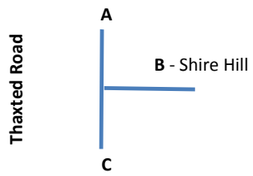
Appendix S

J9 - Shire Hill / Thaxted Road – Junction Assessment Data

9 - Shire Hill / Thaxted Road



AM Peak 0800-0900

Background Traffic 2013 count

	A	B	C
A	0	115	146
B	43	0	47
C	318	170	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	119	152
B	45	0	49
C	330	176	0

Committed Development

	A	B	C
A	0	0	28
B	0	0	0
C	38	0	0

Background + Committed

	A	B	C
A	0	119	180
B	45	0	49
C	368	176	0

Development

	A	B	C
A	0	0	0
B	0	0	59
C	0	43	0

Background + Committed + Development

	A	B	C
A	0	119	180
B	45	0	107
C	368	219	0

PM Peak 1700-1800

Background Traffic 2013 count

	A	B	C
A	0	28	246
B	107	0	181
C	235	49	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	30	260
B	113	0	191
C	248	52	0

Committed Development

	A	B	C
A	0	0	87
B	0	0	0
C	94	0	0

Background + Committed

	A	B	C
A	0	30	347
B	113	0	191
C	342	52	0

Development

	A	B	C
A	0	0	0
B	0	0	56
C	0	55	0

Background + Committed + Development

	A	B	C
A	0	30	347
B	113	0	246
C	342	107	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	123	156
B	46	0	50
C	340	182	0

Committed Development

	A	B	C
A	0	0	28
B	0	0	0
C	38	0	0

Background + Committed

	A	B	C
A	0	123	184
B	46	0	50
C	378	182	0

Development

	A	B	C
A	0	0	0
B	0	0	59
C	0	43	0

Background + Committed + Development

	A	B	C
A	0	123	184
B	46	0	109
C	378	224	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	31	274
B	120	0	201
C	261	55	0

Committed Development

	A	B	C
A	0	0	87
B	0	0	0
C	94	0	0

Background + Committed

	A	B	C
A	0	31	361
B	120	0	201
C	355	55	0

Development

	A	B	C
A	0	0	0
B	0	0	56
C	0	55	0

Background + Committed + Development

	A	B	C
A	0	31	361
B	120	0	257
C	355	110	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: J9-Shire_Thax.arc8
Path: S:\JPP\JPP Schemes R\R6694PP - Saffron Walden\Reports\TA\Junction Modelling\J9-Shire_Thax
Report generation date: 02/12/2013 15:55:15

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	J9 - Shire Hill - Thaxted Rd - 2018 - Back + Comm				
Stream B-C	0.09	6.28	0.09	A	8.01
Stream B-A	0.15	11.07	0.13	B	
Stream C-AB	1.22	7.83	0.45	A	
Stream C-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 + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.2.316 at 02/12/2013 15:55:13

File summary

File Description

Title	J9 - Shire Hill - Thaxted Rd
Location	
Site Number	
Date	20/11/2013
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

J9 - Shire Hill - Thaxted Rd - 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
J9 - Shire Hill - Thaxted Rd	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		8.01	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Thaxted Rd (N)		Major
B	Shire Hill		Minor
C	Thaxted Rd (S)		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	8.10		0.00		2.20	100.00	✓	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 plus flare				10.00	4.90	3.50	3.50	3.50	✓	1.00	50	60

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	558.752	0.092	0.234	0.147	0.334
1	B-C	713.192	0.099	0.251	-	-
1	C-B	631.874	0.222	0.222	-	-

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	✓	299.00	100.000
B	ONE HOUR	✓	94.00	100.000
C	ONE HOUR	✓	544.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	119.000	180.000
	B	45.000	0.000	49.000
	C	368.000	176.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.40	0.60
	B	0.48	0.00	0.52
	C	0.68	0.32	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-C	0.09	6.28	0.09	A	44.96	67.44	6.76	6.01	0.08	6.76	6.01
B-A	0.13	11.07	0.15	B	41.29	61.94	10.28	9.96	0.11	10.28	9.96
C-AB	0.45	7.83	1.22	A	284.16	426.24	74.61	10.50	0.83	74.62	10.50
C-A	-	-	-	-	215.03	322.54	-	-	-	-	-
A-B	-	-	-	-	109.20	163.79	-	-	-	-	-
A-C	-	-	-	-	165.17	247.76	-	-	-	-	-

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-C	36.89	9.22	36.65	0.00	656.87	0.056	0.00	0.06	5.803	A
B-A	33.88	8.47	33.54	0.00	433.71	0.078	0.00	0.08	8.989	A
C-AB	206.17	51.54	204.13	0.00	768.72	0.268	0.00	0.51	6.366	A
C-A	203.38	50.85	203.38	0.00	-	-	-	-	-	-
A-B	89.59	22.40	89.59	0.00	-	-	-	-	-	-
A-C	135.51	33.88	135.51	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-C	44.05	11.01	44.00	0.00	644.71	0.068	0.06	0.07	5.992	A
B-A	40.45	10.11	40.36	0.00	408.90	0.099	0.08	0.11	9.766	A
C-AB	269.21	67.30	268.33	0.00	797.10	0.338	0.51	0.73	6.818	A
C-A	219.83	54.96	219.83	0.00	-	-	-	-	-	-
A-B	106.98	26.74	106.98	0.00	-	-	-	-	-	-
A-C	161.82	40.45	161.82	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-C	53.95	13.49	53.87	0.00	627.23	0.086	0.07	0.09	6.278	A
B-A	49.55	12.39	49.38	0.00	375.00	0.132	0.11	0.15	11.050	B
C-AB	375.68	93.92	373.79	0.00	838.33	0.448	0.73	1.20	7.771	A
C-A	223.27	55.82	223.27	0.00	-	-	-	-	-	-
A-B	131.02	32.76	131.02	0.00	-	-	-	-	-	-
A-C	198.18	49.55	198.18	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-C	53.95	13.49	53.95	0.00	627.05	0.086	0.09	0.09	6.280	A
B-A	49.55	12.39	49.54	0.00	374.61	0.132	0.15	0.15	11.074	B
C-AB	376.53	94.13	376.46	0.00	839.10	0.449	1.20	1.22	7.834	A
C-A	222.42	55.61	222.42	0.00	-	-	-	-	-	-
A-B	131.02	32.76	131.02	0.00	-	-	-	-	-	-
A-C	198.18	49.55	198.18	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-C	44.05	11.01	44.13	0.00	644.44	0.068	0.09	0.07	5.997	A
B-A	40.45	10.11	40.61	0.00	408.34	0.099	0.15	0.11	9.793	A
C-AB	270.15	67.54	271.99	0.00	798.20	0.338	1.22	0.76	6.891	A
C-A	218.90	54.72	218.90	0.00	-	-	-	-	-	-
A-B	106.98	26.74	106.98	0.00	-	-	-	-	-	-
A-C	161.82	40.45	161.82	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-C	36.89	9.22	36.95	0.00	656.48	0.056	0.07	0.06	5.812	A
B-A	33.88	8.47	33.98	0.00	433.05	0.078	0.11	0.09	9.024	A
C-AB	207.21	51.80	208.14	0.00	769.56	0.269	0.76	0.53	6.436	A
C-A	202.34	50.59	202.34	0.00	-	-	-	-	-	-
A-B	89.59	22.40	89.59	0.00	-	-	-	-	-	-
A-C	135.51	33.88	135.51	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-C	0.86	0.06	5.803	A	A
B-A	1.21	0.08	8.989	A	A
C-AB	7.52	0.50	6.366	A	A
C-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-C	1.07	0.07	5.992	A	A
B-A	1.59	0.11	9.766	A	A
C-AB	11.03	0.74	6.818	A	A
C-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-C	1.37	0.09	6.278	A	A
B-A	2.18	0.15	11.050	B	B
C-AB	18.14	1.21	7.771	A	A
C-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-C	1.40	0.09	6.280	A	A
B-A	2.26	0.15	11.074	B	B
C-AB	18.55	1.24	7.834	A	A
C-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-C	1.13	0.08	5.997	A	A
B-A	1.72	0.11	9.793	A	A
C-AB	11.47	0.76	6.891	A	A
C-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-C	0.92	0.06	5.812	A	A
B-A	1.32	0.09	9.024	A	A
C-AB	7.90	0.53	6.436	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

J9 - Shire Hill - Thaxted Rd - 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
J9 - Shire Hill - Thaxted Rd	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		9.42	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Thaxted Rd (N)		Major
B	Shire Hill		Minor
C	Thaxted Rd (S)		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	8.10		0.00		2.20	100.00	✓	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 plus flare				10.00	4.90	3.50	3.50	3.50	✓	1.00	50	60

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	535.296	0.089	0.224	0.141	0.320
1	B-C	742.841	0.103	0.262	-	-
1	C-B	631.874	0.222	0.222	-	-

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	✓	299.00	100.000
B	ONE HOUR	✓	152.00	100.000
C	ONE HOUR	✓	587.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	119.000	180.000
	B	45.000	0.000	107.000
	C	368.000	219.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.40	0.60
	B	0.30	0.00	0.70
	C	0.63	0.37	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-C	0.18	6.76	0.22	A	98.19	147.28	15.55	6.34	0.17	15.55	6.34
B-A	0.15	12.33	0.17	B	41.29	61.94	11.27	10.92	0.13	11.27	10.92
C-AB	0.56	9.82	1.83	A	354.61	531.91	107.03	12.07	1.19	107.05	12.08
C-A	-	-	-	-	184.03	276.05	-	-	-	-	-
A-B	-	-	-	-	109.20	163.79	-	-	-	-	-
A-C	-	-	-	-	165.17	247.76	-	-	-	-	-

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-C	80.56	20.14	80.02	0.00	682.99	0.118	0.00	0.13	5.965	A
B-A	33.88	8.47	33.52	0.00	404.60	0.084	0.00	0.09	9.693	A
C-AB	256.54	64.13	253.83	0.00	768.72	0.334	0.00	0.68	6.975	A
C-A	185.39	46.35	185.39	0.00	-	-	-	-	-	-
A-B	89.59	22.40	89.59	0.00	-	-	-	-	-	-
A-C	135.51	33.88	135.51	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-C	96.19	24.05	96.06	0.00	669.69	0.144	0.13	0.17	6.274	A
B-A	40.45	10.11	40.34	0.00	378.24	0.107	0.09	0.12	10.650	B
C-AB	337.21	84.30	335.86	0.00	798.21	0.422	0.68	1.01	7.802	A
C-A	190.49	47.62	190.49	0.00	-	-	-	-	-	-
A-B	106.98	26.74	106.98	0.00	-	-	-	-	-	-
A-C	161.82	40.45	161.82	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-C	117.81	29.45	117.60	0.00	650.17	0.181	0.17	0.22	6.756	A
B-A	49.55	12.39	49.35	0.00	342.07	0.145	0.12	0.17	12.291	B
C-AB	467.76	116.94	464.64	0.00	838.67	0.558	1.01	1.79	9.658	A
C-A	178.54	44.64	178.54	0.00	-	-	-	-	-	-
A-B	131.02	32.76	131.02	0.00	-	-	-	-	-	-
A-C	198.18	49.55	198.18	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-C	117.81	29.45	117.81	0.00	649.93	0.181	0.22	0.22	6.764	A
B-A	49.55	12.39	49.54	0.00	341.42	0.145	0.17	0.17	12.333	B
C-AB	469.26	117.32	469.11	0.00	839.89	0.559	1.79	1.83	9.819	A
C-A	177.04	44.26	177.04	0.00	-	-	-	-	-	-
A-B	131.02	32.76	131.02	0.00	-	-	-	-	-	-
A-C	198.18	49.55	198.18	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-C	96.19	24.05	96.40	0.00	669.35	0.144	0.22	0.17	6.287	A
B-A	40.45	10.11	40.64	0.00	377.29	0.107	0.17	0.12	10.699	B
C-AB	338.87	84.72	341.93	0.00	799.97	0.424	1.83	1.07	7.953	A
C-A	188.83	47.21	188.83	0.00	-	-	-	-	-	-
A-B	106.98	26.74	106.98	0.00	-	-	-	-	-	-
A-C	161.82	40.45	161.82	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-C	80.56	20.14	80.69	0.00	682.54	0.118	0.17	0.13	5.982	A
B-A	33.88	8.47	33.99	0.00	403.65	0.084	0.12	0.09	9.743	A
C-AB	258.01	64.50	259.45	0.00	769.92	0.335	1.07	0.70	7.092	A
C-A	183.92	45.98	183.92	0.00	-	-	-	-	-	-
A-B	89.59	22.40	89.59	0.00	-	-	-	-	-	-
A-C	135.51	33.88	135.51	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-C	1.93	0.13	5.965	A	A
B-A	1.30	0.09	9.693	A	A
C-AB	9.98	0.67	6.975	A	A
C-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-C	2.45	0.16	6.274	A	A
B-A	1.73	0.12	10.650	B	B
C-AB	15.32	1.02	7.802	A	A
C-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-C	3.22	0.21	6.756	A	A
B-A	2.42	0.16	12.291	B	B
C-AB	27.00	1.80	9.658	A	A
C-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-C	3.30	0.22	6.764	A	A
B-A	2.52	0.17	12.333	B	B
C-AB	27.95	1.86	9.819	A	A
C-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-C	2.59	0.17	6.287	A	A
B-A	1.88	0.13	10.699	B	B
C-AB	16.20	1.08	7.953	A	A
C-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-C	2.06	0.14	5.982	A	A
B-A	1.43	0.10	9.743	A	A
C-AB	10.59	0.71	7.092	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

J9 - Shire Hill - Thaxted Rd - 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
J9 - Shire Hill - Thaxted Rd	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		10.69	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Thaxted Rd (N)		Major
B	Shire Hill		Minor
C	Thaxted Rd (S)		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	8.10		0.00		2.20	100.00	✓	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 plus flare				10.00	4.90	3.50	3.50	3.50	✓	1.00	50	60

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	545.011	0.090	0.228	0.143	0.326
1	B-C	730.561	0.102	0.257	-	-
1	C-B	631.874	0.222	0.222	-	-

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	✓	377.00	100.000
B	ONE HOUR	✓	304.00	100.000
C	ONE HOUR	✓	394.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	30.000	347.000
	B	113.000	0.000	191.000
	C	342.000	52.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.08	0.92
	B	0.37	0.00	0.63
	C	0.87	0.13	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-C	0.38	10.54	0.61	B	175.26	262.90	38.99	8.90	0.43	38.99	8.90
B-A	0.34	15.17	0.52	C	103.69	155.54	32.64	12.59	0.36	32.64	12.59
C-AB	0.13	5.28	0.28	A	81.07	121.61	18.40	9.08	0.20	18.40	9.08
C-A	-	-	-	-	280.47	420.70	-	-	-	-	-
A-B	-	-	-	-	27.53	41.29	-	-	-	-	-
A-C	-	-	-	-	318.41	477.62	-	-	-	-	-

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-C	143.79	35.95	142.61	0.00	622.85	0.231	0.00	0.30	7.478	A
B-A	85.07	21.27	84.10	0.00	428.29	0.199	0.00	0.24	10.431	B
C-AB	58.36	14.59	57.81	0.00	741.76	0.079	0.00	0.14	5.263	A
C-A	238.26	59.57	238.26	0.00	-	-	-	-	-	-
A-B	22.59	5.65	22.59	0.00	-	-	-	-	-	-
A-C	261.24	65.31	261.24	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-C	171.71	42.93	171.29	0.00	595.88	0.288	0.30	0.40	8.470	A
B-A	101.58	25.40	101.23	0.00	401.99	0.253	0.24	0.33	11.954	B
C-AB	77.67	19.42	77.46	0.00	768.13	0.101	0.14	0.19	5.216	A
C-A	276.53	69.13	276.53	0.00	-	-	-	-	-	-
A-B	26.97	6.74	26.97	0.00	-	-	-	-	-	-
A-C	311.95	77.99	311.95	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-C	210.29	52.57	209.48	0.00	552.59	0.381	0.40	0.60	10.467	B
B-A	124.42	31.10	123.70	0.00	361.93	0.344	0.33	0.51	15.064	C
C-AB	106.94	26.74	106.60	0.00	801.51	0.133	0.19	0.28	5.186	A
C-A	326.86	81.71	326.86	0.00	-	-	-	-	-	-
A-B	33.03	8.26	33.03	0.00	-	-	-	-	-	-
A-C	382.05	95.51	382.05	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-C	210.29	52.57	210.27	0.00	551.84	0.381	0.60	0.61	10.537	B
B-A	124.42	31.10	124.39	0.00	361.61	0.344	0.51	0.52	15.170	C
C-AB	107.06	26.77	107.05	0.00	801.66	0.134	0.28	0.28	5.191	A
C-A	326.74	81.68	326.74	0.00	-	-	-	-	-	-
A-B	33.03	8.26	33.03	0.00	-	-	-	-	-	-
A-C	382.05	95.51	382.05	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-C	171.71	42.93	172.50	0.00	594.99	0.289	0.61	0.41	8.538	A
B-A	101.58	25.40	102.28	0.00	401.69	0.253	0.52	0.34	12.053	B
C-AB	77.82	19.45	78.15	0.00	768.36	0.101	0.28	0.20	5.224	A
C-A	276.38	69.09	276.38	0.00	-	-	-	-	-	-
A-B	26.97	6.74	26.97	0.00	-	-	-	-	-	-
A-C	311.95	77.99	311.95	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-C	143.79	35.95	144.22	0.00	621.90	0.231	0.41	0.30	7.542	A
B-A	85.07	21.27	85.44	0.00	427.99	0.199	0.34	0.25	10.522	B
C-AB	58.59	14.65	58.81	0.00	741.97	0.079	0.20	0.14	5.276	A
C-A	238.03	59.51	238.03	0.00	-	-	-	-	-	-
A-B	22.59	5.65	22.59	0.00	-	-	-	-	-	-
A-C	261.24	65.31	261.24	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-C	4.29	0.29	7.478	A	A
B-A	3.49	0.23	10.431	B	B
C-AB	2.05	0.14	5.263	A	A
C-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-C	5.83	0.39	8.470	A	A
B-A	4.82	0.32	11.954	B	B
C-AB	2.88	0.19	5.216	A	A
C-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-C	8.70	0.58	10.467	B	B
B-A	7.31	0.49	15.064	C	B
C-AB	4.17	0.28	5.186	A	A
C-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-C	9.11	0.61	10.537	B	B
B-A	7.73	0.52	15.170	C	B
C-AB	4.22	0.28	5.191	A	A
C-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-C	6.38	0.43	8.538	A	A
B-A	5.38	0.36	12.053	B	B
C-AB	2.94	0.20	5.224	A	A
C-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-C	4.68	0.31	7.542	A	A
B-A	3.90	0.26	10.522	B	B
C-AB	2.13	0.14	5.276	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

J9 - Shire Hill - Thaxted Rd - 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
J9 - Shire Hill - Thaxted Rd	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 + Dev, PM	2018 - Back + Comm + Dev	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		11.89	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Thaxted Rd (N)		Major
B	Shire Hill		Minor
C	Thaxted Rd (S)		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	8.10		0.00		2.20	100.00	✓	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 plus flare				10.00	4.90	3.50	3.50	3.50	✓	1.00	50	60

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	537.699	0.089	0.225	0.142	0.321
1	B-C	739.804	0.103	0.260	-	-
1	C-B	631.874	0.222	0.222	-	-

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	✓	377.00	100.000
B	ONE HOUR	✓	359.00	100.000
C	ONE HOUR	✓	449.00	100.000

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	30.000	347.000
	B	113.000	0.000	246.000
	C	342.000	107.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.08	0.92
	B	0.31	0.00	0.69
	C	0.76	0.24	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-C	0.50	13.09	0.97	B	225.73	338.60	58.35	10.34	0.65	58.36	10.34
B-A	0.39	18.45	0.63	C	103.69	155.54	37.38	14.42	0.42	37.38	14.42
C-AB	0.27	6.21	0.61	A	167.73	251.59	39.05	9.31	0.43	39.06	9.31
C-A	-	-	-	-	244.28	366.42	-	-	-	-	-
A-B	-	-	-	-	27.53	41.29	-	-	-	-	-
A-C	-	-	-	-	318.41	477.62	-	-	-	-	-

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-C	185.20	46.30	183.55	0.00	627.47	0.295	0.00	0.41	8.080	A
B-A	85.07	21.27	84.02	0.00	404.56	0.210	0.00	0.26	11.197	B
C-AB	122.68	30.67	121.53	0.00	744.42	0.165	0.00	0.29	5.776	A
C-A	215.35	53.84	215.35	0.00	-	-	-	-	-	-
A-B	22.59	5.65	22.59	0.00	-	-	-	-	-	-
A-C	261.24	65.31	261.24	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-C	221.15	55.29	220.49	0.00	597.43	0.370	0.41	0.58	9.533	A
B-A	101.58	25.40	101.16	0.00	371.96	0.273	0.26	0.37	13.272	B
C-AB	159.81	39.95	159.37	0.00	768.27	0.208	0.29	0.40	5.917	A
C-A	243.83	60.96	243.83	0.00	-	-	-	-	-	-
A-B	26.97	6.74	26.97	0.00	-	-	-	-	-	-
A-C	311.95	77.99	311.95	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-C	270.85	67.71	269.34	0.00	546.90	0.495	0.58	0.95	12.900	B
B-A	124.42	31.10	123.43	0.00	320.26	0.388	0.37	0.62	18.196	C
C-AB	220.08	55.02	219.27	0.00	801.74	0.275	0.40	0.60	6.192	A
C-A	274.27	68.57	274.27	0.00	-	-	-	-	-	-
A-B	33.03	8.26	33.03	0.00	-	-	-	-	-	-
A-C	382.05	95.51	382.05	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-C	270.85	67.71	270.79	0.00	545.61	0.496	0.95	0.97	13.091	B
B-A	124.42	31.10	124.37	0.00	319.40	0.390	0.62	0.63	18.448	C
C-AB	220.39	55.10	220.37	0.00	802.07	0.275	0.60	0.61	6.209	A
C-A	273.96	68.49	273.96	0.00	-	-	-	-	-	-
A-B	33.03	8.26	33.03	0.00	-	-	-	-	-	-
A-C	382.05	95.51	382.05	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-C	221.15	55.29	222.63	0.00	596.05	0.371	0.97	0.60	9.680	A
B-A	101.58	25.40	102.56	0.00	371.12	0.274	0.63	0.38	13.453	B
C-AB	160.19	40.05	160.97	0.00	768.77	0.208	0.61	0.41	5.943	A
C-A	243.45	60.86	243.45	0.00	-	-	-	-	-	-
A-B	26.97	6.74	26.97	0.00	-	-	-	-	-	-
A-C	311.95	77.99	311.95	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-C	185.20	46.30	185.90	0.00	626.27	0.296	0.60	0.43	8.187	A
B-A	85.07	21.27	85.53	0.00	403.82	0.211	0.38	0.27	11.326	B
C-AB	123.21	30.80	123.66	0.00	744.86	0.165	0.41	0.30	5.805	A
C-A	214.82	53.71	214.82	0.00	-	-	-	-	-	-
A-B	22.59	5.65	22.59	0.00	-	-	-	-	-	-
A-C	261.24	65.31	261.24	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-C	5.94	0.40	8.080	A	A
B-A	3.74	0.25	11.197	B	B
C-AB	4.26	0.28	5.776	A	A
C-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-C	8.38	0.56	9.533	A	A
B-A	5.32	0.35	13.272	B	B
C-AB	6.00	0.40	5.917	A	A
C-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-C	13.58	0.91	12.900	B	B
B-A	8.71	0.58	18.196	C	B
C-AB	9.05	0.60	6.192	A	A
C-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-C	14.47	0.96	13.091	B	B
B-A	9.34	0.62	18.448	C	B
C-AB	9.17	0.61	6.209	A	A
C-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-C	9.39	0.63	9.680	A	A
B-A	6.05	0.40	13.453	B	B
C-AB	6.15	0.41	5.943	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

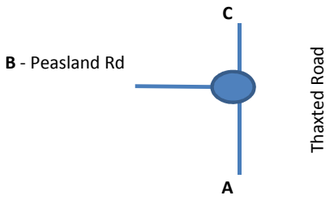
Queueing Delay results: (18:00-18:15)

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-C	6.58	0.44	8.187	A	A
B-A	4.22	0.28	11.326	B	B
C-AB	4.43	0.30	5.805	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Appendix T

J10 - Thaxted Road / Peasland Road – Junction Assessment Data

10 - Thaxted Road / Peasland Road



AM Peak 0800-0900

Background Traffic 2012 count

	A	B	C
A	0	152	232
B	100	0	300
C	121	141	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	158	241
B	104	0	311
C	126	146	0

Committed Development

	A	B	C
A	0	23	36
B	17	0	12
C	23	6	0

Background + Committed

	A	B	C
A	0	181	277
B	121	0	323
C	149	152	0

Development

	A	B	C
A	0	0	7
B	0	0	35
C	10	49	0

Background + Committed + Development

	A	B	C
A	0	181	284
B	121	0	359
C	158	201	0

PM Peak 1700-1800

Background Traffic 2012 count

	A	B	C
A	0	99	109
B	159	0	282
C	214	288	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	104	115
B	168	0	298
C	226	304	0

Committed Development

	A	B	C
A	0	49	82
B	44	0	12
C	82	6	0

Background + Committed

	A	B	C
A	0	153	197
B	212	0	310
C	308	310	0

Development

	A	B	C
A	0	0	9
B	0	0	46
C	9	46	0

Background + Committed + Development

	A	B	C
A	0	153	206
B	212	0	355
C	317	356	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	162	248
B	107	0	321
C	129	151	0

Committed Development

	A	B	C
A	0	23	36
B	17	0	12
C	23	6	0

Background + Committed

	A	B	C
A	0	185	284
B	124	0	333
C	152	157	0

Development

	A	B	C
A	0	0	7
B	0	0	35
C	10	49	0

Background + Committed + Development

	A	B	C
A	0	185	291
B	124	0	368
C	162	206	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	110	121
B	177	0	314
C	238	321	0

Committed Development

	A	B	C
A	0	49	82
B	44	0	12
C	82	6	0

Background + Committed

	A	B	C
A	0	159	203
B	221	0	326
C	320	327	0

Development

	A	B	C
A	0	0	9
B	0	0	46
C	9	46	0

Background + Committed + Development

	A	B	C
A	0	159	213
B	221	0	372
C	329	373	0

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]

Filename: J10-Thax_Peasland.arc8
Path: S:\JPP\JPP Schemes R\R6694PP - Saffron Walden\Reports\TA\Junction Modelling\J10-Thax_Peasland
Report generation date: 02/12/2013 16:57:22

» (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	1.05	7.58	0.52	A	13.64
Arm 2	3.15	24.17	0.77	C	
Arm 3	0.67	7.32	0.40	A	

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 16:57:21

File summary

File Description

Title	J10 - Thaxted Rd / Peasland Rd
Location	
Site Number	
Date	18/11/2013
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
J10 - Thaxted Rd / Peasland Rd	Mini-roundabout	1,2,3	13.64	B

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Thaxted Rd (S)	
2	Peasland Rd	
3	Thaxted Rd (N)	

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

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	3.75	3.50	5.50	14.00	12.00	10.00	0.00	
2	3.50	3.00	4.50	6.00	10.50	8.00	0.00	
3	3.50	3.50	3.50	0.00	14.00	17.00	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

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)	0.602	1079.602
2		(calculated)	(calculated)	0.547	802.558
3		(calculated)	(calculated)	0.658	910.525

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	✓	458.00	100.000
2	ONE HOUR	✓	444.00	100.000
3	ONE HOUR	✓	301.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	181.000	277.000
	2	121.000	0.000	323.000
	3	149.000	152.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.40	0.60
	2	0.27	0.00	0.73
	3	0.50	0.50	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	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	0.52	7.58	1.05	A	420.27	630.40	67.47	6.42	0.75	67.48	6.42
2	0.77	24.17	3.15	C	407.42	611.13	160.15	15.72	1.78	160.19	15.73
3	0.40	7.32	0.67	A	276.20	414.30	44.85	6.49	0.50	44.85	6.50

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	344.81	86.20	342.76	201.55	113.71	0.00	1011.20	831.73	0.341	0.00	0.51	5.369	A
2	334.27	83.57	330.58	249.16	207.30	0.00	689.14	527.35	0.485	0.00	0.92	9.941	A
3	226.61	56.65	225.17	447.79	90.09	0.00	851.27	816.00	0.266	0.00	0.36	5.737	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	411.73	102.93	411.00	241.94	136.42	0.00	997.54	831.73	0.413	0.51	0.70	6.130	A
2	399.15	99.79	397.07	298.85	248.58	0.00	666.56	527.35	0.599	0.92	1.44	13.251	B
3	270.59	67.65	270.15	537.43	108.21	0.00	839.35	816.00	0.322	0.36	0.47	6.318	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	504.27	126.07	502.87	295.19	166.97	0.00	979.17	831.73	0.515	0.70	1.04	7.535	A
2	488.85	122.21	482.59	365.70	304.14	0.00	636.16	527.35	0.768	1.44	3.01	22.549	C
3	331.41	82.85	330.64	655.21	131.52	0.00	824.02	816.00	0.402	0.47	0.66	7.284	A

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	504.27	126.07	504.23	297.11	167.34	0.00	978.94	831.73	0.515	1.04	1.05	7.583	A
2	488.85	122.21	488.27	366.62	304.96	0.00	635.71	527.35	0.769	3.01	3.15	24.170	C
3	331.41	82.85	331.39	660.17	133.07	0.00	823.00	816.00	0.403	0.66	0.67	7.322	A

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	411.73	102.93	413.10	244.84	137.02	0.00	997.18	831.73	0.413	1.05	0.71	6.177	A
2	399.15	99.79	405.56	300.28	249.84	0.00	665.87	527.35	0.599	3.15	1.55	14.147	B
3	270.59	67.65	271.34	544.88	110.52	0.00	837.83	816.00	0.323	0.67	0.48	6.362	A

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	344.81	86.20	345.56	204.14	114.67	0.00	1010.63	831.73	0.341	0.71	0.52	5.420	A
2	334.27	83.57	336.61	251.23	209.00	0.00	688.22	527.35	0.486	1.55	0.96	10.305	B
3	226.61	56.65	227.07	453.87	91.73	0.00	850.19	816.00	0.267	0.48	0.37	5.783	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	7.44	0.50	5.369	A	A
2	13.01	0.87	9.941	A	A
3	5.22	0.35	5.737	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	10.15	0.68	6.130	A	A
2	20.40	1.36	13.251	B	B
3	6.90	0.46	6.318	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	15.09	1.01	7.535	A	A
2	39.99	2.67	22.549	C	C
3	9.66	0.64	7.284	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.75	1.05	7.583	A	A
2	46.41	3.09	24.170	C	C
3	10.01	0.67	7.322	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.01	0.73	6.177	A	A
2	25.14	1.68	14.147	B	B
3	7.43	0.50	6.362	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.03	0.54	5.420	A	A
2	15.20	1.01	10.305	B	B
3	5.62	0.37	5.783	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
J10 - Thaxted Rd / Peasland Rd	Mini-roundabout	1,2,3	17.57	C

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Thaxted Rd (S)	
2	Peasland Rd	
3	Thaxted Rd (N)	

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

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	3.75	3.50	5.50	14.00	12.00	10.00	0.00	
2	3.50	3.00	4.50	6.00	10.50	8.00	0.00	
3	3.50	3.50	3.50	0.00	14.00	17.00	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

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)	0.602	1079.602
2		(calculated)	(calculated)	0.547	802.558
3		(calculated)	(calculated)	0.658	910.525

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	✓	465.00	100.000
2	ONE HOUR	✓	480.00	100.000
3	ONE HOUR	✓	359.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	181.000	284.000
	2	121.000	0.000	359.000
	3	158.000	201.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.39	0.61
	2	0.25	0.00	0.75
	3	0.44	0.56	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	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	0.54	8.28	1.17	A	426.69	640.04	73.21	6.86	0.81	73.22	6.86
2	0.84	33.43	4.63	D	440.46	660.68	212.91	19.34	2.37	212.96	19.34
3	0.48	8.41	0.92	A	329.42	494.14	59.51	7.23	0.66	59.51	7.23

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	350.08	87.52	347.91	208.14	150.29	0.00	989.20	802.79	0.354	0.00	0.54	5.594	A
2	361.37	90.34	357.03	285.71	212.48	0.00	686.31	534.31	0.527	0.00	1.08	10.796	B
3	270.27	67.57	268.43	479.51	90.00	0.00	851.33	821.93	0.317	0.00	0.46	6.176	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	418.03	104.51	417.21	249.84	180.34	0.00	971.12	802.79	0.430	0.54	0.75	6.490	A
2	431.51	107.88	428.72	342.74	254.81	0.00	663.15	534.31	0.651	1.08	1.78	15.169	C
3	322.73	80.68	322.11	575.46	108.07	0.00	839.44	821.93	0.384	0.46	0.62	6.950	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	511.97	127.99	510.34	304.16	220.66	0.00	946.87	802.79	0.541	0.75	1.15	8.216	A
2	528.49	132.12	518.50	419.31	311.69	0.00	632.03	534.31	0.836	1.78	4.28	29.376	D
3	395.27	98.82	394.11	699.49	130.71	0.00	824.55	821.93	0.479	0.62	0.91	8.341	A

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	511.97	127.99	511.93	306.81	221.28	0.00	946.50	802.79	0.541	1.15	1.17	8.281	A
2	528.49	132.12	527.08	420.55	312.66	0.00	631.50	534.31	0.837	4.28	4.63	33.427	D
3	395.27	98.82	395.23	706.87	132.87	0.00	823.13	821.93	0.480	0.91	0.92	8.411	A

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	418.03	104.51	419.63	254.00	181.32	0.00	970.53	802.79	0.431	1.17	0.77	6.552	A
2	431.51	107.88	442.20	344.66	256.29	0.00	662.34	534.31	0.651	4.63	1.96	17.069	C
3	322.73	80.68	323.85	587.02	111.47	0.00	837.20	821.93	0.385	0.92	0.64	7.030	A

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	350.08	87.52	350.93	211.16	151.69	0.00	988.36	802.79	0.354	0.77	0.55	5.656	A
2	361.37	90.34	364.63	288.29	214.33	0.00	685.30	534.31	0.527	1.96	1.14	11.339	B
3	270.27	67.57	270.93	487.04	91.92	0.00	850.07	821.93	0.318	0.64	0.47	6.225	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	7.86	0.52	5.594	A	A
2	15.20	1.01	10.796	B	B
3	6.66	0.44	6.176	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	10.89	0.73	6.490	A	A
2	24.90	1.66	15.169	C	B
3	9.01	0.60	6.950	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	16.62	1.11	8.216	A	A
2	54.41	3.63	29.376	D	C
3	13.08	0.87	8.341	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.43	1.16	8.281	A	A
2	67.30	4.49	33.427	D	C
3	13.67	0.91	8.411	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.89	0.79	6.552	A	A
2	32.93	2.20	17.069	C	B
3	9.84	0.66	7.030	A	A

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.52	0.57	5.656	A	A
2	18.16	1.21	11.339	B	B
3	7.25	0.48	6.225	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
J10 - Thaxted Rd / Peasland Rd	Mini-roundabout	1,2,3	29.89	D

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Thaxted Rd (S)	
2	Peasland Rd	
3	Thaxted Rd (N)	

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

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	3.75	3.50	5.50	14.00	12.00	10.00	0.00	
2	3.50	3.00	4.50	6.00	10.50	8.00	0.00	
3	3.50	3.50	3.50	0.00	14.00	17.00	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

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)	0.602	1079.602
2		(calculated)	(calculated)	0.547	802.558
3		(calculated)	(calculated)	0.658	910.525

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	✓	350.00	100.000
2	ONE HOUR	✓	522.00	100.000
3	ONE HOUR	✓	618.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	153.000	197.000
	2	212.000	0.000	310.000
	3	308.000	310.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.44	0.56
	2	0.41	0.00	0.59
	3	0.50	0.50	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	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	0.44	7.35	0.78	A	321.17	481.75	50.38	6.27	0.56	50.39	6.28
2	0.84	31.62	4.77	D	479.00	718.49	223.08	18.63	2.48	223.15	18.63
3	0.90	41.19	7.27	E	567.09	850.63	299.27	21.11	3.33	299.34	21.11

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	263.50	65.87	261.95	386.95	230.72	0.00	940.82	848.49	0.280	0.00	0.39	5.291	A
2	392.99	98.25	388.33	345.24	147.44	0.00	721.89	541.27	0.544	0.00	1.16	10.652	B
3	465.26	116.32	459.96	378.06	157.71	0.00	806.79	765.93	0.577	0.00	1.33	10.231	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	314.64	78.66	314.10	464.37	276.76	0.00	913.13	848.49	0.345	0.39	0.52	6.005	A
2	469.27	117.32	466.34	414.06	176.80	0.00	705.83	541.27	0.665	1.16	1.90	14.846	B
3	555.57	138.89	551.73	453.74	189.40	0.00	785.95	765.93	0.707	1.33	2.29	15.116	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	385.36	96.34	384.36	560.31	333.15	0.00	879.21	848.49	0.438	0.52	0.77	7.260	A
2	574.73	143.68	564.62	501.17	216.34	0.00	684.20	541.27	0.840	1.90	4.42	27.950	D
3	680.43	170.11	664.15	551.65	229.31	0.00	759.70	765.93	0.896	2.29	6.36	33.085	D

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	385.36	96.34	385.32	570.16	339.49	0.00	875.39	848.49	0.440	0.77	0.78	7.345	A
2	574.73	143.68	573.34	507.93	216.88	0.00	683.90	541.27	0.840	4.42	4.77	31.623	D
3	680.43	170.11	676.80	557.37	232.85	0.00	757.37	765.93	0.898	6.36	7.27	41.191	E

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	314.64	78.66	315.61	481.15	288.05	0.00	906.33	848.49	0.347	0.78	0.54	6.103	A
2	469.27	117.32	480.02	426.02	177.64	0.00	705.37	541.27	0.665	4.77	2.08	16.664	C
3	555.57	138.89	574.25	462.71	194.95	0.00	782.30	765.93	0.710	7.27	2.60	18.650	C

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	263.50	65.87	264.07	395.24	235.77	0.00	937.78	848.49	0.281	0.54	0.39	5.347	A
2	392.99	98.25	396.41	351.20	148.63	0.00	721.24	541.27	0.545	2.08	1.23	11.197	B
3	465.26	116.32	470.01	384.05	160.99	0.00	804.63	765.93	0.578	2.60	1.41	10.905	B

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.61	0.37	5.291	A	A
2	16.30	1.09	10.652	B	B
3	18.55	1.24	10.231	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.62	0.51	6.005	A	A
2	26.49	1.77	14.846	B	B
3	31.68	2.11	15.116	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.17	0.74	7.260	A	A
2	56.47	3.76	27.950	D	C
3	77.15	5.14	33.085	D	C

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	11.64	0.78	7.345	A	A
2	69.42	4.63	31.623	D	C
3	103.25	6.88	41.191	E	D

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	8.29	0.55	6.103	A	A
2	34.90	2.33	16.664	C	B
3	46.20	3.08	18.650	C	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	6.05	0.40	5.347	A	A
2	19.50	1.30	11.197	B	B
3	22.45	1.50	10.905	B	B

(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
J10 - Thaxted Rd / Peasland Rd	Mini-roundabout	1,2,3	52.48	F

Junction Network Options

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

Arms

Arms

Arm	Name	Description
1	Thaxted Rd (S)	
2	Peasland Rd	
3	Thaxted Rd (N)	

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

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	3.75	3.50	5.50	14.00	12.00	10.00	0.00	
2	3.50	3.00	4.50	6.00	10.50	8.00	0.00	
3	3.50	3.50	3.50	0.00	14.00	17.00	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

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)	0.602	1079.602
2		(calculated)	(calculated)	0.547	802.558
3		(calculated)	(calculated)	0.658	910.525

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	✓	359.00	100.000
2	ONE HOUR	✓	567.00	100.000
3	ONE HOUR	✓	673.00	100.000

Turning Proportions

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

		To		
		1	2	3
From	1	0.000	153.000	206.000
	2	212.000	0.000	355.000
	3	317.000	356.000	0.000

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

		To		
		1	2	3
From	1	0.00	0.43	0.57
	2	0.37	0.00	0.63
	3	0.47	0.53	0.00

Vehicle Mix

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

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

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	0.000	0.000
	2	0.000	0.000	0.000
	3	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	0.47	7.94	0.86	A	329.42	494.14	55.04	6.68	0.61	55.04	6.68
2	0.92	53.07	8.57	F	520.29	780.43	337.96	25.98	3.76	338.05	25.99
3	0.98	75.75	15.02	F	617.56	926.33	504.28	32.66	5.60	504.39	32.67

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	270.27	67.57	268.63	393.07	264.57	0.00	920.46	832.24	0.294	0.00	0.41	5.510	A
2	426.87	106.72	421.20	379.05	154.14	0.00	718.23	541.29	0.594	0.00	1.42	11.906	B
3	506.67	126.67	500.15	417.85	157.48	0.00	806.94	777.41	0.628	0.00	1.63	11.506	B

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	322.73	80.68	322.13	471.24	316.98	0.00	888.93	832.24	0.363	0.41	0.56	6.345	A
2	509.72	127.43	505.44	454.26	184.84	0.00	701.43	541.29	0.727	1.42	2.49	17.967	C
3	605.01	151.25	599.23	501.30	188.98	0.00	786.22	777.41	0.770	1.63	3.08	18.673	C

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	395.27	98.82	394.13	559.94	374.78	0.00	854.17	832.24	0.463	0.56	0.85	7.806	A
2	624.28	156.07	605.04	542.75	226.16	0.00	678.83	541.29	0.920	2.49	7.30	40.811	E
3	740.99	185.25	708.50	604.97	226.22	0.00	761.73	777.41	0.973	3.08	11.20	49.755	E

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	395.27	98.82	395.21	573.33	383.88	0.00	848.69	832.24	0.466	0.85	0.86	7.936	A
2	624.28	156.07	619.17	552.31	226.78	0.00	678.49	541.29	0.920	7.30	8.57	53.068	F
3	740.99	185.25	725.71	614.44	231.51	0.00	758.25	777.41	0.977	11.20	15.02	75.746	F

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	322.73	80.68	323.81	505.13	343.66	0.00	872.88	832.24	0.370	0.86	0.59	6.571	A
2	509.72	127.43	532.55	481.66	185.81	0.00	700.90	541.29	0.727	8.57	2.87	23.752	C
3	605.01	151.25	649.67	519.24	199.12	0.00	779.55	777.41	0.776	15.02	3.85	34.121	D

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

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	270.27	67.57	270.96	404.22	272.44	0.00	915.72	832.24	0.295	0.59	0.42	5.588	A
2	426.87	106.72	432.27	387.92	155.48	0.00	717.49	541.29	0.595	2.87	1.52	12.850	B
3	506.67	126.67	515.04	426.13	161.63	0.00	804.22	777.41	0.630	3.85	1.76	12.787	B

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.99	0.40	5.510	A	A
2	19.64	1.31	11.906	B	B
3	22.53	1.50	11.506	B	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.24	0.55	6.345	A	A
2	34.09	2.27	17.967	C	B
3	41.57	2.77	18.673	C	B

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.27	0.82	7.806	A	A
2	85.68	5.71	40.811	E	D
3	121.93	8.13	49.755	E	D

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.87	0.86	7.936	A	A
2	120.30	8.02	53.068	F	D
3	198.94	13.26	75.746	F	E

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.17	0.61	6.571	A	A
2	53.89	3.59	23.752	C	C
3	90.56	6.04	34.121	D	C

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

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.49	0.43	5.588	A	A
2	24.36	1.62	12.850	B	B
3	28.76	1.92	12.787	B	B