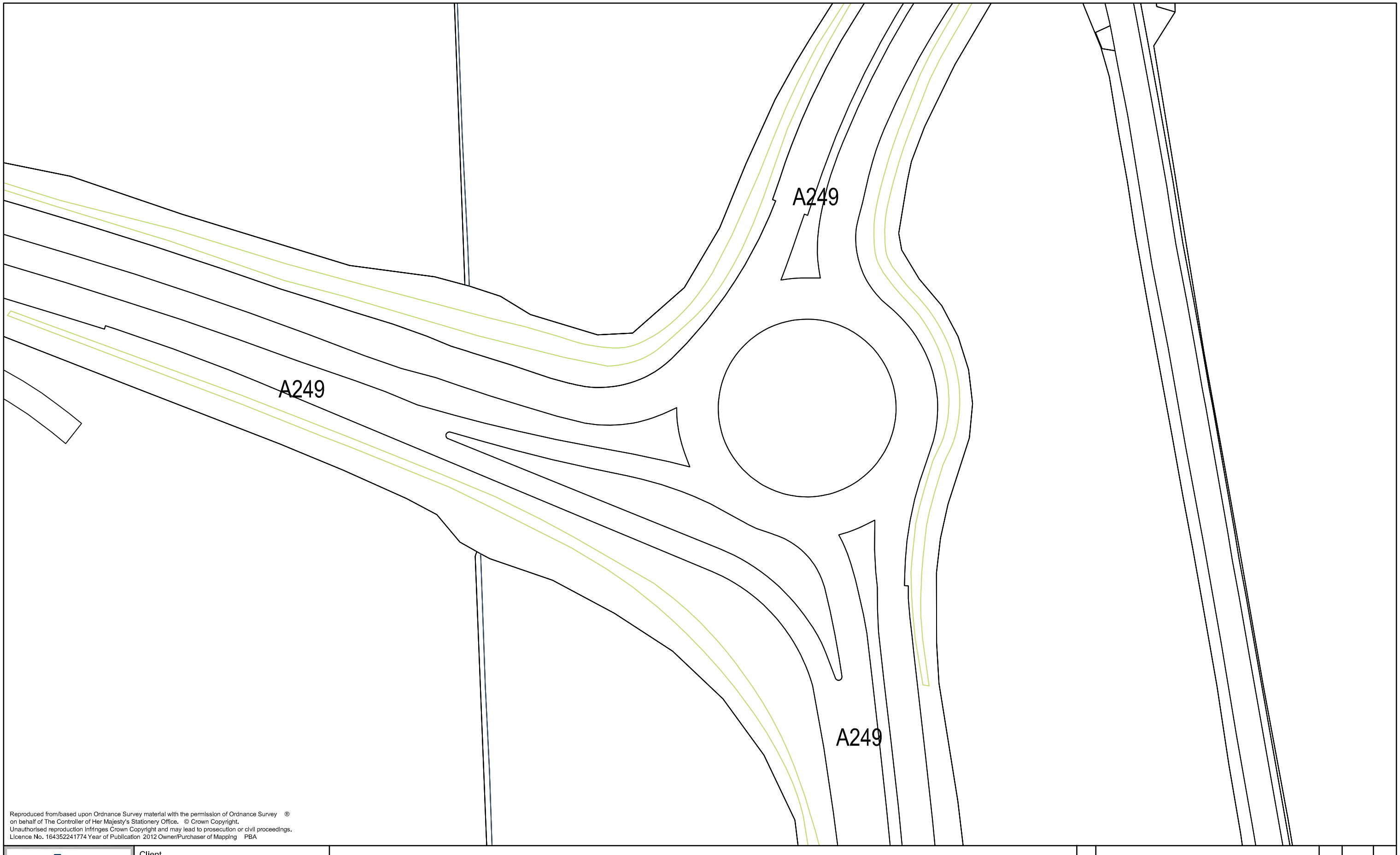
Appendix D – Junction Layouts



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A249 Junction
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

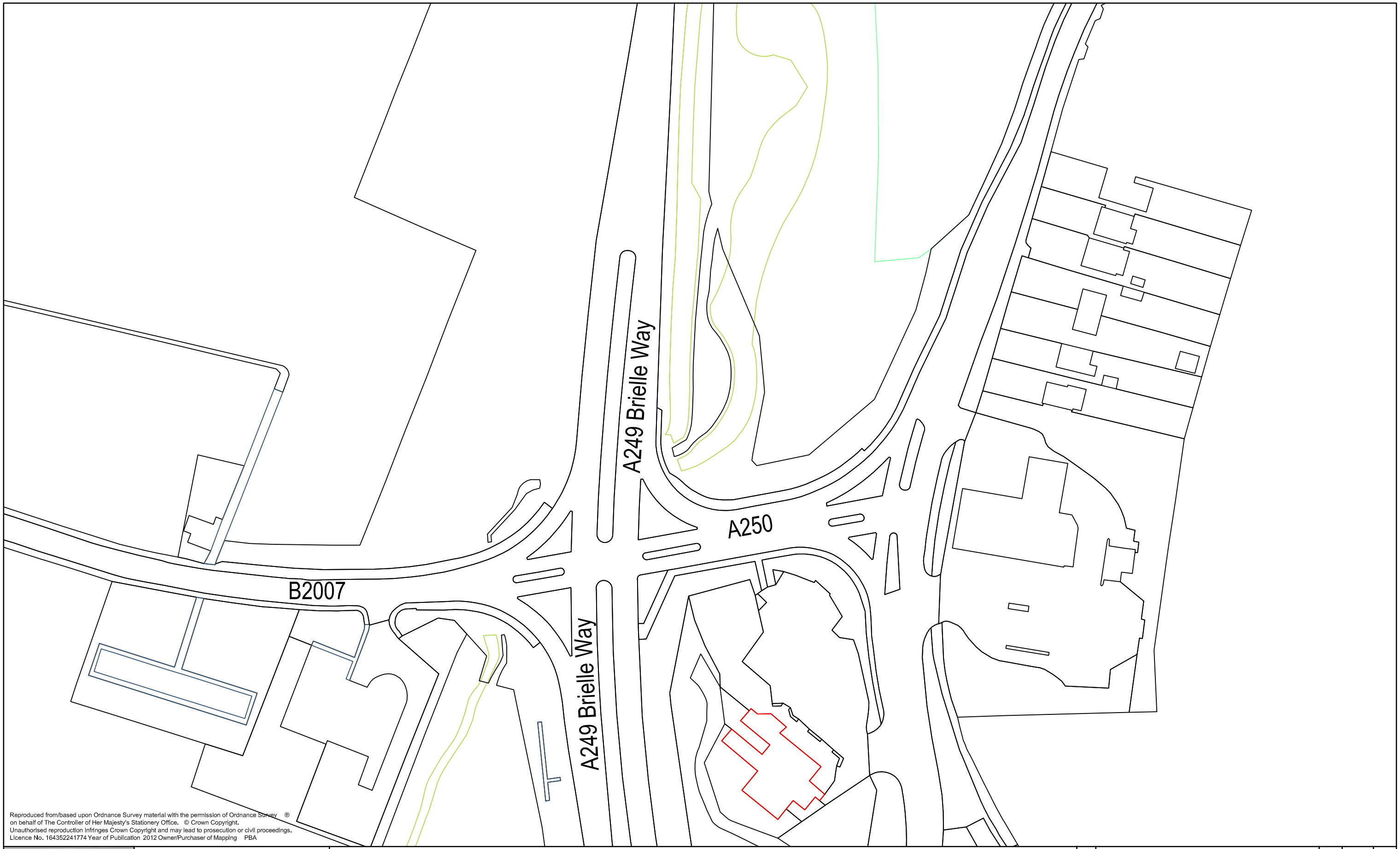
Date of 1st Issue	15/3/13
A3 Scale	1:1000
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

user name: faye murray

File Location: J:\26677 - gh - land at plover road, minster\3-autocad\drawings\26677-001-001a.dwg



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A249/B2007/A250
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

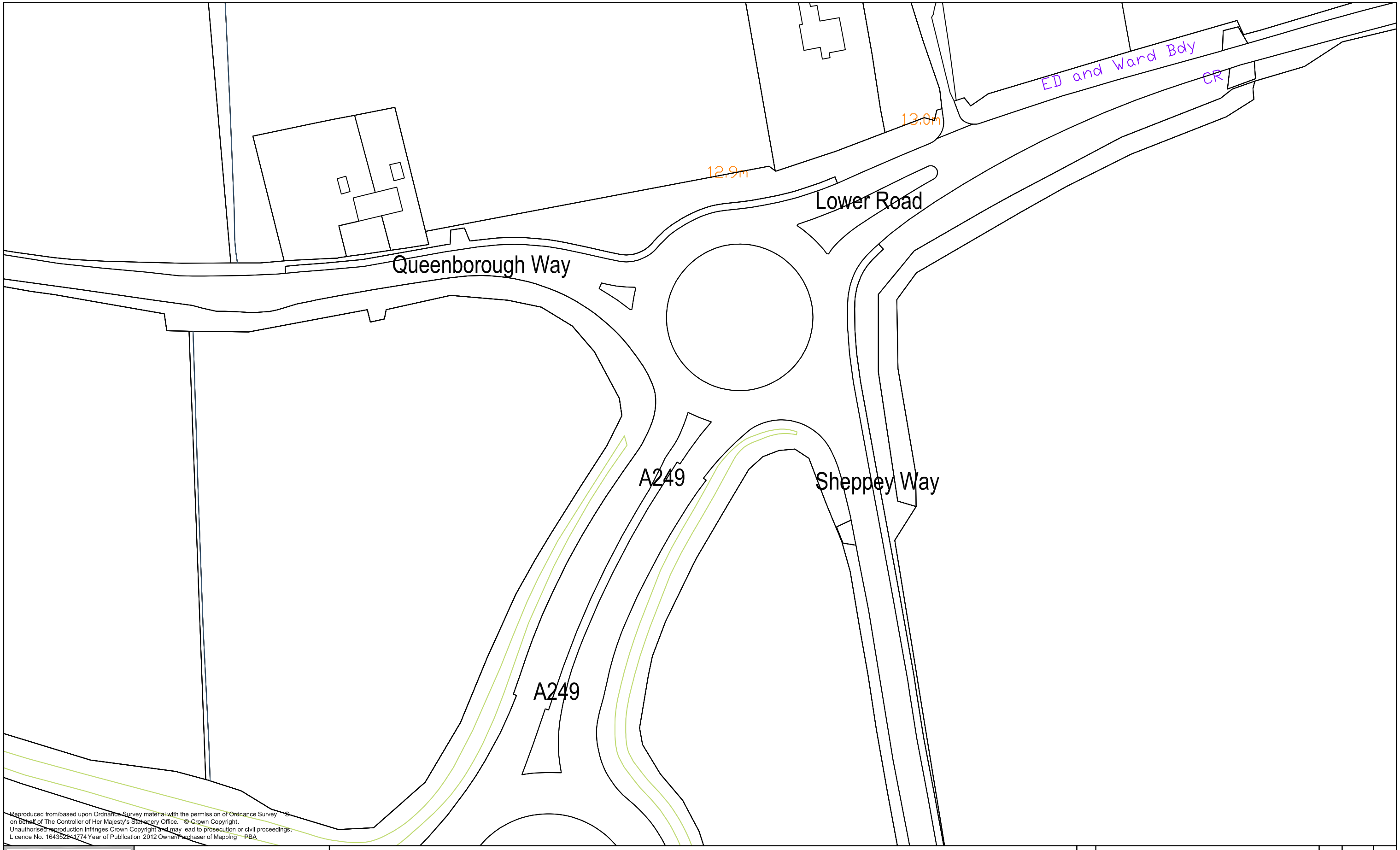
Date of 1st Issue	15/3/13
A3 Scale	1:1000
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

user name: faye murray

File Location: j:\26677 - gh - land at plover road, minster\3-autocad\drawings\26677-001-001a.dwg



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A249/Lower Road/Sheppey Way/Queenborough Way
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

Date of 1st Issue	15/3/13
A3 Scale	1:1000
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

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Barton Hill Drive/Minster Road
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

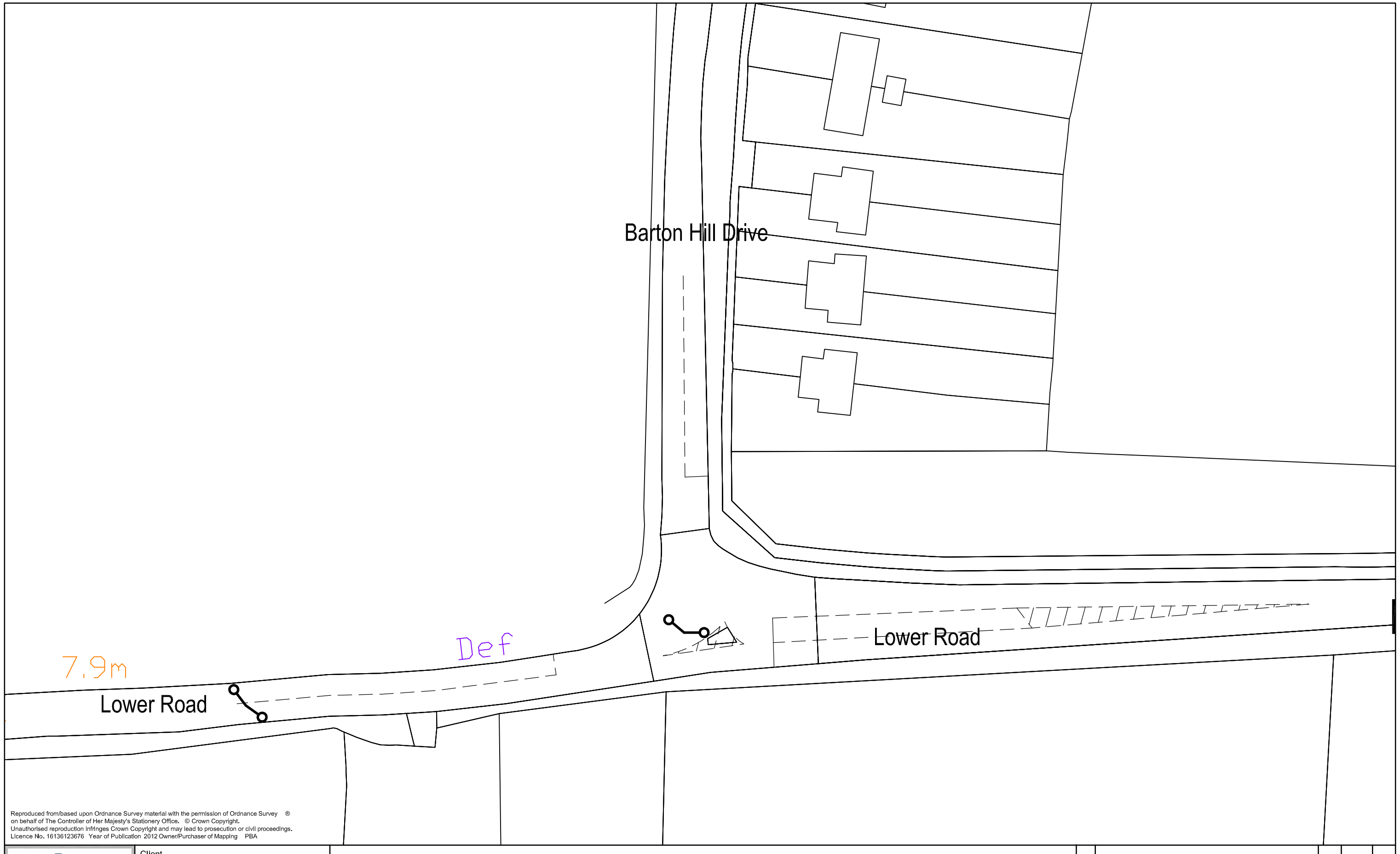
Date of 1st Issue	15/3/13
A3 Scale	1:500
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

user name: faye murray

File Location: j:\26677 - gh - land at plover road, minster\3-autocad\drawings\26677-001-001a.dwg



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Lower Road/Barton Hill Drive
Existing Layout

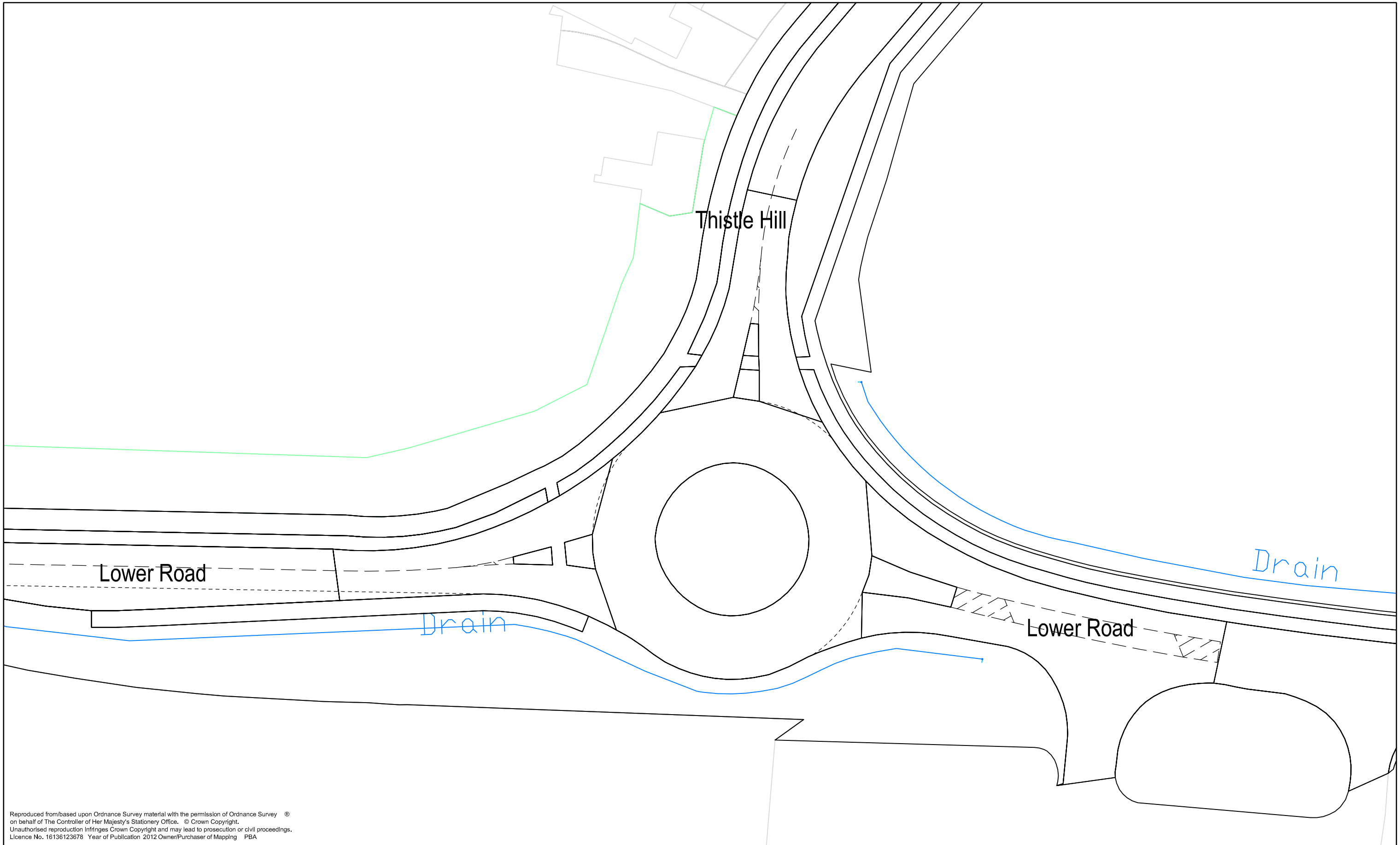
Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

Date of 1st Issue	15/3/13
A3 Scale	1:500
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A



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Lower Road/Thistle Hill
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

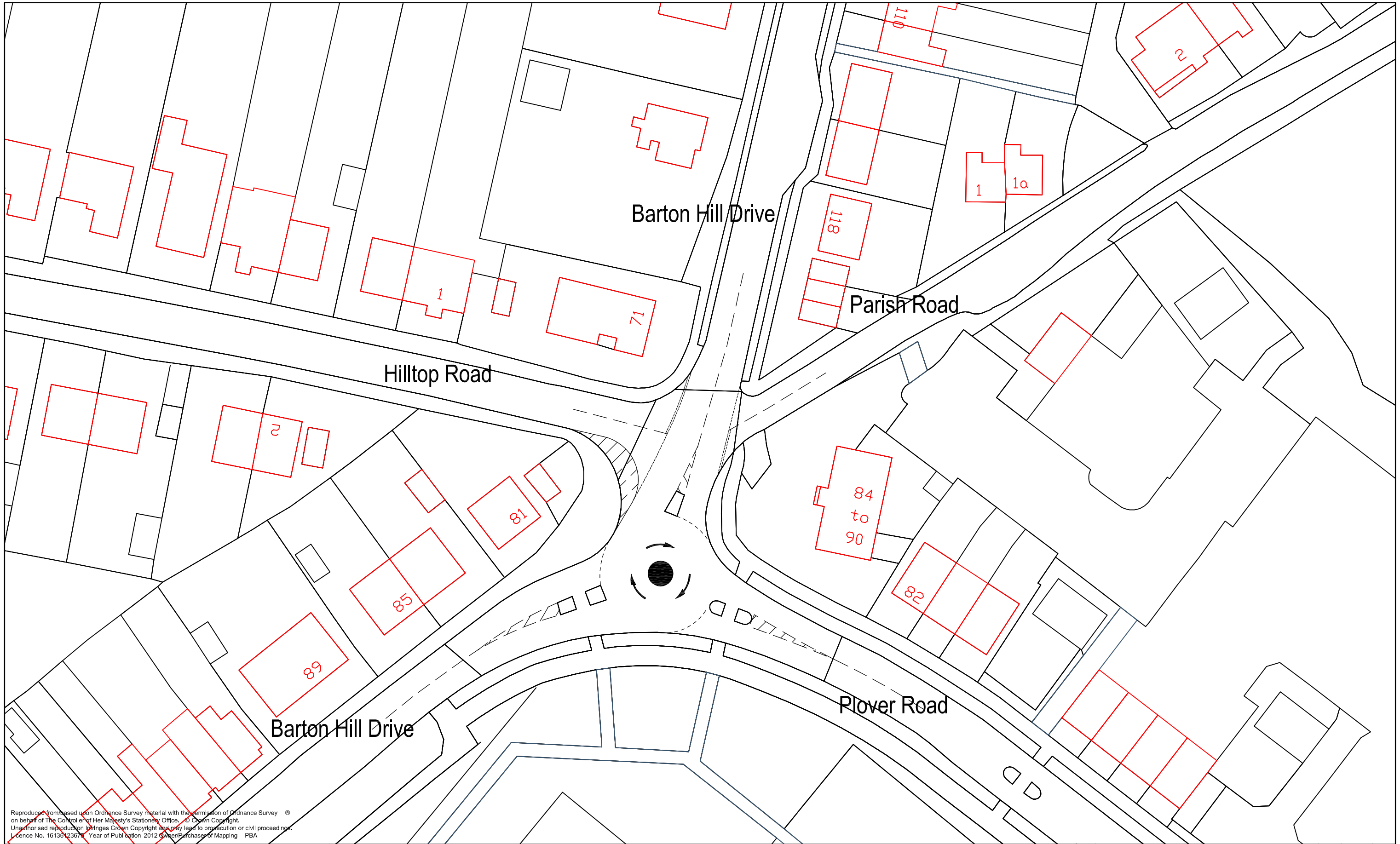
Date of 1st Issue	15/3/13
A3 Scale	1:500
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

user name: faye murray

File Location: J:\26677 - gh - land at plover road, minster\3-autocad\drawings\26677-001-001a.dwg



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Barton Hill Drive/Plover Road mini-roundabout
Existing Layout

Mark	Revision	Drawn	Date	Chkd

Drawing Status: For information

Date of 1st Issue	15/3/13
A3 Scale	1:500
Drawn by	FAM
Checked by	GH

Drawing Number: 26677-001-001

Revision: A

Appendix E – Model outputs (observed flows)

Junctions 8

ARCADY 8 - Roundabout Module

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

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

Filename: 2012 observed BartonHillDrive_MinsterRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\BartonHillDrive_MinsterRoad\2015 Models for TA
Report generation date: 12/06/2015 11:57:51

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.28	0.20	0.57	B				
Arm 2	2.70	0.32	0.75	C				
Arm 3	0.92	0.19	0.49	B				
	A1 - Scenario 2							
Arm 1					2.59	0.34	0.74	C
Arm 2					0.90	0.16	0.48	A
Arm 3					1.13	0.19	0.54	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 12/06/2015 11:57:49

File summary

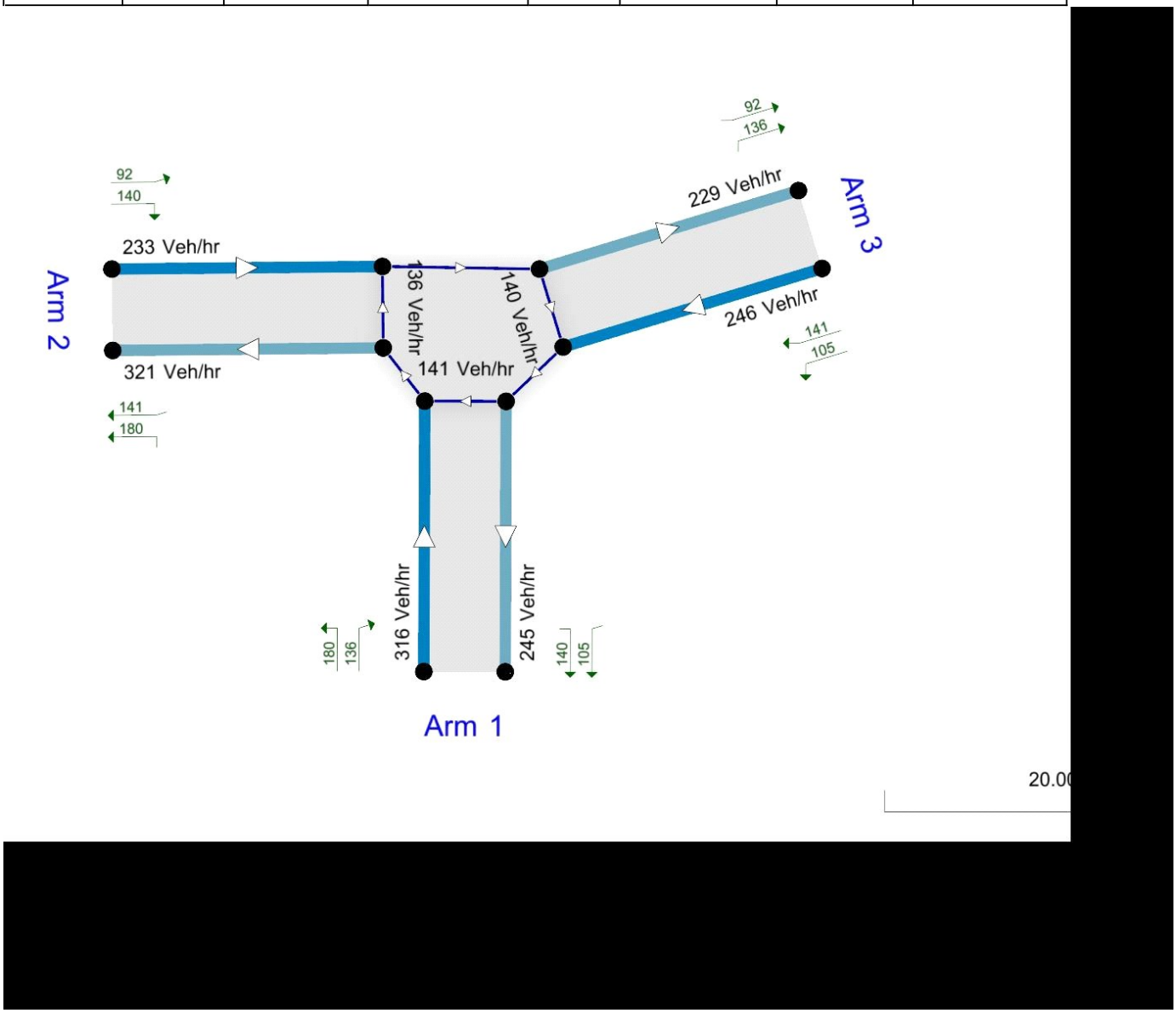
Title	(untitled)
Location	
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Barton Hill Drive / Minstwer Road	Mini-roundabout	1,2,3	0.25	B

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	✓	395.00	100.000
2	ONE HOUR	✓	529.00	100.000
3	ONE HOUR	✓	290.00	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	267.10	272.22		
07:45-07:55	2	357.71	372.85		
07:45-07:55	3	196.10	207.53		
07:55-08:05	1	267.10	272.22		
07:55-08:05	2	357.71	372.85		
07:55-08:05	3	196.10	207.53		
08:05-08:15	1	334.58	340.99		
08:05-08:15	2	448.08	467.05		
08:05-08:15	3	245.64	259.96		
08:15-08:25	1	383.00	390.34		
08:15-08:25	2	512.93	534.64		
08:15-08:25	3	281.19	297.58		
08:25-08:35	1	400.65	408.33		
08:25-08:35	2	536.56	559.27		
08:25-08:35	3	294.15	311.29		
08:35-08:45	1	383.00	390.34		
08:35-08:45	2	512.93	534.64		
08:35-08:45	3	281.19	297.58		
08:45-08:55	1	334.58	340.99		
08:45-08:55	2	448.08	467.05		
08:45-08:55	3	245.64	259.96		
08:55-09:05	1	267.10	272.22		
08:55-09:05	2	357.71	372.85		
08:55-09:05	3	196.10	207.53		
09:05-09:15	1	267.10	272.22		
09:05-09:15	2	357.71	372.85		
09:05-09:15	3	196.10	207.53		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	181.000	214.000
	2	358.000	0.000	171.000
	3	184.000	106.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.46	0.54
	2	0.68	0.00	0.32
	3	0.63	0.37	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	1.110
	3	1.040	1.090	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	11.0
	3	4.0	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	0.57	0.20	1.28	B	322.69	484.03	76.76	0.16	0.85	76.77	0.16
2	0.75	0.32	2.70	C	432.16	648.23	139.23	0.21	1.55	139.27	0.21
3	0.49	0.19	0.92	B	236.91	355.36	55.22	0.16	0.61	55.23	0.16

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	267.10	44.52	263.66	361.41	70.78	0.00	723.46	648.46	0.369	0.00	0.57	0.130	A
2	357.71	59.62	352.49	191.59	142.84	0.00	758.25	646.04	0.472	0.00	0.87	0.146	A
3	196.10	32.68	193.64	256.79	238.55	0.00	665.96	563.65	0.294	0.00	0.41	0.126	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	267.10	44.52	267.06	366.42	71.67	0.00	722.97	648.46	0.369	0.57	0.58	0.132	A
2	357.71	59.62	357.63	194.04	144.69	0.00	757.26	646.04	0.472	0.87	0.88	0.150	A
3	196.10	32.68	196.07	260.29	242.02	0.00	664.17	563.65	0.295	0.41	0.41	0.128	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	334.58	55.76	332.90	455.92	89.34	0.00	713.17	648.46	0.469	0.58	0.86	0.157	A
2	448.08	74.68	444.53	241.89	180.36	0.00	738.06	646.04	0.607	0.88	1.47	0.202	B
3	245.64	40.94	244.42	324.05	300.84	0.00	633.88	563.65	0.388	0.41	0.62	0.154	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	383.00	63.83	381.29	521.61	102.32	0.00	705.97	648.46	0.543	0.86	1.14	0.184	B
2	512.92	85.49	508.30	277.04	206.57	0.00	723.95	646.04	0.709	1.47	2.24	0.272	C
3	281.19	46.86	279.94	370.88	343.99	0.00	611.65	563.65	0.460	0.62	0.83	0.180	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	400.65	66.77	399.84	547.51	107.30	0.00	703.21	648.46	0.570	1.14	1.28	0.197	B
2	536.56	89.43	533.81	290.52	216.62	0.00	718.54	646.04	0.747	2.24	2.70	0.318	C
3	294.15	49.02	293.55	389.18	361.26	0.00	602.76	563.65	0.488	0.83	0.92	0.194	B

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	383.00	63.83	383.36	526.28	102.89	0.00	705.66	648.46	0.543	1.28	1.22	0.187	B
2	512.92	85.49	513.76	278.55	207.69	0.00	723.34	646.04	0.709	2.70	2.56	0.289	C
3	281.19	46.86	281.48	373.77	347.69	0.00	609.75	563.65	0.461	0.92	0.88	0.183	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	334.58	55.76	336.44	463.75	90.28	0.00	712.65	648.46	0.469	1.22	0.91	0.160	A
2	448.08	74.68	453.71	244.44	182.27	0.00	737.03	646.04	0.608	2.56	1.63	0.216	B
3	245.64	40.94	246.98	328.93	307.05	0.00	630.68	563.65	0.389	0.88	0.65	0.157	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	267.10	44.52	268.97	370.22	72.17	0.00	722.69	648.46	0.370	0.91	0.60	0.133	A
2	357.71	59.62	361.93	195.42	145.72	0.00	756.70	646.04	0.473	1.63	0.92	0.154	A
3	196.10	32.68	197.45	262.72	244.94	0.00	662.67	563.65	0.296	0.65	0.43	0.129	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	267.10	44.52	267.14	366.57	71.69	0.00	722.96	648.46	0.369	0.60	0.59	0.132	A
2	357.71	59.62	357.78	194.10	144.73	0.00	757.23	646.04	0.472	0.92	0.91	0.150	A
3	196.10	32.68	196.12	260.38	242.13	0.00	664.11	563.65	0.295	0.43	0.42	0.128	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.40	0.54	0.130	A	A
2	8.08	0.81	0.146	A	A
3	3.88	0.39	0.126	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.77	0.58	0.132	A	A
2	8.77	0.88	0.150	A	A
3	4.13	0.41	0.128	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	8.18	0.82	0.157	A	A
2	13.69	1.37	0.202	B	B
3	5.90	0.59	0.154	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.88	1.09	0.184	B	B
2	20.56	2.06	0.272	C	B
3	7.88	0.79	0.180	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	12.41	1.24	0.197	B	B
2	25.52	2.55	0.318	C	B
3	8.99	0.90	0.194	B	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	12.38	1.24	0.187	B	B
2	26.16	2.62	0.289	C	B
3	8.91	0.89	0.183	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	9.53	0.95	0.160	A	A
2	17.54	1.75	0.216	B	B
3	6.82	0.68	0.157	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	6.26	0.63	0.133	A	A
2	9.79	0.98	0.154	A	A
3	4.46	0.45	0.129	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	5.94	0.59	0.132	A	A
2	9.13	0.91	0.150	A	A
3	4.25	0.42	0.128	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	0.24	B

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	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	✓	348.00	100.000
3	ONE HOUR	✓	368.00	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	321.19	326.23		
16:45-16:55	2	235.32	241.44		
16:45-16:55	3	248.84	256.67		
16:55-17:05	1	321.19	326.23		
16:55-17:05	2	235.32	241.44		
16:55-17:05	3	248.84	256.67		
17:05-17:15	1	402.34	408.65		
17:05-17:15	2	294.77	302.44		
17:05-17:15	3	311.71	321.52		
17:15-17:25	1	460.57	467.79		
17:15-17:25	2	337.43	346.21		
17:15-17:25	3	356.82	368.05		
17:25-17:35	1	481.79	489.35		
17:25-17:35	2	352.98	362.17		
17:25-17:35	3	373.26	385.01		
17:35-17:45	1	460.57	467.79		
17:35-17:45	2	337.43	346.21		
17:35-17:45	3	356.82	368.05		
17:45-17:55	1	402.34	408.65		
17:45-17:55	2	294.77	302.44		
17:45-17:55	3	311.71	321.52		
17:55-18:05	1	321.19	326.23		
17:55-18:05	2	235.32	241.44		
17:55-18:05	3	248.84	256.67		
18:05-18:15	1	321.19	326.23		
18:05-18:15	2	235.32	241.44		
18:05-18:15	3	248.84	256.67		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	270.000	205.000
	2	210.000	0.000	138.000
	3	157.000	211.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.57	0.43
	2	0.60	0.00	0.40
	3	0.43	0.57	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	2.0	1.0
	2	3.0	0.0	2.0
	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	0.74	0.34	2.59	C	388.04	582.07	134.49	0.23	1.49	134.52	0.23
2	0.48	0.16	0.90	A	284.29	426.44	55.67	0.13	0.62	55.68	0.13
3	0.54	0.19	1.13	B	300.63	450.95	67.44	0.15	0.75	67.45	0.15

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	321.20	53.53	316.13	245.32	140.94	0.00	690.49	589.17	0.465	0.00	0.84	0.158	A
2	235.32	39.22	232.74	320.64	136.43	0.00	773.80	709.37	0.304	0.00	0.43	0.111	A
3	248.84	41.47	245.82	228.72	140.44	0.00	733.63	578.65	0.339	0.00	0.50	0.122	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	321.20	53.53	321.11	248.14	142.66	0.00	689.58	589.17	0.466	0.84	0.86	0.163	A
2	235.32	39.22	235.29	325.19	138.58	0.00	772.62	709.37	0.305	0.43	0.43	0.112	A
3	248.84	41.47	248.81	231.89	141.99	0.00	732.80	578.65	0.340	0.50	0.51	0.124	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	402.34	67.06	398.94	309.53	177.88	0.00	670.89	589.17	0.600	0.86	1.43	0.218	B
2	294.77	49.13	293.60	404.64	172.18	0.00	754.25	709.37	0.391	0.43	0.63	0.130	A
3	311.71	51.95	310.23	288.60	177.17	0.00	713.84	578.65	0.437	0.51	0.76	0.148	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	460.57	76.76	456.18	354.53	203.73	0.00	657.17	589.17	0.701	1.43	2.16	0.292	C
2	337.43	56.24	336.30	463.03	196.88	0.00	740.75	709.37	0.456	0.63	0.82	0.148	A
3	356.82	59.47	355.31	330.24	202.94	0.00	699.96	578.65	0.510	0.76	1.01	0.173	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	481.79	80.30	479.19	371.64	213.61	0.00	651.92	589.17	0.739	2.16	2.59	0.340	C
2	352.98	58.83	352.47	485.99	206.81	0.00	735.32	709.37	0.480	0.82	0.90	0.156	A
3	373.26	62.21	372.55	346.58	212.69	0.00	694.70	578.65	0.537	1.01	1.13	0.186	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	460.57	76.76	461.29	356.16	204.79	0.00	656.60	589.17	0.701	2.59	2.47	0.310	C
2	337.43	56.24	337.70	467.00	199.08	0.00	739.54	709.37	0.456	0.90	0.86	0.149	A
3	356.82	59.47	357.17	333.00	203.78	0.00	699.50	578.65	0.510	1.13	1.07	0.176	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	402.34	67.06	407.68	312.28	179.66	0.00	669.94	589.17	0.601	2.47	1.58	0.233	B
2	294.77	49.13	295.96	411.39	175.95	0.00	752.19	709.37	0.392	0.86	0.66	0.132	A
3	311.71	51.95	313.34	293.31	178.60	0.00	713.08	578.65	0.437	1.07	0.80	0.151	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	321.20	53.53	325.28	249.63	143.61	0.00	689.08	589.17	0.466	1.58	0.90	0.167	A
2	235.32	39.22	236.59	328.51	140.38	0.00	771.64	709.37	0.305	0.66	0.45	0.112	A
3	248.84	41.47	250.47	234.20	142.77	0.00	732.38	578.65	0.340	0.80	0.52	0.125	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	321.20	53.53	321.28	248.19	142.69	0.00	689.57	589.17	0.466	0.90	0.89	0.163	A
2	235.32	39.22	235.34	325.31	138.66	0.00	772.58	709.37	0.305	0.45	0.44	0.112	A
3	248.84	41.47	248.87	231.98	142.02	0.00	732.79	578.65	0.340	0.52	0.52	0.124	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.82	0.78	0.158	A	A
2	4.09	0.41	0.111	A	A
3	4.76	0.48	0.122	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.53	0.85	0.163	A	A
2	4.33	0.43	0.112	A	A
3	5.07	0.51	0.124	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	13.21	1.32	0.218	B	B
2	6.04	0.60	0.130	A	A
3	7.21	0.72	0.148	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	19.74	1.97	0.292	C	B
2	7.84	0.78	0.148	A	A
3	9.60	0.96	0.173	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	24.46	2.45	0.340	C	C
2	8.79	0.88	0.156	A	A
3	10.93	1.09	0.186	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	25.16	2.52	0.310	C	B
2	8.69	0.87	0.149	A	A
3	10.85	1.09	0.176	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	17.07	1.71	0.233	B	B
2	6.83	0.68	0.132	A	A
3	8.32	0.83	0.151	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	9.58	0.96	0.167	A	A
2	4.63	0.46	0.112	A	A
3	5.47	0.55	0.125	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.90	0.89	0.163	A	A
2	4.43	0.44	0.112	A	A
3	5.21	0.52	0.124	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

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

Filename: 2012 Obs 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 12:18:02

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.19	0.07	0.55	A				
Arm 2	0.12	0.06	0.11	A				
Arm 3	0.42	0.04	0.30	A				
Arm 4	0.16	0.06	0.14	A				
	A1 - Scenario 2							
Arm 1					0.61	0.05	0.38	A
Arm 2					0.23	0.06	0.19	A
Arm 3					0.74	0.05	0.43	A
Arm 4					0.12	0.06	0.11	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 12:17:59

File summary

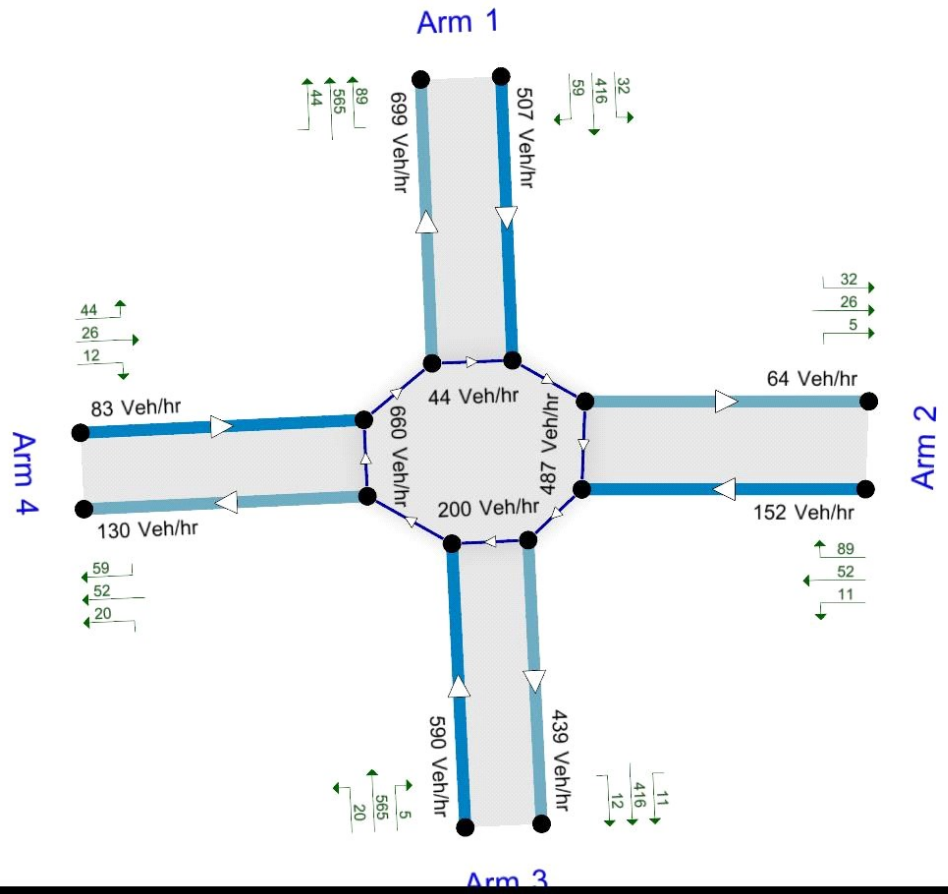
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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				0.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.58	9.21	22.39	25.70	61.91	22.00	
2	3.88	6.73	12.18	16.39	61.91	25.00	
3	8.04	8.04	0.00	15.72	61.91	39.00	
4	3.52	7.58	27.39	12.95	61.91	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	2108.493
2		(calculated)	(calculated)	0.545	1680.294
3		(calculated)	(calculated)	0.642	2327.645
4		(calculated)	(calculated)	0.535	1751.504

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1073.00	100.000
2	ONE HOUR	✓	107.00	100.000
3	ONE HOUR	✓	614.00	100.000
4	ONE HOUR	✓	170.00	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	725.56	740.07		
07:45-07:55	2	72.35	77.90		
07:45-07:55	3	415.19	438.14		
07:45-07:55	4	114.95	126.96		
07:55-08:05	1	725.56	740.07		
07:55-08:05	2	72.35	77.90		
07:55-08:05	3	415.19	438.14		
07:55-08:05	4	114.95	126.96		
08:05-08:15	1	908.87	927.05		
08:05-08:15	2	90.63	97.58		
08:05-08:15	3	520.08	548.84		
08:05-08:15	4	144.00	159.03		
08:15-08:25	1	1040.40	1061.21		
08:15-08:25	2	103.75	111.70		
08:15-08:25	3	595.34	628.26		
08:15-08:25	4	164.83	182.05		
08:25-08:35	1	1088.34	1110.11		
08:25-08:35	2	108.53	116.85		
08:25-08:35	3	622.78	657.21		
08:25-08:35	4	172.43	190.43		
08:35-08:45	1	1040.40	1061.21		
08:35-08:45	2	103.75	111.70		
08:35-08:45	3	595.34	628.26		
08:35-08:45	4	164.83	182.05		
08:45-08:55	1	908.87	927.05		
08:45-08:55	2	90.63	97.58		
08:45-08:55	3	520.08	548.84		
08:45-08:55	4	144.00	159.03		
08:55-09:05	1	725.56	740.07		
08:55-09:05	2	72.35	77.90		
08:55-09:05	3	415.19	438.14		
08:55-09:05	4	114.95	126.96		
09:05-09:15	1	725.56	740.07		
09:05-09:15	2	72.35	77.90		
09:05-09:15	3	415.19	438.14		
09:05-09:15	4	114.95	126.96		

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.000	93.000	922.000	58.000
	2	54.000	0.000	7.000	46.000
	3	579.000	10.000	0.000	25.000
	4	83.000	62.000	25.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.09	0.86	0.05
	2	0.50	0.00	0.07	0.43
	3	0.94	0.02	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	0.55	0.07	1.19	A	876.57	1314.85	72.23	0.05	0.80	72.24	0.05
2	0.11	0.06	0.12	A	87.41	131.12	7.64	0.06	0.08	7.64	0.06
3	0.30	0.04	0.42	A	501.60	752.40	28.13	0.04	0.31	28.13	0.04
4	0.14	0.06	0.16	A	138.88	208.32	10.70	0.05	0.12	10.70	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	725.56	120.93	722.22	482.34	65.29	0.00	2018.87	1832.84	0.359	0.00	0.56	0.046	A
2	72.35	12.06	71.97	111.06	676.44	0.00	1209.34	642.98	0.060	0.00	0.06	0.053	A
3	415.19	69.20	413.75	642.12	106.30	0.00	2137.63	1752.48	0.194	0.00	0.24	0.035	A
4	114.95	19.16	114.40	86.83	433.22	0.00	1364.95	564.02	0.084	0.00	0.09	0.048	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	725.56	120.93	725.55	484.15	65.59	0.00	2018.64	1832.84	0.359	0.56	0.56	0.046	A
2	72.35	12.06	72.35	111.57	679.57	0.00	1207.72	642.98	0.060	0.06	0.06	0.053	A
3	415.19	69.20	415.18	645.08	106.84	0.00	2137.29	1752.48	0.194	0.24	0.24	0.035	A
4	114.95	19.16	114.95	87.23	434.79	0.00	1364.15	564.02	0.084	0.09	0.09	0.048	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	908.87	151.48	907.31	605.85	82.06	0.00	2006.46	1832.84	0.453	0.56	0.82	0.055	A
2	90.63	15.11	90.49	139.55	849.82	0.00	1119.29	642.98	0.081	0.06	0.09	0.058	A
3	520.08	86.68	519.59	806.69	133.61	0.00	2120.14	1752.48	0.245	0.24	0.32	0.037	A
4	144.00	24.00	143.81	109.10	544.09	0.00	1308.40	564.02	0.110	0.09	0.12	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	1040.40	173.40	1038.88	693.72	93.97	0.00	1997.66	1832.84	0.521	0.82	1.07	0.062	A
2	103.75	17.29	103.62	159.79	973.05	0.00	1055.28	642.98	0.098	0.09	0.11	0.063	A
3	595.35	99.22	594.94	923.67	153.00	0.00	2107.73	1752.48	0.282	0.32	0.39	0.040	A
4	164.83	27.47	164.68	124.93	623.01	0.00	1268.15	564.02	0.130	0.12	0.15	0.054	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	1088.34	181.39	1087.67	726.03	98.35	0.00	1994.41	1832.84	0.546	1.07	1.19	0.066	A
2	108.53	18.09	108.48	167.28	1018.74	0.00	1031.55	642.98	0.105	0.11	0.12	0.065	A
3	622.78	103.80	622.62	967.04	160.17	0.00	2103.13	1752.48	0.296	0.39	0.42	0.041	A
4	172.43	28.74	172.37	130.78	652.01	0.00	1253.36	564.02	0.138	0.15	0.16	0.055	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	1040.40	173.40	1040.92	694.42	94.08	0.00	1997.57	1832.84	0.521	1.19	1.10	0.063	A
2	103.75	17.29	103.79	160.05	974.94	0.00	1054.30	642.98	0.098	0.12	0.11	0.063	A
3	595.35	99.22	595.48	925.47	153.27	0.00	2107.56	1752.48	0.282	0.42	0.40	0.040	A
4	164.83	27.47	164.88	125.13	623.61	0.00	1267.84	564.02	0.130	0.16	0.15	0.054	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	908.87	151.48	910.45	607.01	82.25	0.00	2006.32	1832.84	0.453	1.10	0.84	0.055	A
2	90.63	15.11	90.76	139.96	852.74	0.00	1117.78	642.98	0.081	0.11	0.09	0.058	A
3	520.08	86.68	520.50	809.46	134.04	0.00	2119.87	1752.48	0.245	0.40	0.33	0.038	A
4	144.00	24.00	144.15	109.42	545.10	0.00	1307.89	564.02	0.110	0.15	0.12	0.052	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	725.56	120.93	727.19	484.80	65.70	0.00	2018.56	1832.84	0.359	0.84	0.57	0.047	A
2	72.35	12.06	72.50	111.79	681.10	0.00	1206.93	642.98	0.060	0.09	0.06	0.053	A
3	415.19	69.20	415.69	646.53	107.07	0.00	2137.14	1752.48	0.194	0.33	0.24	0.035	A
4	114.95	19.16	115.15	87.40	435.36	0.00	1363.86	564.02	0.084	0.12	0.09	0.048	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	725.56	120.93	725.57	484.16	65.59	0.00	2018.64	1832.84	0.359	0.57	0.56	0.046	A
2	72.35	12.06	72.35	111.57	679.59	0.00	1207.71	642.98	0.060	0.06	0.06	0.053	A
3	415.19	69.20	415.19	645.11	106.84	0.00	2137.28	1752.48	0.194	0.24	0.24	0.035	A
4	114.95	19.16	114.96	87.23	434.80	0.00	1364.15	564.02	0.084	0.09	0.09	0.048	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.42	0.54	0.046	A	A
2	0.62	0.06	0.053	A	A
3	2.35	0.24	0.035	A	A
4	0.89	0.09	0.048	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.58	0.56	0.046	A	A
2	0.63	0.06	0.053	A	A
3	2.40	0.24	0.035	A	A
4	0.92	0.09	0.048	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	7.99	0.80	0.055	A	A
2	0.86	0.09	0.058	A	A
3	3.19	0.32	0.037	A	A
4	1.21	0.12	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	10.45	1.04	0.062	A	A
2	1.06	0.11	0.063	A	A
3	3.86	0.39	0.040	A	A
4	1.46	0.15	0.054	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.64	1.16	0.066	A	A
2	1.15	0.12	0.065	A	A
3	4.14	0.41	0.041	A	A
4	1.57	0.16	0.055	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	11.16	1.12	0.063	A	A
2	1.11	0.11	0.063	A	A
3	3.99	0.40	0.040	A	A
4	1.52	0.15	0.054	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.57	0.86	0.055	A	A
2	0.90	0.09	0.058	A	A
3	3.31	0.33	0.038	A	A
4	1.26	0.13	0.052	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.78	0.58	0.047	A	A
2	0.65	0.07	0.053	A	A
3	2.46	0.25	0.035	A	A
4	0.94	0.09	0.048	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	5.64	0.56	0.046	A	A
2	0.64	0.06	0.053	A	A
3	2.42	0.24	0.035	A	A
4	0.92	0.09	0.048	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				0.05	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.58	9.21	22.39	25.70	61.91	22.00	
2	3.88	6.73	12.18	16.39	61.91	25.00	
3	8.04	8.04	0.00	15.72	61.91	39.00	
4	3.52	7.58	27.39	12.95	61.91	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	2108.493
2		(calculated)	(calculated)	0.545	1680.294
3		(calculated)	(calculated)	0.642	2327.645
4		(calculated)	(calculated)	0.535	1751.504

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	753.00	100.000
2	ONE HOUR	✓	226.00	100.000
3	ONE HOUR	✓	876.00	100.000
4	ONE HOUR	✓	123.00	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	509.18	525.89		
16:45-16:55	2	152.82	156.45		
16:45-16:55	3	592.35	604.28		
16:45-16:55	4	83.17	87.17		
16:55-17:05	1	509.18	525.89		
16:55-17:05	2	152.82	156.45		
16:55-17:05	3	592.35	604.28		
16:55-17:05	4	83.17	87.17		
17:05-17:15	1	637.82	658.76		
17:05-17:15	2	191.43	195.98		
17:05-17:15	3	742.00	756.95		
17:05-17:15	4	104.19	109.19		
17:15-17:25	1	730.12	754.09		
17:15-17:25	2	219.13	224.34		
17:15-17:25	3	849.38	866.50		
17:15-17:25	4	119.26	124.99		
17:25-17:35	1	763.77	788.84		
17:25-17:35	2	229.23	234.68		
17:25-17:35	3	888.52	906.43		
17:25-17:35	4	124.76	130.75		
17:35-17:45	1	730.12	754.09		
17:35-17:45	2	219.13	224.34		
17:35-17:45	3	849.38	866.50		
17:35-17:45	4	119.26	124.99		
17:45-17:55	1	637.82	658.76		
17:45-17:55	2	191.43	195.98		
17:45-17:55	3	742.00	756.95		
17:45-17:55	4	104.19	109.19		
17:55-18:05	1	509.18	525.89		
17:55-18:05	2	152.82	156.45		
17:55-18:05	3	592.35	604.28		
17:55-18:05	4	83.17	87.17		
18:05-18:15	1	509.18	525.89		
18:05-18:15	2	152.82	156.45		
18:05-18:15	3	592.35	604.28		
18:05-18:15	4	83.17	87.17		

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.000	48.000	618.000	87.000
	2	133.000	0.000	16.000	77.000
	3	839.000	8.000	0.000	29.000
	4	66.000	39.000	18.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.06	0.82	0.12
	2	0.59	0.00	0.07	0.34
	3	0.96	0.01	0.00	0.03
	4	0.54	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	1.030	1.060
	2	1.010	1.000	1.060	1.040
	3	1.020	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	3.0	6.0
	2	1.0	0.0	6.0	4.0
	3	2.0	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	0.38	0.05	0.61	A	615.15	922.72	40.33	0.04	0.45	40.33	0.04
2	0.19	0.06	0.23	A	184.63	276.94	14.88	0.05	0.17	14.89	0.05
3	0.43	0.05	0.74	A	715.63	1073.45	46.82	0.04	0.52	46.82	0.04
4	0.11	0.06	0.12	A	100.48	150.72	7.94	0.05	0.09	7.94	0.05

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	509.18	84.86	507.16	699.07	43.75	0.00	2014.17	1859.52	0.253	0.00	0.34	0.040	A
2	152.82	25.47	152.07	63.96	486.94	0.00	1373.66	637.45	0.111	0.00	0.12	0.049	A
3	592.35	98.72	590.08	439.11	199.90	0.00	2151.85	1758.04	0.275	0.00	0.38	0.038	A
4	83.17	13.86	82.77	129.94	660.04	0.00	1328.09	593.02	0.063	0.00	0.07	0.048	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	509.18	84.86	509.17	701.89	43.95	0.00	2014.04	1859.52	0.253	0.34	0.34	0.040	A
2	152.82	25.47	152.82	64.24	488.89	0.00	1372.59	637.45	0.111	0.12	0.12	0.049	A
3	592.35	98.72	592.34	440.88	200.83	0.00	2151.26	1758.04	0.275	0.38	0.38	0.038	A
4	83.17	13.86	83.17	130.50	662.67	0.00	1326.72	593.02	0.063	0.07	0.07	0.048	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	637.82	106.30	637.07	878.09	54.98	0.00	2007.16	1859.52	0.318	0.34	0.46	0.044	A
2	191.43	31.91	191.16	80.37	611.68	0.00	1305.10	637.45	0.147	0.12	0.17	0.054	A
3	742.00	123.67	741.06	551.61	251.23	0.00	2118.53	1758.04	0.350	0.38	0.54	0.044	A
4	104.19	17.36	104.04	163.27	829.03	0.00	1240.24	593.02	0.084	0.07	0.09	0.053	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	730.12	121.69	729.48	1005.45	62.96	0.00	2002.18	1859.52	0.365	0.46	0.57	0.047	A
2	219.13	36.52	218.90	92.03	700.41	0.00	1256.33	637.45	0.174	0.17	0.21	0.058	A
3	849.38	141.56	848.54	631.63	287.68	0.00	2094.85	1758.04	0.405	0.54	0.68	0.048	A
4	119.26	19.88	119.14	186.95	949.27	0.00	1177.74	593.02	0.101	0.09	0.11	0.057	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	763.77	127.29	763.50	1052.42	65.90	0.00	2000.34	1859.53	0.382	0.57	0.61	0.049	A
2	229.23	38.21	229.14	96.32	733.09	0.00	1238.37	637.45	0.185	0.21	0.23	0.059	A
3	888.52	148.09	888.17	661.09	301.13	0.00	2086.12	1758.04	0.426	0.68	0.74	0.050	A
4	124.76	20.79	124.71	195.69	993.61	0.00	1154.69	593.02	0.108	0.11	0.12	0.058	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	730.12	121.69	730.33	1006.81	63.05	0.00	2002.12	1859.52	0.365	0.61	0.58	0.047	A
2	219.13	36.52	219.21	92.14	701.24	0.00	1255.88	637.45	0.174	0.23	0.21	0.058	A
3	849.38	141.56	849.68	632.37	288.07	0.00	2094.60	1758.04	0.406	0.74	0.69	0.048	A
4	119.26	19.88	119.30	187.20	950.55	0.00	1177.07	593.02	0.101	0.12	0.11	0.057	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	637.82	106.30	638.47	880.26	55.12	0.00	2007.07	1859.52	0.318	0.58	0.47	0.044	A
2	191.43	31.91	191.67	80.56	613.04	0.00	1304.36	637.45	0.147	0.21	0.17	0.054	A
3	742.00	123.67	742.87	552.84	251.87	0.00	2118.11	1758.04	0.350	0.69	0.54	0.044	A
4	104.19	17.36	104.31	163.66	831.07	0.00	1239.18	593.02	0.084	0.11	0.09	0.053	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	509.18	84.86	509.95	703.07	44.03	0.00	2013.99	1859.52	0.253	0.47	0.34	0.040	A
2	152.82	25.47	153.10	64.34	489.64	0.00	1372.18	637.45	0.111	0.17	0.13	0.049	A
3	592.35	98.72	593.31	441.56	201.18	0.00	2151.03	1758.04	0.275	0.54	0.38	0.039	A
4	83.17	13.86	83.32	130.72	663.77	0.00	1326.15	593.02	0.063	0.09	0.07	0.048	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	509.18	84.86	509.18	701.90	43.95	0.00	2014.04	1859.52	0.253	0.34	0.34	0.040	A
2	152.82	25.47	152.82	64.24	488.90	0.00	1372.59	637.45	0.111	0.13	0.13	0.049	A
3	592.35	98.72	592.35	440.89	200.83	0.00	2151.25	1758.04	0.275	0.38	0.38	0.039	A
4	83.17	13.86	83.17	130.51	662.68	0.00	1326.72	593.02	0.063	0.07	0.07	0.048	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	3.29	0.33	0.040	A	A
2	1.22	0.12	0.049	A	A
3	3.70	0.37	0.038	A	A
4	0.65	0.07	0.048	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	3.37	0.34	0.040	A	A
2	1.25	0.12	0.049	A	A
3	3.79	0.38	0.038	A	A
4	0.67	0.07	0.048	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	4.55	0.45	0.044	A	A
2	1.68	0.17	0.054	A	A
3	5.25	0.53	0.044	A	A
4	0.90	0.09	0.053	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	5.60	0.56	0.047	A	A
2	2.06	0.21	0.058	A	A
3	6.64	0.66	0.048	A	A
4	1.10	0.11	0.057	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	6.06	0.61	0.049	A	A
2	2.23	0.22	0.059	A	A
3	7.26	0.73	0.050	A	A
4	1.19	0.12	0.058	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	5.84	0.58	0.047	A	A
2	2.15	0.21	0.058	A	A
3	6.95	0.70	0.048	A	A
4	1.14	0.11	0.057	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	4.77	0.48	0.044	A	A
2	1.76	0.18	0.054	A	A
3	5.53	0.55	0.044	A	A
4	0.94	0.09	0.053	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	3.46	0.35	0.040	A	A
2	1.28	0.13	0.049	A	A
3	3.89	0.39	0.039	A	A
4	0.68	0.07	0.048	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	3.40	0.34	0.040	A	A
2	1.26	0.13	0.049	A	A
3	3.81	0.38	0.039	A	A
4	0.67	0.07	0.048	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

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Filename: 2012 obs-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 11:10:48

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	0.84	0.04	0.46	A				
Arm 2	0.40	0.04	0.29	A				
Arm 3	0.88	0.05	0.47	A				
	A1 - Scenario 2							
Arm 1					1.34	0.05	0.57	A
Arm 2					0.54	0.05	0.35	A
Arm 3					0.46	0.04	0.32	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 11:10:46

File summary

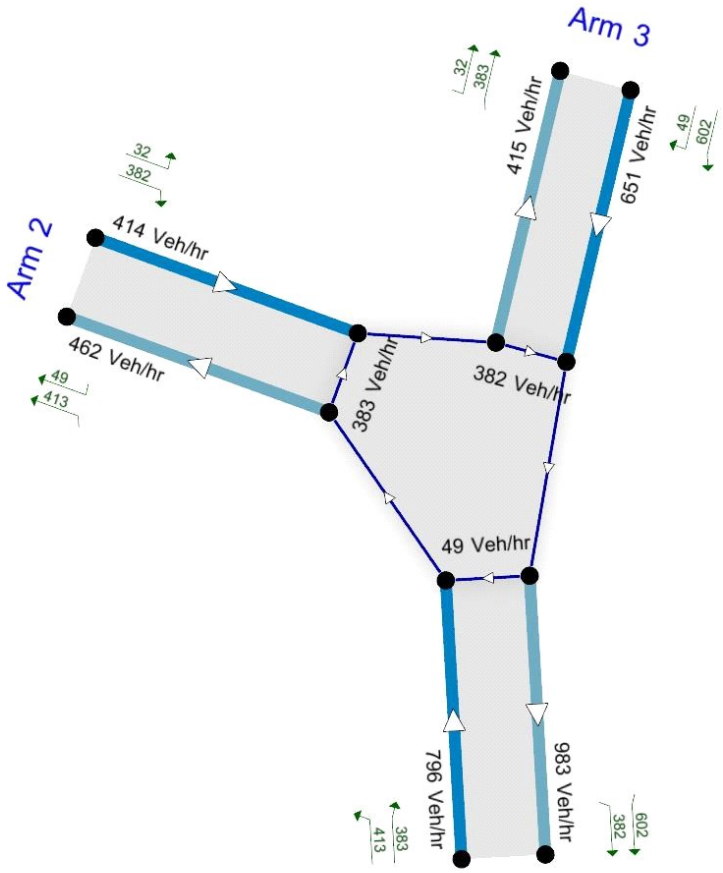
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

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

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1181.00	100.000
2	ONE HOUR	✓	614.00	100.000
3	ONE HOUR	✓	966.00	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	798.59	863.39		
07:45-07:55	2	415.19	449.05		
07:45-07:55	3	653.21	674.78		
07:55-08:05	1	798.59	863.39		
07:55-08:05	2	415.19	449.05		
07:55-08:05	3	653.21	674.78		
08:05-08:15	1	1000.35	1081.52		
08:05-08:15	2	520.08	562.50		
08:05-08:15	3	818.24	845.26		
08:15-08:25	1	1145.12	1238.03		
08:15-08:25	2	595.34	643.90		
08:15-08:25	3	936.65	967.58		
08:25-08:35	1	1197.89	1295.09		
08:25-08:35	2	622.78	673.57		
08:25-08:35	3	979.81	1012.17		
08:35-08:45	1	1145.12	1238.03		
08:35-08:45	2	595.34	643.90		
08:35-08:45	3	936.65	967.58		
08:45-08:55	1	1000.35	1081.52		
08:45-08:55	2	520.08	562.50		
08:45-08:55	3	818.24	845.26		
08:55-09:05	1	798.59	863.39		
08:55-09:05	2	415.19	449.05		
08:55-09:05	3	653.21	674.78		
09:05-09:15	1	798.59	863.39		
09:05-09:15	2	415.19	449.05		
09:05-09:15	3	653.21	674.78		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	613.000	568.000
	2	566.000	0.000	48.000
	3	893.000	73.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.52	0.48
	2	0.92	0.00	0.08
	3	0.92	0.08	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.110	1.050
	2	1.080	1.000	1.100
	3	1.030	1.070	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	11.0	5.0
	2	8.0	0.0	10.0
	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	0.46	0.04	0.84	A	964.80	1447.20	53.42	0.04	0.59	53.42	0.04
2	0.29	0.04	0.40	A	501.60	752.40	26.44	0.04	0.29	26.44	0.04
3	0.47	0.05	0.88	A	789.16	1183.74	53.70	0.05	0.60	53.70	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	798.59	133.10	796.00	983.06	49.18	0.00	2634.80	2603.05	0.303	0.00	0.43	0.033	A
2	415.19	69.20	413.86	462.33	382.83	0.00	2287.83	1732.13	0.181	0.00	0.22	0.032	A
3	653.21	108.87	650.73	415.18	381.51	0.00	2225.39	1288.57	0.294	0.00	0.41	0.038	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	798.59	133.10	798.59	986.56	49.36	0.00	2634.68	2603.05	0.303	0.43	0.43	0.033	A
2	415.19	69.20	415.18	463.87	384.08	0.00	2287.03	1732.13	0.182	0.22	0.22	0.032	A
3	653.21	108.87	653.20	416.53	382.73	0.00	2224.45	1288.57	0.294	0.41	0.41	0.038	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	1000.35	166.73	999.29	1234.29	61.75	0.00	2626.52	2603.05	0.381	0.43	0.61	0.037	A
2	520.08	86.68	519.59	580.43	480.60	0.00	2225.31	1732.14	0.234	0.22	0.30	0.035	A
3	818.24	136.37	817.07	521.22	478.97	0.00	2150.26	1288.57	0.381	0.41	0.61	0.045	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	1145.12	190.85	1144.16	1413.23	70.70	0.00	2620.62	2603.05	0.437	0.61	0.77	0.041	A
2	595.35	99.22	594.93	664.58	550.28	0.00	2180.76	1732.14	0.273	0.30	0.37	0.038	A
3	936.65	156.11	935.51	596.79	548.42	0.00	2096.72	1288.57	0.447	0.61	0.80	0.052	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	1197.89	199.65	1197.49	1479.23	74.01	0.00	2618.44	2603.05	0.457	0.77	0.84	0.042	A
2	622.78	103.80	622.61	695.57	575.93	0.00	2164.36	1732.14	0.288	0.37	0.40	0.039	A
3	979.81	163.30	979.31	624.60	573.94	0.00	2077.05	1288.57	0.472	0.80	0.88	0.055	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	1145.12	190.85	1145.46	1415.20	70.81	0.00	2620.54	2603.05	0.437	0.84	0.78	0.041	A
2	595.35	99.22	595.49	665.36	550.90	0.00	2180.36	1732.14	0.273	0.40	0.38	0.038	A
3	936.65	156.11	937.07	597.45	548.94	0.00	2096.32	1288.57	0.447	0.88	0.81	0.052	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	1000.35	166.73	1001.33	1237.30	61.92	0.00	2626.40	2603.05	0.381	0.78	0.62	0.037	A
2	520.08	86.68	520.51	581.66	481.59	0.00	2224.69	1732.14	0.234	0.38	0.31	0.035	A
3	818.24	136.37	819.41	522.27	479.82	0.00	2149.61	1288.57	0.381	0.81	0.62	0.045	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	798.59	133.10	799.68	988.15	49.45	0.00	2634.61	2603.05	0.303	0.62	0.44	0.033	A
2	415.19	69.20	415.69	464.53	384.61	0.00	2286.69	1732.13	0.182	0.31	0.22	0.032	A
3	653.21	108.87	654.41	417.10	383.19	0.00	2224.10	1288.57	0.294	0.62	0.42	0.038	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	798.59	133.10	798.60	986.58	49.36	0.00	2634.67	2603.05	0.303	0.44	0.44	0.033	A
2	415.19	69.20	415.19	463.88	384.08	0.00	2287.03	1732.13	0.182	0.22	0.22	0.032	A
3	653.21	108.87	653.22	416.54	382.73	0.00	2224.45	1288.57	0.294	0.42	0.42	0.038	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	4.24	0.42	0.033	A	A
2	2.17	0.22	0.032	A	A
3	4.04	0.40	0.038	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	4.34	0.43	0.033	A	A
2	2.21	0.22	0.032	A	A
3	4.14	0.41	0.038	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.01	0.60	0.037	A	A
2	2.99	0.30	0.035	A	A
3	5.97	0.60	0.045	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	7.57	0.76	0.041	A	A
2	3.68	0.37	0.038	A	A
3	7.83	0.78	0.052	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	8.27	0.83	0.042	A	A
2	3.98	0.40	0.039	A	A
3	8.71	0.87	0.055	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	7.90	0.79	0.041	A	A
2	3.81	0.38	0.038	A	A
3	8.26	0.83	0.052	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	6.29	0.63	0.037	A	A
2	3.11	0.31	0.035	A	A
3	6.32	0.63	0.045	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	4.44	0.44	0.033	A	A
2	2.26	0.23	0.032	A	A
3	4.26	0.43	0.038	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.36	0.44	0.033	A	A
2	2.22	0.22	0.032	A	A
3	4.17	0.42	0.038	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				0.05	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1522.00	100.000
2	ONE HOUR	✓	697.00	100.000
3	ONE HOUR	✓	629.00	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	1029.17	1087.52		
16:45-16:55	2	471.31	511.01		
16:45-16:55	3	425.33	440.18		
16:55-17:05	1	1029.17	1087.52		
16:55-17:05	2	471.31	511.01		
16:55-17:05	3	425.33	440.18		
17:05-17:15	1	1289.19	1362.27		
17:05-17:15	2	590.39	640.11		
17:05-17:15	3	532.79	551.40		
17:15-17:25	1	1475.76	1559.41		
17:15-17:25	2	675.82	732.75		
17:15-17:25	3	609.89	631.19		
17:25-17:35	1	1543.76	1631.27		
17:25-17:35	2	706.97	766.51		
17:25-17:35	3	637.99	660.28		
17:35-17:45	1	1475.76	1559.41		
17:35-17:45	2	675.82	732.75		
17:35-17:45	3	609.89	631.19		
17:45-17:55	1	1289.19	1362.27		
17:45-17:55	2	590.39	640.11		
17:45-17:55	3	532.79	551.40		
17:55-18:05	1	1029.17	1087.52		
17:55-18:05	2	471.31	511.01		
17:55-18:05	3	425.33	440.18		
18:05-18:15	1	1029.17	1087.52		
18:05-18:15	2	471.31	511.01		
18:05-18:15	3	425.33	440.18		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	698.000	824.000
	2	630.000	0.000	67.000
	3	567.000	62.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.46	0.54
	2	0.90	0.00	0.10
	3	0.90	0.10	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.100	1.020
	2	1.090	1.000	1.030
	3	1.030	1.080	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	10.0	2.0
	2	9.0	0.0	3.0
	3	3.0	8.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.57	0.05	1.34	A	1243.37	1865.06	80.34	0.04	0.89	80.35	0.04
2	0.35	0.05	0.54	A	569.40	854.11	34.14	0.04	0.38	34.14	0.04
3	0.32	0.04	0.46	A	513.85	770.78	29.50	0.04	0.33	29.51	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	1029.17	171.53	1025.50	806.62	41.78	0.00	2700.48	2637.55	0.381	0.00	0.61	0.036	A
2	471.31	78.55	469.67	512.08	555.20	0.00	2182.37	1641.62	0.216	0.00	0.27	0.035	A
3	425.33	70.89	423.88	600.35	424.52	0.00	2185.17	1362.50	0.195	0.00	0.24	0.034	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	1029.17	171.53	1029.16	809.40	41.92	0.00	2700.39	2637.55	0.381	0.61	0.61	0.036	A
2	471.31	78.55	471.31	513.90	557.18	0.00	2181.14	1641.62	0.216	0.27	0.27	0.035	A
3	425.33	70.89	425.32	602.49	426.00	0.00	2184.01	1362.50	0.195	0.24	0.24	0.034	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	1289.19	214.86	1287.41	1012.75	52.46	0.00	2693.22	2637.55	0.479	0.61	0.91	0.043	A
2	590.39	98.40	589.69	642.87	696.99	0.00	2094.52	1641.62	0.282	0.27	0.39	0.040	A
3	532.79	88.80	532.21	753.68	533.01	0.00	2100.91	1362.50	0.254	0.24	0.34	0.038	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	1475.75	245.96	1473.99	1159.60	60.07	0.00	2688.04	2637.55	0.549	0.91	1.20	0.049	A
2	675.82	112.64	675.19	736.05	798.01	0.00	2031.93	1641.62	0.333	0.39	0.50	0.044	A
3	609.89	101.65	609.37	862.92	610.29	0.00	2040.89	1362.50	0.299	0.34	0.42	0.042	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	1543.76	257.29	1542.97	1213.68	62.87	0.00	2686.14	2637.55	0.575	1.20	1.34	0.052	A
2	706.97	117.83	706.70	770.48	835.35	0.00	2008.79	1641.62	0.352	0.50	0.54	0.046	A
3	637.99	106.33	637.78	903.29	638.77	0.00	2018.78	1362.50	0.316	0.42	0.46	0.043	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	1475.75	245.96	1476.40	1161.00	60.13	0.00	2688.00	2637.55	0.549	1.34	1.23	0.050	A
2	675.82	112.64	676.05	737.22	799.31	0.00	2031.12	1641.62	0.333	0.54	0.50	0.044	A
3	609.89	101.65	610.07	864.30	611.06	0.00	2040.29	1362.50	0.299	0.46	0.43	0.042	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	1289.19	214.86	1291.01	1014.95	52.57	0.00	2693.15	2637.55	0.479	1.23	0.93	0.043	A
2	590.39	98.40	591.03	644.64	698.95	0.00	2093.31	1641.62	0.282	0.50	0.39	0.040	A
3	532.79	88.80	533.31	755.76	534.21	0.00	2099.97	1362.50	0.254	0.43	0.34	0.038	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	1029.17	171.53	1031.01	810.58	41.98	0.00	2700.35	2637.55	0.381	0.93	0.62	0.036	A
2	471.31	78.55	472.02	514.81	558.18	0.00	2180.52	1641.62	0.216	0.39	0.28	0.035	A
3	425.33	70.89	425.92	603.56	426.64	0.00	2183.51	1362.50	0.195	0.34	0.24	0.034	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	1029.17	171.53	1029.18	809.42	41.92	0.00	2700.39	2637.55	0.381	0.62	0.62	0.036	A
2	471.31	78.55	471.32	513.92	557.19	0.00	2181.14	1641.62	0.216	0.28	0.28	0.035	A
3	425.33	70.89	425.33	602.50	426.01	0.00	2184.01	1362.50	0.195	0.24	0.24	0.034	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	5.98	0.60	0.036	A	A
2	2.69	0.27	0.035	A	A
3	2.36	0.24	0.034	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	6.13	0.61	0.036	A	A
2	2.75	0.27	0.035	A	A
3	2.41	0.24	0.034	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	8.90	0.89	0.043	A	A
2	3.84	0.38	0.040	A	A
3	3.33	0.33	0.038	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	11.75	1.18	0.049	A	A
2	4.87	0.49	0.044	A	A
3	4.17	0.42	0.042	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	13.13	1.31	0.052	A	A
2	5.33	0.53	0.046	A	A
3	4.54	0.45	0.043	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	12.48	1.25	0.050	A	A
2	5.07	0.51	0.044	A	A
3	4.33	0.43	0.042	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	9.46	0.95	0.043	A	A
2	4.01	0.40	0.040	A	A
3	3.47	0.35	0.038	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	6.32	0.63	0.036	A	A
2	2.81	0.28	0.035	A	A
3	2.47	0.25	0.034	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	6.18	0.62	0.036	A	A
2	2.77	0.28	0.035	A	A
3	2.43	0.24	0.034	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

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

Filename: 2012 Observed.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\MODEL USED TAs\London Modelling\Models\Arcady Models\BartonHillDrive_PloverRoad\June 2015 for use in TA
Report generation date: 07/07/2015 11:53:19

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	0.19	0.38	B				
Arm 2	0.59	0.13	0.38	A				
Arm 3	4.90	0.51	0.86	D				
	A1 - Scenario 2							
Arm 1					0.50	0.14	0.34	A
Arm 2					1.19	0.17	0.55	B
Arm 3					0.97	0.17	0.50	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 11:53:18

File summary

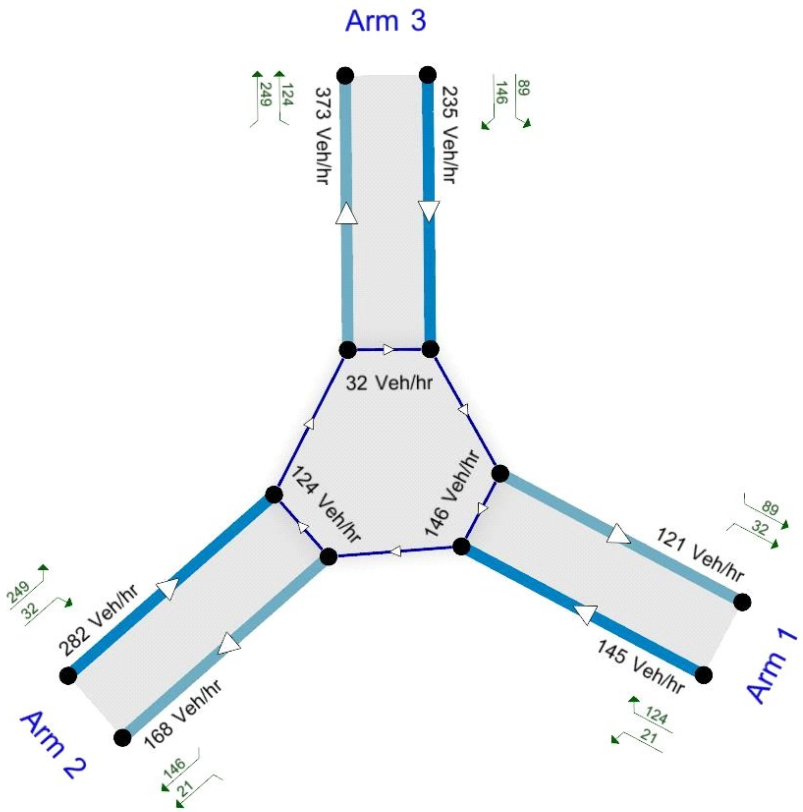
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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	0.35	C

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	✓	197.00	100.000
2	ONE HOUR	✓	284.00	100.000
3	ONE HOUR	✓	603.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	29.000	168.000
	2	61.000	0.000	223.000
	3	154.000	449.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.15	0.85
	2	0.21	0.00	0.79
	3	0.26	0.74	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	1.030	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	2.0
	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	0.38	0.19	0.60	B	160.94	241.40	36.73	0.15	0.41	36.73	0.15
2	0.38	0.13	0.59	A	232.01	348.01	38.40	0.11	0.43	38.40	0.11
3	0.86	0.51	4.90	D	492.61	738.91	228.29	0.31	2.54	228.37	0.31

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	133.21	22.20	131.55	143.08	298.08	0.00	606.89	494.20	0.220	0.00	0.28	0.126	A
2	192.04	32.01	190.16	317.45	112.19	0.00	798.01	626.78	0.241	0.00	0.31	0.098	A
3	407.75	67.96	400.32	261.50	40.84	0.00	723.84	673.36	0.563	0.00	1.24	0.182	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	133.21	22.20	133.19	145.34	303.50	0.00	603.90	494.20	0.221	0.28	0.28	0.127	A
2	192.04	32.01	192.03	323.10	113.58	0.00	797.24	626.78	0.241	0.31	0.32	0.099	A
3	407.75	67.96	407.59	264.36	41.25	0.00	723.63	673.36	0.563	1.24	1.26	0.190	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	166.87	27.81	166.08	180.42	375.85	0.00	563.79	494.20	0.296	0.28	0.41	0.151	A
2	240.56	40.09	239.82	400.30	141.63	0.00	781.71	626.78	0.308	0.32	0.44	0.111	A
3	510.76	85.13	504.76	329.94	51.51	0.00	718.10	673.36	0.711	1.26	2.26	0.273	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	191.01	31.84	190.23	205.99	428.54	0.00	534.58	494.20	0.357	0.41	0.54	0.174	B
2	275.37	45.90	274.72	456.55	162.23	0.00	770.30	626.78	0.357	0.44	0.55	0.121	A
3	584.68	97.45	575.53	377.94	59.01	0.00	714.07	673.36	0.819	2.26	3.79	0.405	C

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	199.82	33.30	199.44	216.32	450.47	0.00	522.43	494.20	0.382	0.54	0.60	0.185	B
2	288.06	48.01	287.78	479.83	170.08	0.00	765.95	626.78	0.376	0.55	0.59	0.125	A
3	611.62	101.94	604.97	396.06	61.81	0.00	712.55	673.36	0.858	3.79	4.90	0.514	D

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	191.01	31.84	191.20	208.64	435.77	0.00	530.58	494.20	0.360	0.60	0.57	0.177	B
2	275.37	45.90	275.54	463.91	163.05	0.00	769.85	626.78	0.358	0.59	0.57	0.121	A
3	584.68	97.45	585.23	379.41	59.18	0.00	713.97	673.36	0.819	4.90	4.80	0.475	D

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	166.87	27.81	167.68	185.52	389.82	0.00	556.04	494.20	0.300	0.57	0.44	0.155	A
2	240.56	40.09	241.24	414.51	143.00	0.00	780.95	626.78	0.308	0.57	0.45	0.111	A
3	510.76	85.13	523.52	332.42	51.82	0.00	717.94	673.36	0.711	4.80	2.68	0.326	C

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	133.21	22.20	134.10	147.59	309.57	0.00	600.53	494.20	0.222	0.44	0.29	0.129	A
2	192.04	32.01	192.82	329.31	114.36	0.00	796.81	626.78	0.241	0.45	0.32	0.099	A
3	407.75	67.96	415.75	265.77	41.42	0.00	723.53	673.36	0.564	2.68	1.34	0.200	B

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	133.21	22.20	133.23	145.43	303.73	0.00	603.77	494.20	0.221	0.29	0.29	0.128	A
2	192.04	32.01	192.05	323.34	113.62	0.00	797.22	626.78	0.241	0.32	0.32	0.099	A
3	407.75	67.96	407.90	264.42	41.25	0.00	723.62	673.36	0.563	1.34	1.32	0.190	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	2.63	0.26	0.126	A	A
2	2.99	0.30	0.098	A	A
3	11.26	1.13	0.182	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	2.79	0.28	0.127	A	A
2	3.14	0.31	0.099	A	A
3	12.53	1.25	0.190	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	3.95	0.40	0.151	A	A
2	4.24	0.42	0.111	A	A
3	20.41	2.04	0.273	C	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	5.21	0.52	0.174	B	B
2	5.30	0.53	0.121	A	A
3	33.20	3.32	0.405	C	C

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	5.89	0.59	0.185	B	B
2	5.82	0.58	0.125	A	A
3	44.72	4.47	0.514	D	C

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	5.83	0.58	0.177	B	B
2	5.73	0.57	0.121	A	A
3	48.46	4.85	0.475	D	C

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	4.55	0.46	0.155	A	A
2	4.66	0.47	0.111	A	A
3	29.81	2.98	0.326	C	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	3.01	0.30	0.129	A	A
2	3.32	0.33	0.099	A	A
3	14.61	1.46	0.200	B	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	2.87	0.29	0.128	A	A
2	3.20	0.32	0.099	A	A
3	13.28	1.33	0.190	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	0.16	A

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	✓	217.00	100.000
2	ONE HOUR	✓	421.00	100.000
3	ONE HOUR	✓	352.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	32.000	185.000
	2	48.000	0.000	373.000
	3	133.000	219.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.15	0.85
	2	0.11	0.00	0.89
	3	0.38	0.62	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	1.020	1.000	1.010
	3	1.030	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	2.0	0.0	1.0
	3	3.0	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	0.34	0.14	0.50	A	177.27	265.91	32.66	0.12	0.36	32.67	0.12
2	0.55	0.17	1.19	B	343.93	515.89	70.96	0.14	0.79	70.98	0.14
3	0.50	0.17	0.97	B	287.56	431.34	61.06	0.14	0.68	61.07	0.14

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	146.74	24.46	145.14	120.94	146.29	0.00	691.04	529.56	0.212	0.00	0.27	0.110	A
2	284.68	47.45	281.50	167.70	123.74	0.00	812.53	626.28	0.350	0.00	0.53	0.112	A
3	238.02	39.67	235.14	373.14	32.09	0.00	724.22	703.39	0.329	0.00	0.48	0.122	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	146.74	24.46	146.72	122.38	148.07	0.00	690.05	529.56	0.213	0.27	0.27	0.110	A
2	284.68	47.45	284.65	169.71	125.09	0.00	811.76	626.28	0.351	0.53	0.54	0.114	A
3	238.02	39.67	237.99	377.28	32.45	0.00	724.02	703.39	0.329	0.48	0.49	0.123	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	183.81	30.63	183.18	152.67	184.73	0.00	669.73	529.56	0.274	0.27	0.37	0.123	A
2	356.60	59.43	355.04	211.74	156.17	0.00	794.10	626.28	0.449	0.54	0.80	0.136	A
3	298.16	49.69	296.92	470.73	40.48	0.00	719.77	703.39	0.414	0.49	0.69	0.141	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	210.41	35.07	209.85	174.88	211.62	0.00	654.83	529.56	0.321	0.37	0.46	0.135	A
2	408.21	68.03	406.61	242.57	178.90	0.00	781.18	626.28	0.523	0.80	1.06	0.159	A
3	341.30	56.88	340.14	539.16	46.36	0.00	716.66	703.39	0.476	0.69	0.88	0.159	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	220.10	36.68	219.87	183.31	221.81	0.00	649.18	529.56	0.339	0.46	0.50	0.140	A
2	427.02	71.17	426.27	254.23	187.44	0.00	776.32	626.28	0.550	1.06	1.19	0.171	B
3	357.03	59.51	356.52	565.11	48.60	0.00	715.47	703.39	0.499	0.88	0.97	0.167	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	210.41	35.07	210.54	175.64	212.50	0.00	654.34	529.56	0.322	0.50	0.48	0.135	A
2	408.21	68.03	408.60	243.55	179.50	0.00	780.84	626.28	0.523	1.19	1.12	0.161	A
3	341.30	56.88	341.56	541.51	46.59	0.00	716.54	703.39	0.476	0.97	0.93	0.160	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	183.81	30.63	184.38	153.97	186.27	0.00	668.88	529.56	0.275	0.48	0.39	0.124	A
2	356.60	59.43	358.32	213.46	157.19	0.00	793.51	626.28	0.449	1.12	0.84	0.138	A
3	298.16	49.69	299.39	474.66	40.85	0.00	719.57	703.39	0.414	0.93	0.72	0.143	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	146.74	24.46	147.40	123.10	148.93	0.00	689.58	529.56	0.213	0.39	0.27	0.111	A
2	284.68	47.45	286.39	170.66	125.66	0.00	811.43	626.28	0.351	0.84	0.55	0.115	A
3	238.02	39.67	239.37	379.41	32.65	0.00	723.92	703.39	0.329	0.72	0.50	0.124	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	146.74	24.46	146.75	122.40	148.10	0.00	690.04	529.56	0.213	0.27	0.27	0.110	A
2	284.68	47.45	284.71	169.74	125.11	0.00	811.75	626.28	0.351	0.55	0.54	0.114	A
3	238.02	39.67	238.05	377.35	32.46	0.00	724.02	703.39	0.329	0.50	0.49	0.124	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	2.54	0.25	0.110	A	A
2	5.03	0.50	0.112	A	A
3	4.55	0.45	0.122	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	2.67	0.27	0.110	A	A
2	5.33	0.53	0.114	A	A
3	4.84	0.48	0.123	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	3.60	0.36	0.123	A	A
2	7.61	0.76	0.136	A	A
3	6.62	0.66	0.141	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	4.50	0.45	0.135	A	A
2	10.14	1.01	0.159	A	A
3	8.49	0.85	0.159	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	4.95	0.49	0.140	A	A
2	11.53	1.15	0.171	B	B
3	9.47	0.95	0.167	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	4.87	0.49	0.135	A	A
2	11.41	1.14	0.161	A	A
3	9.42	0.94	0.160	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	3.97	0.40	0.124	A	A
2	8.72	0.87	0.138	A	A
3	7.52	0.75	0.143	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	2.83	0.28	0.111	A	A
2	5.73	0.57	0.115	A	A
3	5.19	0.52	0.124	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	2.73	0.27	0.110	A	A
2	5.47	0.55	0.114	A	A
3	4.96	0.50	0.124	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: 2012 Observed-LowerRoad_ThistleHillWay.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\LowerRoad_ThistleHillWay\2015 June for TA
Report generation date: 12/06/2015 12:18:55

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	0.48	0.06	0.33	A	0.76	0.07	0.43	A
Arm 2	0.39	0.06	0.28	A	0.08	0.05	0.07	A
Arm 3	0.67	0.08	0.40	A	0.73	0.07	0.43	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 12:18:53

File summary

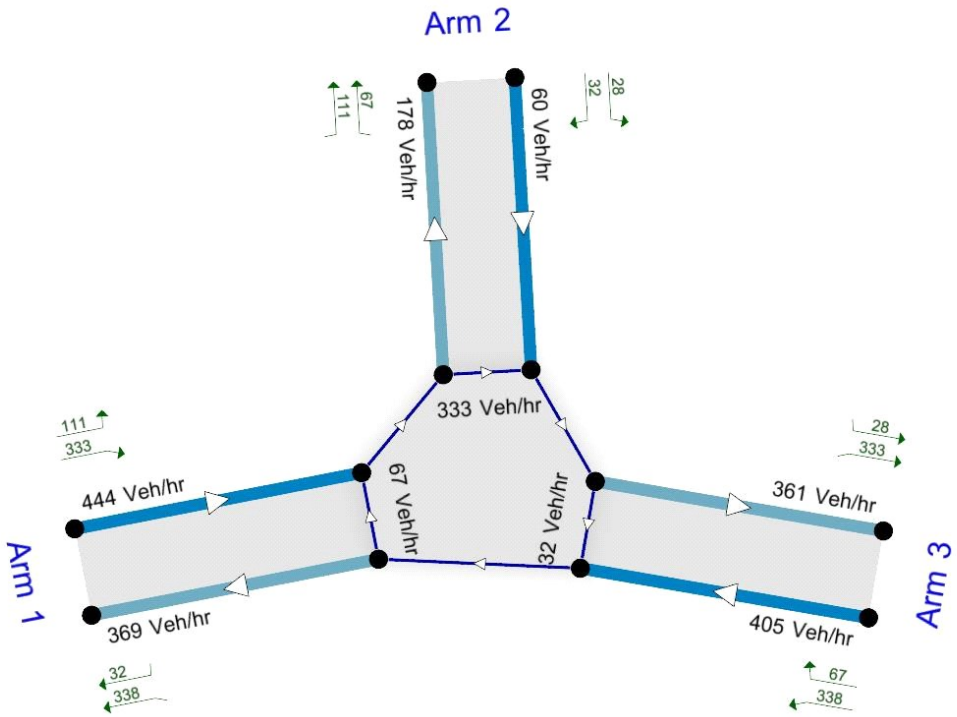
Title	Lower Road / Thistle Hill Way
Location	Minster on Sea
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	26677
Enumerator	PBA\rspiller
Description	

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				0.07	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.08	7.19	9.49	60.23	39.20	0.00	
2	3.62	7.18	5.47	40.67	39.20	0.00	
3	3.00	6.59	7.10	57.88	39.20	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.676	1652.993
2		(calculated)	(calculated)	0.670	1634.023
3		(calculated)	(calculated)	0.646	1503.675

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	488.00	100.000
2	ONE HOUR	✓	359.00	100.000
3	ONE HOUR	✓	511.00	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	329.98	348.76		
07:45-07:55	2	242.76	247.35		
07:45-07:55	3	345.54	364.84		
07:55-08:05	1	329.98	348.76		
07:55-08:05	2	242.76	247.35		
07:55-08:05	3	345.54	364.84		
08:05-08:15	1	413.35	436.88		
08:05-08:15	2	304.09	309.85		
08:05-08:15	3	432.84	457.02		
08:15-08:25	1	473.17	500.10		
08:15-08:25	2	348.09	354.69		
08:15-08:25	3	495.47	523.16		
08:25-08:35	1	494.98	523.14		
08:25-08:35	2	364.13	371.03		
08:25-08:35	3	518.31	547.26		
08:35-08:45	1	473.17	500.10		
08:35-08:45	2	348.09	354.69		
08:35-08:45	3	495.47	523.16		
08:45-08:55	1	413.35	436.88		
08:45-08:55	2	304.09	309.85		
08:45-08:55	3	432.84	457.02		
08:55-09:05	1	329.98	348.76		
08:55-09:05	2	242.76	247.35		
08:55-09:05	3	345.54	364.84		
09:05-09:15	1	329.98	348.76		
09:05-09:15	2	242.76	247.35		
09:05-09:15	3	345.54	364.84		

Turning Proportions

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

		To		
		1	2	3
From	1	1.000	57.000	430.000
	2	222.000	1.000	136.000
	3	451.000	60.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.12	0.88
	2	0.62	0.00	0.38
	3	0.88	0.12	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.110	1.050
	2	1.020	2.000	1.010
	3	1.050	1.100	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	11.0	5.0
	2	2.0	100.0	1.0
	3	5.0	10.0	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	0.33	0.06	0.48	A	398.66	597.99	32.08	0.05	0.36	32.08	0.05
2	0.28	0.06	0.39	A	293.28	439.92	25.13	0.06	0.28	25.13	0.06
3	0.40	0.08	0.67	A	417.45	626.18	42.98	0.07	0.48	42.98	0.07

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	329.98	55.00	328.35	453.14	41.00	0.00	1534.76	1466.82	0.215	0.00	0.27	0.050	A
2	242.76	40.46	241.51	79.35	290.00	0.00	1403.56	709.79	0.173	0.00	0.21	0.052	A
3	345.54	57.59	343.45	380.82	150.69	0.00	1329.72	1146.07	0.260	0.00	0.35	0.061	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	329.98	55.00	329.98	455.75	41.25	0.00	1534.59	1466.82	0.215	0.27	0.27	0.050	A
2	242.76	40.46	242.75	79.79	291.44	0.00	1402.57	709.79	0.173	0.21	0.21	0.052	A
3	345.54	57.59	345.53	382.72	151.46	0.00	1329.23	1146.07	0.260	0.35	0.35	0.061	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	413.35	68.89	412.78	569.86	51.57	0.00	1527.23	1466.82	0.271	0.27	0.37	0.054	A
2	304.09	50.68	303.61	99.78	364.57	0.00	1352.11	709.79	0.225	0.21	0.29	0.057	A
3	432.84	72.14	431.99	478.74	189.44	0.00	1305.45	1146.07	0.332	0.35	0.49	0.069	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	473.17	78.86	472.70	652.60	59.06	0.00	1521.89	1466.82	0.311	0.37	0.45	0.057	A
2	348.09	58.02	347.68	114.27	417.49	0.00	1315.60	709.79	0.265	0.29	0.36	0.062	A
3	495.47	82.58	494.71	548.23	216.94	0.00	1288.22	1146.07	0.385	0.49	0.62	0.076	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	494.98	82.50	494.79	683.25	61.83	0.00	1519.91	1466.82	0.326	0.45	0.48	0.059	A
2	364.13	60.69	363.96	119.63	437.00	0.00	1302.13	709.79	0.280	0.36	0.39	0.064	A
3	518.31	86.38	517.99	573.86	227.10	0.00	1281.86	1146.07	0.404	0.62	0.67	0.079	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	473.17	78.86	473.32	653.81	59.17	0.00	1521.81	1466.82	0.311	0.48	0.45	0.057	A
2	348.09	58.02	348.23	114.46	418.04	0.00	1315.22	709.79	0.265	0.39	0.36	0.062	A
3	495.47	82.58	495.71	548.98	217.28	0.00	1288.01	1146.07	0.385	0.67	0.63	0.076	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	413.35	68.89	413.84	571.85	51.76	0.00	1527.09	1466.82	0.271	0.45	0.37	0.054	A
2	304.09	50.68	304.51	100.10	365.50	0.00	1351.46	709.79	0.225	0.36	0.29	0.057	A
3	432.84	72.14	433.62	480.01	190.00	0.00	1305.10	1146.07	0.332	0.63	0.50	0.069	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	329.98	55.00	330.57	456.84	41.35	0.00	1534.51	1466.82	0.215	0.37	0.28	0.050	A
2	242.76	40.46	243.25	79.97	291.96	0.00	1402.20	709.79	0.173	0.29	0.21	0.052	A
3	345.54	57.59	346.42	383.43	151.77	0.00	1329.04	1146.07	0.260	0.50	0.35	0.061	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	329.98	55.00	329.99	455.77	41.25	0.00	1534.58	1466.82	0.215	0.28	0.27	0.050	A
2	242.76	40.46	242.76	79.79	291.45	0.00	1402.56	709.79	0.173	0.21	0.21	0.052	A
3	345.54	57.59	345.55	382.73	151.47	0.00	1329.23	1146.07	0.260	0.35	0.35	0.061	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	2.65	0.27	0.050	A	A
2	2.03	0.20	0.052	A	A
3	3.38	0.34	0.061	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	2.73	0.27	0.050	A	A
2	2.08	0.21	0.052	A	A
3	3.49	0.35	0.061	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	3.61	0.36	0.054	A	A
2	2.82	0.28	0.057	A	A
3	4.79	0.48	0.069	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	4.39	0.44	0.057	A	A
2	3.50	0.35	0.062	A	A
3	6.03	0.60	0.076	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	4.74	0.47	0.059	A	A
2	3.80	0.38	0.064	A	A
3	6.60	0.66	0.079	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	4.59	0.46	0.057	A	A
2	3.67	0.37	0.062	A	A
3	6.40	0.64	0.076	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	3.81	0.38	0.054	A	A
2	2.98	0.30	0.057	A	A
3	5.13	0.51	0.069	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	2.81	0.28	0.050	A	A
2	2.15	0.21	0.052	A	A
3	3.63	0.36	0.061	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	2.75	0.28	0.050	A	A
2	2.10	0.21	0.052	A	A
3	3.53	0.35	0.061	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				0.07	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.08	7.19	9.49	60.23	39.20	0.00	
2	3.62	7.18	5.47	40.67	39.20	0.00	
3	3.00	6.59	7.10	57.88	39.20	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.676	1652.993
2		(calculated)	(calculated)	0.670	1634.023
3		(calculated)	(calculated)	0.646	1503.675

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	660.00	100.000
2	ONE HOUR	✓	89.00	100.000
3	ONE HOUR	✓	602.00	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	446.29	457.45		
16:45-16:55	2	60.18	61.45		
16:45-16:55	3	407.07	417.25		
16:55-17:05	1	446.29	457.45		
16:55-17:05	2	60.18	61.45		
16:55-17:05	3	407.07	417.25		
17:05-17:15	1	559.04	573.02		
17:05-17:15	2	75.39	76.98		
17:05-17:15	3	509.92	522.67		
17:15-17:25	1	639.95	655.95		
17:15-17:25	2	86.30	88.12		
17:15-17:25	3	583.71	598.31		
17:25-17:35	1	669.44	686.17		
17:25-17:35	2	90.27	92.18		
17:25-17:35	3	610.61	625.88		
17:35-17:45	1	639.95	655.95		
17:35-17:45	2	86.30	88.12		
17:35-17:45	3	583.71	598.31		
17:45-17:55	1	559.04	573.02		
17:45-17:55	2	75.39	76.98		
17:45-17:55	3	509.92	522.67		
17:55-18:05	1	446.29	457.45		
17:55-18:05	2	60.18	61.45		
17:55-18:05	3	407.07	417.25		
18:05-18:15	1	446.29	457.45		
18:05-18:15	2	60.18	61.45		
18:05-18:15	3	407.07	417.25		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	165.000	495.000
	2	47.000	0.000	42.000
	3	502.000	100.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.25	0.75
	2	0.53	0.00	0.47
	3	0.83	0.17	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	1.040	1.000	1.000
	3	1.030	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	4.0	0.0	0.0
	3	3.0	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	0.43	0.07	0.76	A	539.18	808.76	48.54	0.06	0.54	48.55	0.06
2	0.07	0.05	0.08	A	72.71	109.06	5.25	0.05	0.06	5.25	0.05
3	0.43	0.07	0.73	A	491.79	737.69	47.40	0.06	0.53	47.41	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	446.29	74.38	443.92	369.14	67.23	0.00	1568.35	1484.17	0.285	0.00	0.39	0.053	A
2	60.18	10.03	59.91	178.21	332.94	0.00	1375.34	848.35	0.044	0.00	0.05	0.046	A
3	407.07	67.85	404.74	361.21	31.64	0.00	1446.24	1173.47	0.281	0.00	0.39	0.057	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	446.29	74.38	446.28	371.22	67.62	0.00	1568.09	1484.17	0.285	0.39	0.40	0.053	A
2	60.18	10.03	60.18	179.19	334.71	0.00	1374.14	848.35	0.044	0.05	0.05	0.046	A
3	407.07	67.85	407.06	363.11	31.78	0.00	1446.15	1173.47	0.281	0.39	0.39	0.058	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	559.04	93.17	558.09	464.21	84.55	0.00	1556.93	1484.16	0.359	0.40	0.56	0.060	A
2	75.39	12.56	75.30	224.07	418.57	0.00	1317.50	848.35	0.057	0.05	0.06	0.048	A
3	509.91	84.99	509.00	454.10	39.76	0.00	1440.92	1173.47	0.354	0.39	0.54	0.064	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	639.95	106.66	639.10	531.61	96.83	0.00	1548.84	1484.16	0.413	0.56	0.70	0.066	A
2	86.30	14.38	86.23	256.60	479.32	0.00	1276.46	848.35	0.068	0.06	0.07	0.050	A
3	583.71	97.28	582.90	520.02	45.53	0.00	1437.14	1173.47	0.406	0.54	0.68	0.070	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	669.44	111.57	669.08	556.55	101.37	0.00	1545.84	1484.16	0.433	0.70	0.76	0.068	A
2	90.27	15.05	90.25	268.64	501.81	0.00	1261.27	848.36	0.072	0.07	0.08	0.051	A
3	610.61	101.77	610.27	544.40	47.66	0.00	1435.75	1173.47	0.425	0.68	0.73	0.073	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	639.95	106.66	640.21	532.53	97.00	0.00	1548.72	1484.16	0.413	0.76	0.71	0.066	A
2	86.30	14.38	86.32	257.06	480.16	0.00	1275.90	848.35	0.068	0.08	0.07	0.050	A
3	583.71	97.28	583.95	520.90	45.58	0.00	1437.11	1173.47	0.406	0.73	0.69	0.070	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	559.04	93.17	559.92	465.75	84.84	0.00	1556.74	1484.16	0.359	0.71	0.57	0.060	A
2	75.39	12.56	75.46	224.82	419.94	0.00	1316.57	848.35	0.057	0.07	0.06	0.048	A
3	509.91	84.99	510.74	455.55	39.85	0.00	1440.87	1173.47	0.354	0.69	0.55	0.065	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	446.29	74.38	447.28	372.07	67.78	0.00	1567.99	1484.17	0.285	0.57	0.40	0.054	A
2	60.18	10.03	60.27	179.60	335.46	0.00	1373.64	848.35	0.044	0.06	0.05	0.046	A
3	407.07	67.85	408.02	363.90	31.83	0.00	1446.12	1173.47	0.281	0.55	0.39	0.058	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	446.29	74.38	446.30	371.24	67.62	0.00	1568.09	1484.17	0.285	0.40	0.40	0.053	A
2	60.18	10.03	60.18	179.20	334.72	0.00	1374.13	848.35	0.044	0.05	0.05	0.046	A
3	407.07	67.85	407.08	363.13	31.78	0.00	1446.15	1173.47	0.281	0.39	0.39	0.058	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	3.84	0.38	0.053	A	A
2	0.45	0.04	0.046	A	A
3	3.77	0.38	0.057	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	3.96	0.40	0.053	A	A
2	0.46	0.05	0.046	A	A
3	3.90	0.39	0.058	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	5.42	0.54	0.060	A	A
2	0.59	0.06	0.048	A	A
3	5.29	0.53	0.064	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	6.81	0.68	0.066	A	A
2	0.71	0.07	0.050	A	A
3	6.60	0.66	0.070	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	7.44	0.74	0.068	A	A
2	0.76	0.08	0.051	A	A
3	7.21	0.72	0.073	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	7.20	0.72	0.066	A	A
2	0.74	0.07	0.050	A	A
3	7.00	0.70	0.070	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	5.78	0.58	0.060	A	A
2	0.62	0.06	0.048	A	A
3	5.66	0.57	0.065	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	4.10	0.41	0.054	A	A
2	0.47	0.05	0.046	A	A
3	4.04	0.40	0.058	A	A

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

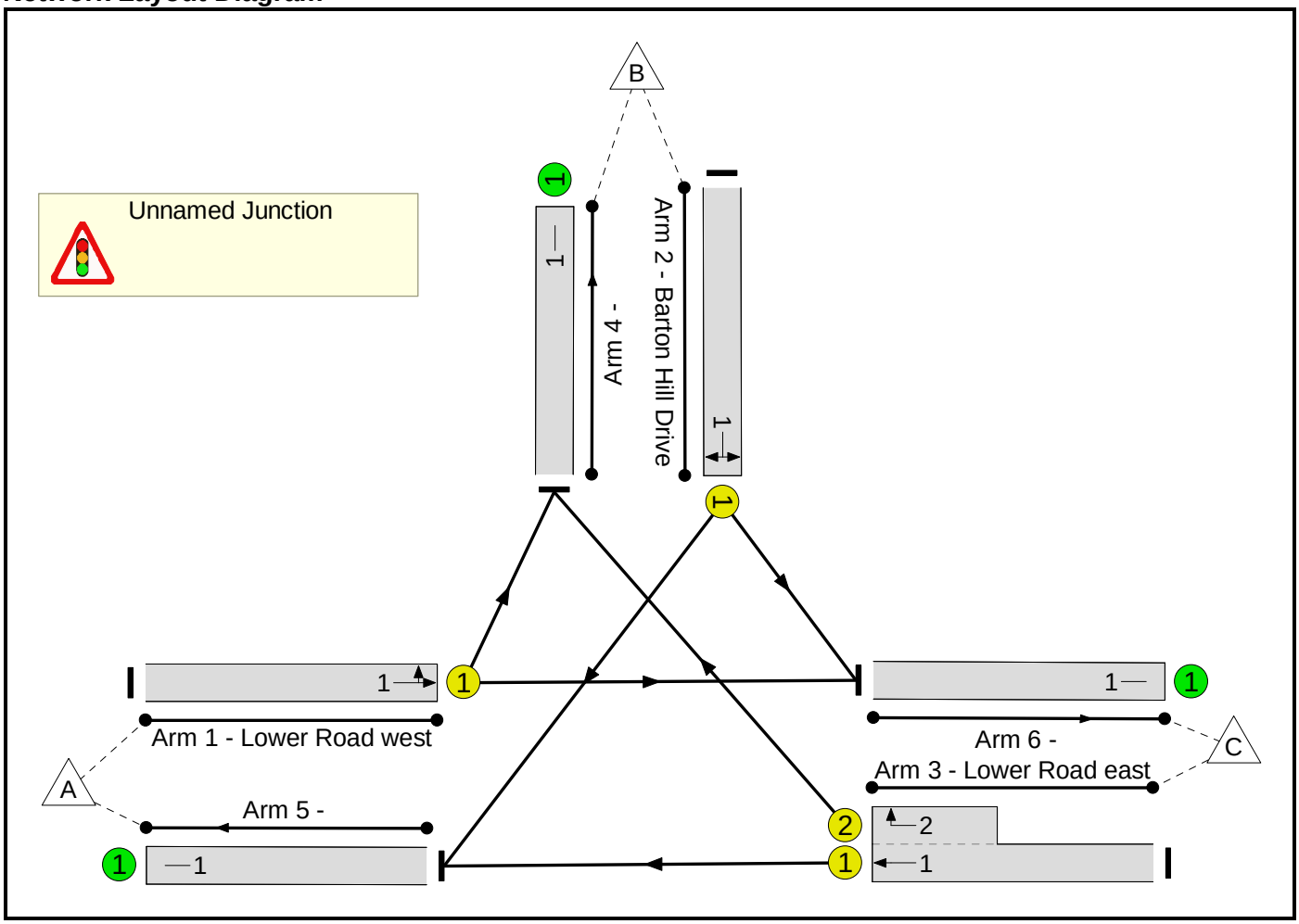
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.00	0.40	0.053	A	A
2	0.46	0.05	0.046	A	A
3	3.94	0.39	0.058	A	A

Full Input Data And Results

Project and User Details

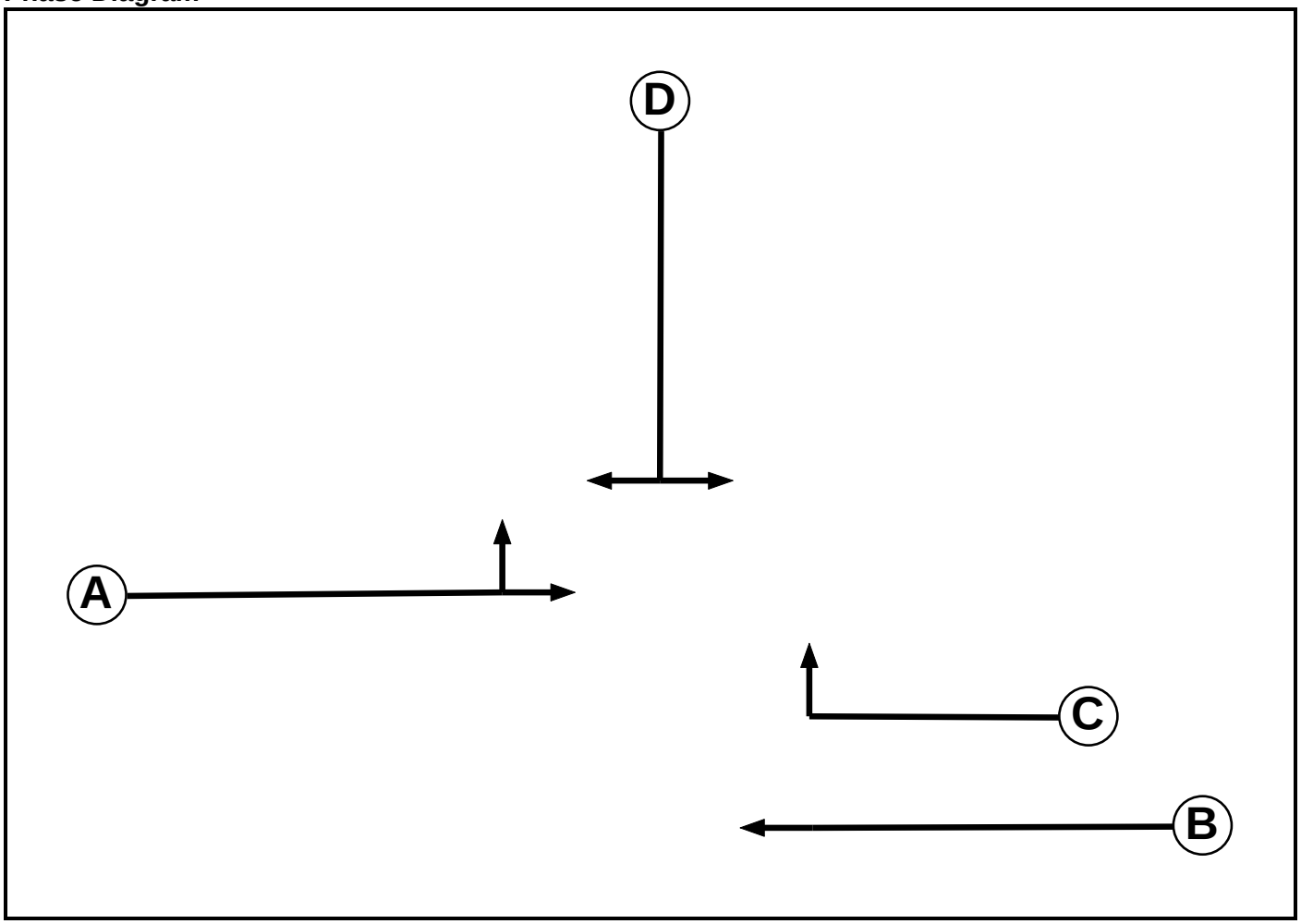
Project:	
Title:	
Location:	
File name:	Lower Road - Barton Hill Drive 006 (NN).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

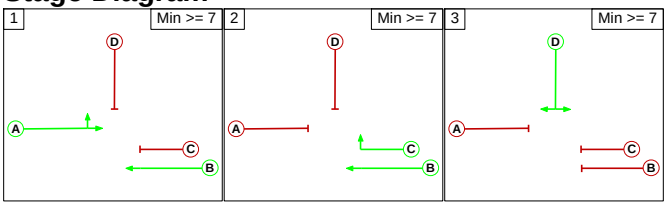
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

Full Input Data And Results

Give-Way Lane Input Data

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

Full Input Data And Results

Lane Input Data

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

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2012 AM Observed'	08:00	09:00	01:00	
2: '2012 PM Observed'	17:00	18:00	01:00	

Traffic Flows, Desired

FG1: '2012 AM Observed'

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	240	500	740
	B	518	0	18	536
	C	660	18	0	678
	Tot.	1178	258	518	1954

FG2: '2012 PM Observed'

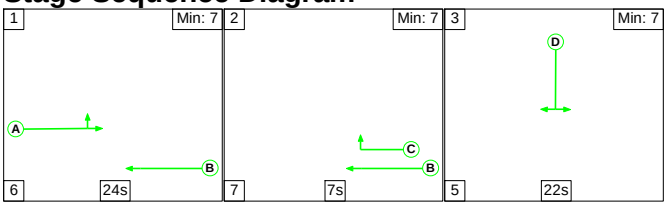
Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	400	672	1072
	B	209	0	12	221
	C	519	39	0	558
	Tot.	728	439	684	1851

Full Input Data And Results

Scenario 1: '2012 AM Observed' (FG1: '2012 AM Observed', Plan 1: '2012 AM Observed')

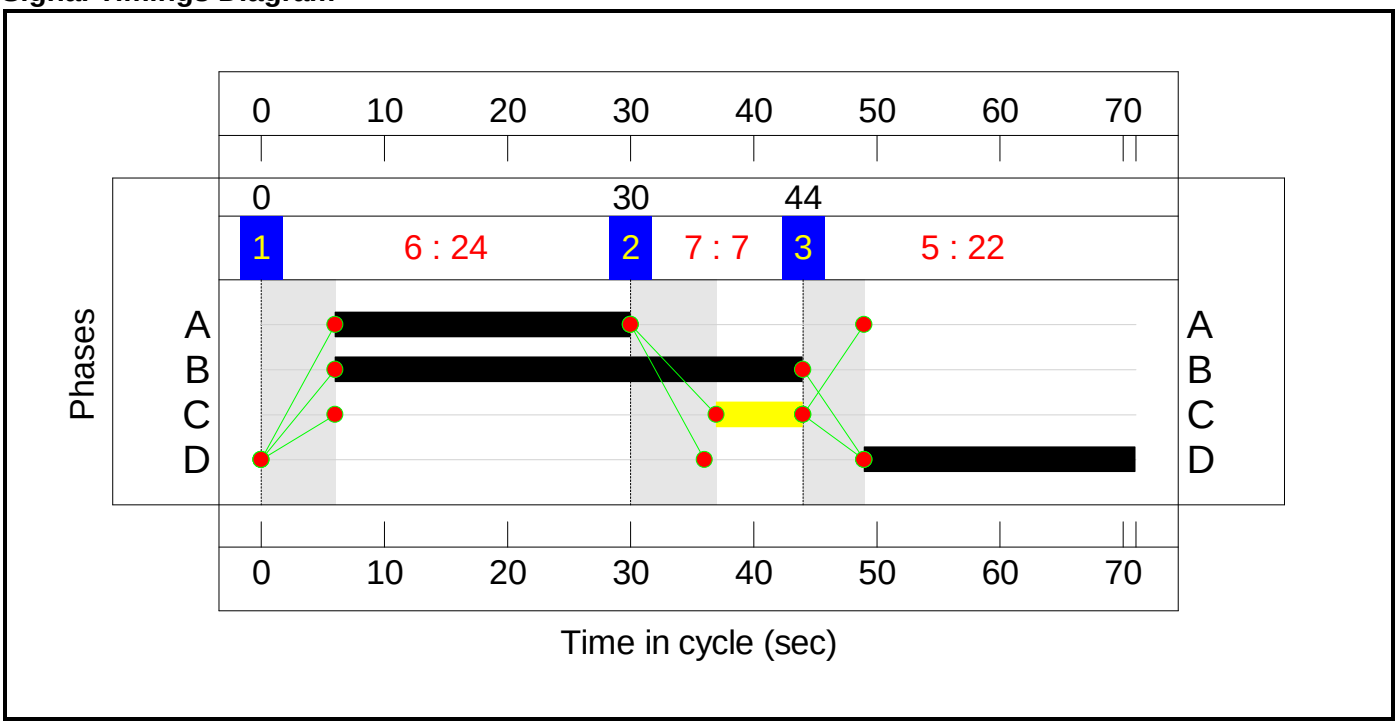
Stage Sequence Diagram



Stage Timings

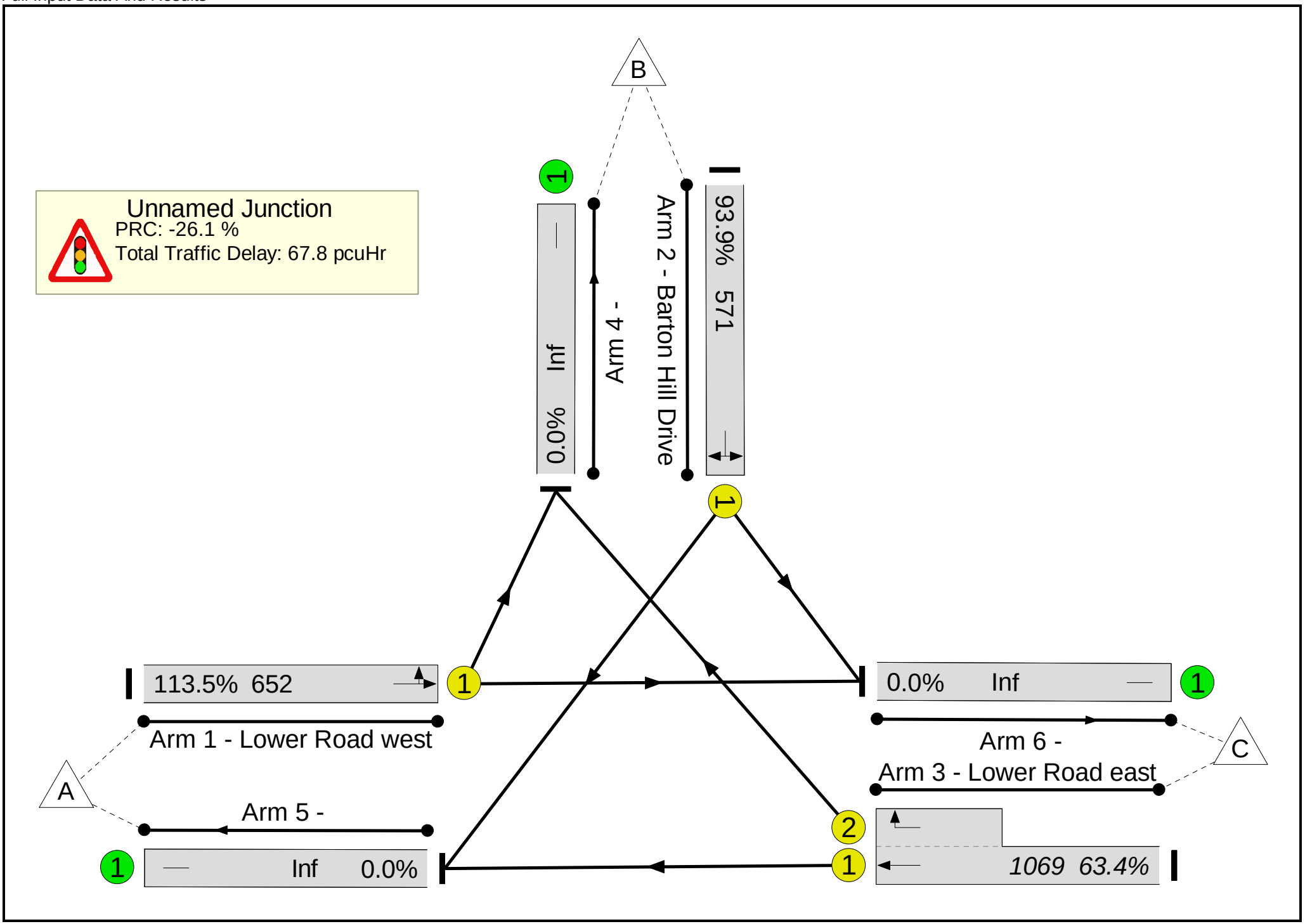
Stage	1	2	3
Duration	24	7	22
Change Point	0	30	44

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: -26.1 %
Total Traffic Delay: 67.8 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
93.9% 571
1
113.5% 652
1
0.0% Inf
1
Arm 1 - Lower Road west
A
Arm 6 -
Arm 3 - Lower Road east
C
Arm 5 -
2
1
Inf 0.0%
1069 63.4%

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.5%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**113.5%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	24	-	740	1852	652	113.5%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	22	-	536	1762	571	93.9%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	38:7	-	678	1915:1881	1069	63.4%
4/1		U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	1178	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%

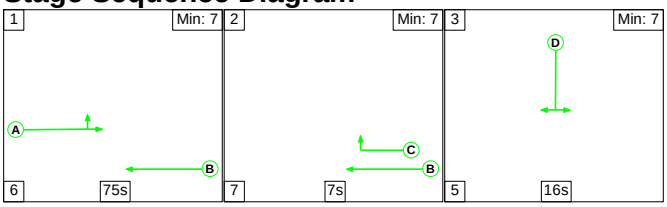
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.3**	**54.5**	**0.0**	**67.8**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**13.3**	**54.5**	**0.0**	**67.8**	**-**	**-**	**-**	**-**
1/1	740	652	-	-	-	7.7	47.8	-	55.5	270.1	16.3	47.8	64.1
2/1	536	536	-	-	-	3.5	5.8	-	9.3	62.2	10.1	5.8	15.9
3/1+3/2	678	678	-	-	-	2.2	0.9	-	3.0	16.0	8.9	0.9	9.8
4/1	229	229	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1178	1178	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	459	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -26.1 Total Delay for Signalled Lanes (pcuHr): 67.80 Cycle Time (s): 71
PRC Over All Lanes (%): -26.1 Total Delay Over All Lanes(pcuHr): 67.80

Full Input Data And Results

Scenario 2: '2012 PM Observed' (FG2: '2012 PM Observed', Plan 2: '2012 PM Observed')

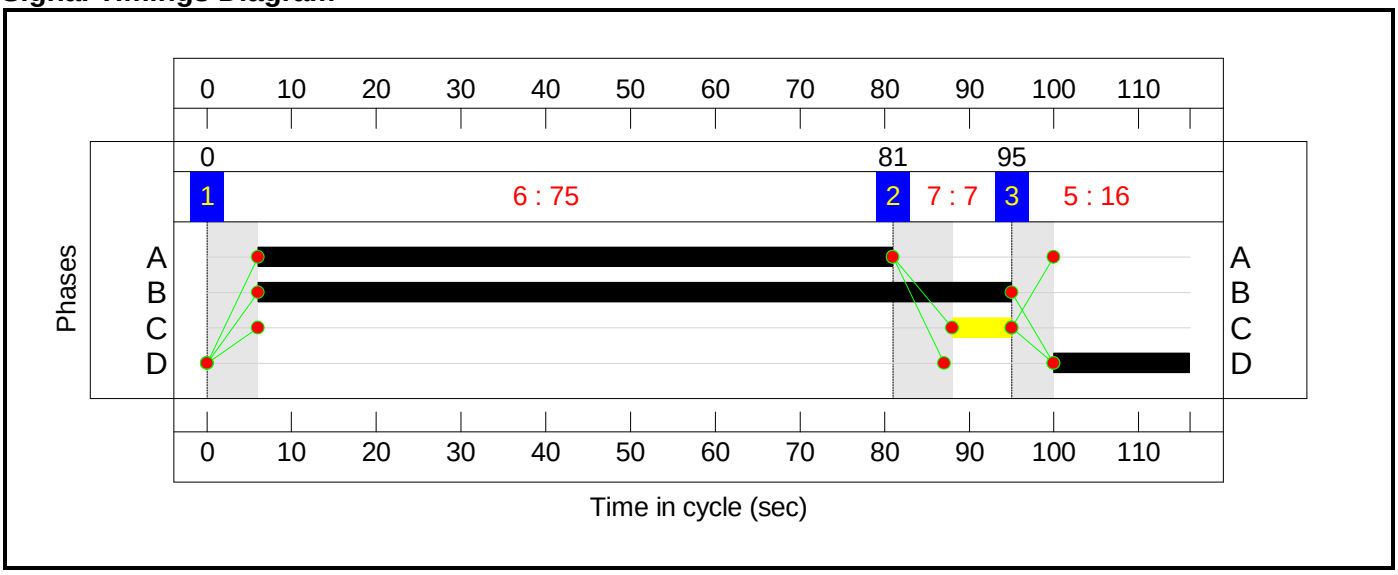
Stage Sequence Diagram



Stage Timings

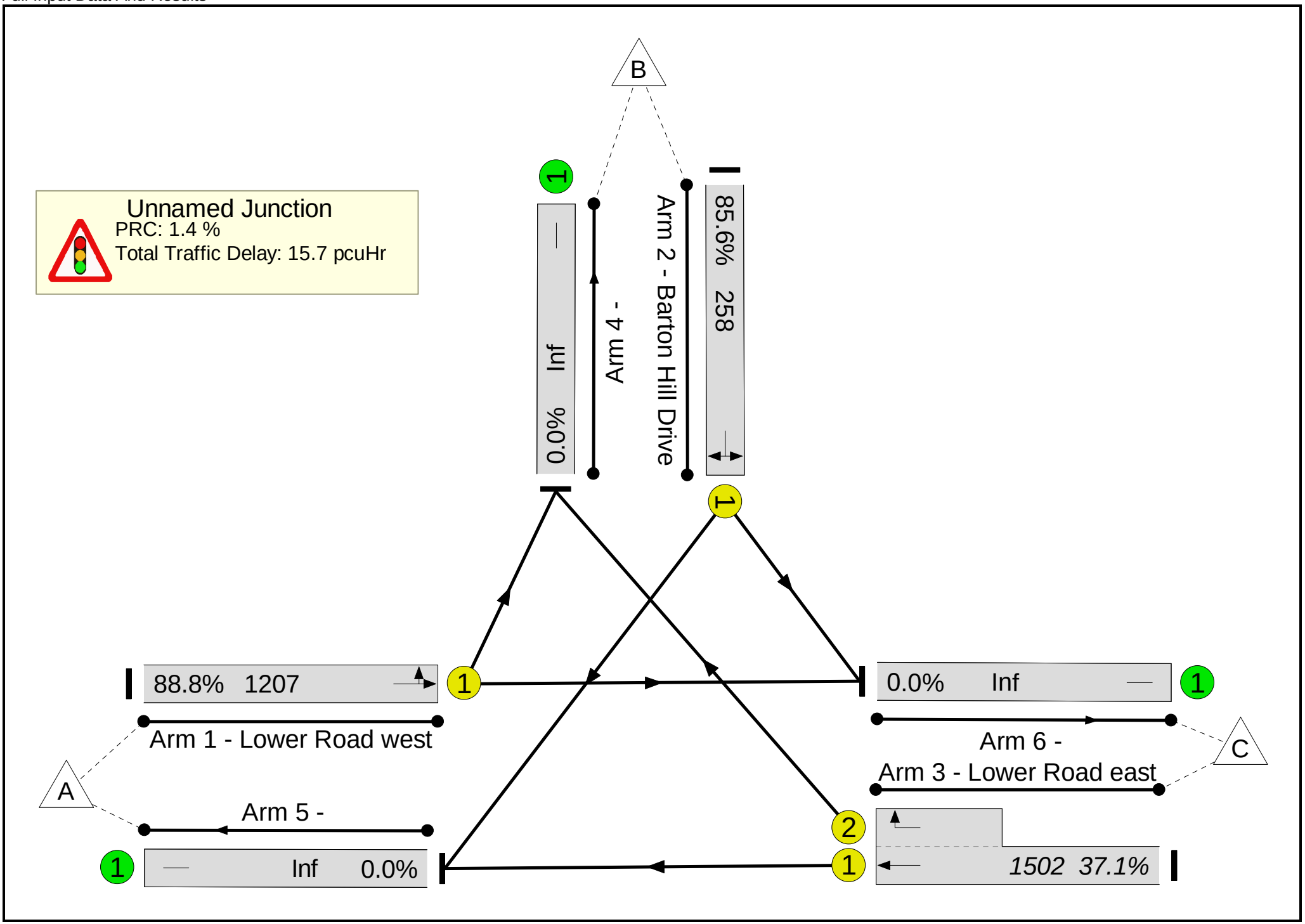
Stage	1	2	3
Duration	75	7	16
Change Point	0	81	95

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Unnamed Junction
PRC: 1.4 %
Total Traffic Delay: 15.7 pcuHr
B
1
0.0% Inf
Arm 4 -
Arm 2 - Barton Hill Drive
85.6% 258
1
88.8% 1207
1
0.0% Inf
1
Arm 1 - Lower Road west
Arm 6 -
Arm 3 - Lower Road east
A
C
Arm 5 -
2
1
Inf 0.0%
1502 37.1%

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.8%**
Unnamed Junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**88.8%**
1/1	Lower Road west Left Ahead	U	N/A	N/A	A		1	75	-	1072	1843	1207	88.8%
2/1	Barton Hill Drive Right Left	U	N/A	N/A	D		1	16	-	221	1761	258	85.6%
3/1+3/2	Lower Road east Right Ahead	U	N/A	N/A	B C		1	89:7	-	558	1915:1881	1502	37.1%
4/1		U	N/A	N/A	-		-	-	-	439	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	728	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	684	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**	**9.0**	**6.7**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**0**	**9.0**	**6.7**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
1/1	1072	1072	-	-	-	4.9	3.7	-	8.7	29.1	28.3	3.7	32.0
2/1	221	221	-	-	-	3.0	2.6	-	5.6	90.9	6.9	2.6	9.5
3/1+3/2	558	558	-	-	-	1.1	0.3	-	1.4	9.2	5.0	0.3	5.3
4/1	439	439	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	728	728	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	684	684	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 1.4 Total Delay for Signalled Lanes (pcuHr): 15.66 Cycle Time (s): 116
PRC Over All Lanes (%): 1.4 Total Delay Over All Lanes(pcuHr): 15.66

Appendix F – Model outputs (2017 base flows)

Junctions 8

ARCADY 8 - Roundabout Module

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

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

Filename: 2017 Base-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 11:17:34

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.00	0.05	0.50	A				
Arm 2	0.47	0.04	0.32	A				
Arm 3	1.28	0.07	0.56	A				
	A1 - Scenario 2							
Arm 1					1.66	0.06	0.63	A
Arm 2					0.75	0.05	0.43	A
Arm 3					0.59	0.05	0.37	A

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

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

Run using Junctions 8.0.4.487 at 07/07/2015 11:17:32

File summary

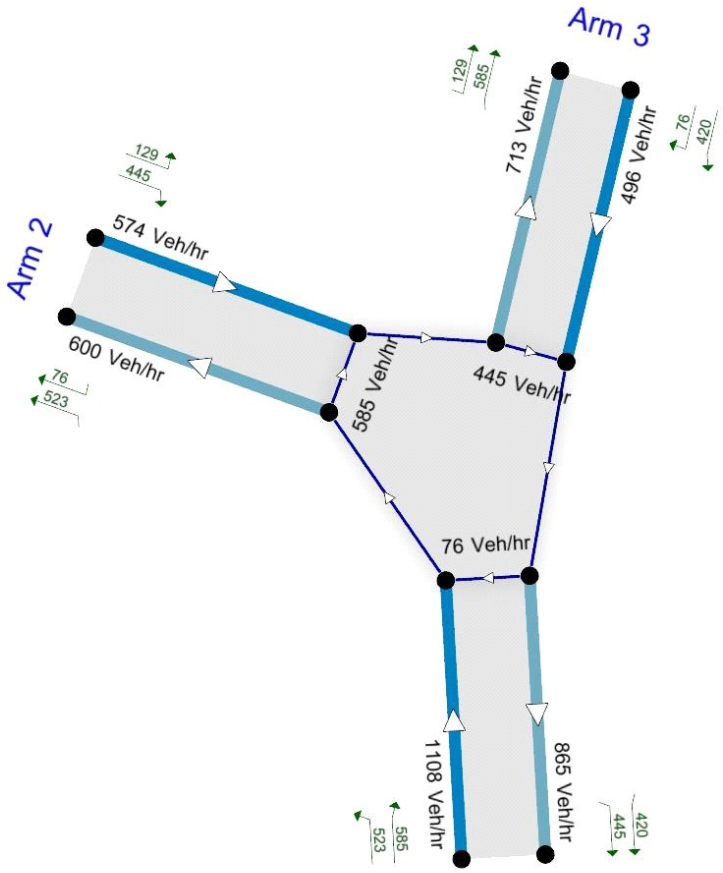
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (min)	Queue Threshold (PCU)
5.75			N/A	0.85	0.60	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	min	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

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

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1282.00	100.000
2	ONE HOUR	✓	681.00	100.000
3	ONE HOUR	✓	1142.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-07:55	1	866.89	932.75		
07:45-07:55	2	460.49	496.80		
07:45-07:55	3	772.22	796.34		
07:55-08:05	1	866.89	932.75		
07:55-08:05	2	460.49	496.80		
07:55-08:05	3	772.22	796.34		
08:05-08:15	1	1085.90	1168.40		
08:05-08:15	2	576.83	622.31		
08:05-08:15	3	967.32	997.53		
08:15-08:25	1	1243.05	1337.49		
08:15-08:25	2	660.31	712.37		
08:15-08:25	3	1107.30	1141.89		
08:25-08:35	1	1300.33	1399.12		
08:25-08:35	2	690.74	745.19		
08:25-08:35	3	1158.33	1194.51		
08:35-08:45	1	1243.05	1337.49		
08:35-08:45	2	660.31	712.37		
08:35-08:45	3	1107.30	1141.89		
08:45-08:55	1	1085.90	1168.40		
08:45-08:55	2	576.83	622.31		
08:45-08:55	3	967.32	997.53		
08:55-09:05	1	866.89	932.75		
08:55-09:05	2	460.49	496.80		
08:55-09:05	3	772.22	796.34		
09:05-09:15	1	866.89	932.75		
09:05-09:15	2	460.49	496.80		
09:05-09:15	3	772.22	796.34		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	666.000	616.000
	2	602.000	0.000	79.000
	3	1001.000	141.000	0.000

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

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

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.50	0.05	1.00	A	1047.30	1570.95	62.32	0.04	0.69	62.32	0.04
2	0.32	0.04	0.47	A	556.33	834.50	30.74	0.04	0.34	30.74	0.04
3	0.56	0.07	1.28	A	932.94	1399.41	73.43	0.05	0.82	73.44	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	866.88	144.48	863.93	1079.80	94.95	0.00	2618.90	2574.20	0.331	0.00	0.49	0.034	A
2	460.49	76.75	458.97	543.76	415.12	0.00	2272.90	1746.13	0.203	0.00	0.25	0.033	A
3	772.22	128.70	769.02	468.36	405.73	0.00	2210.55	1331.85	0.349	0.00	0.53	0.042	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	866.88	144.48	866.87	1083.93	95.34	0.00	2618.64	2574.20	0.331	0.49	0.49	0.034	A
2	460.49	76.75	460.49	545.68	416.53	0.00	2271.99	1746.13	0.203	0.25	0.25	0.033	A
3	772.22	128.70	772.21	469.96	407.07	0.00	2209.52	1331.85	0.350	0.53	0.54	0.042	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1085.90	180.98	1084.59	1355.75	119.22	0.00	2603.28	2574.20	0.417	0.49	0.71	0.039	A
2	576.83	96.14	576.24	682.67	521.15	0.00	2204.93	1746.13	0.262	0.25	0.35	0.037	A
3	967.32	161.22	965.59	588.00	509.39	0.00	2130.50	1331.85	0.454	0.54	0.82	0.051	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1243.04	207.17	1241.82	1552.22	136.49	0.00	2592.17	2574.20	0.480	0.71	0.91	0.044	A
2	660.31	110.05	659.79	781.62	596.70	0.00	2156.51	1746.13	0.306	0.35	0.44	0.040	A
3	1107.31	184.55	1105.46	673.24	583.25	0.00	2073.46	1331.85	0.534	0.82	1.13	0.062	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1300.32	216.72	1299.80	1624.97	142.91	0.00	2588.04	2574.20	0.502	0.91	1.00	0.047	A
2	690.74	115.12	690.52	818.16	624.56	0.00	2138.65	1746.13	0.323	0.44	0.47	0.041	A
3	1158.33	193.06	1157.46	704.66	610.42	0.00	2052.48	1331.85	0.564	1.13	1.28	0.067	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1243.04	207.17	1243.48	1555.08	136.80	0.00	2591.97	2574.20	0.480	1.00	0.93	0.044	A
2	660.31	110.05	660.49	782.80	597.49	0.00	2156.00	1746.13	0.306	0.47	0.44	0.040	A
3	1107.31	184.55	1108.01	674.12	583.87	0.00	2072.98	1331.85	0.534	1.28	1.16	0.062	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1085.90	180.98	1087.15	1359.96	119.67	0.00	2602.99	2574.20	0.417	0.93	0.72	0.040	A
2	576.83	96.14	577.36	684.45	522.38	0.00	2204.15	1746.13	0.262	0.44	0.36	0.037	A
3	967.32	161.22	969.24	589.35	510.38	0.00	2129.73	1331.85	0.454	1.16	0.84	0.052	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	866.88	144.48	868.22	1086.05	95.57	0.00	2618.50	2574.20	0.331	0.72	0.50	0.034	A
2	460.49	76.75	461.10	546.61	417.18	0.00	2271.58	1746.13	0.203	0.36	0.26	0.033	A
3	772.22	128.70	774.02	470.67	407.61	0.00	2209.10	1331.85	0.350	0.84	0.54	0.042	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	866.88	144.48	866.89	1083.96	95.35	0.00	2618.64	2574.20	0.331	0.50	0.50	0.034	A
2	460.49	76.75	460.49	545.70	416.54	0.00	2271.99	1746.13	0.203	0.26	0.25	0.033	A
3	772.22	128.70	772.23	469.96	407.07	0.00	2209.51	1331.85	0.350	0.54	0.54	0.042	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.82	0.48	0.034	A	A
2	2.48	0.25	0.033	A	A
3	5.20	0.52	0.042	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.93	0.49	0.034	A	A
2	2.53	0.25	0.033	A	A
3	5.35	0.53	0.042	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.97	0.70	0.039	A	A
2	3.47	0.35	0.037	A	A
3	8.03	0.80	0.051	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.95	0.90	0.044	A	A
2	4.32	0.43	0.040	A	A
3	10.99	1.10	0.062	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.87	0.99	0.047	A	A
2	4.69	0.47	0.041	A	A
3	12.51	1.25	0.067	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.40	0.94	0.044	A	A
2	4.48	0.45	0.040	A	A
3	11.81	1.18	0.062	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.34	0.73	0.040	A	A
2	3.61	0.36	0.037	A	A
3	8.61	0.86	0.052	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.06	0.51	0.034	A	A
2	2.59	0.26	0.033	A	A
3	5.53	0.55	0.042	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.97	0.50	0.034	A	A
2	2.55	0.25	0.033	A	A
3	5.40	0.54	0.042	A	A

(Default Analysis Set) - Scenario 2, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relations
Scenario 2, PM	Scenario 2	PM		ONE HOUR	16:45	18:15	90	10				✓		

Junction Network

Junctions

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

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

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

Capacity Options

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

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	8.57	10.96	5.24	21.98	74.81	32.00	
2	8.51	8.51	0.00	30.84	74.81	17.00	
3	8.04	8.04	0.00	24.75	59.18	13.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.666	2883.609
2		(calculated)	(calculated)	0.659	2739.167
3		(calculated)	(calculated)	0.737	2602.697

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1645.00	100.000
2	ONE HOUR	✓	852.00	100.000
3	ONE HOUR	✓	736.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-16:55	1	1112.35	1171.37		
16:45-16:55	2	576.12	617.64		
16:45-16:55	3	497.68	514.14		
16:55-17:05	1	1112.35	1171.37		
16:55-17:05	2	576.12	617.64		
16:55-17:05	3	497.68	514.14		
17:05-17:15	1	1393.38	1467.31		
17:05-17:15	2	721.68	773.68		
17:05-17:15	3	623.42	644.04		
17:15-17:25	1	1595.02	1679.66		
17:15-17:25	2	826.11	885.65		
17:15-17:25	3	713.64	737.24		
17:25-17:35	1	1668.52	1757.06		
17:25-17:35	2	864.18	926.46		
17:25-17:35	3	746.52	771.21		
17:35-17:45	1	1595.02	1679.66		
17:35-17:45	2	826.11	885.65		
17:35-17:45	3	713.64	737.24		
17:45-17:55	1	1393.38	1467.31		
17:45-17:55	2	721.68	773.68		
17:45-17:55	3	623.42	644.04		
17:55-18:05	1	1112.35	1171.37		
17:55-18:05	2	576.12	617.64		
17:55-18:05	3	497.68	514.14		
18:05-18:15	1	1112.35	1171.37		
18:05-18:15	2	576.12	617.64		
18:05-18:15	3	497.68	514.14		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	777.000	868.000
	2	661.000	0.000	191.000
	3	623.000	113.000	0.000

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

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

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (min)
1	0.63	0.06	1.66	A	1343.86	2015.79	95.81	0.05	1.06	95.82	0.05
2	0.43	0.05	0.75	A	696.02	1044.04	45.91	0.04	0.51	45.91	0.04
3	0.37	0.05	0.59	A	601.26	901.89	37.15	0.04	0.41	37.15	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	1112.35	185.39	1108.14	865.08	76.14	0.00	2687.78	2586.16	0.414	0.00	0.70	0.038	A
2	576.12	96.02	573.99	599.56	584.72	0.00	2188.63	1699.93	0.263	0.00	0.36	0.037	A
3	497.68	82.95	495.91	713.39	445.31	0.00	2172.92	1493.30	0.229	0.00	0.30	0.036	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1112.35	185.39	1112.34	868.23	76.41	0.00	2687.60	2586.16	0.414	0.70	0.70	0.038	A
2	576.12	96.02	576.11	601.81	586.93	0.00	2187.24	1699.93	0.263	0.36	0.36	0.037	A
3	497.68	82.95	497.68	716.08	446.96	0.00	2171.64	1493.30	0.229	0.30	0.30	0.036	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1393.38	232.23	1391.14	1086.17	95.60	0.00	2674.87	2586.15	0.521	0.70	1.08	0.047	A
2	721.67	120.28	720.68	752.69	734.05	0.00	2095.06	1699.94	0.344	0.36	0.52	0.044	A
3	623.42	103.90	622.65	895.61	559.12	0.00	2084.38	1493.29	0.299	0.30	0.42	0.041	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1595.02	265.84	1592.67	1243.64	109.46	0.00	2665.67	2586.15	0.598	1.08	1.47	0.056	A
2	826.11	137.68	825.15	861.73	840.38	0.00	2028.42	1699.94	0.407	0.52	0.68	0.050	A
3	713.64	118.94	712.93	1025.36	640.17	0.00	2021.32	1493.29	0.353	0.42	0.54	0.046	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1668.53	278.09	1667.42	1301.77	114.57	0.00	2662.28	2586.15	0.627	1.47	1.66	0.060	A
2	864.18	144.03	863.76	902.15	879.82	0.00	2003.71	1699.94	0.431	0.68	0.75	0.053	A
3	746.52	124.42	746.22	1073.46	670.12	0.00	1998.02	1493.29	0.374	0.54	0.59	0.048	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1595.02	265.84	1595.90	1245.48	109.61	0.00	2665.57	2586.15	0.598	1.66	1.51	0.056	A
2	826.11	137.68	826.46	863.41	842.09	0.00	2027.35	1699.94	0.407	0.75	0.69	0.050	A
3	713.64	118.94	713.89	1027.36	641.19	0.00	2020.53	1493.29	0.353	0.59	0.55	0.046	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1393.38	232.23	1395.84	1088.97	95.83	0.00	2674.72	2586.15	0.521	1.51	1.10	0.047	A
2	721.67	120.28	722.65	755.14	736.53	0.00	2093.50	1699.94	0.345	0.69	0.53	0.044	A
3	623.42	103.90	624.14	898.53	560.65	0.00	2083.18	1493.29	0.299	0.55	0.43	0.041	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1112.35	185.39	1114.67	869.69	76.53	0.00	2687.52	2586.16	0.414	1.10	0.71	0.038	A
2	576.12	96.02	577.14	603.04	588.17	0.00	2186.47	1699.93	0.263	0.53	0.36	0.037	A
3	497.68	82.95	498.47	717.55	447.76	0.00	2171.02	1493.30	0.229	0.43	0.30	0.036	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (min)	LOS
1	1112.35	185.39	1112.36	868.25	76.41	0.00	2687.60	2586.16	0.414	0.71	0.71	0.038	A
2	576.12	96.02	576.12	601.82	586.95	0.00	2187.23	1699.93	0.263	0.36	0.36	0.037	A
3	497.68	82.95	497.69	716.10	446.97	0.00	2171.63	1493.30	0.229	0.30	0.30	0.036	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.84	0.68	0.038	A	A
2	3.48	0.35	0.037	A	A
3	2.90	0.29	0.036	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.03	0.70	0.038	A	A
2	3.56	0.36	0.037	A	A
3	2.96	0.30	0.036	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.49	1.05	0.047	A	A
2	5.12	0.51	0.044	A	A
3	4.17	0.42	0.041	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.27	1.43	0.056	A	A
2	6.68	0.67	0.050	A	A
3	5.32	0.53	0.046	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.20	1.62	0.060	A	A
2	7.41	0.74	0.053	A	A
3	5.85	0.58	0.048	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.35	1.54	0.056	A	A
2	7.02	0.70	0.050	A	A
3	5.56	0.56	0.046	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.26	1.13	0.047	A	A
2	5.40	0.54	0.044	A	A
3	4.37	0.44	0.041	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.26	0.73	0.038	A	A
2	3.66	0.37	0.037	A	A
3	3.04	0.30	0.036	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.09	0.71	0.038	A	A
2	3.59	0.36	0.037	A	A
3	2.98	0.30	0.036	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

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

Filename: 2017 Base-BartonHill Drive_PloverRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\BartonHillDrive_PloverRoad\June 2015 for use in TA
Report generation date: 12/06/2015 11:10:35

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	1.03	0.24	0.52	B				
Arm 2	0.69	0.14	0.41	A				
Arm 3	8.94	0.85	0.95	F				
	A1 - Scenario 2							
Arm 1					0.70	0.16	0.42	A
Arm 2					1.56	0.21	0.62	B
Arm 3					1.45	0.21	0.60	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 12/06/2015 11:10:33

File summary

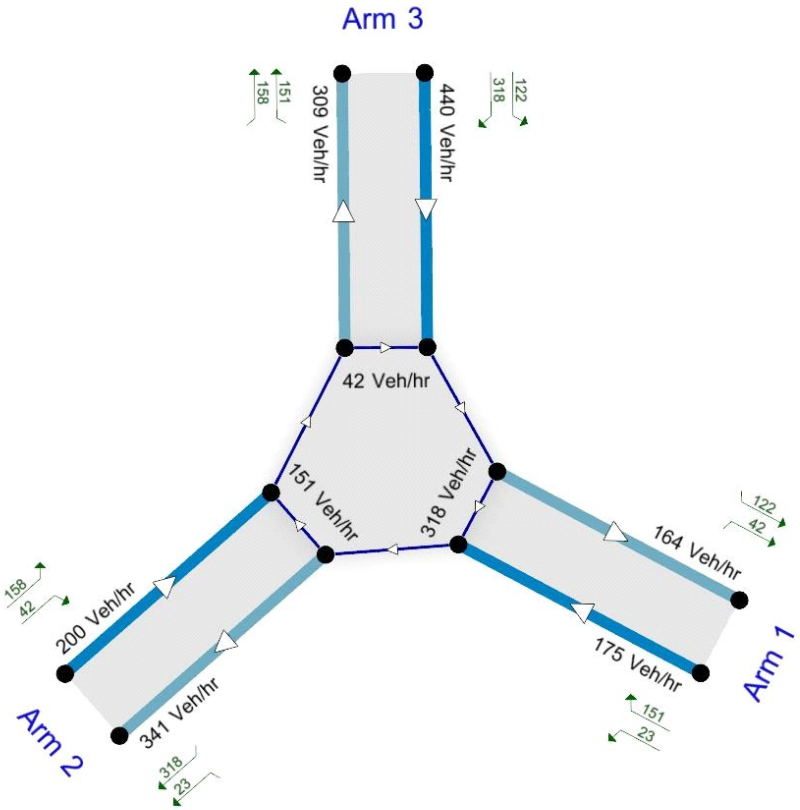
Title	(untitled)
Location	
Site Number	
Date	21/05/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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	0.54	D

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	✓	262.00	100.000
2	ONE HOUR	✓	299.00	100.000
3	ONE HOUR	✓	664.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	35.000	227.000
	2	63.000	0.000	236.000
	3	184.000	480.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.13	0.87
	2	0.21	0.00	0.79
	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	0.52	0.24	1.03	B	214.04	321.06	59.12	0.18	0.66	59.13	0.18
2	0.41	0.14	0.69	A	244.26	366.40	43.67	0.12	0.49	43.67	0.12
3	0.95	0.85	8.94	F	542.44	813.66	362.09	0.45	4.02	362.20	0.45

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	177.16	29.53	174.71	164.01	317.85	0.00	600.90	505.56	0.295	0.00	0.41	0.140	A
2	202.18	33.70	200.10	341.19	151.37	0.00	777.11	619.96	0.260	0.00	0.35	0.104	A
3	449.00	74.83	439.69	309.31	42.16	0.00	723.29	675.66	0.621	0.00	1.55	0.205	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	177.16	29.53	177.12	166.95	324.39	0.00	597.25	505.56	0.297	0.41	0.42	0.143	A
2	202.18	33.70	202.17	348.05	153.46	0.00	775.96	619.96	0.261	0.35	0.35	0.105	A
3	449.00	74.83	448.74	313.03	42.60	0.00	723.06	675.66	0.621	1.55	1.59	0.218	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	221.92	36.99	220.54	206.43	399.79	0.00	555.11	505.57	0.400	0.42	0.65	0.179	B
2	253.26	42.21	252.39	429.25	191.08	0.00	755.34	619.95	0.335	0.35	0.50	0.119	A
3	562.43	93.74	553.04	390.29	53.18	0.00	717.36	675.66	0.784	1.59	3.16	0.346	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	254.04	42.34	252.52	234.41	452.61	0.00	525.58	505.56	0.483	0.65	0.90	0.218	B
2	289.92	48.32	289.10	486.35	218.79	0.00	740.15	619.95	0.392	0.50	0.63	0.133	A
3	643.82	107.30	626.11	446.97	60.91	0.00	713.19	675.66	0.903	3.16	6.11	0.584	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	265.75	44.29	264.95	245.79	474.68	0.00	513.24	505.57	0.518	0.90	1.03	0.241	B
2	303.28	50.55	302.92	510.08	229.56	0.00	734.24	619.95	0.413	0.63	0.69	0.139	A
3	673.49	112.25	656.65	468.65	63.83	0.00	711.62	675.66	0.946	6.11	8.92	0.836	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	254.04	42.34	254.31	239.51	465.34	0.00	518.47	505.56	0.490	1.03	0.99	0.228	B
2	289.92	48.32	290.12	499.32	220.34	0.00	739.30	619.95	0.392	0.69	0.66	0.134	A
3	643.82	107.30	643.73	449.33	61.13	0.00	713.08	675.66	0.903	8.92	8.94	0.846	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	221.92	36.99	223.54	217.29	427.16	0.00	539.81	505.57	0.411	0.99	0.72	0.191	B
2	253.26	42.21	254.11	457.02	193.67	0.00	753.92	619.95	0.336	0.66	0.51	0.120	A
3	562.43	93.74	590.91	394.25	53.54	0.00	717.16	675.66	0.784	8.94	4.19	0.535	D

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	177.16	29.53	178.86	171.31	335.25	0.00	591.18	505.56	0.300	0.72	0.44	0.146	A
2	202.18	33.70	203.12	359.14	154.96	0.00	775.14	619.96	0.261	0.51	0.36	0.105	A
3	449.00	74.83	463.76	315.29	42.80	0.00	722.95	675.66	0.621	4.19	1.73	0.243	B

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	177.16	29.53	177.22	167.10	324.77	0.00	597.04	505.56	0.297	0.44	0.43	0.143	A
2	202.18	33.70	202.20	348.44	153.54	0.00	775.92	619.96	0.261	0.36	0.35	0.105	A
3	449.00	74.83	449.26	313.14	42.60	0.00	723.05	675.66	0.621	1.73	1.68	0.220	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	3.86	0.39	0.140	A	A
2	3.31	0.33	0.104	A	A
3	13.88	1.39	0.205	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	4.14	0.41	0.143	A	A
2	3.49	0.35	0.105	A	A
3	15.76	1.58	0.218	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	6.15	0.61	0.179	B	B
2	4.78	0.48	0.119	A	A
3	27.54	2.75	0.346	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	8.52	0.85	0.218	B	B
2	6.10	0.61	0.133	A	A
3	50.36	5.04	0.584	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	9.96	1.00	0.241	B	B
2	6.76	0.68	0.139	A	A
3	77.02	7.70	0.836	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	10.03	1.00	0.228	B	B
2	6.65	0.67	0.134	A	A
3	89.27	8.93	0.846	F	D

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	7.56	0.76	0.191	B	B
2	5.32	0.53	0.120	A	A
3	51.54	5.15	0.535	D	C

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	4.59	0.46	0.146	A	A
2	3.70	0.37	0.105	A	A
3	19.69	1.97	0.243	B	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	4.30	0.43	0.143	A	A
2	3.56	0.36	0.105	A	A
3	17.02	1.70	0.220	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	0.20	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	✓	263.00	100.000
2	ONE HOUR	✓	458.00	100.000
3	ONE HOUR	✓	425.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	33.000	230.000
	2	50.000	0.000	408.000
	3	190.000	235.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.13	0.87
	2	0.11	0.00	0.89
	3	0.45	0.55	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	1.020	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	2.0	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	0.42	0.16	0.70	A	214.85	322.28	43.90	0.14	0.49	43.90	0.14
2	0.62	0.21	1.56	B	374.16	561.23	88.63	0.16	0.98	88.64	0.16
3	0.60	0.21	1.45	B	347.20	520.79	86.46	0.17	0.96	86.47	0.17

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	177.84	29.64	175.77	160.16	156.78	0.00	684.93	554.67	0.260	0.00	0.35	0.117	A
2	309.70	51.62	305.95	178.84	153.71	0.00	795.53	607.21	0.389	0.00	0.62	0.122	A
3	287.38	47.90	283.54	426.26	33.40	0.00	726.20	708.71	0.396	0.00	0.64	0.134	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	177.84	29.64	177.82	162.26	158.88	0.00	683.77	554.67	0.260	0.35	0.35	0.119	A
2	309.70	51.62	309.66	181.19	155.51	0.00	794.51	607.21	0.390	0.62	0.63	0.124	A
3	287.38	47.90	287.34	431.36	33.81	0.00	725.99	708.71	0.396	0.64	0.65	0.137	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	222.77	37.13	221.88	202.21	198.00	0.00	662.09	554.67	0.336	0.35	0.50	0.136	A
2	387.94	64.66	385.86	225.84	194.04	0.00	772.61	607.21	0.502	0.63	0.98	0.154	A
3	359.99	60.00	358.08	537.77	42.12	0.00	721.57	708.71	0.499	0.65	0.97	0.164	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	255.01	42.50	254.17	231.58	226.77	0.00	646.15	554.67	0.395	0.50	0.64	0.153	A
2	444.08	74.01	441.78	258.67	222.28	0.00	756.56	607.21	0.587	0.98	1.36	0.189	B
3	412.09	68.68	410.12	615.83	48.23	0.00	718.32	708.71	0.574	0.97	1.29	0.193	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	266.76	44.46	266.39	242.88	237.84	0.00	640.02	554.67	0.417	0.64	0.70	0.160	A
2	464.55	77.42	463.38	271.26	232.96	0.00	750.49	607.21	0.619	1.36	1.56	0.208	B
3	431.08	71.85	430.14	645.76	50.59	0.00	717.06	708.71	0.601	1.29	1.45	0.208	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	255.01	42.50	255.21	232.94	228.07	0.00	645.43	554.67	0.395	0.70	0.67	0.154	A
2	444.08	74.01	444.63	260.10	223.19	0.00	756.05	607.21	0.587	1.56	1.47	0.193	B
3	412.09	68.68	412.47	619.28	48.54	0.00	718.15	708.71	0.574	1.45	1.39	0.197	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	222.77	37.13	223.65	204.53	200.24	0.00	660.85	554.67	0.337	0.67	0.52	0.138	A
2	387.94	64.66	390.51	228.31	195.59	0.00	771.73	607.21	0.503	1.47	1.04	0.158	A
3	359.99	60.00	362.14	543.47	42.63	0.00	721.30	708.71	0.499	1.39	1.03	0.168	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	177.84	29.64	178.81	163.50	160.09	0.00	683.10	554.67	0.260	0.52	0.36	0.119	A
2	309.70	51.62	312.03	182.53	156.37	0.00	794.02	607.21	0.390	1.04	0.65	0.125	A
3	287.38	47.90	289.53	434.33	34.06	0.00	725.85	708.71	0.396	1.03	0.67	0.138	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	177.84	29.64	177.86	162.31	158.93	0.00	683.74	554.67	0.260	0.36	0.35	0.119	A
2	309.70	51.62	309.74	181.25	155.54	0.00	794.49	607.21	0.390	0.65	0.65	0.124	A
3	287.38	47.90	287.43	431.47	33.81	0.00	725.98	708.71	0.396	0.67	0.66	0.137	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	3.28	0.33	0.117	A	A
2	5.89	0.59	0.122	A	A
3	6.01	0.60	0.134	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	3.47	0.35	0.119	A	A
2	6.29	0.63	0.124	A	A
3	6.45	0.65	0.137	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	4.78	0.48	0.136	A	A
2	9.29	0.93	0.154	A	A
3	9.16	0.92	0.164	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	6.13	0.61	0.153	A	A
2	12.88	1.29	0.189	B	B
3	12.25	1.23	0.193	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	6.83	0.68	0.160	A	A
2	15.03	1.50	0.208	B	B
3	14.04	1.40	0.208	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	6.75	0.68	0.154	A	A
2	14.97	1.50	0.193	B	B
3	14.07	1.41	0.197	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	5.37	0.54	0.138	A	A
2	10.96	1.10	0.158	A	A
3	10.79	1.08	0.168	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	3.71	0.37	0.119	A	A
2	6.83	0.68	0.125	A	A
3	7.03	0.70	0.138	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	3.56	0.36	0.119	A	A
2	6.48	0.65	0.124	A	A
3	6.65	0.67	0.137	A	A

Junctions 8

ARCADY 8 - Roundabout Module

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

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Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: 2017 Base-BartonHillDrive_MinsterRoad.arc8
Path: J:\26677 - GH - Land at Plover Road, Minster\BRIEF 001 - Transport\MODELLING\TRANSPORT\London Modelling Results\Models\Arcady Models\BartonHillDrive_MinsterRoad\2015 Models for TA
Report generation date: 12/06/2015 11:43:56

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	A1 - Scenario 1							
Arm 1	2.13	0.28	0.69	C				
Arm 2	6.83	0.68	0.91	E				
Arm 3	1.58	0.26	0.62	C				
	A1 - Scenario 2							
Arm 1					6.78	0.79	0.92	E
Arm 2					1.73	0.23	0.64	B
Arm 3					2.84	0.35	0.76	C

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

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

Run using Junctions 8.0.4.487 at 12/06/2015 11:43:54

File summary

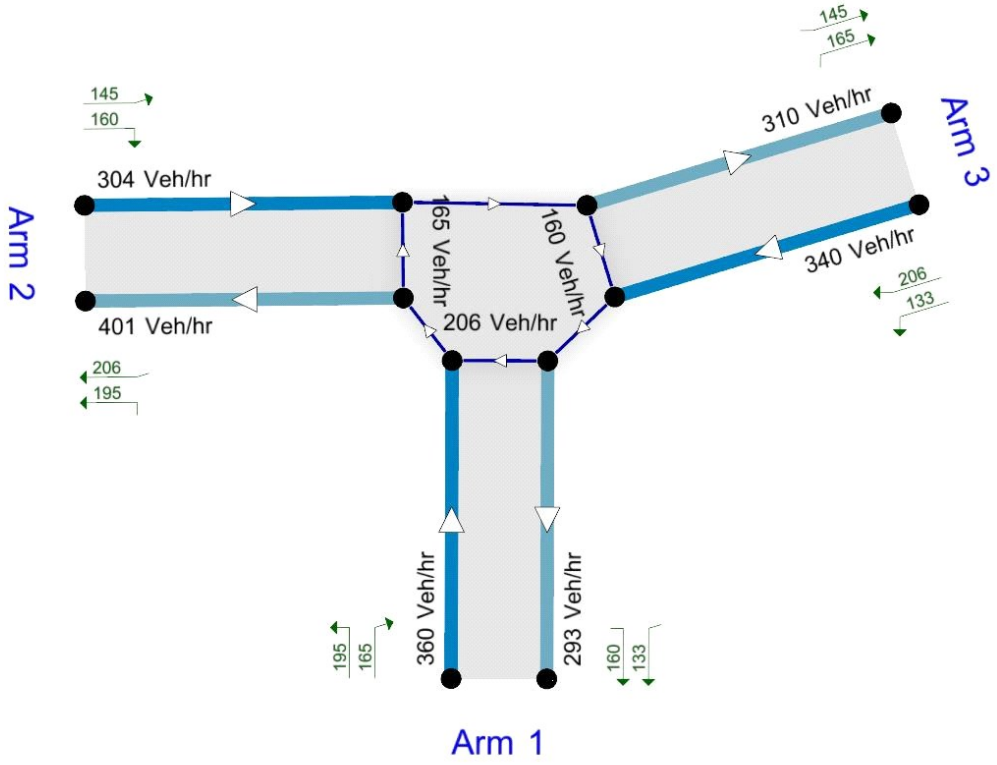
Title	(untitled)
Location	
Site Number	
Date	10/04/2012
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\rspiller
Description	

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



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relations
Scenario 1, AM	Scenario 1	AM		ONE HOUR	07:45	09:15	90	10				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (min)	Junction LOS
1	Barton Hill Drive / Minstwer Road	Mini-roundabout	1,2,3	0.45	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	✓	464.00	100.000
2	ONE HOUR	✓	631.00	100.000
3	ONE HOUR	✓	370.00	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	313.76	319.72		
07:45-07:55	2	426.68	441.13		
07:45-07:55	3	250.19	261.89		
07:55-08:05	1	313.76	319.72		
07:55-08:05	2	426.68	441.13		
07:55-08:05	3	250.19	261.89		
08:05-08:15	1	393.03	400.50		
08:05-08:15	2	534.48	552.58		
08:05-08:15	3	313.40	328.06		
08:15-08:25	1	449.90	458.45		
08:15-08:25	2	611.83	632.55		
08:15-08:25	3	358.76	375.53		
08:25-08:35	1	470.63	479.58		
08:25-08:35	2	640.02	661.70		
08:25-08:35	3	375.29	392.84		
08:35-08:45	1	449.90	458.45		
08:35-08:45	2	611.83	632.55		
08:35-08:45	3	358.76	375.53		
08:45-08:55	1	393.03	400.50		
08:45-08:55	2	534.48	552.58		
08:45-08:55	3	313.40	328.06		
08:55-09:05	1	313.76	319.72		
08:55-09:05	2	426.68	441.13		
08:55-09:05	3	250.19	261.89		
09:05-09:15	1	313.76	319.72		
09:05-09:15	2	426.68	441.13		
09:05-09:15	3	250.19	261.89		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	209.000	255.000
	2	380.000	0.000	251.000
	3	215.000	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	0.69	0.28	2.13	C	379.06	568.58	116.37	0.20	1.29	116.40	0.20
2	0.91	0.68	6.83	E	515.48	773.22	281.52	0.36	3.13	281.59	0.36
3	0.62	0.26	1.58	C	302.26	453.40	87.46	0.19	0.97	87.48	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	313.76	52.29	309.09	395.71	103.33	0.00	706.56	627.76	0.444	0.00	0.78	0.149	A
2	426.68	71.11	419.08	242.56	169.87	0.00	749.79	654.76	0.569	0.00	1.27	0.178	B
3	250.19	41.70	246.66	336.57	252.38	0.00	666.09	592.19	0.376	0.00	0.59	0.142	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	313.76	52.29	313.69	402.20	104.79	0.00	705.77	627.76	0.445	0.78	0.79	0.153	A
2	426.68	71.11	426.50	246.08	172.39	0.00	748.42	654.76	0.570	1.27	1.30	0.186	B
3	250.19	41.70	250.14	342.05	256.85	0.00	663.76	592.19	0.377	0.59	0.60	0.145	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	393.02	65.50	390.19	498.30	130.40	0.00	691.82	627.76	0.568	0.79	1.26	0.197	B
2	534.48	89.08	527.07	306.16	214.44	0.00	725.60	654.76	0.737	1.30	2.53	0.291	C
3	313.40	52.23	311.29	424.10	317.41	0.00	632.23	592.19	0.496	0.60	0.95	0.186	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	449.90	74.98	446.54	567.29	149.26	0.00	681.56	627.76	0.660	1.26	1.82	0.251	C
2	611.83	101.97	598.19	350.40	245.40	0.00	708.80	654.76	0.863	2.53	4.80	0.486	D
3	358.76	59.79	356.31	483.35	360.24	0.00	609.92	592.19	0.588	0.95	1.36	0.234	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	470.63	78.44	468.79	595.41	156.66	0.00	677.53	627.76	0.695	1.82	2.13	0.284	C
2	640.02	106.67	627.85	367.81	257.63	0.00	702.16	654.76	0.912	4.80	6.83	0.681	E
3	375.29	62.55	373.96	507.38	378.11	0.00	600.62	592.19	0.625	1.36	1.58	0.263	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	449.90	74.98	450.50	577.39	150.48	0.00	680.90	627.76	0.661	2.13	2.03	0.262	C
2	611.83	101.97	612.18	353.40	247.58	0.00	707.62	654.76	0.865	6.83	6.77	0.645	E
3	358.76	59.79	359.21	491.09	368.66	0.00	605.54	592.19	0.592	1.58	1.51	0.244	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	393.02	65.50	396.94	518.75	132.44	0.00	690.72	627.76	0.569	2.03	1.38	0.207	B
2	534.48	89.08	556.34	311.24	218.15	0.00	723.59	654.76	0.739	6.77	3.13	0.393	C
3	313.40	52.23	316.14	439.45	335.04	0.00	623.05	592.19	0.503	1.51	1.05	0.197	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	313.76	52.29	317.08	410.12	105.88	0.00	705.18	627.76	0.445	1.38	0.82	0.156	A
2	426.68	71.11	437.14	248.70	174.26	0.00	747.41	654.76	0.571	3.13	1.39	0.199	B
3	250.19	41.70	252.74	348.14	263.26	0.00	660.42	592.19	0.379	1.05	0.62	0.148	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	313.76	52.29	313.82	402.48	104.84	0.00	705.74	627.76	0.445	0.82	0.81	0.153	A
2	426.68	71.11	426.86	246.19	172.47	0.00	748.38	654.76	0.570	1.39	1.36	0.187	B
3	250.19	41.70	250.26	342.26	257.06	0.00	663.65	592.19	0.377	0.62	0.61	0.145	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	7.24	0.72	0.149	A	A
2	11.54	1.15	0.178	B	B
3	5.51	0.55	0.142	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	7.85	0.78	0.153	A	A
2	12.86	1.29	0.186	B	B
3	5.94	0.59	0.145	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	11.79	1.18	0.197	B	B
2	22.52	2.25	0.291	C	B
3	8.95	0.89	0.186	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	16.91	1.69	0.251	C	B
2	40.55	4.05	0.486	D	C
3	12.72	1.27	0.234	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	20.32	2.03	0.284	C	B
2	60.03	6.00	0.681	E	D
3	15.15	1.51	0.263	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	20.66	2.07	0.262	C	B
2	68.01	6.80	0.645	E	D
3	15.32	1.53	0.244	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	14.72	1.47	0.207	B	B
2	37.04	3.70	0.393	C	C
3	11.13	1.11	0.197	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	8.72	0.87	0.156	A	A
2	15.30	1.53	0.199	B	B
3	6.58	0.66	0.148	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	8.16	0.82	0.153	A	A
2	13.67	1.37	0.187	B	B
3	6.17	0.62	0.145	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	0.47	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	✓	543.00	100.000
2	ONE HOUR	✓	456.00	100.000
3	ONE HOUR	✓	510.00	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	367.18	372.84		
16:45-16:55	2	308.35	314.66		
16:45-16:55	3	344.86	353.85		
16:55-17:05	1	367.18	372.84		
16:55-17:05	2	308.35	314.66		
16:55-17:05	3	344.86	353.85		
17:05-17:15	1	459.94	467.03		
17:05-17:15	2	386.25	394.16		
17:05-17:15	3	431.99	443.25		
17:15-17:25	1	526.50	534.62		
17:15-17:25	2	442.14	451.20		
17:15-17:25	3	494.50	507.40		
17:25-17:35	1	550.76	559.25		
17:25-17:35	2	462.52	471.99		
17:25-17:35	3	517.29	530.78		
17:35-17:45	1	526.50	534.62		
17:35-17:45	2	442.14	451.20		
17:35-17:45	3	494.50	507.40		
17:45-17:55	1	459.94	467.03		
17:45-17:55	2	386.25	394.16		
17:45-17:55	3	431.99	443.25		
17:55-18:05	1	367.18	372.84		
17:55-18:05	2	308.35	314.66		
17:55-18:05	3	344.86	353.85		
18:05-18:15	1	367.18	372.84		
18:05-18:15	2	308.35	314.66		
18:05-18:15	3	344.86	353.85		

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	294.000	249.000
	2	239.000	0.000	217.000
	3	200.000	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	0.52	0.00	0.48
	3	0.39	0.61	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.000	1.020	1.010
	2	1.030	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	2.0	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	0.79	6.78	E	443.60	665.39	276.55	0.42	3.07	276.63	0.42
2	0.64	0.23	1.73	B	372.52	558.78	96.91	0.17	1.08	96.93	0.17
3	0.76	0.35	2.84	C	416.64	624.95	143.68	0.23	1.60	143.71	0.23

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	367.18	61.20	359.91	292.70	206.43	0.00	656.96	569.82	0.559	0.00	1.21	0.198	B
2	308.35	51.39	304.36	401.29	165.04	0.00	762.28	709.36	0.405	0.00	0.66	0.130	A
3	344.86	57.48	339.60	309.88	159.52	0.00	727.15	612.17	0.474	0.00	0.88	0.153	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	367.18	61.20	366.99	296.79	209.57	0.00	655.31	569.82	0.560	1.21	1.24	0.208	B
2	308.35	51.39	308.29	408.27	168.29	0.00	760.50	709.36	0.405	0.66	0.67	0.133	A
3	344.86	57.48	344.77	314.99	161.58	0.00	726.04	612.17	0.475	0.88	0.89	0.157	A