

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	467.52	1488.40	0.314	0.00	0.00	0.46	6.67	(0.00)	0.059
16:45-17:00	B	855.99	1835.82	0.466	0.00	0.00	0.87	12.64	(0.00)	0.061
16:45-17:00	C	79.80	784.01	0.102	0.00	0.00	0.11	1.65	(0.00)	0.085
16:45-17:00	D	1295.66	1915.29	0.676	0.00	0.00	2.05	29.11	(0.00)	0.094
16:45-17:00	E	533.02	1348.97	0.395	0.00	0.00	0.65	9.43	(0.00)	0.073
17:00-17:15	A	558.27	1366.49	0.409	0.00	0.46	0.69	10.04	(0.00)	0.074
17:00-17:15	B	1022.14	1758.25	0.581	0.00	0.87	1.37	19.92	(0.00)	0.081
17:00-17:15	C	95.29	655.80	0.145	0.00	0.11	0.17	2.47	(0.00)	0.107
17:00-17:15	D	1547.14	1867.12	0.829	0.00	2.05	4.53	61.54	(0.00)	0.177
17:00-17:15	E	636.48	1211.89	0.525	0.00	0.65	1.09	15.78	(0.00)	0.104
17:15-17:30	A	683.73	1235.08	0.554	0.00	0.69	1.22	17.60	(0.00)	0.108
17:15-17:30	B	1251.86	1657.97	0.755	0.00	1.37	2.97	41.42	(0.00)	0.143
17:15-17:30	C	116.71	483.11	0.242	0.00	0.17	0.31	4.54	(0.00)	0.163
17:15-17:30	D	1894.86	1802.22	1.051	0.00	4.53	36.65	333.93	(0.00)	0.860
17:15-17:30	E	779.52	1081.74	0.721	0.00	1.09	2.47	34.15	(0.00)	0.192
17:30-17:45	A	683.73	1225.10	0.558	0.00	1.22	1.25	18.60	(0.00)	0.111
17:30-17:45	B	1251.86	1654.96	0.756	0.00	2.97	3.04	45.19	(0.00)	0.148
17:30-17:45	C	116.71	478.84	0.244	0.00	0.31	0.32	4.76	(0.00)	0.166
17:30-17:45	D	1894.86	1800.64	1.052	0.00	36.65	62.31	744.30	(0.00)	1.782
17:30-17:45	E	779.52	1068.26	0.730	0.00	2.47	2.61	38.46	(0.00)	0.207
17:45-18:00	A	558.27	1292.54	0.432	0.00	1.25	0.77	11.86	(0.00)	0.082
17:45-18:00	B	1022.14	1745.84	0.585	0.00	3.04	1.43	22.40	(0.00)	0.084
17:45-18:00	C	95.29	649.91	0.147	0.00	0.32	0.17	2.68	(0.00)	0.108
17:45-18:00	D	1547.14	1864.92	0.830	0.00	62.31	5.78	420.75	(0.00)	0.987
17:45-18:00	E	636.48	1091.57	0.583	0.00	2.61	1.43	22.54	(0.00)	0.135
18:00-18:15	A	467.52	1479.03	0.316	0.00	0.77	0.46	7.12	(0.00)	0.059
18:00-18:15	B	855.99	1832.28	0.467	0.00	1.43	0.88	13.59	(0.00)	0.062
18:00-18:15	C	79.80	779.45	0.102	0.00	0.17	0.11	1.76	(0.00)	0.086
18:00-18:15	D	1295.66	1913.64	0.677	0.00	5.78	2.14	34.53	(0.00)	0.102
18:00-18:15	E	533.02	1337.04	0.399	0.00	1.43	0.67	10.34	(0.00)	0.075

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 10:57:07

- » A1 - (Default Analysis Set) - D11 - 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge AM Peak, AM
- » A1 - (Default Analysis Set) - D12 - 2020 PCU + CD + DEV180 - 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 + DEV180 - Wretchwick - Gavray Drive - Charbridge AM Peak								
Arm A	0.41	0.04	0.29	A				
Arm B	0.19	0.06	0.16	A				
Arm C	1.02	0.06	0.51	A				
Arm D	0.36	0.08	0.26	A				
(Default Analysis Set) - 2020 PCU + CD + DEV180 - Wretchwick - Gavray Drive - Charbridge PM Peak								
Arm A					0.74	0.06	0.43	A
Arm B					0.16	0.08	0.14	A
Arm C					0.67	0.05	0.40	A
Arm D					0.59	0.09	0.37	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) - D11 - 2020 PCU + CD + DEV180 - 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 + DEV180 - Wretchwick - Gavray Drive - Charbridge AM Peak, AM	2020 PCU + CD + DEV180 - 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	511.00	100.000	N/A
B	ONE HOUR	Yes	158.00	100.000	N/A
C	ONE HOUR	Yes	877.00	100.000	N/A
D	ONE HOUR	Yes	260.00	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	384.71	384.71	N/A	N/A
07:45-08:00	B	118.95	118.95	N/A	N/A
07:45-08:00	C	660.25	660.25	N/A	N/A
07:45-08:00	D	195.74	195.74	N/A	N/A
08:00-08:15	A	459.38	459.38	N/A	N/A
08:00-08:15	B	142.04	142.04	N/A	N/A
08:00-08:15	C	788.41	788.41	N/A	N/A
08:00-08:15	D	233.73	233.73	N/A	N/A
08:15-08:30	A	562.62	562.62	N/A	N/A
08:15-08:30	B	173.96	173.96	N/A	N/A
08:15-08:30	C	965.59	965.59	N/A	N/A
08:15-08:30	D	286.27	286.27	N/A	N/A
08:30-08:45	A	562.62	562.62	N/A	N/A
08:30-08:45	B	173.96	173.96	N/A	N/A
08:30-08:45	C	965.59	965.59	N/A	N/A
08:30-08:45	D	286.27	286.27	N/A	N/A
08:45-09:00	A	459.38	459.38	N/A	N/A
08:45-09:00	B	142.04	142.04	N/A	N/A
08:45-09:00	C	788.41	788.41	N/A	N/A
08:45-09:00	D	233.73	233.73	N/A	N/A
09:00-09:15	A	384.71	384.71	N/A	N/A
09:00-09:15	B	118.95	118.95	N/A	N/A
09:00-09:15	C	660.25	660.25	N/A	N/A
09:00-09:15	D	195.74	195.74	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	59.00	390.00	62.00
	B	71.00	0.00	66.00	21.00
	C	542.00	24.00	0.00	311.00
	D	78.00	20.00	162.00	0.00

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

		To			
		A	B	C	D
From	A	0.00	0.12	0.76	0.12
	B	0.45	0.00	0.42	0.13
	C	0.62	0.03	0.00	0.35
	D	0.30	0.08	0.62	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

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

	To				
	A	B	C	D	
From	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	0.29	0.04	0.41	A	468.90	703.35	28.46	0.04	0.32	28.46	0.04	0.685	2094.901
B	0.16	0.06	0.19	A	144.98	217.48	12.96	0.06	0.14	12.96	0.06	0.571	1484.915
C	0.51	0.06	1.02	A	804.75	1207.13	66.22	0.05	0.74	66.23	0.05	0.694	2027.030
D	0.26	0.08	0.36	A	238.58	357.87	23.96	0.07	0.27	23.97	0.07	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	384.71	96.18	383.75	518.54	154.49	0.00	1989.01	1701.62	0.193	0.00	0.24
B	118.95	29.74	118.52	77.32	460.93	0.00	1221.52	357.18	0.097	0.00	0.11
C	660.25	165.06	658.21	463.88	115.57	0.00	1946.85	1739.51	0.339	0.00	0.51
D	195.74	48.94	194.97	295.73	478.06	0.00	1211.74	751.67	0.162	0.00	0.19

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	459.38	114.84	459.12	620.64	185.00	0.00	1968.09	1701.62	0.233	0.24	0.30
B	142.04	35.51	141.92	92.53	551.60	0.00	1169.71	357.18	0.121	0.11	0.14
C	788.41	197.10	787.70	555.17	138.34	0.00	1931.05	1739.51	0.408	0.51	0.69
D	233.73	58.43	233.50	353.90	572.14	0.00	1157.97	751.67	0.202	0.19	0.25

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	562.62	140.66	562.21	759.78	226.48	0.00	1939.66	1701.62	0.290	0.30	0.41
B	173.96	43.49	173.76	113.29	675.40	0.00	1098.96	357.18	0.158	0.14	0.19
C	965.59	241.40	964.28	679.77	169.39	0.00	1909.51	1739.51	0.506	0.69	1.01
D	286.27	71.57	285.85	433.26	700.41	0.00	1084.67	751.67	0.264	0.25	0.36

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	562.62	140.66	562.62	760.79	226.81	0.00	1939.44	1701.62	0.290	0.41	0.41
B	173.96	43.49	173.96	113.40	676.02	0.00	1098.61	357.18	0.158	0.19	0.19
C	965.59	241.40	965.58	680.42	169.56	0.00	1909.40	1739.51	0.506	1.01	1.02
D	286.27	71.57	286.26	433.80	701.34	0.00	1084.14	751.67	0.264	0.36	0.36

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	459.38	114.84	459.79	622.21	185.51	0.00	1967.74	1701.62	0.233	0.41	0.31
B	142.04	35.51	142.23	92.71	552.59	0.00	1169.14	357.18	0.121	0.19	0.14
C	788.41	197.10	789.70	556.22	138.61	0.00	1930.87	1739.51	0.408	1.02	0.69
D	233.73	58.43	234.15	354.73	573.58	0.00	1157.15	751.67	0.202	0.36	0.25

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	384.71	96.18	384.97	520.79	155.28	0.00	1988.47	1701.62	0.193	0.31	0.24
B	118.95	29.74	119.07	77.61	462.63	0.00	1220.55	357.18	0.097	0.14	0.11
C	660.25	165.06	660.97	465.66	116.04	0.00	1946.52	1739.51	0.339	0.69	0.52
D	195.74	48.94	195.98	296.92	480.08	0.00	1210.58	751.67	0.162	0.25	0.19

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	3.53	0.24	0.037	A	A
B	1.58	0.11	0.054	A	A
C	7.51	0.50	0.046	A	A
D	2.82	0.19	0.059	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	4.50	0.30	0.040	A	A
B	2.04	0.14	0.058	A	A
C	10.12	0.67	0.052	A	A
D	3.71	0.25	0.065	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	6.02	0.40	0.044	A	A
B	2.76	0.18	0.065	A	A
C	14.86	0.99	0.063	A	A
D	5.24	0.35	0.075	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	3.53	0.24	0.037	A	A
B	1.58	0.11	0.054	A	A
C	7.51	0.50	0.046	A	A
D	2.82	0.19	0.059	A	A

A	6.11	0.41	0.044	A	A
B	2.81	0.19	0.065	A	A
C	15.26	1.02	0.064	A	A
D	5.36	0.36	0.075	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	4.64	0.31	0.040	A	A
B	2.11	0.14	0.058	A	A
C	10.62	0.71	0.053	A	A
D	3.89	0.26	0.065	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	3.65	0.24	0.037	A	A
B	1.65	0.11	0.054	A	A
C	7.86	0.52	0.047	A	A
D	2.95	0.20	0.059	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	384.71	1989.01	0.193	0.00	0.00	0.24	3.53	(0.00)	0.037
07:45-08:00	B	118.95	1221.52	0.097	0.00	0.00	0.11	1.58	(0.00)	0.054
07:45-08:00	C	660.25	1946.85	0.339	0.00	0.00	0.51	7.51	(0.00)	0.046
07:45-08:00	D	195.74	1211.74	0.162	0.00	0.00	0.19	2.82	(0.00)	0.059
08:00-08:15	A	459.38	1968.09	0.233	0.00	0.24	0.30	4.50	(0.00)	0.040
08:00-08:15	B	142.04	1169.71	0.121	0.00	0.11	0.14	2.04	(0.00)	0.058
08:00-08:15	C	788.41	1931.05	0.408	0.00	0.51	0.69	10.12	(0.00)	0.052
08:00-08:15	D	233.73	1157.97	0.202	0.00	0.19	0.25	3.71	(0.00)	0.065
08:15-08:30	A	562.62	1939.66	0.290	0.00	0.30	0.41	6.02	(0.00)	0.044
08:15-08:30	B	173.96	1098.96	0.158	0.00	0.14	0.19	2.76	(0.00)	0.065
08:15-08:30	C	965.59	1909.51	0.506	0.00	0.69	1.01	14.86	(0.00)	0.063
08:15-08:30	D	286.27	1084.67	0.264	0.00	0.25	0.36	5.24	(0.00)	0.075
08:30-08:45	A	562.62	1939.44	0.290	0.00	0.41	0.41	6.11	(0.00)	0.044
08:30-08:45	B	173.96	1098.61	0.158	0.00	0.19	0.19	2.81	(0.00)	0.065
08:30-08:45	C	965.59	1909.40	0.506	0.00	1.01	1.02	15.26	(0.00)	0.064
08:30-08:45	D	286.27	1084.14	0.264	0.00	0.36	0.36	5.36	(0.00)	0.075
08:45-09:00	A	459.38	1967.74	0.233	0.00	0.41	0.31	4.64	(0.00)	0.040

08:45-09:00	B	142.04	1169.14	0.121	0.00	0.19	0.14	2.11	(0.00)	0.058
08:45-09:00	C	788.41	1930.87	0.408	0.00	1.02	0.69	10.62	(0.00)	0.053
08:45-09:00	D	233.73	1157.15	0.202	0.00	0.36	0.25	3.89	(0.00)	0.065
09:00-09:15	A	384.71	1988.47	0.193	0.00	0.31	0.24	3.65	(0.00)	0.037
09:00-09:15	B	118.95	1220.55	0.097	0.00	0.14	0.11	1.65	(0.00)	0.054
09:00-09:15	C	660.25	1946.52	0.339	0.00	0.69	0.52	7.86	(0.00)	0.047
09:00-09:15	D	195.74	1210.58	0.162	0.00	0.25	0.19	2.95	(0.00)	0.059

A1 - (Default Analysis Set) - D12 - 2020 PCU + CD + DEV180 - 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 + DEV180 - Wretchwick - Gavray Drive - Charbridge PM Peak, PM	2020 PCU + CD + DEV180 - 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	
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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	704.00	100.000	N/A
B	ONE HOUR	Yes	113.00	100.000	N/A
C	ONE HOUR	Yes	700.00	100.000	N/A
D	ONE HOUR	Yes	371.00	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	530.01	530.01	N/A	N/A
16:45-17:00	B	85.07	85.07	N/A	N/A
16:45-17:00	C	527.00	527.00	N/A	N/A
16:45-17:00	D	279.31	279.31	N/A	N/A
17:00-17:15	A	632.88	632.88	N/A	N/A
17:00-17:15	B	101.58	101.58	N/A	N/A
17:00-17:15	C	629.29	629.29	N/A	N/A
17:00-17:15	D	333.52	333.52	N/A	N/A
17:15-17:30	A	775.12	775.12	N/A	N/A
17:15-17:30	B	124.42	124.42	N/A	N/A
17:15-17:30	C	770.71	770.71	N/A	N/A
17:15-17:30	D	408.48	408.48	N/A	N/A
17:30-17:45	A	775.12	775.12	N/A	N/A
17:30-17:45	B	124.42	124.42	N/A	N/A
17:30-17:45	C	770.71	770.71	N/A	N/A
17:30-17:45	D	408.48	408.48	N/A	N/A
17:45-18:00	A	632.88	632.88	N/A	N/A
17:45-18:00	B	101.58	101.58	N/A	N/A
17:45-18:00	C	629.29	629.29	N/A	N/A
17:45-18:00	D	333.52	333.52	N/A	N/A
18:00-18:15	A	530.01	530.01	N/A	N/A
18:00-18:15	B	85.07	85.07	N/A	N/A
18:00-18:15	C	527.00	527.00	N/A	N/A
18:00-18:15	D	279.31	279.31	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	76.00	559.00	69.00
	B	65.00	0.00	30.00	18.00
	C	475.00	67.00	0.00	158.00
	D	74.00	22.00	275.00	0.00

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

		To			
		A	B	C	D
From	A	0.00	0.11	0.79	0.10
	B	0.58	0.00	0.27	0.16
	C	0.68	0.10	0.00	0.23
	D	0.20	0.06	0.74	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

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
		A	B	C	D
From	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	0.43	0.06	0.74	A	646.00	969.00	48.79	0.05	0.54	48.79	0.05	0.685	2094.901
B	0.14	0.08	0.16	A	103.69	155.54	10.48	0.07	0.12	10.48	0.07	0.571	1484.915
C	0.40	0.05	0.67	A	642.33	963.50	45.61	0.05	0.51	45.62	0.05	0.694	2027.030
D	0.37	0.09	0.59	A	340.44	510.65	38.08	0.07	0.42	38.08	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	530.01	132.50	528.48	460.82	272.96	0.00	1907.81	1654.31	0.278	0.00	0.38
B	85.07	21.27	84.74	123.84	677.59	0.00	1097.71	388.46	0.078	0.00	0.08
C	527.00	131.75	525.52	648.29	114.04	0.00	1947.91	1716.59	0.271	0.00	0.37
D	279.31	69.83	278.13	183.91	455.64	0.00	1224.54	597.71	0.228	0.00	0.29

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	632.88	158.22	632.38	551.53	326.86	0.00	1870.86	1654.31	0.338	0.38	0.51
B	101.58	25.40	101.48	148.21	811.03	0.00	1021.46	388.46	0.099	0.08	0.11
C	629.29	157.32	628.84	775.99	136.52	0.00	1932.32	1716.59	0.326	0.37	0.48
D	333.52	83.38	333.12	220.08	545.28	0.00	1173.32	597.71	0.284	0.29	0.39

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	775.12	193.78	774.21	675.25	400.10	0.00	1820.66	1654.31	0.426	0.51	0.74
B	124.42	31.10	124.23	181.45	992.85	0.00	917.56	388.46	0.136	0.11	0.16
C	770.71	192.68	769.95	949.95	187.13	0.00	1911.08	1716.59	0.403	0.48	0.67
D	408.48	102.12	407.73	269.46	667.62	0.00	1103.41	597.71	0.370	0.39	0.58

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	775.12	193.78	775.11	676.02	400.76	0.00	1820.21	1654.31	0.426	0.74	0.74
B	124.42	31.10	124.41	181.67	994.20	0.00	916.79	388.46	0.136	0.16	0.16
C	770.71	192.68	770.71	951.26	167.35	0.00	1910.93	1716.59	0.403	0.67	0.67
D	408.48	102.12	408.47	269.75	668.31	0.00	1103.02	597.71	0.370	0.58	0.59

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	632.88	158.22	633.78	552.74	327.89	0.00	1870.15	1654.31	0.338	0.74	0.51
B	101.58	25.40	101.77	148.55	813.13	0.00	1020.26	388.46	0.100	0.16	0.11
C	629.29	157.32	630.04	778.03	136.87	0.00	1932.08	1716.59	0.326	0.67	0.49
D	333.52	83.38	334.26	220.54	546.37	0.00	1172.70	597.71	0.284	0.59	0.40

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	530.01	132.50	530.52	462.70	274.41	0.00	1906.81	1654.31	0.278	0.51	0.39
B	85.07	21.27	85.18	124.34	680.59	0.00	1096.00	388.46	0.078	0.11	0.08
C	527.00	131.75	527.45	651.20	114.56	0.00	1947.55	1716.59	0.271	0.49	0.37
D	279.31	69.83	279.72	184.62	457.39	0.00	1223.54	597.71	0.228	0.40	0.30

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	5.65	0.38	0.043	A	A
B	1.23	0.08	0.059	A	A
C	5.45	0.36	0.042	A	A
D	4.31	0.29	0.063	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	7.52	0.50	0.048	A	A
B	1.63	0.11	0.065	A	A
C	7.11	0.47	0.046	A	A
D	5.81	0.39	0.071	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	10.83	0.72	0.057	A	A
B	2.30	0.15	0.076	A	A
C	9.91	0.66	0.053	A	A
D	8.53	0.57	0.086	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	11.07	0.74	0.057	A	A

B	2.34	0.16	0.076	A	A
C	10.10	0.67	0.053	A	A
D	8.76	0.58	0.086	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	7.84	0.52	0.049	A	A
B	1.69	0.11	0.065	A	A
C	7.39	0.49	0.046	A	A
D	6.13	0.41	0.072	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	5.88	0.39	0.044	A	A
B	1.29	0.09	0.059	A	A
C	5.66	0.38	0.042	A	A
D	4.54	0.30	0.064	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	530.01	1907.81	0.278	0.00	0.00	0.38	5.65	(0.00)	0.043
16:45-17:00	B	85.07	1097.71	0.078	0.00	0.00	0.08	1.23	(0.00)	0.059
16:45-17:00	C	527.00	1947.91	0.271	0.00	0.00	0.37	5.45	(0.00)	0.042
16:45-17:00	D	279.31	1224.54	0.228	0.00	0.00	0.29	4.31	(0.00)	0.063
17:00-17:15	A	632.88	1870.86	0.338	0.00	0.38	0.51	7.52	(0.00)	0.048
17:00-17:15	B	101.58	1021.46	0.099	0.00	0.08	0.11	1.63	(0.00)	0.065
17:00-17:15	C	629.29	1932.32	0.326	0.00	0.37	0.48	7.11	(0.00)	0.046
17:00-17:15	D	333.52	1173.32	0.284	0.00	0.29	0.39	5.81	(0.00)	0.071
17:15-17:30	A	775.12	1820.66	0.426	0.00	0.51	0.74	10.83	(0.00)	0.057
17:15-17:30	B	124.42	917.56	0.136	0.00	0.11	0.16	2.30	(0.00)	0.076
17:15-17:30	C	770.71	1911.08	0.403	0.00	0.48	0.67	9.91	(0.00)	0.053
17:15-17:30	D	408.48	1103.41	0.370	0.00	0.39	0.58	8.53	(0.00)	0.086
17:30-17:45	A	775.12	1820.21	0.426	0.00	0.74	0.74	11.07	(0.00)	0.057
17:30-17:45	B	124.42	916.79	0.136	0.00	0.16	0.16	2.34	(0.00)	0.076
17:30-17:45	C	770.71	1910.93	0.403	0.00	0.67	0.67	10.10	(0.00)	0.053
17:30-17:45	D	408.48	1103.02	0.370	0.00	0.58	0.59	8.76	(0.00)	0.086
17:45-18:00	A	632.88	1870.15	0.338	0.00	0.74	0.51	7.84	(0.00)	0.049
17:45-18:00	B	101.58	1020.26	0.100	0.00	0.16	0.11	1.69	(0.00)	0.065

17:45-18:00	C	629.29	1932.08	0.326	0.00	0.67	0.49	7.39	(0.00)	0.046
17:45-18:00	D	333.52	1172.70	0.284	0.00	0.59	0.40	6.13	(0.00)	0.072
18:00-18:15	A	530.01	1906.81	0.278	0.00	0.51	0.39	5.88	(0.00)	0.044
18:00-18:15	B	85.07	1096.00	0.078	0.00	0.11	0.08	1.29	(0.00)	0.059
18:00-18:15	C	527.00	1947.55	0.271	0.00	0.49	0.37	5.66	(0.00)	0.042
18:00-18:15	D	279.31	1223.54	0.228	0.00	0.40	0.30	4.54	(0.00)	0.064

PICADY		
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010)		
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TRL Limited Crowthorne House Nine Mile Ride Wokingham, Berks. RG40 3GA, UK		Tel: +44 (0)1344 770758 Fax: +44 (0)1344 770864 E-mail: software@trl.co.uk Web: www.trlsoftware.co.uk
The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution		

Run Analysis

Parameter	Values
File Run	\\O..\Revision A\With SEB 2014 Wretchwick Way -Pergrine Way Junction.vpi
Date Run	10 April 2015
Time Run	11:40:19
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

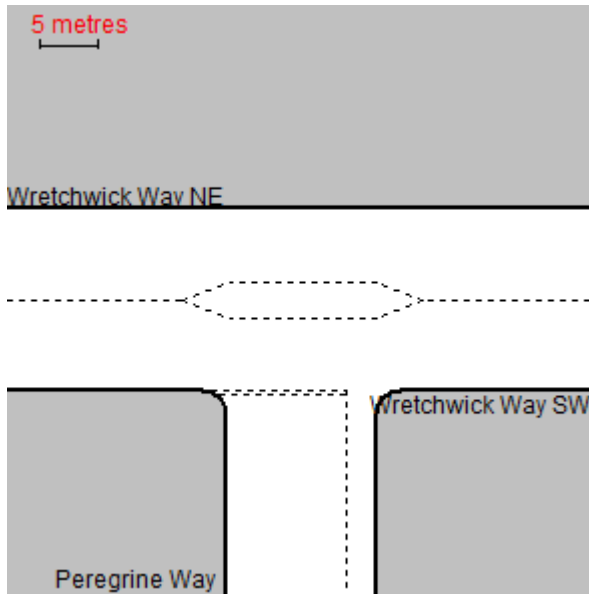
Parameter	Minor Arm B
Major Road Carriageway Width (m)	12.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	3.20
Minor Road Width 0m Back from Junction (m)	10.00
Minor Road Width 5m Back from Junction (m)	9.00
Minor Road Width 10m Back from Junction (m)	6.50
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

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

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	110.0	578.0
Arm B	54.0	0.0	88.0
Arm C	449.0	134.0	0.0

Demand Set: 2020 AM PCU + CD+ DEV180 - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	54.0	376.0
Arm B	103.0	0.0	131.0
Arm C	534.0	85.0	0.0

Demand Set: 2020 PM PCU+ CD+ DEV180 - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	110.0	623.0
Arm B	54.0	0.0	88.0
Arm C	487.0	134.0	0.0

Demand Set: 2020 AM PCU + CD+ DEV300 - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	54.0	397.0
Arm B	103.0	0.0	131.0
Arm C	563.0	85.0	0.0

Demand Set: 2020 PM PCU+ CD+ DEV300 - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	110.0	653.0
Arm B	54.0	0.0	88.0
Arm C	512.0	134.0	0.0

ODTAB Synthesised Flows

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

Modelling Period: 07:45-09:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	08:00	4.975	08:30	7.462	09:00	4.975
Arm B	08:00	2.925	08:30	4.387	09:00	2.925
Arm C	08:00	7.200	08:30	10.800	09:00	7.200

Heavy Vehicles Percentages

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	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

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

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Demand Set: 2020 AM PCU + CD+ DEV180 - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Demand Set: 2020 PM PCU+ CD+ DEV180 - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Demand Set: 2020 AM PCU + CD+ DEV300 - Wretchwick Way - Peregrine Way

Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

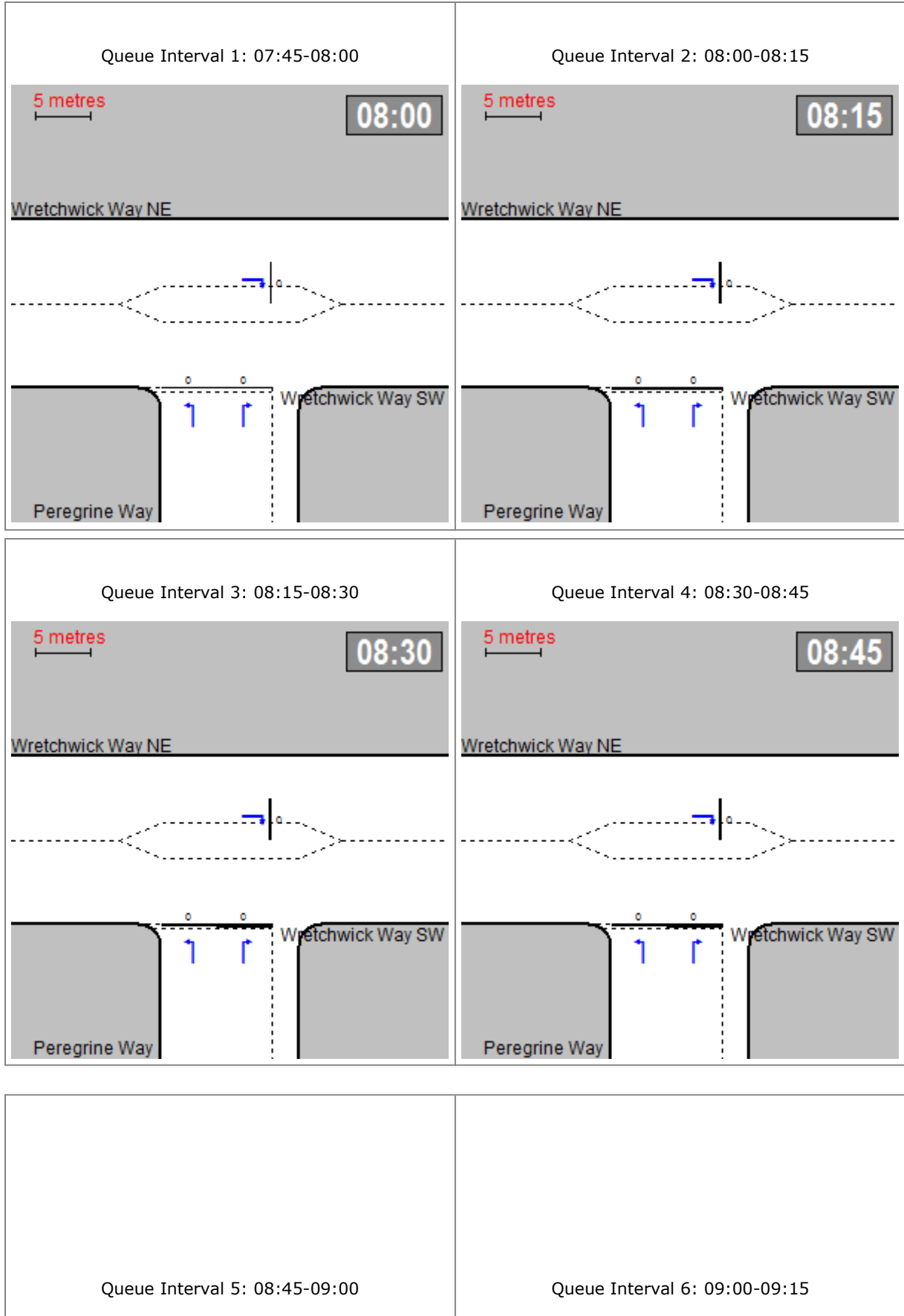
Demand Set: 2020 PM PCU+ CD+ DEV300 - Wretchwick Way - Peregrine Way

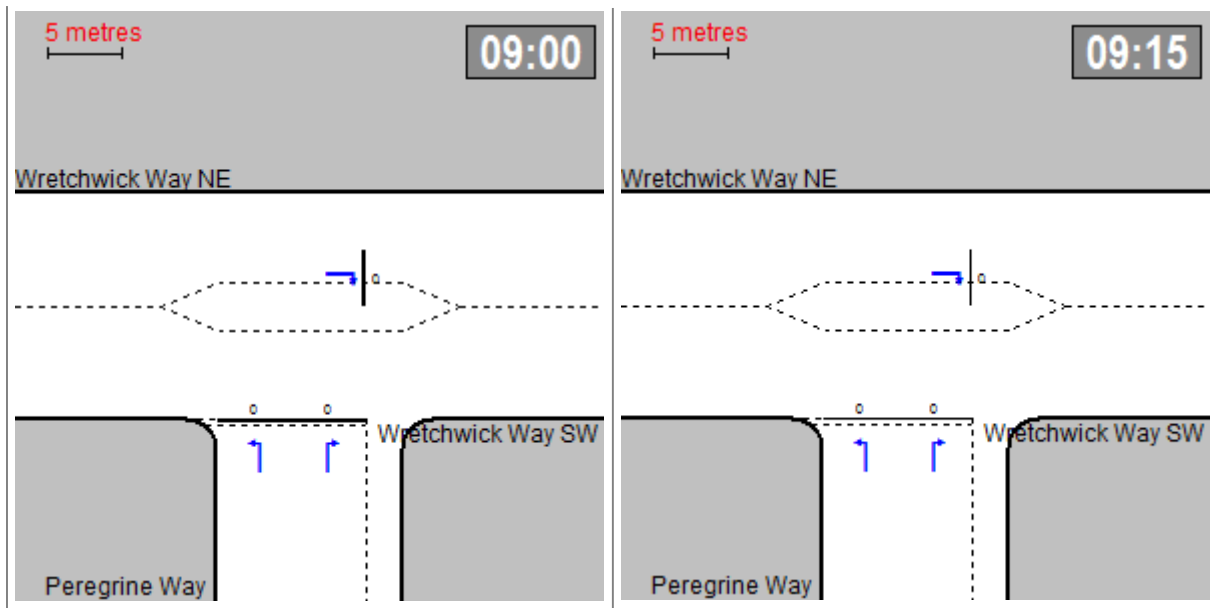
Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Queue Diagrams

Demand Set: 2020 AM PCU + CD - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15
View Extent: 40m

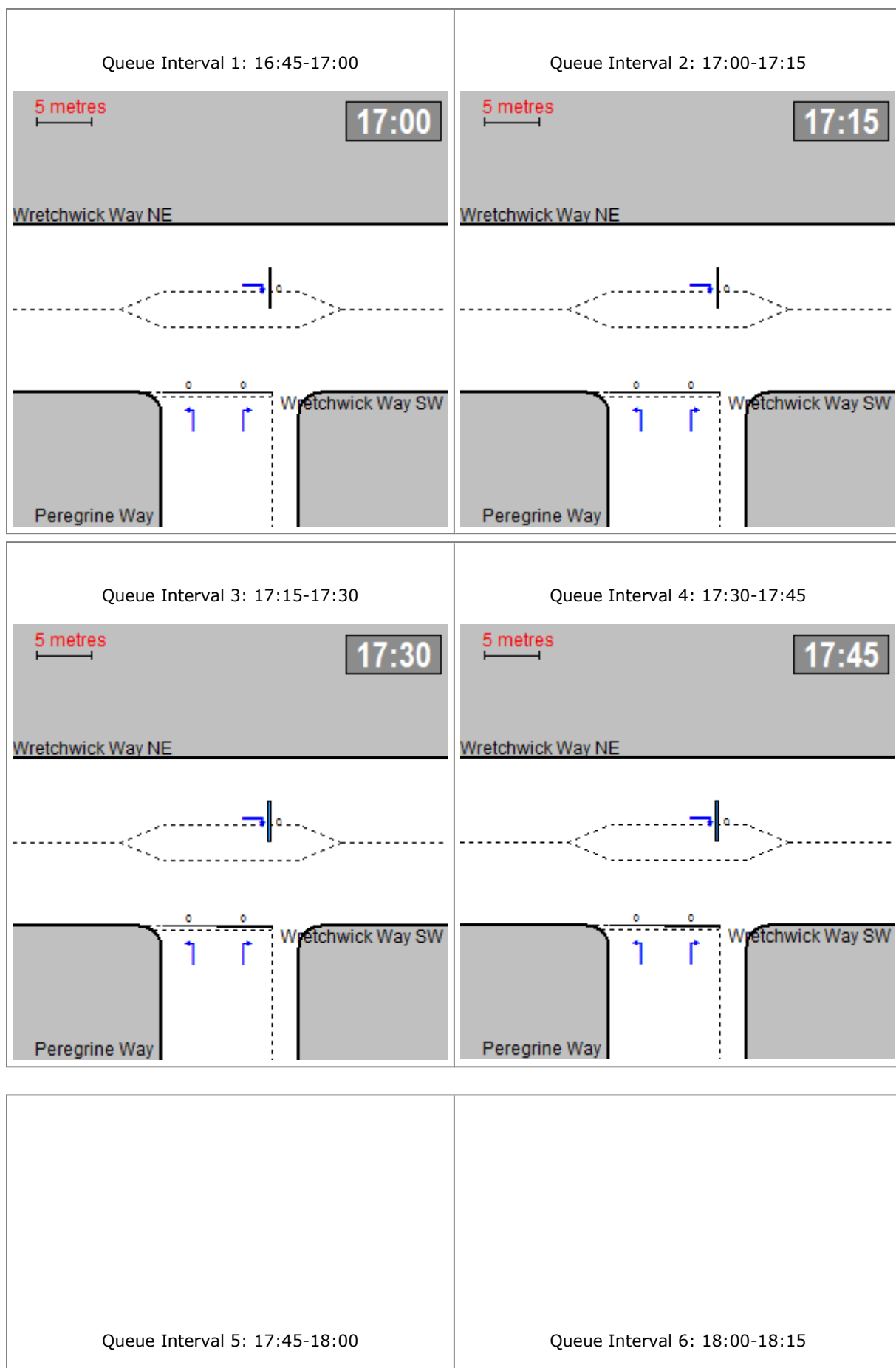


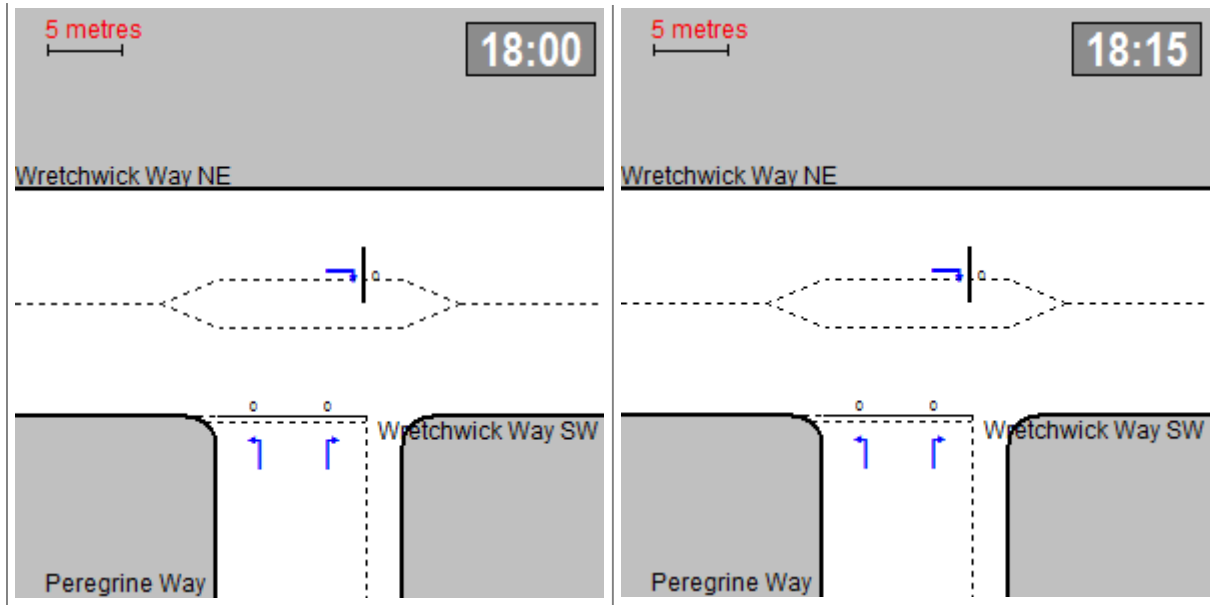


Demand Set: 2020 PM PCU+ CD - Wretchwick Way - Peregrine Way

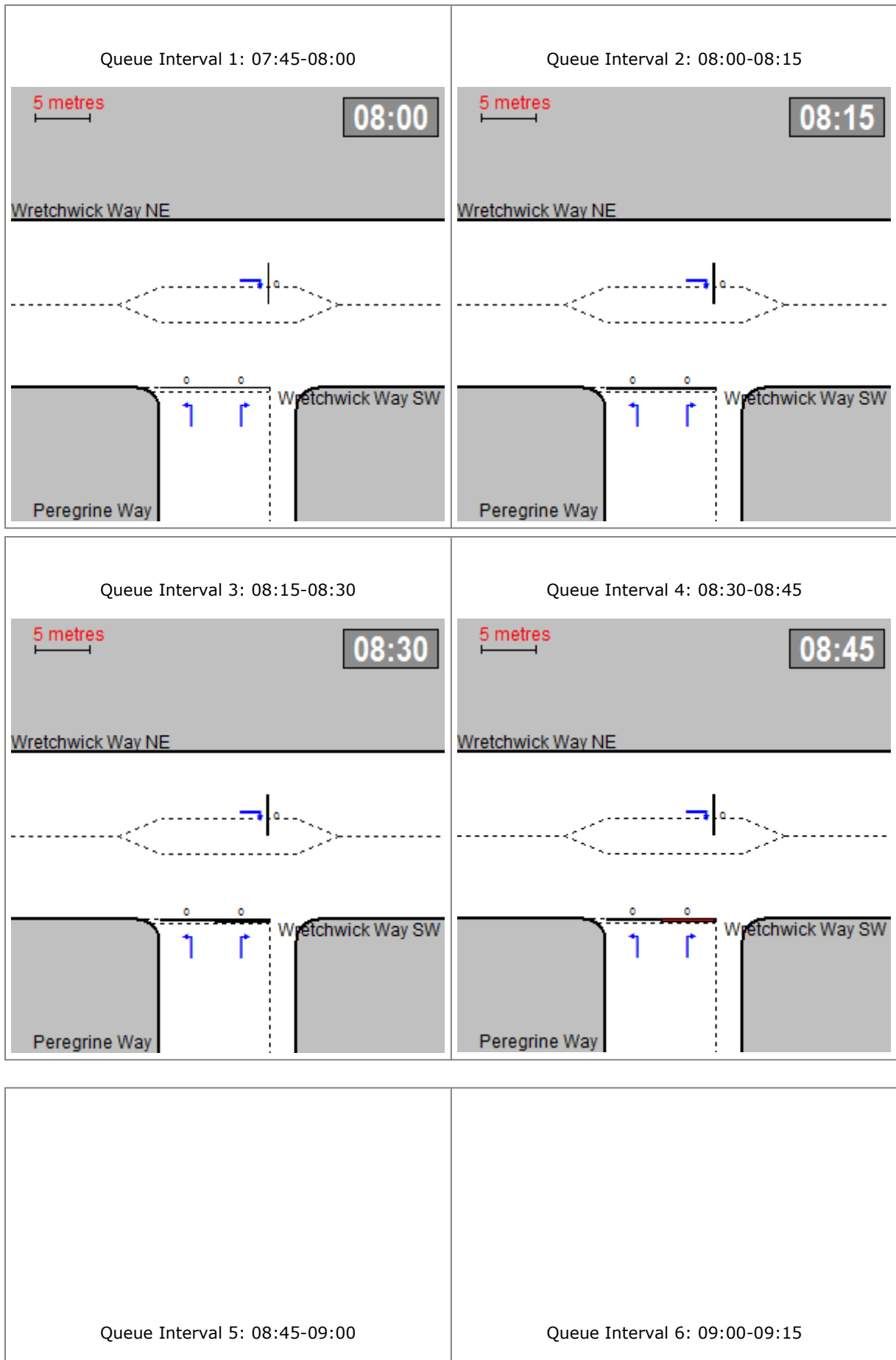
Modelling Period: 16:45-18:15

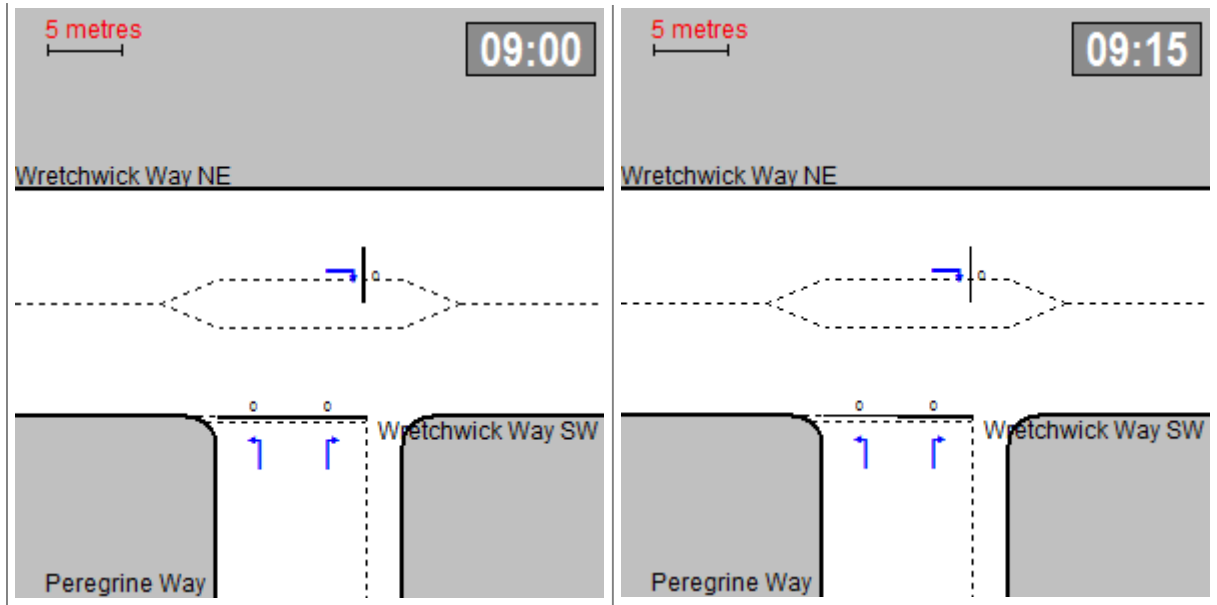
View Extent: 40m



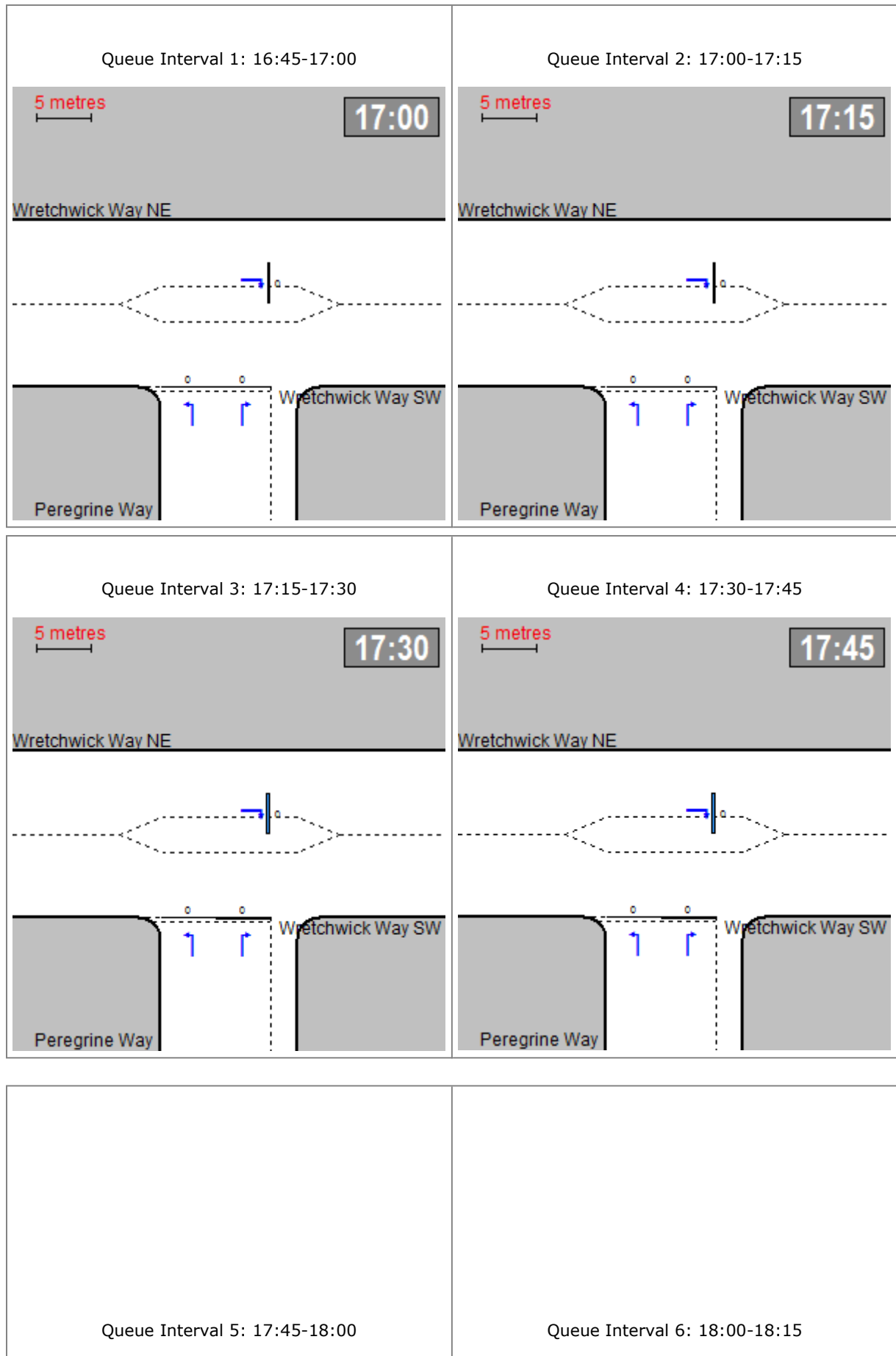


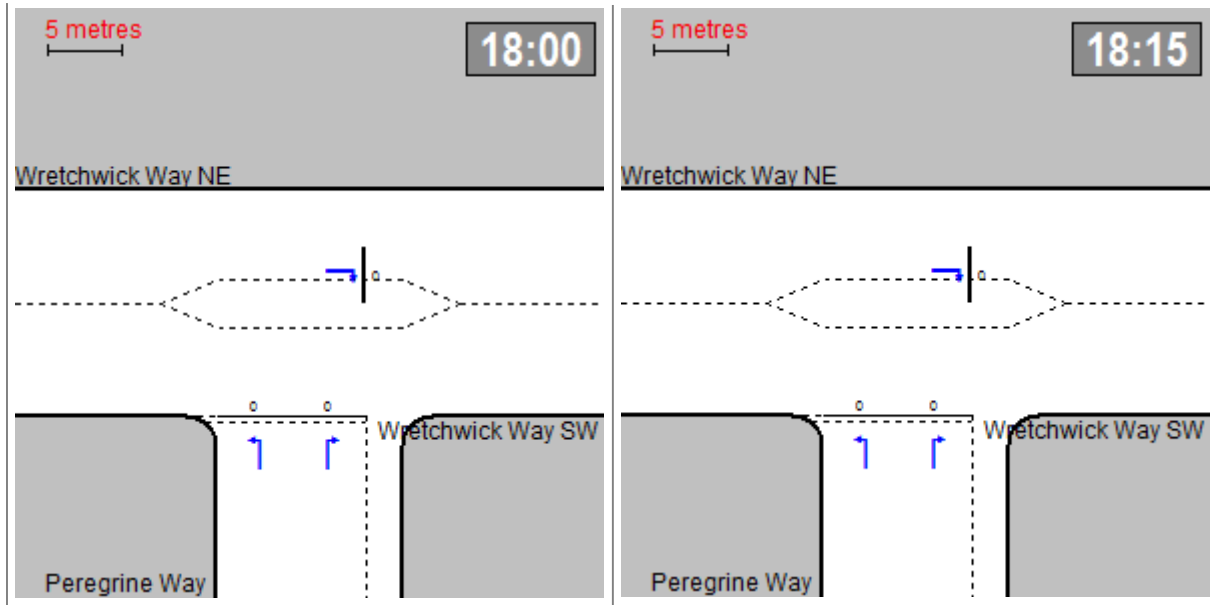
Demand Set: 2020 AM PCU + CD+ DEV180 - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15
View Extent: 40m



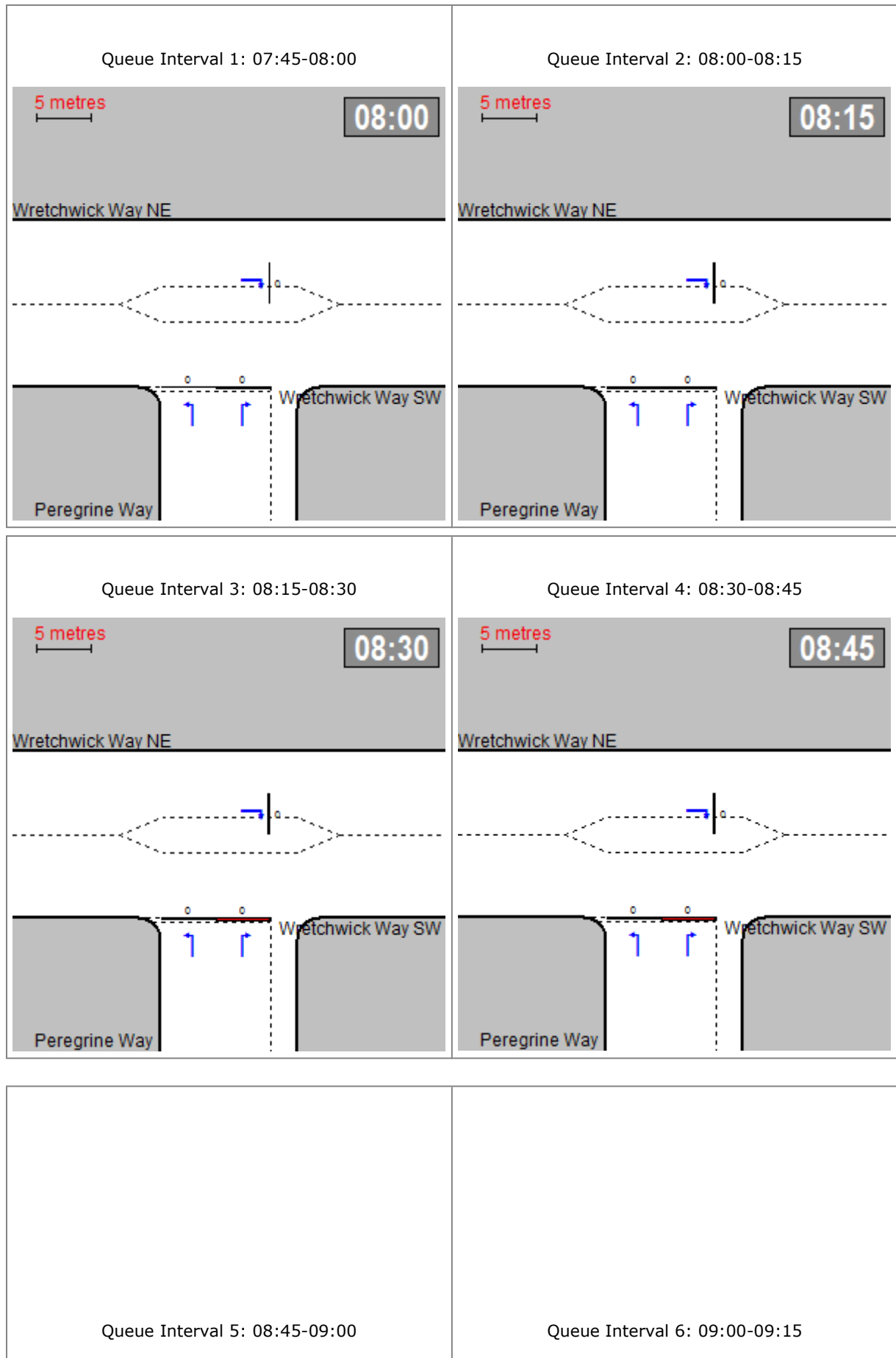


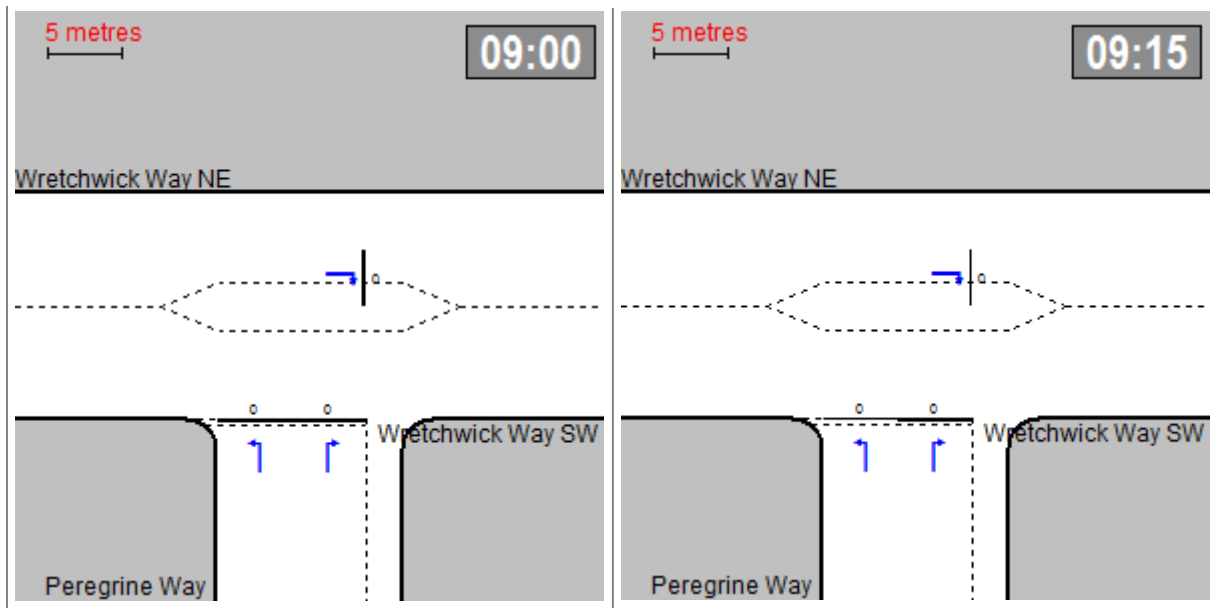
Demand Set: 2020 PM PCU+ CD+ DEV180 - Wretchwick Way - Peregrine Way
Modelling Period: 16:45-18:15
View Extent: 40m





Demand Set: 2020 AM PCU + CD+ DEV300 - Wretchwick Way - Peregrine Way
Modelling Period: 07:45-09:15
View Extent: 40m

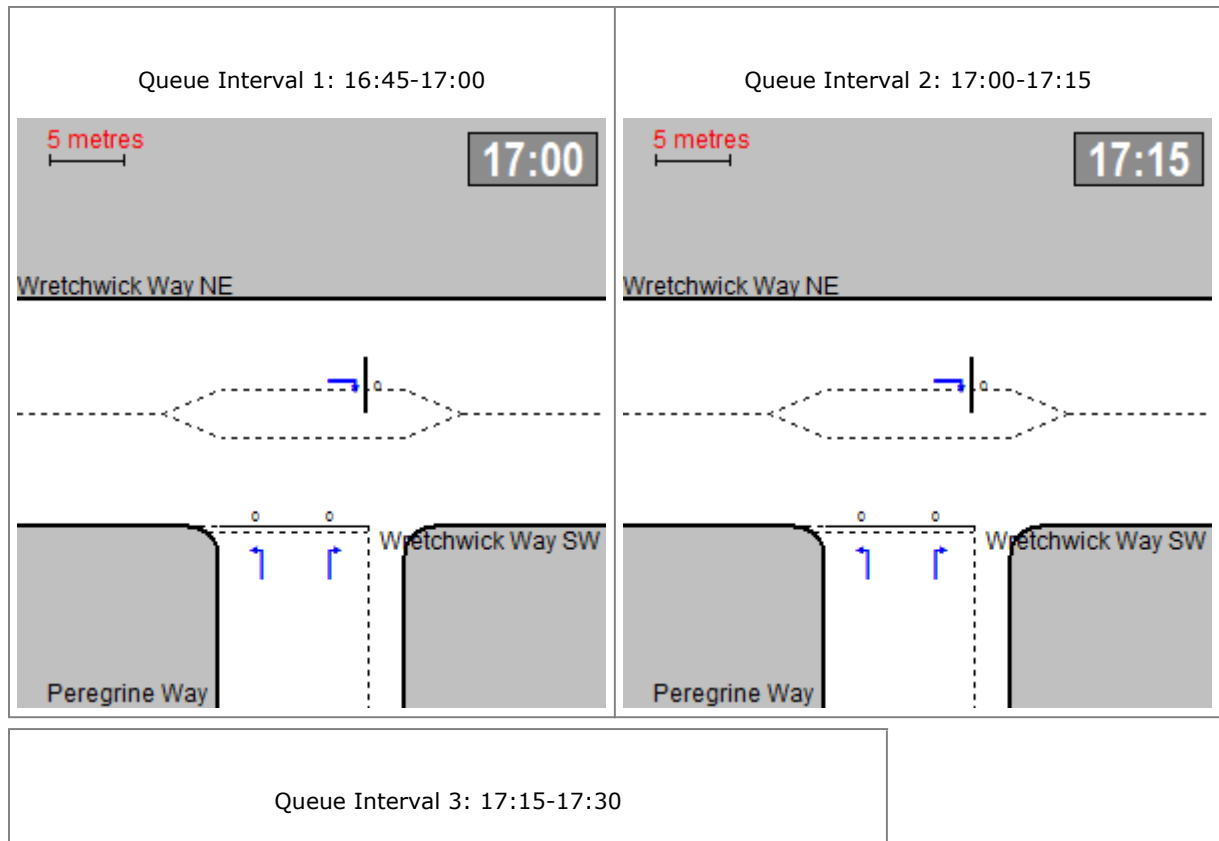




Demand Set: 2020 PM PCU+ CD+ DEV300 - Wretchwick Way - Peregrine Way

Modelling Period: 16:45-18:15

View Extent: 40m



**APPENDIX M: JUNCTION MODEL OUTPUTS: WITH WIDER SITE
FULL ALLOCATION SCENARIO WITHOUT SOUTH EAST BICESTER**

ARCADY 7
Version: 7.0.1.130 [12 March 2010] © Copyright Transport Research Laboratory 2009
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\2014 Peregrine Way - Wretchwick Way roundabout.arc7
Report generation date: 10/04/2015 10:46:34

- » A1 - (Default Analysis Set) - D9 - 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way PM Peak, PM
- » A1 - (Default Analysis Set) - D10 - 2020 PCU + CD +DEV300 - 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 +DEV300 - Peregrine Way/Wretchwick Way AM Peak								
Arm A	0.32	0.03	0.25	A				
Arm B	0.31	0.06	0.24	A				
Arm C	0.90	0.05	0.48	A				
(Default Analysis Set) - 2020 PCU + CD +DEV300 - Peregrine Way/Wretchwick Way PM Peak								
Arm A					0.80	0.04	0.45	A
Arm B					0.30	0.08	0.23	A
Arm C					0.46	0.04	0.31	A

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

2014 PCU - Peregrine Way/Wretchwick Way PM Peak - PM runs from 16:45:00 to 18:15:00
 2014 PCU - Peregrine Way/Wretchwick Way AM Peak - AM runs from 07:45:00 to 09:15:00
 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
	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 +DEV300 - 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 +DEV300 - Peregrine Way/Wretchwick Way PM Peak, PM	2020 PCU + CD +DEV300 - 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

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	1159.00	100.000	N/A
B	ONE HOUR	Yes	208.00	100.000	N/A
C	ONE HOUR	Yes	644.00	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	872.56	872.56	N/A	N/A
16:45-17:00	B	156.59	156.59	N/A	N/A

16:45-17:00	C	484.84	484.84	N/A	N/A
17:00-17:15	A	1041.92	1041.92	N/A	N/A
17:00-17:15	B	186.99	186.99	N/A	N/A
17:00-17:15	C	578.94	578.94	N/A	N/A
17:15-17:30	A	1276.08	1276.08	N/A	N/A
17:15-17:30	B	229.01	229.01	N/A	N/A
17:15-17:30	C	709.06	709.06	N/A	N/A
17:30-17:45	A	1276.08	1276.08	N/A	N/A
17:30-17:45	B	229.01	229.01	N/A	N/A
17:30-17:45	C	709.06	709.06	N/A	N/A
17:45-18:00	A	1041.92	1041.92	N/A	N/A
17:45-18:00	B	186.99	186.99	N/A	N/A
17:45-18:00	C	578.94	578.94	N/A	N/A
18:00-18:15	A	872.56	872.56	N/A	N/A
18:00-18:15	B	156.59	156.59	N/A	N/A
18:00-18:15	C	484.84	484.84	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	918.00
	B	157.00	0.00	51.00
	C	588.00	56.00	0.00

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

		To		
		A	B	C
From	A	0.00	0.21	0.79
	B	0.75	0.00	0.25
	C	0.91	0.09	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

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	0.45	0.04	0.80	A	1063.52	1595.28	54.05	0.03	0.60	54.05	0.03	0.858	2913.181
B	0.23	0.08	0.30	A	190.86	286.30	19.80	0.07	0.22	19.80	0.07	0.608	1594.519
C	0.31	0.04	0.46	A	590.95	886.42	31.70	0.04	0.35	31.71	0.04	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	872.56	218.14	870.82	559.44	42.07	0.00	2877.08	2746.20	0.303	0.00	0.43
B	156.59	39.15	155.98	223.14	689.74	0.00	1175.40	272.80	0.133	0.00	0.15
C	484.84	121.21	483.77	727.99	117.74	0.00	2305.86	2237.83	0.210	0.00	0.27

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	1041.92	260.48	1041.38	669.32	50.32	0.00	2870.00	2746.21	0.363	0.43	0.57
B	186.99	46.75	186.78	266.86	824.84	0.00	1093.31	272.80	0.171	0.15	0.21
C	578.94	144.74	578.65	870.64	140.98	0.00	2287.93	2237.83	0.253	0.27	0.34

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	1276.08	319.02	1275.15	819.54	61.62	0.00	2860.31	2746.20	0.446	0.57	0.80
B	229.01	57.25	228.62	326.77	1010.00	0.00	980.81	272.80	0.233	0.21	0.30
C	709.06	177.26	708.59	1066.05	172.57	0.00	2263.56	2237.83	0.313	0.34	0.45

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	1276.08	319.02	1276.08	820.25	61.66	0.00	2860.27	2746.20	0.446	0.80	0.80
B	229.01	57.25	229.01	327.00	1010.73	0.00	980.36	272.80	0.234	0.30	0.30
C	709.06	177.26	709.05	1066.88	172.86	0.00	2263.34	2237.83	0.313	0.45	0.46

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	1041.92	260.48	1042.84	670.45	50.38	0.00	2869.95	2746.21	0.363	0.80	0.57
B	186.99	46.75	187.37	267.23	826.00	0.00	1092.61	272.80	0.171	0.30	0.21
C	578.94	144.74	579.40	871.94	141.43	0.00	2287.58	2237.83	0.253	0.46	0.34

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	872.56	218.14	873.10	561.30	42.19	0.00	2876.98	2746.20	0.303	0.57	0.44
B	156.59	39.15	156.81	223.74	691.55	0.00	1174.31	272.80	0.133	0.21	0.15
C	484.84	121.21	485.13	729.99	118.36	0.00	2305.38	2237.83	0.210	0.34	0.27

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	6.42	0.43	0.030	A	A
B	2.25	0.15	0.059	A	A
C	3.93	0.26	0.033	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	8.42	0.56	0.033	A	A
B	3.03	0.20	0.066	A	A
C	5.01	0.33	0.035	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	11.85	0.79	0.038	A	A
B	4.45	0.30	0.080	A	A
C	6.73	0.45	0.039	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	12.04	0.80	0.038	A	A
B	4.55	0.30	0.080	A	A
C	6.82	0.45	0.039	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	8.69	0.58	0.033	A	A
B	3.17	0.21	0.066	A	A
C	5.16	0.34	0.035	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	6.62	0.44	0.030	A	A
B	2.35	0.16	0.059	A	A
C	4.05	0.27	0.033	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 (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	872.56	2877.08	0.303	0.00	0.00	0.43	6.42	(0.00)	0.030
16:45-17:00	B	156.59	1175.40	0.133	0.00	0.00	0.15	2.25	(0.00)	0.059
16:45-17:00	C	484.84	2305.86	0.210	0.00	0.00	0.27	3.93	(0.00)	0.033
17:00-17:15	A	1041.92	2870.00	0.363	0.00	0.43	0.57	8.42	(0.00)	0.033
17:00-17:15	B	186.99	1093.31	0.171	0.00	0.15	0.21	3.03	(0.00)	0.066
17:00-17:15	C	578.94	2287.93	0.253	0.00	0.27	0.34	5.01	(0.00)	0.035
17:15-17:30	A	1276.08	2860.31	0.446	0.00	0.57	0.80	11.85	(0.00)	0.038
17:15-17:30	B	229.01	980.81	0.233	0.00	0.21	0.30	4.45	(0.00)	0.080
17:15-17:30	C	709.06	2263.56	0.313	0.00	0.34	0.45	6.73	(0.00)	0.039
17:30-17:45	A	1276.08	2860.27	0.446	0.00	0.80	0.80	12.04	(0.00)	0.038
17:30-17:45	B	229.01	980.36	0.234	0.00	0.30	0.30	4.55	(0.00)	0.080
17:30-17:45	C	709.06	2263.34	0.313	0.00	0.45	0.46	6.82	(0.00)	0.039
17:45-18:00	A	1041.92	2869.95	0.363	0.00	0.80	0.57	8.69	(0.00)	0.033
17:45-18:00	B	186.99	1092.61	0.171	0.00	0.30	0.21	3.17	(0.00)	0.066
17:45-18:00	C	578.94	2287.58	0.253	0.00	0.46	0.34	5.16	(0.00)	0.035
18:00-18:15	A	872.56	2876.98	0.303	0.00	0.57	0.44	6.62	(0.00)	0.030
18:00-18:15	B	156.59	1174.31	0.133	0.00	0.21	0.15	2.35	(0.00)	0.059
18:00-18:15	C	484.84	2305.38	0.210	0.00	0.34	0.27	4.05	(0.00)	0.033

A1 - (Default Analysis Set) - D10 - 2020 PCU + CD +DEV300 - 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 +DEV300 - Peregrine Way/Wretchwick Way AM Peak, AM	2020 PCU + CD +DEV300 - 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/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	643.00	100.000	N/A
B	ONE HOUR	Yes	273.00	100.000	N/A
C	ONE HOUR	Yes	953.00	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	484.08	484.08	N/A	N/A
07:45-08:00	B	205.53	205.53	N/A	N/A
07:45-08:00	C	717.47	717.47	N/A	N/A
08:00-08:15	A	578.04	578.04	N/A	N/A
08:00-08:15	B	245.42	245.42	N/A	N/A
08:00-08:15	C	856.73	856.73	N/A	N/A
08:15-08:30	A	707.96	707.96	N/A	N/A
08:15-08:30	B	300.58	300.58	N/A	N/A
08:15-08:30	C	1049.27	1049.27	N/A	N/A
08:30-08:45	A	707.96	707.96	N/A	N/A
08:30-08:45	B	300.58	300.58	N/A	N/A
08:30-08:45	C	1049.27	1049.27	N/A	N/A
08:45-09:00	A	578.04	578.04	N/A	N/A
08:45-09:00	B	245.42	245.42	N/A	N/A
08:45-09:00	C	856.73	856.73	N/A	N/A
09:00-09:15	A	484.08	484.08	N/A	N/A
09:00-09:15	B	205.53	205.53	N/A	N/A
09:00-09:15	C	717.47	717.47	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	493.00
	B	225.00	0.00	48.00
	C	927.00	26.00	0.00

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

		To		
		A	B	C
From	A	0.00	0.23	0.77
	B	0.82	0.00	0.18
	C	0.97	0.03	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

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	0.25	0.03	0.32	A	590.03	885.04	23.18	0.03	0.26	23.18	0.03	0.858	2913.181
B	0.24	0.06	0.31	A	250.51	375.76	21.35	0.06	0.24	21.35	0.06	0.608	1594.519
C	0.48	0.05	0.90	A	874.49	1311.73	59.28	0.05	0.66	59.28	0.05	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	484.08	121.02	483.28	864.91	19.52	0.00	2896.43	2860.97	0.167	0.00	0.20
B	205.53	51.38	204.83	132.26	370.54	0.00	1369.36	261.63	0.150	0.00	0.18
C	717.47	179.37	715.62	406.56	168.81	0.00	2266.46	2230.34	0.317	0.00	0.46

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	578.04	144.51	577.85	1034.86	23.36	0.00	2893.14	2860.97	0.200	0.20	0.25
B	245.42	61.36	245.22	158.16	443.05	0.00	1325.31	261.63	0.185	0.18	0.23
C	856.73	214.18	856.11	486.16	202.10	0.00	2240.77	2230.34	0.382	0.46	0.62

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	707.96	176.99	707.66	1266.99	28.60	0.00	2888.64	2860.97	0.245	0.25	0.32
B	300.58	75.14	300.24	193.68	542.57	0.00	1264.83	261.63	0.238	0.23	0.31
C	1049.27	262.32	1048.13	595.36	247.45	0.00	2205.78	2230.34	0.476	0.62	0.90

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	707.96	176.99	707.95	1268.36	28.63	0.00	2888.62	2860.97	0.245	0.32	0.32
B	300.58	75.14	300.58	193.78	542.80	0.00	1264.89	261.63	0.238	0.31	0.31

B	300.00	75.14	300.00	155.16	342.00	0.00	1204.00	201.00	0.200	0.31	0.31
C	1049.27	262.32	1049.26	595.65	247.73	0.00	2205.57	2230.34	0.476	0.90	0.90

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	578.04	144.51	578.34	1037.00	23.40	0.00	2893.10	2860.97	0.200	0.32	0.25
B	245.42	61.36	245.75	158.32	443.42	0.00	1325.08	261.63	0.185	0.31	0.23
C	856.73	214.18	857.86	486.63	202.54	0.00	2240.43	2230.34	0.382	0.90	0.62

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	484.08	121.02	484.28	868.06	19.59	0.00	2896.37	2860.97	0.167	0.25	0.20
B	205.53	51.38	205.73	132.57	371.31	0.00	1368.90	261.63	0.150	0.23	0.18
C	717.47	179.37	718.10	407.48	169.56	0.00	2265.88	2230.34	0.317	0.62	0.47

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	2.97	0.20	0.025	A	A
B	2.59	0.17	0.051	A	A
C	6.81	0.45	0.039	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	3.71	0.25	0.026	A	A
B	3.35	0.22	0.056	A	A
C	9.11	0.61	0.043	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	4.82	0.32	0.027	A	A
B	4.58	0.31	0.062	A	A
C	13.26	0.88	0.052	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	4.86	0.32	0.027	A	A
B	4.66	0.31	0.062	A	A
C	13.55	0.90	0.052	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	3.79	0.25	0.026	A	A
B	3.48	0.23	0.056	A	A
C	9.49	0.63	0.043	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	3.79	0.25	0.026	A	A
B	3.48	0.23	0.056	A	A
C	9.49	0.63	0.043	A	A

Arm	(min)	min/min)	(min)	Service	Service
A	3.04	0.20	0.025	A	A
B	2.70	0.18	0.052	A	A
C	7.07	0.47	0.039	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 (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	484.08	2896.43	0.167	0.00	0.00	0.20	2.97	(0.00)	0.025
07:45-08:00	B	205.53	1369.36	0.150	0.00	0.00	0.18	2.59	(0.00)	0.051
07:45-08:00	C	717.47	2266.46	0.317	0.00	0.00	0.46	6.81	(0.00)	0.039
08:00-08:15	A	578.04	2893.14	0.200	0.00	0.20	0.25	3.71	(0.00)	0.026
08:00-08:15	B	245.42	1325.31	0.185	0.00	0.18	0.23	3.35	(0.00)	0.056
08:00-08:15	C	856.73	2240.77	0.382	0.00	0.46	0.62	9.11	(0.00)	0.043
08:15-08:30	A	707.96	2888.64	0.245	0.00	0.25	0.32	4.82	(0.00)	0.027
08:15-08:30	B	300.58	1264.83	0.238	0.00	0.23	0.31	4.58	(0.00)	0.062
08:15-08:30	C	1049.27	2205.78	0.476	0.00	0.62	0.90	13.26	(0.00)	0.052
08:30-08:45	A	707.96	2888.62	0.245	0.00	0.32	0.32	4.86	(0.00)	0.027
08:30-08:45	B	300.58	1264.69	0.238	0.00	0.31	0.31	4.66	(0.00)	0.062
08:30-08:45	C	1049.27	2205.57	0.476	0.00	0.90	0.90	13.55	(0.00)	0.052
08:45-09:00	A	578.04	2893.10	0.200	0.00	0.32	0.25	3.79	(0.00)	0.026
08:45-09:00	B	245.42	1325.08	0.185	0.00	0.31	0.23	3.48	(0.00)	0.056
08:45-09:00	C	856.73	2240.43	0.382	0.00	0.90	0.62	9.49	(0.00)	0.043
09:00-09:15	A	484.08	2896.37	0.167	0.00	0.25	0.20	3.04	(0.00)	0.025
09:00-09:15	B	205.53	1368.90	0.150	0.00	0.23	0.18	2.70	(0.00)	0.052
09:00-09:15	C	717.47	2265.88	0.317	0.00	0.62	0.47	7.07	(0.00)	0.039

ARCADY 7
Version: 7.0.1.130 [12 March 2010] © Copyright Transport Research Laboratory 2009
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File: Q:\14-033 - Gavray Drive, Bicester\Trans\Arcady\Revision A\2014 Seel Way - A41 East - Grav Rd N - A41 W - B4100.arc7
Report generation date: 10/04/2015 10:35:19

- » A1 - (Default Analysis Set) - D13 - 2020 PCU + CD + DEV300 -AM Peak, AM
- » A1 - (Default Analysis Set) - D14 - 2020 PCU + CD + DEV300 - 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 + DEV300 - PM Peak								
Arm A					1.62	0.12	0.62	A
Arm B					5.80	0.25	0.86	B
Arm C					0.39	0.20	0.28	B
Arm D					82.70	2.45	1.09	F
Arm E					3.23	0.26	0.77	C
(Default Analysis Set) - 2020 PCU + CD + DEV300 -AM Peak								
Arm A	7.81	0.40	0.90	C				
Arm B	5.60	0.26	0.86	C				
Arm C	0.91	0.33	0.48	C				
Arm D	2.34	0.12	0.70	A				
Arm E	0.77	0.08	0.44	A				

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

2014 PCU -AM Peak - AM runs from 07:45:00 to 09:15:00
 2014 PCU- PM Peak - PM runs from 16:45:00 to 18:15:00
 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

[No text visible in this block]

PCU 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) - D13 - 2020 PCU + CD + DEV300 -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 + DEV300 - AM Peak, AM	2020 PCU + CD + DEV300 - 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 Percentages	2.00				Yes	Yes
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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	1136.00	100.000	N/A
B	ONE HOUR	Yes	1210.00	100.000	N/A
C	ONE HOUR	Yes	153.00	100.000	N/A
D	ONE HOUR	Yes	1097.00	100.000	N/A
E	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)
07:45-08:00	A	855.24	855.24	N/A	N/A
07:45-08:00	B	910.95	910.95	N/A	N/A
07:45-08:00	C	115.19	115.19	N/A	N/A
07:45-08:00	D	825.88	825.88	N/A	N/A
07:45-08:00	E	379.44	379.44	N/A	N/A
08:00-08:15	A	1021.24	1021.24	N/A	N/A
08:00-08:15	B	1087.77	1087.77	N/A	N/A
08:00-08:15	C	137.54	137.54	N/A	N/A
08:00-08:15	D	986.18	986.18	N/A	N/A
08:00-08:15	E	453.09	453.09	N/A	N/A
08:15-08:30	A	1250.76	1250.76	N/A	N/A
08:15-08:30	B	1332.23	1332.23	N/A	N/A
08:15-08:30	C	168.46	168.46	N/A	N/A
08:15-08:30	D	1207.82	1207.82	N/A	N/A
08:15-08:30	E	554.91	554.91	N/A	N/A
08:30-08:45	A	1250.76	1250.76	N/A	N/A
08:30-08:45	B	1332.23	1332.23	N/A	N/A
08:30-08:45	C	168.46	168.46	N/A	N/A
08:30-08:45	D	1207.82	1207.82	N/A	N/A
08:30-08:45	E	554.91	554.91	N/A	N/A
08:45-09:00	A	1021.24	1021.24	N/A	N/A
08:45-09:00	B	1087.77	1087.77	N/A	N/A
08:45-09:00	C	137.54	137.54	N/A	N/A
08:45-09:00	D	986.18	986.18	N/A	N/A
08:45-09:00	E	453.09	453.09	N/A	N/A
09:00-09:15	A	855.24	855.24	N/A	N/A
09:00-09:15	B	910.95	910.95	N/A	N/A
09:00-09:15	C	115.19	115.19	N/A	N/A
09:00-09:15	D	825.88	825.88	N/A	N/A
09:00-09:15	E	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	D	E
From	A	0.00	368.00	41.00	545.00	182.00
	B	210.00	0.00	33.00	705.00	262.00
	C	19.00	13.00	0.00	97.00	24.00
	D	345.00	639.00	59.00	0.00	54.00
	E	66.00	220.00	29.00	189.00	0.00

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

		To				
		A	B	C	D	E
From	A	0.00	0.32	0.04	0.48	0.16
	B	0.17	0.00	0.03	0.58	0.22
	C	0.12	0.08	0.00	0.63	0.16
	D	0.31	0.58	0.05	0.00	0.05
	E	0.13	0.44	0.06	0.38	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	0.90	0.40	7.81	C	1042.41	1563.62	298.32	0.19	3.31	298.34	0.19	0.570	2113.640
B	0.86	0.26	5.60	C	1110.32	1665.48	239.31	0.14	2.66	239.33	0.14	0.588	2230.844
C	0.48	0.33	0.91	C	140.40	210.59	41.38	0.20	0.46	41.38	0.20	0.472	1435.972
D	0.70	0.12	2.34	A	1006.63	1509.94	128.16	0.08	1.42	128.17	0.08	0.568	2160.167
E	0.44	0.08	0.77	A	462.48	693.72	46.81	0.07	0.52	46.81	0.07	0.554	2054.761

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	855.24	213.81	850.83	479.83	861.79	0.00	1622.60	1000.43	0.527	0.00	1.10
B	910.95	227.74	906.75	929.61	783.01	0.00	1770.26	1526.82	0.515	0.00	1.05
C	115.19	28.80	114.40	121.44	1568.32	0.00	695.22	255.89	0.166	0.00	0.20
D	825.88	206.47	822.70	1150.82	531.89	0.00	1858.05	1677.63	0.444	0.00	0.79
E	379.44	94.86	378.11	391.09	963.50	0.00	1521.06	994.81	0.249	0.00	0.33

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	1021.24	255.31	1017.74	574.18	1031.37	0.00	1525.97	1000.43	0.669	1.10	1.98
B	1087.77	271.94	1084.75	1112.37	936.74	0.00	1679.83	1526.82	0.648	1.05	1.80
C	137.54	34.39	137.01	145.31	1876.19	0.00	549.81	255.89	0.250	0.20	0.33
D	986.18	246.55	984.56	1376.86	636.34	0.00	1798.72	1677.63	0.548	0.79	1.20
E	453.09	113.27	452.54	467.89	1153.01	0.00	1416.09	994.81	0.320	0.33	0.47

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	1250.76	312.69	1230.24	700.49	1261.09	0.00	1395.08	1000.43	0.897	1.98	7.11
B	1332.23	333.06	1318.54	1355.38	1135.95	0.00	1562.66	1526.82	0.853	1.80	5.23
C	168.46	42.11	166.39	176.95	2277.54	0.00	360.25	255.89	0.468	0.33	0.85
D	1207.82	301.95	1203.45	1671.59	772.34	0.00	1721.47	1677.63	0.702	1.20	2.29
E	554.91	138.73	553.73	567.94	1407.85	0.00	1274.93	994.81	0.435	0.47	0.76

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	1250.76	312.69	1247.95	704.30	1264.92	0.00	1392.90	1000.43	0.898	7.11	7.81
B	1332.23	333.06	1330.74	1364.22	1148.64	0.00	1555.19	1526.82	0.857	5.23	5.60
C	168.46	42.11	168.22	178.21	2301.17	0.00	349.08	255.89	0.483	0.85	0.91
D	1207.82	301.95	1207.64	1688.79	780.60	0.00	1716.78	1677.63	0.704	2.29	2.34
E	554.91	138.73	554.89	573.91	1414.33	0.00	1271.33	994.81	0.436	0.76	0.77

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	1021.24	255.31	1044.14	579.72	1036.94	0.00	1522.80	1000.43	0.671	7.81	2.09
B	1087.77	271.94	1102.54	1125.42	955.66	0.00	1668.71	1526.82	0.652	5.60	1.91
C	137.54	34.39	139.76	147.17	1911.03	0.00	533.35	255.89	0.258	0.91	0.35
D	986.18	246.55	990.58	1402.27	648.52	0.00	1791.80	1677.63	0.550	2.34	1.24
E	453.09	113.27	454.26	476.70	1162.40	0.00	1410.88	994.81	0.321	0.77	0.48

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	855.24	213.81	859.06	483.09	866.66	0.00	1619.82	1000.43	0.528	2.09	1.13
B	910.95	227.74	914.29	936.07	789.65	0.00	1766.36	1526.82	0.516	1.91	1.08
C	115.19	28.80	115.79	122.32	1581.62	0.00	688.94	255.89	0.167	0.35	0.20
D	825.88	206.47	827.60	1160.75	536.66	0.00	1855.34	1677.63	0.445	1.24	0.81