

<h1>Junctions 11</h1>
<h2>ARCADY 11 - Roundabout Module</h2>
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**Filename:** 25103-Grange Farm-Proposed access roundabout (drawing with widened northwestern and southeastern A1307 arms).j11  
**Path:** C:\Users\SamuelSizer\KMC\KMC-Data - Documents\1\_PROJECTS\25000\25103 - Grange Farm, Cambridge\Modelling\A1307 proposed roundabout (using drawing)  
**Report generation date:** 27/03/2026 09:46:52

- »D3 - | Granta Base + CaPCAM (2550) | AM
- »D4 - | Granta Base + CaPCAM (2550) | PM
- »D5 - | Granta Base + CaPCAM (5000) | AM
- »D6 - | Granta Base + CaPCAM (5000) | PM

**Summary of junction performance**

		AM								PM								
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
<b>- Granta Base + CaPCAM (2550)</b>																		
Arm 1	D3	0.6	2.9	5.46	0.38	A	4.32	A	43 %	D4	0.3	1.4	5.16	0.25	A	3.88	A	57 %
Arm 2		1.5	2.0	5.31	0.60	A					0.6	2.6	3.02	0.35	A			
Arm 3		0.1	0.5	4.48	0.12	A					0.3	1.1	3.87	0.21	A			
Arm 4		0.6	2.6	2.45	0.35	A					1.5	2.4	4.07	0.60	A			
<b>- Granta Base + CaPCAM (5000)</b>																		
Arm 1	D5	3.0	12.7	13.39	0.75	B	7.83	A	15 %	D6	1.0	3.0	7.66	0.50	A	6.63	A	21 %
Arm 2		2.4	4.7	8.20	0.71	A					0.7	2.8	3.54	0.41	A			
Arm 3		0.2	0.5	5.95	0.15	A					0.4	1.5	4.71	0.27	A			
Arm 4		0.7	2.7	2.63	0.40	A					3.8	12.0	7.91	0.79	A			

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

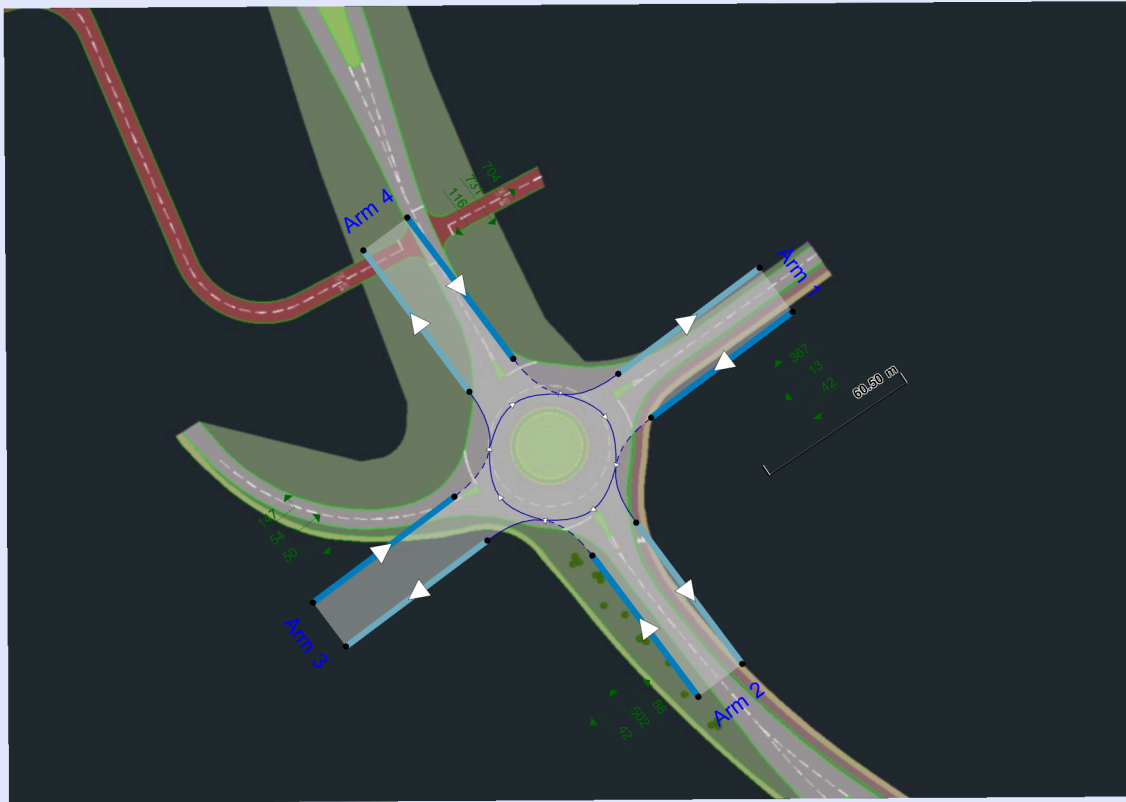
**File summary**

**File Description**

<b>Title</b>	
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	18/03/2026
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	AzureAD\SamuelSizer
<b>Description</b>	

**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	Veh	PCU	perHour	s	-Min	perMin



Flows show original traffic demand (Veh/hr)

The junction diagram reflects the last run of Junctions.

### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75	✓				✓	Delay	0.85	36.00	20.00		

### Demand Set Summary

ID	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Granta Base + CaPCAM (2550)	AM	ONE HOUR	00:00	01:30	15	✓
D4	Granta Base + CaPCAM (2550)	PM	ONE HOUR	00:00	01:30	15	✓
D5	Granta Base + CaPCAM (5000)	AM	ONE HOUR	00:00	01:30	15	✓
D6	Granta Base + CaPCAM (5000)	PM	ONE HOUR	00:00	01:30	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# D3 - | Granta Base + CaPCAM (2550) | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D3 -   Granta Base + CaPCAM (2550)   AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Demand Sets	D5 -   Granta Base + CaPCAM (5000)   AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	4.32	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	43	Arm 2	4.32	A

## Arms

### Arms

Arm	Name	Description	No give-way line
1	Site Access		
2	A1307 (South)		
3	Newmarket Road		
4	A1307 (North)		

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1	3.50	8.11	6.2	33.0	60.5	36.1		
2	3.57	8.35	30.0	32.9	60.5	28.1		
3	3.48	9.32	8.5	31.0	60.5	26.2		
4	7.50	7.50	0.0	32.3	60.5	25.7		

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.514	1472
2	0.629	2094
3	0.555	1656
4	0.675	2349

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

## Traffic Demand

### Demand Set Details

ID	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Granta Base + CaPCAM (2550)	AM	ONE HOUR	00:00	01:30	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	371	100.000
2		ONE HOUR	✓	934	100.000
3		ONE HOUR	✓	97	100.000
4		ONE HOUR	✓	727	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To				
	1	2	3	4	
From	1	0	37	16	318
	2	17	0	85	832
	3	3	22	0	72
	4	86	475	166	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

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

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.38	5.46	0.6	2.9	A	347	521
2	0.60	5.31	1.5	2.0	A	874	1311
3	0.12	4.48	0.1	0.5	A	91	136
4	0.35	2.45	0.6	2.6	A	680	1021

### Main Results for each time segment

#### 00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	285	71	508	1210	0.235	284	81	0.0	0.3	3.958	A
2	717	179	383	1853	0.387	715	409	0.0	0.6	3.218	A
3	74	19	893	1161	0.064	74	204	0.0	0.1	3.379	A
4	558	140	32	2327	0.240	557	935	0.0	0.3	2.073	A

#### 00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	608	1159	0.294	340	97	0.3	0.4	4.481	A
2	856	214	458	1806	0.474	855	489	0.6	0.9	3.860	A
3	89	22	1069	1063	0.084	89	245	0.1	0.1	3.768	A
4	667	167	38	2323	0.287	666	1119	0.3	0.4	2.216	A

#### 00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	104	744	1089	0.383	416	119	0.4	0.6	5.450	A
2	1049	262	561	1741	0.602	1046	599	0.9	1.5	5.266	A
3	109	27	1308	931	0.117	109	299	0.1	0.1	4.466	A
4	816	204	47	2317	0.352	816	1369	0.4	0.6	2.446	A

00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	104	745	1088	0.383	417	119	0.6	0.6	5.465	A
2	1049	262	562	1741	0.603	1049	600	1.5	1.5	5.307	A
3	109	27	1311	929	0.117	109	300	0.1	0.1	4.476	A
4	816	204	47	2317	0.352	816	1372	0.6	0.6	2.446	A

01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	340	85	608	1158	0.294	341	97	0.6	0.4	4.495	A
2	856	214	459	1805	0.475	859	490	1.5	0.9	3.892	A
3	89	22	1073	1061	0.084	89	245	0.1	0.1	3.778	A
4	667	167	39	2323	0.287	667	1124	0.6	0.4	2.219	A

01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	285	71	509	1209	0.236	285	81	0.4	0.3	3.976	A
2	717	179	384	1852	0.387	718	410	0.9	0.6	3.243	A
3	74	19	898	1158	0.064	75	205	0.1	0.1	3.391	A
4	558	140	32	2327	0.240	559	940	0.4	0.3	2.076	A

Queue Variation Results for each time segment

00:00 - 00:15

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	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2	0.64	0.56	1.02	1.43	1.48			N/A	N/A
3	0.07	0.00	0.00	0.07	0.07			N/A	N/A
4	0.32	0.00	0.00	0.32	0.32			N/A	N/A

00:15 - 00:30

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	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2	0.91	0.07	0.81	1.57	1.96			N/A	N/A
3	0.09	0.03	0.26	0.46	0.48			N/A	N/A
4	0.41	0.00	0.00	0.41	0.41			N/A	N/A

00:30 - 00:45

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	0.26	0.63	0.63			N/A	N/A
2	1.52	0.03	0.27	1.52	1.52			N/A	N/A
3	0.13	0.03	0.26	0.47	0.50			N/A	N/A
4	0.55	0.03	0.26	0.55	0.55			N/A	N/A

00:45 - 01:00

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	0.63	0.03	0.30	1.28	2.87			N/A	N/A
2	1.54	0.03	0.27	1.54	1.54			N/A	N/A
3	0.14	0.00	0.00	0.14	0.14			N/A	N/A
4	0.55	0.03	0.31	1.41	2.59			N/A	N/A

01:00 - 01:15

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	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2	0.93	0.24	1.00	1.26	1.26			N/A	N/A
3	0.09	0.00	0.00	0.09	0.09			N/A	N/A
4	0.41	0.00	0.00	0.41	0.41			N/A	N/A

01:15 - 01:30

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	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2	0.65	0.06	0.70	1.39	1.47			N/A	N/A
3	0.07	0.00	0.00	0.07	0.07			N/A	N/A
4	0.32	0.00	0.00	0.32	0.32			N/A	N/A

# D4 - | Granta Base + CaPCAM (2550) | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D3 -   Granta Base + CaPCAM (2550)   AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Demand Sets	D5 -   Granta Base + CaPCAM (5000)   AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	3.88	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	57	Arm 4	3.88	A

## Traffic Demand

### Demand Set Details

ID	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	Granta Base + CaPCAM (2550)	PM	ONE HOUR	00:00	01:30	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	215	100.000
2		ONE HOUR	✓	588	100.000
3		ONE HOUR	✓	224	100.000
4		ONE HOUR	✓	1206	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	21	7	187
	2	44	0	42	502
	3	27	50	0	147
	4	359	731	116	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

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

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.25	5.16	0.3	1.4	A	201	302
2	0.35	3.02	0.6	2.6	A	550	826
3	0.21	3.87	0.3	1.1	A	210	314
4	0.60	4.07	1.5	2.4	A	1129	1693

## Main Results for each time segment

### 00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	165	41	687	1118	0.148	164	329	0.0	0.2	3.847	A
2	452	113	237	1945	0.232	450	614	0.0	0.3	2.454	A
3	172	43	561	1345	0.128	171	126	0.0	0.1	3.128	A
4	926	232	93	2287	0.405	923	640	0.0	0.7	2.687	A

### 00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	197	49	822	1049	0.188	197	394	0.2	0.2	4.309	A
2	539	135	284	1915	0.282	539	735	0.3	0.4	2.667	A
3	205	51	672	1283	0.160	205	151	0.1	0.2	3.405	A
4	1106	276	111	2274	0.486	1105	766	0.7	1.0	3.137	A

### 00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	241	60	1006	954	0.253	241	482	0.2	0.3	5.145	A
2	660	165	348	1875	0.352	660	899	0.4	0.6	3.019	A
3	252	63	822	1200	0.210	251	185	0.2	0.3	3.870	A
4	1354	339	136	2257	0.600	1352	938	1.0	1.5	4.046	A

### 00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	241	60	1007	953	0.253	241	483	0.3	0.3	5.157	A
2	660	165	348	1875	0.352	660	901	0.6	0.6	3.022	A
3	252	63	823	1199	0.210	252	185	0.3	0.3	3.873	A
4	1354	339	136	2257	0.600	1354	939	1.5	1.5	4.066	A

### 01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	197	49	824	1048	0.188	198	395	0.3	0.2	4.323	A
2	539	135	285	1915	0.282	540	737	0.6	0.4	2.673	A
3	205	51	673	1283	0.160	206	152	0.3	0.2	3.412	A
4	1106	276	111	2274	0.486	1108	768	1.5	1.0	3.154	A

### 01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	165	41	690	1117	0.148	165	331	0.2	0.2	3.861	A
2	452	113	238	1944	0.232	452	617	0.4	0.3	2.463	A
3	172	43	563	1343	0.128	172	127	0.2	0.2	3.134	A
4	926	232	93	2286	0.405	927	643	1.0	0.7	2.705	A

**Queue Variation Results for each time segment****00:00 - 00:15**

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	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	0.31	0.00	0.00	0.31	0.31			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4	0.69	0.56	1.02	1.43	1.48			N/A	N/A

**00:15 - 00:30**

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	0.23	0.00	0.00	0.23	0.23			N/A	N/A
2	0.40	0.00	0.00	0.40	0.40			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A
4	0.96	0.06	0.78	1.77	2.37			N/A	N/A

**00:30 - 00:45**

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	0.34	0.03	0.26	0.47	0.49			N/A	N/A
2	0.55	0.03	0.26	0.55	0.55			N/A	N/A
3	0.27	0.03	0.26	0.47	0.49			N/A	N/A
4	1.51	0.03	0.26	1.51	1.51			N/A	N/A

**00:45 - 01:00**

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	0.03	0.33	1.17	1.44			N/A	N/A
2	0.55	0.03	0.31	1.41	2.59			N/A	N/A
3	0.27	0.03	0.29	0.69	1.11			N/A	N/A
4	1.52	0.03	0.27	1.52	1.52			N/A	N/A

**01:00 - 01:15**

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	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2	0.40	0.00	0.00	0.40	0.40			N/A	N/A
3	0.20	0.00	0.00	0.20	0.20			N/A	N/A
4	0.97	0.52	1.02	1.47	1.53			N/A	N/A

**01:15 - 01:30**

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	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	0.31	0.00	0.00	0.31	0.31			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4	0.70	0.09	0.83	1.40	1.47			N/A	N/A

# D5 - | Granta Base + CaPCAM (5000) | AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D3 -   Granta Base + CaPCAM (2550)   AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Demand Sets	D5 -   Granta Base + CaPCAM (5000)   AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	7.83	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	15	Arm 1	7.83	A

## Traffic Demand

### Demand Set Details

ID	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	Granta Base + CaPCAM (5000)	AM	ONE HOUR	00:00	01:30	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	726	100.000
2		ONE HOUR	✓	951	100.000
3		ONE HOUR	✓	99	100.000
4		ONE HOUR	✓	810	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	72	30	624
	2	34	0	85	832
	3	5	22	0	72
	4	169	475	166	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

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

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.75	13.39	3.0	12.7	B	680	1019
2	0.71	8.20	2.4	4.7	A	890	1335
3	0.15	5.95	0.2	0.5	A	93	139
4	0.40	2.63	0.7	2.7	A	758	1137

### Main Results for each time segment

#### 00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	558	139	508	1210	0.461	554	159	0.0	0.9	5.567	A
2	730	183	626	1700	0.430	727	436	0.0	0.8	3.765	A
3	76	19	1138	1025	0.074	76	215	0.0	0.1	3.869	A
4	622	156	47	2318	0.268	621	1167	0.0	0.4	2.161	A

#### 00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	666	166	608	1159	0.574	664	191	0.9	1.4	7.385	A
2	872	218	750	1622	0.538	870	521	0.8	1.2	4.873	A
3	91	23	1363	900	0.101	91	257	0.1	0.1	4.537	A
4	743	186	56	2311	0.321	742	1398	0.4	0.5	2.340	A

#### 00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	815	204	744	1089	0.749	809	233	1.4	2.9	12.857	B
2	1068	267	915	1518	0.703	1063	638	1.2	2.4	7.988	A
3	111	28	1664	733	0.152	111	315	0.1	0.2	5.898	A
4	910	227	68	2303	0.395	909	1706	0.5	0.7	2.632	A

#### 00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	815	204	745	1088	0.749	815	234	2.9	3.0	13.387	B
2	1068	267	921	1515	0.705	1068	639	2.4	2.4	8.205	A
3	111	28	1673	728	0.153	111	316	0.2	0.2	5.951	A
4	910	227	68	2303	0.395	910	1716	0.7	0.7	2.635	A

#### 01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	666	166	609	1158	0.575	672	191	3.0	1.4	7.639	A
2	872	218	758	1617	0.539	877	523	2.4	1.2	4.991	A
3	91	23	1376	893	0.102	91	258	0.2	0.1	4.582	A
4	743	186	56	2311	0.321	743	1411	0.7	0.5	2.344	A

#### 01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	558	139	510	1209	0.461	560	160	1.4	0.9	5.668	A
2	730	183	632	1697	0.430	732	437	1.2	0.8	3.815	A
3	76	19	1148	1019	0.075	76	216	0.1	0.1	3.894	A
4	622	156	47	2317	0.268	622	1177	0.5	0.4	2.168	A

**Queue Variation Results for each time segment****00:00 - 00:15**

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	0.86	0.56	1.02	1.43	1.48			N/A	N/A
2	0.76	0.56	1.02	1.43	1.48			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.37	0.00	0.00	0.37	0.37			N/A	N/A

**00:15 - 00:30**

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	1.35	0.06	0.81	3.00	4.34			N/A	N/A
2	1.17	0.06	0.67	2.61	3.76			N/A	N/A
3	0.11	0.00	0.00	0.11	0.11			N/A	N/A
4	0.48	0.00	0.00	0.48	0.48			N/A	N/A

**00:30 - 00:45**

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	2.88	0.03	0.30	2.88	12.69			N/A	N/A
2	2.35	0.03	0.28	2.35	4.68			N/A	N/A
3	0.18	0.03	0.26	0.47	0.50			N/A	N/A
4	0.66	0.03	0.26	0.66	0.66			N/A	N/A

**00:45 - 01:00**

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	2.96	0.03	0.28	2.96	7.08			N/A	N/A
2	2.40	0.03	0.27	2.40	2.40			N/A	N/A
3	0.18	0.03	0.26	0.46	0.48			N/A	N/A
4	0.66	0.03	0.29	0.96	2.72			N/A	N/A

**01:00 - 01:15**

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	1.40	0.06	0.73	3.28	4.83			N/A	N/A
2	1.21	0.09	1.00	2.16	2.91			N/A	N/A
3	0.12	0.00	0.00	0.12	0.12			N/A	N/A
4	0.48	0.00	0.00	0.48	0.48			N/A	N/A

**01:15 - 01:30**

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	0.88	0.04	0.39	2.08	3.62			N/A	N/A
2	0.78	0.05	0.46	1.61	2.31			N/A	N/A
3	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4	0.38	0.00	0.00	0.38	0.38			N/A	N/A

# D6 - | Granta Base + CaPCAM (5000) | PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D3 -   Granta Base + CaPCAM (2550)   AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Demand Sets	D5 -   Granta Base + CaPCAM (5000)   AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3, 4	6.63	A

### Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	21	Arm 4	6.63	A

## Traffic Demand

### Demand Set Details

ID	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	Granta Base + CaPCAM (5000)	PM	ONE HOUR	00:00	01:30	15	✓

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	422	100.000
2		ONE HOUR	✓	630	100.000
3		ONE HOUR	✓	251	100.000
4		ONE HOUR	✓	1551	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	42	13	367
	2	86	0	42	502
	3	54	50	0	147
	4	704	731	116	0

## Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Heavy Vehicle %

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

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.50	7.66	1.0	3.0	A	395	592
2	0.41	3.54	0.7	2.8	A	590	884
3	0.27	4.71	0.4	1.5	A	235	352
4	0.79	7.91	3.8	12.0	A	1452	2178

## Main Results for each time segment

### 00:00 - 00:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	324	81	686	1119	0.290	322	646	0.0	0.4	4.603	A
2	484	121	379	1855	0.261	482	630	0.0	0.4	2.672	A
3	193	48	731	1251	0.154	192	131	0.0	0.2	3.467	A
4	1191	298	145	2251	0.529	1186	777	0.0	1.1	3.436	A

### 00:15 - 00:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	387	97	821	1049	0.369	386	773	0.4	0.6	5.534	A
2	578	144	454	1808	0.319	577	753	0.4	0.5	2.983	A
3	230	58	875	1171	0.197	230	157	0.2	0.2	3.901	A
4	1422	356	174	2232	0.637	1420	930	1.1	1.8	4.507	A

### 00:30 - 00:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	474	118	1003	955	0.496	472	944	0.6	1.0	7.576	A
2	708	177	555	1745	0.406	707	920	0.5	0.7	3.533	A
3	282	70	1070	1062	0.265	281	191	0.2	0.4	4.699	A
4	1742	435	213	2205	0.790	1734	1139	1.8	3.7	7.670	A

### 00:45 - 01:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	474	118	1007	953	0.497	474	948	1.0	1.0	7.658	A
2	708	177	557	1744	0.406	708	924	0.7	0.7	3.543	A
3	282	70	1072	1061	0.266	282	192	0.4	0.4	4.711	A
4	1742	435	213	2205	0.790	1742	1141	3.7	3.8	7.908	A

### 01:00 - 01:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	387	97	827	1046	0.370	389	778	1.0	0.6	5.596	A
2	578	144	457	1807	0.320	579	759	0.7	0.5	2.991	A
3	230	58	878	1169	0.197	231	157	0.4	0.3	3.916	A
4	1422	356	175	2231	0.637	1430	934	3.8	1.8	4.627	A

### 01:15 - 01:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	324	81	690	1116	0.290	325	649	0.6	0.4	4.642	A
2	484	121	382	1854	0.261	484	633	0.5	0.4	2.683	A
3	193	48	734	1249	0.154	193	132	0.3	0.2	3.481	A
4	1191	298	146	2250	0.529	1194	781	1.8	1.2	3.482	A

**Queue Variation Results for each time segment****00:00 - 00:15**

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	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3	0.18	0.00	0.00	0.18	0.18			N/A	N/A
4	1.14	0.56	1.02	1.43	1.48			N/A	N/A

**00:15 - 00:30**

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	0.59	0.09	0.81	1.39	1.46			N/A	N/A
2	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3	0.25	0.00	0.00	0.25	0.25			N/A	N/A
4	1.77	0.04	0.45	4.73	7.86			N/A	N/A

**00:30 - 00:45**

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	0.99	0.03	0.26	0.99	0.99			N/A	N/A
2	0.69	0.03	0.26	0.69	0.69			N/A	N/A
3	0.37	0.03	0.26	0.47	0.49			N/A	N/A
4	3.69	0.03	0.29	3.69	11.98			N/A	N/A

**00:45 - 01:00**

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	1.00	0.03	0.28	1.00	2.98			N/A	N/A
2	0.69	0.03	0.29	0.95	2.80			N/A	N/A
3	0.37	0.03	0.33	1.23	1.50			N/A	N/A
4	3.76	0.03	0.27	3.76	3.76			N/A	N/A

**01:00 - 01:15**

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	0.60	0.09	0.83	1.39	1.46			N/A	N/A
2	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3	0.25	0.00	0.00	0.25	0.25			N/A	N/A
4	1.82	0.07	1.01	4.30	6.16			N/A	N/A

**01:15 - 01:30**

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	0.42	0.03	0.33	1.09	1.31			N/A	N/A
2	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A
4	1.16	0.04	0.42	2.89	4.77			N/A	N/A