.48	0.48	0.041	A
4	87.23	14.54	87.23	135.92	776.29	0.00	1271.13	583.13	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	3.94	0.39	0.041	A	A
2	1.32	0.13	0.051	A	A
3	4.65	0.47	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	4.04	0.40	0.042	A	A
2	1.35	0.14	0.051	A	A
3	4.78	0.48	0.041	A	A
4	0.73	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	5.54	0.55	0.047	A	A
2	1.84	0.18	0.057	A	A
3	6.82	0.68	0.048	A	A
4	1.00	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	6.93	0.69	0.051	A	A
2	2.30	0.23	0.062	A	A
3	8.86	0.89	0.054	A	A
4	1.25	0.13	0.062	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	7.56	0.76	0.053	A	A
2	2.50	0.25	0.064	A	A
3	9.83	0.98	0.057	A	A
4	1.37	0.14	0.064	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	7.27	0.73	0.051	A	A
2	2.40	0.24	0.062	A	A
3	9.38	0.94	0.055	A	A
4	1.31	0.13	0.062	A	A

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

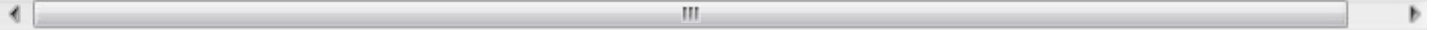
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.84	0.58	0.047	A	A
2	1.94	0.19	0.057	A	A
3	7.25	0.72	0.048	A	A
4	1.05	0.11	0.057	A	A

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	4.16	0.42	0.042	A	A
2	1.39	0.14	0.051	A	A
3	4.93	0.49	0.041	A	A
4	0.75	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	4.07	0.41	0.042	A	A
2	1.36	0.14	0.051	A	A
3	4.82	0.48	0.041	A	A
4	0.74	0.07	0.051	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 Base-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

Report generation date: 12/06/2015 12:03:07

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 1, PM

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	1.15	0.08	0.54	A
Arm 2	0.67	0.08	0.41	A	0.17	0.06	0.14	A
Arm 3	0.85	0.09	0.46	A	0.92	0.08	0.48	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 12:03:05

File summary

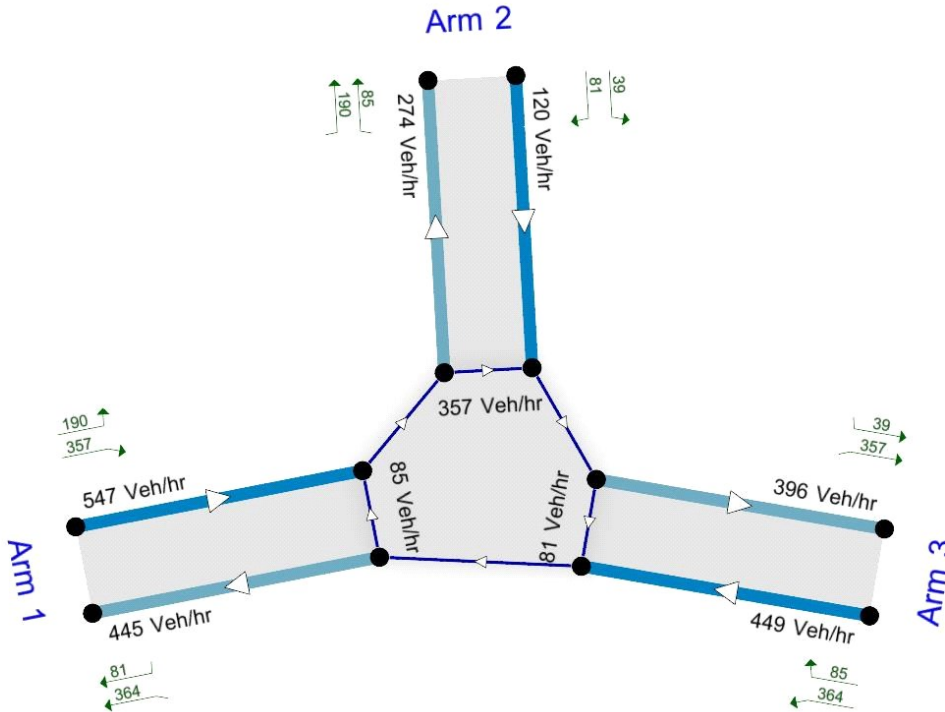
Title	Lower Road / Thistle Hill Way
Location	Minster on Sea
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	26677
Enumerator	PBA\rspiller
Description	

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)	I' - 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	✓	516.00	100.000
3	ONE HOUR	✓	550.00	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	348.92	353.08		
07:45-07:55	3	371.91	392.42		
07:55-08:05	1	383.40	403.26		
07:55-08:05	2	348.92	353.08		
07:55-08:05	3	371.91	392.42		
08:05-08:15	1	480.27	505.14		
08:05-08:15	2	437.07	442.28		
08:05-08:15	3	465.87	491.57		
08:15-08:25	1	549.77	578.24		
08:15-08:25	2	500.32	506.28		
08:15-08:25	3	533.29	562.71		
08:25-08:35	1	575.11	604.89		
08:25-08:35	2	523.38	529.62		
08:25-08:35	3	557.86	588.64		
08:35-08:45	1	549.77	578.24		
08:35-08:45	2	500.32	506.28		
08:35-08:45	3	533.29	562.71		
08:45-08:55	1	480.27	505.14		
08:45-08:55	2	437.07	442.28		
08:45-08:55	3	465.87	491.57		
08:55-09:05	1	383.40	403.26		
08:55-09:05	2	348.92	353.08		
08:55-09:05	3	371.91	392.42		
09:05-09:15	1	383.40	403.26		
09:05-09:15	2	348.92	353.08		
09:05-09:15	3	371.91	392.42		

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	164.000
	3	479.000	71.000	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	1.090	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	9.0	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	39.64	0.06	0.44	39.64	0.06
2	0.41	0.08	0.67	A	421.54	632.31	41.93	0.07	0.47	41.94	0.07
3	0.46	0.09	0.85	A	449.31	673.97	52.37	0.08	0.58	52.38	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	381.43	558.44	48.37	0.00	1537.35	1470.94	0.249	0.00	0.33	0.052	A
2	348.92	58.15	346.94	119.67	310.12	0.00	1399.32	783.87	0.249	0.00	0.33	0.057	A
3	371.91	61.99	369.47	419.71	237.34	0.00	1277.97	1092.06	0.291	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	48.68	0.00	1537.12	1470.94	0.249	0.33	0.33	0.052	A
2	348.92	58.15	348.91	120.36	311.72	0.00	1398.20	783.87	0.250	0.33	0.33	0.057	A
3	371.91	61.99	371.90	421.94	238.69	0.00	1277.14	1092.06	0.291	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	702.32	60.84	0.00	1528.51	1470.94	0.314	0.33	0.45	0.057	A
2	437.07	72.85	436.19	150.49	389.88	0.00	1343.90	783.87	0.325	0.33	0.48	0.066	A
3	465.87	77.65	464.76	527.67	298.40	0.00	1240.13	1092.06	0.376	0.41	0.59	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	804.26	69.67	0.00	1522.25	1470.94	0.361	0.45	0.56	0.062	A
2	500.32	83.39	499.50	172.33	446.48	0.00	1304.58	783.87	0.384	0.48	0.61	0.074	A
3	533.29	88.88	532.22	604.26	341.71	0.00	1213.29	1092.06	0.440	0.59	0.77	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	842.23	72.97	0.00	1519.92	1470.94	0.378	0.56	0.60	0.063	A
2	523.38	87.23	523.02	180.44	467.38	0.00	1290.05	783.87	0.406	0.61	0.67	0.078	A
3	557.87	92.98	557.39	632.60	357.80	0.00	1203.32	1092.06	0.464	0.77	0.85	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	69.86	0.00	1522.12	1470.94	0.361	0.60	0.57	0.062	A
2	500.32	83.39	500.60	172.67	447.15	0.00	1304.11	783.87	0.384	0.67	0.63	0.075	A
3	533.29	88.88	533.63	605.29	342.46	0.00	1212.82	1092.06	0.440	0.85	0.80	0.088	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	705.44	61.13	0.00	1528.30	1470.94	0.314	0.57	0.46	0.057	A
2	437.07	72.85	437.92	151.04	391.01	0.00	1343.11	783.87	0.325	0.63	0.49	0.066	A
3	465.87	77.65	466.99	529.35	299.59	0.00	1239.40	1092.06	0.376	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	563.56	48.84	0.00	1537.01	1470.94	0.249	0.46	0.33	0.052	A
2	348.92	58.15	349.83	120.66	312.35	0.00	1397.77	783.87	0.250	0.49	0.34	0.057	A
3	371.91	61.99	373.08	422.86	239.32	0.00	1276.75	1092.06	0.291	0.61	0.41	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	48.69	0.00	1537.12	1470.94	0.249	0.33	0.33	0.052	A
2	348.92	58.15	348.93	120.37	311.73	0.00	1398.19	783.87	0.250	0.34	0.33	0.057	A
3	371.91	61.99	371.92	421.95	238.70	0.00	1277.13	1092.06	0.291	0.41	0.41	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	3.20	0.32	0.057	A	A
3	3.93	0.39	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	3.31	0.33	0.057	A	A
3	4.08	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	0.44	0.057	A	A
2	4.66	0.47	0.066	A	A
3	5.77	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	5.49	0.55	0.062	A	A
2	6.00	0.60	0.074	A	A
3	7.50	0.75	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	5.95	0.60	0.063	A	A
2	6.63	0.66	0.078	A	A
3	8.35	0.83	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	5.77	0.58	0.062	A	A
2	6.38	0.64	0.075	A	A
3	8.08	0.81	0.088	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	4.71	0.47	0.057	A	A
2	4.99	0.50	0.066	A	A
3	6.27	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	3.43	0.34	0.057	A	A
3	4.26	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	3.34	0.33	0.057	A	A
3	4.14	0.41	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)	I' - 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	✓	178.00	100.000
3	ONE HOUR	✓	668.00	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	120.36	121.99		
16:45-16:55	3	451.70	459.03		
16:55-17:05	1	549.75	562.43		
16:55-17:05	2	120.36	121.99		
16:55-17:05	3	451.70	459.03		
17:05-17:15	1	688.64	704.52		
17:05-17:15	2	150.77	152.81		
17:05-17:15	3	565.82	575.00		
17:15-17:25	1	788.30	806.48		
17:15-17:25	2	172.59	174.92		
17:15-17:25	3	647.70	658.21		
17:25-17:35	1	824.62	843.64		
17:25-17:35	2	180.54	182.98		
17:25-17:35	3	677.55	688.55		
17:35-17:45	1	788.30	806.48		
17:35-17:45	2	172.59	174.92		
17:35-17:45	3	647.70	658.21		
17:45-17:55	1	688.64	704.52		
17:45-17:55	2	150.77	152.81		
17:45-17:55	3	565.82	575.00		
17:55-18:05	1	549.75	562.43		
17:55-18:05	2	120.36	121.99		
17:55-18:05	3	451.70	459.03		
18:05-18:15	1	549.75	562.43		
18:05-18:15	2	120.36	121.99		
18:05-18:15	3	451.70	459.03		

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	58.000
	3	542.000	126.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.35	0.65
	2	0.67	0.00	0.33
	3	0.81	0.19	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	0.08	1.15	A	664.17	996.25	70.03	0.07	0.78	70.04	0.07
2	0.14	0.06	0.17	A	145.41	218.12	11.29	0.05	0.13	11.29	0.05
3	0.48	0.08	0.92	A	545.71	818.56	57.91	0.07	0.64	57.92	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	546.51	445.02	84.68	0.00	1559.80	1483.26	0.352	0.00	0.54	0.059	A
2	120.36	20.06	119.79	274.25	356.95	0.00	1369.37	952.99	0.088	0.00	0.10	0.048	A
3	451.70	75.28	448.95	395.98	80.76	0.00	1427.32	1063.28	0.316	0.00	0.46	0.061	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	549.74	447.63	85.20	0.00	1559.45	1483.26	0.353	0.54	0.54	0.059	A
2	120.36	20.06	120.36	275.88	359.05	0.00	1367.94	952.99	0.088	0.10	0.10	0.048	A
3	451.70	75.28	451.69	398.27	81.14	0.00	1427.07	1063.28	0.317	0.46	0.46	0.061	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	687.13	559.64	106.50	0.00	1545.38	1483.25	0.446	0.54	0.79	0.070	A
2	150.77	25.13	150.57	344.84	448.79	0.00	1306.86	952.99	0.115	0.10	0.13	0.052	A
3	565.82	94.30	564.63	497.85	101.51	0.00	1413.87	1063.28	0.400	0.46	0.66	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	786.83	640.87	121.96	0.00	1535.17	1483.25	0.513	0.79	1.04	0.080	A
2	172.59	28.77	172.43	394.88	513.91	0.00	1262.55	952.99	0.137	0.13	0.16	0.055	A
3	647.70	107.95	646.59	570.09	116.24	0.00	1404.32	1063.28	0.461	0.66	0.84	0.079	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	823.97	671.03	127.71	0.00	1531.37	1483.25	0.538	1.04	1.15	0.085	A
2	180.55	30.09	180.48	413.52	538.16	0.00	1246.04	952.99	0.145	0.16	0.17	0.056	A
3	677.55	112.92	677.07	596.97	121.67	0.00	1400.81	1063.28	0.484	0.84	0.92	0.083	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	788.77	642.20	122.24	0.00	1534.99	1483.25	0.514	1.15	1.07	0.080	A
2	172.59	28.77	172.65	395.83	515.17	0.00	1261.69	952.99	0.137	0.17	0.16	0.055	A
3	647.70	107.95	648.04	571.43	116.39	0.00	1404.23	1063.28	0.461	0.92	0.87	0.079	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	690.18	561.79	106.94	0.00	1545.09	1483.25	0.446	1.07	0.81	0.070	A
2	150.77	25.13	150.94	346.34	450.78	0.00	1305.51	952.99	0.115	0.16	0.13	0.052	A
3	565.82	94.30	566.97	499.96	101.76	0.00	1413.71	1063.28	0.400	0.87	0.67	0.071	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	551.34	448.79	85.44	0.00	1559.30	1483.26	0.353	0.81	0.55	0.060	A
2	120.36	20.06	120.57	276.67	360.10	0.00	1367.22	952.99	0.088	0.13	0.10	0.048	A
3	451.70	75.28	452.95	399.38	81.28	0.00	1426.98	1063.28	0.317	0.67	0.47	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	85.20	0.00	1559.45	1483.26	0.353	0.55	0.55	0.059	A
2	120.36	20.06	120.37	275.90	359.07	0.00	1367.92	952.99	0.088	0.10	0.10	0.048	A
3	451.70	75.28	451.71	398.29	81.14	0.00	1427.07	1063.28	0.317	0.47	0.47	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	5.22	0.52	0.059	A	A
2	0.94	0.09	0.048	A	A
3	4.44	0.44	0.061	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	5.41	0.54	0.059	A	A
2	0.96	0.10	0.048	A	A
3	4.60	0.46	0.061	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	7.71	0.77	0.070	A	A
2	1.27	0.13	0.052	A	A
3	6.41	0.64	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	10.07	1.01	0.080	A	A
2	1.55	0.15	0.055	A	A
3	8.21	0.82	0.079	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	11.25	1.13	0.085	A	A
2	1.67	0.17	0.056	A	A
3	9.07	0.91	0.083	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	10.88	1.09	0.080	A	A
2	1.61	0.16	0.055	A	A
3	8.79	0.88	0.079	A	A

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

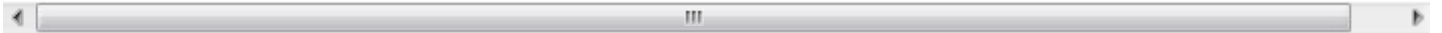
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.37	0.84	0.070	A	A
2	1.33	0.13	0.052	A	A
3	6.93	0.69	0.071	A	A

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	5.64	0.56	0.060	A	A
2	0.99	0.10	0.048	A	A
3	4.79	0.48	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	5.48	0.55	0.059	A	A
2	0.97	0.10	0.048	A	A
3	4.66	0.47	0.062	A	A

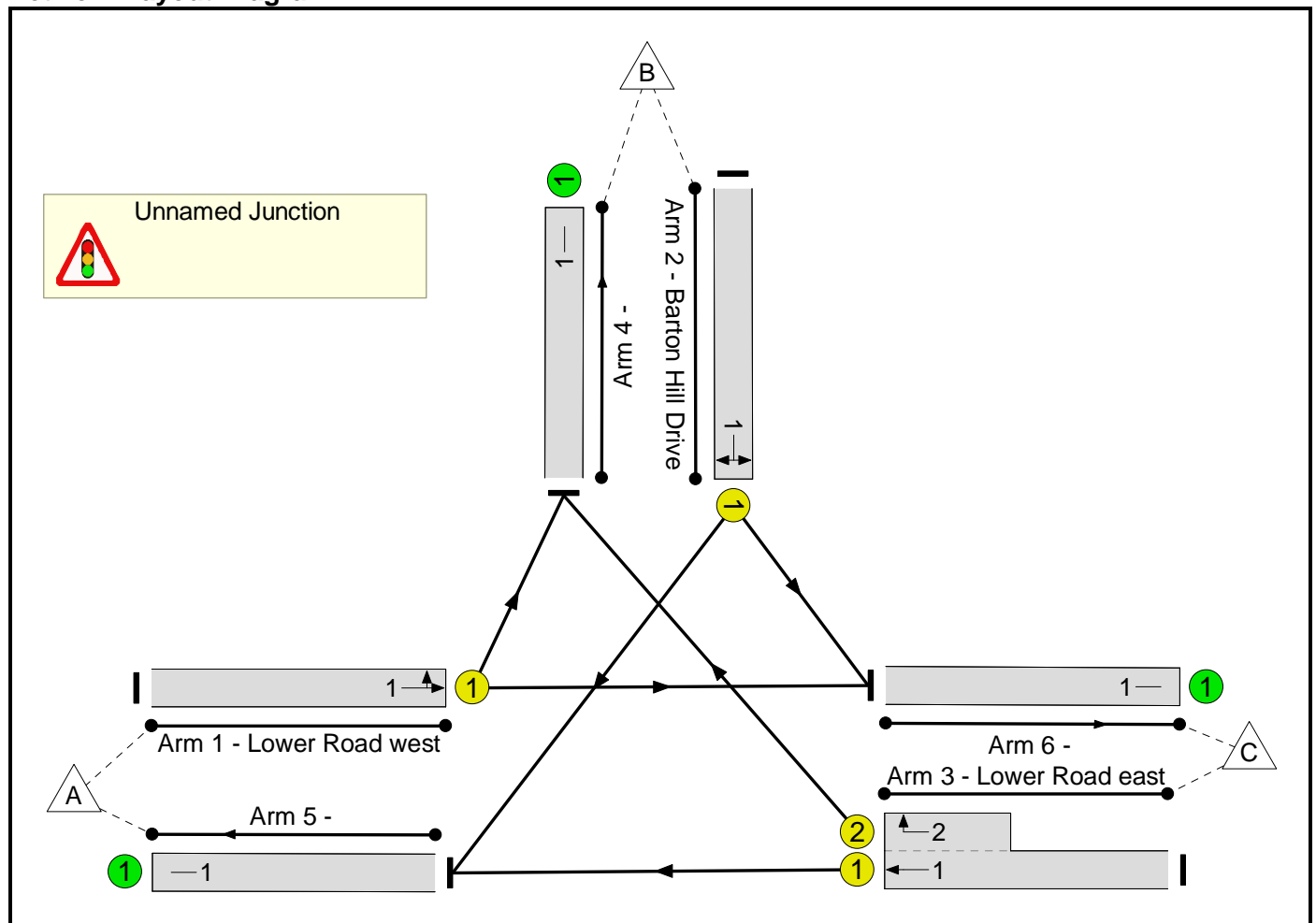


Full Input Data And Results
Full Input Data And Results

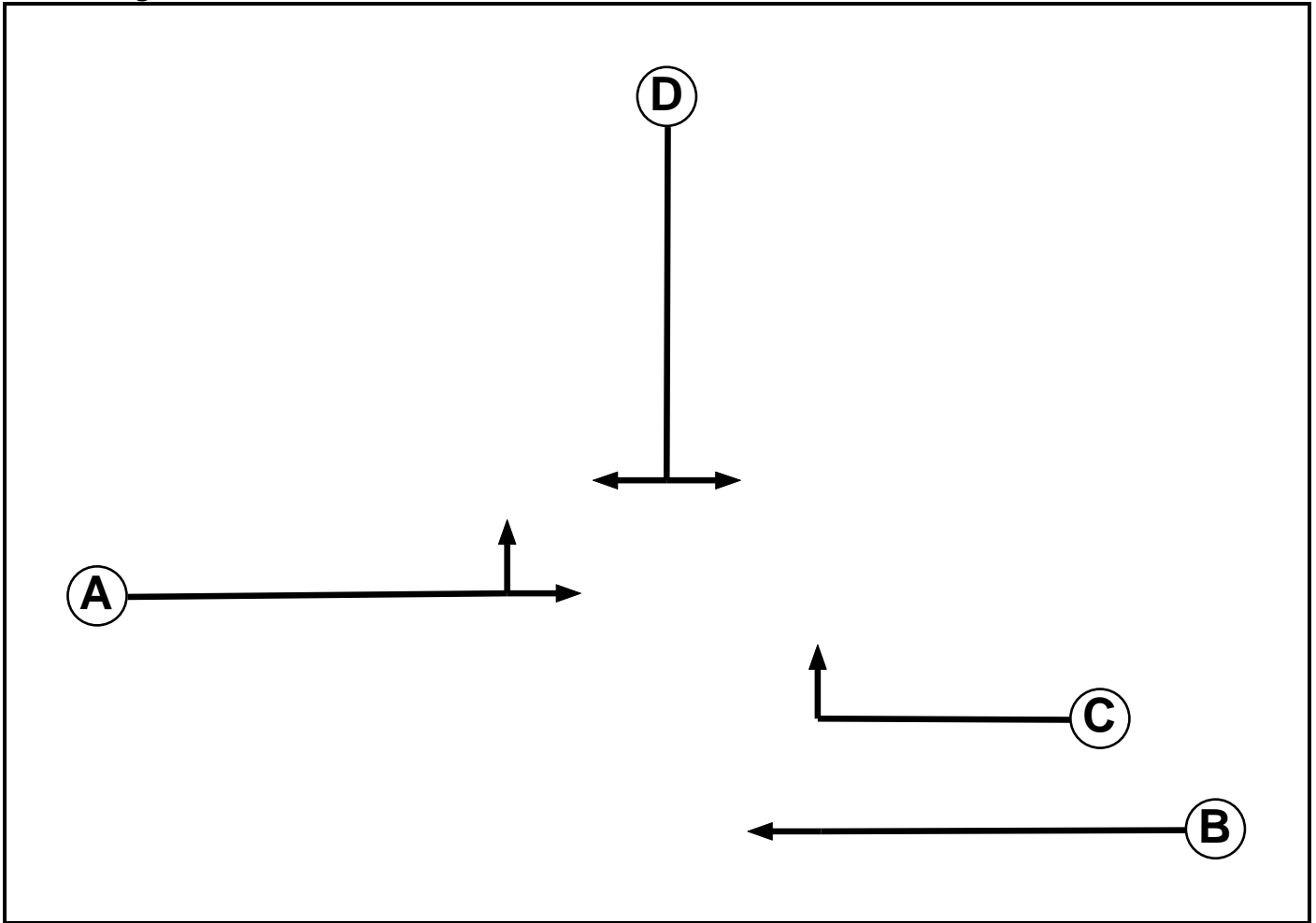
Project and User Details

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

Network Layout Diagram



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

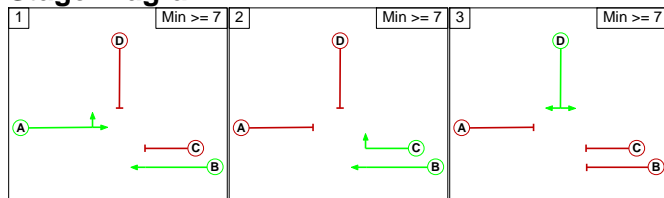
Phase Intergrens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	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

		To Stage		
		1	2	3
From Stage	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
3: '2017 Base AM'	08:00	09:00	01:00	
4: '2017 Base PM'	17:00	18:00	01:00	

Traffic Flows, Desired

FG3: '2017 Base AM'

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	252	542	794
	B	566	0	26	592
	C	792	20	0	812
	Tot.	1358	272	568	2198

FG4: '2017 Base PM'

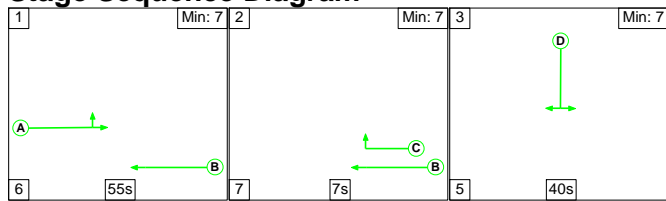
Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	446	805	1251
	B	232	0	17	249
	C	601	52	0	653
	Tot.	833	498	822	2153

Full Input Data And Results

Scenario 3: '2017 Base AM' (FG3: '2017 Base AM', Plan 3: '2017 Base AM')

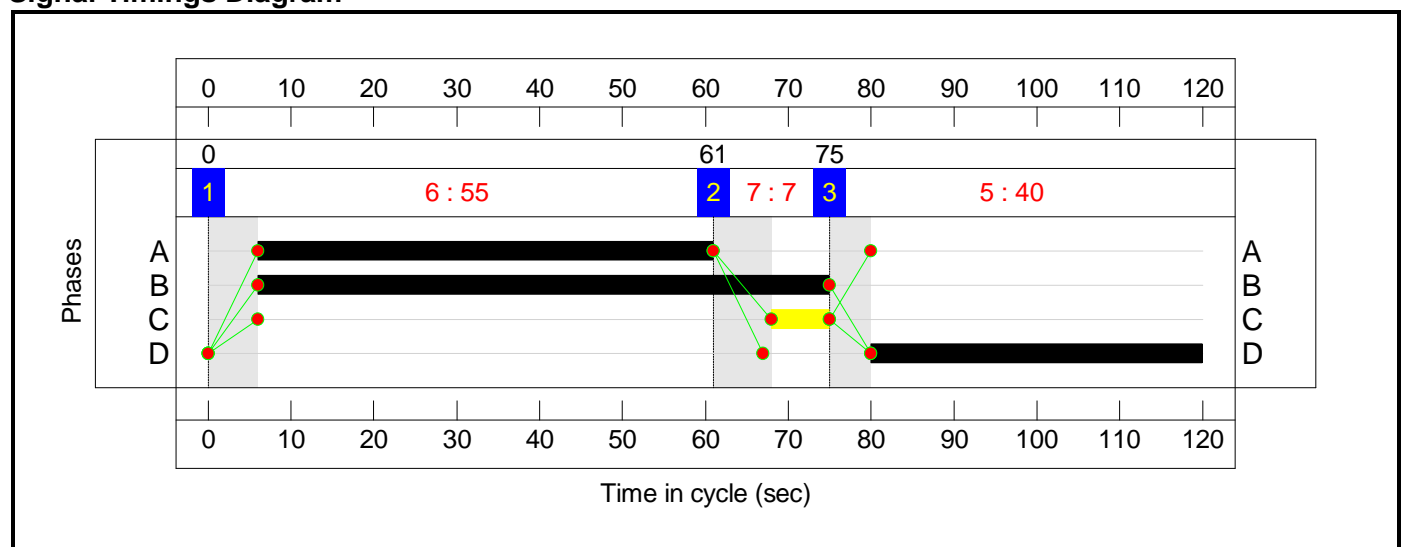
Stage Sequence Diagram



Stage Timings


Stage	1	2	3
Duration	55	7	40
Change Point	0	61	75

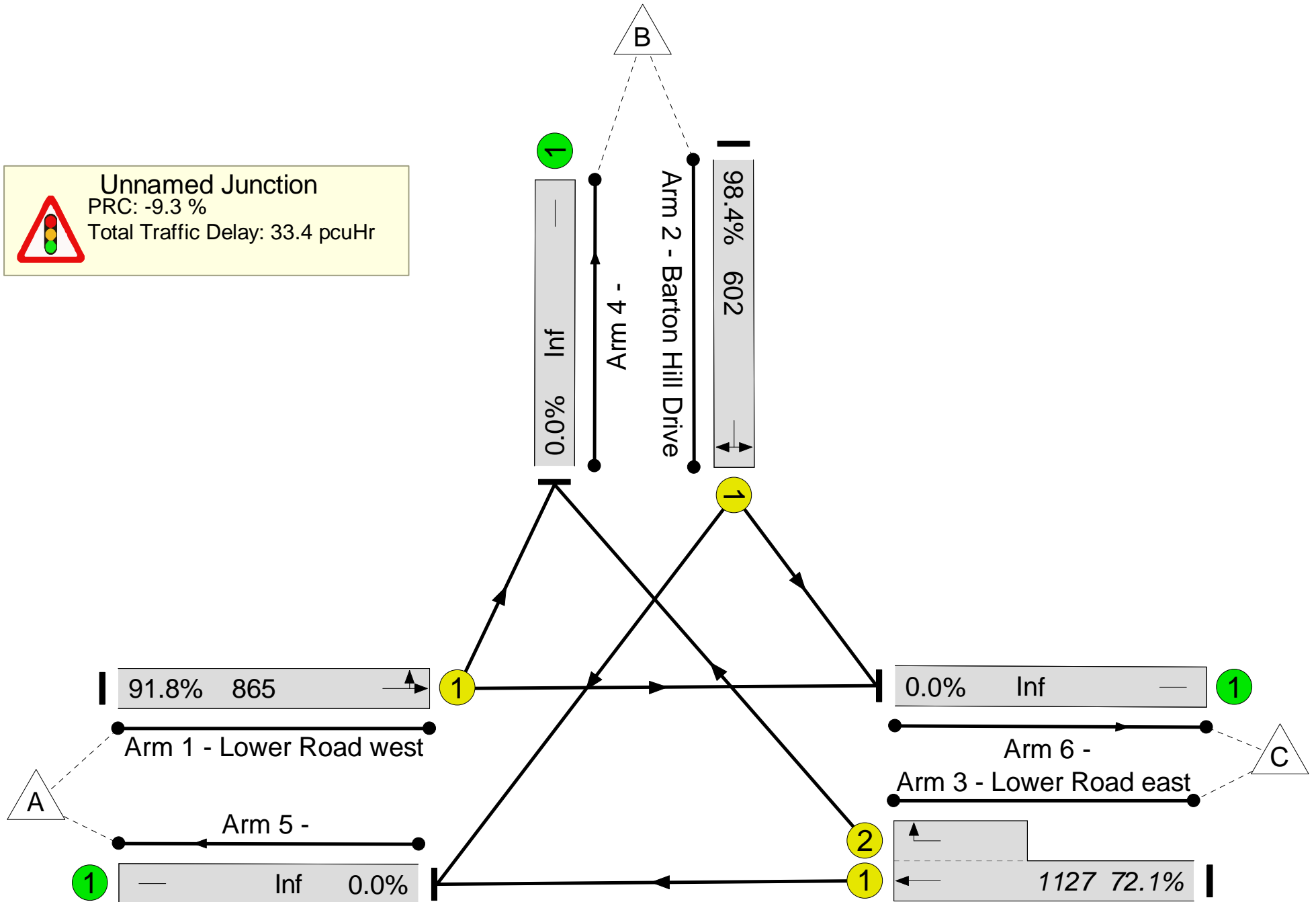
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: -9.3 %
 Total Traffic Delay: 33.4 pcuHr



Full Input Data And Results

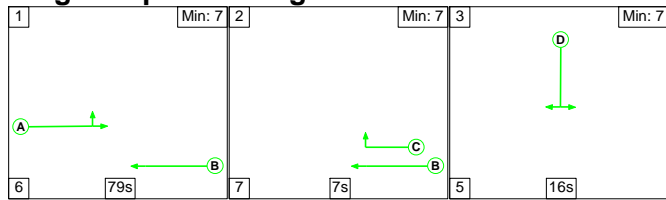
Network Results

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	-	-		-	-	-	-	-	-	98.4%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	98.4%
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	55	-	794	1854	865	91.8%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	40	-	592	1761	602	98.4%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	69:7	-	812	1915:1881	1127	72.1%
4/1		U	N/A	N/A	-		-	-	-	272	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1358	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	568	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	17.2	16.2	0.0	33.4	-	-	-	-
Unnamed Junction	-	-	0	0	0	17.2	16.2	0.0	33.4	-	-	-	-
1/1	794	794	-	-	-	6.6	4.9	-	11.5	52.1	24.5	4.9	29.4
2/1	592	592	-	-	-	6.4	10.0	-	16.4	99.9	19.6	10.0	29.6
3/1+3/2	812	812	-	-	-	4.2	1.3	-	5.5	24.3	19.0	1.3	20.3
4/1	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1358	1358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):	-9.3	Total Delay for Signalled Lanes (pcuHr):	33.40	Cycle Time (s):	120					
			PRC Over All Lanes (%):	-9.3	Total Delay Over All Lanes(pcuHr):	33.40							

Full Input Data And Results

Scenario 4: '2017 Base PM' (FG4: '2017 Base PM', Plan 4: '2017 Base PM')

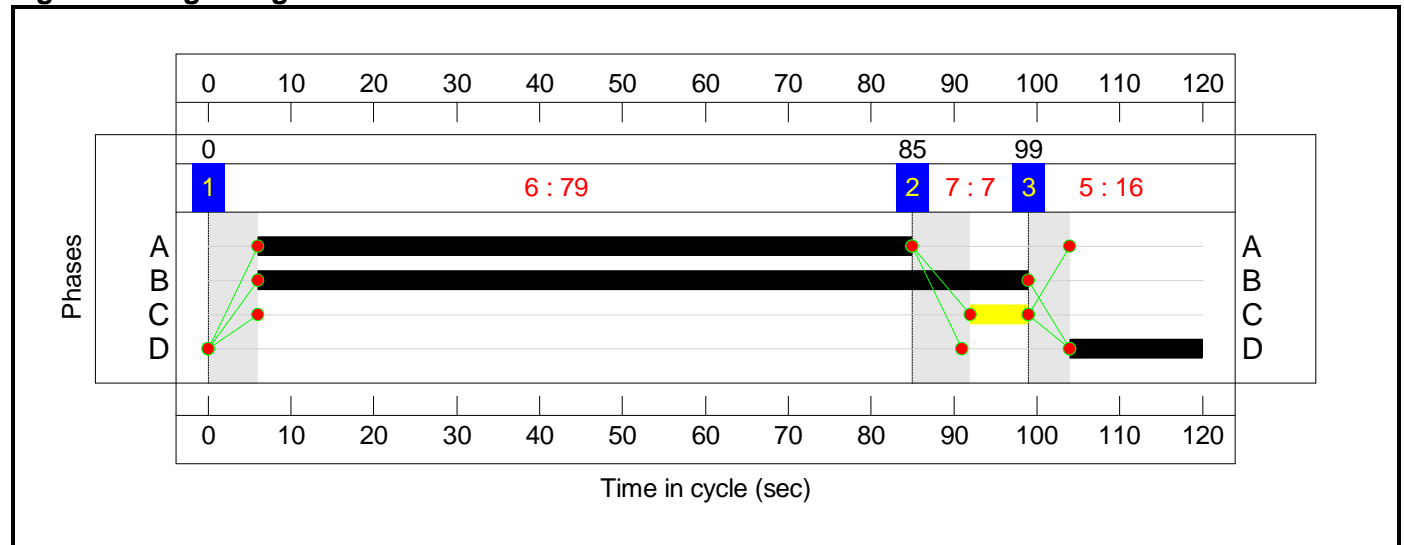
Stage Sequence Diagram



Stage Timings


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

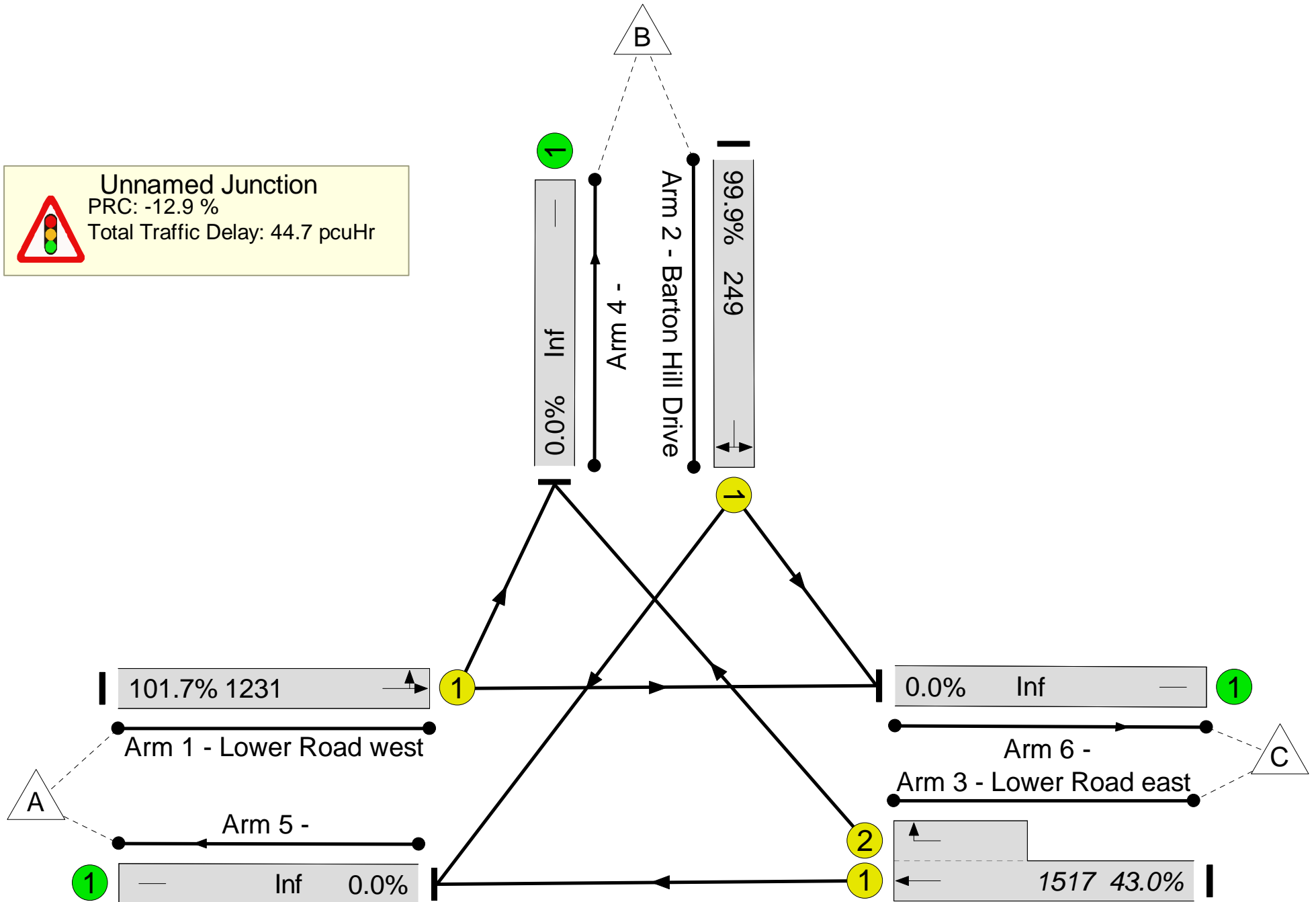
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: -12.9 %
 Total Traffic Delay: 44.7 pcuHr



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	-	-		-	-	-	-	-	-	101.7%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	101.7%
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1251	1846	1231	101.7%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	249	1760	249	99.9%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	653	1915:1881	1517	43.0%
4/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	822	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	13.1	31.7	0.0	44.7	-	-	-	-
Unnamed Junction	-	-	0	0	0	13.1	31.7	0.0	44.7	-	-	-	-
1/1	1251	1231	-	-	-	8.0	23.5	-	31.5	90.7	42.4	23.5	65.9
2/1	249	249	-	-	-	3.6	7.8	-	11.4	164.4	8.2	7.8	16.0
3/1+3/2	653	653	-	-	-	1.5	0.4	-	1.8	10.1	6.3	0.4	6.7
4/1	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	809	809	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): -12.9		PRC Over All Lanes (%): -12.9		Total Delay for Signalled Lanes (pcuHr): 44.73		Total Delay Over All Lanes(pcuHr): 44.73		Cycle Time (s): 120		

Appendix G – Model outputs (2017 ‘with development’ flows)

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2017 Base Residential-BartonHillDrive_MinsterRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODEL USED TAs\London Modelling\Models\Arcady Models\BHD_MinsterRoad\2015 Models for TA
Report generation date: 07/07/2015 11:49:56

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 2, PM

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	7.16	0.71	0.92	E				
Arm 3	1.61	0.27	0.63	C				
A1 - Scenario 2								
Arm 1					7.10	0.81	0.92	E
Arm 2					1.78	0.24	0.65	B
Arm 3					2.97	0.36	0.77	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 07/07/2015 11:49:54

File summary

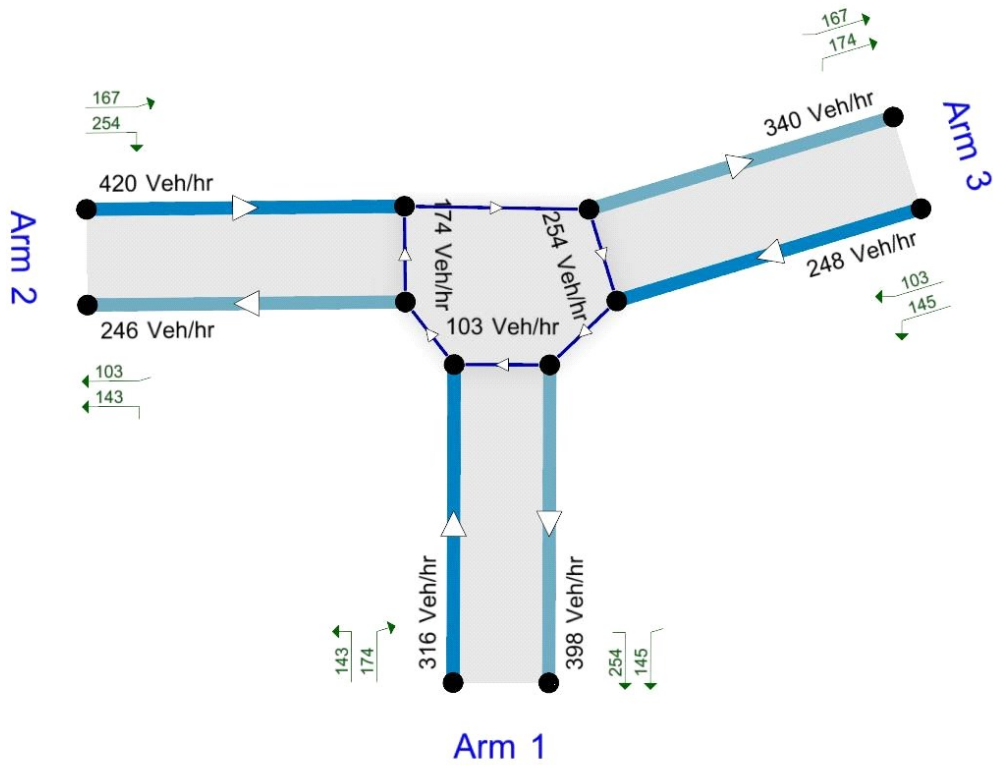
Title	(untitled)
Location	
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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



20.00

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 / Minster 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	✓	633.00	100.000
3	ONE HOUR	✓	372.00	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	428.03	442.50		
07:45-07:55	3	251.55	263.28		
07:55-08:05	1	321.19	327.30		
07:55-08:05	2	428.03	442.50		
07:55-08:05	3	251.55	263.28		
08:05-08:15	1	402.34	409.99		
08:05-08:15	2	536.17	554.29		
08:05-08:15	3	315.10	329.80		
08:15-08:25	1	460.57	469.32		
08:15-08:25	2	613.77	634.51		
08:15-08:25	3	360.70	377.53		
08:25-08:35	1	481.79	490.95		
08:25-08:35	2	642.05	663.75		
08:25-08:35	3	377.32	394.93		
08:35-08:45	1	460.57	469.32		
08:35-08:45	2	613.77	634.51		
08:35-08:45	3	360.70	377.53		
08:45-08:55	1	402.34	409.99		
08:45-08:55	2	536.17	554.29		
08:45-08:55	3	315.10	329.80		
08:55-09:05	1	321.19	327.30		
08:55-09:05	2	428.03	442.50		
08:55-09:05	3	251.55	263.28		
09:05-09:15	1	321.19	327.30		
09:05-09:15	2	428.03	442.50		
09:05-09:15	3	251.55	263.28		

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	382.000	0.000	251.000
	3	217.000	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	0.58	0.42	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	123.39	0.21	1.37	123.42	0.21
2	0.92	0.71	7.16	E	517.12	775.68	291.66	0.38	3.24	291.73	0.38
3	0.63	0.27	1.61	C	303.90	455.85	88.70	0.19	0.99	88.72	0.19

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	398.32	103.33	0.00	706.57	628.56	0.455	0.00	0.81	0.152	A
2	428.03	71.34	420.33	245.84	173.82	0.00	747.70	654.60	0.572	0.00	1.28	0.179	B
3	251.54	41.92	247.98	340.49	253.66	0.00	665.48	591.86	0.378	0.00	0.59	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	404.90	104.79	0.00	705.77	628.56	0.455	0.81	0.82	0.156	A
2	428.03	71.34	427.85	249.46	176.45	0.00	746.27	654.60	0.574	1.28	1.31	0.188	B
3	251.54	41.92	251.49	346.10	258.20	0.00	663.11	591.86	0.379	0.59	0.60	0.146	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	501.51	130.39	0.00	691.83	628.56	0.582	0.82	1.33	0.203	B
2	536.18	89.36	528.53	310.29	219.41	0.00	722.96	654.60	0.742	1.31	2.59	0.297	C
3	315.10	52.52	312.95	428.98	318.95	0.00	631.48	591.86	0.499	0.60	0.96	0.187	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	570.69	149.25	0.00	681.57	628.56	0.676	1.33	1.94	0.262	C
2	613.77	102.29	599.43	355.08	251.04	0.00	705.79	654.60	0.870	2.59	4.98	0.501	D
3	360.70	60.12	358.19	488.73	361.74	0.00	609.20	591.86	0.592	0.96	1.38	0.236	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	598.86	156.65	0.00	677.54	628.56	0.711	1.94	2.29	0.299	C
2	642.05	107.01	628.94	372.77	263.59	0.00	698.98	654.60	0.919	4.98	7.16	0.710	E
3	377.32	62.89	375.95	512.99	379.55	0.00	599.92	591.86	0.629	1.38	1.61	0.266	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	581.21	150.48	0.00	680.90	628.56	0.676	2.29	2.18	0.275	C
2	613.77	102.29	614.02	358.26	253.42	0.00	704.50	654.60	0.871	7.16	7.12	0.679	E
3	360.70	60.12	361.15	496.89	370.54	0.00	604.61	591.86	0.597	1.61	1.53	0.247	B

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	523.10	132.46	0.00	690.71	628.56	0.583	2.18	1.46	0.214	B
2	536.18	89.36	559.52	315.68	223.47	0.00	720.76	654.60	0.744	7.12	3.23	0.410	C
3	315.10	52.52	317.90	445.33	337.66	0.00	621.74	591.86	0.507	1.53	1.06	0.199	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	413.17	105.90	0.00	705.17	628.56	0.455	1.46	0.86	0.159	A
2	428.03	71.34	438.98	252.22	178.46	0.00	745.18	654.60	0.574	3.23	1.41	0.202	B
3	251.54	41.92	254.15	352.53	264.91	0.00	659.62	591.86	0.381	1.06	0.63	0.149	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	405.20	104.84	0.00	705.74	628.56	0.455	0.86	0.85	0.156	A
2	428.03	71.34	428.22	249.58	176.53	0.00	746.23	654.60	0.574	1.41	1.38	0.189	B
3	251.54	41.92	251.61	346.33	258.42	0.00	663.00	591.86	0.379	0.63	0.62	0.146	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	11.68	1.17	0.179	B	B
3	5.57	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	13.03	1.30	0.188	B	B
3	6.00	0.60	0.146	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	22.97	2.30	0.297	C	B
3	9.05	0.91	0.187	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	41.80	4.18	0.501	D	C
3	12.90	1.29	0.236	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	62.61	6.26	0.710	E	D
3	15.39	1.54	0.266	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	71.42	7.14	0.679	E	D
3	15.58	1.56	0.247	B	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	38.68	3.87	0.410	C	C
3	11.31	1.13	0.199	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	15.59	1.56	0.202	B	B
3	6.66	0.67	0.149	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	13.88	1.39	0.189	B	B
3	6.24	0.62	0.146	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	0.48	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	✓	550.00	100.000
2	ONE HOUR	✓	460.00	100.000
3	ONE HOUR	✓	515.00	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	371.91	375.63		
16:45-16:55	2	311.05	317.45		
16:45-16:55	3	348.24	357.30		
16:55-17:05	1	371.91	375.63		
16:55-17:05	2	311.05	317.45		
16:55-17:05	3	348.24	357.30		
17:05-17:15	1	465.87	470.53		
17:05-17:15	2	389.64	397.65		
17:05-17:15	3	436.22	447.57		
17:15-17:25	1	533.29	538.62		
17:15-17:25	2	446.02	455.20		
17:15-17:25	3	499.35	512.34		
17:25-17:35	1	557.86	563.44		
17:25-17:35	2	466.58	476.17		
17:25-17:35	3	522.36	535.95		
17:35-17:45	1	533.29	538.62		
17:35-17:45	2	446.02	455.20		
17:35-17:45	3	499.35	512.34		
17:45-17:55	1	465.87	470.53		
17:45-17:55	2	389.64	397.65		
17:45-17:55	3	436.22	447.57		
17:55-18:05	1	371.91	375.63		
17:55-18:05	2	311.05	317.45		
17:55-18:05	3	348.24	357.30		
18:05-18:15	1	371.91	375.63		
18:05-18:15	2	311.05	317.45		
18:05-18:15	3	348.24	357.30		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	297.000	253.000
	2	243.000	0.000	217.000
	3	205.000	310.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.54	0.46
	2	0.53	0.00	0.47
	3	0.40	0.60	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	1.0	1.0
	2	3.0	0.0	1.0
	3	2.0	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	0.92	0.81	7.10	E	449.31	673.97	286.66	0.43	3.19	286.74	0.43
2	0.65	0.24	1.78	B	375.79	563.68	99.40	0.18	1.10	99.42	0.18
3	0.77	0.36	2.97	C	420.72	631.08	148.94	0.24	1.65	148.98	0.24

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	371.91	61.98	364.52	298.65	206.39	0.00	660.50	575.10	0.563	0.00	1.23	0.198	B
2	311.05	51.84	306.99	403.23	167.68	0.00	760.76	707.51	0.409	0.00	0.68	0.131	A
3	348.24	58.04	342.87	312.50	162.17	0.00	725.76	611.15	0.480	0.00	0.90	0.155	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	371.91	61.98	371.71	302.87	209.57	0.00	658.82	575.10	0.565	1.23	1.26	0.209	B
2	311.05	51.84	310.99	410.29	170.99	0.00	758.94	707.51	0.410	0.68	0.69	0.134	A
3	348.24	58.04	348.15	317.70	164.29	0.00	724.62	611.15	0.481	0.90	0.91	0.159	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	465.87	77.65	458.42	376.68	260.27	0.00	632.01	575.10	0.737	1.26	2.51	0.332	C
2	389.64	64.94	387.25	507.81	210.87	0.00	737.02	707.51	0.529	0.69	1.08	0.170	B
3	436.22	72.70	432.38	393.55	204.57	0.00	702.79	611.15	0.621	0.91	1.55	0.219	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	533.29	88.88	519.11	430.85	297.42	0.00	612.36	575.11	0.871	2.51	4.87	0.565	D
2	446.02	74.34	443.29	577.74	238.79	0.00	721.67	707.51	0.618	1.08	1.54	0.213	B
3	499.35	83.23	494.11	447.91	234.17	0.00	686.76	611.15	0.727	1.55	2.43	0.303	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	557.86	92.98	544.48	452.33	312.45	0.00	604.42	575.11	0.923	4.87	7.10	0.810	E
2	466.57	77.76	465.12	606.48	250.46	0.00	715.25	707.51	0.652	1.54	1.78	0.238	B
3	522.36	87.06	519.08	469.88	245.71	0.00	680.51	611.15	0.768	2.43	2.97	0.361	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	533.29	88.88	533.34	435.00	301.10	0.00	610.42	575.11	0.874	7.10	7.09	0.788	E
2	446.02	74.34	446.54	589.10	245.33	0.00	718.07	707.51	0.621	1.78	1.70	0.222	B
3	499.35	83.23	500.21	455.98	235.89	0.00	685.83	611.15	0.728	2.97	2.83	0.327	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	465.87	77.65	489.11	383.70	266.54	0.00	628.70	575.10	0.741	7.09	3.22	0.477	D
2	389.64	64.94	392.69	530.66	224.99	0.00	729.26	707.51	0.534	1.70	1.19	0.180	B
3	436.22	72.70	442.80	410.24	207.44	0.00	701.24	611.15	0.622	2.83	1.74	0.238	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	371.91	61.98	383.04	306.30	212.44	0.00	657.30	575.10	0.566	3.22	1.36	0.227	B
2	311.05	51.84	313.89	419.28	176.20	0.00	756.08	707.51	0.411	1.19	0.71	0.137	A
3	348.24	58.04	352.92	324.27	165.82	0.00	723.79	611.15	0.481	1.74	0.95	0.164	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	371.91	61.98	372.12	303.01	209.67	0.00	658.76	575.10	0.565	1.36	1.33	0.210	B
2	311.05	51.84	311.12	410.62	171.17	0.00	758.84	707.51	0.410	0.71	0.70	0.134	A
3	348.24	58.04	348.33	317.94	164.35	0.00	724.58	611.15	0.481	0.95	0.94	0.160	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	11.15	1.11	0.198	B	B
2	6.35	0.64	0.131	A	A
3	8.30	0.83	0.155	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	12.52	1.25	0.209	B	B
2	6.82	0.68	0.134	A	A
3	9.05	0.90	0.159	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	22.12	2.21	0.332	C	B
2	10.22	1.02	0.170	B	B
3	14.34	1.43	0.219	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	40.59	4.06	0.565	D	C
2	14.44	1.44	0.213	B	B
3	22.02	2.20	0.303	C	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	61.64	6.16	0.810	E	D
2	17.11	1.71	0.238	B	B
3	27.88	2.79	0.361	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	70.96	7.10	0.788	E	D
2	17.27	1.73	0.222	B	B
3	28.86	2.89	0.327	C	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	39.01	3.90	0.477	D	C
2	12.59	1.26	0.180	B	B
3	18.86	1.89	0.238	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	15.25	1.52	0.227	B	B
2	7.53	0.75	0.137	A	A
3	10.19	1.02	0.164	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	13.42	1.34	0.210	B	B
2	7.07	0.71	0.134	A	A
3	9.45	0.95	0.160	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 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 11:12:27

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 2, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
A1 - Scenario 1								
Arm 1	1.01	0.05	0.51	A				
Arm 2	0.48	0.04	0.32	A				
Arm 3	1.34	0.07	0.58	A				
A1 - Scenario 2								
Arm 1					1.70	0.06	0.63	A
Arm 2					0.77	0.05	0.44	A
Arm 3					0.60	0.05	0.38	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 11:12:25

File summary

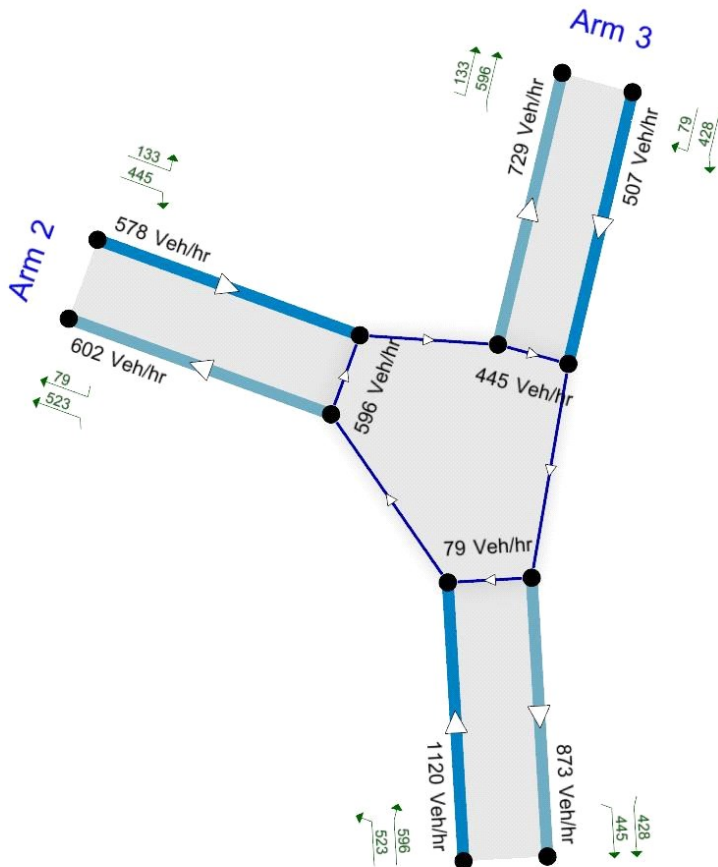
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\vspiller
Description	

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)	I' - 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	✓	684.00	100.000
3	ONE HOUR	✓	1166.00	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	462.52	498.41		
07:45-07:55	3	788.45	813.09		
07:55-08:05	1	871.62	937.72		
07:55-08:05	2	462.52	498.41		
07:55-08:05	3	788.45	813.09		
08:05-08:15	1	1091.83	1174.63		
08:05-08:15	2	579.37	624.33		
08:05-08:15	3	987.65	1018.52		
08:15-08:25	1	1249.83	1344.61		
08:15-08:25	2	663.22	714.68		
08:15-08:25	3	1130.57	1165.91		
08:25-08:35	1	1307.43	1406.58		
08:25-08:35	2	693.78	747.62		
08:25-08:35	3	1182.67	1219.64		
08:35-08:45	1	1249.83	1344.61		
08:35-08:45	2	663.22	714.68		
08:35-08:45	3	1130.57	1165.91		
08:45-08:55	1	1091.83	1174.63		
08:45-08:55	2	579.37	624.33		
08:45-08:55	3	987.65	1018.52		
08:55-09:05	1	871.62	937.72		
08:55-09:05	2	462.52	498.41		
08:55-09:05	3	788.45	813.09		
09:05-09:15	1	871.62	937.72		
09:05-09:15	2	462.52	498.41		
09:05-09:15	3	788.45	813.09		

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	82.000
	3	1019.000	147.000	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	0.87	0.13	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.050
	2	1.080	1.000	1.060
	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	6.0
	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	0.51	0.05	1.01	A	1053.03	1579.55	63.04	0.04	0.70	63.04	0.04
2	0.32	0.04	0.48	A	558.78	838.18	30.95	0.04	0.34	30.95	0.04
3	0.58	0.07	1.34	A	952.54	1428.82	76.44	0.05	0.85	76.45	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	868.64	1091.88	98.98	0.00	2616.67	2571.80	0.333	0.00	0.50	0.034	A
2	462.52	77.09	460.99	547.79	419.83	0.00	2272.49	1744.23	0.204	0.00	0.25	0.033	A
3	788.45	131.41	785.14	475.10	405.73	0.00	2210.49	1338.33	0.357	0.00	0.55	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	99.40	0.00	2616.40	2571.80	0.333	0.50	0.50	0.034	A
2	462.52	77.09	462.52	549.74	421.27	0.00	2271.57	1744.23	0.204	0.25	0.26	0.033	A
3	788.45	131.41	788.44	476.72	407.07	0.00	2209.45	1338.33	0.357	0.55	0.55	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	1090.51	1370.93	124.29	0.00	2600.39	2571.80	0.420	0.50	0.72	0.040	A
2	579.37	96.56	578.78	687.73	527.06	0.00	2203.68	1744.23	0.263	0.26	0.35	0.037	A
3	987.65	164.61	985.83	596.45	509.39	0.00	2130.44	1338.33	0.464	0.55	0.86	0.052	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	1248.60	1569.57	142.29	0.00	2588.80	2571.80	0.483	0.72	0.93	0.045	A
2	663.22	110.54	662.70	787.41	603.47	0.00	2154.64	1744.23	0.308	0.35	0.44	0.040	A
3	1130.57	188.43	1128.61	682.92	583.25	0.00	2073.40	1338.33	0.545	0.86	1.18	0.063	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	1306.90	1643.17	148.98	0.00	2584.50	2571.80	0.506	0.93	1.01	0.047	A
2	693.78	115.63	693.57	824.23	631.65	0.00	2136.56	1744.23	0.325	0.44	0.48	0.042	A
3	1182.67	197.11	1181.73	714.80	610.42	0.00	2052.42	1338.33	0.576	1.18	1.34	0.069	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	1250.28	1572.57	142.63	0.00	2588.58	2571.80	0.483	1.01	0.94	0.045	A
2	663.22	110.54	663.40	788.62	604.29	0.00	2154.12	1744.23	0.308	0.48	0.45	0.040	A
3	1130.57	188.43	1131.33	683.82	583.87	0.00	2072.92	1338.33	0.545	1.34	1.21	0.064	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	1093.11	1375.30	124.77	0.00	2600.07	2571.80	0.420	0.94	0.73	0.040	A
2	579.37	96.56	579.91	689.56	528.32	0.00	2202.87	1744.23	0.263	0.45	0.36	0.037	A
3	987.65	164.61	989.70	597.84	510.38	0.00	2129.67	1338.33	0.464	1.21	0.87	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	871.62	145.27	872.98	1098.30	99.64	0.00	2616.25	2571.80	0.333	0.73	0.50	0.034	A
2	462.52	77.09	463.13	550.69	421.93	0.00	2271.15	1744.23	0.204	0.36	0.26	0.033	A
3	788.45	131.41	790.33	477.45	407.61	0.00	2209.03	1338.33	0.357	0.87	0.56	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	99.40	0.00	2616.40	2571.80	0.333	0.50	0.50	0.034	A
2	462.52	77.09	462.52	549.76	421.28	0.00	2271.56	1744.23	0.204	0.26	0.26	0.033	A
3	788.45	131.41	788.46	476.73	407.07	0.00	2209.45	1338.33	0.357	0.56	0.56	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	4.86	0.49	0.034	A	A
2	2.50	0.25	0.033	A	A
3	5.37	0.54	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	4.98	0.50	0.034	A	A
2	2.55	0.25	0.033	A	A
3	5.52	0.55	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	7.05	0.70	0.040	A	A
2	3.49	0.35	0.037	A	A
3	8.34	0.83	0.052	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	9.07	0.91	0.045	A	A
2	4.35	0.44	0.040	A	A
3	11.48	1.15	0.063	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	10.00	1.00	0.047	A	A
2	4.73	0.47	0.042	A	A
3	13.11	1.31	0.069	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	9.53	0.95	0.045	A	A
2	4.52	0.45	0.040	A	A
3	12.37	1.24	0.064	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	7.43	0.74	0.040	A	A
2	3.64	0.36	0.037	A	A
3	8.96	0.90	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	5.11	0.51	0.034	A	A
2	2.61	0.26	0.033	A	A
3	5.71	0.57	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	5.01	0.50	0.034	A	A
2	2.56	0.26	0.033	A	A
3	5.57	0.56	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)	I' - 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	✓	858.00	100.000
3	ONE HOUR	✓	752.00	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	580.18	621.74		
16:45-16:55	3	508.50	520.25		
16:55-17:05	1	1123.84	1183.10		
16:55-17:05	2	580.18	621.74		
16:55-17:05	3	508.50	520.25		
17:05-17:15	1	1407.78	1482.00		
17:05-17:15	2	726.76	778.82		
17:05-17:15	3	636.97	651.69		
17:15-17:25	1	1611.50	1696.47		
17:15-17:25	2	831.93	891.52		
17:15-17:25	3	729.15	746.00		
17:25-17:35	1	1685.76	1774.65		
17:25-17:35	2	870.27	932.61		
17:25-17:35	3	762.75	780.38		
17:35-17:45	1	1611.50	1696.47		
17:35-17:45	2	831.93	891.52		
17:35-17:45	3	729.15	746.00		
17:45-17:55	1	1407.78	1482.00		
17:45-17:55	2	726.76	778.82		
17:45-17:55	3	636.97	651.69		
17:55-18:05	1	1123.84	1183.10		
17:55-18:05	2	580.18	621.74		
17:55-18:05	3	508.50	520.25		
18:05-18:15	1	1123.84	1183.10		
18:05-18:15	2	580.18	621.74		
18:05-18:15	3	508.50	520.25		

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	197.000
	3	635.000	117.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.47	0.53
	2	0.77	0.00	0.23
	3	0.84	0.16	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	1.040	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	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	0.63	0.06	1.70	A	1357.74	2036.61	98.06	0.05	1.09	98.07	0.05
2	0.44	0.05	0.77	A	700.93	1051.39	46.71	0.04	0.52	46.72	0.04
3	0.38	0.05	0.60	A	614.33	921.50	37.79	0.04	0.42	37.79	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	1119.55	873.17	78.83	0.00	2687.33	2583.79	0.418	0.00	0.71	0.038	A
2	580.18	96.70	578.02	602.24	596.15	0.00	2182.36	1693.59	0.266	0.00	0.36	0.037	A
3	508.50	84.75	506.70	728.87	445.30	0.00	2194.08	1518.93	0.232	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	79.11	0.00	2687.15	2583.79	0.418	0.71	0.72	0.038	A
2	580.18	96.70	580.17	604.51	598.43	0.00	2180.93	1693.59	0.266	0.36	0.36	0.037	A
3	508.50	84.75	508.50	731.64	446.96	0.00	2192.78	1518.93	0.232	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	1405.46	1096.32	98.98	0.00	2674.09	2583.78	0.526	0.72	1.10	0.047	A
2	726.76	121.13	725.74	756.05	748.40	0.00	2086.92	1693.59	0.348	0.36	0.53	0.044	A
3	636.97	106.16	636.19	915.03	559.11	0.00	2104.68	1518.92	0.303	0.30	0.43	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	1609.04	1255.25	113.33	0.00	2664.65	2583.78	0.605	1.10	1.51	0.057	A
2	831.93	138.66	830.95	865.58	856.81	0.00	2018.96	1693.59	0.412	0.53	0.70	0.050	A
3	729.15	121.53	728.43	1047.59	640.16	0.00	2041.01	1518.92	0.357	0.43	0.55	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	1684.59	1313.93	118.62	0.00	2661.17	2583.78	0.633	1.51	1.70	0.061	A
2	870.27	145.04	869.83	906.20	897.04	0.00	1993.74	1693.59	0.437	0.70	0.77	0.053	A
3	762.75	127.13	762.44	1096.75	670.11	0.00	2017.47	1518.92	0.378	0.55	0.60	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	1612.41	1257.13	113.49	0.00	2664.55	2583.78	0.605	1.70	1.55	0.057	A
2	831.93	138.66	832.30	867.30	858.60	0.00	2017.84	1693.59	0.412	0.77	0.71	0.051	A
3	729.15	121.53	729.41	1049.70	641.20	0.00	2040.19	1518.92	0.357	0.60	0.56	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	1410.33	1099.16	99.22	0.00	2673.93	2583.78	0.526	1.55	1.12	0.048	A
2	726.76	121.13	727.77	758.56	750.99	0.00	2085.29	1693.59	0.349	0.71	0.54	0.044	A
3	636.97	106.16	637.71	918.09	560.67	0.00	2103.45	1518.92	0.303	0.56	0.44	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	1126.23	877.83	79.24	0.00	2687.07	2583.79	0.418	1.12	0.72	0.038	A
2	580.18	96.70	581.22	605.76	599.71	0.00	2180.13	1693.59	0.266	0.54	0.36	0.038	A
3	508.50	84.75	509.30	733.16	447.77	0.00	2192.14	1518.93	0.232	0.44	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	79.12	0.00	2687.15	2583.79	0.418	0.72	0.72	0.038	A
2	580.18	96.70	580.19	604.53	598.44	0.00	2180.92	1693.59	0.266	0.36	0.36	0.037	A
3	508.50	84.75	508.51	731.66	446.97	0.00	2192.77	1518.93	0.232	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	6.96	0.70	0.038	A	A
2	3.53	0.35	0.037	A	A
3	2.94	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	7.16	0.72	0.038	A	A
2	3.61	0.36	0.037	A	A
3	3.01	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	10.72	1.07	0.047	A	A
2	5.20	0.52	0.044	A	A
3	4.24	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	14.64	1.46	0.057	A	A
2	6.81	0.68	0.050	A	A
3	5.42	0.54	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	16.66	1.67	0.061	A	A
2	7.56	0.76	0.053	A	A
3	5.96	0.60	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	15.78	1.58	0.057	A	A
2	7.17	0.72	0.051	A	A
3	5.66	0.57	0.046	A	A

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

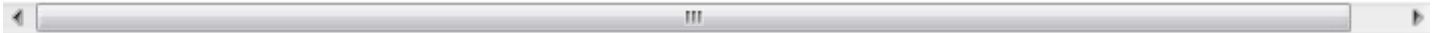
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.53	1.15	0.048	A	A
2	5.49	0.55	0.044	A	A
3	4.44	0.44	0.041	A	A

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	7.40	0.74	0.038	A	A
2	3.71	0.37	0.038	A	A
3	3.08	0.31	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	7.22	0.72	0.038	A	A
2	3.64	0.36	0.037	A	A
3	3.03	0.30	0.036	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 Base Residential-BartonHillDrive_PloverRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORTMODEL USED TAs\London Modelling\Models\Arcady Models\BartonHillDrive_PloverRoad\June 2015 for use in TA
Report generation date: 07/07/2015 11:51:49

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 2, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
A1 - Scenario 1								
Arm 1	1.35	0.28	0.59	C				
Arm 2	0.74	0.14	0.43	A				
Arm 3	9.89	0.94	0.96	F				
A1 - Scenario 2								
Arm 1					0.80	0.17	0.45	B
Arm 2					1.80	0.23	0.65	B
Arm 3					1.61	0.23	0.63	B

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 11:51:47

File summary

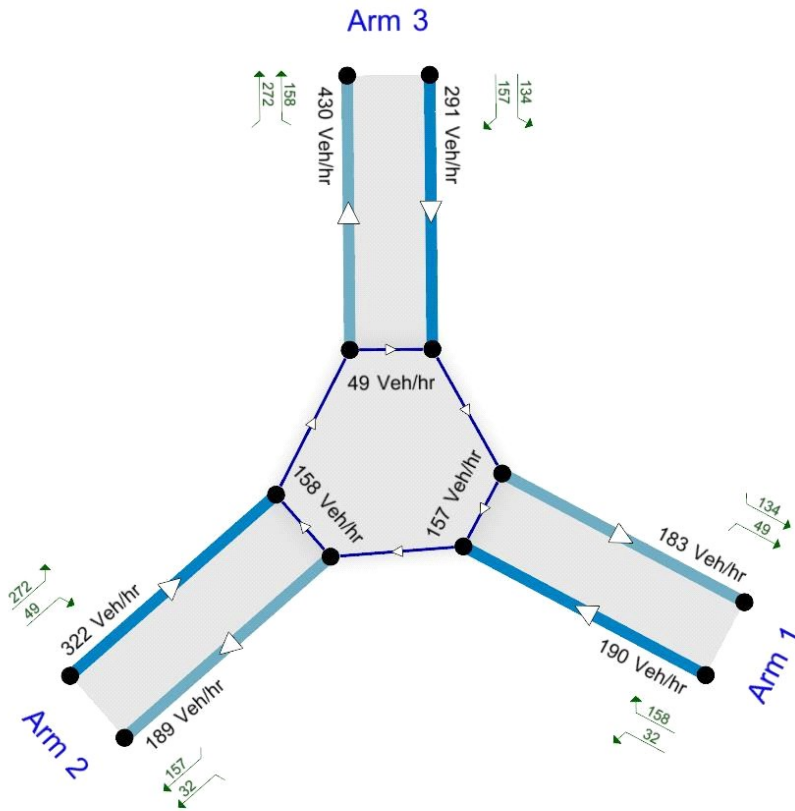
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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	0.59	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	✓	298.00	100.000
2	ONE HOUR	✓	309.00	100.000
3	ONE HOUR	✓	668.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	60.000	238.000
	2	73.000	0.000	236.000
	3	188.000	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	0.28	0.72	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	1.35	C	243.45	365.17	74.66	0.20	0.83	74.67	0.20
2	0.43	0.14	0.74	A	252.43	378.65	46.40	0.12	0.52	46.41	0.12
3	0.96	0.94	9.89	F	545.71	818.56	390.43	0.48	4.34	390.55	0.48

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	201.51	33.58	198.55	173.28	317.71	0.00	601.38	511.78	0.335	0.00	0.49	0.148	A
2	208.94	34.82	206.76	357.69	158.57	0.00	773.35	636.16	0.270	0.00	0.36	0.106	A
3	451.70	75.28	442.14	316.48	48.85	0.00	719.72	665.09	0.628	0.00	1.59	0.210	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	201.51	33.58	201.45	176.41	324.38	0.00	597.65	511.78	0.337	0.49	0.50	0.151	A
2	208.94	34.82	208.93	364.94	160.89	0.00	772.07	636.16	0.271	0.36	0.37	0.107	A
3	451.70	75.28	451.43	320.46	49.36	0.00	719.44	665.09	0.628	1.59	1.64	0.223	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	252.42	42.07	250.60	218.03	399.37	0.00	555.71	511.78	0.454	0.50	0.80	0.195	B
2	261.73	43.62	260.79	449.83	200.14	0.00	750.55	636.16	0.349	0.37	0.53	0.122	A
3	565.82	94.30	555.79	399.32	61.61	0.00	712.85	665.09	0.794	1.64	3.31	0.360	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	288.94	48.16	286.83	247.34	451.33	0.00	526.65	511.78	0.549	0.80	1.16	0.248	B
2	299.61	49.94	298.72	509.08	229.08	0.00	734.68	636.16	0.408	0.53	0.67	0.137	A
3	647.70	107.95	628.10	457.23	70.57	0.00	708.02	665.09	0.915	3.31	6.58	0.621	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	302.26	50.38	301.09	259.15	472.86	0.00	514.61	511.78	0.587	1.16	1.35	0.279	C
2	313.42	52.24	313.02	533.48	240.47	0.00	728.44	636.16	0.430	0.67	0.74	0.144	A
3	677.55	112.92	658.06	479.54	73.95	0.00	706.20	665.09	0.959	6.58	9.82	0.908	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	288.94	48.16	289.27	253.01	465.13	0.00	518.93	511.78	0.557	1.35	1.30	0.262	C
2	299.61	49.94	299.83	523.38	231.03	0.00	733.61	636.16	0.408	0.74	0.70	0.138	A
3	647.70	107.95	647.31	460.03	70.83	0.00	707.88	665.09	0.915	9.82	9.89	0.942	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	252.42	42.07	254.72	230.38	429.78	0.00	538.70	511.78	0.469	1.30	0.91	0.213	B
2	261.73	43.62	262.67	481.06	203.44	0.00	748.74	636.16	0.350	0.70	0.55	0.124	A
3	565.82	94.30	598.10	404.05	62.05	0.00	712.61	665.09	0.794	9.89	4.51	0.595	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	201.51	33.58	203.81	181.33	336.32	0.00	590.97	511.78	0.341	0.91	0.53	0.156	A
2	208.94	34.82	209.96	377.35	162.78	0.00	771.04	636.16	0.271	0.55	0.38	0.107	A
3	451.70	75.28	468.04	323.14	49.60	0.00	719.31	665.09	0.628	4.51	1.79	0.252	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	201.51	33.58	201.58	176.57	324.78	0.00	597.42	511.78	0.337	0.53	0.52	0.152	A
2	208.94	34.82	208.96	365.37	161.00	0.00	772.02	636.16	0.271	0.38	0.37	0.107	A
3	451.70	75.28	451.99	320.59	49.37	0.00	719.44	665.09	0.628	1.79	1.74	0.225	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	4.62	0.46	0.148	A	A
2	3.48	0.35	0.106	A	A
3	14.23	1.42	0.210	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	4.99	0.50	0.151	A	A
2	3.67	0.37	0.107	A	A
3	16.20	1.62	0.223	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	7.58	0.76	0.195	B	B
2	5.07	0.51	0.122	A	A
3	28.68	2.87	0.360	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	10.84	1.08	0.248	B	B
2	6.50	0.65	0.137	A	A
3	53.56	5.36	0.621	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	12.96	1.30	0.279	C	B
2	7.24	0.72	0.144	A	A
3	83.92	8.39	0.908	F	D

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	13.18	1.32	0.262	C	B
2	7.13	0.71	0.138	A	A
3	98.58	9.86	0.942	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	9.69	0.97	0.213	B	B
2	5.66	0.57	0.124	A	A
3	57.11	5.71	0.595	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	5.59	0.56	0.156	A	A
2	3.91	0.39	0.107	A	A
3	20.58	2.06	0.252	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	5.21	0.52	0.152	A	A
2	3.75	0.38	0.107	A	A
3	17.56	1.76	0.225	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	0.21	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	✓	284.00	100.000
2	ONE HOUR	✓	482.00	100.000
3	ONE HOUR	✓	436.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	48.000	236.000
	2	74.000	0.000	408.000
	3	201.000	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	0.15	0.00	0.85
	3	0.46	0.54	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	0.45	0.17	0.80	B	232.01	348.01	49.40	0.14	0.55	49.40	0.14
2	0.65	0.23	1.80	B	393.76	590.64	99.60	0.17	1.11	99.62	0.17
3	0.63	0.23	1.61	B	356.18	534.27	94.14	0.18	1.05	94.16	0.18

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	192.04	32.01	189.74	183.44	156.71	0.00	685.56	564.99	0.280	0.00	0.38	0.120	A
2	325.93	54.32	321.84	188.78	157.67	0.00	794.14	616.72	0.410	0.00	0.68	0.126	A
3	294.82	49.14	290.74	430.10	49.41	0.00	717.95	694.11	0.411	0.00	0.68	0.139	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	192.04	32.01	192.02	185.92	158.88	0.00	684.35	564.99	0.281	0.38	0.39	0.122	A
2	325.93	54.32	325.88	191.33	159.56	0.00	793.06	616.72	0.411	0.68	0.69	0.128	A
3	294.82	49.14	294.77	435.41	50.03	0.00	717.62	694.11	0.411	0.68	0.69	0.142	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	240.56	40.09	239.53	231.58	197.90	0.00	662.71	564.99	0.363	0.39	0.56	0.141	A
2	408.27	68.05	405.87	238.39	199.05	0.00	770.60	616.72	0.530	0.69	1.09	0.163	A
3	369.31	61.55	367.17	542.60	62.31	0.00	711.15	694.11	0.519	0.69	1.04	0.173	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	275.37	45.90	274.38	265.17	226.63	0.00	646.78	564.99	0.426	0.56	0.72	0.161	A
2	467.35	77.89	464.58	273.01	228.01	0.00	754.12	616.72	0.620	1.09	1.55	0.205	B
3	422.75	70.46	420.48	621.26	71.33	0.00	706.41	694.11	0.598	1.04	1.42	0.208	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	288.06	48.01	287.61	278.19	237.75	0.00	640.61	564.99	0.450	0.72	0.80	0.170	B
2	488.89	81.48	487.43	286.36	239.00	0.00	747.86	616.72	0.654	1.55	1.80	0.229	B
3	442.23	73.71	441.11	651.60	74.83	0.00	704.56	694.11	0.628	1.42	1.61	0.226	B

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	275.37	45.90	275.60	266.94	228.09	0.00	645.97	564.99	0.426	0.80	0.76	0.162	A
2	467.35	77.89	467.99	274.67	229.02	0.00	753.54	616.72	0.620	1.80	1.69	0.211	B
3	422.75	70.46	423.19	625.16	71.85	0.00	706.13	694.11	0.599	1.61	1.54	0.213	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	240.56	40.09	241.61	234.58	200.42	0.00	661.32	564.99	0.364	0.76	0.58	0.143	A
2	408.27	68.05	411.42	241.25	200.77	0.00	769.62	616.72	0.530	1.69	1.17	0.169	B
3	369.31	61.55	371.84	549.02	63.16	0.00	710.71	694.11	0.520	1.54	1.12	0.178	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	192.04	32.01	193.16	187.49	160.21	0.00	683.61	564.99	0.281	0.58	0.40	0.123	A
2	325.93	54.32	328.65	192.86	160.51	0.00	792.52	616.72	0.411	1.17	0.71	0.130	A
3	294.82	49.14	297.25	438.71	50.46	0.00	717.40	694.11	0.411	1.12	0.71	0.144	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	192.04	32.01	192.06	185.98	158.93	0.00	684.32	564.99	0.281	0.40	0.39	0.122	A
2	325.93	54.32	325.97	191.39	159.60	0.00	793.04	616.72	0.411	0.71	0.71	0.128	A
3	294.82	49.14	294.87	435.53	50.05	0.00	717.61	694.11	0.411	0.71	0.71	0.142	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	3.63	0.36	0.120	A	A
2	6.41	0.64	0.126	A	A
3	6.37	0.64	0.139	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	3.85	0.39	0.122	A	A
2	6.87	0.69	0.128	A	A
3	6.86	0.69	0.142	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	5.35	0.54	0.141	A	A
2	10.29	1.03	0.163	A	A
3	9.87	0.99	0.173	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	6.94	0.69	0.161	A	A
2	14.57	1.46	0.205	B	B
3	13.43	1.34	0.208	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	7.78	0.78	0.170	B	B
2	17.25	1.73	0.229	B	B
3	15.56	1.56	0.226	B	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	7.70	0.77	0.162	A	A
2	17.26	1.73	0.211	B	B
3	15.65	1.56	0.213	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	6.07	0.61	0.143	A	A
2	12.36	1.24	0.169	B	B
3	11.80	1.18	0.178	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	4.13	0.41	0.123	A	A
2	7.50	0.75	0.130	A	A
3	7.51	0.75	0.144	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	3.95	0.39	0.122	A	A
2	7.08	0.71	0.128	A	A
3	7.09	0.71	0.142	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 Base Residential-LowerRoad_ThistleHillWay.arc8

Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODEL USED TAs\London Modelling\Models\Arcady Models\LowerRoad_ThistleHillWay\2015 June for TA

Report generation date: 07/07/2015 11:57:11

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 1, PM

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	1.15	0.08	0.54	A
Arm 2	0.68	0.08	0.41	A	0.17	0.06	0.15	A
Arm 3	0.86	0.09	0.47	A	0.93	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 07/07/2015 11:57:10

File summary

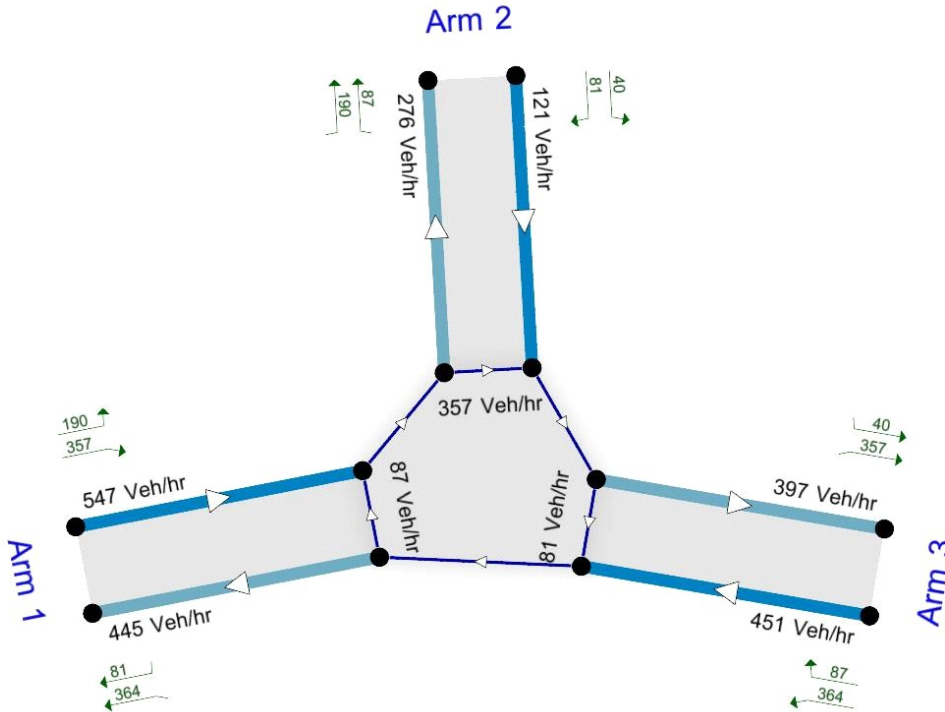
Title	Lower Road / Thistle Hill Way
Location	Minster on Sea
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	26677
Enumerator	PBA\rspiller
Description	

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)	I' - 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	✓	552.00	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	373.26	393.90		
07:55-08:05	1	383.40	403.26		
07:55-08:05	2	351.62	355.81		
07:55-08:05	3	373.26	393.90		
08:05-08:15	1	480.27	505.14		
08:05-08:15	2	440.46	445.70		
08:05-08:15	3	467.56	493.42		
08:15-08:25	1	549.77	578.24		
08:15-08:25	2	504.20	510.20		
08:15-08:25	3	535.23	564.82		
08:25-08:35	1	575.11	604.89		
08:25-08:35	2	527.43	533.71		
08:25-08:35	3	559.89	590.85		
08:35-08:45	1	549.77	578.24		
08:35-08:45	2	504.20	510.20		
08:35-08:45	3	535.23	564.82		
08:45-08:55	1	480.27	505.14		
08:45-08:55	2	440.46	445.70		
08:45-08:55	3	467.56	493.42		
08:55-09:05	1	383.40	403.26		
08:55-09:05	2	351.62	355.81		
08:55-09:05	3	373.26	393.90		
09:05-09:15	1	383.40	403.26		
09:05-09:15	2	351.62	355.81		
09:05-09:15	3	373.26	393.90		

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	73.000	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	1.090	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	9.0	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	39.68	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	450.95	676.42	52.69	0.08	0.59	52.70	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	49.71	0.00	1536.41	1468.37	0.250	0.00	0.33	0.052	A
2	351.62	58.60	349.63	121.02	310.12	0.00	1399.34	785.34	0.251	0.00	0.33	0.057	A
3	373.26	62.21	370.81	422.40	237.34	0.00	1277.81	1093.86	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	50.04	0.00	1536.18	1468.37	0.250	0.33	0.33	0.052	A
2	351.62	58.60	351.62	121.71	311.72	0.00	1398.23	785.34	0.251	0.33	0.33	0.057	A
3	373.26	62.21	373.25	424.64	238.69	0.00	1276.98	1093.86	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	62.53	0.00	1527.33	1468.37	0.314	0.33	0.45	0.057	A
2	440.46	73.41	439.57	152.18	389.88	0.00	1343.92	785.34	0.328	0.33	0.48	0.066	A
3	467.56	77.93	466.44	531.05	298.40	0.00	1239.98	1093.86	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	71.61	0.00	1520.90	1468.37	0.361	0.45	0.56	0.062	A
2	504.20	84.03	503.36	174.27	446.48	0.00	1304.60	785.34	0.386	0.48	0.62	0.075	A
3	535.23	89.20	534.15	608.13	341.70	0.00	1213.14	1093.86	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	74.99	0.00	1518.50	1468.37	0.379	0.56	0.60	0.064	A
2	527.44	87.91	527.07	182.46	467.38	0.00	1290.08	785.34	0.409	0.62	0.68	0.079	A
3	559.89	93.32	559.41	636.65	357.80	0.00	1203.17	1093.86	0.465	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	71.80	0.00	1520.76	1468.37	0.362	0.60	0.57	0.062	A
2	504.20	84.03	504.48	174.61	447.15	0.00	1304.13	785.34	0.387	0.68	0.64	0.075	A
3	535.23	89.20	535.57	609.17	342.46	0.00	1212.67	1093.86	0.441	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	62.83	0.00	1527.11	1468.37	0.315	0.57	0.46	0.057	A
2	440.46	73.41	441.33	152.74	391.01	0.00	1343.14	785.34	0.328	0.64	0.49	0.067	A
3	467.56	77.93	468.69	532.75	299.59	0.00	1239.24	1093.86	0.377	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	50.20	0.00	1536.06	1468.37	0.250	0.46	0.33	0.052	A
2	351.62	58.60	352.55	122.02	312.35	0.00	1397.79	785.34	0.252	0.49	0.34	0.057	A
3	373.26	62.21	374.44	425.57	239.32	0.00	1276.59	1093.86	0.292	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	50.04	0.00	1536.17	1468.37	0.250	0.33	0.33	0.052	A
2	351.62	58.60	351.63	121.72	311.73	0.00	1398.22	785.34	0.251	0.34	0.34	0.057	A
3	373.26	62.21	373.27	424.66	238.70	0.00	1276.97	1093.86	0.292	0.42	0.41	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	4.10	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	5.49	0.55	0.062	A	A
2	6.07	0.61	0.075	A	A
3	7.55	0.75	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	8.41	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	8.13	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	4.28	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)	I' - 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	✓	180.00	100.000
3	ONE HOUR	✓	671.00	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	121.72	123.34		
16:45-16:55	3	453.73	461.06		
16:55-17:05	1	549.75	562.43		
16:55-17:05	2	121.72	123.34		
16:55-17:05	3	453.73	461.06		
17:05-17:15	1	688.64	704.52		
17:05-17:15	2	152.47	154.50		
17:05-17:15	3	568.36	577.54		
17:15-17:25	1	788.30	806.48		
17:15-17:25	2	174.53	176.86		
17:15-17:25	3	650.61	661.12		
17:25-17:35	1	824.62	843.64		
17:25-17:35	2	182.57	185.01		
17:25-17:35	3	680.59	691.59		
17:35-17:45	1	788.30	806.48		
17:35-17:45	2	174.53	176.86		
17:35-17:45	3	650.61	661.12		
17:45-17:55	1	688.64	704.52		
17:45-17:55	2	152.47	154.50		
17:45-17:55	3	568.36	577.54		
17:55-18:05	1	549.75	562.43		
17:55-18:05	2	121.72	123.34		
17:55-18:05	3	453.73	461.06		
18:05-18:15	1	549.75	562.43		
18:05-18:15	2	121.72	123.34		
18:05-18:15	3	453.73	461.06		

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	60.000
	3	542.000	129.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.35	0.65
	2	0.67	0.00	0.33
	3	0.81	0.19	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	0.08	1.15	A	664.17	996.25	70.18	0.07	0.78	70.18	0.07
2	0.15	0.06	0.17	A	147.05	220.57	11.43	0.05	0.13	11.43	0.05
3	0.49	0.08	0.93	A	548.16	822.25	58.35	0.07	0.65	58.35	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	546.51	445.02	86.70	0.00	1558.46	1480.20	0.353	0.00	0.54	0.059	A
2	121.72	20.29	121.13	276.26	356.94	0.00	1369.57	954.49	0.089	0.00	0.10	0.048	A
3	453.73	75.62	450.96	397.32	80.76	0.00	1427.43	1067.34	0.318	0.00	0.46	0.061	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	549.74	447.63	87.23	0.00	1558.11	1480.20	0.353	0.54	0.54	0.059	A
2	121.72	20.29	121.71	277.91	359.05	0.00	1368.14	954.49	0.089	0.10	0.10	0.048	A
3	453.73	75.62	453.72	399.62	81.14	0.00	1427.18	1067.34	0.318	0.46	0.46	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	687.13	559.63	109.04	0.00	1543.71	1480.19	0.446	0.54	0.80	0.070	A
2	152.47	25.41	152.26	347.38	448.79	0.00	1307.06	954.50	0.117	0.10	0.13	0.052	A
3	568.36	94.73	567.16	499.54	101.51	0.00	1413.98	1067.34	0.402	0.46	0.66	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	786.82	640.87	124.87	0.00	1533.25	1480.19	0.514	0.80	1.04	0.080	A
2	174.53	29.09	174.36	397.78	513.90	0.00	1262.74	954.50	0.138	0.13	0.16	0.055	A
3	650.62	108.44	649.50	572.02	116.24	0.00	1404.43	1067.34	0.463	0.66	0.85	0.079	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	823.97	671.03	130.75	0.00	1529.36	1480.19	0.539	1.04	1.15	0.085	A
2	182.57	30.43	182.51	416.56	538.16	0.00	1246.23	954.50	0.147	0.16	0.17	0.056	A
3	680.60	113.43	680.11	599.00	121.67	0.00	1400.92	1067.34	0.486	0.85	0.93	0.083	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	788.77	642.20	125.15	0.00	1533.07	1480.19	0.514	1.15	1.07	0.081	A
2	174.53	29.09	174.59	398.74	515.17	0.00	1261.87	954.50	0.138	0.17	0.16	0.055	A
3	650.62	108.44	650.96	573.37	116.39	0.00	1404.34	1067.34	0.463	0.93	0.87	0.080	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	690.19	561.79	109.49	0.00	1543.41	1480.19	0.446	1.07	0.82	0.070	A
2	152.47	25.41	152.64	348.89	450.79	0.00	1305.70	954.50	0.117	0.16	0.13	0.052	A
3	568.36	94.73	569.53	501.66	101.76	0.00	1413.82	1067.34	0.402	0.87	0.68	0.071	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	551.34	448.80	87.47	0.00	1557.95	1480.20	0.353	0.82	0.55	0.060	A
2	121.72	20.29	121.92	278.71	360.10	0.00	1367.42	954.49	0.089	0.13	0.10	0.048	A
3	453.73	75.62	454.99	400.74	81.28	0.00	1427.09	1067.34	0.318	0.68	0.47	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	87.23	0.00	1558.11	1480.20	0.353	0.55	0.55	0.060	A
2	121.72	20.29	121.72	277.93	359.07	0.00	1368.12	954.49	0.089	0.10	0.10	0.048	A
3	453.73	75.62	453.74	399.65	81.14	0.00	1427.18	1067.34	0.318	0.47	0.47	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	5.22	0.52	0.059	A	A
2	0.95	0.09	0.048	A	A
3	4.47	0.45	0.061	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	5.42	0.54	0.059	A	A
2	0.97	0.10	0.048	A	A
3	4.63	0.46	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	7.72	0.77	0.070	A	A
2	1.29	0.13	0.052	A	A
3	6.46	0.65	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	10.10	1.01	0.080	A	A
2	1.57	0.16	0.055	A	A
3	8.27	0.83	0.079	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	11.28	1.13	0.085	A	A
2	1.69	0.17	0.056	A	A
3	9.15	0.91	0.083	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	10.91	1.09	0.081	A	A
2	1.63	0.16	0.055	A	A
3	8.87	0.89	0.080	A	A

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

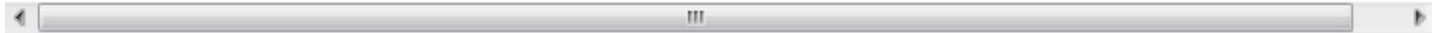
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.39	0.84	0.070	A	A
2	1.35	0.14	0.052	A	A
3	6.98	0.70	0.071	A	A

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	5.65	0.57	0.060	A	A
2	1.00	0.10	0.048	A	A
3	4.83	0.48	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	5.49	0.55	0.060	A	A
2	0.98	0.10	0.048	A	A
3	4.69	0.47	0.062	A	A



Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2015
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Filename: 2017 Base Resi-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 12:19:37

- » (Default Analysis Set) - Scenario 1, AM
- » (Default Analysis Set) - Scenario 2, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
A1 - Scenario 1								
Arm 1	1.82	0.09	0.65	A				
Arm 2	0.14	0.07	0.12	A				
Arm 3	0.51	0.04	0.34	A				
Arm 4	0.17	0.06	0.15	A				
A1 - Scenario 2								
Arm 1					0.79	0.05	0.44	A
Arm 2					0.25	0.06	0.20	A
Arm 3					1.05	0.06	0.51	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 12:19:35

File summary

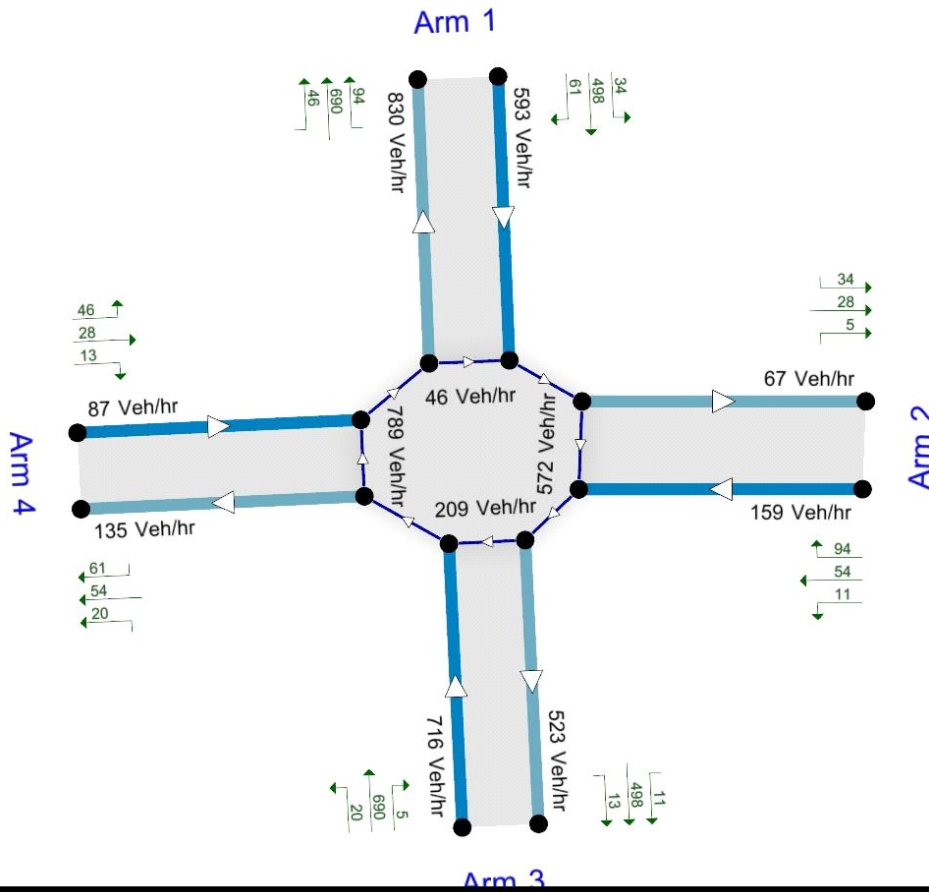
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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)	I' - 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	✓	1278.00	100.000
2	ONE HOUR	✓	111.00	100.000
3	ONE HOUR	✓	703.00	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	864.18	881.47		
07:45-07:55	2	75.06	80.81		
07:45-07:55	3	475.37	501.35		
07:45-07:55	4	119.01	131.44		
07:55-08:05	1	864.18	881.47		
07:55-08:05	2	75.06	80.81		
07:55-08:05	3	475.37	501.35		
07:55-08:05	4	119.01	131.44		
08:05-08:15	1	1082.51	1104.16		
08:05-08:15	2	94.02	101.22		
08:05-08:15	3	595.47	628.02		
08:05-08:15	4	149.08	164.65		
08:15-08:25	1	1239.17	1263.95		
08:15-08:25	2	107.63	115.87		
08:15-08:25	3	681.64	718.90		
08:15-08:25	4	170.65	188.47		
08:25-08:35	1	1296.27	1322.20		
08:25-08:35	2	112.59	121.21		
08:25-08:35	3	713.05	752.03		
08:25-08:35	4	178.52	197.16		
08:35-08:45	1	1239.17	1263.95		
08:35-08:45	2	107.63	115.87		
08:35-08:45	3	681.64	718.90		
08:35-08:45	4	170.65	188.47		
08:45-08:55	1	1082.51	1104.16		
08:45-08:55	2	94.02	101.22		
08:45-08:55	3	595.47	628.02		
08:45-08:55	4	149.08	164.65		
08:55-09:05	1	864.18	881.47		
08:55-09:05	2	75.06	80.81		
08:55-09:05	3	475.37	501.35		
08:55-09:05	4	119.01	131.44		
09:05-09:15	1	864.18	881.47		
09:05-09:15	2	75.06	80.81		
09:05-09:15	3	475.37	501.35		
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	1121.000	60.000
	2	56.000	0.000	7.000	48.000
	3	667.000	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	0.88	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	0.65	0.09	1.82	A	1044.04	1566.06	103.70	0.07	1.15	103.71	0.07
2	0.12	0.07	0.14	A	90.68	136.02	8.72	0.06	0.10	8.72	0.06
3	0.34	0.04	0.51	A	574.30	861.45	33.86	0.04	0.38	33.86	0.04
4	0.15	0.06	0.17	A	143.78	215.67	11.51	0.05	0.13	11.51	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	864.18	144.03	859.73	544.93	67.30	0.00	2017.39	1838.42	0.428	0.00	0.74	0.052	A
2	75.06	12.51	74.64	115.05	811.97	0.00	1139.37	630.62	0.066	0.00	0.07	0.056	A
3	475.37	79.23	473.66	776.31	110.29	0.00	2136.32	1767.96	0.223	0.00	0.28	0.036	A
4	119.01	19.84	118.43	90.16	493.79	0.00	1334.13	556.71	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	864.18	144.03	864.16	547.04	67.62	0.00	2017.15	1838.42	0.428	0.74	0.75	0.052	A
2	75.06	12.51	75.06	115.63	816.15	0.00	1137.20	630.62	0.066	0.07	0.07	0.056	A
3	475.37	79.23	475.36	780.31	110.89	0.00	2135.93	1767.96	0.223	0.28	0.29	0.036	A
4	119.01	19.84	119.01	90.61	495.65	0.00	1333.18	556.71	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	1082.51	180.42	1080.04	684.47	84.59	0.00	2004.60	1838.42	0.540	0.75	1.16	0.065	A
2	94.02	15.67	93.85	144.57	1020.06	0.00	1031.37	630.62	0.091	0.07	0.10	0.064	A
3	595.46	99.24	594.84	975.27	138.63	0.00	2118.16	1767.96	0.281	0.29	0.39	0.039	A
4	149.08	24.85	148.87	113.29	620.19	0.00	1269.68	556.71	0.117	0.10	0.13	0.054	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	1239.17	206.53	1236.48	783.76	96.87	0.00	1995.52	1838.42	0.621	1.16	1.61	0.079	A
2	107.63	17.94	107.47	165.53	1167.81	0.00	954.69	630.62	0.113	0.10	0.13	0.071	A
3	681.64	113.61	681.12	1116.54	158.74	0.00	2105.27	1767.96	0.324	0.39	0.48	0.042	A
4	170.65	28.44	170.48	129.71	710.14	0.00	1223.82	556.71	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	1296.27	216.05	1294.97	820.30	101.39	0.00	1992.18	1838.42	0.651	1.61	1.82	0.086	A
2	112.59	18.76	112.52	173.32	1223.05	0.00	926.03	630.62	0.122	0.13	0.14	0.074	A
3	713.05	118.84	712.84	1169.34	166.22	0.00	2100.48	1767.96	0.339	0.48	0.51	0.043	A
4	178.52	29.75	178.45	135.82	743.24	0.00	1206.95	556.71	0.148	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	1239.17	206.53	1240.11	784.64	96.99	0.00	1995.43	1838.42	0.621	1.82	1.67	0.080	A
2	107.63	17.94	107.68	165.90	1171.20	0.00	952.94	630.62	0.113	0.14	0.13	0.071	A
3	681.64	113.61	681.81	1119.77	159.11	0.00	2105.04	1767.96	0.324	0.51	0.48	0.042	A
4	170.65	28.44	170.71	130.00	710.92	0.00	1223.43	556.71	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	1082.51	180.42	1085.38	685.93	84.80	0.00	2004.45	1838.42	0.540	1.67	1.19	0.066	A
2	94.02	15.67	94.18	145.13	1025.05	0.00	1028.79	630.62	0.091	0.13	0.10	0.064	A
3	595.46	99.24	595.99	980.03	139.20	0.00	2117.80	1767.96	0.281	0.48	0.39	0.039	A
4	149.08	24.85	149.25	113.73	621.47	0.00	1269.03	556.71	0.117	0.16	0.13	0.054	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	864.18	144.03	866.78	547.84	67.74	0.00	2017.06	1838.42	0.428	1.19	0.76	0.052	A
2	75.06	12.51	75.24	115.91	818.61	0.00	1135.93	630.62	0.066	0.10	0.07	0.057	A
3	475.37	79.23	476.00	782.66	111.19	0.00	2135.75	1767.96	0.223	0.39	0.29	0.036	A
4	119.01	19.84	119.22	90.83	496.35	0.00	1332.82	556.71	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	864.18	144.03	864.20	547.05	67.62	0.00	2017.15	1838.42	0.428	0.76	0.75	0.052	A
2	75.06	12.51	75.06	115.63	816.19	0.00	1137.18	630.62	0.066	0.07	0.07	0.056	A
3	475.37	79.23	475.37	780.35	110.90	0.00	2135.93	1767.96	0.223	0.29	0.29	0.036	A
4	119.01	19.84	119.01	90.61	495.66	0.00	1333.18	556.71	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	7.19	0.72	0.052	A	A
2	0.68	0.07	0.056	A	A
3	2.79	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	7.45	0.74	0.052	A	A
2	0.70	0.07	0.056	A	A
3	2.85	0.29	0.036	A	A
4	0.98	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	11.20	1.12	0.065	A	A
2	0.98	0.10	0.064	A	A
3	3.83	0.38	0.039	A	A
4	1.30	0.13	0.054	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	15.46	1.55	0.079	A	A
2	1.24	0.12	0.071	A	A
3	4.69	0.47	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	17.76	1.78	0.086	A	A
2	1.36	0.14	0.074	A	A
3	5.05	0.51	0.043	A	A
4	1.71	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	17.02	1.70	0.080	A	A
2	1.30	0.13	0.071	A	A
3	4.86	0.49	0.042	A	A
4	1.65	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	12.30	1.23	0.066	A	A
2	1.03	0.10	0.064	A	A
3	3.99	0.40	0.039	A	A
4	1.36	0.14	0.054	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	7.78	0.78	0.052	A	A
2	0.73	0.07	0.057	A	A
3	2.92	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	7.54	0.75	0.052	A	A
2	0.71	0.07	0.056	A	A
3	2.87	0.29	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)	I' - 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	✓	881.00	100.000
2	ONE HOUR	✓	236.00	100.000
3	ONE HOUR	✓	1063.00	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	595.73	610.11		
16:45-16:55	2	159.58	163.38		
16:45-16:55	3	718.80	726.34		
16:45-16:55	4	87.23	91.42		
16:55-17:05	1	595.73	610.11		
16:55-17:05	2	159.58	163.38		
16:55-17:05	3	718.80	726.34		
16:55-17:05	4	87.23	91.42		
17:05-17:15	1	746.24	764.25		
17:05-17:15	2	199.90	204.65		
17:05-17:15	3	900.40	909.85		
17:05-17:15	4	109.27	114.51		
17:15-17:25	1	854.23	874.85		
17:15-17:25	2	228.83	234.27		
17:15-17:25	3	1030.70	1041.51		
17:15-17:25	4	125.08	131.08		
17:25-17:35	1	893.60	915.16		
17:25-17:35	2	239.37	245.06		
17:25-17:35	3	1078.20	1089.51		
17:25-17:35	4	130.84	137.12		
17:35-17:45	1	854.23	874.85		
17:35-17:45	2	228.83	234.27		
17:35-17:45	3	1030.70	1041.51		
17:35-17:45	4	125.08	131.08		
17:45-17:55	1	746.24	764.25		
17:45-17:55	2	199.90	204.65		
17:45-17:55	3	900.40	909.85		
17:45-17:55	4	109.27	114.51		
17:55-18:05	1	595.73	610.11		
17:55-18:05	2	159.58	163.38		
17:55-18:05	3	718.80	726.34		
17:55-18:05	4	87.23	91.42		
18:05-18:15	1	595.73	610.11		
18:05-18:15	2	159.58	163.38		
18:05-18:15	3	718.80	726.34		
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	740.000	91.000
	2	139.000	0.000	17.000	80.000
	3	1025.000	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	0.44	0.05	0.79	A	719.72	1079.58	50.70	0.05	0.56	50.71	0.05
2	0.20	0.06	0.25	A	192.80	289.19	16.51	0.06	0.18	16.51	0.06
3	0.51	0.06	1.05	A	868.40	1302.60	63.83	0.05	0.71	63.84	0.05
4	0.12	0.06	0.14	A	105.38	158.08	9.02	0.06	0.10	9.02	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	595.73	99.29	593.25	830.18	45.75	0.00	2030.01	1879.66	0.293	0.00	0.41	0.042	A
2	159.58	26.60	158.77	66.64	572.36	0.00	1329.45	629.25	0.120	0.00	0.14	0.051	A
3	718.80	119.80	715.84	522.52	208.61	0.00	2166.72	1794.24	0.332	0.00	0.49	0.041	A
4	87.23	14.54	86.79	135.30	789.15	0.00	1264.50	581.41	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	595.73	99.29	595.72	833.74	45.98	0.00	2029.87	1879.66	0.293	0.41	0.41	0.042	A
2	159.58	26.60	159.58	66.94	574.76	0.00	1328.14	629.25	0.120	0.14	0.14	0.051	A
3	718.80	119.80	718.79	524.72	209.62	0.00	2166.06	1794.24	0.332	0.49	0.50	0.041	A
4	87.23	14.54	87.23	135.91	792.49	0.00	1262.78	581.41	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	746.24	124.37	745.24	1042.78	57.51	0.00	2022.61	1879.66	0.369	0.41	0.58	0.047	A
2	199.90	33.32	199.58	83.73	719.01	0.00	1249.55	629.25	0.160	0.14	0.19	0.057	A
3	900.40	150.07	899.02	656.41	262.18	0.00	2131.60	1794.24	0.422	0.50	0.73	0.049	A
4	109.27	18.21	109.09	170.01	991.20	0.00	1160.34	581.41	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	854.23	142.37	853.35	1194.00	65.85	0.00	2017.36	1879.66	0.423	0.58	0.73	0.052	A
2	228.83	38.14	228.55	95.88	823.31	0.00	1192.73	629.25	0.192	0.19	0.24	0.062	A
3	1030.70	171.78	1029.36	751.63	300.23	0.00	2106.65	1794.24	0.489	0.73	0.95	0.056	A
4	125.08	20.85	124.93	194.67	1134.93	0.00	1086.25	581.41	0.115	0.10	0.13	0.062	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	893.60	148.93	893.23	1249.95	68.94	0.00	2015.42	1879.66	0.443	0.73	0.79	0.053	A
2	239.37	39.90	239.26	100.37	861.79	0.00	1171.76	629.25	0.204	0.24	0.25	0.064	A
3	1078.20	179.70	1077.61	786.76	314.29	0.00	2097.44	1794.24	0.514	0.95	1.05	0.059	A
4	130.84	21.81	130.78	203.78	1188.12	0.00	1058.83	581.41	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	854.23	142.37	854.53	1196.07	65.96	0.00	2017.29	1879.66	0.423	0.79	0.74	0.052	A
2	228.83	38.14	228.92	96.03	824.46	0.00	1192.10	629.25	0.192	0.25	0.24	0.062	A
3	1030.70	171.78	1031.17	752.68	300.70	0.00	2106.35	1794.24	0.489	1.05	0.97	0.056	A
4	125.08	20.85	125.13	194.97	1136.91	0.00	1085.23	581.41	0.115	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	746.24	124.37	747.15	1045.98	57.68	0.00	2022.50	1879.66	0.369	0.74	0.59	0.047	A
2	199.90	33.32	200.18	83.97	720.86	0.00	1248.54	629.25	0.160	0.24	0.19	0.057	A
3	900.40	150.07	901.78	658.11	262.94	0.00	2131.10	1794.24	0.423	0.97	0.74	0.049	A
4	109.27	18.21	109.43	170.48	994.24	0.00	1158.78	581.41	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	595.73	99.29	596.76	835.42	46.08	0.00	2029.81	1879.66	0.293	0.59	0.42	0.042	A
2	159.58	26.60	159.91	67.07	575.76	0.00	1327.60	629.25	0.120	0.19	0.14	0.051	A
3	718.80	119.80	720.23	525.64	210.03	0.00	2165.79	1794.24	0.332	0.74	0.50	0.042	A
4	87.23	14.54	87.41	136.17	794.09	0.00	1261.96	581.41	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	595.73	99.29	595.74	833.76	45.98	0.00	2029.87	1879.66	0.293	0.42	0.42	0.042	A
2	159.58	26.60	159.59	66.94	574.77	0.00	1328.13	629.25	0.120	0.14	0.14	0.051	A
3	718.80	119.80	718.81	524.73	209.62	0.00	2166.05	1794.24	0.332	0.50	0.50	0.041	A
4	87.23	14.54	87.23	135.92	792.52	0.00	1262.77	581.41	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	4.03	0.40	0.042	A	A
2	1.32	0.13	0.051	A	A
3	4.81	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	4.14	0.41	0.042	A	A
2	1.36	0.14	0.051	A	A
3	4.94	0.49	0.041	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	5.69	0.57	0.047	A	A
2	1.86	0.19	0.057	A	A
3	7.09	0.71	0.049	A	A
4	1.01	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	7.13	0.71	0.052	A	A
2	2.31	0.23	0.062	A	A
3	9.25	0.93	0.056	A	A
4	1.27	0.13	0.062	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	7.79	0.78	0.053	A	A
2	2.52	0.25	0.064	A	A
3	10.29	1.03	0.059	A	A
4	1.38	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	7.49	0.75	0.052	A	A
2	2.42	0.24	0.062	A	A
3	9.82	0.98	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	6.00	0.60	0.047	A	A
2	1.95	0.20	0.057	A	A
3	7.54	0.75	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	4.26	0.43	0.042	A	A
2	1.40	0.14	0.051	A	A
3	5.10	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	4.17	0.42	0.042	A	A
2	1.37	0.14	0.051	A	A
3	4.99	0.50	0.041	A	A
4	0.75	0.07	0.051	A	A

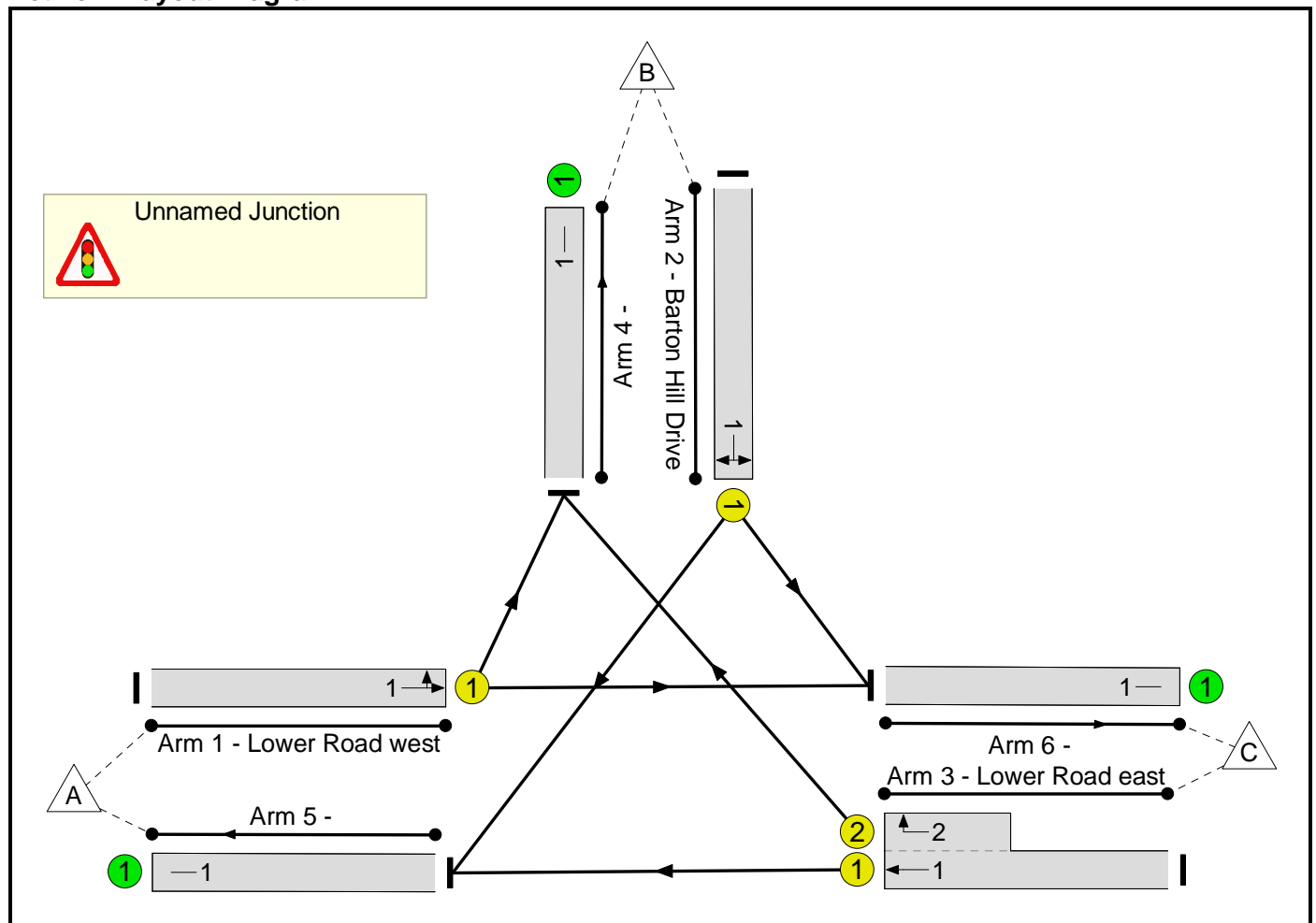


Full Input Data And Results
Full Input Data And Results

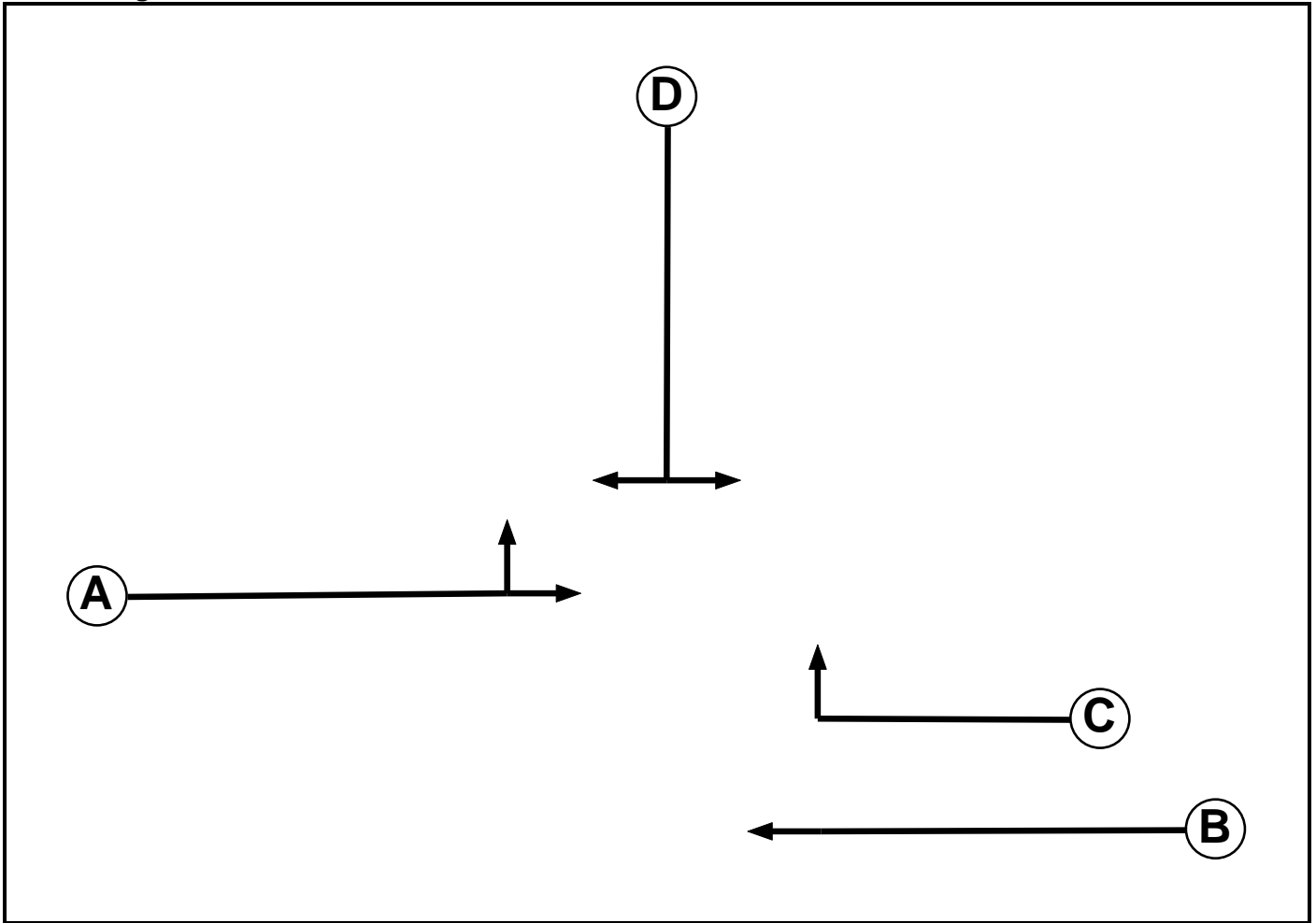
Project and User Details

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

Network Layout Diagram



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

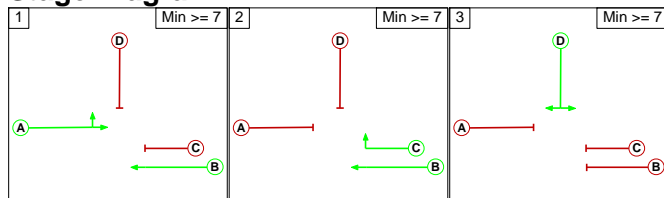
Phase Intergrens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	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

		To Stage		
		1	2	3
From Stage	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
5: '2017 AM Resi Devt'	08:00	09:00	01:00	
6: '2017 PM Resi Devt'	17:00	18:00	01:00	

Traffic Flows, Desired

FG5: '2017 AM Resi Devt'

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	252	542	794
	B	566	0	26	592
	C	792	20	0	812
	Tot.	1358	272	568	2198

FG6: '2017 PM Resi Devt'

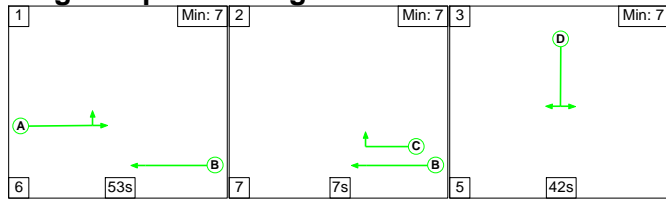
Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	446	805	1251
	B	232	0	17	249
	C	601	52	0	653
	Tot.	833	498	822	2153

Full Input Data And Results

Scenario 5: '2017 AM Resi Devt' (FG5: '2017 AM Resi Devt', Plan 5: '2017 AM Resi Devt')

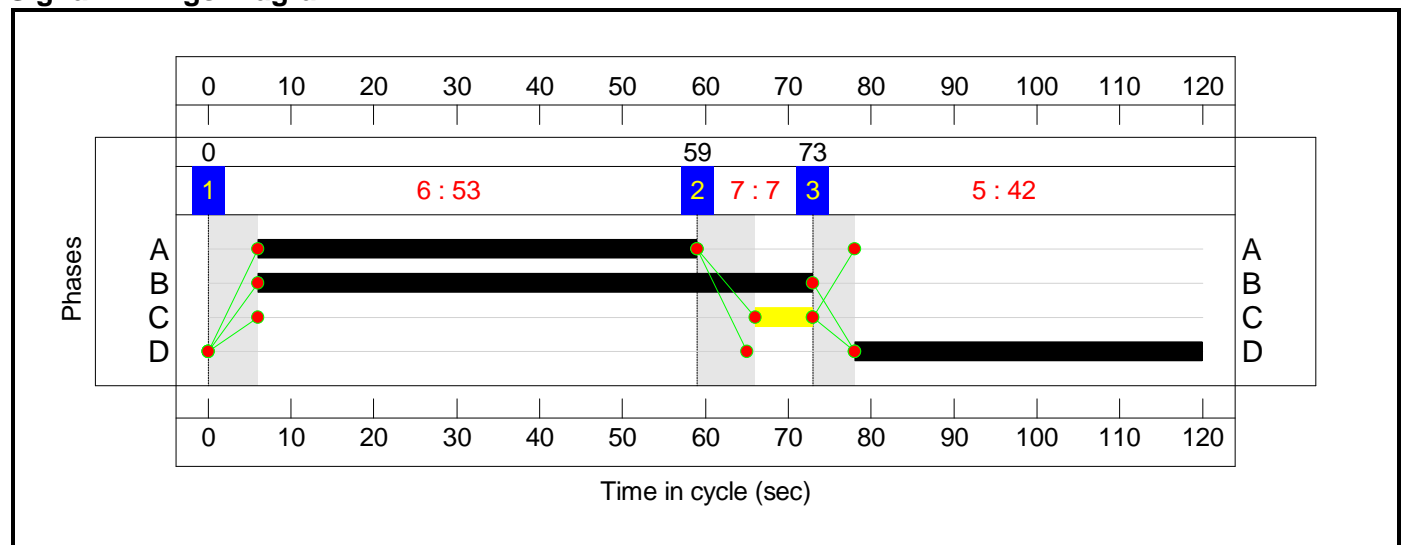
Stage Sequence Diagram



Stage Timings


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

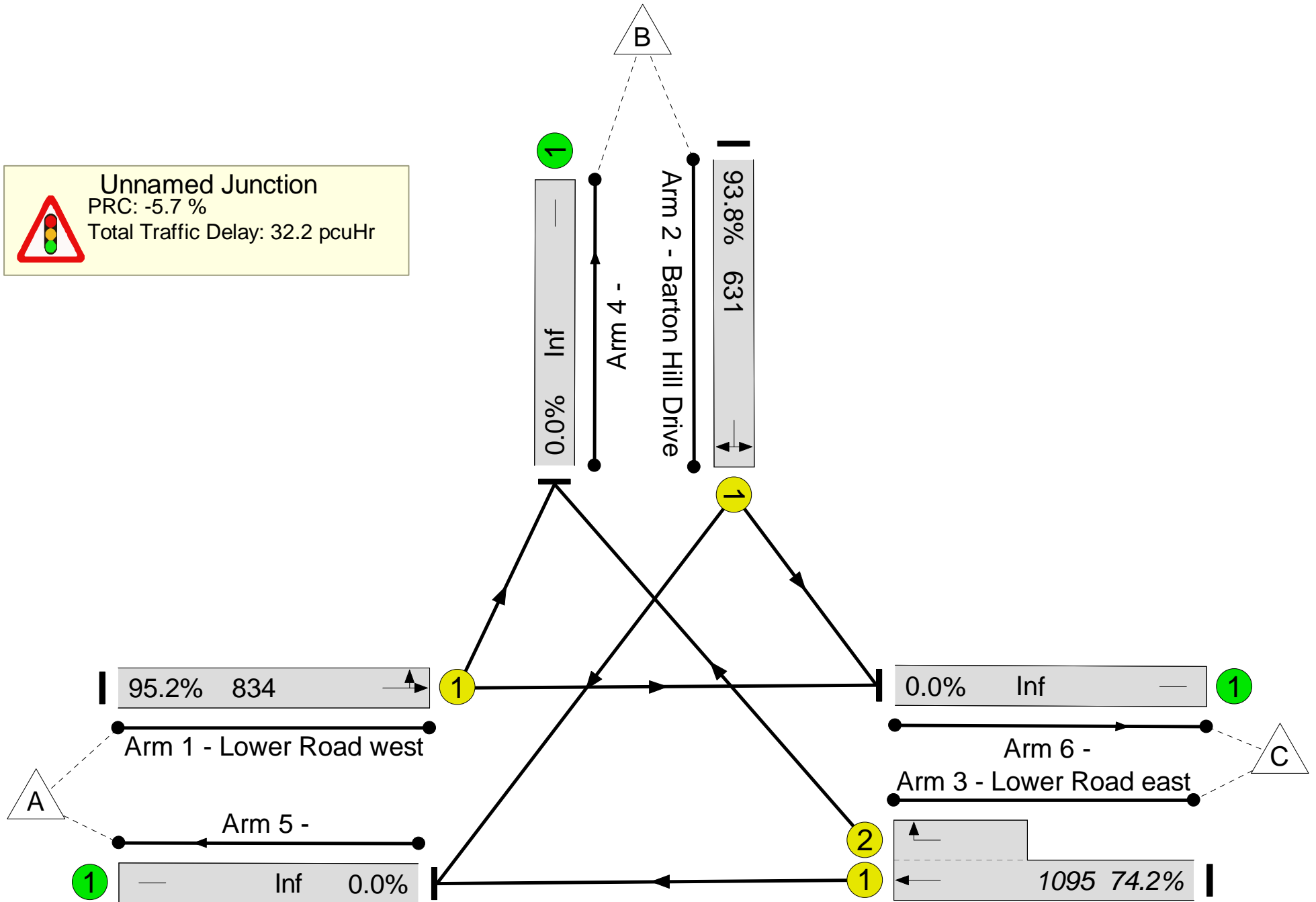
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: -5.7 %
 Total Traffic Delay: 32.2 pcuHr



Full Input Data And Results

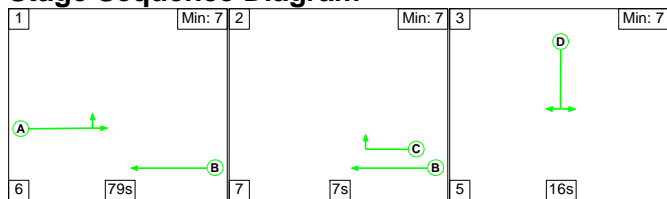
Network Results

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	-	-		-	-	-	-	-	-	95.2%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	95.2%
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	53	-	794	1854	834	95.2%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	42	-	592	1761	631	93.8%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	67:7	-	812	1915:1881	1095	74.2%
4/1		U	N/A	N/A	-		-	-	-	272	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1358	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	568	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	17.7	14.5	0.0	32.2	-	-	-	-
Unnamed Junction	-	-	0	0	0	17.7	14.5	0.0	32.2	-	-	-	-
1/1	794	794	-	-	-	7.0	7.2	-	14.2	64.6	25.4	7.2	32.6
2/1	592	592	-	-	-	6.1	5.8	-	12.0	72.7	18.9	5.8	24.7
3/1+3/2	812	812	-	-	-	4.5	1.4	-	5.9	26.4	19.9	1.4	21.4
4/1	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1358	1358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):	-5.7	Total Delay for Signalled Lanes (pcuHr):			32.16	Cycle Time (s): 120				
			PRC Over All Lanes (%):	-5.7	Total Delay Over All Lanes(pcuHr):			32.16					

Full Input Data And Results

Scenario 6: '2017 PM Resi Devt' (FG6: '2017 PM Resi Devt', Plan 5: '2017 AM Resi Devt')

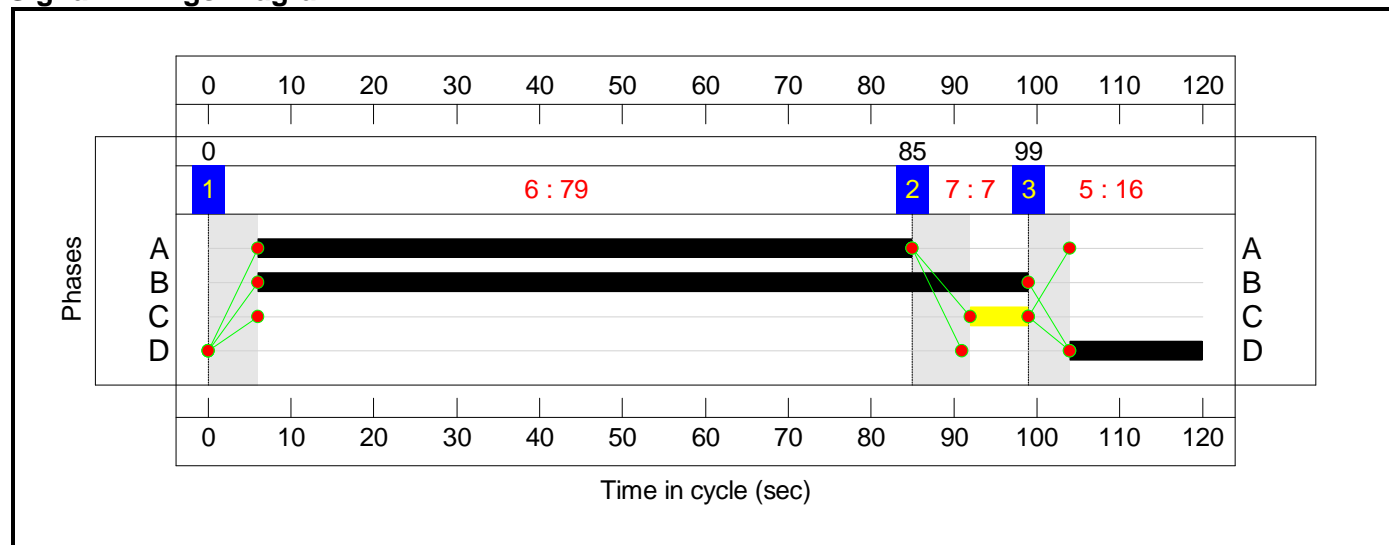
Stage Sequence Diagram



Stage Timings


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

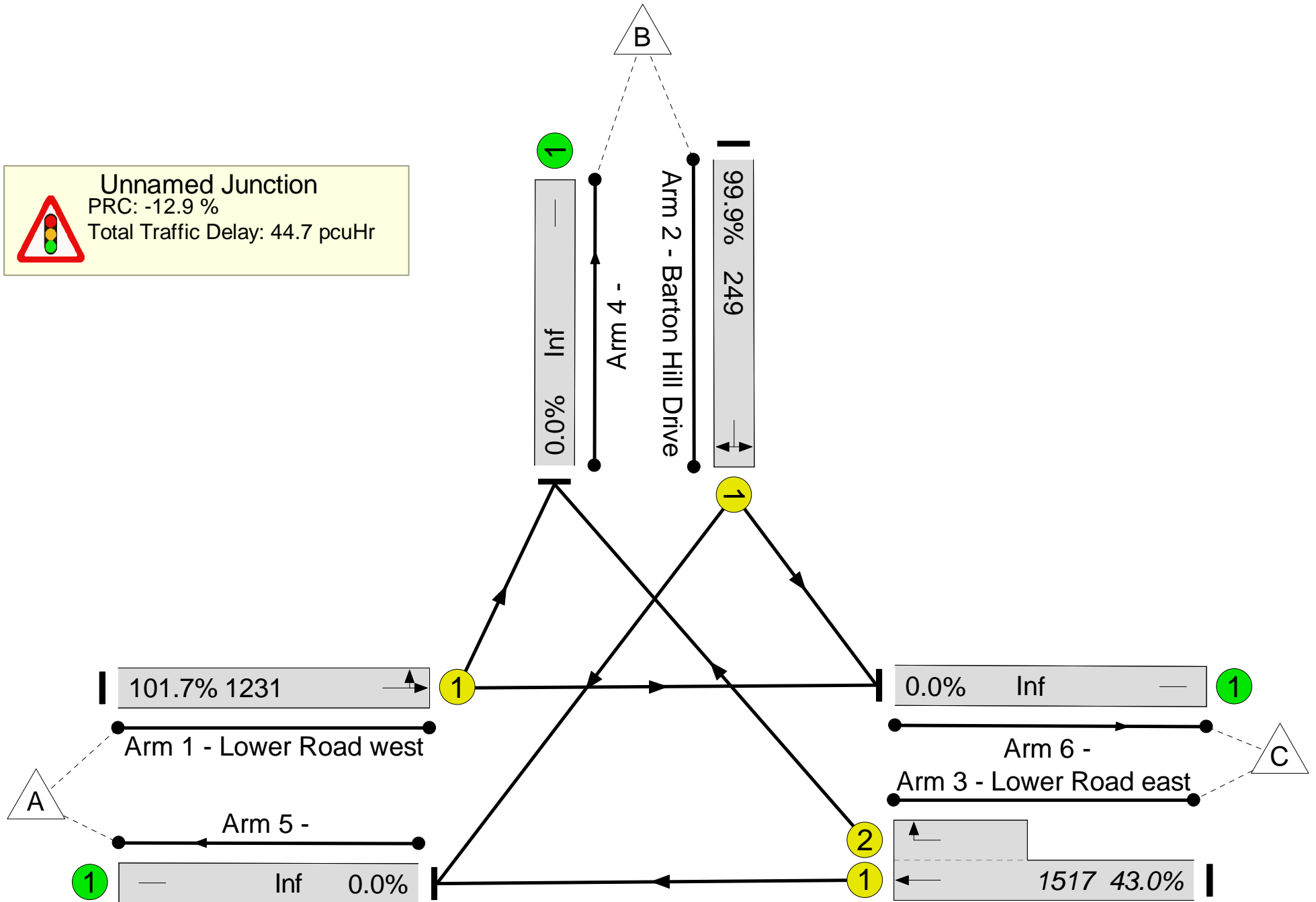
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Unnamed Junction
 PRC: -12.9 %
 Total Traffic Delay: 44.7 pcuHr



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	-	-		-	-	-	-	-	-	101.7%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	101.7%
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	79	-	1251	1846	1231	101.7%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	249	1760	249	99.9%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	93:7	-	653	1915:1881	1517	43.0%
4/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	822	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	13.1	31.7	0.0	44.7	-	-	-	-
Unnamed Junction	-	-	0	0	0	13.1	31.7	0.0	44.7	-	-	-	-
1/1	1251	1231	-	-	-	8.0	23.5	-	31.5	90.7	42.4	23.5	65.9
2/1	249	249	-	-	-	3.6	7.8	-	11.4	164.4	8.2	7.8	16.0
3/1+3/2	653	653	-	-	-	1.5	0.4	-	1.8	10.1	6.3	0.4	6.7
4/1	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	809	809	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): -12.9		Total Delay for Signalled Lanes (pcuHr): 44.73		Cycle Time (s): 120						
			PRC Over All Lanes (%): -12.9		Total Delay Over All Lanes(pcuHr): 44.73								