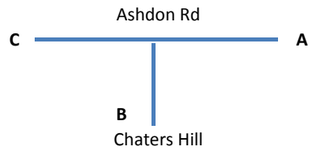
Appendix N

J3 - Ashdon Road / Chaters Hill – Junction Assessment Data

3 - Ashdon Road / Chaters Hill



AM Peak 0800-0900

Background Traffic 2013 count

	A	B	C
A	0	0	443
B	25	0	117
C	225	0	0

Tempro 12-18

	A	B	C
A	1.038	1.038	1.038
B	1.038	1.038	1.038
C	1.038	1.038	1.038

Background 2018

	A	B	C
A	0	0	460
B	26	0	121
C	233	0	0

Committed Development

	A	B	C
A	0	0	14
B	7	0	8
C	18	0	0

Background + Committed

	A	B	C
A	0	0	474
B	33	0	129
C	251	0	0

Development

	A	B	C
A	0	0	43
B	0	0	0
C	31	0	0

Background + Committed + Development

	A	B	C
A	0	0	517
B	33	0	129
C	283	0	0

PM Peak 1700-1800

Background Traffic 2013 count

	A	B	C
A	0	0	232
B	33	0	112
C	352	0	0

Tempro 12-18

	A	B	C
A	1.055	1.055	1.055
B	1.055	1.055	1.055
C	1.055	1.055	1.055

Background 2018

	A	B	C
A	0	0	245
B	35	0	118
C	371	0	0

Committed Development

	A	B	C
A	0	0	10
B	14	0	15
C	26	0	0

Background + Committed

	A	B	C
A	0	0	255
B	49	0	133
C	397	0	0

Development

	A	B	C
A	0	0	40
B	0	0	0
C	40	0	0

Background + Committed + Development

	A	B	C
A	0	0	295
B	49	0	133
C	437	0	0

AM Peak 0800-0900

Tempro 12-26

	A	B	C
A	1.069	1.069	1.069
B	1.069	1.069	1.069
C	1.069	1.069	1.069

Background 2026

	A	B	C
A	0	0	473
B	27	0	125
C	240	0	0

Committed Development

	A	B	C
A	0	0	14
B	7	0	8
C	18	0	0

Background + Committed

	A	B	C
A	0	0	487
B	34	0	133
C	258	0	0

Development

	A	B	C
A	0	0	43
B	0	0	0
C	31	0	0

Background + Committed + Development

	A	B	C
A	0	0	530
B	34	0	133
C	290	0	0

PM Peak 1700-1800

Tempro 12-26

	A	B	C
A	1.113	1.113	1.113
B	1.113	1.113	1.113
C	1.113	1.113	1.113

Background 2026

	A	B	C
A	0	0	258
B	37	0	125
C	391	0	0

Committed Development

	A	B	C
A	0	0	10
B	14	0	15
C	26	0	0

Background + Committed

	A	B	C
A	0	0	268
B	51	0	140
C	417	0	0

Development

	A	B	C
A	0	0	40
B	0	0	0
C	40	0	0

Background + Committed + Development

	A	B	C
A	0	0	309
B	51	0	140
C	458	0	0

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.2.316 [14 Feb 2013]

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

Filename: J3-Ashdon Rd_Chaters Hill.arc8
Path: S:\JPP\JPP Schemes R\R6694PP - Saffron Walden\Reports\TA\Junction Modelling\J3-Ashdon Rd_Chaters Hill
Report generation date: 02/12/2013 10:19:16

» (Default Analysis Set) - 2018 - Back + Comm, AM
» (Default Analysis Set) - 2018 - Back + Comm + Prop, AM
» (Default Analysis Set) - 2018 - Back + Comm, PM
» (Default Analysis Set) - 2018 - Back + Comm + Prop, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
A1 - 2018 - Back + Comm					
Stream B-AC	0.50	10.16	0.33	B	10.16
Stream C-A	-	-	-	-	
Stream C-B	0.00	0.00	0.00	A	
Stream A-B	-	-	-	-	
Stream A-C	-	-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - 2018 - Back + Comm, AM" model duration: 07:45 - 09:15
"D2 - 2018 - Back + Comm + Prop, AM" model duration: 07:45 - 09:15
"D3 - 2018 - Back + Comm, PM" model duration: 16:45 - 18:15
"D4 - 2018 - Back + Comm + Prop, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 02/12/2013 10:19:15

File summary

File Description

Title	J3 Ashdon Rd / Chaters Hill
Location	
Site Number	
Date	21/11/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
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) - 2018 - Back + Comm, 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)	N/A		✓				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
2018 - Back + Comm, AM	2018 - Back + Comm	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		10.16	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Ashdon Rd (E)		Major
B	Chaters Hill		Minor
C	Ashdon Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.66		0.00		2.20	0.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	4.45										50	17

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574.957	0.102	0.257	0.162	0.367
1	B-C	726.769	0.108	0.274	-	-
1	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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	✓	474.00	100.000
B	ONE HOUR	✓	162.00	100.000
C	ONE HOUR	✓	251.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	0.000	474.000
	B	33.000	0.000	129.000
	C	251.000	0.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.20	0.00	0.80
	C	1.00	0.00	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

Stream	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)
B-AC	0.33	10.16	0.50	B	148.65	222.98	33.07	8.90	0.37	33.07	8.90
C-A	-	-	-	-	230.32	345.48	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	434.95	652.43	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	121.96	30.49	120.92	0.00	582.87	0.209	0.00	0.26	7.776	A
C-A	188.97	47.24	188.97	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	496.88	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	356.85	89.21	356.85	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	145.63	36.41	145.30	0.00	561.84	0.259	0.26	0.35	8.635	A
C-A	225.64	56.41	225.64	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	481.92	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	426.12	106.53	426.12	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	178.37	44.59	177.77	0.00	532.56	0.335	0.35	0.50	10.129	B
C-A	276.36	69.09	276.36	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	461.24	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	521.88	130.47	521.88	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	178.37	44.59	178.35	0.00	532.56	0.335	0.50	0.50	10.163	B
C-A	276.36	69.09	276.36	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	461.24	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	521.88	130.47	521.88	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	145.63	36.41	146.22	0.00	561.84	0.259	0.50	0.35	8.673	A
C-A	225.64	56.41	225.64	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	481.92	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	426.12	106.53	426.12	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	121.96	30.49	122.31	0.00	582.87	0.209	0.35	0.27	7.823	A
C-A	188.97	47.24	188.97	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	496.88	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	356.85	89.21	356.85	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	3.78	0.25	7.776	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.04	0.34	8.635	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.17	0.48	10.129	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.47	0.50	10.163	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.49	0.37	8.673	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	4.12	0.27	7.823	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 - Back + Comm + Prop, 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)	N/A		✓				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
2018 - Back + Comm + Prop, AM	2018 - Back + Comm + Prop	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		10.62	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Ashdon Rd (E)		Major
B	Chaters Hill		Minor
C	Ashdon Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.66		0.00		2.20	0.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	4.45										50	17

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574.957	0.102	0.257	0.162	0.367
1	B-C	726.769	0.108	0.274	-	-
1	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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	✓	517.00	100.000
B	ONE HOUR	✓	162.00	100.000
C	ONE HOUR	✓	283.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	0.000	517.000
	B	33.000	0.000	129.000
	C	283.000	0.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.20	0.00	0.80
	C	1.00	0.00	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

Stream	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)
B-AC	0.34	10.62	0.52	B	148.65	222.98	34.20	9.20	0.38	34.21	9.20
C-A	-	-	-	-	259.69	389.53	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	474.41	711.61	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	121.96	30.49	120.89	0.00	572.67	0.213	0.00	0.27	7.956	A
C-A	213.06	53.26	213.06	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	489.89	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	389.22	97.31	389.22	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	145.63	36.41	145.28	0.00	549.57	0.265	0.27	0.36	8.896	A
C-A	254.41	63.60	254.41	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	473.57	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	464.77	116.19	464.77	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	178.37	44.59	177.72	0.00	517.34	0.345	0.36	0.52	10.580	B
C-A	311.59	77.90	311.59	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	451.01	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	569.23	142.31	569.23	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	178.37	44.59	178.35	0.00	517.34	0.345	0.52	0.52	10.617	B
C-A	311.59	77.90	311.59	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	451.01	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	569.23	142.31	569.23	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	145.63	36.41	146.26	0.00	549.57	0.265	0.52	0.37	8.939	A
C-A	254.41	63.60	254.41	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	473.57	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	464.77	116.19	464.77	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	121.96	30.49	122.33	0.00	572.67	0.213	0.37	0.27	8.000	A
C-A	213.06	53.26	213.06	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	489.89	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	389.22	97.31	389.22	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	3.86	0.26	7.956	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.19	0.35	8.896	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.48	0.50	10.580	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.80	0.52	10.617	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.66	0.38	8.939	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	4.22	0.28	8.000	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 - Back + Comm, 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)	N/A		✓				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
2018 - Back + Comm, PM	2018 - Back + Comm	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		9.68	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Ashdon Rd (E)		Major
B	Chaters Hill		Minor
C	Ashdon Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.66		0.00		2.20	0.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	4.45										50	17

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574.957	0.102	0.257	0.162	0.367
1	B-C	726.769	0.108	0.274	-	-
1	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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	✓	255.00	100.000
B	ONE HOUR	✓	182.00	100.000
C	ONE HOUR	✓	397.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	0.000	255.000
	B	49.000	0.000	133.000
	C	397.000	0.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.27	0.00	0.73
	C	1.00	0.00	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

Stream	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)
B-AC	0.35	9.68	0.53	A	167.01	250.51	35.86	8.59	0.40	35.87	8.59
C-A	-	-	-	-	364.29	546.44	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	233.99	350.99	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	137.02	34.25	135.87	0.00	606.82	0.226	0.00	0.29	7.625	A
C-A	298.88	74.72	298.88	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	532.50	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	191.98	47.99	191.98	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	163.61	40.90	163.26	0.00	592.45	0.276	0.29	0.38	8.381	A
C-A	356.89	89.22	356.89	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	524.45	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	229.24	57.31	229.24	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	200.39	50.10	199.77	0.00	572.28	0.350	0.38	0.53	9.647	A
C-A	437.11	109.28	437.11	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	513.32	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	280.76	70.19	280.76	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	200.39	50.10	200.37	0.00	572.28	0.350	0.53	0.53	9.679	A
C-A	437.11	109.28	437.11	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	513.32	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	280.76	70.19	280.76	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	163.61	40.90	164.21	0.00	592.45	0.276	0.53	0.39	8.419	A
C-A	356.89	89.22	356.89	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	524.45	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	229.24	57.31	229.24	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	137.02	34.25	137.39	0.00	606.82	0.226	0.39	0.29	7.676	A
C-A	298.88	74.72	298.88	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	532.50	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	191.98	47.99	191.98	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	4.16	0.28	7.625	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.50	0.37	8.381	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.69	0.51	9.647	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.99	0.53	9.679	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.98	0.40	8.419	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	4.54	0.30	7.676	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

(Default Analysis Set) - 2018 - Back + Comm + Prop, 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)	N/A		✓				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
2018 - Back + Comm + Prop, PM	2018 - Back + Comm + Prop	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		10.10	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Ashdon Rd (E)		Major
B	Chaters Hill		Minor
C	Ashdon Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.66		0.00		2.20	0.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	4.45										50	17

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	574.957	0.102	0.257	0.162	0.367
1	B-C	726.769	0.108	0.274	-	-
1	C-B	573.963	0.216	0.216	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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	✓	295.00	100.000
B	ONE HOUR	✓	182.00	100.000
C	ONE HOUR	✓	437.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	0.000	295.000
	B	49.000	0.000	133.000
	C	437.000	0.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.27	0.00	0.73
	C	1.00	0.00	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

Stream	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)
B-AC	0.36	10.10	0.56	B	167.01	250.51	37.07	8.88	0.41	37.08	8.88
C-A	-	-	-	-	401.00	601.50	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	270.70	406.05	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	137.02	34.25	135.84	0.00	596.43	0.230	0.00	0.29	7.797	A
C-A	329.00	82.25	329.00	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	525.99	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	222.09	55.52	222.09	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	163.61	40.90	163.24	0.00	579.91	0.282	0.29	0.39	8.632	A
C-A	392.85	98.21	392.85	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	516.68	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	265.20	66.30	265.20	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	200.39	50.10	199.73	0.00	556.66	0.360	0.39	0.55	10.066	B
C-A	481.15	120.29	481.15	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	503.81	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	324.80	81.20	324.80	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	200.39	50.10	200.37	0.00	556.66	0.360	0.55	0.56	10.102	B
C-A	481.15	120.29	481.15	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	503.81	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	324.80	81.20	324.80	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	163.61	40.90	164.25	0.00	579.91	0.282	0.56	0.40	8.675	A
C-A	392.85	98.21	392.85	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	516.68	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	265.20	66.30	265.20	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	137.02	34.25	137.41	0.00	596.43	0.230	0.40	0.30	7.850	A
C-A	329.00	82.25	329.00	0.00	-	-	-	-	-	-
C-B	0.00	0.00	0.00	0.00	525.99	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	222.09	55.52	222.09	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	4.25	0.28	7.797	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	5.66	0.38	8.632	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	8.01	0.53	10.066	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	8.34	0.56	10.102	B	B
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	6.17	0.41	8.675	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

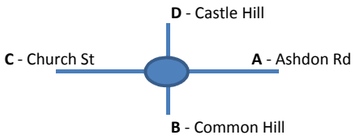
Queueing Delay results: (18:00-18:15)

Stream	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
B-AC	4.65	0.31	7.850	A	A
C-A	-	-	-	-	-
C-B	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Appendix O

J4 - Ashdon Road/ Castle Hill / Common Hill / Castle Street - – Junction Assessment Data

4 - Ashdon Rd / Castle Hill / Common Hill / Church Street



AM Peak 0800-0900

Background Traffic 2013 count

	A	B	C	D
A	1	133	335	79
B	101	0	57	79
C	0	0	0	0
D	125	255	204	0

Tempro 12-18

	A	B	C	D
A	1.038	1.038	1.038	1.038
B	1.038	1.038	1.038	1.038
C	1.038	1.038	1.038	1.038
D	1.038	1.038	1.038	1.038

Background 2018

	A	B	C	D
A	1	138	347	82
B	105	0	59	82
C	0	0	0	0
D	130	265	212	0

Committed Development

	A	B	C	D
A	0	4	14	6
B	0	0	0	0
C	0	0	0	0
D	9	0	0	0

Background + Committed

	A	B	C	D
A	1	142	361	88
B	105	0	59	82
C	0	0	0	0
D	139	265	212	0

Development

	A	B	C	D
A	0	0	36	7
B	0	0	0	0
C	0	0	0	0
D	31	0	0	0

Background + Committed + Development

	A	B	C	D
A	1	142	397	95
B	105	0	59	82
C	0	0	0	0
D	170	265	212	0

PM Peak 1700-1800

Background Traffic 2013 count

	A	B	C	D
A	4	77	182	81
B	158	1	99	147
C	0	0	0	0
D	183	199	117	0

Tempro 12-18

	A	B	C	D
A	1.055	1.055	1.055	1.055
B	1.055	1.055	1.055	1.055
C	1.055	1.055	1.055	1.055
D	1.055	1.055	1.055	1.055

Background 2018

	A	B	C	D
A	4	81	192	86
B	166	1	105	155
C	0	0	0	0
D	193	210	123	0

Committed Development

	A	B	C	D
A	0	3	14	10
B	13	0	0	0
C	0	0	0	0
D	13	0	0	0

Background + Committed

	A	B	C	D
A	4	84	205	95
B	179	1	105	155
C	0	0	0	0
D	206	210	123	0

Development

	A	B	C	D
A	0	0	34	7
B	0	0	0	0
C	0	0	0	0
D	40	0	0	0

Background + Committed + Development

	A	B	C	D
A	4	84	239	102
B	179	1	105	155
C	0	0	0	0
D	246	210	123	0

AM Peak 0800-0900

Tempro 12-26

	A	B	C	D
A	1.069	1.069	1.069	1.069
B	1.069	1.069	1.069	1.069
C	1.069	1.069	1.069	1.069
D	1.069	1.069	1.069	1.069

Background 2026

	A	B	C	D
A	1	142	358	85
B	108	0	60	85
C	0	0	0	0
D	134	273	218	0

Committed Development

	A	B	C	D
A	0	4	14	6
B	0	0	0	0
C	0	0	0	0
D	9	0	0	0

Background + Committed

	A	B	C	D
A	1	146	372	91
B	108	0	60	85
C	0	0	0	0
D	143	273	218	0

Development

	A	B	C	D
A	0	0	36	7
B	0	0	0	0
C	0	0	0	0
D	31	0	0	0

Background + Committed + Development

	A	B	C	D
A	1	146	407	98
B	108	0	60	85
C	0	0	0	0
D	174	273	218	0

PM Peak 1700-1800

Tempro 12-26

	A	B	C	D
A	1.113	1.113	1.113	1.113
B	1.113	1.113	1.113	1.113
C	1.113	1.113	1.113	1.113
D	1.113	1.113	1.113	1.113

Background 2026

	A	B	C	D
A	4	85	202	91
B	175	1	111	163
C	0	0	0	0
D	204	221	130	0

Committed Development

	A	B	C	D
A	0	3	14	10
B	13	0	0	0
C	0	0	0	0
D	13	0	0	0

Background + Committed

	A	B	C	D
A	4	88	216	100
B	188	1	111	163
C	0	0	0	0
D	217	221	130	0

Development

	A	B	C	D
A	0	0	34	7
B	0	0	0	0
C	0	0	0	0
D	40	0	0	0

Background + Committed + Development

	A	B	C	D
A	4	88	250	107
B	188	1	111	163
C	0	0	0	0
D	257	221	130	0

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]

Filename: J4-Ashdon_Church.arc8
Path: S:\JPP\JPP Schemes R\R6694PP - Saffron Walden\Reports\TA\Junction Modelling\J4-Ashdon_Church
Report generation date: 02/12/2013 11:32:47

» (Default Analysis Set) - 2018 - Back + Comm, AM
» (Default Analysis Set) - 2018 - Back + Comm + Dev, AM
» (Default Analysis Set) - 2018 - Back + Comm, PM
» (Default Analysis Set) - 2018 - Back + Comm + Dev, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	A1 - 2018 - Back + Comm				
Arm 1	16.70	93.96	0.99	F	46.31
Arm 2	0.53	7.12	0.35	A	
Arm 3	0.00	0.00	0.00	A	
Arm 4	2.96	16.17	0.75	C	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D1 - 2018 - Back + Comm, AM " model duration: 07:45 - 09:15
"D2 - 2018 - Back + Comm + Dev, AM" model duration: 07:45 - 09:15
"D3 - 2018 - Back + Comm, PM" model duration: 16:45 - 18:15
"D4 - 2018 - Back + Comm + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 02/12/2013 11:32:46

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	21/11/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
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) - 2018 - Back + Comm, 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
2018 - Back + Comm, AM	2018 - Back + Comm	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	1,2,3,4	46.31	E

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.44	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.576	957.975
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	592.00	100.000
2	ONE HOUR	✓	246.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	616.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	1.000	142.000	361.000	88.000
	2	105.000	0.000	59.000	82.000
	3	0.000	0.000	0.000	0.000
	4	139.000	265.000	212.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.24	0.61	0.15
	2	0.43	0.00	0.24	0.33
	3	0.25	0.25	0.25	0.25
	4	0.23	0.43	0.34	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	0.99	93.96	16.70	F	543.23	814.84	514.90	37.91	5.72	514.99	37.92
2	0.35	7.12	0.53	A	225.73	338.60	33.99	6.02	0.38	33.99	6.02
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.75	16.17	2.96	C	565.25	847.88	160.13	11.33	1.78	160.16	11.33

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
1	445.69	111.42	440.06	183.11	356.03	0.00	752.96	593.39	0.592	0.00	1.41	11.314	B
2	185.20	46.30	184.19	303.35	492.74	0.00	910.58	761.32	0.203	0.00	0.25	4.948	A
3	0.00	0.00	0.00	470.76	206.17	0.00	468.56	235.80	0.000	0.00	0.00	0.000	A
4	463.76	115.94	459.78	126.81	79.36	0.00	922.11	665.39	0.503	0.00	0.99	7.723	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
1	532.20	133.05	526.85	219.62	427.24	0.00	711.96	593.39	0.748	1.41	2.74	18.905	C
2	221.15	55.29	220.77	363.73	590.36	0.00	851.42	761.32	0.260	0.25	0.35	5.704	A
3	0.00	0.00	0.00	564.10	247.03	0.00	447.97	235.80	0.000	0.00	0.00	0.000	A
4	553.77	138.44	551.74	151.91	95.12	0.00	912.55	665.39	0.607	0.99	1.50	9.919	A

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
1	651.80	162.95	615.12	268.16	520.95	0.00	658.00	593.39	0.991	2.74	11.91	58.410	F
2	270.85	67.71	270.16	436.96	699.11	0.00	785.50	761.32	0.345	0.35	0.52	6.977	A
3	0.00	0.00	0.00	671.43	297.84	0.00	422.35	235.80	0.000	0.00	0.00	0.000	A
4	678.23	169.56	672.76	181.49	116.35	0.00	899.68	665.39	0.754	1.50	2.87	15.490	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
1	651.80	162.95	632.65	269.62	524.91	0.00	655.72	593.39	0.994	11.91	16.70	93.959	F
2	270.85	67.71	270.81	443.36	714.19	0.00	776.36	761.32	0.349	0.52	0.53	7.120	A
3	0.00	0.00	0.00	684.03	300.97	0.00	420.78	235.80	0.000	0.00	0.00	0.000	A
4	678.23	169.56	677.87	184.31	116.66	0.00	899.50	665.39	0.754	2.87	2.96	16.171	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
1	532.20	133.05	585.63	221.85	433.07	0.00	708.60	593.39	0.751	16.70	3.34	38.030	E
2	221.15	55.29	221.79	381.07	637.63	0.00	822.76	761.32	0.269	0.53	0.37	5.998	A
3	0.00	0.00	0.00	602.78	256.64	0.00	443.12	235.80	0.000	0.00	0.00	0.000	A
4	553.77	138.44	559.27	160.98	95.66	0.00	912.23	665.39	0.607	2.96	1.59	10.353	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
1	445.69	111.42	453.03	185.15	360.84	0.00	750.20	593.39	0.594	3.34	1.51	12.395	B
2	185.20	46.30	185.65	309.13	504.73	0.00	903.32	761.32	0.205	0.37	0.26	5.020	A
3	0.00	0.00	0.00	481.15	209.23	0.00	467.02	235.80	0.000	0.00	0.00	0.000	A
4	463.76	115.94	465.98	129.22	80.00	0.00	921.72	665.39	0.503	1.59	1.03	7.939	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
1	19.54	1.30	11.314	B	B
2	3.70	0.25	4.948	A	A
3	0.00	0.00	0.000	A	A
4	14.16	0.94	7.723	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
1	37.11	2.47	18.905	C	B
2	5.11	0.34	5.704	A	A
3	0.00	0.00	0.000	A	A
4	21.46	1.43	9.919	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	124.80	8.32	58.410	F	E
2	7.58	0.51	6.977	A	A
3	0.00	0.00	0.000	A	A
4	39.21	2.61	15.490	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
1	216.85	14.46	93.959	F	F
2	7.92	0.53	7.120	A	A
3	0.00	0.00	0.000	A	A
4	43.87	2.92	16.171	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
1	92.08	6.14	38.030	E	D
2	5.71	0.38	5.998	A	A
3	0.00	0.00	0.000	A	A
4	25.32	1.69	10.353	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
1	24.53	1.64	12.395	B	B
2	3.98	0.27	5.020	A	A
3	0.00	0.00	0.000	A	A
4	16.11	1.07	7.939	A	A

(Default Analysis Set) - 2018 - Back + Comm + Dev, 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
2018 - Back + Comm + Dev, AM	2018 - Back + Comm + Dev	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	1,2,3,4	74.41	F

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.44	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.576	957.975
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	635.00	100.000
2	ONE HOUR	✓	246.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	647.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	1.000	142.000	397.000	95.000
	2	105.000	0.000	59.000	82.000
	3	0.000	0.000	0.000	0.000
	4	170.000	265.000	212.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.22	0.63	0.15
	2	0.43	0.00	0.24	0.33
	3	0.25	0.25	0.25	0.25
	4	0.26	0.41	0.33	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	1.07	156.85	32.19	F	582.69	874.03	945.97	64.94	10.51	946.10	64.95
2	0.36	7.32	0.55	A	225.73	338.60	35.37	6.27	0.39	35.37	6.27
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.79	19.02	3.63	C	593.70	890.55	187.22	12.61	2.08	187.26	12.62

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
1	478.06	119.52	471.37	206.18	355.87	0.00	753.05	606.85	0.635	0.00	1.67	12.504	B
2	185.20	46.30	184.16	303.11	524.12	0.00	891.56	755.42	0.208	0.00	0.26	5.082	A
3	0.00	0.00	0.00	497.03	211.25	0.00	466.00	236.78	0.000	0.00	0.00	0.000	A
4	487.10	121.77	482.70	131.91	79.35	0.00	922.12	666.50	0.528	0.00	1.10	8.115	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
1	570.85	142.71	563.16	247.30	427.03	0.00	712.08	606.85	0.802	1.67	3.60	23.035	C
2	221.15	55.29	220.75	363.17	627.01	0.00	829.20	755.42	0.267	0.26	0.36	5.912	A
3	0.00	0.00	0.00	594.82	252.94	0.00	444.98	236.78	0.000	0.00	0.00	0.000	A
4	581.64	145.41	579.22	157.83	95.11	0.00	912.56	666.50	0.637	1.10	1.70	10.718	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
1	699.15	174.79	635.27	301.61	519.94	0.00	658.58	606.85	1.062	3.60	19.57	82.652	F
2	270.85	67.71	270.15	430.91	724.29	0.00	770.24	755.42	0.352	0.36	0.54	7.188	A
3	0.00	0.00	0.00	693.04	301.40	0.00	420.56	236.78	0.000	0.00	0.00	0.000	A
4	712.36	178.09	705.24	185.09	116.31	0.00	899.71	666.50	0.792	1.70	3.48	17.871	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
1	699.15	174.79	648.66	303.63	524.76	0.00	655.80	606.85	1.066	19.57	32.19	156.851	F
2	270.85	67.71	270.81	436.59	736.83	0.00	762.64	755.42	0.355	0.54	0.55	7.319	A
3	0.00	0.00	0.00	703.72	303.93	0.00	419.29	236.78	0.000	0.00	0.00	0.000	A
4	712.36	178.09	711.78	187.31	116.61	0.00	899.52	666.50	0.792	3.48	3.63	19.017	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
1	570.85	142.71	676.72	250.43	434.16	0.00	707.97	606.85	0.806	32.19	5.72	103.681	F
2	221.15	55.29	221.72	392.53	718.35	0.00	773.84	755.42	0.286	0.55	0.40	6.526	A
3	0.00	0.00	0.00	669.22	270.85	0.00	435.96	236.78	0.000	0.00	0.00	0.000	A
4	581.64	145.41	588.90	175.15	95.70	0.00	912.20	666.50	0.638	3.63	1.82	11.373	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
1	478.06	119.52	493.64	208.75	361.10	0.00	750.04	606.85	0.637	5.72	1.83	14.819	B
2	185.20	46.30	185.74	311.00	543.74	0.00	879.68	755.42	0.211	0.40	0.27	5.191	A
3	0.00	0.00	0.00	513.66	215.82	0.00	463.70	236.78	0.000	0.00	0.00	0.000	A
4	487.10	121.77	489.79	135.77	80.06	0.00	921.69	666.50	0.528	1.82	1.14	8.388	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
1	22.99	1.53	12.504	B	B
2	3.80	0.25	5.082	A	A
3	0.00	0.00	0.000	A	A
4	15.58	1.04	8.115	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
1	47.30	3.15	23.035	C	C
2	5.29	0.35	5.912	A	A
3	0.00	0.00	0.000	A	A
4	24.20	1.61	10.718	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
1	186.66	12.44	82.652	F	F
2	7.80	0.52	7.188	A	A
3	0.00	0.00	0.000	A	A
4	46.70	3.11	17.871	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
1	389.75	25.98	156.851	F	F
2	8.14	0.54	7.319	A	A
3	0.00	0.00	0.000	A	A
4	53.57	3.57	19.017	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
1	267.45	17.83	103.681	F	F
2	6.22	0.41	6.526	A	A
3	0.00	0.00	0.000	A	A
4	29.24	1.95	11.373	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
1	31.82	2.12	14.819	B	B
2	4.12	0.27	5.191	A	A
3	0.00	0.00	0.000	A	A
4	17.93	1.20	8.388	A	A

(Default Analysis Set) - 2018 - Back + Comm, 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
2018 - Back + Comm, PM	2018 - Back + Comm	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	1,2,3,4	11.40	B

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.44	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.576	957.975
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	388.00	100.000
2	ONE HOUR	✓	440.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	539.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	4.000	84.000	205.000	95.000
	2	179.000	1.000	105.000	155.000
	3	0.000	0.000	0.000	0.000
	4	206.000	210.000	123.000	0.000

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

		To			
		1	2	3	4
From	1	0.01	0.22	0.53	0.24
	2	0.41	0.00	0.24	0.35
	3	0.25	0.25	0.25	0.25
	4	0.38	0.39	0.23	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	0.57	11.27	1.32	B	356.04	534.05	78.99	8.87	0.88	79.00	8.88
2	0.52	8.18	1.09	A	403.75	605.63	66.81	6.62	0.74	66.82	6.62
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.70	14.13	2.28	B	494.60	741.89	128.02	10.35	1.42	128.04	10.36

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
1	292.11	73.03	289.90	290.79	249.39	0.00	814.37	657.34	0.359	0.00	0.55	6.835	A
2	331.26	82.81	329.34	220.31	318.98	0.00	1015.91	773.01	0.326	0.00	0.48	5.228	A
3	0.00	0.00	0.00	323.60	324.71	0.00	408.81	191.28	0.000	0.00	0.00	0.000	A
4	405.79	101.45	402.46	187.00	137.72	0.00	886.73	687.42	0.458	0.00	0.83	7.384	A

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
1	348.80	87.20	347.87	348.77	299.27	0.00	785.64	657.34	0.444	0.55	0.79	8.205	A
2	395.55	98.89	394.78	264.37	382.77	0.00	977.24	773.01	0.405	0.48	0.67	6.173	A
3	0.00	0.00	0.00	388.22	389.33	0.00	376.24	191.28	0.000	0.00	0.00	0.000	A
4	484.55	121.14	482.96	224.24	165.09	0.00	870.14	687.42	0.557	0.83	1.23	9.259	A

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
1	427.20	106.80	425.15	426.09	365.28	0.00	747.64	657.34	0.571	0.79	1.30	11.091	B
2	484.45	121.11	482.83	322.80	467.63	0.00	925.81	773.01	0.523	0.67	1.08	8.097	A
3	0.00	0.00	0.00	474.37	476.09	0.00	332.50	191.28	0.000	0.00	0.00	0.000	A
4	593.45	148.36	589.47	274.18	201.90	0.00	847.82	687.42	0.700	1.23	2.22	13.720	B

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
1	427.20	106.80	427.11	428.19	367.61	0.00	746.30	657.34	0.572	1.30	1.32	11.270	B
2	484.45	121.11	484.40	324.70	470.02	0.00	924.36	773.01	0.524	1.08	1.09	8.180	A
3	0.00	0.00	0.00	476.64	477.78	0.00	331.65	191.28	0.000	0.00	0.00	0.000	A
4	593.45	148.36	593.24	275.22	202.57	0.00	847.41	687.42	0.700	2.22	2.28	14.130	B

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
1	348.80	87.20	350.82	351.89	302.71	0.00	783.66	657.34	0.445	1.32	0.82	8.355	A
2	395.55	98.89	397.15	267.18	386.35	0.00	975.07	773.01	0.406	1.09	0.69	6.245	A
3	0.00	0.00	0.00	391.61	391.89	0.00	374.95	191.28	0.000	0.00	0.00	0.000	A
4	484.55	121.14	488.51	225.80	166.09	0.00	869.53	687.42	0.557	2.28	1.29	9.545	A

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
1	292.11	73.03	293.10	293.85	252.52	0.00	812.57	657.34	0.359	0.82	0.57	6.942	A
2	331.26	82.81	332.06	222.98	322.63	0.00	1013.69	773.01	0.327	0.69	0.49	5.289	A
3	0.00	0.00	0.00	327.09	327.60	0.00	407.35	191.28	0.000	0.00	0.00	0.000	A
4	405.79	101.45	407.51	188.74	138.86	0.00	886.03	687.42	0.458	1.29	0.86	7.549	A

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
1	7.96	0.53	6.835	A	A
2	6.97	0.46	5.228	A	A
3	0.00	0.00	0.000	A	A
4	11.89	0.79	7.384	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.39	0.76	8.205	A	A
2	9.82	0.65	6.173	A	A
3	0.00	0.00	0.000	A	A
4	17.65	1.18	9.259	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	18.44	1.23	11.091	B	B
2	15.52	1.03	8.097	A	A
3	0.00	0.00	0.000	A	A
4	30.88	2.06	13.720	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	19.66	1.31	11.270	B	B
2	16.28	1.09	8.180	A	A
3	0.00	0.00	0.000	A	A
4	33.86	2.26	14.130	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.75	0.85	8.355	A	A
2	10.70	0.71	6.245	A	A
3	0.00	0.00	0.000	A	A
4	20.38	1.36	9.545	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.78	0.59	6.942	A	A
2	7.53	0.50	5.289	A	A
3	0.00	0.00	0.000	A	A
4	13.36	0.89	7.549	A	A

(Default Analysis Set) - 2018 - Back + Comm + Dev, 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
2018 - Back + Comm + Dev, PM	2018 - Back + Comm + Dev	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	1,2,3,4	13.35	B

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.44	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.576	957.975
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	429.00	100.000
2	ONE HOUR	✓	440.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	579.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	4.000	84.000	239.000	102.000
	2	179.000	1.000	105.000	155.000
	3	0.000	0.000	0.000	0.000
	4	246.000	210.000	123.000	0.000

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

		To			
		1	2	3	4
From	1	0.01	0.20	0.56	0.24
	2	0.41	0.00	0.24	0.35
	3	0.25	0.25	0.25	0.25
	4	0.42	0.36	0.21	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	0.63	13.12	1.69	B	393.66	590.49	97.23	9.88	1.08	97.25	9.88
2	0.54	8.72	1.16	A	403.75	605.63	70.02	6.94	0.78	70.03	6.94
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.75	17.03	2.93	C	531.30	796.95	156.02	11.75	1.73	156.05	11.75

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
1	322.97	80.74	320.38	320.53	249.26	0.00	814.44	672.70	0.397	0.00	0.65	7.249	A
2	331.26	82.81	329.28	220.20	349.44	0.00	997.44	763.06	0.332	0.00	0.49	5.373	A
3	0.00	0.00	0.00	348.86	329.87	0.00	406.21	195.85	0.000	0.00	0.00	0.000	A
4	435.90	108.98	432.10	192.17	137.69	0.00	886.74	688.11	0.492	0.00	0.95	7.855	A

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
1	385.66	96.42	384.47	384.47	299.11	0.00	785.74	672.70	0.491	0.65	0.95	8.945	A
2	395.55	98.89	394.73	264.24	419.34	0.00	955.08	763.06	0.414	0.49	0.70	6.415	A
3	0.00	0.00	0.00	418.54	395.53	0.00	373.11	195.85	0.000	0.00	0.00	0.000	A
4	520.51	130.13	518.51	230.46	165.06	0.00	870.15	688.11	0.598	0.95	1.45	10.177	B

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
1	472.34	118.08	469.52	469.23	364.56	0.00	748.05	672.70	0.631	0.95	1.65	12.793	B
2	484.45	121.11	482.66	322.24	511.83	0.00	899.01	763.06	0.539	0.70	1.15	8.608	A
3	0.00	0.00	0.00	511.00	483.49	0.00	328.77	195.85	0.000	0.00	0.00	0.000	A
4	637.49	159.37	631.96	281.66	201.83	0.00	847.86	688.11	0.752	1.45	2.83	16.260	C

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
1	472.34	118.08	472.19	472.15	367.52	0.00	746.35	672.70	0.633	1.65	1.69	13.115	B
2	484.45	121.11	484.39	324.63	515.08	0.00	897.05	763.06	0.540	1.15	1.16	8.721	A
3	0.00	0.00	0.00	514.00	485.47	0.00	327.78	195.85	0.000	0.00	0.00	0.000	A
4	637.49	159.37	637.11	282.91	202.56	0.00	847.42	688.11	0.752	2.83	2.93	17.034	C

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
1	385.66	96.42	388.46	388.78	303.47	0.00	783.23	672.70	0.492	1.69	0.99	9.184	A
2	395.55	98.89	397.32	267.78	424.16	0.00	952.16	763.06	0.415	1.16	0.72	6.508	A
3	0.00	0.00	0.00	422.99	398.49	0.00	371.62	195.85	0.000	0.00	0.00	0.000	A
4	520.51	130.13	526.09	232.33	166.16	0.00	869.48	688.11	0.599	2.93	1.53	10.646	B

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
1	322.97	80.74	324.25	324.27	252.71	0.00	812.45	672.70	0.398	0.99	0.67	7.395	A
2	331.26	82.81	332.12	223.14	353.83	0.00	994.78	763.06	0.333	0.72	0.50	5.439	A
3	0.00	0.00	0.00	352.97	332.98	0.00	404.64	195.85	0.000	0.00	0.00	0.000	A
4	435.90	108.98	438.09	194.09	138.89	0.00	886.02	688.11	0.492	1.53	0.98	8.077	A

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
1	9.31	0.62	7.249	A	A
2	7.15	0.48	5.373	A	A
3	0.00	0.00	0.000	A	A
4	13.53	0.90	7.855	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.65	0.91	8.945	A	A
2	10.19	0.68	6.415	A	A
3	0.00	0.00	0.000	A	A
4	20.69	1.38	10.177	B	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
1	23.21	1.55	12.793	B	B
2	16.44	1.10	8.608	A	A
3	0.00	0.00	0.000	A	A
4	38.57	2.57	16.260	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	25.12	1.67	13.115	B	B
2	17.33	1.16	8.721	A	A
3	0.00	0.00	0.000	A	A
4	43.35	2.89	17.034	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.57	1.04	9.184	A	A
2	11.17	0.74	6.508	A	A
3	0.00	0.00	0.000	A	A
4	24.47	1.63	10.646	B	B

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
1	10.38	0.69	7.395	A	A
2	7.75	0.52	5.439	A	A
3	0.00	0.00	0.000	A	A
4	15.40	1.03	8.077	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]

Filename: J4-Ashdon_Church-Nil Det.arc8
Path: S:\JPP\JPP Schemes R\R6694PP - Saffron Walden\Reports\TA\Junction Modelling\J4-Ashdon_Church
Report generation date: 02/12/2013 11:36:38

» (Default Analysis Set) - 2018 - Back + Comm + Dev, AM
» (Default Analysis Set) - 2018 - Back + Comm + Dev, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	A1 - 2018 - Back + Comm + Dev				
Arm 1	16.89	88.70	0.99	F	46.13
Arm 2	0.56	7.54	0.36	A	
Arm 3	0.00	0.00	0.00	A	
Arm 4	3.63	19.02	0.79	C	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

"D2 - 2018 - Back + Comm + Dev, AM " model duration: 07:45 - 09:15
"D4 - 2018 - Back + Comm + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 02/12/2013 11:36:37

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	21/11/2013
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
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) - 2018 - Back + Comm + Dev, 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
2018 - Back + Comm + Dev, AM	2018 - Back + Comm + Dev	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	1,2,3,4	46.13	E

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.80	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.589	1013.945
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	635.00	100.000
2	ONE HOUR	✓	246.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	647.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	1.000	142.000	397.000	95.000
	2	105.000	0.000	59.000	82.000
	3	0.000	0.000	0.000	0.000
	4	170.000	265.000	212.000	0.000

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

		To			
		1	2	3	4
From	1	0.00	0.22	0.63	0.15
	2	0.43	0.00	0.24	0.33
	3	0.25	0.25	0.25	0.25
	4	0.26	0.41	0.33	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	0.99	88.70	16.89	F	582.69	874.03	519.96	35.69	5.78	520.05	35.70
2	0.36	7.54	0.56	A	225.73	338.60	35.52	6.29	0.39	35.52	6.29
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.79	19.02	3.63	C	593.70	890.55	187.22	12.61	2.08	187.26	12.62

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
1	478.06	119.52	472.37	206.18	355.87	0.00	804.30	651.71	0.594	0.00	1.42	10.672	B
2	185.20	46.30	184.16	303.34	524.90	0.00	891.09	732.84	0.208	0.00	0.26	5.085	A
3	0.00	0.00	0.00	497.66	211.40	0.00	465.92	242.02	0.000	0.00	0.00	0.000	A
4	487.10	121.77	482.70	132.06	79.35	0.00	922.12	669.92	0.528	0.00	1.10	8.115	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
1	570.85	142.71	565.46	247.30	427.03	0.00	762.39	651.71	0.749	1.42	2.77	17.796	C
2	221.15	55.29	220.75	363.69	628.80	0.00	828.12	732.84	0.267	0.26	0.36	5.923	A
3	0.00	0.00	0.00	596.26	253.29	0.00	444.81	242.02	0.000	0.00	0.00	0.000	A
4	581.64	145.41	579.22	158.18	95.11	0.00	912.56	669.92	0.637	1.10	1.70	10.718	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
1	699.15	174.79	661.87	301.63	519.94	0.00	707.65	651.71	0.988	2.77	12.09	55.240	F
2	270.85	67.71	270.10	436.86	744.94	0.00	757.72	732.84	0.357	0.36	0.55	7.383	A
3	0.00	0.00	0.00	709.66	305.38	0.00	418.55	242.02	0.000	0.00	0.00	0.000	A
4	712.36	178.09	705.24	189.05	116.33	0.00	899.70	669.92	0.792	1.70	3.48	17.872	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
1	699.15	174.79	679.94	303.68	524.76	0.00	704.82	651.71	0.992	12.09	16.89	88.701	F
2	270.85	67.71	270.80	443.58	761.11	0.00	747.92	732.84	0.362	0.55	0.56	7.545	A
3	0.00	0.00	0.00	723.27	308.65	0.00	416.91	242.02	0.000	0.00	0.00	0.000	A
4	712.36	178.09	711.78	191.99	116.66	0.00	899.50	669.92	0.792	3.48	3.63	19.018	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
1	570.85	142.71	625.00	250.41	434.16	0.00	758.18	651.71	0.753	16.89	3.36	34.937	D
2	221.15	55.29	221.85	380.97	678.20	0.00	798.18	732.84	0.277	0.56	0.39	6.253	A
3	0.00	0.00	0.00	636.92	263.13	0.00	439.85	242.02	0.000	0.00	0.00	0.000	A
4	581.64	145.41	588.90	167.45	95.68	0.00	912.22	669.92	0.638	3.63	1.82	11.372	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
1	478.06	119.52	485.40	208.71	361.10	0.00	801.23	651.71	0.597	3.36	1.52	11.650	B
2	185.20	46.30	185.68	309.16	537.34	0.00	883.55	732.84	0.210	0.39	0.27	5.161	A
3	0.00	0.00	0.00	508.49	214.53	0.00	464.35	242.02	0.000	0.00	0.00	0.000	A
4	487.10	121.77	489.79	134.51	80.02	0.00	921.71	669.92	0.528	1.82	1.14	8.386	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
1	19.82	1.32	10.672	B	B
2	3.80	0.25	5.085	A	A
3	0.00	0.00	0.000	A	A
4	15.58	1.04	8.115	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
1	37.61	2.51	17.796	C	B
2	5.29	0.35	5.923	A	A
3	0.00	0.00	0.000	A	A
4	24.20	1.61	10.718	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
1	127.12	8.47	55.240	F	E
2	7.99	0.53	7.383	A	A
3	0.00	0.00	0.000	A	A
4	46.70	3.11	17.872	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
1	219.72	14.65	88.701	F	F
2	8.38	0.56	7.545	A	A
3	0.00	0.00	0.000	A	A
4	53.57	3.57	19.018	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
1	91.01	6.07	34.937	D	C
2	5.96	0.40	6.253	A	A
3	0.00	0.00	0.000	A	A
4	29.24	1.95	11.372	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
1	24.67	1.64	11.650	B	B
2	4.10	0.27	5.161	A	A
3	0.00	0.00	0.000	A	A
4	17.92	1.19	8.386	A	A

(Default Analysis Set) - 2018 - Back + Comm + Dev, 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
2018 - Back + Comm + Dev, PM	2018 - Back + Comm + Dev	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	1,2,3,4	12.74	B

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Ashdon Rd	
2	Common Hill	
3	Church Street	
4	Castle Hill	

Capacity Options

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

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	4.10	4.10	4.80	10.00	13.10	8.09	0.00	
2	3.98	3.98	5.57	10.00	10.20	5.62	0.00	
3	3.00	3.00	3.00	0.00	5.00	2.00	0.00	
4	4.15	4.15	4.81	10.00	18.30	13.01	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
1	None
2	None
3	None
4	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)
1		(calculated)	(calculated)	0.589	1013.945
2		(calculated)	(calculated)	0.606	1209.251
3		(calculated)	(calculated)	0.504	572.486
4		(calculated)	(calculated)	0.606	970.221

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 (%)
1	ONE HOUR	✓	429.00	100.000
2	ONE HOUR	✓	440.00	100.000
3	ONE HOUR	✓	0.00	100.000
4	ONE HOUR	✓	579.00	100.000

Turning Proportions

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

		To			
		1	2	3	4
From	1	4.000	84.000	239.000	102.000
	2	179.000	1.000	105.000	155.000
	3	0.000	0.000	0.000	0.000
	4	246.000	210.000	123.000	0.000

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

		To			
		1	2	3	4
From	1	0.01	0.20	0.56	0.24
	2	0.41	0.00	0.24	0.35
	3	0.25	0.25	0.25	0.25
	4	0.42	0.36	0.21	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	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)
1	0.59	11.06	1.43	B	393.66	590.49	84.85	8.62	0.94	84.86	8.62
2	0.54	8.72	1.16	A	403.75	605.63	70.04	6.94	0.78	70.04	6.94
3	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.75	17.03	2.93	C	531.30	796.95	156.02	11.75	1.73	156.05	11.75

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
1	322.97	80.74	320.63	320.53	249.26	0.00	867.11	719.74	0.372	0.00	0.59	6.560	A
2	331.26	82.81	329.28	220.25	349.64	0.00	997.32	739.09	0.332	0.00	0.49	5.374	A
3	0.00	0.00	0.00	349.00	329.93	0.00	406.18	199.19	0.000	0.00	0.00	0.000	A
4	435.90	108.98	432.10	192.23	137.70	0.00	886.74	692.27	0.492	0.00	0.95	7.855	A

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
1	385.66	96.42	384.65	384.47	299.11	0.00	837.74	719.74	0.460	0.59	0.84	7.927	A
2	395.55	98.89	394.73	264.27	419.48	0.00	954.99	739.09	0.414	0.49	0.70	6.416	A
3	0.00	0.00	0.00	418.64	395.57	0.00	373.09	199.19	0.000	0.00	0.00	0.000	A
4	520.51	130.13	518.51	230.51	165.07	0.00	870.15	692.27	0.598	0.95	1.45	10.177	B

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
1	472.34	118.08	470.08	469.24	364.56	0.00	799.19	719.74	0.591	0.84	1.41	10.863	B
2	484.45	121.11	482.66	322.35	512.28	0.00	898.74	739.09	0.539	0.70	1.15	8.614	A
3	0.00	0.00	0.00	511.31	483.63	0.00	328.70	199.19	0.000	0.00	0.00	0.000	A
4	637.49	159.37	631.96	281.79	201.83	0.00	847.86	692.27	0.752	1.45	2.83	16.260	C

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
1	472.34	118.08	472.24	472.15	367.52	0.00	797.44	719.74	0.592	1.41	1.43	11.062	B
2	484.45	121.11	484.39	324.64	515.12	0.00	897.02	739.09	0.540	1.15	1.16	8.721	A
3	0.00	0.00	0.00	514.03	485.48	0.00	327.77	199.19	0.000	0.00	0.00	0.000	A
4	637.49	159.37	637.11	282.92	202.56	0.00	847.42	692.27	0.752	2.83	2.93	17.034	C

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
1	385.66	96.42	387.90	388.77	303.47	0.00	835.17	719.74	0.462	1.43	0.87	8.089	A
2	395.55	98.89	397.32	267.66	423.70	0.00	952.43	739.09	0.415	1.16	0.72	6.507	A
3	0.00	0.00	0.00	422.68	398.35	0.00	371.69	199.19	0.000	0.00	0.00	0.000	A
4	520.51	130.13	526.09	232.19	166.16	0.00	869.49	692.27	0.599	2.93	1.53	10.648	B

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
1	322.97	80.74	324.05	324.26	252.71	0.00	865.07	719.74	0.373	0.87	0.60	6.669	A
2	331.26	82.81	332.12	223.10	353.67	0.00	994.88	739.09	0.333	0.72	0.50	5.440	A
3	0.00	0.00	0.00	352.85	332.93	0.00	404.67	199.19	0.000	0.00	0.00	0.000	A
4	435.90	108.98	438.09	194.04	138.89	0.00	886.02	692.27	0.492	1.53	0.98	8.077	A

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
1	8.46	0.56	6.560	A	A
2	7.15	0.48	5.374	A	A
3	0.00	0.00	0.000	A	A
4	13.53	0.90	7.855	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.17	0.81	7.927	A	A
2	10.19	0.68	6.416	A	A
3	0.00	0.00	0.000	A	A
4	20.69	1.38	10.177	B	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
1	19.95	1.33	10.863	B	B
2	16.45	1.10	8.614	A	A
3	0.00	0.00	0.000	A	A
4	38.57	2.57	16.260	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	21.31	1.42	11.062	B	B
2	17.33	1.16	8.721	A	A
3	0.00	0.00	0.000	A	A
4	43.35	2.89	17.034	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	13.64	0.91	8.089	A	A
2	11.16	0.74	6.507	A	A
3	0.00	0.00	0.000	A	A
4	24.47	1.63	10.648	B	B

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
1	9.32	0.62	6.669	A	A
2	7.75	0.52	5.440	A	A
3	0.00	0.00	0.000	A	A
4	15.40	1.03	8.077	A	A