

Appendix K

Site Access Junction Modelling

Junctions 11				
ARCADY 11 - Roundabout Module				
Version: 11.0.0.2177				
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Filename: Import of Site Access - Roundabout.j11

Path: C:\Users\Sarah\TTC Transportplanning\TTC Transportplanning Team Site - Documents\TTC - Projects\211206 - Meopham\Data\Junction Modelling

Report generation date: 09/02/2026 09:08:00

»2042 | Future Base + Development | AM

»2042 | Future Base + Development | PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2042 - Future Base + Development								
1 - Camer Road (S)	0.3	3.83	0.25	A	1.1	5.81	0.51	A
2 - Site Access	0.7	5.38	0.42	A	0.2	4.15	0.18	A
3 - Camer Road (N)	2.3	10.12	0.70	B	0.3	3.50	0.22	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.

File summary

File Description

Title	
Location	
Site number	
Date	15/08/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\Luke
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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2042	Future Base + Development	AM	ONE HOUR	07:45	09:15	15
D2	2042	Future Base + Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2042 | Future Base + Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access Roundabout	Standard Roundabout		1, 2, 3	7.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.45	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Camer Road (S)		
2	Site Access		
3	Camer Road (N)		

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 - Camer Road (S)	3.38	4.50	13.5	20.0	45.0	21.0		
2 - Site Access	3.38	4.50	11.8	20.0	45.0	28.0		
3 - Camer Road (N)	3.38	4.50	22.5	20.0	45.0	24.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Camer Road (S)	0.565	1332
2 - Site Access	0.550	1293
3 - Camer Road (N)	0.564	1344

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2042	Future Base + Development	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Camer Road (S)		✓	288	100.000
2 - Site Access		✓	447	100.000
3 - Camer Road (N)		✓	739	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - Camer Road (S)	2 - Site Access	3 - Camer Road (N)
From	1 - Camer Road (S)	0	71	217
	2 - Site Access	282	0	165
	3 - Camer Road (N)	619	120	0

Vehicle Mix

Heavy Vehicle %

	To			
		1 - Camer Road (S)	2 - Site Access	3 - Camer Road (N)
From	1 - Camer Road (S)	0	0	0
	2 - Site Access	0	0	0
	3 - Camer Road (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Camer Road (S)	0.25	3.83	0.3	A
2 - Site Access	0.42	5.38	0.7	A
3 - Camer Road (N)	0.70	10.12	2.3	B

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)	Unsignalised level of service
1 - Camer Road (S)	217	90	1281	0.169	216	0.2	3.378	A
2 - Site Access	337	163	1203	0.280	335	0.4	4.139	A
3 - Camer Road (N)	556	211	1225	0.454	553	0.8	5.336	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)	Unsignalised level of service
1 - Camer Road (S)	259	108	1271	0.204	259	0.3	3.555	A
2 - Site Access	402	195	1185	0.339	401	0.5	4.588	A
3 - Camer Road (N)	664	253	1201	0.553	663	1.2	6.668	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)	Unsignalised level of service
1 - Camer Road (S)	317	131	1258	0.252	317	0.3	3.826	A
2 - Site Access	492	239	1161	0.424	491	0.7	5.366	A
3 - Camer Road (N)	814	310	1169	0.696	810	2.2	9.910	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)	Unsignalised level of service
1 - Camer Road (S)	317	132	1257	0.252	317	0.3	3.827	A
2 - Site Access	492	239	1161	0.424	492	0.7	5.379	A
3 - Camer Road (N)	814	310	1169	0.696	813	2.3	10.124	B

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)	Unsignalised level of service
1 - Camer Road (S)	259	109	1271	0.204	259	0.3	3.559	A
2 - Site Access	402	195	1185	0.339	403	0.5	4.606	A
3 - Camer Road (N)	664	254	1200	0.553	668	1.3	6.813	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)	Unsignalised level of service
1 - Camer Road (S)	217	91	1281	0.169	217	0.2	3.386	A
2 - Site Access	337	164	1203	0.280	337	0.4	4.162	A
3 - Camer Road (N)	556	213	1224	0.455	558	0.8	5.421	A

2042 | Future Base + Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Site Access Roundabout	Standard Roundabout		1, 2, 3	4.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.95	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2042	Future Base + Development	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Camer Road (S)		✓	597	100.000
2 - Site Access		✓	170	100.000
3 - Camer Road (N)		✓	258	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		1 - Camer Road (S)	2 - Site Access	3 - Camer Road (N)
	1 - Camer Road (S)	0	203	394
	2 - Site Access	51	0	119
	3 - Camer Road (N)	170	88	0

Vehicle Mix

Heavy Vehicle %

	To			
From		1 - Camer Road (S)	2 - Site Access	3 - Camer Road (N)
	1 - Camer Road (S)	0	0	0
	2 - Site Access	0	0	0
	3 - Camer Road (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Camer Road (S)	0.51	5.81	1.1	A
2 - Site Access	0.18	4.15	0.2	A
3 - Camer Road (N)	0.22	3.50	0.3	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)	Unsignalised level of service
1 - Camer Road (S)	449	66	1295	0.347	447	0.5	4.238	A
2 - Site Access	128	295	1130	0.113	127	0.1	3.588	A
3 - Camer Road (N)	194	38	1322	0.147	194	0.2	3.188	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)	Unsignalised level of service
1 - Camer Road (S)	537	79	1287	0.417	536	0.7	4.785	A
2 - Site Access	153	354	1098	0.139	153	0.2	3.807	A
3 - Camer Road (N)	232	46	1318	0.176	232	0.2	3.313	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)	Unsignalised level of service
1 - Camer Road (S)	657	97	1277	0.515	656	1.0	5.780	A
2 - Site Access	187	433	1054	0.178	187	0.2	4.148	A
3 - Camer Road (N)	284	56	1312	0.216	284	0.3	3.500	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)	Unsignalised level of service
1 - Camer Road (S)	657	97	1277	0.515	657	1.1	5.805	A
2 - Site Access	187	434	1054	0.178	187	0.2	4.152	A
3 - Camer Road (N)	284	56	1312	0.216	284	0.3	3.500	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)	Unsignalised level of service
1 - Camer Road (S)	537	79	1287	0.417	538	0.7	4.812	A
2 - Site Access	153	355	1097	0.139	153	0.2	3.815	A
3 - Camer Road (N)	232	46	1318	0.176	232	0.2	3.315	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)	Unsignalised level of service
1 - Camer Road (S)	449	66	1295	0.347	450	0.5	4.266	A
2 - Site Access	128	297	1129	0.113	128	0.1	3.595	A
3 - Camer Road (N)	194	38	1322	0.147	194	0.2	3.191	A