APPENDIX G

ARCADY Output

ARCADY 7

Version: 7.0.1.130 [12 March 2010]
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For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: www.trlsoftware.co.uk

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File: T:\Projects\Aldi Goldthorpe North\T155 - Old Mill lane, Barnsley\Calculations\Arcady\ARCADY East Mini Roundabout.arc7
Report generation date: 15/12/2015 13:52:39

» A1 - (Default Analysis Set) - D1 - Base 2016, PM
» A1 - (Default Analysis Set) - D2 - Base 2016 + Dev, PM
» A1 - (Default Analysis Set) - D3 - Base 2021, PM
» A1 - (Default Analysis Set) - D4 - Base 2021 + Dev, PM
» A1 - (Default Analysis Set) - D5 - Base 2016, SAT
» A1 - (Default Analysis Set) - D6 - Base 2016 + Dev, SAT
» A1 - (Default Analysis Set) - D7 - Base 2021, SAT
» A1 - (Default Analysis Set) - D8 - Base 2021 + Dev, SAT

Summary of roundabout performance

	PM				SAT			
	Queue (PCU)	Delay (min)	RFC	LOS	Queue (PCU)	Delay (min)	RFC	LOS
(Default Analysis Set) - Base 2016								
Arm 1	1.32	0.11	0.57	A	1.01	0.10	0.50	A
Arm 2	2.98	0.21	0.75	B	1.46	0.13	0.60	A
Arm 3	0.14	0.07	0.13	A	0.06	0.06	0.06	A
(Default Analysis Set) - Base 2016 + Dev								
Arm 1	1.48	0.12	0.60	A	1.14	0.10	0.53	A
Arm 2	3.12	0.22	0.76	B	1.52	0.13	0.61	A
Arm 3	0.16	0.08	0.14	A	0.08	0.06	0.08	A
(Default Analysis Set) - Base 2021								
Arm 1	1.62	0.13	0.62	A	1.16	0.10	0.54	A
Arm 2	4.06	0.27	0.81	C	1.76	0.15	0.64	A
Arm 3	0.16	0.08	0.14	A	0.07	0.06	0.06	A
(Default Analysis Set) - Base 2021 + Dev								
Arm 1	1.77	0.13	0.64	A	1.32	0.11	0.57	A
Arm 2	4.28	0.29	0.82	C	1.83	0.15	0.65	A
Arm 3	0.18	0.08	0.15	A	0.09	0.07	0.08	A

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

Base 2016 - PM runs from 17:00:00 to 18:30:00
Base 2016 + Dev - PM runs from 17:00:00 to 18:30:00
Base 2021 - PM runs from 17:00:00 to 18:30:00
Base 2021 + Dev - PM runs from 17:00:00 to 18:30:00
Base 2016 - SAT runs from 11:00:00 to 12:30:00
Base 2016 + Dev - SAT runs from 11:00:00 to 12:30:00
Base 2021 - SAT runs from 11:00:00 to 12:30:00
Base 2021 + Dev - SAT runs from 11:00:00 to 12:30:00

File summary

File Description

Title	(untitled)

Date	27/11/2015
Status	(new file)
Enumerator	Desktop-03\Matthew
Results Upto Date	True

Analysis Options

RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

Units

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

A1 - (Default Analysis Set) - D1 - Base 2016, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2016, PM	Base 2016	PM			Yes			17:00	18:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	649.00	100.000	N/A
2	ONE HOUR	Yes	778.00	100.000	N/A
3	ONE HOUR	Yes	107.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-17:15	1	488.60	488.60	N/A	N/A
17:00-17:15	2	585.72	585.72	N/A	N/A
17:00-17:15	3	80.56	80.56	N/A	N/A
17:15-17:30	1	583.44	583.44	N/A	N/A
17:15-17:30	2	699.41	699.41	N/A	N/A
17:15-17:30	3	96.19	96.19	N/A	N/A
17:30-17:45	1	714.56	714.56	N/A	N/A
17:30-17:45	2	856.59	856.59	N/A	N/A
17:30-17:45	3	117.81	117.81	N/A	N/A
17:45-18:00	1	714.56	714.56	N/A	N/A
17:45-18:00	2	856.59	856.59	N/A	N/A
17:45-18:00	3	117.81	117.81	N/A	N/A
18:00-18:15	1	583.44	583.44	N/A	N/A
18:00-18:15	2	699.41	699.41	N/A	N/A
18:00-18:15	3	96.19	96.19	N/A	N/A
18:15-18:30	1	488.60	488.60	N/A	N/A
18:15-18:30	2	585.72	585.72	N/A	N/A
18:15-18:30	3	80.56	80.56	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	602.00	47.00
	2	757.00	0.00	21.00
	3	70.00	37.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.93	0.07
	2	0.97	0.00	0.03
	3	0.65	0.35	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
	1	0.00	0.00	0.00

From	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.57	0.11	1.32	A	595.53	893.30	83.69	0.09	0.93	83.70	0.09	0.563	1274.764
2	0.75	0.21	2.98	B	713.91	1070.86	163.53	0.15	1.82	163.56	0.15	0.534	1163.999
3	0.13	0.07	0.14	A	98.19	147.28	9.78	0.07	0.11	9.78	0.07	0.603	1433.915

Main Results

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	488.60	122.15	486.09	618.39	27.75	0.00	1259.13	1123.44	0.388	0.00	0.63
2	585.72	146.43	581.59	478.63	35.20	0.00	1145.19	1120.52	0.511	0.00	1.03
3	80.56	20.14	80.24	50.90	565.89	0.00	1092.78	776.67	0.074	0.00	0.08

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	583.44	145.86	582.52	741.39	33.23	0.00	1256.04	1123.44	0.465	0.63	0.86
2	699.41	174.85	697.34	573.56	42.19	0.00	1141.45	1120.52	0.613	1.03	1.55
3	96.19	24.05	96.10	61.01	678.52	0.00	1024.88	776.67	0.094	0.08	0.10

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	714.56	178.64	712.76	905.16	40.68	0.00	1251.84	1123.45	0.571	0.86	1.31
2	856.59	214.15	851.17	701.83	51.62	0.00	1136.41	1120.52	0.754	1.55	2.90
3	117.81	29.45	117.65	74.59	828.19	0.00	934.66	776.67	0.126	0.10	0.14

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	714.56	178.64	714.52	910.25	40.74	0.00	1251.81	1123.45	0.571	1.31	1.32
2	856.59	214.15	856.30	703.51	51.74	0.00	1136.34	1120.52	0.754	2.90	2.98
3	117.81	29.45	117.81	74.86	833.19	0.00	931.65	776.67	0.126	0.14	0.14

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	583.44	145.86	585.21	748.85	33.32	0.00	1255.99	1123.44	0.465	1.32	0.88
2	699.41	174.85	704.85	576.14	42.38	0.00	1141.35	1120.52	0.613	2.98	1.62
3	96.19	24.05	96.35	61.41	685.82	0.00	1020.48	776.67	0.094	0.14	0.10

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

	Demand	Arrivals	Entry Flow	Exit Flow	Circulating Flow	Pedestrian	Capacity	Saturation		Start	End

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Capacity (PCU/hr)	RFC	Queue (PCU)	Queue (PCU)
1	488.60	122.15	489.55	624.84	27.89	0.00	1259.05	1123.44	0.388	0.88	0.64
2	585.72	146.43	587.94	481.99	35.45	0.00	1145.05	1120.52	0.512	1.62	1.06
3	80.56	20.14	80.65	51.32	572.07	0.00	1089.05	776.67	0.074	0.10	0.08

Queueing Delay Results

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.14	0.61	0.077	A	A
2	14.79	0.99	0.106	A	A
3	1.17	0.08	0.059	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.54	0.84	0.089	A	A
2	22.22	1.48	0.134	A	A
3	1.52	0.10	0.065	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.90	1.26	0.111	A	A
2	40.11	2.67	0.206	B	B
3	2.12	0.14	0.073	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.72	1.31	0.112	A	A
2	44.24	2.95	0.214	B	B
3	2.16	0.14	0.074	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.56	0.90	0.090	A	A
2	25.64	1.71	0.139	A	A
3	1.59	0.11	0.065	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.82	0.65	0.078	A	A
2	16.53	1.10	0.108	A	A
3	1.22	0.08	0.059	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764

2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
17:00-17:15	1	488.60	1259.13	0.388	0.00	0.00	0.63	9.14	(0.00)	0.077
17:00-17:15	2	585.72	1145.19	0.511	0.00	0.00	1.03	14.79	(0.00)	0.106
17:00-17:15	3	80.56	1092.78	0.074	0.00	0.00	0.08	1.17	(0.00)	0.059
17:15-17:30	1	583.44	1256.04	0.465	0.00	0.63	0.86	12.54	(0.00)	0.089
17:15-17:30	2	699.41	1141.45	0.613	0.00	1.03	1.55	22.22	(0.00)	0.134
17:15-17:30	3	96.19	1024.88	0.094	0.00	0.08	0.10	1.52	(0.00)	0.065
17:30-17:45	1	714.56	1251.84	0.571	0.00	0.86	1.31	18.90	(0.00)	0.111
17:30-17:45	2	856.59	1136.41	0.754	0.00	1.55	2.90	40.11	(0.00)	0.206
17:30-17:45	3	117.81	934.66	0.126	0.00	0.10	0.14	2.12	(0.00)	0.073
17:45-18:00	1	714.56	1251.81	0.571	0.00	1.31	1.32	19.72	(0.00)	0.112
17:45-18:00	2	856.59	1136.34	0.754	0.00	2.90	2.98	44.24	(0.00)	0.214
17:45-18:00	3	117.81	931.65	0.126	0.00	0.14	0.14	2.16	(0.00)	0.074
18:00-18:15	1	583.44	1255.99	0.465	0.00	1.32	0.88	13.56	(0.00)	0.090
18:00-18:15	2	699.41	1141.35	0.613	0.00	2.98	1.62	25.64	(0.00)	0.139
18:00-18:15	3	96.19	1020.48	0.094	0.00	0.14	0.10	1.59	(0.00)	0.065
18:15-18:30	1	488.60	1259.05	0.388	0.00	0.88	0.64	9.82	(0.00)	0.078
18:15-18:30	2	585.72	1145.05	0.512	0.00	1.62	1.06	16.53	(0.00)	0.108
18:15-18:30	3	80.56	1089.05	0.074	0.00	0.10	0.08	1.22	(0.00)	0.059

A1 - (Default Analysis Set) - D2 - Base 2016 + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2016 + Dev, PM	Base 2016 + Dev	PM			Yes			17:00	18:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay

1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	679.00	100.000	N/A
2	ONE HOUR	Yes	787.00	100.000	N/A
3	ONE HOUR	Yes	116.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-17:15	1	511.19	511.19	N/A	N/A
17:00-17:15	2	592.49	592.49	N/A	N/A
17:00-17:15	3	87.33	87.33	N/A	N/A
17:15-17:30	1	610.41	610.41	N/A	N/A
17:15-17:30	2	707.50	707.50	N/A	N/A
17:15-17:30	3	104.28	104.28	N/A	N/A
17:30-17:45	1	747.59	747.59	N/A	N/A
17:30-17:45	2	866.50	866.50	N/A	N/A
17:30-17:45	3	127.72	127.72	N/A	N/A
17:45-18:00	1	747.59	747.59	N/A	N/A
17:45-18:00	2	866.50	866.50	N/A	N/A
17:45-18:00	3	127.72	127.72	N/A	N/A
18:00-18:15	1	610.41	610.41	N/A	N/A
18:00-18:15	2	707.50	707.50	N/A	N/A
18:00-18:15	3	104.28	104.28	N/A	N/A
18:15-18:30	1	511.19	511.19	N/A	N/A
18:15-18:30	2	592.49	592.49	N/A	N/A
18:15-18:30	3	87.33	87.33	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	632.00	47.00
	2	766.00	0.00	21.00
	3	70.00	46.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.93	0.07
	2	0.97	0.00	0.03
	3	0.60	0.40	0.00

Vehicle Mix

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

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.60	0.12	1.48	A	623.06	934.59	92.56	0.10	1.03	92.58	0.10	0.563	1274.764
2	0.76	0.22	3.12	B	722.16	1083.25	169.44	0.16	1.88	169.47	0.16	0.534	1163.999
3	0.14	0.08	0.16	A	106.44	159.67	10.77	0.07	0.12	10.77	0.07	0.603	1433.915

Main Results

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	511.19	127.80	508.46	625.06	34.49	0.00	1255.33	1101.62	0.407	0.00	0.68
2	592.49	148.12	588.27	507.76	35.20	0.00	1145.19	1123.24	0.517	0.00	1.06
3	87.33	21.83	86.98	50.89	572.57	0.00	1088.75	774.86	0.080	0.00	0.09

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	610.41	152.60	609.37	749.39	41.31	0.00	1251.49	1101.63	0.488	0.68	0.94
2	707.50	176.87	705.35	608.50	42.18	0.00	1141.46	1123.24	0.620	1.06	1.59
3	104.28	26.07	104.18	61.00	686.53	0.00	1020.06	774.86	0.102	0.09	0.11

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	747.59	186.90	745.47	914.73	50.58	0.00	1246.27	1101.64	0.600	0.94	1.47
2	866.50	216.63	860.74	744.45	51.60	0.00	1136.42	1123.24	0.762	1.59	3.04
3	127.72	31.93	127.54	74.57	837.77	0.00	928.88	774.86	0.138	0.11	0.16

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	747.59	186.90	747.54	920.13	50.65	0.00	1246.23	1101.64	0.600	1.47	1.48
2	866.50	216.63	866.17	746.44	51.74	0.00	1136.34	1123.24	0.763	3.04	3.12

3	127.72	31.93	127.71	74.86	843.06	0.00	925.69	774.86	0.138	0.16	0.16

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	610.41	152.60	612.49	757.29	41.42	0.00	1251.42	1101.63	0.488	1.48	0.96
2	707.50	176.87	713.29	611.52	42.40	0.00	1141.34	1123.24	0.620	3.12	1.67
3	104.28	26.07	104.46	61.43	694.26	0.00	1015.39	774.86	0.103	0.16	0.12

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	511.19	127.80	512.27	631.71	34.67	0.00	1255.23	1101.62	0.407	0.96	0.69
2	592.49	148.12	594.82	511.48	35.46	0.00	1145.05	1123.24	0.517	1.67	1.09
3	87.33	21.83	87.44	51.33	578.95	0.00	1084.91	774.86	0.081	0.12	0.09

Queueing Delay Results

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.88	0.66	0.080	A	A
2	15.12	1.01	0.107	A	A
3	1.28	0.09	0.060	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.73	0.92	0.093	A	A
2	22.85	1.52	0.137	A	A
3	1.68	0.11	0.066	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	21.16	1.41	0.119	A	A
2	41.76	2.78	0.213	B	B
3	2.34	0.16	0.075	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.19	1.48	0.120	A	A
2	46.27	3.08	0.221	B	B
3	2.39	0.16	0.075	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.94	1.00	0.094	A	A
2	26.48	1.77	0.142	A	A
3	1.75	0.12	0.066	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service

1	10.66	0.71	0.081	A	A
2	16.94	1.13	0.110	A	A
3	1.34	0.09	0.060	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
17:00-17:15	1	511.19	1255.33	0.407	0.00	0.00	0.68	9.88	(0.00)	0.080
17:00-17:15	2	592.49	1145.19	0.517	0.00	0.00	1.06	15.12	(0.00)	0.107
17:00-17:15	3	87.33	1088.75	0.080	0.00	0.00	0.09	1.28	(0.00)	0.060
17:15-17:30	1	610.41	1251.49	0.488	0.00	0.68	0.94	13.73	(0.00)	0.093
17:15-17:30	2	707.50	1141.46	0.620	0.00	1.06	1.59	22.85	(0.00)	0.137
17:15-17:30	3	104.28	1020.06	0.102	0.00	0.09	0.11	1.68	(0.00)	0.066
17:30-17:45	1	747.59	1246.27	0.600	0.00	0.94	1.47	21.16	(0.00)	0.119
17:30-17:45	2	866.50	1136.42	0.762	0.00	1.59	3.04	41.76	(0.00)	0.213
17:30-17:45	3	127.72	928.88	0.138	0.00	0.11	0.16	2.34	(0.00)	0.075
17:45-18:00	1	747.59	1246.23	0.600	0.00	1.47	1.48	22.19	(0.00)	0.120
17:45-18:00	2	866.50	1136.34	0.763	0.00	3.04	3.12	46.27	(0.00)	0.221
17:45-18:00	3	127.72	925.69	0.138	0.00	0.16	0.16	2.39	(0.00)	0.075
18:00-18:15	1	610.41	1251.42	0.488	0.00	1.48	0.96	14.94	(0.00)	0.094
18:00-18:15	2	707.50	1141.34	0.620	0.00	3.12	1.67	26.48	(0.00)	0.142
18:00-18:15	3	104.28	1015.39	0.103	0.00	0.16	0.12	1.75	(0.00)	0.066
18:15-18:30	1	511.19	1255.23	0.407	0.00	0.96	0.69	10.66	(0.00)	0.081
18:15-18:30	2	592.49	1145.05	0.517	0.00	1.67	1.09	16.94	(0.00)	0.110
18:15-18:30	3	87.33	1084.91	0.081	0.00	0.12	0.09	1.34	(0.00)	0.060

A1 - (Default Analysis Set) - D3 - Base 2021, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2021, PM	Base 2021	PM			Yes			17:00	18:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	705.00	100.000	N/A
2	ONE HOUR	Yes	834.00	100.000	N/A
3	ONE HOUR	Yes	114.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-17:15	1	530.76	530.76	N/A	N/A
17:00-17:15	2	627.88	627.88	N/A	N/A
17:00-17:15	3	85.83	85.83	N/A	N/A
17:15-17:30	1	633.78	633.78	N/A	N/A
17:15-17:30	2	749.75	749.75	N/A	N/A
17:15-17:30	3	102.48	102.48	N/A	N/A
17:30-17:45	1	776.22	776.22	N/A	N/A
17:30-17:45	2	918.25	918.25	N/A	N/A
17:30-17:45	3	125.52	125.52	N/A	N/A
17:45-18:00	1	776.22	776.22	N/A	N/A
17:45-18:00	2	918.25	918.25	N/A	N/A
17:45-18:00	3	125.52	125.52	N/A	N/A
18:00-18:15	1	633.78	633.78	N/A	N/A
18:00-18:15	2	749.75	749.75	N/A	N/A
18:00-18:15	3	102.48	102.48	N/A	N/A
18:15-18:30	1	530.76	530.76	N/A	N/A
18:15-18:30	2	627.88	627.88	N/A	N/A
18:15-18:30	3	85.83	85.83	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	655.00	50.00
	2	811.00	0.00	23.00
	3	75.00	39.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.93	0.07
	2	0.97	0.00	0.03
	3	0.66	0.34	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.62	0.13	1.62	A	646.92	970.38	99.71	0.10	1.11	99.72	0.10	0.563	1274.764
2	0.81	0.27	4.06	C	765.29	1147.94	207.14	0.18	2.30	207.18	0.18	0.534	1163.999
3	0.14	0.08	0.16	A	104.61	156.91	10.88	0.07	0.12	10.88	0.07	0.603	1433.915

Main Results

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	530.76	132.69	527.87	662.15	29.24	0.00	1258.29	1125.07	0.422	0.00	0.72
2	627.88	156.97	623.09	519.67	37.44	0.00	1143.99	1121.35	0.549	0.00	1.20
3	85.83	21.46	85.48	54.62	605.91	0.00	1068.65	776.57	0.080	0.00	0.09

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	633.78	158.45	632.64	793.81	35.02	0.00	1255.03	1125.08	0.505	0.72	1.01
2	749.75	187.44	747.06	622.80	44.87	0.00	1140.02	1121.35	0.658	1.20	1.87
3	102.48	25.62	102.37	65.47	726.46	0.00	995.98	776.57	0.103	0.09	0.11

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

	Demand	Arrivals	Entry Flow	Exit Flow	Circulating Flow	Pedestrian	Capacity	Saturation		Start	End

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Capacity (PCU/hr)	RFC	Queue (PCU)	Queue (PCU)
1	776.22	194.05	773.84	967.46	42.88	0.00	1250.61	1125.08	0.621	1.01	1.60
2	918.25	229.56	910.11	761.83	54.88	0.00	1134.67	1121.35	0.809	1.87	3.90
3	125.52	31.38	125.33	79.98	885.01	0.00	900.40	776.57	0.139	0.11	0.16

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	776.22	194.05	776.15	974.90	42.94	0.00	1250.57	1125.08	0.621	1.60	1.62
2	918.25	229.56	917.63	764.04	55.05	0.00	1134.58	1121.35	0.809	3.90	4.06
3	125.52	31.38	125.51	80.35	892.32	0.00	895.99	776.57	0.140	0.16	0.16

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	633.78	158.45	636.12	804.71	35.12	0.00	1254.97	1125.08	0.505	1.62	1.03
2	749.75	187.44	758.07	626.13	45.12	0.00	1139.89	1121.35	0.658	4.06	1.98
3	102.48	25.62	102.67	66.02	737.17	0.00	989.53	776.57	0.104	0.16	0.12

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	530.76	132.69	531.95	669.98	29.40	0.00	1258.20	1125.07	0.422	1.03	0.74
2	627.88	156.97	630.84	523.62	37.73	0.00	1143.84	1121.35	0.549	1.98	1.24
3	85.83	21.46	85.94	55.12	613.44	0.00	1064.11	776.57	0.081	0.12	0.09

Queueing Delay Results

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.48	0.70	0.082	A	A
2	17.05	1.14	0.114	A	A
3	1.28	0.09	0.061	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.68	0.98	0.096	A	A
2	26.60	1.77	0.152	A	A
3	1.69	0.11	0.067	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	22.98	1.53	0.125	A	A
2	52.42	3.49	0.258	C	B
3	2.37	0.16	0.077	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	24.18	1.61	0.126	A	A
2	59.95	4.00	0.274	C	B

3	2.43	0.16	0.078	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.05	1.07	0.097	A	A
2	31.77	2.12	0.160	A	A
3	1.77	0.12	0.068	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.34	0.76	0.083	A	A
2	19.36	1.29	0.118	A	A
3	1.34	0.09	0.061	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
17:00-17:15	1	530.76	1258.29	0.422	0.00	0.00	0.72	10.48	(0.00)	0.082
17:00-17:15	2	627.88	1143.99	0.549	0.00	0.00	1.20	17.05	(0.00)	0.114
17:00-17:15	3	85.83	1068.65	0.080	0.00	0.00	0.09	1.28	(0.00)	0.061
17:15-17:30	1	633.78	1255.03	0.505	0.00	0.72	1.01	14.68	(0.00)	0.096
17:15-17:30	2	749.75	1140.02	0.658	0.00	1.20	1.87	26.60	(0.00)	0.152
17:15-17:30	3	102.48	995.98	0.103	0.00	0.09	0.11	1.69	(0.00)	0.067
17:30-17:45	1	776.22	1250.61	0.621	0.00	1.01	1.60	22.98	(0.00)	0.125
17:30-17:45	2	918.25	1134.67	0.809	0.00	1.87	3.90	52.42	(0.00)	0.258
17:30-17:45	3	125.52	900.40	0.139	0.00	0.11	0.16	2.37	(0.00)	0.077
17:45-18:00	1	776.22	1250.57	0.621	0.00	1.60	1.62	24.18	(0.00)	0.126
17:45-18:00	2	918.25	1134.58	0.809	0.00	3.90	4.06	59.95	(0.00)	0.274
17:45-18:00	3	125.52	895.99	0.140	0.00	0.16	0.16	2.43	(0.00)	0.078
18:00-18:15	1	633.78	1254.97	0.505	0.00	1.62	1.03	16.05	(0.00)	0.097
18:00-18:15	2	749.75	1139.89	0.658	0.00	4.06	1.98	31.77	(0.00)	0.160
18:00-18:15	3	102.48	989.53	0.104	0.00	0.16	0.12	1.77	(0.00)	0.068
18:15-18:30	1	530.76	1258.20	0.422	0.00	1.03	0.74	11.34	(0.00)	0.083
18:15-18:30	2	627.88	1143.84	0.549	0.00	1.98	1.24	19.36	(0.00)	0.118
18:15-18:30	3	85.83	1064.11	0.081	0.00	0.12	0.09	1.34	(0.00)	0.061

A1 - (Default Analysis Set) - D4 - Base 2021 + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2021 + Dev, PM	Base 2021 + Dev	PM			Yes			17:00	18:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None

3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	725.00	100.000	N/A
2	ONE HOUR	Yes	843.00	100.000	N/A
3	ONE HOUR	Yes	123.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
17:00-17:15	1	545.82	545.82	N/A	N/A
17:00-17:15	2	634.65	634.65	N/A	N/A
17:00-17:15	3	92.60	92.60	N/A	N/A
17:15-17:30	1	651.76	651.76	N/A	N/A
17:15-17:30	2	757.84	757.84	N/A	N/A
17:15-17:30	3	110.57	110.57	N/A	N/A
17:30-17:45	1	798.24	798.24	N/A	N/A
17:30-17:45	2	928.16	928.16	N/A	N/A
17:30-17:45	3	135.43	135.43	N/A	N/A
17:45-18:00	1	798.24	798.24	N/A	N/A
17:45-18:00	2	928.16	928.16	N/A	N/A
17:45-18:00	3	135.43	135.43	N/A	N/A
18:00-18:15	1	651.76	651.76	N/A	N/A
18:00-18:15	2	757.84	757.84	N/A	N/A
18:00-18:15	3	110.57	110.57	N/A	N/A
18:15-18:30	1	545.82	545.82	N/A	N/A
18:15-18:30	2	634.65	634.65	N/A	N/A
18:15-18:30	3	92.60	92.60	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	675.00	50.00
	2	820.00	0.00	23.00
	3	75.00	48.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.93	0.07
	2	0.97	0.00	0.03
	3	0.61	0.39	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.64	0.13	1.77	A	665.27	997.91	107.13	0.11	1.19	107.15	0.11	0.563	1274.764
2	0.82	0.29	4.28	C	773.55	1160.33	215.61	0.19	2.40	215.65	0.19	0.534	1163.999
3	0.15	0.08	0.18	A	112.87	169.30	11.93	0.07	0.13	11.93	0.07	0.603	1433.915

Main Results

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	545.82	136.45	542.77	668.81	35.99	0.00	1254.49	1104.30	0.435	0.00	0.76
2	634.65	158.66	629.76	541.32	37.43	0.00	1143.99	1123.30	0.555	0.00	1.22

3	92.60	23.15	92.22	54.61	612.57	0.00	1064.64	775.23	0.087	0.00	0.09

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	651.76	162.94	650.51	801.78	43.10	0.00	1250.48	1104.31	0.521	0.76	1.07
2	757.84	189.46	755.03	648.76	44.86	0.00	1140.02	1123.30	0.665	1.22	1.93
3	110.57	27.64	110.45	65.46	734.43	0.00	991.18	775.23	0.112	0.09	0.12

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	798.24	199.56	795.56	976.81	52.77	0.00	1245.03	1104.31	0.641	1.07	1.74
2	928.16	232.04	919.44	793.46	54.87	0.00	1134.68	1123.30	0.818	1.93	4.11
3	135.43	33.86	135.22	79.95	894.36	0.00	894.77	775.23	0.151	0.12	0.18

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	798.24	199.56	798.16	984.72	52.85	0.00	1244.99	1104.31	0.641	1.74	1.77
2	928.16	232.04	927.45	795.96	55.05	0.00	1134.58	1123.30	0.818	4.11	4.28
3	135.43	33.86	135.42	80.35	902.15	0.00	890.07	775.23	0.152	0.18	0.18

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	651.76	162.94	654.41	813.42	43.23	0.00	1250.41	1104.31	0.521	1.77	1.10
2	757.84	189.46	766.79	652.51	45.13	0.00	1139.88	1123.30	0.665	4.28	2.04
3	110.57	27.64	110.78	66.05	745.87	0.00	984.28	775.23	0.112	0.18	0.13

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

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	545.82	136.45	547.12	676.90	36.19	0.00	1254.38	1104.30	0.435	1.10	0.78
2	634.65	158.66	637.76	545.57	37.73	0.00	1143.83	1123.30	0.555	2.04	1.27
3	92.60	23.15	92.73	55.13	620.36	0.00	1059.95	775.23	0.087	0.13	0.10

Queueing Delay Results

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.04	0.74	0.084	A	A
2	17.44	1.16	0.116	A	A
3	1.39	0.09	0.062	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.62	1.04	0.100	A	A
2	27.38	1.83	0.155	A	A
3	1.85	0.12	0.068	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	24.94	1.66	0.133	A	A
2	54.82	3.65	0.268	C	B
3	2.61	0.17	0.079	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	26.36	1.76	0.134	A	A
2	63.16	4.21	0.287	C	B
3	2.67	0.18	0.079	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.18	1.15	0.101	A	A
2	32.95	2.20	0.165	A	A
3	1.94	0.13	0.069	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.99	0.80	0.085	A	A
2	19.85	1.32	0.119	A	A
3	1.46	0.10	0.062	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
17:00-17:15	1	545.82	1254.49	0.435	0.00	0.00	0.76	11.04	(0.00)	0.084
17:00-17:15	2	634.65	1143.99	0.555	0.00	0.00	1.22	17.44	(0.00)	0.116
17:00-17:15	3	92.60	1064.64	0.087	0.00	0.00	0.09	1.39	(0.00)	0.062
17:15-17:30	1	651.76	1250.48	0.521	0.00	0.76	1.07	15.62	(0.00)	0.100
17:15-17:30	2	757.84	1140.02	0.665	0.00	1.22	1.93	27.38	(0.00)	0.155
17:15-17:30	3	110.57	991.18	0.112	0.00	0.09	0.12	1.85	(0.00)	0.068
17:30-17:45	1	798.24	1245.03	0.641	0.00	1.07	1.74	24.94	(0.00)	0.133
17:30-17:45	2	928.16	1134.68	0.818	0.00	1.93	4.11	54.82	(0.00)	0.268
17:30-17:45	3	135.43	894.77	0.151	0.00	0.12	0.18	2.61	(0.00)	0.079
17:45-18:00	1	798.24	1244.99	0.641	0.00	1.74	1.77	26.36	(0.00)	0.134
17:45-18:00	2	928.16	1134.58	0.818	0.00	4.11	4.28	63.16	(0.00)	0.287
17:45-18:00	3	135.43	890.07	0.152	0.00	0.18	0.18	2.67	(0.00)	0.079

18:00-18:15	1	651.76	1250.41	0.521	0.00	1.77	1.10	17.18	(0.00)	0.101
18:00-18:15	2	757.84	1139.88	0.665	0.00	4.28	2.04	32.95	(0.00)	0.165
18:00-18:15	3	110.57	984.28	0.112	0.00	0.18	0.13	1.94	(0.00)	0.069
18:15-18:30	1	545.82	1254.38	0.435	0.00	1.10	0.78	11.99	(0.00)	0.085
18:15-18:30	2	634.65	1143.83	0.555	0.00	2.04	1.27	19.85	(0.00)	0.119
18:15-18:30	3	92.60	1059.95	0.087	0.00	0.13	0.10	1.46	(0.00)	0.062

A1 - (Default Analysis Set) - D5 - Base 2016, SAT

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2016, SAT	Base 2016	SAT			Yes			11:00	12:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	578.00	100.000	N/A
2	ONE HOUR	Yes	614.00	100.000	N/A
3	ONE HOUR	Yes	54.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
11:00-11:15	1	435.15	435.15	N/A	N/A
11:00-11:15	2	462.25	462.25	N/A	N/A
11:00-11:15	3	40.65	40.65	N/A	N/A
11:15-11:30	1	519.61	519.61	N/A	N/A
11:15-11:30	2	551.97	551.97	N/A	N/A
11:15-11:30	3	48.54	48.54	N/A	N/A
11:30-11:45	1	636.39	636.39	N/A	N/A
11:30-11:45	2	676.03	676.03	N/A	N/A

11:30-11:45	2	676.03	676.03	N/A	N/A
11:30-11:45	3	59.46	59.46	N/A	N/A
11:45-12:00	1	636.39	636.39	N/A	N/A
11:45-12:00	2	676.03	676.03	N/A	N/A
11:45-12:00	3	59.46	59.46	N/A	N/A
12:00-12:15	1	519.61	519.61	N/A	N/A
12:00-12:15	2	551.97	551.97	N/A	N/A
12:00-12:15	3	48.54	48.54	N/A	N/A
12:15-12:30	1	435.15	435.15	N/A	N/A
12:15-12:30	2	462.25	462.25	N/A	N/A
12:15-12:30	3	40.65	40.65	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	529.00	49.00
	2	599.00	0.00	15.00
	3	39.00	15.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.92	0.08
	2	0.98	0.00	0.02
	3	0.72	0.28	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.50	0.10	1.01	A	530.38	795.57	66.11	0.08	0.73	66.11	0.08	0.563	1274.764

2	0.60	0.13	1.46	A	563.42	845.13	91.00	0.11	1.01	91.01	0.11	0.534	1163.999
3	0.06	0.06	0.06	A	49.55	74.33	4.26	0.06	0.05	4.26	0.06	0.603	1433.915

Main Results

Main results: (11:00-11:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	435.15	108.79	433.07	477.60	11.25	0.00	1268.42	1152.67	0.343	0.00	0.52
2	462.25	115.56	459.57	407.61	36.71	0.00	1144.38	1111.77	0.404	0.00	0.67
3	40.65	10.16	40.51	47.94	448.34	0.00	1163.64	780.08	0.035	0.00	0.04

Main results: (11:15-11:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	519.61	129.90	518.93	572.53	13.47	0.00	1267.17	1152.67	0.410	0.52	0.69
2	551.97	137.99	550.95	488.41	43.99	0.00	1140.49	1111.77	0.484	0.67	0.93
3	48.54	12.14	48.51	57.45	537.49	0.00	1109.90	780.08	0.044	0.04	0.05

Main results: (11:30-11:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	636.39	159.10	635.15	700.39	16.50	0.00	1265.47	1152.67	0.503	0.69	1.00
2	676.03	169.01	673.96	597.80	53.84	0.00	1135.22	1111.77	0.596	0.93	1.44
3	59.46	14.86	59.40	70.31	657.50	0.00	1037.56	780.08	0.057	0.05	0.06

Main results: (11:45-12:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	636.39	159.10	636.37	702.39	16.52	0.00	1265.46	1152.67	0.503	1.00	1.01
2	676.03	169.01	675.97	598.93	53.95	0.00	1135.17	1111.77	0.596	1.44	1.46
3	59.46	14.86	59.45	70.46	659.45	0.00	1036.38	780.08	0.057	0.06	0.06

Main results: (12:00-12:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	519.61	129.90	520.83	575.57	13.50	0.00	1267.16	1152.67	0.410	1.01	0.70
2	551.97	137.99	554.00	490.17	44.15	0.00	1140.40	1111.77	0.484	1.46	0.95
3	48.54	12.14	48.60	57.69	540.47	0.00	1108.11	780.08	0.044	0.06	0.05

Main results: (12:15-12:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	435.15	108.79	435.85	481.38	11.30	0.00	1268.39	1152.67	0.343	0.70	0.53
2	462.25	115.56	463.31	410.20	36.95	0.00	1144.25	1111.77	0.404	0.95	0.68
3	40.65	10.16	40.69	48.27	452.00	0.00	1161.44	780.08	0.035	0.05	0.04

Queueing Delay Results

Queueing Delay results: (11:00-11:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.56	0.50	0.072	A	A

2	9.72	0.65	0.087	A	A
3	0.53	0.04	0.053	A	A

Queueing Delay results: (11:15-11:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.11	0.67	0.080	A	A
2	13.49	0.90	0.102	A	A
3	0.68	0.05	0.057	A	A

Queueing Delay results: (11:30-11:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.55	0.97	0.095	A	A
2	20.72	1.38	0.129	A	A
3	0.90	0.06	0.061	A	A

Queueing Delay results: (11:45-12:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.04	1.00	0.095	A	A
2	21.77	1.45	0.131	A	A
3	0.91	0.06	0.061	A	A

Queueing Delay results: (12:00-12:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.79	0.72	0.081	A	A
2	14.75	0.98	0.103	A	A
3	0.70	0.05	0.057	A	A

Queueing Delay results: (12:15-12:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.05	0.54	0.072	A	A
2	10.54	0.70	0.088	A	A
3	0.55	0.04	0.054	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
11:00-11:15	1	435.15	1268.42	0.343	0.00	0.00	0.52	7.56	(0.00)	0.072
11:00-11:15	2	462.25	1144.38	0.404	0.00	0.00	0.67	9.72	(0.00)	0.087

11:00-11:15	3	40.65	1163.64	0.035	0.00	0.00	0.04	0.53	(0.00)	0.053
11:15-11:30	1	519.61	1267.17	0.410	0.00	0.52	0.69	10.11	(0.00)	0.080
11:15-11:30	2	551.97	1140.49	0.484	0.00	0.67	0.93	13.49	(0.00)	0.102
11:15-11:30	3	48.54	1109.90	0.044	0.00	0.04	0.05	0.68	(0.00)	0.057
11:30-11:45	1	636.39	1265.47	0.503	0.00	0.69	1.00	14.55	(0.00)	0.095
11:30-11:45	2	676.03	1135.22	0.596	0.00	0.93	1.44	20.72	(0.00)	0.129
11:30-11:45	3	59.46	1037.56	0.057	0.00	0.05	0.06	0.90	(0.00)	0.061
11:45-12:00	1	636.39	1265.46	0.503	0.00	1.00	1.01	15.04	(0.00)	0.095
11:45-12:00	2	676.03	1135.17	0.596	0.00	1.44	1.46	21.77	(0.00)	0.131
11:45-12:00	3	59.46	1036.38	0.057	0.00	0.06	0.06	0.91	(0.00)	0.061
12:00-12:15	1	519.61	1267.16	0.410	0.00	1.01	0.70	10.79	(0.00)	0.081
12:00-12:15	2	551.97	1140.40	0.484	0.00	1.46	0.95	14.75	(0.00)	0.103
12:00-12:15	3	48.54	1108.11	0.044	0.00	0.06	0.05	0.70	(0.00)	0.057
12:15-12:30	1	435.15	1268.39	0.343	0.00	0.70	0.53	8.05	(0.00)	0.072
12:15-12:30	2	462.25	1144.25	0.404	0.00	0.95	0.68	10.54	(0.00)	0.088
12:15-12:30	3	40.65	1161.44	0.035	0.00	0.05	0.04	0.55	(0.00)	0.054

A1 - (Default Analysis Set) - D6 - Base 2016 + Dev, SAT

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2016 + Dev, SAT	Base 2016 + Dev	SAT			Yes			11:00	12:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	609.00	100.000	N/A
2	ONE HOUR	Yes	625.00	100.000	N/A
3	ONE HOUR	Yes	72.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
11:00-11:15	1	458.49	458.49	N/A	N/A
11:00-11:15	2	470.53	470.53	N/A	N/A
11:00-11:15	3	54.21	54.21	N/A	N/A
11:15-11:30	1	547.48	547.48	N/A	N/A
11:15-11:30	2	561.86	561.86	N/A	N/A
11:15-11:30	3	64.73	64.73	N/A	N/A
11:30-11:45	1	670.52	670.52	N/A	N/A
11:30-11:45	2	688.14	688.14	N/A	N/A
11:30-11:45	3	79.27	79.27	N/A	N/A
11:45-12:00	1	670.52	670.52	N/A	N/A
11:45-12:00	2	688.14	688.14	N/A	N/A
11:45-12:00	3	79.27	79.27	N/A	N/A
12:00-12:15	1	547.48	547.48	N/A	N/A
12:00-12:15	2	561.86	561.86	N/A	N/A
12:00-12:15	3	64.73	64.73	N/A	N/A
12:15-12:30	1	458.49	458.49	N/A	N/A
12:15-12:30	2	470.53	470.53	N/A	N/A
12:15-12:30	3	54.21	54.21	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	560.00	49.00
	2	610.00	0.00	15.00
	3	39.00	33.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.92	0.08
	2	0.98	0.00	0.02
	3	0.54	0.46	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3

From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.53	0.10	1.14	A	558.83	838.24	73.75	0.09	0.82	73.76	0.09	0.563	1274.764
2	0.61	0.13	1.52	A	573.51	860.27	94.47	0.11	1.05	94.49	0.11	0.534	1163.999
3	0.08	0.06	0.08	A	66.07	99.10	5.82	0.06	0.06	5.82	0.06	0.603	1433.915

Main Results

Main results: (11:00-11:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	458.49	114.62	456.22	485.80	24.75	0.00	1260.82	1074.30	0.364	0.00	0.57
2	470.53	117.63	467.77	444.27	36.71	0.00	1144.38	1117.80	0.411	0.00	0.69
3	54.21	13.55	54.01	47.93	456.54	0.00	1158.70	776.24	0.047	0.00	0.05

Main results: (11:15-11:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	547.48	136.87	546.69	582.37	29.64	0.00	1258.06	1074.30	0.435	0.57	0.76
2	561.86	140.47	560.79	532.35	43.99	0.00	1140.49	1117.80	0.493	0.69	0.96
3	64.73	16.18	64.67	57.45	547.33	0.00	1103.96	776.24	0.059	0.05	0.06

Main results: (11:30-11:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	670.52	167.63	669.04	712.38	36.30	0.00	1254.31	1074.30	0.535	0.76	1.13
2	688.14	172.03	685.95	651.51	53.83	0.00	1135.23	1117.80	0.606	0.96	1.51
3	79.27	19.82	79.19	70.29	669.48	0.00	1030.33	776.24	0.077	0.06	0.08

Main results: (11:45-12:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	670.52	167.63	670.49	714.50	36.33	0.00	1254.29	1074.30	0.535	1.13	1.14
2	688.14	172.03	688.07	652.88	53.95	0.00	1135.17	1117.80	0.606	1.51	1.52
3	79.27	19.82	79.27	70.46	671.56	0.00	1029.08	776.24	0.077	0.08	0.08

Main results: (12:00-12:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	547.48	136.87	548.93	585.58	29.70	0.00	1258.03	1074.30	0.435	1.14	0.78
2	561.86	140.47	564.02	534.47	44.17	0.00	1140.39	1117.80	0.493	1.52	0.98
3	64.73	16.18	64.81	57.70	550.48	0.00	1102.07	776.24	0.059	0.08	0.06

Main results: (12:15-12:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	458.49	114.62	459.30	489.72	24.87	0.00	1260.75	1074.30	0.364	0.78	0.58
2	470.53	117.63	471.65	447.21	36.95	0.00	1144.25	1117.80	0.411	0.98	0.71
3	54.21	13.55	54.26	48.27	460.33	0.00	1156.41	776.24	0.047	0.06	0.05

Queueing Delay Results

Queueing Delay results: (11:00-11:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.26	0.55	0.074	A	A
2	10.01	0.67	0.088	A	A
3	0.72	0.05	0.054	A	A

Queueing Delay results: (11:15-11:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.18	0.75	0.084	A	A
2	13.95	0.93	0.103	A	A
3	0.92	0.06	0.058	A	A

Queueing Delay results: (11:30-11:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.43	1.10	0.102	A	A
2	21.60	1.44	0.133	A	A
3	1.23	0.08	0.063	A	A

Queueing Delay results: (11:45-12:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.06	1.14	0.103	A	A
2	22.74	1.52	0.134	A	A
3	1.25	0.08	0.063	A	A

Queueing Delay results: (12:00-12:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.00	0.80	0.085	A	A
2	15.30	1.02	0.105	A	A
3	0.95	0.06	0.058	A	A

Queueing Delay results: (12:15-12:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.83	0.59	0.075	A	A
2	10.87	0.72	0.089	A	A
3	0.75	0.05	0.054	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)

1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
11:00-11:15	1	458.49	1260.82	0.364	0.00	0.00	0.57	8.26	(0.00)	0.074
11:00-11:15	2	470.53	1144.38	0.411	0.00	0.00	0.69	10.01	(0.00)	0.088
11:00-11:15	3	54.21	1158.70	0.047	0.00	0.00	0.05	0.72	(0.00)	0.054
11:15-11:30	1	547.48	1258.06	0.435	0.00	0.57	0.76	11.18	(0.00)	0.084
11:15-11:30	2	561.86	1140.49	0.493	0.00	0.69	0.96	13.95	(0.00)	0.103
11:15-11:30	3	64.73	1103.96	0.059	0.00	0.05	0.06	0.92	(0.00)	0.058
11:30-11:45	1	670.52	1254.31	0.535	0.00	0.76	1.13	16.43	(0.00)	0.102
11:30-11:45	2	688.14	1135.23	0.606	0.00	0.96	1.51	21.60	(0.00)	0.133
11:30-11:45	3	79.27	1030.33	0.077	0.00	0.06	0.08	1.23	(0.00)	0.063
11:45-12:00	1	670.52	1254.29	0.535	0.00	1.13	1.14	17.06	(0.00)	0.103
11:45-12:00	2	688.14	1135.17	0.606	0.00	1.51	1.52	22.74	(0.00)	0.134
11:45-12:00	3	79.27	1029.08	0.077	0.00	0.08	0.08	1.25	(0.00)	0.063
12:00-12:15	1	547.48	1258.03	0.435	0.00	1.14	0.78	12.00	(0.00)	0.085
12:00-12:15	2	561.86	1140.39	0.493	0.00	1.52	0.98	15.30	(0.00)	0.105
12:00-12:15	3	64.73	1102.07	0.059	0.00	0.08	0.06	0.95	(0.00)	0.058
12:15-12:30	1	458.49	1260.75	0.364	0.00	0.78	0.58	8.83	(0.00)	0.075
12:15-12:30	2	470.53	1144.25	0.411	0.00	0.98	0.71	10.87	(0.00)	0.089
12:15-12:30	3	54.21	1156.41	0.047	0.00	0.06	0.05	0.75	(0.00)	0.054

A1 - (Default Analysis Set) - D7 - Base 2021, SAT

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2021, SAT	Base 2021	SAT			Yes			11:00	12:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	619.00	100.000	N/A
2	ONE HOUR	Yes	659.00	100.000	N/A
3	ONE HOUR	Yes	57.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
11:00-11:15	1	466.02	466.02	N/A	N/A
11:00-11:15	2	496.13	496.13	N/A	N/A
11:00-11:15	3	42.91	42.91	N/A	N/A
11:15-11:30	1	556.47	556.47	N/A	N/A
11:15-11:30	2	592.43	592.43	N/A	N/A
11:15-11:30	3	51.24	51.24	N/A	N/A
11:30-11:45	1	681.53	681.53	N/A	N/A
11:30-11:45	2	725.57	725.57	N/A	N/A
11:30-11:45	3	62.76	62.76	N/A	N/A
11:45-12:00	1	681.53	681.53	N/A	N/A
11:45-12:00	2	725.57	725.57	N/A	N/A
11:45-12:00	3	62.76	62.76	N/A	N/A
12:00-12:15	1	556.47	556.47	N/A	N/A
12:00-12:15	2	592.43	592.43	N/A	N/A
12:00-12:15	3	51.24	51.24	N/A	N/A
12:15-12:30	1	466.02	466.02	N/A	N/A
12:15-12:30	2	496.13	496.13	N/A	N/A
12:15-12:30	3	42.91	42.91	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	567.00	52.00
	2	643.00	0.00	16.00
	3	41.00	16.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.92	0.08
	2	0.98	0.00	0.02
	3	0.72	0.28	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.54	0.10	1.16	A	568.01	852.01	75.01	0.09	0.83	75.01	0.09	0.563	1274.764
2	0.64	0.15	1.76	A	604.71	907.06	106.52	0.12	1.18	106.53	0.12	0.534	1163.999
3	0.06	0.06	0.07	A	52.30	78.46	4.63	0.06	0.05	4.63	0.06	0.603	1433.915

Main Results

Main results: (11:00-11:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	466.02	116.50	463.71	511.88	12.00	0.00	1268.00	1151.45	0.368	0.00	0.58
2	496.13	124.03	493.10	436.76	38.95	0.00	1143.18	1112.30	0.434	0.00	0.76
3	42.91	10.73	42.76	50.93	481.12	0.00	1143.88	779.67	0.038	0.00	0.04

Main results: (11:15-11:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	556.47	139.12	555.67	613.66	14.37	0.00	1266.67	1151.45	0.439	0.58	0.78
2	592.43	148.11	591.19	523.36	46.68	0.00	1139.05	1112.30	0.520	0.76	1.07
3	51.24	12.81	51.20	61.03	576.84	0.00	1086.18	779.67	0.047	0.04	0.05

Main results: (11:30-11:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	681.53	170.38	680.03	750.45	17.60	0.00	1264.85	1151.46	0.539	0.78	1.15
2	725.57	181.39	722.91	640.50	57.13	0.00	1133.47	1112.30	0.640	1.07	1.73
3	62.76	15.69	62.69	74.68	705.36	0.00	1008.70	779.67	0.062	0.05	0.07

Main results: (11:45-12:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	681.53	170.38	681.50	753.01	17.62	0.00	1264.84	1151.46	0.539	1.15	1.16
2	725.57	181.39	725.48	641.86	57.25	0.00	1133.40	1112.30	0.640	1.73	1.76

3	62.76	15.69	62.76	74.86	707.87	0.00	1007.19	779.67	0.062	0.07	0.07

Main results: (12:00-12:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	556.47	139.12	557.94	617.51	14.40	0.00	1266.65	1151.45	0.439	1.16	0.79
2	592.43	148.11	595.05	525.47	46.87	0.00	1138.95	1112.30	0.520	1.76	1.10
3	51.24	12.81	51.31	61.32	580.60	0.00	1083.91	779.67	0.047	0.07	0.05

Main results: (12:15-12:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	466.02	116.50	466.84	516.25	12.06	0.00	1267.97	1151.45	0.368	0.79	0.59
2	496.13	124.03	497.43	439.68	39.22	0.00	1143.04	1112.30	0.434	1.10	0.78
3	42.91	10.73	42.96	51.29	485.35	0.00	1141.33	779.67	0.038	0.05	0.04

Queueing Delay Results

Queueing Delay results: (11:00-11:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.40	0.56	0.074	A	A
2	10.96	0.73	0.092	A	A
3	0.57	0.04	0.054	A	A

Queueing Delay results: (11:15-11:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.36	0.76	0.084	A	A
2	15.51	1.03	0.109	A	A
3	0.73	0.05	0.058	A	A

Queueing Delay results: (11:30-11:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.71	1.11	0.102	A	A
2	24.71	1.65	0.145	A	A
3	0.98	0.07	0.063	A	A

Queueing Delay results: (11:45-12:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.35	1.16	0.103	A	A
2	26.21	1.75	0.147	A	A
3	0.99	0.07	0.064	A	A

Queueing Delay results: (12:00-12:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.21	0.81	0.085	A	A
2	17.16	1.14	0.111	A	A
3	0.76	0.05	0.058	A	A

Queueing Delay results: (12:15-12:30)

	Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving Vehicle	Unsignalised Level Of	Signalised Level Of

Arm	min)	min/min)	(min)	Service	Service
1	8.98	0.60	0.075	A	A
2	11.96	0.80	0.093	A	A
3	0.60	0.04	0.055	A	A

Overview: Standard Roundabout Geometry

Standard 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	Final Slope	Final Intercept (PCU/hr)
1	3.60	5.00	5.00	22.00	27.50	40.00		0.563	1274.764
2	3.60	4.35	3.50	17.00	27.50	42.00		0.534	1163.999
3	3.50	5.00	27.00	17.00	27.50	30.00		0.603	1433.915

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
11:00-11:15	1	466.02	1268.00	0.368	0.00	0.00	0.58	8.40	(0.00)	0.074
11:00-11:15	2	496.13	1143.18	0.434	0.00	0.00	0.76	10.96	(0.00)	0.092
11:00-11:15	3	42.91	1143.88	0.038	0.00	0.00	0.04	0.57	(0.00)	0.054
11:15-11:30	1	556.47	1266.67	0.439	0.00	0.58	0.78	11.36	(0.00)	0.084
11:15-11:30	2	592.43	1139.05	0.520	0.00	0.76	1.07	15.51	(0.00)	0.109
11:15-11:30	3	51.24	1086.18	0.047	0.00	0.04	0.05	0.73	(0.00)	0.058
11:30-11:45	1	681.53	1264.85	0.539	0.00	0.78	1.15	16.71	(0.00)	0.102
11:30-11:45	2	725.57	1133.47	0.640	0.00	1.07	1.73	24.71	(0.00)	0.145
11:30-11:45	3	62.76	1008.70	0.062	0.00	0.05	0.07	0.98	(0.00)	0.063
11:45-12:00	1	681.53	1264.84	0.539	0.00	1.15	1.16	17.35	(0.00)	0.103
11:45-12:00	2	725.57	1133.40	0.640	0.00	1.73	1.76	26.21	(0.00)	0.147
11:45-12:00	3	62.76	1007.19	0.062	0.00	0.07	0.07	0.99	(0.00)	0.064
12:00-12:15	1	556.47	1266.65	0.439	0.00	1.16	0.79	12.21	(0.00)	0.085
12:00-12:15	2	592.43	1138.95	0.520	0.00	1.76	1.10	17.16	(0.00)	0.111
12:00-12:15	3	51.24	1083.91	0.047	0.00	0.07	0.05	0.76	(0.00)	0.058
12:15-12:30	1	466.02	1267.97	0.368	0.00	0.79	0.59	8.98	(0.00)	0.075
12:15-12:30	2	496.13	1143.04	0.434	0.00	1.10	0.78	11.96	(0.00)	0.093
12:15-12:30	3	42.91	1141.33	0.038	0.00	0.05	0.04	0.60	(0.00)	0.055

A1 - (Default Analysis Set) - D8 - Base 2021 + Dev, SAT

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
Base 2021 + Dev, SAT	Base 2021 + Dev	SAT			Yes			11:00	12:30	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Burton Road East	
2	Burton Road Bypass	
3	Burton 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

Standard 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	3.60	5.00	5.00	22.00	27.50	40.00	
2	3.60	4.35	3.50	17.00	27.50	42.00	
3	3.50	5.00	27.00	17.00	27.50	30.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.563	1274.764
2		((calculated))	((calculated))	0.534	1163.999
3		((calculated))	((calculated))	0.603	1433.915

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
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	650.00	100.000	N/A
2	ONE HOUR	Yes	669.00	100.000	N/A
3	ONE HOUR	Yes	75.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
11:00-11:15	1	489.35	489.35	N/A	N/A
11:00-11:15	2	503.66	503.66	N/A	N/A
11:00-11:15	3	56.46	56.46	N/A	N/A
11:15-11:30	1	584.34	584.34	N/A	N/A
11:15-11:30	2	601.42	601.42	N/A	N/A
11:15-11:30	3	67.42	67.42	N/A	N/A
11:30-11:45	1	715.66	715.66	N/A	N/A
11:30-11:45	2	736.58	736.58	N/A	N/A
11:30-11:45	3	82.58	82.58	N/A	N/A
11:45-12:00	1	715.66	715.66	N/A	N/A
11:45-12:00	2	736.58	736.58	N/A	N/A
11:45-12:00	3	82.58	82.58	N/A	N/A
12:00-12:15	1	584.34	584.34	N/A	N/A
12:00-12:15	2	601.42	601.42	N/A	N/A
12:00-12:15	3	67.42	67.42	N/A	N/A
12:15-12:30	1	489.35	489.35	N/A	N/A
12:15-12:30	2	503.66	503.66	N/A	N/A
12:15-12:30	3	56.46	56.46	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	598.00	52.00
	2	653.00	0.00	16.00