

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
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Filename: Proposed Railway View Road Min Rbt July 2014.arc8  
 Path: A:\Project\_008\_02 Clitheroe DTPC\5 July 2014\ARCADY  
 Report generation date: 09/07/2014 10:06:05

## Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - 2017 Base plus Scenario 1 Development						
Arm A	2.45	16.59	0.72	9.77	56.60	0.94
Arm B	3.58	23.99	0.79	3.30	22.75	0.78
Arm C	2.59	16.79	0.73	12.50	63.79	0.96
A1 - 2017 Base plus Scenario 3 Development						
Arm A	2.23	15.48	0.70	9.57	55.86	0.93
Arm B	3.83	25.22	0.80	3.11	21.64	0.77
Arm C	2.51	16.41	0.72	12.10	61.89	0.95
A1 - 2019 Base plus Scenario 3 Development						
Arm A	2.47	16.70	0.72	12.37	69.28	0.96
Arm B	4.42	28.61	0.83	3.55	24.21	0.79
Arm C	2.80	17.84	0.74	15.98	77.83	0.98

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

"D1 - 2017 Base plus Scenario 1 Development, AM" model duration: 07:45 - 09:15  
 "D2 - 2017 Base plus Scenario 1 Development, PM" model duration: 16:45 - 18:15  
 "D3 - 2017 Base plus Scenario 3 Development, AM" model duration: 07:45 - 09:15  
 "D4 - 2017 Base plus Scenario 3 Development, PM" model duration: 16:45 - 18:15  
 "D5 - 2019 Base plus Scenario 3 Development, AM" model duration: 07:45 - 09:15  
 "D6 - 2019 Base plus Scenario 3 Development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 09/07/2014 10:06:01

## File summary

### File Description

Title	Clitheroe
Location	
Site Number	
Date	06/10/2012
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Description	

## Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

## Units

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

# (Default Analysis Set) - 2017 Base plus Scenario 1 Development, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base plus Scenario 1 Development, AM	2017 Base plus Scenario 1 Development	AM		ONE HOUR	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	19.13	C

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	496.00	100.000
B	ONE HOUR	✓	510.00	100.000
C	ONE HOUR	✓	519.00	100.000

## 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	373.41	373.41		
07:45-08:00	B	383.95	383.95		
07:45-08:00	C	390.73	390.73		
08:00-08:15	A	445.89	445.89		
08:00-08:15	B	458.48	458.48		
08:00-08:15	C	466.57	466.57		
08:15-08:30	A	546.11	546.11		
08:15-08:30	B	561.52	561.52		
08:15-08:30	C	571.43	571.43		
08:30-08:45	A	546.11	546.11		
08:30-08:45	B	561.52	561.52		
08:30-08:45	C	571.43	571.43		
08:45-09:00	A	445.89	445.89		
08:45-09:00	B	458.48	458.48		
08:45-09:00	C	466.57	466.57		
09:00-09:15	A	373.41	373.41		
09:00-09:15	B	383.95	383.95		
09:00-09:15	C	390.73	390.73		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	154.000	342.000
	B	115.000	0.000	395.000
	C	302.000	217.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.31	0.69
	B	0.23	0.00	0.77
	C	0.58	0.42	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.72	16.59	2.45	C	455.14	682.71	135.68	11.92	1.51	135.71	11.93
B	0.79	23.99	3.58	C	467.98	701.98	178.01	15.22	1.98	178.06	15.22
C	0.73	16.79	2.59	C	476.24	714.37	144.56	12.14	1.61	144.59	12.14

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	373.41	93.35	369.95	310.87	161.81	0.00	796.81	723.38	0.469	0.00	0.87	8.367	A
B	383.95	95.99	379.97	276.67	255.09	0.00	761.54	655.82	0.504	0.00	1.00	9.342	A
C	390.73	97.68	387.00	549.38	85.68	0.00	801.71	775.69	0.487	0.00	0.93	8.606	A

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	445.89	111.47	444.19	373.30	194.32	0.00	782.12	723.38	0.570	0.87	1.29	10.597	B
B	458.48	114.62	456.15	332.24	306.28	0.00	739.33	655.82	0.620	1.00	1.58	12.604	B
C	466.57	116.64	464.77	659.57	102.86	0.00	794.53	775.69	0.587	0.93	1.38	10.854	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	546.11	136.53	541.76	454.85	237.03	0.00	762.82	723.38	0.716	1.29	2.38	15.968	C
B	561.52	140.38	554.25	405.24	373.55	0.00	710.14	655.82	0.791	1.58	3.40	22.102	C
C	571.43	142.86	566.91	802.82	124.98	0.00	785.27	775.69	0.728	1.38	2.51	16.147	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	546.11	136.53	545.82	458.77	238.79	0.00	762.03	723.38	0.717	2.38	2.45	16.591	C
B	561.52	140.38	560.77	408.26	376.35	0.00	708.93	655.82	0.792	3.40	3.58	23.993	C
C	571.43	142.86	571.12	810.67	126.45	0.00	784.66	775.69	0.728	2.51	2.59	16.792	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	445.89	111.47	450.23	379.19	196.96	0.00	780.92	723.38	0.571	2.45	1.37	11.025	B
B	458.48	114.62	466.01	336.75	310.44	0.00	737.52	655.82	0.622	3.58	1.70	13.603	B
C	466.57	116.64	471.07	671.37	105.08	0.00	793.60	775.69	0.588	2.59	1.47	11.313	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	373.41	93.35	375.28	315.69	164.20	0.00	795.73	723.38	0.469	1.37	0.90	8.601	A
B	383.95	95.99	386.59	280.72	258.76	0.00	759.94	655.82	0.505	1.70	1.04	9.709	A
C	390.73	97.68	392.72	558.18	87.17	0.00	801.09	775.69	0.488	1.47	0.97	8.859	A

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	12.33	0.82	8.367	A	A
B	14.07	0.94	9.342	A	A
C	13.25	0.88	8.606	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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.48	1.23	10.597	B	B
B	22.29	1.49	12.604	B	B
C	19.76	1.32	10.854	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	32.71	2.18	15.968	C	B
B	44.87	2.99	22.102	C	C
C	34.53	2.30	16.147	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.33	2.42	16.591	C	B
B	52.63	3.51	23.993	C	C
C	38.43	2.56	16.792	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	21.77	1.45	11.025	B	B
B	27.73	1.85	13.603	B	B
C	23.41	1.56	11.313	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.06	0.94	8.601	A	A
B	16.42	1.09	9.709	A	A
C	15.18	1.01	8.859	A	A

## (Default Analysis Set) - 2017 Base plus Scenario 1 Development, PM

**Data Errors and Warnings**

*No errors or warnings*

**Analysis Set Details**

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

**Demand Set Details**

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base plus Scenario 1 Development, PM	2017 Base plus Scenario 1 Development	PM		ONE HOUR	16:45	18:15	90	15				✓		

## Junction Network

**Junctions**

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	49.91	E

**Junction Network Options**

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

## Arms

**Arms**

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	603.00	100.000
B	ONE HOUR	✓	495.00	100.000
C	ONE HOUR	✓	678.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	453.97	453.97		
16:45-17:00	B	372.66	372.66		
16:45-17:00	C	510.43	510.43		
17:00-17:15	A	542.08	542.08		
17:00-17:15	B	444.99	444.99		
17:00-17:15	C	609.51	609.51		
17:15-17:30	A	663.92	663.92		
17:15-17:30	B	545.01	545.01		
17:15-17:30	C	746.49	746.49		
17:30-17:45	A	663.92	663.92		
17:30-17:45	B	545.01	545.01		
17:30-17:45	C	746.49	746.49		
17:45-18:00	A	542.08	542.08		
17:45-18:00	B	444.99	444.99		
17:45-18:00	C	609.51	609.51		
18:00-18:15	A	453.97	453.97		
18:00-18:15	B	372.66	372.66		
18:00-18:15	C	510.43	510.43		

## Turning Proportions

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

		To		
		A	B	C
From	A	0.000	240.000	363.000
	B	125.000	0.000	370.000
	C	352.000	326.000	0.000

### Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.40	0.60
	B	0.25	0.00	0.75
	C	0.52	0.48	0.00

## Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.94	56.60	9.77	F	553.32	829.99	367.71	26.58	4.09	367.81	26.59
B	0.78	22.75	3.30	C	454.22	681.33	167.27	14.73	1.86	167.31	14.73
C	0.96	63.79	12.50	F	622.14	933.22	455.71	29.30	5.06	455.84	29.31

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.97	113.49	448.23	354.60	242.15	0.00	760.51	703.76	0.597	0.00	1.44	11.332	B
B	372.66	93.17	368.84	420.55	269.83	0.00	755.14	688.41	0.494	0.00	0.95	9.231	A
C	510.43	127.61	503.61	545.53	93.14	0.00	798.59	764.83	0.639	0.00	1.71	11.945	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	542.08	135.52	537.51	425.37	290.39	0.00	738.71	703.76	0.734	1.44	2.58	17.489	C
B	444.99	111.25	442.81	504.33	323.58	0.00	731.82	688.41	0.608	0.95	1.50	12.359	B
C	609.51	152.38	603.94	654.56	111.82	0.00	790.78	764.83	0.771	1.71	3.10	18.703	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	663.92	165.98	642.37	509.28	345.71	0.00	713.72	703.76	0.930	2.58	7.97	41.431	E
B	545.01	136.25	538.56	601.38	386.70	0.00	704.44	688.41	0.774	1.50	3.11	20.911	C
C	746.49	186.62	718.99	789.26	136.00	0.00	780.66	764.83	0.956	3.10	9.97	45.156	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	663.92	165.98	656.71	519.75	354.08	0.00	709.94	703.76	0.935	7.97	9.77	56.603	F
B	545.01	136.25	544.24	615.46	395.34	0.00	700.70	688.41	0.778	3.11	3.30	22.754	C
C	746.49	186.62	736.40	802.14	137.44	0.00	780.06	764.83	0.957	9.97	12.50	63.795	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	542.08	135.52	568.65	448.72	309.96	0.00	729.87	703.76	0.743	9.77	3.12	25.245	D
B	444.99	111.25	451.59	536.28	342.32	0.00	723.69	688.41	0.615	3.30	1.65	13.531	B
C	609.51	152.38	644.63	679.88	114.04	0.00	789.85	764.83	0.772	12.50	3.72	29.146	D

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.97	113.49	460.29	363.66	249.04	0.00	757.40	703.76	0.599	3.12	1.54	12.360	B
B	372.66	93.17	375.27	432.24	277.09	0.00	751.99	688.41	0.496	1.65	1.00	9.622	A
C	510.43	127.61	517.94	557.59	94.76	0.00	797.91	764.83	0.640	3.72	1.84	13.182	B

## Queueing Delay Results for each time segment

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	19.93	1.33	11.332	B	B
B	13.51	0.90	9.231	A	A
C	23.50	1.57	11.945	B	B

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	35.28	2.35	17.489	C	B
B	21.26	1.42	12.359	B	B
C	41.96	2.80	18.703	C	B

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	92.28	6.15	41.431	E	D
B	41.52	2.77	20.911	C	C
C	112.12	7.47	45.156	E	D

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	134.67	8.98	56.603	F	E
B	48.43	3.23	22.754	C	C
C	170.42	11.36	63.795	F	E

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	60.68	4.05	25.245	D	C
B	26.76	1.78	13.531	B	B
C	77.84	5.19	29.146	D	C

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	24.88	1.66	12.360	B	B
B	15.79	1.05	9.622	A	A
C	29.86	1.99	13.182	B	B

# (Default Analysis Set) - 2017 Base plus Scenario 3 Development, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base plus Scenario 3 Development, AM	2017 Base plus Scenario 3 Development	AM		ONE HOUR	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	19.13	C

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	483.00	100.000
B	ONE HOUR	✓	520.00	100.000
C	ONE HOUR	✓	514.00	100.000

# 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	363.63	363.63		
07:45-08:00	B	391.48	391.48		
07:45-08:00	C	386.97	386.97		
08:00-08:15	A	434.21	434.21		
08:00-08:15	B	467.47	467.47		
08:00-08:15	C	462.08	462.08		
08:15-08:30	A	531.79	531.79		
08:15-08:30	B	572.53	572.53		
08:15-08:30	C	565.92	565.92		
08:30-08:45	A	531.79	531.79		
08:30-08:45	B	572.53	572.53		
08:30-08:45	C	565.92	565.92		
08:45-09:00	A	434.21	434.21		
08:45-09:00	B	467.47	467.47		
08:45-09:00	C	462.08	462.08		
09:00-09:15	A	363.63	363.63		
09:00-09:15	B	391.48	391.48		
09:00-09:15	C	386.97	386.97		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	148.000	335.000
	B	116.000	0.000	404.000
	C	300.000	214.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.31	0.69
	B	0.22	0.00	0.78
	C	0.58	0.42	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.70	15.48	2.23	C	443.21	664.81	126.01	11.37	1.40	126.03	11.37
B	0.80	25.22	3.83	D	477.16	715.74	187.41	15.71	2.08	187.46	15.71
C	0.72	16.41	2.51	C	471.66	707.48	140.95	11.95	1.57	140.98	11.96

### Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	363.63	90.91	360.33	310.13	159.58	0.00	797.81	723.85	0.456	0.00	0.82	8.169	A
B	391.48	97.87	387.37	270.00	249.92	0.00	763.78	654.40	0.513	0.00	1.03	9.465	A
C	386.97	96.74	383.30	550.87	86.41	0.00	801.41	776.49	0.483	0.00	0.92	8.538	A

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	434.21	108.55	432.65	372.41	191.65	0.00	783.32	723.85	0.554	0.82	1.21	10.218	B
B	467.47	116.87	465.02	324.22	300.07	0.00	742.02	654.40	0.630	1.03	1.64	12.878	B
C	462.08	115.52	460.32	661.36	103.73	0.00	794.16	776.49	0.582	0.92	1.35	10.725	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	531.79	132.95	527.95	453.73	233.81	0.00	764.27	723.85	0.696	1.21	2.17	14.987	B
B	572.53	143.13	564.64	395.59	366.18	0.00	713.34	654.40	0.803	1.64	3.61	23.046	C
C	565.92	141.48	561.59	804.86	125.96	0.00	784.86	776.49	0.721	1.35	2.44	15.811	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	531.79	132.95	531.56	457.66	235.50	0.00	763.51	723.85	0.697	2.17	2.23	15.477	C
B	572.53	143.13	571.67	398.38	368.68	0.00	712.26	654.40	0.804	3.61	3.83	25.222	D
C	565.92	141.48	565.63	812.82	127.53	0.00	784.21	776.49	0.722	2.44	2.51	16.411	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	434.21	108.55	438.02	378.32	194.18	0.00	782.18	723.85	0.555	2.23	1.28	10.574	B
B	467.47	116.87	475.68	328.39	303.80	0.00	740.40	654.40	0.631	3.83	1.78	13.990	B
C	462.08	115.52	466.39	673.37	106.11	0.00	793.17	776.49	0.583	2.51	1.43	11.158	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	363.63	90.91	365.33	314.94	161.91	0.00	796.76	723.85	0.456	1.28	0.85	8.376	A
B	391.48	97.87	394.28	273.86	253.39	0.00	762.27	654.40	0.514	1.78	1.08	9.857	A
C	386.97	96.74	388.89	559.71	87.95	0.00	800.76	776.49	0.483	1.43	0.95	8.782	A

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.74	0.78	8.169	A	A
B	14.52	0.97	9.465	A	A
C	13.02	0.87	8.538	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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	17.40	1.16	10.218	B	B
B	23.17	1.54	12.878	B	B
C	19.35	1.29	10.725	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	30.10	2.01	14.987	B	B
B	47.44	3.16	23.046	C	C
C	33.57	2.24	15.811	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	33.14	2.21	15.477	C	B
B	56.17	3.74	25.222	D	C
C	37.24	2.48	16.411	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	20.31	1.35	10.574	B	B
B	29.10	1.94	13.990	B	B
C	22.86	1.52	11.158	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.32	0.89	8.376	A	A
B	17.01	1.13	9.857	A	A
C	14.90	0.99	8.782	A	A

## (Default Analysis Set) - 2017 Base plus Scenario 3 Development, PM

**Data Errors and Warnings**

*No errors or warnings*

**Analysis Set Details**

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base plus Scenario 3 Development, PM	2017 Base plus Scenario 3 Development	PM		ONE HOUR	16:45	18:15	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	48.70	E

### Junction Network Options

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

## Arms

### Arms

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

### 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

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Entered slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	599.00	100.000
B	ONE HOUR	✓	489.00	100.000
C	ONE HOUR	✓	678.00	100.000

# 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	450.96	450.96		
16:45-17:00	B	368.14	368.14		
16:45-17:00	C	510.43	510.43		
17:00-17:15	A	538.49	538.49		
17:00-17:15	B	439.60	439.60		
17:00-17:15	C	609.51	609.51		
17:15-17:30	A	659.51	659.51		
17:15-17:30	B	538.40	538.40		
17:15-17:30	C	746.49	746.49		
17:30-17:45	A	659.51	659.51		
17:30-17:45	B	538.40	538.40		
17:30-17:45	C	746.49	746.49		
17:45-18:00	A	538.49	538.49		
17:45-18:00	B	439.60	439.60		
17:45-18:00	C	609.51	609.51		
18:00-18:15	A	450.96	450.96		
18:00-18:15	B	368.14	368.14		
18:00-18:15	C	510.43	510.43		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	240.000	359.000
	B	119.000	0.000	370.000
	C	346.000	332.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.40	0.60
	B	0.24	0.00	0.76
	C	0.51	0.49	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.93	55.86	9.57	F	549.65	824.48	361.79	26.33	4.02	361.88	26.34
B	0.77	21.64	3.11	C	448.71	673.07	159.91	14.25	1.78	159.94	14.26
C	0.95	61.89	12.10	F	622.14	933.22	445.62	28.65	4.95	445.75	28.66

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	450.96	112.74	445.27	345.71	246.62	0.00	758.49	700.16	0.595	0.00	1.42	11.300	B
B	368.14	92.04	364.43	425.03	266.87	0.00	756.43	690.16	0.487	0.00	0.93	9.101	A
C	510.43	127.61	503.65	542.61	88.68	0.00	800.46	767.30	0.638	0.00	1.70	11.876	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	538.49	134.62	533.98	414.73	295.78	0.00	736.28	700.16	0.731	1.42	2.55	17.400	C
B	439.60	109.90	437.52	509.73	320.03	0.00	733.36	690.16	0.599	0.93	1.45	12.079	B
C	609.51	152.38	604.03	651.08	106.47	0.00	793.02	767.30	0.769	1.70	3.07	18.506	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	659.51	164.88	638.38	496.90	352.47	0.00	710.67	700.16	0.928	2.55	7.83	41.078	E
B	538.40	134.60	532.42	608.25	382.60	0.00	706.22	690.16	0.762	1.45	2.94	20.037	C
C	746.49	186.62	719.81	785.46	129.57	0.00	783.35	767.30	0.953	3.07	9.74	44.246	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	659.51	164.88	652.56	506.99	360.91	0.00	706.85	700.16	0.933	7.83	9.57	55.863	F
B	538.40	134.60	537.73	622.37	391.10	0.00	702.53	690.16	0.766	2.94	3.11	21.639	C
C	746.49	186.62	737.04	797.98	130.86	0.00	782.81	767.30	0.954	9.74	12.10	61.893	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	538.49	134.62	564.45	436.73	314.99	0.00	727.60	700.16	0.740	9.57	3.08	24.865	C
B	439.60	109.90	445.69	541.15	338.29	0.00	725.44	690.16	0.606	3.11	1.59	13.132	B
C	609.51	152.38	643.27	675.52	108.46	0.00	792.18	767.30	0.769	12.10	3.66	28.221	D

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	450.96	112.74	457.16	354.41	253.53	0.00	755.37	700.16	0.597	3.08	1.53	12.311	B
B	368.14	92.04	370.61	436.70	273.99	0.00	753.34	690.16	0.489	1.59	0.97	9.465	A
C	510.43	127.61	517.76	554.41	90.19	0.00	799.83	767.30	0.638	3.66	1.83	13.075	B

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	19.74	1.32	11.300	B	B
B	13.17	0.88	9.101	A	A
C	23.38	1.56	11.876	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	34.90	2.33	17.400	C	B
B	20.57	1.37	12.079	B	B
C	41.57	2.77	18.506	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	90.96	6.06	41.078	E	D
B	39.51	2.63	20.037	C	C
C	110.02	7.33	44.246	E	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	132.15	8.81	55.863	F	E
B	45.70	3.05	21.639	C	C
C	165.59	11.04	61.893	F	E

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	59.42	3.96	24.865	C	C
B	25.63	1.71	13.132	B	B
C	75.46	5.03	28.221	D	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	24.61	1.64	12.311	B	B
B	15.33	1.02	9.465	A	A
C	29.61	1.97	13.075	B	B

## (Default Analysis Set) - 2019 Base plus Scenario 3 Development, AM

**Data Errors and Warnings**

*No errors or warnings*

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 Base plus Scenario 3 Development, AM	2019 Base plus Scenario 3 Development	AM		ONE HOUR	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	21.16	C

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	496.00	100.000
B	ONE HOUR	✓	532.00	100.000
C	ONE HOUR	✓	529.00	100.000

## 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	373.41	373.41		
07:45-08:00	B	400.52	400.52		
07:45-08:00	C	398.26	398.26		
08:00-08:15	A	445.89	445.89		
08:00-08:15	B	478.26	478.26		
08:00-08:15	C	475.56	475.56		
08:15-08:30	A	546.11	546.11		
08:15-08:30	B	585.74	585.74		
08:15-08:30	C	582.44	582.44		
08:30-08:45	A	546.11	546.11		
08:30-08:45	B	585.74	585.74		
08:30-08:45	C	582.44	582.44		
08:45-09:00	A	445.89	445.89		
08:45-09:00	B	478.26	478.26		
08:45-09:00	C	475.56	475.56		
09:00-09:15	A	373.41	373.41		
09:00-09:15	B	400.52	400.52		
09:00-09:15	C	398.26	398.26		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	151.000	345.000
	B	119.000	0.000	413.000
	C	309.000	220.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.30	0.70
	B	0.22	0.00	0.78
	C	0.58	0.42	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.72	16.70	2.47	C	455.14	682.71	136.30	11.98	1.51	136.33	11.98
B	0.83	28.61	4.42	D	488.17	732.26	207.74	17.02	2.31	207.79	17.03
C	0.74	17.84	2.80	C	485.42	728.13	153.48	12.65	1.71	153.52	12.65

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	373.41	93.35	369.94	318.98	164.01	0.00	795.81	724.03	0.469	0.00	0.87	8.387	A
B	400.52	100.13	396.17	276.63	257.32	0.00	760.57	653.73	0.527	0.00	1.09	9.767	A
C	398.26	99.56	394.37	564.87	88.62	0.00	800.49	776.38	0.498	0.00	0.97	8.783	A

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	445.89	111.47	444.18	383.02	196.97	0.00	780.92	724.03	0.571	0.87	1.30	10.633	B
B	478.26	119.56	475.53	332.20	308.96	0.00	738.17	653.72	0.648	1.09	1.77	13.560	B
C	475.56	118.89	473.63	678.12	106.37	0.00	793.06	776.38	0.600	0.97	1.45	11.198	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	546.11	136.53	541.73	466.22	240.14	0.00	761.41	724.03	0.717	1.30	2.39	16.063	C
B	585.74	146.44	576.36	405.06	376.80	0.00	708.73	653.72	0.826	1.77	4.11	25.524	D
C	582.44	145.61	577.44	824.24	128.92	0.00	783.62	776.38	0.743	1.45	2.71	17.044	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	546.11	136.53	545.81	470.74	242.07	0.00	760.55	724.03	0.718	2.39	2.47	16.704	C
B	585.74	146.44	584.53	408.23	379.65	0.00	707.50	653.72	0.828	4.11	4.42	28.610	D
C	582.44	145.61	582.06	833.43	130.75	0.00	782.86	776.38	0.744	2.71	2.80	17.839	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	445.89	111.47	450.27	389.91	199.86	0.00	779.62	724.03	0.572	2.47	1.37	11.072	B
B	478.26	119.56	488.20	336.93	313.19	0.00	736.33	653.72	0.650	4.42	1.93	15.039	C
C	475.56	118.89	480.56	692.19	109.20	0.00	791.87	776.38	0.601	2.80	1.55	11.744	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	373.41	93.35	375.30	324.18	166.52	0.00	794.68	724.03	0.470	1.37	0.90	8.622	A
B	400.52	100.13	403.67	280.78	261.04	0.00	758.95	653.73	0.528	1.93	1.14	10.220	B
C	398.26	99.56	400.41	574.42	90.30	0.00	799.78	776.38	0.498	1.55	1.01	9.063	A

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	12.36	0.82	8.387	A	A
B	15.31	1.02	9.767	A	A
C	13.76	0.92	8.783	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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.54	1.24	10.633	B	B
B	24.83	1.66	13.560	B	B
C	20.72	1.38	11.198	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	32.88	2.19	16.063	C	B
B	53.06	3.54	25.524	D	C
C	36.92	2.46	17.044	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.56	2.44	16.704	C	B
B	64.40	4.29	28.610	D	C
C	41.43	2.76	17.839	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	21.87	1.46	11.072	B	B
B	32.06	2.14	15.039	C	B
C	24.79	1.65	11.744	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.10	0.94	8.622	A	A
B	18.08	1.21	10.220	B	B
C	15.85	1.06	9.063	A	A

## (Default Analysis Set) - 2019 Base plus Scenario 3 Development, PM

**Data Errors and Warnings**

*No errors or warnings*

**Analysis Set Details**

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

**Demand Set Details**

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 Base plus Scenario 3 Development, PM	2019 Base plus Scenario 3 Development	PM		ONE HOUR	16:45	18:15	90	15				✓		

## Junction Network

**Junctions**

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	60.08	F

**Junction Network Options**

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

## Arms

**Arms**

Arm	Name	Description
A	Railway View Road S	
B	Waddington Road	
C	Railway View Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.15	4.15	4.15	0.00	9.00	7.80	0.00	
B	3.70	3.70	3.70	0.00	11.60	10.80	0.00	
C	3.50	3.50	3.50	0.00	8.90	5.10	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.452	869.909
B		(calculated)	(calculated)	0.434	872.192
C		(calculated)	(calculated)	0.418	837.558

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	615.00	100.000
B	ONE HOUR	✓	502.00	100.000
C	ONE HOUR	✓	696.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	463.00	463.00		
16:45-17:00	B	377.93	377.93		
16:45-17:00	C	523.99	523.99		
17:00-17:15	A	552.87	552.87		
17:00-17:15	B	451.29	451.29		
17:00-17:15	C	625.69	625.69		
17:15-17:30	A	677.13	677.13		
17:15-17:30	B	552.71	552.71		
17:15-17:30	C	766.31	766.31		
17:30-17:45	A	677.13	677.13		
17:30-17:45	B	552.71	552.71		
17:30-17:45	C	766.31	766.31		
17:45-18:00	A	552.87	552.87		
17:45-18:00	B	451.29	451.29		
17:45-18:00	C	625.69	625.69		
18:00-18:15	A	463.00	463.00		
18:00-18:15	B	377.93	377.93		
18:00-18:15	C	523.99	523.99		

## Turning Proportions

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

		To		
		A	B	C
From	A	0.000	245.000	370.000
	B	122.000	0.000	380.000
	C	357.000	339.000	0.000

### Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.40	0.60
	B	0.24	0.00	0.76
	C	0.51	0.49	0.00

## Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.96	69.28	12.37	F	564.33	846.50	436.68	30.95	4.85	436.78	30.96
B	0.79	24.21	3.55	C	460.64	690.97	176.97	15.37	1.97	177.01	15.37
C	0.98	77.83	15.98	F	638.66	957.99	547.69	34.30	6.09	547.84	34.31

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	463.00	115.75	456.90	355.91	251.86	0.00	756.21	701.02	0.612	0.00	1.53	11.802	B
B	377.93	94.48	373.98	433.67	274.88	0.00	752.95	689.24	0.502	0.00	0.99	9.406	A
C	523.99	131.00	516.68	557.98	90.89	0.00	799.54	767.48	0.655	0.00	1.83	12.431	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	552.87	138.22	547.65	426.77	301.65	0.00	733.63	701.02	0.754	1.53	2.83	18.824	C
B	451.29	112.82	448.96	519.82	329.48	0.00	729.26	689.24	0.619	0.99	1.57	12.735	B
C	625.69	156.42	619.31	669.33	109.11	0.00	791.91	767.48	0.790	1.83	3.42	20.111	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	677.13	169.28	650.29	508.04	356.50	0.00	708.85	701.02	0.955	2.83	9.54	47.467	E
B	552.71	138.18	545.68	615.56	391.23	0.00	702.47	689.24	0.787	1.57	3.33	22.009	C
C	766.31	191.58	731.93	804.30	132.62	0.00	782.08	767.48	0.980	3.42	12.02	51.504	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	677.13	169.28	665.81	519.03	365.52	0.00	704.77	701.02	0.961	9.54	12.37	69.277	F
B	552.71	138.18	551.80	630.76	400.57	0.00	698.42	689.24	0.791	3.33	3.55	24.210	C
C	766.31	191.58	750.45	818.27	134.10	0.00	781.46	767.48	0.981	12.02	15.98	77.827	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	552.87	138.22	587.90	456.40	327.58	0.00	721.91	701.02	0.766	12.37	3.61	31.820	D
B	451.29	112.82	458.49	561.78	353.69	0.00	718.76	689.24	0.628	3.55	1.75	14.188	B
C	625.69	156.42	672.55	700.76	111.43	0.00	790.94	767.48	0.791	15.98	4.27	37.663	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	463.00	115.75	470.84	366.00	259.67	0.00	752.59	701.02	0.615	3.61	1.65	13.110	B
B	377.93	94.48	380.78	447.24	283.27	0.00	749.31	689.24	0.504	1.75	1.04	9.842	A
C	523.99	131.00	533.12	571.51	92.54	0.00	798.84	767.48	0.656	4.27	1.98	13.977	B

## Queueing Delay Results for each time segment

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	21.11	1.41	11.802	B	B
B	13.94	0.93	9.406	A	A
C	25.03	1.67	12.431	B	B

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	38.40	2.56	18.824	C	B
B	22.15	1.48	12.735	B	B
C	45.90	3.06	20.111	C	C

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	106.62	7.11	47.467	E	D
B	44.04	2.94	22.009	C	C
C	130.21	8.68	51.504	F	D

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	166.40	11.09	69.277	F	E
B	51.95	3.46	24.210	C	C
C	212.21	14.15	77.827	F	E

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	77.18	5.15	31.820	D	C
B	28.49	1.90	14.188	B	B
C	101.79	6.79	37.663	E	D

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	26.97	1.80	13.110	B	B
B	16.40	1.09	9.842	A	A
C	32.56	2.17	13.977	B	B

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
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Filename: Shawbridge Street Waterloo Road 2017 Base Plus DTPC Improvements.arc8  
Path: A:\Project\_008\_02 Clitheroe DTPC\5 July 2014\ARCADY  
Report generation date: 09/07/2014 11:25:56

## Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - 2017 Base Plus Scenario 1 Development						
Arm A	2.88	23.86	0.75	2.94	25.14	0.76
Arm B	0.71	5.58	0.42	0.64	5.06	0.39
Arm C	9.81	43.32	0.93	37.64	128.89	1.05
A1 - 2017 Base Plus Scenario 3 Development						
Arm A	2.88	23.86	0.75	2.94	25.14	0.76
Arm B	0.71	5.58	0.42	0.64	5.06	0.39
Arm C	9.81	43.32	0.93	37.64	128.89	1.05
A1 - 2019 Base Plus Scenario 3 Development						
Arm A	3.26	26.60	0.78	3.02	25.70	0.76
Arm B	0.69	5.57	0.41	0.66	5.16	0.40
Arm C	12.67	53.78	0.95	45.95	151.80	1.07

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

"D1 - 2017 Base Plus Scenario 1 Development, AM" model duration: 07:45 - 09:15  
"D2 - 2017 Base Plus Scenario 1 Development, PM" model duration: 16:45 - 18:15  
"D3 - 2017 Base Plus Scenario 3 Development, AM" model duration: 07:45 - 09:15  
"D4 - 2017 Base Plus Scenario 3 Development, PM" model duration: 16:45 - 18:15  
"D5 - 2019 Base Plus Scenario 3 Development, AM" model duration: 07:45 - 09:15  
"D6 - 2019 Base Plus Scenario 3 Development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 09/07/2014 11:25:53

## File summary

### File Description

Title	clitheroe
Location	
Site Number	
Date	05/10/2012
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	Administrator
Description	

## Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

## Units

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

# (Default Analysis Set) - 2017 Base Plus Scenario 1 Development, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base Plus Scenario 1 Development, AM	2017 Base Plus Scenario 1 Development	AM		Varies by Arm	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	28.69	D

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	412.00	100.000
B	ONE HOUR	✓	416.00	100.000
C	ONE HOUR	✓	793.00	100.000

## 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	310.18	310.18		
07:45-08:00	B	313.19	313.19		
07:45-08:00	C	597.01	597.01		
08:00-08:15	A	370.38	370.38		
08:00-08:15	B	373.98	373.98		
08:00-08:15	C	712.89	712.89		
08:15-08:30	A	453.62	453.62		
08:15-08:30	B	458.02	458.02		
08:15-08:30	C	873.11	873.11		
08:30-08:45	A	453.62	453.62		
08:30-08:45	B	458.02	458.02		
08:30-08:45	C	873.11	873.11		
08:45-09:00	A	370.38	370.38		
08:45-09:00	B	373.98	373.98		
08:45-09:00	C	712.89	712.89		
09:00-09:15	A	310.18	310.18		
09:00-09:15	B	313.19	313.19		
09:00-09:15	C	597.01	597.01		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	78.000	334.000
	B	105.000	0.000	311.000
	C	306.000	487.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.19	0.81
	B	0.25	0.00	0.75
	C	0.39	0.61	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.75	23.86	2.88	C	378.06	567.09	144.45	15.28	1.61	144.48	15.29
B	0.42	5.58	0.71	A	381.73	572.59	45.71	4.79	0.51	45.71	4.79
C	0.93	43.32	9.81	E	727.67	1091.51	385.50	21.19	4.28	385.59	21.20

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	310.18	77.54	306.93	306.59	362.70	0.00	684.86	599.73	0.453	0.00	0.81	9.448	A
B	313.19	78.30	311.78	420.80	248.82	0.00	1200.60	1004.85	0.261	0.00	0.35	4.038	A
C	597.01	149.25	590.59	481.91	78.70	0.00	958.51	875.84	0.623	0.00	1.61	9.625	A

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	370.38	92.59	368.49	367.48	434.82	0.00	649.81	599.73	0.570	0.81	1.29	12.708	B
B	373.98	93.49	373.49	504.58	298.73	0.00	1159.44	1004.85	0.323	0.35	0.47	4.577	A
C	712.89	178.22	708.03	577.94	94.27	0.00	951.15	875.84	0.750	1.61	2.82	14.512	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.62	113.41	447.95	443.63	522.41	0.00	607.25	599.73	0.747	1.29	2.70	21.842	C
B	458.02	114.51	457.12	607.22	363.14	0.00	1106.32	1004.85	0.414	0.47	0.70	5.537	A
C	873.11	218.28	850.66	704.88	115.38	0.00	941.18	875.84	0.928	2.82	8.43	33.474	D

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.62	113.41	452.90	450.38	532.80	0.00	602.20	599.73	0.753	2.70	2.88	23.860	C
B	458.02	114.51	458.00	618.54	367.16	0.00	1103.01	1004.85	0.415	0.70	0.71	5.580	A
C	873.11	218.28	867.58	709.56	115.60	0.00	941.07	875.84	0.928	8.43	9.81	43.321	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	370.38	92.59	376.24	379.93	454.07	0.00	640.46	599.73	0.578	2.88	1.42	13.911	B
B	373.98	93.49	374.87	525.30	305.01	0.00	1154.26	1004.85	0.324	0.71	0.48	4.625	A
C	712.89	178.22	739.38	585.26	94.62	0.00	950.99	875.84	0.750	9.81	3.19	18.814	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	310.18	77.54	312.44	311.86	370.31	0.00	681.16	599.73	0.455	1.42	0.85	9.823	A
B	313.19	78.30	313.69	429.46	253.29	0.00	1196.91	1004.85	0.262	0.48	0.36	4.078	A
C	597.01	149.25	602.99	487.80	79.18	0.00	958.29	875.84	0.623	3.19	1.70	10.297	B

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.51	0.77	9.448	A	A
B	5.13	0.34	4.038	A	A
C	22.40	1.49	9.625	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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.23	1.22	12.708	B	B
B	6.95	0.46	4.577	A	A
C	38.84	2.59	14.512	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.16	2.41	21.842	C	C
B	10.21	0.68	5.537	A	A
C	99.40	6.63	33.474	D	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	42.22	2.81	23.860	C	C
B	10.55	0.70	5.580	A	A
C	138.25	9.22	43.321	E	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	22.93	1.53	13.911	B	B
B	7.41	0.49	4.625	A	A
C	59.47	3.96	18.814	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.41	0.89	9.823	A	A
B	5.45	0.36	4.078	A	A
C	27.14	1.81	10.297	B	B

# (Default Analysis Set) - 2017 Base Plus Scenario 1 Development, PM

**Data Errors and Warnings**

*No errors or warnings*

**Analysis Set Details**

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

**Demand Set Details**

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base Plus Scenario 1 Development, PM	2017 Base Plus Scenario 1 Development	PM		Varies by Arm	16:45	18:15	90	15				✓		

## Junction Network

**Junctions**

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	74.93	F

**Junction Network Options**

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

## Arms

**Arms**

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	399.00	100.000
B	ONE HOUR	✓	413.00	100.000
C	ONE HOUR	✓	903.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	300.39	300.39		
16:45-17:00	B	310.93	310.93		
16:45-17:00	C	679.83	679.83		
17:00-17:15	A	358.69	358.69		
17:00-17:15	B	371.28	371.28		
17:00-17:15	C	811.78	811.78		
17:15-17:30	A	439.31	439.31		
17:15-17:30	B	454.72	454.72		
17:15-17:30	C	994.22	994.22		
17:30-17:45	A	439.31	439.31		
17:30-17:45	B	454.72	454.72		
17:30-17:45	C	994.22	994.22		
17:45-18:00	A	358.69	358.69		
17:45-18:00	B	371.28	371.28		
17:45-18:00	C	811.78	811.78		
18:00-18:15	A	300.39	300.39		
18:00-18:15	B	310.93	310.93		
18:00-18:15	C	679.83	679.83		

## Turning Proportions

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

		To		
		A	B	C
From	A	0.000	135.000	264.000
	B	94.000	0.000	319.000
	C	346.000	557.000	0.000

### Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.34	0.66
	B	0.23	0.00	0.77
	C	0.38	0.62	0.00

## Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.76	25.14	2.94	D	366.13	549.19	150.70	16.46	1.67	150.74	16.47
B	0.39	5.06	0.64	A	378.98	568.46	42.05	4.44	0.47	42.06	4.44
C	1.05	128.89	37.64	F	828.61	1242.91	1168.87	56.43	12.99	1169.07	56.44

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	300.39	75.10	297.11	327.43	413.67	0.00	660.09	597.46	0.455	0.00	0.82	9.833	A
B	310.93	77.73	309.60	514.19	196.59	0.00	1243.67	1079.79	0.250	0.00	0.33	3.848	A
C	679.83	169.96	670.63	435.72	70.47	0.00	962.40	879.55	0.706	0.00	2.30	11.992	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	358.69	89.67	356.67	391.49	494.35	0.00	620.88	597.47	0.578	0.82	1.32	13.520	B
B	371.28	92.82	370.85	615.03	236.00	0.00	1211.17	1079.79	0.307	0.33	0.44	4.282	A
C	811.78	202.94	801.43	522.44	84.41	0.00	955.81	879.55	0.849	2.30	4.88	21.922	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	439.31	109.83	433.64	455.73	567.31	0.00	585.43	597.47	0.750	1.32	2.74	22.885	C
B	454.72	113.68	453.95	714.03	286.92	0.00	1169.18	1079.79	0.389	0.44	0.63	5.028	A
C	994.22	248.56	919.72	637.55	103.32	0.00	946.87	879.55	1.050	4.88	23.51	69.496	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	439.31	109.83	438.52	462.80	578.42	0.00	580.03	597.47	0.757	2.74	2.94	25.139	D
B	454.72	113.68	454.70	726.79	290.15	0.00	1166.51	1079.79	0.390	0.63	0.64	5.057	A
C	994.22	248.56	937.72	641.36	103.49	0.00	946.79	879.55	1.050	23.51	37.64	128.887	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	358.69	89.67	363.75	440.57	572.93	0.00	582.70	597.47	0.616	2.94	1.67	16.800	C
B	371.28	92.82	372.03	696.00	240.68	0.00	1207.31	1079.79	0.308	0.64	0.45	4.315	A
C	811.78	202.94	928.82	528.04	84.68	0.00	955.69	879.55	0.849	37.64	8.38	95.517	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	300.39	75.10	303.56	340.32	433.78	0.00	650.32	597.46	0.462	1.67	0.88	10.475	B
B	310.93	77.73	311.37	536.49	200.85	0.00	1240.15	1079.79	0.251	0.45	0.34	3.879	A
C	679.83	169.96	703.23	441.36	70.87	0.00	962.21	879.55	0.707	8.38	2.52	15.028	C

## Queueing Delay Results for each time segment

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.58	0.77	9.833	A	A
B	4.86	0.32	3.848	A	A
C	31.29	2.09	11.992	B	B

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.70	1.25	13.520	B	B
B	6.47	0.43	4.282	A	A
C	63.50	4.23	21.922	C	C

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.56	2.44	22.885	C	C
B	9.24	0.62	5.028	A	A
C	227.31	15.15	69.496	F	E

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	42.91	2.86	25.139	D	C
B	9.51	0.63	5.057	A	A
C	460.46	30.70	128.887	F	F

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	27.09	1.81	16.800	C	B
B	6.85	0.46	4.315	A	A
C	340.54	22.70	95.517	F	F

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.87	0.92	10.475	B	B
B	5.14	0.34	3.879	A	A
C	45.76	3.05	15.028	C	B

# (Default Analysis Set) - 2017 Base Plus Scenario 3 Development, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base Plus Scenario 3 Development, AM	2017 Base Plus Scenario 3 Development	AM		Varies by Arm	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	28.69	D

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	412.00	100.000
B	ONE HOUR	✓	416.00	100.000
C	ONE HOUR	✓	793.00	100.000

# 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	310.18	310.18		
07:45-08:00	B	313.19	313.19		
07:45-08:00	C	597.01	597.01		
08:00-08:15	A	370.38	370.38		
08:00-08:15	B	373.98	373.98		
08:00-08:15	C	712.89	712.89		
08:15-08:30	A	453.62	453.62		
08:15-08:30	B	458.02	458.02		
08:15-08:30	C	873.11	873.11		
08:30-08:45	A	453.62	453.62		
08:30-08:45	B	458.02	458.02		
08:30-08:45	C	873.11	873.11		
08:45-09:00	A	370.38	370.38		
08:45-09:00	B	373.98	373.98		
08:45-09:00	C	712.89	712.89		
09:00-09:15	A	310.18	310.18		
09:00-09:15	B	313.19	313.19		
09:00-09:15	C	597.01	597.01		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	78.000	334.000
	B	105.000	0.000	311.000
	C	306.000	487.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.19	0.81
	B	0.25	0.00	0.75
	C	0.39	0.61	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.75	23.86	2.88	C	378.06	567.09	144.45	15.28	1.61	144.48	15.29
B	0.42	5.58	0.71	A	381.73	572.59	45.71	4.79	0.51	45.71	4.79
C	0.93	43.32	9.81	E	727.67	1091.51	385.50	21.19	4.28	385.59	21.20

### Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	310.18	77.54	306.93	306.59	362.70	0.00	684.86	599.73	0.453	0.00	0.81	9.448	A
B	313.19	78.30	311.78	420.80	248.82	0.00	1200.60	1004.85	0.261	0.00	0.35	4.038	A
C	597.01	149.25	590.59	481.91	78.70	0.00	958.51	875.84	0.623	0.00	1.61	9.625	A

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	370.38	92.59	368.49	367.48	434.82	0.00	649.81	599.73	0.570	0.81	1.29	12.708	B
B	373.98	93.49	373.49	504.58	298.73	0.00	1159.44	1004.85	0.323	0.35	0.47	4.577	A
C	712.89	178.22	708.03	577.94	94.27	0.00	951.15	875.84	0.750	1.61	2.82	14.512	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.62	113.41	447.95	443.63	522.41	0.00	607.25	599.73	0.747	1.29	2.70	21.842	C
B	458.02	114.51	457.12	607.22	363.14	0.00	1106.32	1004.85	0.414	0.47	0.70	5.537	A
C	873.11	218.28	850.66	704.88	115.38	0.00	941.18	875.84	0.928	2.82	8.43	33.474	D

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	453.62	113.41	452.90	450.38	532.80	0.00	602.20	599.73	0.753	2.70	2.88	23.860	C
B	458.02	114.51	458.00	618.54	367.16	0.00	1103.01	1004.85	0.415	0.70	0.71	5.580	A
C	873.11	218.28	867.58	709.56	115.60	0.00	941.07	875.84	0.928	8.43	9.81	43.321	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	370.38	92.59	376.24	379.93	454.07	0.00	640.46	599.73	0.578	2.88	1.42	13.911	B
B	373.98	93.49	374.87	525.30	305.01	0.00	1154.26	1004.85	0.324	0.71	0.48	4.625	A
C	712.89	178.22	739.38	585.26	94.62	0.00	950.99	875.84	0.750	9.81	3.19	18.814	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	310.18	77.54	312.44	311.86	370.31	0.00	681.16	599.73	0.455	1.42	0.85	9.823	A
B	313.19	78.30	313.69	429.46	253.29	0.00	1196.91	1004.85	0.262	0.48	0.36	4.078	A
C	597.01	149.25	602.99	487.80	79.18	0.00	958.29	875.84	0.623	3.19	1.70	10.297	B

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.51	0.77	9.448	A	A
B	5.13	0.34	4.038	A	A
C	22.40	1.49	9.625	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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.23	1.22	12.708	B	B
B	6.95	0.46	4.577	A	A
C	38.84	2.59	14.512	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.16	2.41	21.842	C	C
B	10.21	0.68	5.537	A	A
C	99.40	6.63	33.474	D	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	42.22	2.81	23.860	C	C
B	10.55	0.70	5.580	A	A
C	138.25	9.22	43.321	E	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	22.93	1.53	13.911	B	B
B	7.41	0.49	4.625	A	A
C	59.47	3.96	18.814	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.41	0.89	9.823	A	A
B	5.45	0.36	4.078	A	A
C	27.14	1.81	10.297	B	B

## (Default Analysis Set) - 2017 Base Plus Scenario 3 Development, PM

**Data Errors and Warnings**

No errors or warnings

**Analysis Set Details**

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base Plus Scenario 3 Development, PM	2017 Base Plus Scenario 3 Development	PM		Varies by Arm	16:45	18:15	90	15				✓		

## Junction Network

### Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	74.93	F

### Junction Network Options

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

## Arms

### Arms

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

### 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

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Entered slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

# Traffic Flows

## Demand Set Data Options

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

# Entry Flows

## General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	399.00	100.000
B	ONE HOUR	✓	413.00	100.000
C	ONE HOUR	✓	903.00	100.000

# 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	300.39	300.39		
16:45-17:00	B	310.93	310.93		
16:45-17:00	C	679.83	679.83		
17:00-17:15	A	358.69	358.69		
17:00-17:15	B	371.28	371.28		
17:00-17:15	C	811.78	811.78		
17:15-17:30	A	439.31	439.31		
17:15-17:30	B	454.72	454.72		
17:15-17:30	C	994.22	994.22		
17:30-17:45	A	439.31	439.31		
17:30-17:45	B	454.72	454.72		
17:30-17:45	C	994.22	994.22		
17:45-18:00	A	358.69	358.69		
17:45-18:00	B	371.28	371.28		
17:45-18:00	C	811.78	811.78		
18:00-18:15	A	300.39	300.39		
18:00-18:15	B	310.93	310.93		
18:00-18:15	C	679.83	679.83		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	135.000	264.000
	B	94.000	0.000	319.000
	C	346.000	557.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.34	0.66
	B	0.23	0.00	0.77
	C	0.38	0.62	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.76	25.14	2.94	D	366.13	549.19	150.70	16.46	1.67	150.74	16.47
B	0.39	5.06	0.64	A	378.98	568.46	42.05	4.44	0.47	42.06	4.44
C	1.05	128.89	37.64	F	828.61	1242.91	1168.87	56.43	12.99	1169.07	56.44

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	300.39	75.10	297.11	327.43	413.67	0.00	660.09	597.46	0.455	0.00	0.82	9.833	A
B	310.93	77.73	309.60	514.19	196.59	0.00	1243.67	1079.79	0.250	0.00	0.33	3.848	A
C	679.83	169.96	670.63	435.72	70.47	0.00	962.40	879.55	0.706	0.00	2.30	11.992	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	358.69	89.67	356.67	391.49	494.35	0.00	620.88	597.47	0.578	0.82	1.32	13.520	B
B	371.28	92.82	370.85	615.03	236.00	0.00	1211.17	1079.79	0.307	0.33	0.44	4.282	A
C	811.78	202.94	801.43	522.44	84.41	0.00	955.81	879.55	0.849	2.30	4.88	21.922	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	439.31	109.83	433.64	455.73	567.31	0.00	585.43	597.47	0.750	1.32	2.74	22.885	C
B	454.72	113.68	453.95	714.03	286.92	0.00	1169.18	1079.79	0.389	0.44	0.63	5.028	A
C	994.22	248.56	919.72	637.55	103.32	0.00	946.87	879.55	1.050	4.88	23.51	69.496	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	439.31	109.83	438.52	462.80	578.42	0.00	580.03	597.47	0.757	2.74	2.94	25.139	D
B	454.72	113.68	454.70	726.79	290.15	0.00	1166.51	1079.79	0.390	0.63	0.64	5.057	A
C	994.22	248.56	937.72	641.36	103.49	0.00	946.79	879.55	1.050	23.51	37.64	128.887	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	358.69	89.67	363.75	440.57	572.93	0.00	582.70	597.47	0.616	2.94	1.67	16.800	C
B	371.28	92.82	372.03	696.00	240.68	0.00	1207.31	1079.79	0.308	0.64	0.45	4.315	A
C	811.78	202.94	928.82	528.04	84.68	0.00	955.69	879.55	0.849	37.64	8.38	95.517	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	300.39	75.10	303.56	340.32	433.78	0.00	650.32	597.46	0.462	1.67	0.88	10.475	B
B	310.93	77.73	311.37	536.49	200.85	0.00	1240.15	1079.79	0.251	0.45	0.34	3.879	A
C	679.83	169.96	703.23	441.36	70.87	0.00	962.21	879.55	0.707	8.38	2.52	15.028	C

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.58	0.77	9.833	A	A
B	4.86	0.32	3.848	A	A
C	31.29	2.09	11.992	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	18.70	1.25	13.520	B	B
B	6.47	0.43	4.282	A	A
C	63.50	4.23	21.922	C	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.56	2.44	22.885	C	C
B	9.24	0.62	5.028	A	A
C	227.31	15.15	69.496	F	E

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	42.91	2.86	25.139	D	C
B	9.51	0.63	5.057	A	A
C	460.46	30.70	128.887	F	F

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	27.09	1.81	16.800	C	B
B	6.85	0.46	4.315	A	A
C	340.54	22.70	95.517	F	F

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	13.87	0.92	10.475	B	B
B	5.14	0.34	3.879	A	A
C	45.76	3.05	15.028	C	B

## (Default Analysis Set) - 2019 Base Plus Scenario 3 Development, AM

**Data Errors and Warnings**

*No errors or warnings*

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 Base Plus Scenario 3 Development, AM	2019 Base Plus Scenario 3 Development	AM		Varies by Arm	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	34.89	D

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	421.00	100.000
B	ONE HOUR	✓	408.00	100.000
C	ONE HOUR	✓	818.00	100.000

## 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	316.95	316.95		
07:45-08:00	B	307.16	307.16		
07:45-08:00	C	615.83	615.83		
08:00-08:15	A	378.47	378.47		
08:00-08:15	B	366.78	366.78		
08:00-08:15	C	735.37	735.37		
08:15-08:30	A	463.53	463.53		
08:15-08:30	B	449.22	449.22		
08:15-08:30	C	900.63	900.63		
08:30-08:45	A	463.53	463.53		
08:30-08:45	B	449.22	449.22		
08:30-08:45	C	900.63	900.63		
08:45-09:00	A	378.47	378.47		
08:45-09:00	B	366.78	366.78		
08:45-09:00	C	735.37	735.37		
09:00-09:15	A	316.95	316.95		
09:00-09:15	B	307.16	307.16		
09:00-09:15	C	615.83	615.83		

# Turning Proportions

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

		To		
		A	B	C
From	A	0.000	78.000	343.000
	B	97.000	0.000	311.000
	C	317.000	501.000	0.000

## Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.19	0.81
	B	0.24	0.00	0.76
	C	0.39	0.61	0.00

# Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

## Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.78	26.60	3.26	D	386.32	579.48	158.61	16.42	1.76	158.64	16.43
B	0.41	5.57	0.69	A	374.39	561.58	44.79	4.79	0.50	44.79	4.79
C	0.95	53.78	12.67	F	750.61	1125.92	461.93	24.62	5.13	462.03	24.62

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	316.95	79.24	313.53	308.68	372.95	0.00	679.88	598.33	0.466	0.00	0.86	9.738	A
B	307.16	76.79	305.79	431.03	255.44	0.00	1195.14	1003.79	0.257	0.00	0.34	4.042	A
C	615.83	153.96	608.92	488.53	72.70	0.00	961.35	882.92	0.641	0.00	1.73	10.030	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	378.47	94.62	376.38	369.89	446.95	0.00	643.92	598.33	0.588	0.86	1.38	13.349	B
B	366.78	91.70	366.31	516.68	306.65	0.00	1152.91	1003.79	0.318	0.34	0.46	4.573	A
C	735.37	183.84	729.75	585.87	87.09	0.00	954.55	882.92	0.770	1.73	3.13	15.619	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	463.53	115.88	456.96	444.45	533.96	0.00	601.63	598.33	0.770	1.38	3.02	23.847	C
B	449.22	112.30	448.33	618.63	372.30	0.00	1098.77	1003.79	0.409	0.46	0.68	5.526	A
C	900.63	225.16	871.82	714.04	106.59	0.00	945.33	882.92	0.953	3.13	10.33	38.716	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	463.53	115.88	462.56	452.19	545.89	0.00	595.84	598.33	0.778	3.02	3.26	26.597	D
B	449.22	112.30	449.19	631.58	376.86	0.00	1095.01	1003.79	0.410	0.68	0.69	5.573	A
C	900.63	225.16	891.29	719.25	106.79	0.00	945.23	882.92	0.953	10.33	12.67	53.782	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	378.47	94.62	385.32	386.40	472.54	0.00	631.48	598.33	0.599	3.26	1.55	15.005	C
B	366.78	91.70	367.65	543.93	313.93	0.00	1146.90	1003.79	0.320	0.69	0.47	4.624	A
C	735.37	183.84	771.53	594.18	87.41	0.00	954.40	882.92	0.771	12.67	3.63	22.786	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	316.95	79.24	319.55	314.58	381.57	0.00	675.69	598.33	0.469	1.55	0.90	10.182	B
B	307.16	76.79	307.66	440.78	260.35	0.00	1191.09	1003.79	0.258	0.47	0.35	4.077	A
C	615.83	153.96	623.00	494.86	73.14	0.00	961.14	882.92	0.641	3.63	1.84	10.862	B

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	12.11	0.81	9.738	A	A
B	5.03	0.34	4.042	A	A
C	24.01	1.60	10.030	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	19.48	1.30	13.349	B	B
B	6.81	0.45	4.573	A	A
C	42.75	2.85	15.619	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	39.90	2.66	23.847	C	C
B	10.00	0.67	5.526	A	A
C	117.13	7.81	38.716	E	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	47.56	3.17	26.597	D	C
B	10.33	0.69	5.573	A	A
C	174.46	11.63	53.782	F	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	25.33	1.69	15.005	C	B
B	7.27	0.48	4.624	A	A
C	74.05	4.94	22.786	C	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.22	0.95	10.182	B	B
B	5.34	0.36	4.077	A	A
C	29.53	1.97	10.862	B	B

## (Default Analysis Set) - 2019 Base Plus Scenario 3 Development, PM

**Data Errors and Warnings**

*No errors or warnings*

**Analysis Set Details**

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

**Demand Set Details**

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2019 Base Plus Scenario 3 Development, PM	2019 Base Plus Scenario 3 Development	PM		Varies by Arm	16:45	18:15	90	15				✓		

## Junction Network

**Junctions**

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	87.51	F

**Junction Network Options**

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

## Arms

**Arms**

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	5.50	2.60	11.80	8.30	0.00	
B	3.65	3.65	5.80	5.80	18.00	19.00	0.00	
C	3.65	3.65	5.20	7.60	10.50	4.30	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.486	861.121
B		(calculated)	(calculated)	0.825	1405.782
C		(calculated)	(calculated)	0.473	995.706

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	402.00	100.000
B	ONE HOUR	✓	418.00	100.000
C	ONE HOUR	✓	922.00	100.000

## Direct/Resultant Flows

### Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	Direct Demand Entry Flow in PCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	302.65	302.65		
16:45-17:00	B	314.69	314.69		
16:45-17:00	C	694.13	694.13		
17:00-17:15	A	361.39	361.39		
17:00-17:15	B	375.77	375.77		
17:00-17:15	C	828.86	828.86		
17:15-17:30	A	442.61	442.61		
17:15-17:30	B	460.23	460.23		
17:15-17:30	C	1015.14	1015.14		
17:30-17:45	A	442.61	442.61		
17:30-17:45	B	460.23	460.23		
17:30-17:45	C	1015.14	1015.14		
17:45-18:00	A	361.39	361.39		
17:45-18:00	B	375.77	375.77		
17:45-18:00	C	828.86	828.86		
18:00-18:15	A	302.65	302.65		
18:00-18:15	B	314.69	314.69		
18:00-18:15	C	694.13	694.13		

## Turning Proportions

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

		To		
		A	B	C
From	A	0.000	129.000	273.000
	B	92.000	0.000	326.000
	C	356.000	566.000	0.000

### Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.32	0.68
	B	0.22	0.00	0.78
	C	0.39	0.61	0.00

## Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.76	25.70	3.02	D	368.88	553.32	155.43	16.85	1.73	155.47	16.86
B	0.40	5.16	0.66	A	383.56	575.35	43.21	4.51	0.48	43.21	4.51
C	1.07	151.80	45.95	F	846.04	1269.06	1485.42	70.23	16.50	1485.66	70.24

## Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	302.65	75.66	299.30	333.19	420.09	0.00	656.97	597.32	0.461	0.00	0.84	9.975	A
B	314.69	78.67	313.34	516.13	203.26	0.00	1238.17	1071.27	0.254	0.00	0.34	3.887	A
C	694.13	173.53	684.31	447.63	68.96	0.00	963.11	884.27	0.721	0.00	2.45	12.509	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	361.39	90.35	359.28	398.01	501.46	0.00	617.43	597.32	0.585	0.84	1.36	13.828	B
B	375.77	93.94	375.33	616.75	243.99	0.00	1204.58	1071.27	0.312	0.34	0.45	4.339	A
C	828.86	207.21	816.87	536.71	82.61	0.00	956.66	884.27	0.866	2.45	5.45	23.859	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	442.61	110.65	436.76	458.82	568.70	0.00	584.75	597.32	0.757	1.36	2.82	23.427	C
B	460.23	115.06	459.43	708.86	296.61	0.00	1161.19	1071.27	0.396	0.45	0.65	5.125	A
C	1015.14	253.79	926.41	654.92	101.12	0.00	947.92	884.27	1.071	5.45	27.64	78.258	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	442.61	110.65	441.82	464.96	578.20	0.00	580.14	597.32	0.763	2.82	3.02	25.703	D
B	460.23	115.06	460.21	719.97	300.04	0.00	1158.35	1071.27	0.397	0.65	0.66	5.156	A
C	1015.14	253.79	941.87	658.96	101.29	0.00	947.83	884.27	1.071	27.64	45.95	151.802	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	361.39	90.35	366.63	444.35	574.70	0.00	581.84	597.32	0.621	3.02	1.71	17.110	C
B	375.77	93.94	376.56	692.34	248.98	0.00	1200.46	1071.27	0.313	0.66	0.46	4.375	A
C	828.86	207.21	936.16	542.66	82.88	0.00	956.54	884.27	0.867	45.95	19.13	129.685	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	302.65	75.66	305.77	362.68	466.34	0.00	634.49	597.32	0.477	1.71	0.93	11.053	B
B	314.69	78.67	315.15	564.46	207.65	0.00	1234.55	1071.27	0.255	0.46	0.34	3.918	A
C	694.13	173.53	759.66	453.43	69.36	0.00	962.92	884.27	0.721	19.13	2.75	22.948	C

## Queueing Delay Results for each time segment

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	11.83	0.79	9.975	A	A
B	4.96	0.33	3.887	A	A
C	33.23	2.22	12.509	B	B

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	19.24	1.28	13.828	B	B
B	6.63	0.44	4.339	A	A
C	69.82	4.65	23.859	C	C

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	37.60	2.51	23.427	C	C
B	9.52	0.63	5.125	A	A
C	260.93	17.40	78.258	F	E

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	44.19	2.95	25.703	D	C
B	9.81	0.65	5.156	A	A
C	553.38	36.89	151.802	F	F

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	27.80	1.85	17.110	C	B
B	7.03	0.47	4.375	A	A
C	488.13	32.54	129.685	F	F

### 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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.78	0.99	11.053	B	B
B	5.25	0.35	3.918	A	A
C	79.95	5.33	22.948	C	C

<b>Junctions 8</b>
<b>ARCADY 8 - Roundabout Module</b>
Version: 8.0.2.316 [14 Feb 2013] © Copyright TRL Limited, 2014
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**Filename:** Shawbridge Street Waterloo Road 2017 Base Plus without Improvements.arc8  
**Path:** A:\Project\_008\_02 Clitheroe DTPC\5 July 2014\ARCADY  
**Report generation date:** 09/07/2014 11:42:08

## Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - 2017 Base						
Arm A	5.24	45.88	0.86	4.17	38.94	0.82
Arm B	0.71	5.95	0.42	0.61	5.19	0.38
Arm C	12.75	59.69	0.96	62.37	230.70	1.12

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

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15  
"D2 - 2017 Base, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 09/07/2014 11:42:07

## File summary

### File Description

<b>Title</b>	clitheroe
<b>Location</b>	
<b>Site Number</b>	
<b>Date</b>	05/10/2012
<b>Version</b>	
<b>Status</b>	
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	Administrator
<b>Description</b>	

## Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

## Units

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

# (Default Analysis Set) - 2017 Base, AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

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

## Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

# Junction Network

## Junctions

Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
untitled	Mini-roundabout	A,B,C	42.36	E

## Junction Network Options

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

# Arms

## Arms

Arm	Name	Description
A	Shawbridge St	
B	Waterloo Road S	
C	Waterloo Road N	

## 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

## Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.35	4.35	4.35	0.00	8.50	6.50	0.00	
B	3.65	3.65	3.65	0.00	18.90	20.00	0.00	
C	3.85	3.85	3.85	0.00	12.70	9.30	0.00	

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

## Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A		(calculated)	(calculated)	0.461	740.440
B		(calculated)	(calculated)	1.003	1393.400
C		(calculated)	(calculated)	0.438	897.460

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

## Traffic Flows

### Demand Set Data Options

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

## Entry Flows

### General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	401.00	100.000
B	ONE HOUR	✓	391.00	100.000
C	ONE HOUR	✓	740.00	100.000

## Turning Proportions

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

		To		
		A	B	C
From	A	0.000	75.000	326.000
	B	94.000	0.000	297.000
	C	285.000	455.000	0.000

### Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.19	0.81
	B	0.24	0.00	0.76
	C	0.39	0.61	0.00

## Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

### Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To		
	A	B	C
	0.000	0.000	0.000
	0.000	0.000	0.000

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A	0.86	45.88	5.24	E	367.96	551.95	224.50	24.40	2.49	224.56	24.41
B	0.42	5.95	0.71	A	358.79	538.18	45.22	5.04	0.50	45.22	5.04
C	0.96	59.69	12.75	F	679.04	1018.56	464.62	27.37	5.16	464.74	27.38

### Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	301.89	75.47	297.74	282.32	338.27	0.00	584.44	515.04	0.517	0.00	1.04	12.387	B
B	294.37	73.59	293.00	393.96	242.05	0.00	1150.74	973.64	0.256	0.00	0.34	4.190	A
C	557.11	139.28	550.16	464.61	70.44	0.00	866.59	794.88	0.643	0.00	1.74	11.147	B

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	360.49	90.12	357.56	338.41	405.55	0.00	553.41	515.04	0.651	1.04	1.77	18.102	C
B	351.50	87.88	351.01	472.43	290.68	0.00	1101.99	973.64	0.319	0.34	0.46	4.790	A
C	665.24	166.31	659.58	557.30	84.39	0.00	860.48	794.88	0.773	1.74	3.15	17.421	C

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	441.51	110.38	430.36	406.11	483.47	0.00	517.47	515.04	0.853	1.77	4.56	37.254	E
B	430.50	107.62	429.58	563.96	349.87	0.00	1042.65	973.64	0.413	0.46	0.70	5.864	A
C	814.76	203.69	786.30	676.17	103.27	0.00	852.20	794.88	0.956	3.15	10.27	42.500	E

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	441.51	110.38	438.77	413.45	494.85	0.00	512.22	515.04	0.862	4.56	5.24	45.878	E
B	430.50	107.62	430.46	576.92	356.71	0.00	1035.80	973.64	0.416	0.70	0.71	5.946	A
C	814.76	203.69	804.81	683.68	103.49	0.00	852.11	794.88	0.956	10.27	12.75	59.695	F

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	360.49	90.12	373.00	354.84	431.23	0.00	541.56	515.04	0.666	5.24	2.12	22.716	C
B	351.50	87.88	352.40	501.00	303.24	0.00	1089.41	973.64	0.323	0.71	0.48	4.892	A
C	665.24	166.31	701.35	570.92	84.72	0.00	860.33	794.88	0.773	12.75	3.73	26.515	D

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

Arm	Total Demand (PCU/hr)	Junction 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)	Delay (s)	LOS
A	301.89	75.47	305.90	288.33	347.13	0.00	580.35	515.04	0.520	2.12	1.12	13.298	B
B	294.37	73.59	294.89	404.34	248.68	0.00	1144.09	973.64	0.257	0.48	0.35	4.241	A
C	557.11	139.28	564.56	472.68	70.89	0.00	866.39	794.88	0.643	3.73	1.86	12.206	B

**Queueing Delay Results for each time segment****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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	14.47	0.96	12.387	B	B
B	5.00	0.33	4.190	A	A
C	24.02	1.60	11.147	B	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	24.55	1.64	18.102	C	B
B	6.83	0.46	4.790	A	A
C	42.83	2.86	17.421	C	B

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	56.42	3.76	37.254	E	D
B	10.15	0.68	5.864	A	A
C	115.61	7.71	42.500	E	D

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	74.43	4.96	45.878	E	D
B	10.54	0.70	5.946	A	A
C	174.55	11.64	59.695	F	E

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	36.78	2.45	22.716	C	C
B	7.38	0.49	4.892	A	A
C	77.50	5.17	26.515	D	C

**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 (s)	Unsignalised Level Of Service	Signalised Level Of Service
A	17.85	1.19	13.298	B	B
B	5.33	0.36	4.241	A	A
C	30.12	2.01	12.206	B	B