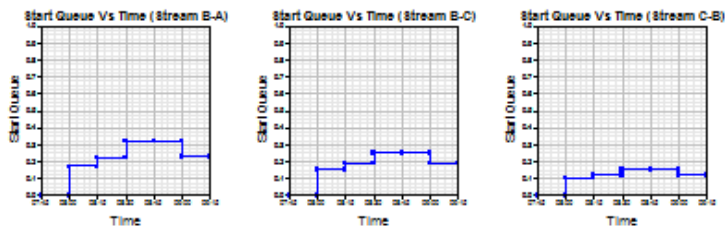
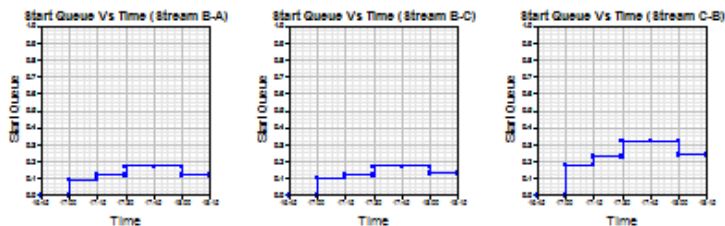


Start Queue Graph

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15

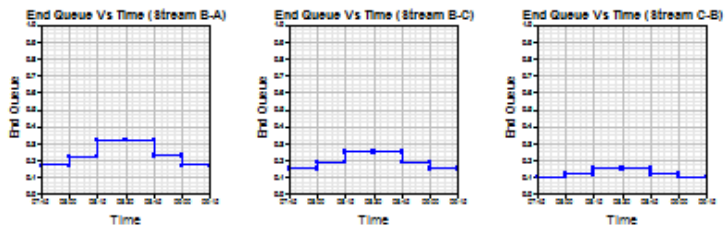


Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15

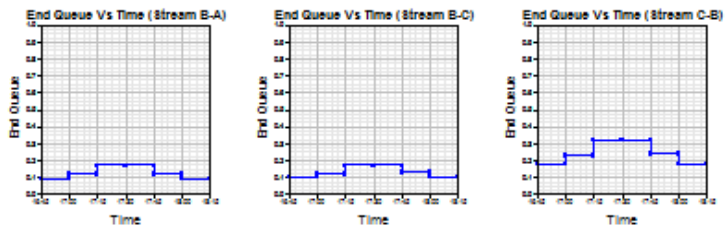


End Queue Graph

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15



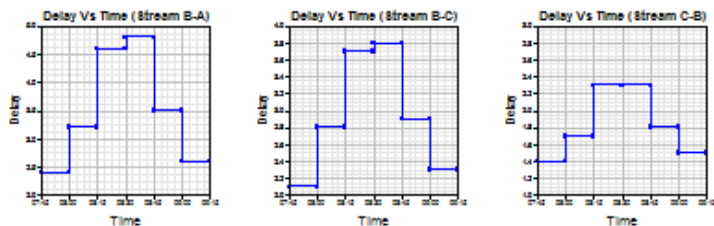
Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15



Delay Graph

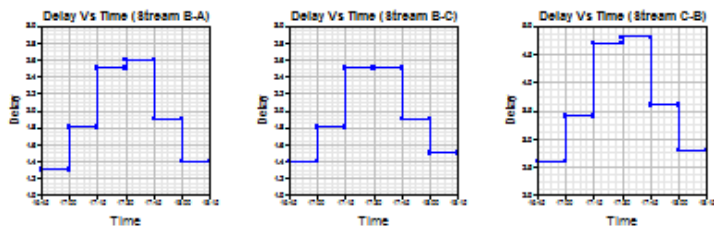
Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15



Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15



Queues & Delays

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-A	1.08	7.47	0.144	-	0.00	0.17	-	2.4	0.16
	B-C	1.49	11.53	0.130	-	0.00	0.15	-	2.1	0.10
	C-A	7.88	-	-	-	-	-	-	-	-
	C-B	0.95	10.88	0.088	-	0.00	0.10	-	1.4	0.10
	A-B	0.59	-	-	-	-	-	-	-	-
	A-C	4.37	-	-	-	-	-	-	-	-
08:00-08:15	B-A	1.29	7.04	0.183	-	0.17	0.22	-	3.2	0.17
	B-C	1.78	11.20	0.159	-	0.15	0.19	-	2.8	0.11
	C-A	9.41	-	-	-	-	-	-	-	-
	C-B	1.14	10.68	0.107	-	0.10	0.12	-	1.7	0.10
	A-B	0.70	-	-	-	-	-	-	-	-
	A-C	5.21	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-A	1.58	6.43	0.246	-	0.22	0.32	-	4.6	0.21
	B-C	2.18	10.72	0.204	-	0.19	0.25	-	3.7	0.12
	C-A	11.52	-	-	-	-	-	-	-	-
	C-B	1.39	10.41	0.134	-	0.12	0.15	-	2.3	0.11
	A-B	0.86	-	-	-	-	-	-	-	-
	A-C	6.39	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-A	1.58	6.43	0.246	-	0.32	0.32	-	4.8	0.21
	B-C	2.18	10.71	0.204	-	0.25	0.25	-	3.8	0.12
	C-A	11.52	-	-	-	-	-	-	-	-
	C-B	1.39	10.41	0.134	-	0.15	0.15	-	2.3	0.11
	A-B	0.86	-	-	-	-	-	-	-	-
	A-C	6.39	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-A	1.29	7.04	0.183	-	0.32	0.23	-	3.5	0.17
	B-C	1.78	11.20	0.159	-	0.25	0.19	-	2.9	0.11
	C-A	9.41	-	-	-	-	-	-	-	-
	C-B	1.14	10.68	0.107	-	0.15	0.12	-	1.8	0.10
	A-B	0.70	-	-	-	-	-	-	-	-
	A-C	5.21	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
09:00-09:15	B-A	1.08	7.47	0.144	-	0.23	0.17	-	2.6	0.16
	B-C	1.49	11.52	0.130	-	0.19	0.15	-	2.3	0.10
	C-A	7.88	-	-	-	-	-	-	-	-
	C-B	0.95	10.88	0.088	-	0.12	0.10	-	1.5	0.10
	A-B	0.59	-	-	-	-	-	-	-	-
	A-C	4.37	-	-	-	-	-	-	-	-

Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
16:45-17:00	B-A	0.58	6.86	0.084	-	0.00	0.09	-	1.3	0.16
	B-C	1.00	11.17	0.090	-	0.00	0.10	-	1.4	0.10
	C-A	5.18	-	-	-	-	-	-	-	-
	C-B	1.56	10.13	0.154	-	0.00	0.18	-	2.6	0.12
	A-B	1.13	-	-	-	-	-	-	-	-
	A-C	7.52	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-A	0.69	6.35	0.109	-	0.09	0.12	-	1.8	0.18
	B-C	1.20	10.75	0.111	-	0.10	0.12	-	1.8	0.10
	C-A	6.19	-	-	-	-	-	-	-	-
	C-B	1.86	9.78	0.190	-	0.18	0.23	-	3.4	0.13
	A-B	1.35	-	-	-	-	-	-	-	-
	A-C	8.97	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:15-17:30	B-A	0.84	5.63	0.150	-	0.12	0.17	-	2.5	0.21
	B-C	1.47	10.18	0.144	-	0.12	0.17	-	2.5	0.11
	C-A	7.58	-	-	-	-	-	-	-	-
	C-B	2.28	9.31	0.244	-	0.23	0.32	-	4.7	0.14
	A-B	1.65	-	-	-	-	-	-	-	-
	A-C	10.99	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:30-17:45	B-A	0.84	5.63	0.150	-	0.17	0.17	-	2.6	0.21
	B-C	1.47	10.18	0.144	-	0.17	0.17	-	2.5	0.11
	C-A	7.58	-	-	-	-	-	-	-	-
	C-B	2.28	9.31	0.244	-	0.32	0.32	-	4.8	0.14
	A-B	1.65	-	-	-	-	-	-	-	-
	A-C	10.99	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:45-18:00	B-A	0.69	6.35	0.109	-	0.17	0.12	-	1.9	0.18
	B-C	1.20	10.75	0.112	-	0.17	0.13	-	1.9	0.10
	C-A	6.19	-	-	-	-	-	-	-	-
	C-B	1.86	9.78	0.190	-	0.32	0.24	-	3.6	0.13
	A-B	1.35	-	-	-	-	-	-	-	-
	A-C	8.97	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
18:00-18:15	B-A	0.58	6.85	0.084	-	0.12	0.09	-	1.4	0.16
	B-C	1.00	11.17	0.090	-	0.13	0.10	-	1.5	0.10
	C-A	5.18	-	-	-	-	-	-	-	-
	C-B	1.56	10.13	0.154	-	0.24	0.18	-	2.8	0.12
	A-B	1.13	-	-	-	-	-	-	-	-
	A-C	7.52	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.

In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.

Delays marked with '###' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: 2014 AM PCU - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-A	118.4	78.9	21.2	0.2	21.2	0.2
B-C	163.8	109.2	17.7	0.1	17.7	0.1
C-A	864.4	576.3	-	-	-	-
C-B	104.6	69.7	11.0	0.1	11.0	0.1
A-B	64.7	43.1	-	-	-	-
A-C	479.0	319.3	-	-	-	-
All	1794.9	1196.6	49.9	0.0	49.9	0.0

Demand Set: 2014 PM PCU - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-A	63.3	42.2	11.5	0.2	11.5	0.2
B-C	110.1	73.4	11.7	0.1	11.7	0.1
C-A	568.5	379.0	-	-	-	-
C-B	170.7	113.8	21.9	0.1	21.9	0.1
A-B	123.9	82.6	-	-	-	-
A-C	824.5	549.7	-	-	-	-
All	1860.9	1240.6	45.2	0.0	45.2	0.0

Delay is that occurring only within the time period.

Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.

These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

**APPENDIX H: JUNCTION MODEL OUTPUTS: BASELINE SCENARIO
WITH SOUTH EAST BICESTER**

ARCADY 7

Version: 7.0.1.130 [12 March 2010]
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\With SEB 2014 Peregrine Way - Wretchwick Way roundabout.arc7

Report generation date: 10/04/2015 10:47:42

- » A1 - (Default Analysis Set) - D5 - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, PM
- » A1 - (Default Analysis Set) - D6 - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM

Summary of roundabout performance

	AM				PM			
	Queue (PCU)	Delay (min)	RFC	LOS	Queue (PCU)	Delay (min)	RFC	LOS
(Default Analysis Set) - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak								
Arm A	0.24	0.03	0.19	A				
Arm B	0.28	0.06	0.22	A				
Arm C	0.42	0.04	0.30	A				
(Default Analysis Set) - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak								
Arm A					0.52	0.03	0.34	A
Arm B					0.25	0.06	0.20	A
Arm C					0.32	0.04	0.25	A

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

2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD +DEV180 - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD +DEV180 - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00

File summary

File Description

Title	Peregrine Way/Wretchwick Way AM Peak
Location	Bicester
Date	13/07/2010
Status	TIA
Client	JJ Gallagher
Jobnumber	18578-01-1
Enumerator	Alexanders [CS5DG3J]
Results Upto Date	False

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
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	Order	Ascending	Numerical	By Destination	Absolute Time
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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) - D5 - 2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, 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
2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak, PM	2020 PCU + CD - Peregrine Way/Wretchwick Way PM Peak	PM			Yes			16:45	18:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C	Standard			

Roundabout Network Options

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

Arms

Arms

ID	Name	Description
A	Neunkirchen Way	
B	Peregine Way	
C	Wretchwick Way North	

Capacity Options

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

B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	7.00	10.00	25.00	40.00	49.00	23.00	
B	3.00	6.50	15.00	60.00	49.00	24.50	
C	5.50	8.00	19.00	45.00	49.00	12.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	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)
A		((calculated))	((calculated))	0.858	2913.181
B		((calculated))	((calculated))	0.608	1594.519
C		((calculated))	((calculated))	0.772	2396.694

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
A	ONE HOUR	Yes	890.00	100.000	N/A
B	ONE HOUR	Yes	208.00	100.000	N/A
C	ONE HOUR	Yes	504.00	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)
16:45-17:00	A	670.04	670.04	N/A	N/A
16:45-17:00	B	156.59	156.59	N/A	N/A
16:45-17:00	C	379.44	379.44	N/A	N/A
17:00-17:15	A	800.09	800.09	N/A	N/A
17:00-17:15	B	186.99	186.99	N/A	N/A

17:00-17:15	C	453.09	453.09	N/A	N/A
17:15-17:30	A	979.91	979.91	N/A	N/A
17:15-17:30	B	229.01	229.01	N/A	N/A
17:15-17:30	C	554.91	554.91	N/A	N/A
17:30-17:45	A	979.91	979.91	N/A	N/A
17:30-17:45	B	229.01	229.01	N/A	N/A
17:30-17:45	C	554.91	554.91	N/A	N/A
17:45-18:00	A	800.09	800.09	N/A	N/A
17:45-18:00	B	186.99	186.99	N/A	N/A
17:45-18:00	C	453.09	453.09	N/A	N/A
18:00-18:15	A	670.04	670.04	N/A	N/A
18:00-18:15	B	156.59	156.59	N/A	N/A
18:00-18:15	C	379.44	379.44	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.00	241.00	649.00
	B	157.00	0.00	51.00
	C	448.00	56.00	0.00

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

		To		
		A	B	C
From	A	0.00	0.27	0.73
	B	0.75	0.00	0.25
	C	0.89	0.11	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.00	1.00	1.00
	B	1.00	1.00	1.00
	C	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	0.00
	B	0.00	0.00	0.00
	C	0.00	0.00	0.00

Results

Results Summary

	Max	Min	Total	Total	Total	Average	Rate Of	Inclusive	Inclusive

Arm	Max RFC	max Delay (min)	max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Queueing Delay (PCU-min)	Average Queueing Delay (min)	Queueing Delay (PCU-min/min)	Queueing Total Delay (PCU-min)	Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
A	0.34	0.03	0.52	A	816.68	1225.02	36.20	0.03	0.40	36.20	0.03	0.858	2913.181
B	0.20	0.06	0.25	A	190.86	286.30	16.72	0.06	0.19	16.72	0.06	0.608	1594.519
C	0.25	0.04	0.32	A	462.48	693.72	22.98	0.03	0.26	22.98	0.03	0.772	2396.694

Main Results

Main results: (16:45-17:00)

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)
A	670.04	167.51	668.83	454.36	42.07	0.00	2877.08	2706.62	0.233	0.00	0.30
B	156.59	39.15	156.05	223.18	487.72	0.00	1298.16	395.22	0.121	0.00	0.14
C	379.44	94.86	378.65	525.98	117.79	0.00	2305.82	2166.55	0.165	0.00	0.20

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)
A	800.09	200.02	799.76	543.58	50.32	0.00	2870.00	2706.62	0.279	0.30	0.39
B	186.99	46.75	186.83	266.89	583.20	0.00	1240.15	395.22	0.151	0.14	0.18
C	453.09	113.27	452.89	629.01	141.02	0.00	2287.90	2166.54	0.198	0.20	0.25

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)
A	979.91	244.98	979.37	665.64	61.62	0.00	2860.30	2706.62	0.343	0.39	0.52
B	229.01	57.25	228.74	326.82	714.17	0.00	1160.56	395.22	0.197	0.18	0.24
C	554.91	138.73	554.60	770.26	172.66	0.00	2263.49	2166.54	0.245	0.25	0.32

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)
A	979.91	244.98	979.90	666.11	61.66	0.00	2860.27	2706.62	0.343	0.52	0.52
B	229.01	57.25	229.01	327.00	714.56	0.00	1160.32	395.22	0.197	0.24	0.25
C	554.91	138.73	554.91	770.71	172.86	0.00	2263.33	2166.54	0.245	0.32	0.32

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)
A	800.09	200.02	800.62	544.36	50.38	0.00	2869.95	2706.62	0.279	0.52	0.39
B	186.99	46.75	187.26	267.17	583.82	0.00	1239.76	395.22	0.151	0.25	0.18
C	453.09	113.27	453.39	629.74	141.34	0.00	2287.65	2166.54	0.198	0.32	0.25

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)
A	670.04	167.51	670.37	455.78	42.18	0.00	2876.98	2706.62	0.233	0.39	0.30
B	156.59	39.15	156.76	223.71	488.84	0.00	1297.48	395.22	0.121	0.18	0.14
C	379.44	94.86	379.64	527.28	118.32	0.00	2305.41	2166.55	0.165	0.25	0.20

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

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
A	4.49	0.30	0.027	A	A
B	2.01	0.13	0.053	A	A
C	2.91	0.19	0.031	A	A

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
A	5.73	0.38	0.029	A	A
B	2.62	0.17	0.057	A	A
C	3.66	0.24	0.033	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
A	7.71	0.51	0.032	A	A
B	3.61	0.24	0.064	A	A
C	4.81	0.32	0.035	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
A	7.80	0.52	0.032	A	A
B	3.67	0.24	0.064	A	A
C	4.86	0.32	0.035	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
A	5.87	0.39	0.029	A	A
B	2.72	0.18	0.057	A	A
C	3.75	0.25	0.033	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
A	4.61	0.31	0.027	A	A
B	2.09	0.14	0.053	A	A
C	2.99	0.20	0.031	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)
A	7.00	10.00	25.00	40.00	49.00	23.00		0.858	2913.181
B	3.00	6.50	15.00	60.00	49.00	24.50		0.608	1594.519
C	5.50	8.00	19.00	45.00	49.00	12.00		0.772	2396.694

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand	Capacity	PCU	Pedestrian	Start Queue	End Queue	Queueing Total	Geometric Total	Average Delay Per Arriving Vehicle
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Time Segment	Arm	(PCU/hr)	(PCU/hr)	KPCU	Demand (Ped/hr)	Queue (PCU)	Queue (PCU)	Delay (PCU-min)	Delay (PCU-min)	Arriving Vehicle (min)
16:45-17:00	A	670.04	2877.08	0.233	0.00	0.00	0.30	4.49	(0.00)	0.027
16:45-17:00	B	156.59	1298.16	0.121	0.00	0.00	0.14	2.01	(0.00)	0.053
16:45-17:00	C	379.44	2305.82	0.165	0.00	0.00	0.20	2.91	(0.00)	0.031
17:00-17:15	A	800.09	2870.00	0.279	0.00	0.30	0.39	5.73	(0.00)	0.029
17:00-17:15	B	186.99	1240.15	0.151	0.00	0.14	0.18	2.62	(0.00)	0.057
17:00-17:15	C	453.09	2287.90	0.198	0.00	0.20	0.25	3.66	(0.00)	0.033
17:15-17:30	A	979.91	2860.30	0.343	0.00	0.39	0.52	7.71	(0.00)	0.032
17:15-17:30	B	229.01	1160.56	0.197	0.00	0.18	0.24	3.61	(0.00)	0.064
17:15-17:30	C	554.91	2263.49	0.245	0.00	0.25	0.32	4.81	(0.00)	0.035
17:30-17:45	A	979.91	2860.27	0.343	0.00	0.52	0.52	7.80	(0.00)	0.032
17:30-17:45	B	229.01	1160.32	0.197	0.00	0.24	0.25	3.67	(0.00)	0.064
17:30-17:45	C	554.91	2263.33	0.245	0.00	0.32	0.32	4.86	(0.00)	0.035
17:45-18:00	A	800.09	2869.95	0.279	0.00	0.52	0.39	5.87	(0.00)	0.029
17:45-18:00	B	186.99	1239.76	0.151	0.00	0.25	0.18	2.72	(0.00)	0.057
17:45-18:00	C	453.09	2287.65	0.198	0.00	0.32	0.25	3.75	(0.00)	0.033
18:00-18:15	A	670.04	2876.98	0.233	0.00	0.39	0.30	4.61	(0.00)	0.027
18:00-18:15	B	156.59	1297.48	0.121	0.00	0.18	0.14	2.09	(0.00)	0.053
18:00-18:15	C	379.44	2305.41	0.165	0.00	0.25	0.20	2.99	(0.00)	0.031

A1 - (Default Analysis Set) - D6 - 2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM

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
2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak, AM	2020 PCU + CD - Peregrine Way/Wretchwick Way AM Peak	AM			Yes			07:45	09:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C	Standard			

Roundabout Network Options

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

Left | NORTHBOUND | ((MIN-FOURDAYS ONLY))

Arms

Arms

ID	Name	Description
A	Neunkirchen Way	
B	Peregine Way	
C	Wretchwick Way North	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00

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
A	7.00	10.00	25.00	40.00	49.00	23.00	
B	3.00	6.50	15.00	60.00	49.00	24.50	
C	5.50	8.00	19.00	45.00	49.00	12.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	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)
A		((calculated))	((calculated))	0.858	2913.181
B		((calculated))	((calculated))	0.608	1594.519
C		((calculated))	((calculated))	0.772	2396.694

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
A	ONE HOUR	Yes	504.00	100.000	NA

A	ONE HOUR	Yes	304.00	100.000	N/A
B	ONE HOUR	Yes	273.00	100.000	N/A
C	ONE HOUR	Yes	592.00	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)
07:45-08:00	A	379.44	379.44	N/A	N/A
07:45-08:00	B	205.53	205.53	N/A	N/A
07:45-08:00	C	445.69	445.69	N/A	N/A
08:00-08:15	A	453.09	453.09	N/A	N/A
08:00-08:15	B	245.42	245.42	N/A	N/A
08:00-08:15	C	532.20	532.20	N/A	N/A
08:15-08:30	A	554.91	554.91	N/A	N/A
08:15-08:30	B	300.58	300.58	N/A	N/A
08:15-08:30	C	651.80	651.80	N/A	N/A
08:30-08:45	A	554.91	554.91	N/A	N/A
08:30-08:45	B	300.58	300.58	N/A	N/A
08:30-08:45	C	651.80	651.80	N/A	N/A
08:45-09:00	A	453.09	453.09	N/A	N/A
08:45-09:00	B	245.42	245.42	N/A	N/A
08:45-09:00	C	532.20	532.20	N/A	N/A
09:00-09:15	A	379.44	379.44	N/A	N/A
09:00-09:15	B	205.53	205.53	N/A	N/A
09:00-09:15	C	445.69	445.69	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.00	150.00	354.00
	B	225.00	0.00	48.00
	C	566.00	26.00	0.00

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

		To		
		A	B	C
From	A	0.00	0.30	0.70
	B	0.82	0.00	0.18
	C	0.96	0.04	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.00	1.00	1.00
	B	1.00	1.00	1.00

	C	1.00	1.00	1.00
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Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	0.00
	B	0.00	0.00	0.00
	C	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)
A	0.19	0.03	0.24	A	462.48	693.72	17.18	0.02	0.19	17.18	0.02	0.858	2913.181
B	0.22	0.06	0.28	A	250.51	375.76	19.82	0.05	0.22	19.82	0.05	0.608	1594.519
C	0.30	0.04	0.42	A	543.23	814.84	29.15	0.04	0.32	29.16	0.04	0.772	2396.694

Main Results

Main results: (07:45-08:00)

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)
A	379.44	94.86	378.84	594.02	19.53	0.00	2896.42	2832.10	0.131	0.00	0.15
B	205.53	51.38	204.86	132.28	266.09	0.00	1432.83	385.79	0.143	0.00	0.17
C	445.69	111.42	444.71	302.11	168.84	0.00	2266.43	2151.39	0.197	0.00	0.24

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

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)
A	453.09	113.27	452.95	710.69	23.36	0.00	2893.13	2832.10	0.157	0.15	0.19
B	245.42	61.36	245.24	158.17	318.14	0.00	1401.20	385.79	0.175	0.17	0.21
C	532.20	133.05	531.93	361.26	202.12	0.00	2240.76	2151.39	0.238	0.24	0.31

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

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)
A	554.91	138.73	554.71	870.26	28.61	0.00	2888.63	2832.10	0.192	0.19	0.24
B	300.58	75.14	300.29	193.70	389.62	0.00	1357.77	385.79	0.221	0.21	0.28
C	651.80	162.95	651.37	442.41	247.49	0.00	2205.75	2151.39	0.296	0.31	0.42

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

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)
A	554.91	138.73	554.91	870.90	28.63	0.00	2888.62	2832.10	0.192	0.24	0.24
B	300.58	75.14	300.58	193.78	389.76	0.00	1357.68	385.79	0.221	0.28	0.28
C	651.80	162.95	651.80	442.61	247.73	0.00	2205.57	2151.39	0.296	0.42	0.42

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

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)
A	554.91	138.73	554.91	870.90	28.63	0.00	2888.62	2832.10	0.192	0.24	0.24
B	300.58	75.14	300.58	193.78	389.76	0.00	1357.68	385.79	0.221	0.28	0.28
C	651.80	162.95	651.80	442.61	247.73	0.00	2205.57	2151.39	0.296	0.42	0.42

A	453.09	113.27	453.29	711.73	23.39	0.00	2893.11	2832.10	0.157	0.24	0.19
B	245.42	61.36	245.70	158.30	318.38	0.00	1401.06	385.79	0.175	0.28	0.21
C	532.20	133.05	532.62	361.58	202.50	0.00	2240.46	2151.39	0.238	0.42	0.31

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

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)
A	379.44	94.86	379.58	595.91	19.59	0.00	2896.37	2832.10	0.131	0.19	0.15
B	205.53	51.38	205.71	132.56	266.61	0.00	1432.52	385.79	0.143	0.21	0.17
C	445.69	111.42	445.96	302.78	169.54	0.00	2265.89	2151.39	0.197	0.31	0.25

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

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
A	2.24	0.15	0.024	A	A
B	2.46	0.16	0.049	A	A
C	3.61	0.24	0.033	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	2.76	0.18	0.025	A	A
B	3.13	0.21	0.052	A	A
C	4.61	0.31	0.035	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	3.53	0.24	0.026	A	A
B	4.18	0.28	0.057	A	A
C	6.19	0.41	0.039	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	3.56	0.24	0.026	A	A
B	4.25	0.28	0.057	A	A
C	6.28	0.42	0.039	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	2.81	0.19	0.025	A	A
B	3.24	0.22	0.052	A	A
C	4.74	0.32	0.035	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	2.28	0.15	0.024	A	A
B	2.55	0.17	0.049	A	A
C	3.72	0.25	0.033	A	A

Queueing Delay Results

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)
A	7.00	10.00	25.00	40.00	49.00	23.00		0.858	2913.181
B	3.00	6.50	15.00	60.00	49.00	24.50		0.608	1594.519
C	5.50	8.00	19.00	45.00	49.00	12.00		0.772	2396.694

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)
07:45-08:00	A	379.44	2896.42	0.131	0.00	0.00	0.15	2.24	(0.00)	0.024
07:45-08:00	B	205.53	1432.83	0.143	0.00	0.00	0.17	2.46	(0.00)	0.049
07:45-08:00	C	445.69	2266.43	0.197	0.00	0.00	0.24	3.61	(0.00)	0.033
08:00-08:15	A	453.09	2893.13	0.157	0.00	0.15	0.19	2.76	(0.00)	0.025
08:00-08:15	B	245.42	1401.20	0.175	0.00	0.17	0.21	3.13	(0.00)	0.052
08:00-08:15	C	532.20	2240.76	0.238	0.00	0.24	0.31	4.61	(0.00)	0.035
08:15-08:30	A	554.91	2888.63	0.192	0.00	0.19	0.24	3.53	(0.00)	0.026
08:15-08:30	B	300.58	1357.77	0.221	0.00	0.21	0.28	4.18	(0.00)	0.057
08:15-08:30	C	651.80	2205.75	0.296	0.00	0.31	0.42	6.19	(0.00)	0.039
08:30-08:45	A	554.91	2888.62	0.192	0.00	0.24	0.24	3.56	(0.00)	0.026
08:30-08:45	B	300.58	1357.68	0.221	0.00	0.28	0.28	4.25	(0.00)	0.057
08:30-08:45	C	651.80	2205.57	0.296	0.00	0.42	0.42	6.28	(0.00)	0.039
08:45-09:00	A	453.09	2893.11	0.157	0.00	0.24	0.19	2.81	(0.00)	0.025
08:45-09:00	B	245.42	1401.06	0.175	0.00	0.28	0.21	3.24	(0.00)	0.052
08:45-09:00	C	532.20	2240.46	0.238	0.00	0.42	0.31	4.74	(0.00)	0.035
09:00-09:15	A	379.44	2896.37	0.131	0.00	0.19	0.15	2.28	(0.00)	0.024
09:00-09:15	B	205.53	1432.52	0.143	0.00	0.21	0.17	2.55	(0.00)	0.049
09:00-09:15	C	445.69	2265.89	0.197	0.00	0.31	0.25	3.72	(0.00)	0.033

ARCADY 7

Version: 7.0.1.130 [12 March 2010]
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\With SEB 2014 Seel Way - A41 E- Gravll Rd - A41 W - B4100.arc7

Report generation date: 10/04/2015 10:37:17

- » A1 - (Default Analysis Set) - D9 - 2020 PCU + CD -AM Peak, AM
- » A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - PM Peak, PM

Summary of roundabout performance

	AM				PM			
	Queue (PCU)	Delay (min)	RFC	LOS	Queue (PCU)	Delay (min)	RFC	LOS
(Default Analysis Set) - 2020 PCU + CD -AM Peak								
Arm A	2.35	0.15	0.71	A				
Arm B	4.15	0.20	0.81	B				
Arm C	0.78	0.28	0.44	C				
Arm D	2.82	0.13	0.74	A				
Arm E	0.80	0.08	0.45	A				
(Default Analysis Set) - 2020 PCU + CD - PM Peak								
Arm A					1.11	0.11	0.53	A
Arm B					2.88	0.14	0.75	A
Arm C					0.30	0.16	0.23	A
Arm D					43.79	1.34	1.03	F
Arm E					2.53	0.20	0.72	B

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

2020 PCU + CD -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD - PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV180 -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV180 - PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV300 -AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV300 - PM Peak - PM runs from 16:45:00 to 18:15:00

File summary

File Description

Title	Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road AM Peak
Location	Bicester
Date	13/07/2010
Status	TIA
Client	JJ Gallagher Ltd
Jobnumber	18578-01-1
Enumerator	Alexanders [CS5DG3J]
Results Upto Date	False

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) - D9 - 2020 PCU + CD -AM Peak, AM

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
2020 PCU + CD -AM Peak, AM	2020 PCU + CD -AM Peak	AM			Yes			07:45	09:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D,E	Standard			

Roundabout Network Options

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

Arms

Arms

ID	Name	Description
A	Seelshield Way	
B	A41 East	
C	Gravenhill Road North	
D	A41 West	

E | B4100 London Road |

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00
E	0.00	99999.00		0.00

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
A	7.00	7.00	0.00	20.00	70.00	31.00	
B	5.25	8.50	20.00	20.00	70.00	31.00	
C	3.50	7.00	5.00	20.00	70.00	20.00	
D	5.00	9.00	20.00	20.00	70.00	42.00	
E	7.00	7.00	0.00	20.00	70.00	39.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	None
E	None

Arm Slope/ Intercept and Capacity

Arm Intercept Adjustments

Arm	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
A	Yes	(ARCADY 6 CT10 Import)	0.00
B	Yes	(ARCADY 6 CT10 Import)	0.00
C	Yes	(ARCADY 6 CT10 Import)	0.00
D	Yes	(ARCADY 6 CT10 Import)	0.00
E	Yes	(ARCADY 6 CT10 Import)	0.00

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		((calculated))	((calculated))	0.570	2113.640
B		((calculated))	((calculated))	0.588	2230.844
C		((calculated))	((calculated))	0.472	1435.972
D		((calculated))	((calculated))	0.568	2160.167
E		((calculated))	((calculated))	0.554	2054.761

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	HV	2.00				Yes	Yes

			1.00	Percentages	2.00			1.00	1.00
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Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
A	ONE HOUR	Yes	841.00	100.000	N/A
B	ONE HOUR	Yes	1143.00	100.000	N/A
C	ONE HOUR	Yes	153.00	100.000	N/A
D	ONE HOUR	Yes	1211.00	100.000	N/A
E	ONE HOUR	Yes	524.00	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)
07:45-08:00	A	633.15	633.15	N/A	N/A
07:45-08:00	B	860.51	860.51	N/A	N/A
07:45-08:00	C	115.19	115.19	N/A	N/A
07:45-08:00	D	911.70	911.70	N/A	N/A
07:45-08:00	E	394.49	394.49	N/A	N/A
08:00-08:15	A	756.04	756.04	N/A	N/A
08:00-08:15	B	1027.53	1027.53	N/A	N/A
08:00-08:15	C	137.54	137.54	N/A	N/A
08:00-08:15	D	1088.66	1088.66	N/A	N/A
08:00-08:15	E	471.07	471.07	N/A	N/A
08:15-08:30	A	925.96	925.96	N/A	N/A
08:15-08:30	B	1258.47	1258.47	N/A	N/A
08:15-08:30	C	168.46	168.46	N/A	N/A
08:15-08:30	D	1333.34	1333.34	N/A	N/A
08:15-08:30	E	576.93	576.93	N/A	N/A
08:30-08:45	A	925.96	925.96	N/A	N/A
08:30-08:45	B	1258.47	1258.47	N/A	N/A
08:30-08:45	C	168.46	168.46	N/A	N/A
08:30-08:45	D	1333.34	1333.34	N/A	N/A
08:30-08:45	E	576.93	576.93	N/A	N/A
08:45-09:00	A	756.04	756.04	N/A	N/A
08:45-09:00	B	1027.53	1027.53	N/A	N/A
08:45-09:00	C	137.54	137.54	N/A	N/A
08:45-09:00	D	1088.66	1088.66	N/A	N/A
08:45-09:00	E	471.07	471.07	N/A	N/A
09:00-09:15	A	633.15	633.15	N/A	N/A
09:00-09:15	B	860.51	860.51	N/A	N/A
09:00-09:15	C	115.19	115.19	N/A	N/A
09:00-09:15	D	911.70	911.70	N/A	N/A
09:00-09:15	E	394.49	394.49	N/A	N/A

Turning Proportions

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

		To				
		A	B	C	D	E
From	A	0.00	68.00	41.00	543.00	189.00
	B	61.00	0.00	33.00	776.00	273.00
	C	19.00	13.00	0.00	97.00	24.00
	D	345.00	756.00	59.00	0.00	51.00
	E	75.00	231.00	29.00	189.00	0.00

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

		To				
		A	B	C	D	E
From	A	0.00	0.08	0.05	0.65	0.22
	B	0.05	0.00	0.03	0.68	0.24
	C	0.12	0.08	0.00	0.63	0.16
	D	0.28	0.62	0.05	0.00	0.04
	E	0.14	0.44	0.06	0.36	0.00

Vehicle Mix

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

		To				
		A	B	C	D	E
From	A	1.00	1.00	1.00	1.00	1.00
	B	1.00	1.00	1.00	1.00	1.00
	C	1.00	1.00	1.00	1.00	1.00
	D	1.00	1.00	1.00	1.00	1.00
	E	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00
	D	0.00	0.00	0.00	0.00	0.00
	E	0.00	0.00	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)
A	0.71	0.15	2.35	A	771.72	1157.57	120.08	0.10	1.33	120.09	0.10	0.570	2113.640
B	0.81	0.20	4.15	B	1048.84	1573.26	192.13	0.12	2.13	192.15	0.12	0.588	2230.844
C	0.44	0.28	0.78	C	140.40	210.59	37.39	0.18	0.42	37.39	0.18	0.472	1435.972
D	0.74	0.13	2.82	A	1111.23	1666.85	150.57	0.09	1.67	150.58	0.09	0.568	2160.167
E	0.45	0.08	0.80	A	480.83	721.25	48.80	0.07	0.54	48.80	0.07	0.554	2054.761

Main Results

Max Delay (min) (07:45:00:00)

Main results: (07:43-08:00)

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)
A	633.15	158.29	630.46	374.90	957.72	0.00	1567.94	913.99	0.404	0.00	0.67
B	860.51	215.13	856.75	800.90	787.27	0.00	1767.75	1428.62	0.487	0.00	0.94
C	115.19	28.80	114.43	121.47	1522.55	0.00	716.84	225.58	0.161	0.00	0.19
D	911.70	227.93	908.09	1203.06	433.92	0.00	1913.70	1759.47	0.476	0.00	0.90
E	394.49	98.62	393.12	402.51	939.50	0.00	1534.35	1052.83	0.257	0.00	0.34

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

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)
A	756.04	189.01	754.49	448.67	1146.17	0.00	1460.56	913.99	0.518	0.67	1.06
B	1027.53	256.88	1025.06	958.49	942.17	0.00	1676.64	1428.62	0.613	0.94	1.56
C	137.54	34.39	137.06	145.36	1821.87	0.00	575.47	225.58	0.239	0.19	0.31
D	1088.66	272.17	1086.74	1439.67	519.26	0.00	1865.22	1759.47	0.584	0.90	1.39
E	471.07	117.77	470.49	481.66	1124.34	0.00	1431.97	1052.83	0.329	0.34	0.49

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

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)
A	925.96	231.49	921.00	548.02	1401.08	0.00	1315.32	913.99	0.704	1.06	2.30
B	1258.47	314.62	1248.73	1171.35	1150.73	0.00	1553.96	1428.62	0.810	1.56	3.99
C	168.46	42.11	166.70	177.50	2221.95	0.00	386.50	225.58	0.436	0.31	0.75
D	1333.34	333.33	1327.81	1755.76	632.89	0.00	1800.68	1759.47	0.740	1.39	2.77
E	576.93	144.23	575.70	587.30	1373.40	0.00	1294.01	1052.83	0.446	0.49	0.80

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

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)
A	925.96	231.49	925.76	550.40	1405.83	0.00	1312.61	913.99	0.705	2.30	2.35
B	1258.47	314.62	1257.85	1175.72	1155.87	0.00	1550.94	1428.62	0.811	3.99	4.15
C	168.46	42.11	168.34	178.33	2235.39	0.00	380.15	225.58	0.443	0.75	0.78
D	1333.34	333.33	1333.12	1766.51	637.22	0.00	1798.22	1759.47	0.741	2.77	2.82
E	576.93	144.23	576.91	591.03	1379.32	0.00	1290.73	1052.83	0.447	0.80	0.80

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

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)
A	756.04	189.01	761.08	452.02	1152.96	0.00	1456.70	913.99	0.519	2.35	1.09
B	1027.53	256.88	1037.65	964.69	949.34	0.00	1672.42	1428.62	0.614	4.15	1.62
C	137.54	34.39	139.36	146.51	1840.48	0.00	566.68	225.58	0.243	0.78	0.32
D	1088.66	272.17	1094.24	1454.58	525.26	0.00	1861.81	1759.47	0.585	2.82	1.43
E	471.07	117.77	472.30	486.82	1132.68	0.00	1427.35	1052.83	0.330	0.80	0.50

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

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)
A	633.15	158.29	634.78	377.29	963.30	0.00	1564.76	913.99	0.405	1.09	0.68
B	860.51	215.13	863.15	805.75	792.34	0.00	1764.78	1428.62	0.488	1.62	0.96
C	115.19	28.80	115.71	122.25	1533.23	0.00	711.80	225.58	0.162	0.32	0.19
D	911.70	227.93	913.73	1211.71	437.23	0.00	1911.82	1759.47	0.477	1.43	0.92
E	394.49	98.62	395.08	405.44	945.52	0.00	1531.02	1052.83	0.258	0.50	0.35

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

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
A	9.81	0.65	0.064	A	A
B	13.67	0.91	0.066	A	A
C	2.76	0.18	0.099	A	A
D	13.16	0.88	0.059	A	A
E	5.06	0.34	0.052	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	15.44	1.03	0.085	A	A
B	22.52	1.50	0.092	A	A
C	4.51	0.30	0.137	A	A
D	20.15	1.34	0.077	A	A
E	7.18	0.48	0.062	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	32.29	2.15	0.150	A	A
B	54.05	3.60	0.191	B	B
C	10.50	0.70	0.271	C	B
D	38.95	2.60	0.125	A	A
E	11.62	0.77	0.083	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	34.98	2.33	0.155	A	A
B	61.33	4.09	0.204	B	B
C	11.53	0.77	0.283	C	B
D	41.98	2.80	0.129	A	A
E	12.02	0.80	0.084	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	17.04	1.14	0.087	A	A
B	25.75	1.72	0.096	A	A
C	5.09	0.34	0.141	A	A
D	22.20	1.48	0.079	A	A
E	7.60	0.51	0.063	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	10.52	0.70	0.065	A	A
B	14.80	0.99	0.067	A	A
C	3.00	0.20	0.101	A	A
D	14.12	0.94	0.060	A	A
E	5.32	0.35	0.053	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)
A	7.00	7.00	0.00	20.00	70.00	31.00		0.570	2113.640
B	5.25	8.50	20.00	20.00	70.00	31.00		0.588	2230.844
C	3.50	7.00	5.00	20.00	70.00	20.00		0.472	1435.972
D	5.00	9.00	20.00	20.00	70.00	42.00		0.568	2160.167
E	7.00	7.00	0.00	20.00	70.00	39.00		0.554	2054.761

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)
07:45-08:00	A	633.15	1567.94	0.404	0.00	0.00	0.67	9.81	(0.00)	0.064
07:45-08:00	B	860.51	1767.75	0.487	0.00	0.00	0.94	13.67	(0.00)	0.066
07:45-08:00	C	115.19	716.84	0.161	0.00	0.00	0.19	2.76	(0.00)	0.099
07:45-08:00	D	911.70	1913.70	0.476	0.00	0.00	0.90	13.16	(0.00)	0.059
07:45-08:00	E	394.49	1534.35	0.257	0.00	0.00	0.34	5.06	(0.00)	0.052
08:00-08:15	A	756.04	1460.56	0.518	0.00	0.67	1.06	15.44	(0.00)	0.085
08:00-08:15	B	1027.53	1676.64	0.613	0.00	0.94	1.56	22.52	(0.00)	0.092
08:00-08:15	C	137.54	575.47	0.239	0.00	0.19	0.31	4.51	(0.00)	0.137
08:00-08:15	D	1088.66	1865.22	0.584	0.00	0.90	1.39	20.15	(0.00)	0.077
08:00-08:15	E	471.07	1431.97	0.329	0.00	0.34	0.49	7.18	(0.00)	0.062
08:15-08:30	A	925.96	1315.32	0.704	0.00	1.06	2.30	32.29	(0.00)	0.150
08:15-08:30	B	1258.47	1553.96	0.810	0.00	1.56	3.99	54.05	(0.00)	0.191
08:15-08:30	C	168.46	386.50	0.436	0.00	0.31	0.75	10.50	(0.00)	0.271
08:15-08:30	D	1333.34	1800.68	0.740	0.00	1.39	2.77	38.95	(0.00)	0.125
08:15-08:30	E	576.93	1294.01	0.446	0.00	0.49	0.80	11.62	(0.00)	0.083
08:30-08:45	A	925.96	1312.61	0.705	0.00	2.30	2.35	34.98	(0.00)	0.155
08:30-08:45	B	1258.47	1550.94	0.811	0.00	3.99	4.15	61.33	(0.00)	0.204
08:30-08:45	C	168.46	380.15	0.443	0.00	0.75	0.78	11.53	(0.00)	0.283
08:30-08:45	D	1333.34	1798.22	0.741	0.00	2.77	2.82	41.98	(0.00)	0.129
08:30-08:45	E	576.93	1290.73	0.447	0.00	0.80	0.80	12.02	(0.00)	0.084
08:45-09:00	A	756.04	1456.70	0.519	0.00	2.35	1.09	17.04	(0.00)	0.087
08:45-09:00	B	1027.53	1672.42	0.614	0.00	4.15	1.62	25.75	(0.00)	0.096
08:45-09:00	C	137.54	566.68	0.243	0.00	0.78	0.32	5.09	(0.00)	0.141
08:45-09:00	D	1088.66	1861.81	0.585	0.00	2.82	1.43	22.20	(0.00)	0.079
08:45-09:00	E	471.07	1427.35	0.330	0.00	0.80	0.50	7.60	(0.00)	0.063
09:00-09:15	A	633.15	1564.76	0.405	0.00	1.09	0.68	10.52	(0.00)	0.065
09:00-09:15	B	860.51	1764.78	0.488	0.00	1.62	0.96	14.80	(0.00)	0.067
09:00-09:15	C	115.19	711.80	0.162	0.00	0.32	0.19	3.00	(0.00)	0.101
09:00-09:15	D	911.70	1911.82	0.477	0.00	1.43	0.92	14.12	(0.00)	0.060
09:00-09:15	E	394.49	1531.02	0.258	0.00	0.50	0.35	5.32	(0.00)	0.053

A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - PM

Peak, 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
2020 PCU + CD - PM Peak, PM	2020 PCU + CD - PM Peak	PM			Yes			16:45	18:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D,E	Standard			

Roundabout Network Options

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

Arms

Arms

ID	Name	Description
A	Seelshield Way	
B	A41 East	
C	Gravenhill Road North	
D	A41 West	
E	B4100 London Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00
E	0.00	99999.00		0.00

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
A	7.00	7.00	0.00	20.00	70.00	31.00	

B	5.25	8.50	20.00	20.00	70.00	31.00	
C	3.50	7.00	5.00	20.00	70.00	20.00	
D	5.00	9.00	20.00	20.00	70.00	42.00	
E	7.00	7.00	0.00	20.00	70.00	39.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	None
E	None

Arm Slope/ Intercept and Capacity

Arm Intercept Adjustments

Arm	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
A	Yes	(ARCADY 6 CT10 Import)	0.00
B	Yes	(ARCADY 6 CT10 Import)	0.00
C	Yes	(ARCADY 6 CT10 Import)	0.00
D	Yes	(ARCADY 6 CT10 Import)	0.00
E	Yes	(ARCADY 6 CT10 Import)	0.00

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		((calculated))	((calculated))	0.570	2113.640
B		((calculated))	((calculated))	0.588	2230.844
C		((calculated))	((calculated))	0.472	1435.972
D		((calculated))	((calculated))	0.568	2160.167
E		((calculated))	((calculated))	0.554	2054.761

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	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
A	ONE HOUR	Yes	584.00	100.000	N/A
B	ONE HOUR	Yes	1137.00	100.000	N/A
C	ONE HOUR	Yes	106.00	100.000	N/A
D	ONE HOUR	Yes	1678.00	100.000	N/A
E	ONE HOUR	Yes	706.00	100.000	N/A

Direct/Resultant Flows

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)
16:45-17:00	A	439.67	439.67	N/A	N/A
16:45-17:00	B	855.99	855.99	N/A	N/A
16:45-17:00	C	79.80	79.80	N/A	N/A
16:45-17:00	D	1263.29	1263.29	N/A	N/A
16:45-17:00	E	531.51	531.51	N/A	N/A
17:00-17:15	A	525.00	525.00	N/A	N/A
17:00-17:15	B	1022.14	1022.14	N/A	N/A
17:00-17:15	C	95.29	95.29	N/A	N/A
17:00-17:15	D	1508.49	1508.49	N/A	N/A
17:00-17:15	E	634.68	634.68	N/A	N/A
17:15-17:30	A	643.00	643.00	N/A	N/A
17:15-17:30	B	1251.86	1251.86	N/A	N/A
17:15-17:30	C	116.71	116.71	N/A	N/A
17:15-17:30	D	1847.51	1847.51	N/A	N/A
17:15-17:30	E	777.32	777.32	N/A	N/A
17:30-17:45	A	643.00	643.00	N/A	N/A
17:30-17:45	B	1251.86	1251.86	N/A	N/A
17:30-17:45	C	116.71	116.71	N/A	N/A
17:30-17:45	D	1847.51	1847.51	N/A	N/A
17:30-17:45	E	777.32	777.32	N/A	N/A
17:45-18:00	A	525.00	525.00	N/A	N/A
17:45-18:00	B	1022.14	1022.14	N/A	N/A
17:45-18:00	C	95.29	95.29	N/A	N/A
17:45-18:00	D	1508.49	1508.49	N/A	N/A
17:45-18:00	E	634.68	634.68	N/A	N/A
18:00-18:15	A	439.67	439.67	N/A	N/A
18:00-18:15	B	855.99	855.99	N/A	N/A
18:00-18:15	C	79.80	79.80	N/A	N/A
18:00-18:15	D	1263.29	1263.29	N/A	N/A
18:00-18:15	E	531.51	531.51	N/A	N/A

Turning Proportions

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

		To				
		A	B	C	D	E
From	A	0.00	53.00	30.00	360.00	141.00
	B	102.00	0.00	16.00	727.00	292.00
	C	24.00	0.00	0.00	67.00	15.00
	D	625.00	788.00	121.00	0.00	144.00
	E	149.00	350.00	25.00	182.00	0.00

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

		To				
		A	B	C	D	E
From	A	0.00	0.09	0.05	0.62	0.24
	B	0.09	0.00	0.01	0.64	0.26

	C	0.23	0.00	0.00	0.63	0.14
	D	0.37	0.47	0.07	0.00	0.09
	E	0.21	0.50	0.04	0.26	0.00

Vehicle Mix

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

		To				
		A	B	C	D	E
From	A	1.00	1.00	1.00	1.00	1.00
	B	1.00	1.00	1.00	1.00	1.00
	C	1.00	1.00	1.00	1.00	1.00
	D	1.00	1.00	1.00	1.00	1.00
	E	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		A	B	C	D	E
From	A	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00	0.00
	D	0.00	0.00	0.00	0.00	0.00
	E	0.00	0.00	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)
A	0.53	0.11	1.11	A	535.89	803.83	64.41	0.08	0.72	64.41	0.08	0.570	2113.640
B	0.75	0.14	2.88	A	1043.33	1565.00	149.34	0.10	1.66	149.35	0.10	0.588	2230.844
C	0.23	0.16	0.30	A	97.27	145.90	17.20	0.12	0.19	17.20	0.12	0.472	1435.972
D	1.03	1.34	43.79	F	1539.76	2309.64	1139.21	0.49	12.66	1139.27	0.49	0.568	2160.167
E	0.72	0.20	2.53	B	647.84	971.76	124.37	0.13	1.38	124.38	0.13	0.554	2054.761

Main Results

Main results: (16:45-17:00)

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)
A	439.67	109.92	438.00	673.79	1097.57	0.00	1488.26	1095.72	0.295	0.00	0.42
B	855.99	214.00	852.58	891.67	643.89	0.00	1852.09	1382.96	0.462	0.00	0.85
C	79.80	19.95	79.36	143.78	1352.70	0.00	797.06	213.82	0.100	0.00	0.11
D	1263.29	315.82	1255.68	1001.67	430.39	0.00	1915.70	1693.01	0.659	0.00	1.90
E	531.51	132.88	528.99	443.69	1242.37	0.00	1366.59	1101.91	0.389	0.00	0.63

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)
A	525.00	131.25	524.19	805.41	1312.08	0.00	1366.03	1095.72	0.384	0.42	0.62
B	1022.14	255.53	1020.21	1065.87	770.40	0.00	1777.68	1382.96	0.575	0.85	1.34

C	95.29	23.82	95.08	171.88	1618.73	0.00	671.41	213.82	0.142	0.11	0.16
D	1508.49	377.12	1500.16	1198.74	515.07	0.00	1867.60	1693.01	0.808	1.90	3.99
E	634.68	158.67	633.02	530.76	1484.47	0.00	1232.48	1101.91	0.515	0.63	1.05

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)
A	643.00	160.75	641.12	953.57	1558.16	0.00	1225.81	1095.72	0.525	0.62	1.09
B	1251.86	312.97	1245.92	1263.66	935.63	0.00	1680.49	1382.96	0.745	1.34	2.82
C	116.71	29.18	116.17	204.14	1977.41	0.00	502.00	213.82	0.232	0.16	0.30
D	1847.51	461.88	1752.00	1464.30	629.28	0.00	1802.73	1693.01	1.025	3.99	27.86
E	777.32	194.33	772.00	641.55	1739.73	0.00	1091.09	1101.91	0.712	1.05	2.38

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)
A	643.00	160.75	642.89	967.03	1579.10	0.00	1213.89	1095.72	0.530	1.09	1.11
B	1251.86	312.97	1251.61	1281.08	940.90	0.00	1677.39	1382.96	0.746	2.82	2.88
C	116.71	29.18	116.69	206.77	1985.74	0.00	498.07	213.82	0.234	0.30	0.30
D	1847.51	461.88	1783.81	1470.57	631.87	0.00	1801.26	1693.01	1.026	27.86	43.79
E	777.32	194.33	776.70	646.24	1769.43	0.00	1074.64	1101.91	0.723	2.38	2.53

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)
A	525.00	131.25	526.77	869.20	1406.84	0.00	1312.04	1095.72	0.400	1.11	0.67
B	1022.14	255.53	1028.13	1146.98	786.63	0.00	1768.13	1382.96	0.578	2.88	1.39
C	95.29	23.82	95.83	184.26	1630.50	0.00	665.86	213.82	0.143	0.30	0.17
D	1508.49	377.12	1665.23	1207.61	518.72	0.00	1865.53	1693.01	0.809	43.79	4.60
E	634.68	158.67	639.78	547.69	1636.26	0.00	1148.41	1101.91	0.553	2.53	1.26

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)
A	439.67	109.92	440.66	682.23	1111.29	0.00	1480.44	1095.72	0.297	0.67	0.42
B	855.99	214.00	858.07	902.88	649.07	0.00	1849.05	1382.96	0.463	1.39	0.87
C	79.80	19.95	80.03	145.47	1361.67	0.00	792.83	213.82	0.101	0.17	0.11
D	1263.29	315.82	1273.80	1008.52	433.18	0.00	1914.12	1693.01	0.660	4.60	1.98
E	531.51	132.88	533.94	447.39	1259.58	0.00	1357.05	1101.91	0.392	1.26	0.65

Queueing Delay Results
Queueing Delay results: (16:45-17:00)

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
A	6.12	0.41	0.057	A	A
B	12.44	0.83	0.060	A	A
C	1.62	0.11	0.084	A	A
D	27.10	1.81	0.090	A	A
E	9.20	0.61	0.071	A	A

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	Unsignalised Level Of	Signalised Level Of
-----	--------------------------------	--------------------------------------	------------------------------------	-----------------------	---------------------

Arm	(min)	min/min)	(min)	Service	Service
A	9.09	0.61	0.071	A	A
B	19.44	1.30	0.079	A	A
C	2.41	0.16	0.104	A	A
D	54.81	3.65	0.160	A	A
E	15.18	1.01	0.100	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
A	15.74	1.05	0.102	A	A
B	39.54	2.64	0.136	A	A
C	4.33	0.29	0.155	A	A
D	267.34	17.82	0.706	E	D
E	32.98	2.20	0.185	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	16.59	1.11	0.105	A	A
B	42.91	2.86	0.141	A	A
C	4.53	0.30	0.157	A	A
D	540.55	36.04	1.338	F	F
E	37.21	2.48	0.201	B	B

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
A	10.37	0.69	0.077	A	A
B	21.67	1.44	0.082	A	A
C	2.60	0.17	0.105	A	A
D	218.03	14.54	0.485	D	C
E	19.78	1.32	0.119	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
A	6.50	0.43	0.058	A	A
B	13.35	0.89	0.061	A	A
C	1.72	0.11	0.084	A	A
D	31.39	2.09	0.095	A	A
E	10.01	0.67	0.073	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)
A	7.00	7.00	0.00	20.00	70.00	31.00		0.570	2113.640
B	5.25	8.50	20.00	20.00	70.00	31.00		0.588	2230.844
C	3.50	7.00	5.00	20.00	70.00	20.00		0.472	1435.972
D	5.00	9.00	20.00	20.00	70.00	42.00		0.568	2160.167
E	7.00	7.00	0.00	20.00	70.00	39.00		0.554	2054.761

Overview: Time Segment Results

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)
16:45-17:00	A	439.67	1488.26	0.295	0.00	0.00	0.42	6.12	(0.00)	0.057
16:45-17:00	B	855.99	1852.09	0.462	0.00	0.00	0.85	12.44	(0.00)	0.060
16:45-17:00	C	79.80	797.06	0.100	0.00	0.00	0.11	1.62	(0.00)	0.084
16:45-17:00	D	1263.29	1915.70	0.659	0.00	0.00	1.90	27.10	(0.00)	0.090
16:45-17:00	E	531.51	1366.59	0.389	0.00	0.00	0.63	9.20	(0.00)	0.071
17:00-17:15	A	525.00	1366.03	0.384	0.00	0.42	0.62	9.09	(0.00)	0.071
17:00-17:15	B	1022.14	1777.68	0.575	0.00	0.85	1.34	19.44	(0.00)	0.079
17:00-17:15	C	95.29	671.41	0.142	0.00	0.11	0.16	2.41	(0.00)	0.104
17:00-17:15	D	1508.49	1867.60	0.808	0.00	1.90	3.99	54.81	(0.00)	0.160
17:00-17:15	E	634.68	1232.48	0.515	0.00	0.63	1.05	15.18	(0.00)	0.100
17:15-17:30	A	643.00	1225.81	0.525	0.00	0.62	1.09	15.74	(0.00)	0.102
17:15-17:30	B	1251.86	1680.49	0.745	0.00	1.34	2.82	39.54	(0.00)	0.136
17:15-17:30	C	116.71	502.00	0.232	0.00	0.16	0.30	4.33	(0.00)	0.155
17:15-17:30	D	1847.51	1802.73	1.025	0.00	3.99	27.86	267.34	(0.00)	0.706
17:15-17:30	E	777.32	1091.09	0.712	0.00	1.05	2.38	32.98	(0.00)	0.185
17:30-17:45	A	643.00	1213.89	0.530	0.00	1.09	1.11	16.59	(0.00)	0.105
17:30-17:45	B	1251.86	1677.39	0.746	0.00	2.82	2.88	42.91	(0.00)	0.141
17:30-17:45	C	116.71	498.07	0.234	0.00	0.30	0.30	4.53	(0.00)	0.157
17:30-17:45	D	1847.51	1801.26	1.026	0.00	27.86	43.79	540.55	(0.00)	1.338
17:30-17:45	E	777.32	1074.64	0.723	0.00	2.38	2.53	37.21	(0.00)	0.201
17:45-18:00	A	525.00	1312.04	0.400	0.00	1.11	0.67	10.37	(0.00)	0.077
17:45-18:00	B	1022.14	1768.13	0.578	0.00	2.88	1.39	21.67	(0.00)	0.082
17:45-18:00	C	95.29	665.86	0.143	0.00	0.30	0.17	2.60	(0.00)	0.105
17:45-18:00	D	1508.49	1865.53	0.809	0.00	43.79	4.60	218.03	(0.00)	0.485
17:45-18:00	E	634.68	1148.41	0.553	0.00	2.53	1.26	19.78	(0.00)	0.119
18:00-18:15	A	439.67	1480.44	0.297	0.00	0.67	0.42	6.50	(0.00)	0.058
18:00-18:15	B	855.99	1849.05	0.463	0.00	1.39	0.87	13.35	(0.00)	0.061
18:00-18:15	C	79.80	792.83	0.101	0.00	0.17	0.11	1.72	(0.00)	0.084
18:00-18:15	D	1263.29	1914.12	0.660	0.00	4.60	1.98	31.39	(0.00)	0.095
18:00-18:15	E	531.51	1357.05	0.392	0.00	1.26	0.65	10.01	(0.00)	0.073

ARCADY 7
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\With SEB 2014 Wretchwick - Gavray Drive - Charbridge AM Peak REV.arc7

Report generation date: 10/04/2015 10:56:21

- » A1 - (Default Analysis Set) - D9 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM
- » A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, PM

Summary of roundabout performance

	AM				PM			
	Queue (PCU)	Delay (min)	RFC	LOS	Queue (PCU)	Delay (min)	RFC	LOS
(Default Analysis Set) - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak								
Arm A	0.38	0.04	0.28	A				
Arm B	0.10	0.06	0.09	A				
Arm C	1.01	0.06	0.50	A				
Arm D	0.33	0.07	0.25	A				
(Default Analysis Set) - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak								
Arm A					0.65	0.05	0.39	A
Arm B					0.07	0.07	0.06	A
Arm C					0.63	0.05	0.39	A
Arm D					0.54	0.08	0.35	A

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

2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00
 2020 PCU + CD + DEV300 - Wretchwick - Gavray Drive - Charbridge AM Peak - AM runs from 07:45:00 to 09:15:00
 2020 PCU + CD + DEV300 - Wretchwick - Gavray Drive - Charbridge PM Peak - PM runs from 16:45:00 to 18:15:00

File summary

File Description

Title	Wretchwick - Gavray Drive - Charbridge AM Peak
Location	Bicester
Date	13/07/2010
Client	JJ Gallagher
Jobnumber	18578-01-1
Enumerator	Alexanders [CS5DG3J]
Results Upto Date	False

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) - D9 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM

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
2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak, AM	2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge AM Peak	AM			Yes			07:45	09:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D	Standard			

Roundabout Network Options

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

Arms

Arms

ID	Name	Description
A	Wretchwick	
B	Gavray Drive	
C	Charbridge	
D	Gavray Drive	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A	0.00	99999.00		0.00
B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

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
A	6.00	8.00	15.00	20.00	45.00	49.00	
B	3.50	7.00	10.00	20.00	45.00	44.00	
C	5.75	7.00	10.00	35.00	45.00	34.00	
D	3.50	7.00	10.00	20.00	45.00	44.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	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)
A		((calculated))	((calculated))	0.685	2094.901
B		((calculated))	((calculated))	0.571	1484.915
C		((calculated))	((calculated))	0.694	2027.030
D		((calculated))	((calculated))	0.571	1484.915

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	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
A	ONE HOUR	Yes	479.00	100.000	N/A
B	ONE HOUR	Yes	88.00	100.000	N/A
C	ONE HOUR	Yes	863.00	100.000	N/A
D	ONE HOUR	Yes	255.00	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)
07:45-08:00	A	360.62	360.62	N/A	N/A
07:45-08:00	B	66.25	66.25	N/A	N/A
07:45-08:00	C	649.71	649.71	N/A	N/A
07:45-08:00	D	191.98	191.98	N/A	N/A
08:00-08:15	A	430.61	430.61	N/A	N/A
08:00-08:15	B	79.11	79.11	N/A	N/A
08:00-08:15	C	775.82	775.82	N/A	N/A
08:00-08:15	D	229.24	229.24	N/A	N/A
08:15-08:30	A	527.39	527.39	N/A	N/A
08:15-08:30	B	96.89	96.89	N/A	N/A
08:15-08:30	C	950.18	950.18	N/A	N/A
08:15-08:30	D	280.76	280.76	N/A	N/A
08:30-08:45	A	527.39	527.39	N/A	N/A
08:30-08:45	B	96.89	96.89	N/A	N/A
08:30-08:45	C	950.18	950.18	N/A	N/A
08:30-08:45	D	280.76	280.76	N/A	N/A
08:45-09:00	A	430.61	430.61	N/A	N/A
08:45-09:00	B	79.11	79.11	N/A	N/A
08:45-09:00	C	775.82	775.82	N/A	N/A
08:45-09:00	D	229.24	229.24	N/A	N/A
09:00-09:15	A	360.62	360.62	N/A	N/A
09:00-09:15	B	66.25	66.25	N/A	N/A
09:00-09:15	C	649.71	649.71	N/A	N/A
09:00-09:15	D	191.98	191.98	N/A	N/A

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.00	27.00	390.00	62.00
	B	27.00	0.00	47.00	14.00
	C	542.00	10.00	0.00	311.00
	D	0.00	15.00	162.00	78.00

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

		To			
		A	B	C	D
From	A	0.00	0.06	0.81	0.13
	B	0.31	0.00	0.53	0.16
	C	0.63	0.01	0.00	0.36
	D	0.00	0.06	0.64	0.31

Vehicle Mix

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

		To			
		A	B	C	D

From	A	1.00	1.00	1.00	1.00
	B	1.00	1.00	1.00	1.00
	C	1.00	1.00	1.00	1.00
	D	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

From	To				
		A	B	C	D
	A	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00
D	0.00	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)
A	0.28	0.04	0.38	A	439.54	659.31	26.83	0.04	0.30	26.83	0.04	0.685	2094.901
B	0.09	0.06	0.10	A	80.75	121.13	7.05	0.06	0.08	7.05	0.06	0.571	1484.915
C	0.50	0.06	1.01	A	791.90	1187.86	65.45	0.06	0.73	65.45	0.06	0.694	2027.030
D	0.25	0.07	0.33	A	233.99	350.99	22.57	0.06	0.25	22.57	0.06	0.571	1484.915

Main Results

Main results: (07:45-08:00)

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)
A	360.62	90.15	359.72	427.03	198.75	0.00	1958.67	1501.70	0.184	0.00	0.22
B	66.25	16.56	66.02	39.03	519.44	0.00	1188.09	219.93	0.056	0.00	0.06
C	649.71	162.43	647.70	449.64	135.82	0.00	1932.81	1641.47	0.336	0.00	0.50
D	191.98	47.99	191.25	348.97	434.54	0.00	1236.60	846.38	0.155	0.00	0.18

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

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)
A	430.61	107.65	430.37	511.06	238.00	0.00	1931.77	1501.73	0.223	0.22	0.29
B	79.11	19.78	79.05	46.71	621.66	0.00	1129.68	219.93	0.070	0.06	0.08
C	775.82	193.95	775.13	538.12	162.59	0.00	1914.23	1641.47	0.405	0.50	0.68
D	229.24	57.31	229.02	417.67	520.05	0.00	1187.74	846.38	0.193	0.18	0.24

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

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)
A	527.39	131.85	527.00	625.63	291.38	0.00	1895.18	1501.73	0.278	0.29	0.38
B	96.89	24.22	96.79	57.19	761.18	0.00	1049.95	219.93	0.092	0.08	0.10
C	950.18	237.55	948.88	658.90	199.07	0.00	1888.92	1641.47	0.503	0.68	1.00
D	280.76	70.19	280.38	511.32	636.62	0.00	1121.12	846.38	0.250	0.24	0.33

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

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)
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	(PCU/hr)	(PCU)	(PCU/hr)	(PCU/hr)	(PCU/hr)	Demand (Ped/hr)	(PCU/hr)	(PCU/hr)		(PCU)	(PCU)
A	527.39	131.85	527.39	626.47	291.77	0.00	1894.92	1501.73	0.278	0.38	0.38
B	96.89	24.22	96.89	57.25	761.90	0.00	1049.54	219.93	0.092	0.10	0.10
C	950.18	237.55	950.16	659.51	199.28	0.00	1888.77	1641.47	0.503	1.00	1.01
D	280.76	70.19	280.76	511.97	637.48	0.00	1120.63	846.38	0.251	0.33	0.33

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

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)
A	430.61	107.65	431.00	512.36	238.61	0.00	1931.35	1501.73	0.223	0.38	0.29
B	79.11	19.78	79.21	46.81	622.81	0.00	1129.02	219.93	0.070	0.10	0.08
C	775.82	193.95	777.11	539.09	162.93	0.00	1914.00	1641.47	0.405	1.01	0.69
D	229.24	57.31	229.61	418.67	521.37	0.00	1186.99	846.38	0.193	0.33	0.24

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

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)
A	360.62	90.15	360.86	428.84	199.74	0.00	1957.99	1501.70	0.184	0.29	0.23
B	66.25	16.56	66.32	39.18	521.42	0.00	1186.96	219.93	0.056	0.08	0.06
C	649.71	162.43	650.42	451.34	136.40	0.00	1932.40	1641.47	0.336	0.69	0.51
D	191.98	47.99	192.20	350.44	436.37	0.00	1235.55	846.38	0.155	0.24	0.18

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

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
A	3.33	0.22	0.038	A	A
B	0.87	0.06	0.053	A	A
C	7.41	0.49	0.047	A	A
D	2.69	0.18	0.057	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	4.24	0.28	0.040	A	A
B	1.11	0.07	0.057	A	A
C	9.99	0.67	0.053	A	A
D	3.52	0.23	0.063	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	5.69	0.38	0.044	A	A
B	1.50	0.10	0.063	A	A
C	14.71	0.98	0.064	A	A
D	4.89	0.33	0.071	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	5.77	0.38	0.044	A	A
B	1.52	0.10	0.063	A	A
C	15.10	1.01	0.064	A	A
D	4.99	0.33	0.071	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	4.37	0.29	0.040	A	A
B	1.15	0.08	0.057	A	A
C	10.49	0.70	0.053	A	A
D	3.67	0.24	0.063	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
A	3.43	0.23	0.038	A	A
B	0.90	0.06	0.054	A	A
C	7.75	0.52	0.047	A	A
D	2.81	0.19	0.058	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)
A	6.00	8.00	15.00	20.00	45.00	49.00		0.685	2094.901
B	3.50	7.00	10.00	20.00	45.00	44.00		0.571	1484.915
C	5.75	7.00	10.00	35.00	45.00	34.00		0.694	2027.030
D	3.50	7.00	10.00	20.00	45.00	44.00		0.571	1484.915

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)
07:45-08:00	A	360.62	1958.67	0.184	0.00	0.00	0.22	3.33	(0.00)	0.038
07:45-08:00	B	66.25	1188.09	0.056	0.00	0.00	0.06	0.87	(0.00)	0.053
07:45-08:00	C	649.71	1932.81	0.336	0.00	0.00	0.50	7.41	(0.00)	0.047
07:45-08:00	D	191.98	1236.60	0.155	0.00	0.00	0.18	2.69	(0.00)	0.057
08:00-08:15	A	430.61	1931.77	0.223	0.00	0.22	0.29	4.24	(0.00)	0.040
08:00-08:15	B	79.11	1129.68	0.070	0.00	0.06	0.08	1.11	(0.00)	0.057
08:00-08:15	C	775.82	1914.23	0.405	0.00	0.50	0.68	9.99	(0.00)	0.053
08:00-08:15	D	229.24	1187.74	0.193	0.00	0.18	0.24	3.52	(0.00)	0.063
08:15-08:30	A	527.39	1895.18	0.278	0.00	0.29	0.38	5.69	(0.00)	0.044
08:15-08:30	B	96.89	1049.95	0.092	0.00	0.08	0.10	1.50	(0.00)	0.063
08:15-08:30	C	950.18	1888.92	0.503	0.00	0.68	1.00	14.71	(0.00)	0.064
08:15-08:30	D	280.76	1121.12	0.250	0.00	0.24	0.33	4.89	(0.00)	0.071
08:30-08:45	A	527.39	1894.92	0.278	0.00	0.38	0.38	5.77	(0.00)	0.044
08:30-08:45	B	96.89	1049.54	0.092	0.00	0.10	0.10	1.52	(0.00)	0.063
08:30-08:45	C	950.18	1888.77	0.503	0.00	1.00	1.01	15.10	(0.00)	0.064
08:30-08:45	D	280.76	1120.63	0.251	0.00	0.33	0.33	4.99	(0.00)	0.071
08:45-09:00	A	430.61	1931.35	0.223	0.00	0.38	0.29	4.37	(0.00)	0.040
08:45-09:00	B	79.11	1129.02	0.070	0.00	0.10	0.08	1.15	(0.00)	0.057
08:45-09:00	C	775.82	1914.00	0.405	0.00	1.01	0.69	10.49	(0.00)	0.053
08:45-09:00	D	229.24	1186.99	0.193	0.00	0.33	0.24	3.67	(0.00)	0.063

09:00-09:15	A	360.62	1957.99	0.184	0.00	0.29	0.23	3.43	(0.00)	0.038
09:00-09:15	B	66.25	1186.96	0.056	0.00	0.08	0.06	0.90	(0.00)	0.054
09:00-09:15	C	649.71	1932.40	0.336	0.00	0.69	0.51	7.75	(0.00)	0.047
09:00-09:15	D	191.98	1235.55	0.155	0.00	0.24	0.18	2.81	(0.00)	0.058

A1 - (Default Analysis Set) - D10 - 2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, 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
2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak, PM	2020 PCU + CD - Wretchwick - Gavray Drive - Charbridge PM Peak	PM			Yes			16:45	18:15	90	15	Varies by Arm

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	A,B,C,D	Standard			

Roundabout Network Options

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

Arms

Arms

ID	Name	Description
A	Wretchwick	
B	Gavray Drive	
C	Charbridge	
D	Gavray Drive	

Capacity Options

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

B	0.00	99999.00		0.00
C	0.00	99999.00		0.00
D	0.00	99999.00		0.00

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
A	6.00	8.00	15.00	20.00	45.00	49.00	
B	3.50	7.00	10.00	20.00	45.00	44.00	
C	5.75	7.00	10.00	35.00	45.00	34.00	
D	3.50	7.00	10.00	20.00	45.00	44.00	

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None
D	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)
A		((calculated))	((calculated))	0.685	2094.901
B		((calculated))	((calculated))	0.571	1484.915
C		((calculated))	((calculated))	0.694	2027.030
D		((calculated))	((calculated))	0.571	1484.915

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	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
A	ONE HOUR	Yes	659.00	100.000	N/A
B	ONE HOUR	Yes	52.00	100.000	N/A
C	ONE HOUR	Yes	681.00	100.000	N/A
D	ONE HOUR	Yes	364.00	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)
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16:45-17:00	A	496.13	496.13	N/A	N/A
16:45-17:00	B	39.15	39.15	N/A	N/A
16:45-17:00	C	512.69	512.69	N/A	N/A
16:45-17:00	D	274.04	274.04	N/A	N/A
17:00-17:15	A	592.43	592.43	N/A	N/A
17:00-17:15	B	46.75	46.75	N/A	N/A
17:00-17:15	C	612.21	612.21	N/A	N/A
17:00-17:15	D	327.23	327.23	N/A	N/A
17:15-17:30	A	725.57	725.57	N/A	N/A
17:15-17:30	B	57.25	57.25	N/A	N/A
17:15-17:30	C	749.79	749.79	N/A	N/A
17:15-17:30	D	400.77	400.77	N/A	N/A
17:30-17:45	A	725.57	725.57	N/A	N/A
17:30-17:45	B	57.25	57.25	N/A	N/A
17:30-17:45	C	749.79	749.79	N/A	N/A
17:30-17:45	D	400.77	400.77	N/A	N/A
17:45-18:00	A	592.43	592.43	N/A	N/A
17:45-18:00	B	46.75	46.75	N/A	N/A
17:45-18:00	C	612.21	612.21	N/A	N/A
17:45-18:00	D	327.23	327.23	N/A	N/A
18:00-18:15	A	496.13	496.13	N/A	N/A
18:00-18:15	B	39.15	39.15	N/A	N/A
18:00-18:15	C	512.69	512.69	N/A	N/A
18:00-18:15	D	274.04	274.04	N/A	N/A

Turning Proportions

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

		To			
		A	B	C	D
From	A	0.00	31.00	559.00	69.00
	B	27.00	0.00	13.00	12.00
	C	475.00	48.00	0.00	158.00
	D	74.00	15.00	275.00	0.00

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

		To			
		A	B	C	D
From	A	0.00	0.05	0.85	0.10
	B	0.52	0.00	0.25	0.23
	C	0.70	0.07	0.00	0.23
	D	0.20	0.04	0.76	0.00

Vehicle Mix

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

		To			
		A	B	C	D
From	A	1.00	1.00	1.00	1.00
	B	1.00	1.00	1.00	1.00
	C	1.00	1.00	1.00	1.00

	D	1.00	1.00	1.00	1.00
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Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
From		A	B	C	D
	A	0.00	0.00	0.00	0.00
	B	0.00	0.00	0.00	0.00
	C	0.00	0.00	0.00	0.00
	D	0.00	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)
A	0.39	0.05	0.65	A	604.71	907.06	43.44	0.05	0.48	43.44	0.05	0.685	2094.901
B	0.06	0.07	0.07	A	47.72	71.57	4.52	0.06	0.05	4.52	0.06	0.571	1484.915
C	0.39	0.05	0.63	A	624.90	937.35	42.76	0.05	0.48	42.76	0.05	0.694	2027.030
D	0.35	0.08	0.54	A	334.01	501.02	35.64	0.07	0.40	35.64	0.07	0.571	1484.915

Main Results

Main results: (16:45-17:00)

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)
A	496.13	124.03	494.74	432.36	253.47	0.00	1921.16	1667.79	0.258	0.00	0.35
B	39.15	9.79	39.00	70.56	677.66	0.00	1097.67	305.76	0.036	0.00	0.04
C	512.69	128.17	511.29	635.61	81.05	0.00	1970.80	1746.79	0.260	0.00	0.35
D	274.04	68.51	272.92	179.43	412.92	0.00	1248.96	627.60	0.219	0.00	0.28

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)
A	592.43	148.11	591.99	517.43	303.53	0.00	1886.85	1667.79	0.314	0.35	0.46
B	46.75	11.69	46.70	84.44	811.09	0.00	1021.43	305.76	0.046	0.04	0.05
C	612.21	153.05	611.80	760.78	97.01	0.00	1959.73	1746.79	0.312	0.35	0.45
D	327.23	81.81	326.86	214.71	494.10	0.00	1202.57	627.60	0.272	0.28	0.37

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)
A	725.57	181.39	724.81	633.53	371.57	0.00	1840.22	1667.79	0.394	0.46	0.65
B	57.25	14.31	57.18	103.38	992.99	0.00	917.48	305.76	0.062	0.05	0.07
C	749.79	187.45	749.11	931.39	118.77	0.00	1944.63	1746.79	0.386	0.45	0.62
D	400.77	100.19	400.10	262.89	605.00	0.00	1139.20	627.60	0.352	0.37	0.54

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)
A	725.57	181.39	725.56	634.18	372.14	0.00	1839.83	1667.79	0.394	0.65	0.65
B	57.25	14.31	57.25	103.49	994.21	0.00	916.79	305.76	0.062	0.07	0.07

C	749.79	187.45	749.79	932.55	118.91	0.00	1944.54	1746.79	0.386	0.62	0.63
D	400.77	100.19	400.76	263.14	605.56	0.00	1138.88	627.60	0.352	0.54	0.54

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)
A	592.43	148.11	593.18	518.46	304.43	0.00	1886.24	1667.79	0.314	0.65	0.46
B	46.75	11.69	46.82	84.61	813.00	0.00	1020.34	305.76	0.046	0.07	0.05
C	612.21	153.05	612.88	762.59	97.22	0.00	1959.58	1746.79	0.312	0.63	0.46
D	327.23	81.81	327.89	215.11	495.00	0.00	1202.05	627.60	0.272	0.54	0.38

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)
A	496.13	124.03	496.57	434.03	254.79	0.00	1920.26	1667.79	0.258	0.46	0.35
B	39.15	9.79	39.19	70.83	680.53	0.00	1096.03	305.76	0.036	0.05	0.04
C	512.69	128.17	513.11	638.33	81.39	0.00	1970.57	1746.79	0.260	0.46	0.35
D	274.04	68.51	274.41	180.08	414.41	0.00	1248.11	627.60	0.220	0.38	0.28

Queueing Delay Results
Queueing Delay results: (16:45-17:00)

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
A	5.11	0.34	0.042	A	A
B	0.54	0.04	0.057	A	A
C	5.17	0.34	0.041	A	A
D	4.10	0.27	0.061	A	A

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
A	6.74	0.45	0.046	A	A
B	0.71	0.05	0.062	A	A
C	6.70	0.45	0.045	A	A
D	5.48	0.37	0.068	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
A	9.54	0.64	0.054	A	A
B	0.98	0.07	0.070	A	A
C	9.21	0.61	0.050	A	A
D	7.89	0.53	0.081	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
A	9.73	0.65	0.054	A	A
B	1.00	0.07	0.070	A	A
C	9.38	0.63	0.050	A	A
D	8.10	0.54	0.081	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
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Arm	(min)	min/min)	(min)	Service	Service
A	7.01	0.47	0.046	A	A
B	0.73	0.05	0.062	A	A
C	6.95	0.46	0.045	A	A
D	5.76	0.38	0.069	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
A	5.31	0.35	0.042	A	A
B	0.57	0.04	0.057	A	A
C	5.36	0.36	0.041	A	A
D	4.31	0.29	0.062	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)
A	6.00	8.00	15.00	20.00	45.00	49.00		0.685	2094.901
B	3.50	7.00	10.00	20.00	45.00	44.00		0.571	1484.915
C	5.75	7.00	10.00	35.00	45.00	34.00		0.694	2027.030
D	3.50	7.00	10.00	20.00	45.00	44.00		0.571	1484.915


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)
16:45-17:00	A	496.13	1921.16	0.258	0.00	0.00	0.35	5.11	(0.00)	0.042
16:45-17:00	B	39.15	1097.67	0.036	0.00	0.00	0.04	0.54	(0.00)	0.057
16:45-17:00	C	512.69	1970.80	0.260	0.00	0.00	0.35	5.17	(0.00)	0.041
16:45-17:00	D	274.04	1248.96	0.219	0.00	0.00	0.28	4.10	(0.00)	0.061
17:00-17:15	A	592.43	1886.85	0.314	0.00	0.35	0.46	6.74	(0.00)	0.046
17:00-17:15	B	46.75	1021.43	0.046	0.00	0.04	0.05	0.71	(0.00)	0.062
17:00-17:15	C	612.21	1959.73	0.312	0.00	0.35	0.45	6.70	(0.00)	0.045
17:00-17:15	D	327.23	1202.57	0.272	0.00	0.28	0.37	5.48	(0.00)	0.068
17:15-17:30	A	725.57	1840.22	0.394	0.00	0.46	0.65	9.54	(0.00)	0.054
17:15-17:30	B	57.25	917.48	0.062	0.00	0.05	0.07	0.98	(0.00)	0.070
17:15-17:30	C	749.79	1944.63	0.386	0.00	0.45	0.62	9.21	(0.00)	0.050
17:15-17:30	D	400.77	1139.20	0.352	0.00	0.37	0.54	7.89	(0.00)	0.081
17:30-17:45	A	725.57	1839.83	0.394	0.00	0.65	0.65	9.73	(0.00)	0.054
17:30-17:45	B	57.25	916.79	0.062	0.00	0.07	0.07	1.00	(0.00)	0.070
17:30-17:45	C	749.79	1944.54	0.386	0.00	0.62	0.63	9.38	(0.00)	0.050
17:30-17:45	D	400.77	1138.88	0.352	0.00	0.54	0.54	8.10	(0.00)	0.081
17:45-18:00	A	592.43	1886.24	0.314	0.00	0.65	0.46	7.01	(0.00)	0.046
17:45-18:00	B	46.75	1020.34	0.046	0.00	0.07	0.05	0.73	(0.00)	0.062
17:45-18:00	C	612.21	1959.58	0.312	0.00	0.63	0.46	6.95	(0.00)	0.045
17:45-18:00	D	327.23	1202.05	0.272	0.00	0.54	0.38	5.76	(0.00)	0.069
18:00-18:15	A	496.13	1920.26	0.258	0.00	0.46	0.35	5.31	(0.00)	0.042
18:00-18:15	B	39.15	1096.03	0.036	0.00	0.05	0.04	0.57	(0.00)	0.057
18:00-18:15	C	512.69	1970.57	0.260	0.00	0.46	0.35	5.36	(0.00)	0.041



18:00-18:15	D	274.04	1248.11	0.220	0.00	0.38	0.28	4.31	(0.00)	0.062
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PICADY		
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010)		
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Run Analysis

Parameter	Values
File Run	\\O..\Revision A\With SEB 2014 Wretchwick Way -Peregrine Way Junction.vpi
Date Run	10 April 2015
Time Run	11:45:40
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	Wretchwick Way SW	100
Arm B	Peregrine Way	100
Arm C	Wretchwick Way NE	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	Wretchwick Way - Peregrine Way
Location	Bicester
Date	13 July 2010
Enumerator	Alexanders [CS5DG3J]
Job Number	18578-01-1
Status	TIA
Client	JJ Gallagher
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

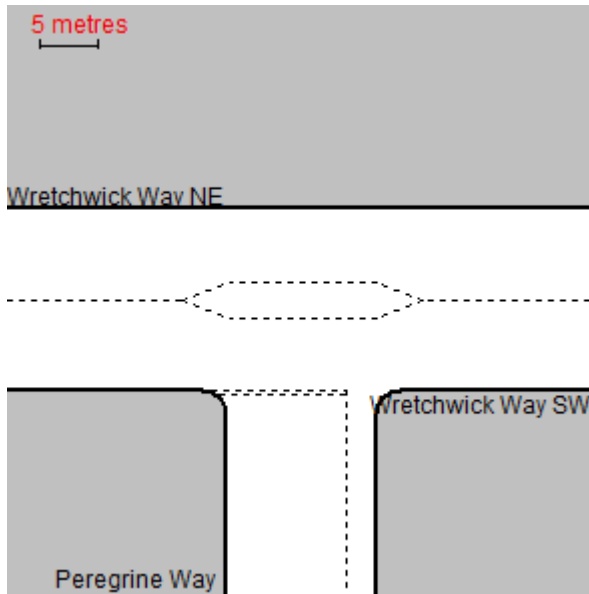
Parameter	Minor Arm B
Major Road Carriageway Width (m)	12.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	3.20
Minor Road Width 0m Back from Junction (m)	10.00
Minor Road Width 5m Back from Junction (m)	9.00
Minor Road Width 10m Back from Junction (m)	6.50
Minor Road Width 15m Back from Junction (m)	6.00
Minor Road Width 20m Back from Junction (m)	6.00
Minor Road Flare Length (veh)	1
Minor Road Visibility To Right (m)	120
Minor Road Visibility To Left (m)	65
Major Road Right Turn Visibility (m)	120
Major Road Right Turn Blocks Traffic	No

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	0.000	0.000	0.000	0.000	0.000
B-C	0.000	0.000	0.000	-	-
C-B	713.487	0.204	0.204	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:45-09:15	90	15
Second Modelling Period	16:45-18:15	90	15

ODTAB Turning Counts

Demand Set: 2020 AM PCU + CD - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	54.0	344.0
Arm B	103.0	0.0	131.0
Arm C	491.0	85.0	0.0