

## **Appendix 67**

Mill Lane/Blackbrook Avenue Modelling Reports

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.2.5947  
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Filename: Mill Lane . Blackbrook . Site 2025 and 2030.j9  
Report generation date: 25/01/2018 11:46:41

### Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
<b>2025 Do Something</b>						
Arm 1	0.1	2.61	0.11	0.1	2.57	0.06
Arm 2	1.1	5.12	0.54	0.6	3.76	0.38
Arm 3	0.2	1.93	0.19	0.5	2.41	0.35
<b>2030 Do Something</b>						
Arm 1	0.4	3.54	0.31	0.2	3.19	0.18
Arm 2	1.5	6.65	0.60	0.9	4.59	0.47
Arm 3	0.4	2.16	0.27	0.8	2.90	0.46
<b>2030 Do Something Through Route</b>						
Arm 1	0.6	4.02	0.39	0.6	4.24	0.36
Arm 2	1.7	7.39	0.64	1.0	5.37	0.51
Arm 3	0.4	2.13	0.26	1.0	3.37	0.51

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

### File summary

#### File Description

Title	(untitled)
Location	
Site number	
Date	18/05/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

## 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

## Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2025 Do Something, AM

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	3.83	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Site	
2	Mill Lane N	
3	untitled	

## Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.65	7.35	20.0	11.0	36.0	56.0	
2	3.50	7.80	10.0	20.0	36.0	31.0	
3	7.00	8.00	10.0	30.0	36.0	38.0	

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.585	1574
2	0.629	1603
3	0.772	2324

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	150	100.000
2		✓	738	100.000
3		✓	404	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	24	126
	2	13	0	725
	3	353	51	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.11	2.61	0.1	0.5	A
2	0.54	5.12	1.1	1.5	A
3	0.19	1.93	0.2	0.5	A

## Main Results for each time segment

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	113	38	1552	0.073	113	0.1	2.501	A
2	556	95	1544	0.360	553	0.6	3.628	A
3	304	10	2316	0.131	304	0.2	1.788	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	135	46	1548	0.087	135	0.1	2.547	A
2	663	113	1532	0.433	663	0.8	4.137	A
3	363	12	2315	0.157	363	0.2	1.843	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	165	56	1542	0.107	165	0.1	2.614	A
2	813	139	1516	0.536	811	1.1	5.095	A
3	445	14	2313	0.192	445	0.2	1.927	A

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	165	56	1542	0.107	165	0.1	2.614	A
2	813	139	1516	0.536	813	1.1	5.117	A
3	445	14	2313	0.192	445	0.2	1.927	A

### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	135	46	1548	0.087	135	0.1	2.550	A
2	663	113	1532	0.433	665	0.8	4.159	A
3	363	12	2315	0.157	363	0.2	1.847	A

### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	113	38	1552	0.073	113	0.1	2.503	A
2	556	95	1544	0.360	556	0.6	3.649	A
3	304	10	2316	0.131	304	0.2	1.788	A

## Queue Variation Results for each time segment

### 07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2	0.56	0.55	1.00	1.40	1.45			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A

### 08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.10	0.03	0.25	0.46	0.48			N/A	N/A
2	0.76	0.10	0.84	1.41	1.49			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A

### 08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2	1.14	0.03	0.26	1.14	1.14			N/A	N/A
3	0.24	0.03	0.25	0.45	0.48			N/A	N/A

### 08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.15	0.03	0.27	1.15	1.31			N/A	N/A
3	0.24	0.03	0.25	0.45	0.48			N/A	N/A

### 08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2	0.77	0.39	0.97	1.39	1.45			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A

### 09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2	0.57	0.06	0.68	1.34	1.42			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A

# 2025 Do Something, PM

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	2.96	A

## Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	88	100.000
2		✓	542	100.000
3		✓	741	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	15	73
	2	19	0	523
	3	622	119	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.06	2.57	0.1	0.5	A
2	0.38	3.76	0.6	2.6	A
3	0.35	2.41	0.5	2.6	A

## Main Results for each time segment

### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	66	89	1522	0.044	66	0.0	2.472	A
2	408	55	1569	0.260	407	0.3	3.093	A
3	558	14	2313	0.241	557	0.3	2.049	A

### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	79	107	1512	0.052	79	0.1	2.512	A
2	487	66	1562	0.312	487	0.5	3.348	A
3	666	17	2310	0.288	666	0.4	2.189	A

### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	97	131	1498	0.065	97	0.1	2.569	A
2	597	80	1553	0.384	596	0.6	3.761	A
3	816	21	2307	0.354	815	0.5	2.413	A

### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	97	131	1498	0.065	97	0.1	2.569	A
2	597	80	1553	0.384	597	0.6	3.764	A
3	816	21	2307	0.354	816	0.5	2.413	A

### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	79	107	1512	0.052	79	0.1	2.514	A
2	487	66	1562	0.312	488	0.5	3.355	A
3	666	17	2310	0.288	667	0.4	2.192	A

### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	66	90	1522	0.044	66	0.0	2.474	A
2	408	55	1569	0.260	408	0.4	3.105	A
3	558	14	2313	0.241	558	0.3	2.052	A

## Queue Variation Results for each time segment

### 16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.32	0.00	0.00	0.32	0.32			N/A	N/A



### 17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.03	0.25	0.45	0.48			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.40	0.00	0.00	0.40	0.40			N/A	N/A

### 17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2	0.62	0.03	0.25	0.62	0.62			N/A	N/A
3	0.54	0.03	0.25	0.54	0.54			N/A	N/A

### 17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2	0.62	0.03	0.29	1.04	2.65			N/A	N/A
3	0.55	0.03	0.30	1.37	2.56			N/A	N/A

### 17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3	0.41	0.00	0.00	0.41	0.41			N/A	N/A

### 18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.32	0.00	0.00	0.32	0.32			N/A	N/A

## 2030 Do Something, AM

### Junction Network

#### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.43	A

#### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	406	100.000
2		✓	746	100.000
3		✓	568	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	58	348
	2	35	0	711
	3	395	173	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.31	3.54	0.4	1.8	A
2	0.60	6.65	1.5	1.8	A
3	0.27	2.16	0.4	1.5	A

## Main Results for each time segment

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	130	1498	0.204	305	0.3	3.012	A
2	562	261	1439	0.390	559	0.6	4.080	A
3	428	26	2303	0.186	427	0.2	1.918	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	365	155	1484	0.246	365	0.3	3.217	A
2	671	313	1407	0.477	670	0.9	4.878	A
3	511	31	2299	0.222	510	0.3	2.012	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	447	190	1463	0.306	447	0.4	3.539	A
2	821	383	1362	0.603	819	1.5	6.595	A
3	625	38	2294	0.273	625	0.4	2.157	A

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	447	190	1463	0.306	447	0.4	3.542	A
2	821	383	1362	0.603	821	1.5	6.653	A
3	625	39	2294	0.273	625	0.4	2.157	A

### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	365	156	1483	0.246	365	0.3	3.220	A
2	671	313	1406	0.477	673	0.9	4.925	A
3	511	32	2299	0.222	511	0.3	2.014	A

### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	130	1498	0.204	306	0.3	3.021	A
2	562	262	1438	0.390	563	0.6	4.116	A
3	428	26	2303	0.186	428	0.2	1.921	A

## Queue Variation Results for each time segment

### 07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.64	0.55	1.00	1.40	1.45			N/A	N/A
3	0.23	0.00	0.00	0.23	0.23			N/A	N/A

### 08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2	0.90	0.08	0.85	1.46	1.84			N/A	N/A
3	0.28	0.00	0.00	0.28	0.28			N/A	N/A

### 08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2	1.49	0.03	0.26	1.49	1.49			N/A	N/A
3	0.37	0.03	0.25	0.45	0.48			N/A	N/A

### 08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.03	0.31	1.37	1.79			N/A	N/A
2	1.50	0.03	0.27	1.50	1.50			N/A	N/A
3	0.37	0.03	0.33	1.22	1.46			N/A	N/A

### 08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2	0.92	0.15	0.96	1.07	1.56			N/A	N/A
3	0.29	0.00	0.00	0.29	0.29			N/A	N/A

### 09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.65	0.06	0.63	1.39	1.48			N/A	N/A
3	0.23	0.00	0.00	0.23	0.23			N/A	N/A

## 2030 Do Something, PM

### Junction Network

#### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	3.52	A

#### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	229	100.000
2		✓	624	100.000
3		✓	945	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	38	191
	2	48	0	576
	3	645	300	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.18	3.19	0.2	0.5	A
2	0.47	4.59	0.9	1.8	A
3	0.46	2.90	0.8	1.6	A

## Main Results for each time segment

### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	225	1443	0.120	172	0.1	2.831	A
2	470	143	1513	0.310	468	0.4	3.439	A
3	711	36	2296	0.310	710	0.4	2.268	A

### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	270	1417	0.145	206	0.2	2.972	A
2	561	172	1495	0.375	560	0.6	3.848	A
3	850	43	2290	0.371	849	0.6	2.496	A

### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	330	1381	0.183	252	0.2	3.186	A
2	687	210	1471	0.467	686	0.9	4.578	A
3	1040	53	2283	0.456	1039	0.8	2.892	A

### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	330	1381	0.183	252	0.2	3.187	A
2	687	210	1471	0.467	687	0.9	4.592	A
3	1040	53	2283	0.456	1040	0.8	2.897	A

### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	270	1417	0.145	206	0.2	2.976	A
2	561	172	1495	0.375	562	0.6	3.863	A
3	850	43	2290	0.371	851	0.6	2.503	A

### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	226	1442	0.120	173	0.1	2.834	A
2	470	144	1513	0.311	470	0.5	3.457	A
3	711	36	2296	0.310	712	0.5	2.273	A

## Queue Variation Results for each time segment

### 16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A

### 17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.60	0.10	0.82	1.37	1.43			N/A	N/A
3	0.59	0.08	0.77	1.35	1.43			N/A	N/A

### 17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.03	0.25	0.46	0.48			N/A	N/A
2	0.87	0.03	0.25	0.87	0.87			N/A	N/A
3	0.83	0.03	0.25	0.83	0.83			N/A	N/A

### 17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.03	0.25	0.46	0.48			N/A	N/A
2	0.87	0.03	0.27	0.87	1.84			N/A	N/A
3	0.84	0.03	0.27	0.84	1.59			N/A	N/A

### 17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.60	0.55	1.00	1.40	1.45			N/A	N/A
3	0.59	0.55	1.00	1.40	1.45			N/A	N/A

### 18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A

## 2030 Do Something Through Route, AM

### Junction Network

#### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.90	A

#### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	511	100.000
2		✓	781	100.000
3		✓	538	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	141	370
	2	51	0	730
	3	356	182	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.39	4.02	0.6	2.7	A
2	0.64	7.39	1.7	2.4	A
3	0.26	2.13	0.4	1.4	A



## Main Results for each time segment

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	137	1494	0.257	383	0.3	3.235	A
2	588	278	1429	0.412	585	0.7	4.255	A
3	405	38	2294	0.177	404	0.2	1.904	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	459	164	1479	0.311	459	0.4	3.527	A
2	702	332	1394	0.504	701	1.0	5.183	A
3	484	46	2288	0.211	483	0.3	1.994	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	563	200	1457	0.386	562	0.6	4.017	A
2	860	407	1347	0.638	857	1.7	7.299	A
3	592	56	2280	0.260	592	0.3	2.132	A

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	563	200	1457	0.386	563	0.6	4.023	A
2	860	407	1347	0.638	860	1.7	7.388	A
3	592	56	2280	0.260	592	0.4	2.132	A

### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	459	164	1479	0.311	460	0.5	3.538	A
2	702	333	1394	0.504	705	1.0	5.248	A
3	484	46	2288	0.211	484	0.3	1.997	A

### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	137	1494	0.257	385	0.3	3.246	A
2	588	279	1428	0.412	589	0.7	4.299	A
3	405	38	2294	0.177	405	0.2	1.905	A

## Queue Variation Results for each time segment

### 07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2	0.69	0.55	1.00	1.40	1.45			N/A	N/A
3	0.21	0.00	0.00	0.21	0.21			N/A	N/A

**08:00 - 08:15**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2	1.00	0.07	0.85	1.80	2.41			N/A	N/A
3	0.27	0.00	0.00	0.27	0.27			N/A	N/A

**08:15 - 08:30**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.62	0.03	0.25	0.62	0.62			N/A	N/A
2	1.73	0.03	0.27	1.73	1.73			N/A	N/A
3	0.35	0.03	0.25	0.45	0.48			N/A	N/A

**08:30 - 08:45**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.63	0.03	0.29	1.06	2.67			N/A	N/A
2	1.75	0.03	0.27	1.75	1.75			N/A	N/A
3	0.35	0.03	0.33	1.15	1.38			N/A	N/A

**08:45 - 09:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2	1.03	0.11	0.98	1.61	1.91			N/A	N/A
3	0.27	0.00	0.00	0.27	0.27			N/A	N/A

**09:00 - 09:15**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2	0.71	0.05	0.59	1.50	1.59			N/A	N/A
3	0.21	0.00	0.00	0.21	0.21			N/A	N/A

# 2030 Do Something Through Route, PM

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.17	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	432	100.000
2		✓	634	100.000
3		✓	991	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	93	339
	2	193	0	441
	3	603	388	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.36	4.24	0.6	2.6	A
2	0.51	5.37	1.0	1.5	A
3	0.51	3.37	1.0	1.5	A

## Main Results for each time segment

### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	325	291	1404	0.232	324	0.3	3.330	A
2	477	254	1443	0.331	475	0.5	3.711	A
3	746	145	2212	0.337	744	0.5	2.449	A

### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	388	349	1371	0.283	388	0.4	3.663	A
2	570	304	1412	0.404	569	0.7	4.269	A
3	891	173	2190	0.407	890	0.7	2.768	A

### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	427	1325	0.359	475	0.6	4.233	A
2	698	373	1369	0.510	697	1.0	5.346	A
3	1091	212	2160	0.505	1090	1.0	3.359	A

### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	427	1325	0.359	476	0.6	4.239	A
2	698	373	1368	0.510	698	1.0	5.369	A
3	1091	212	2159	0.505	1091	1.0	3.368	A

### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	388	349	1370	0.283	389	0.4	3.670	A
2	570	305	1411	0.404	571	0.7	4.293	A
3	891	174	2189	0.407	892	0.7	2.777	A

### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	325	292	1403	0.232	326	0.3	3.340	A
2	477	256	1442	0.331	478	0.5	3.737	A
3	746	146	2211	0.337	747	0.5	2.461	A

## Queue Variation Results for each time segment

### 16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3	0.51	0.51	1.00	1.40	1.45			N/A	N/A

**17:00 - 17:15**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2	0.67	0.10	0.84	1.37	1.44			N/A	N/A
3	0.68	0.08	0.79	1.37	1.45			N/A	N/A

**17:15 - 17:30**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.03	0.25	0.56	0.56			N/A	N/A
2	1.03	0.03	0.26	1.03	1.03			N/A	N/A
3	1.01	0.03	0.25	1.01	1.01			N/A	N/A

**17:30 - 17:45**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.03	0.30	1.33	2.61			N/A	N/A
2	1.03	0.03	0.27	1.03	1.48			N/A	N/A
3	1.02	0.03	0.27	1.02	1.25			N/A	N/A

**17:45 - 18:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2	0.68	0.30	0.95	1.39	1.45			N/A	N/A
3	0.69	0.55	1.00	1.40	1.45			N/A	N/A

**18:00 - 18:15**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	0.50	0.05	0.46	1.28	1.39			N/A	N/A
3	0.51	0.51	1.00	1.40	1.45			N/A	N/A