

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.93	25.83	10.64	D
2	0.71	17.50	2.38	C
3	0.83	15.11	4.50	C
4	0.29	9.65	0.41	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1040.49	1034.46	98.10	0.00	1720.41	0.605	1.51	5.200	A
2	346.57	344.16	968.19	0.00	915.27	0.379	0.60	6.277	A
3	739.15	734.86	366.82	0.00	1420.00	0.521	1.07	5.223	A
4	106.32	105.65	1018.65	0.00	734.54	0.145	0.17	5.718	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1242.45	1238.10	102.99	0.00	1706.67	0.728	2.60	7.610	A
2	413.84	412.44	1109.50	0.00	841.28	0.492	0.95	8.367	A
3	882.62	879.66	471.51	0.00	1358.25	0.650	1.81	7.476	A
4	126.95	126.68	1200.36	0.00	646.70	0.196	0.24	6.920	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1521.67	1503.09	148.49	0.00	1700.09	0.895	7.24	16.872	C
2	506.84	502.55	1294.85	0.00	745.41	0.680	2.02	14.570	B
3	1080.98	1070.12	555.44	0.00	1298.21	0.833	4.53	15.107	C
4	155.49	154.94	1436.07	0.00	553.46	0.281	0.39	9.020	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1521.67	1508.87	152.09	0.00	1633.21	0.932	10.43	25.829	D
2	506.84	505.46	1285.97	0.00	709.13	0.715	2.38	17.504	C
3	1080.98	1082.19	472.10	0.00	1348.67	0.801	4.23	13.623	B
4	155.49	155.38	1431.16	0.00	528.24	0.294	0.41	9.651	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1242.44	1272.88	111.22	0.00	1698.51	0.731	2.81	9.031	A
2	413.84	419.32	1020.01	0.00	832.41	0.498	1.01	8.825	A
3	882.62	892.21	370.26	0.00	1375.92	0.642	1.83	7.585	A
4	126.95	127.66	1208.46	0.00	658.47	0.193	0.24	6.792	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1040.48	1044.89	106.33	0.00	1657.58	0.628	1.71	5.916	A
2	346.57	347.92	969.18	0.00	879.75	0.394	0.66	6.789	A
3	739.15	741.68	343.40	0.00	1366.77	0.541	1.19	5.784	A
4	106.32	106.46	1044.58	0.00	656.64	0.162	0.19	6.547	A

(Default Analysis Set) - 2026 Base+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D6 - 2026 Base+Dev, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base+Dev, PM	2026 Base+Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			12.41	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A421 (East)	
2	2	B4033 Nash Road	
3	3	A421 (West)	
4	4	Winslow Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.80	9.38	10.44	47.36	50.00	21.00	
2	3.43	6.98	17.30	9.92	50.00	50.00	
3	3.80	7.52	9.19	23.64	50.00	24.00	
4	3.30	6.60	6.64	17.34	50.00	36.00	

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)	0.660	1880.799
2		(calculated)	(calculated)	0.534	1487.492
3		(calculated)	(calculated)	0.615	1689.032
4		(calculated)	(calculated)	0.534	1346.657

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1365.27	100.000
2	ONE HOUR	✓	316.24	100.000
3	ONE HOUR	✓	1041.84	100.000
4	ONE HOUR	✓	81.80	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	1027.85	1063.10		
16:45-17:00	2	238.08	242.06		
16:45-17:00	3	784.35	800.81		
16:45-17:00	4	61.58	61.58		
17:00-17:15	1	1227.35	1286.46		
17:00-17:15	2	284.29	295.34		
17:00-17:15	3	936.59	965.53		
17:00-17:15	4	73.54	73.54		
17:15-17:30	1	1503.19	1565.31		
17:15-17:30	2	348.19	356.37		
17:15-17:30	3	1147.09	1153.19		
17:15-17:30	4	90.06	90.06		
17:30-17:45	1	1503.19	1531.07		
17:30-17:45	2	348.19	358.81		
17:30-17:45	3	1147.09	1162.26		
17:30-17:45	4	90.06	102.93		
17:45-18:00	1	1227.35	1279.88		
17:45-18:00	2	284.29	289.51		
17:45-18:00	3	936.59	968.14		
17:45-18:00	4	73.54	73.54		
18:00-18:15	1	1027.85	1061.48		
18:00-18:15	2	238.08	248.26		
18:00-18:15	3	784.35	803.38		
18:00-18:15	4	61.58	61.58		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	175.300	1149.070	40.900
	2	285.560	0.000	15.340	15.340
	3	980.490	15.340	0.000	46.010
	4	0.000	61.350	20.450	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.13	0.84	0.03
	2	0.90	0.00	0.05	0.05
	3	0.94	0.01	0.00	0.04
	4	0.00	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	232.010	830.470	20.450
	2	200.950	0.000	56.240	15.340
	3	1216.020	30.670	0.000	20.450
	4	0.000	20.450	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.21	0.77	0.02
	2	0.74	0.00	0.21	0.06
	3	0.96	0.02	0.00	0.02
	4	0.00	0.67	0.33	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	257.720	964.660	35.790
	2	155.420	0.000	61.350	15.340
	3	1227.000	40.900	0.000	46.010
	4	0.000	30.670	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.20	0.77	0.03
	2	0.67	0.00	0.26	0.07
	3	0.93	0.03	0.00	0.04
	4	0.00	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	339.640	1006.650	46.010
	2	278.530	0.000	56.240	10.220
	3	1160.470	30.670	0.000	46.010
	4	0.000	35.790	0.000	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.24	0.72	0.03
	2	0.81	0.00	0.16	0.03
	3	0.94	0.02	0.00	0.04
	4	0.00	1.00	0.00	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	262.650	1034.640	25.560
	2	226.390	0.000	51.120	5.110
	3	897.590	35.790	0.000	25.990
	4	0.000	35.790	5.110	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.20	0.78	0.02
	2	0.80	0.00	0.18	0.02
	3	0.94	0.04	0.00	0.03
	4	0.00	0.88	0.12	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	190.550	1034.640	40.900
	2	210.590	0.000	30.670	5.110
	3	1077.110	30.670	0.000	46.790
	4	0.000	10.220	15.340	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.15	0.82	0.03
	2	0.85	0.00	0.12	0.02
	3	0.93	0.03	0.00	0.04
	4	0.00	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.088	1.027	1.000
	2	1.019	1.000	1.000	1.000
	3	1.022	1.000	1.000	1.000
	4	1.250	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	8.8	2.7	0.0
	2	1.9	0.0	0.0	0.0
	3	2.2	0.0	0.0	0.0
	4	25.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.044	1.050	1.000
	2	1.053	1.000	1.000	1.000
	3	1.032	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	4.4	5.0	0.0
	2	5.3	0.0	0.0	0.0
	3	3.2	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.060	1.038	1.000
	2	1.035	1.000	1.000	1.000
	3	1.006	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	6.0	3.8	0.0
	2	3.5	0.0	0.0	0.0
	3	0.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.046	1.010	1.000
	2	1.038	1.000	1.000	1.000
	3	1.014	1.000	1.000	1.000
	4	1.000	1.143	1.250	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	4.6	1.0	0.0
	2	3.8	0.0	0.0	0.0
	3	1.4	0.0	0.0	0.0
	4	0.0	14.3	25.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.098	1.030	1.000
	2	1.023	1.000	1.000	1.000
	3	1.036	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	9.8	3.0	0.0
	2	2.3	0.0	0.0	0.0
	3	3.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	1.000	1.081	1.025	1.000
	2	1.050	1.000	1.000	1.000
	3	1.026	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.0	8.1	2.5	0.0
	2	5.0	0.0	0.0	0.0
	3	2.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.87	14.31	6.03	B
2	0.43	7.90	0.75	A
3	0.79	11.58	3.55	B
4	0.17	8.36	0.23	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1027.85	1022.39	72.75	0.00	1772.02	0.580	1.36	4.769	A
2	238.08	236.80	906.43	0.00	974.47	0.244	0.32	4.872	A
3	784.35	780.00	255.94	0.00	1497.86	0.524	1.09	4.985	A
4	61.58	61.26	959.38	0.00	823.94	0.075	0.08	4.718	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1227.35	1223.33	95.98	0.00	1734.01	0.708	2.36	7.005	A
2	284.29	283.74	986.16	0.00	900.57	0.316	0.46	5.831	A
3	936.59	934.22	248.55	0.00	1483.74	0.631	1.68	6.522	A
4	73.54	73.41	1128.44	0.00	723.33	0.102	0.11	5.537	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1503.19	1488.64	125.32	0.00	1726.68	0.871	6.00	14.313	B
2	348.19	346.99	1206.12	0.00	801.17	0.435	0.76	7.905	A
3	1147.09	1141.13	297.64	0.00	1492.91	0.768	3.17	10.063	B
4	90.06	89.85	1333.76	0.00	627.34	0.144	0.17	6.694	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1503.18	1503.33	118.36	0.00	1760.98	0.853	5.96	14.026	B
2	348.19	348.40	1137.70	0.00	847.69	0.411	0.71	7.213	A
3	1147.08	1145.46	340.86	0.00	1453.92	0.789	3.57	11.580	B
4	90.06	89.88	1383.76	0.00	520.68	0.173	0.21	8.357	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1227.35	1241.24	108.90	0.00	1735.32	0.708	2.48	7.481	A
2	284.29	285.31	1002.86	0.00	919.51	0.309	0.45	5.684	A
3	936.59	943.83	258.06	0.00	1477.86	0.634	1.76	6.831	A
4	73.54	73.87	1146.67	0.00	713.82	0.103	0.12	5.630	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1027.84	1032.15	82.70	0.00	1768.22	0.581	1.41	4.920	A
2	238.08	238.54	913.14	0.00	948.05	0.251	0.34	5.076	A
3	784.35	786.96	241.95	0.00	1497.64	0.524	1.11	5.085	A
4	61.58	61.72	958.96	0.00	819.38	0.075	0.08	4.751	A

Appendix R Bletchley Traffic Flow Comparisons

Traffic Flows in Bletchley – MKC ATC data Vs MKTM Model Data

MKC ATCs



Figure 1 – MKC ATC Locations

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 124	409	433	842	445	407	852
Site 78	466	307	773	322	520	842

Table 1 – Average Weekday 2015 Flows

Tempro Growth for 'Bletchley' adjusted by NTM

AM Peak 1.2157

PM Peak 1.2245

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 124	497	526	1024	545	498	1043
Site 78	567	373	940	394	637	1031

Table 2 – Average Weekday 2026 Flows

MKTM 2026 Base Flows

Site 124 is comparable in location to MKTM 'Site 1 – B4034 East of Tattenhoe Roundabout' in TN8

Site 78 is comparable in location to MKTM 'Site 2 – B4034 West of Newton Road' in TN8

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 1	444	504	948	510	363	873
Site 2	607	342	949	383	541	924

Table 3 – MKTM 2026 Base Flows

Difference

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 1 : Site 124	53	22	76	35	135	170
Site 2 : Site 78	-40	31	-9	11	96	107

Table 4 – Difference ATCs Vs MKTM

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 1 : Site 124	11%	4%	7%	6%	27%	16%
Site 2 : Site 78	-7%	8%	-1%	3%	15%	10%

Table 5 – % Difference ATCs Vs MKTM

The ATCs produce higher 2026 flows than the MKTM in most cases. This is largely to be expected given the assumption of a 'straight line' growth projection from 2015 to 2026 that excludes the dynamic reassignment on the links that would otherwise be determined using the variable demand embedded within the MKTM.

Daily variation

	AM			PM		
	E/b	W/b	Total	E/b	W/b	Total
Site 124	18%	11%	14%	18%	14%	18%
Site 78	18%	11%	10%	14%	22%	17%

Table 6 – MKC 2015 ATCs daily weekday variation

There are large daily variations within the MKC ATCs in the peak hours (Table 6 above). Comparing the growthed ATCs and the MKTM, the difference in the total two-way flows through Bletchley is within the daily variation that one might normally expect.

Summary

It is therefore considered that overall, the outputs derived from the MKTM 2026 Base provide an acceptable forecast of the likely impact of traffic originating from SWMK in 2026.

Steph Howard

18-04-2016

Appendix S A5 Redmoor Roundabout Queue Analysis

Redmoor Roundabout
A5 southbound off-slip
270m in length approximately



TEMPRO growth

2015-2026
00MG1 Milton Keynes
Origin Destination
Car Driver
NTM adjusted - Urban Trunk

PM Peak 1.2272

Arrival Profile

17:00	8%
17:05	4%
17:10	14%
17:15	8%
17:20	15%
17:25	4%
17:30	8%
17:35	1%
17:40	11%
17:45	13%
17:50	12%
17:55	3%

Lane Usage

	Lane 2	Lane 3
17:00	0%	100%
17:05	33%	67%
17:10	78%	22%
17:15	64%	36%
17:20	78%	22%
17:25	0%	100%
17:30	67%	33%
17:35	0%	0%
17:40	40%	60%
17:45	79%	21%
17:50	60%	40%
17:55	100%	0%

51 additional pcus in PM peak.

Assume all right turnings - towards the proposed development

Assume arrivals in same profile as existing (from queues)

Assume lane 2/3 usage as existing (from queues)

Assumes all 51 extra pcus arrive on red and join rear of queue

From queue length surveys 2015

Queue - PCU's

	Lane 1	Lane 2	Lane 3
17:00	4	0	2
17:05	0	1	2
17:10	1	7	2
17:15	0	4	2
17:20	2	7	2
17:25	1	0	2
17:30	1	3	2
17:35	1	0	0
17:40	3	2	3
17:45	0	8	2
17:50	4	3	2
17:55	1	1	0

Queue - Metres

	Lane 1	Lane 2	Lane 3
17:00	23	0	9
17:05	0	6	12
17:10	6	40	12
17:15	0	20	12
17:20	12	40	12
17:25	6	0	12
17:30	6	17	9
17:35	6	0	0
17:40	17	12	17
17:45	0	43	12
17:50	23	17	12
17:55	6	6	0

Max 23 43 17

Forecast Queues in 2026

Queue - PCU's

	Lane 1	Lane 2	Lane 3
17:00	5	0	2
17:05	0	1	2
17:10	1	9	2
17:15	0	4	2
17:20	2	9	2
17:25	1	0	2
17:30	1	4	2
17:35	1	0	0
17:40	4	2	4
17:45	0	9	2
17:50	5	4	2
17:55	1	1	0

Max 5 9 4

Queue - Metres

	Lane 1	Lane 2	Lane 3
17:00	28	0	11
17:05	0	7	14
17:10	7	49	14
17:15	0	25	14
17:20	14	49	14
17:25	7	0	14
17:30	7	21	11
17:35	7	0	0
17:40	21	14	21
17:45	0	53	14
17:50	28	21	14
17:55	7	7	0

Max 28 53 21

Additional traffic from Proposed Development

Development Only Queue - PCU's

	Lane 1	Lane 2	Lane 3
17:00	0	0	4
17:05	0	1	1
17:10	0	5	2
17:15	0	2	1
17:20	0	6	2
17:25	0	0	2
17:30	0	3	1
17:35	0	0	0
17:40	0	2	3
17:45	0	5	1
17:50	0	4	3
17:55	0	1	0

Max 0 6 4

Development Only Queue - Metres

	Lane 1	Lane 2	Lane 3
17:00	0	0	22
17:05	0	4	8
17:10	0	31	9
17:15	0	14	8
17:20	0	34	10
17:25	0	0	12
17:30	0	15	7
17:35	0	0	0
17:40	0	13	19
17:45	0	30	8
17:50	0	22	14
17:55	0	8	0

Max 0 34 22

2026 With Development Queue - PCU's

	Lane 1	Lane 2	Lane 3
17:00	5	0	0
17:05	0	0	0
17:10	0	0	0
17:15	0	0	0
17:20	0	0	0
17:25	0	0	0
17:30	0	0	0
17:35	0	0	0
17:40	0	0	0
17:45	0	0	0
17:50	0	0	0
17:55	0	0	0

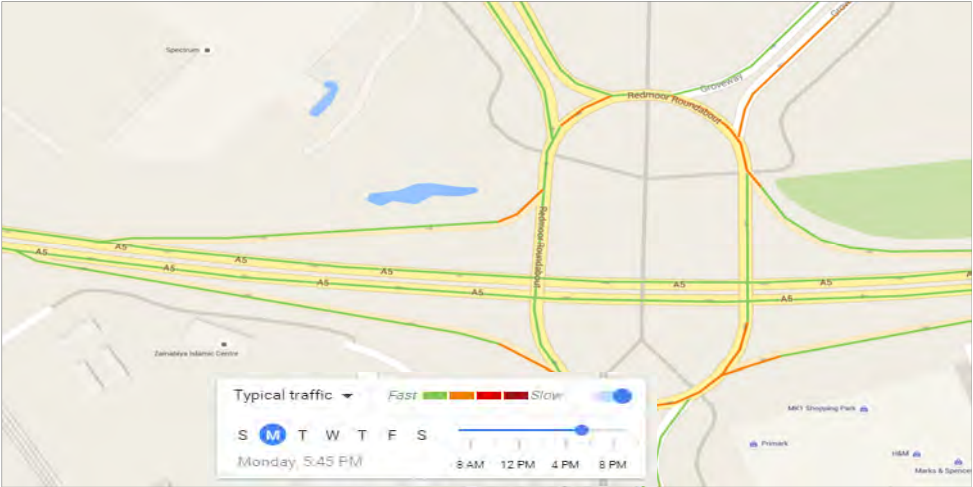
Max 5 0 0

2026 With Development Queue - Metres

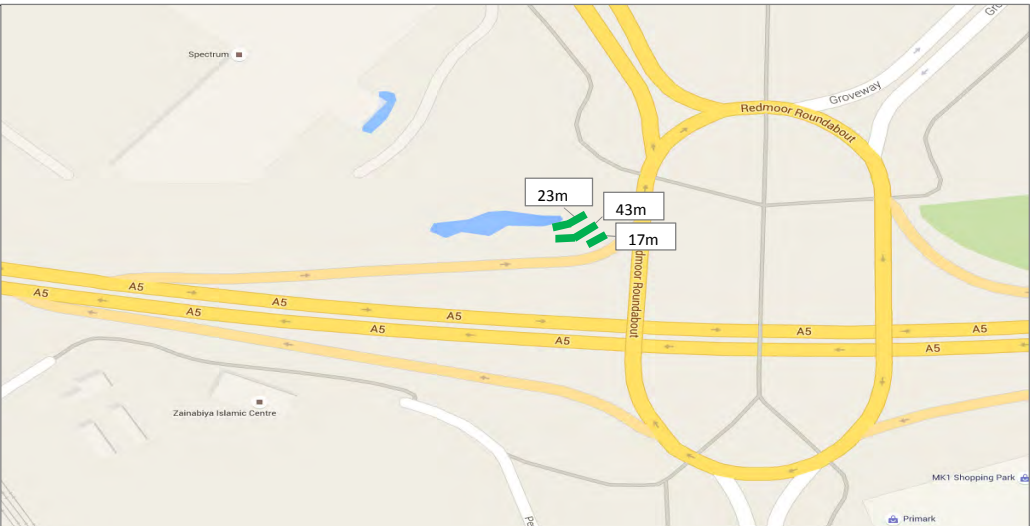
	Lane 1	Lane 2	Lane 3
17:00	28	0	33
17:05	0	11	22
17:10	7	81	23
17:15	0	39	22
17:20	14	84	24
17:25	7	0	26
17:30	7	36	18
17:35	7	0	0
17:40	21	27	40
17:45	0	83	22
17:50	28	43	29
17:55	7	15	0

Max 28 84 40

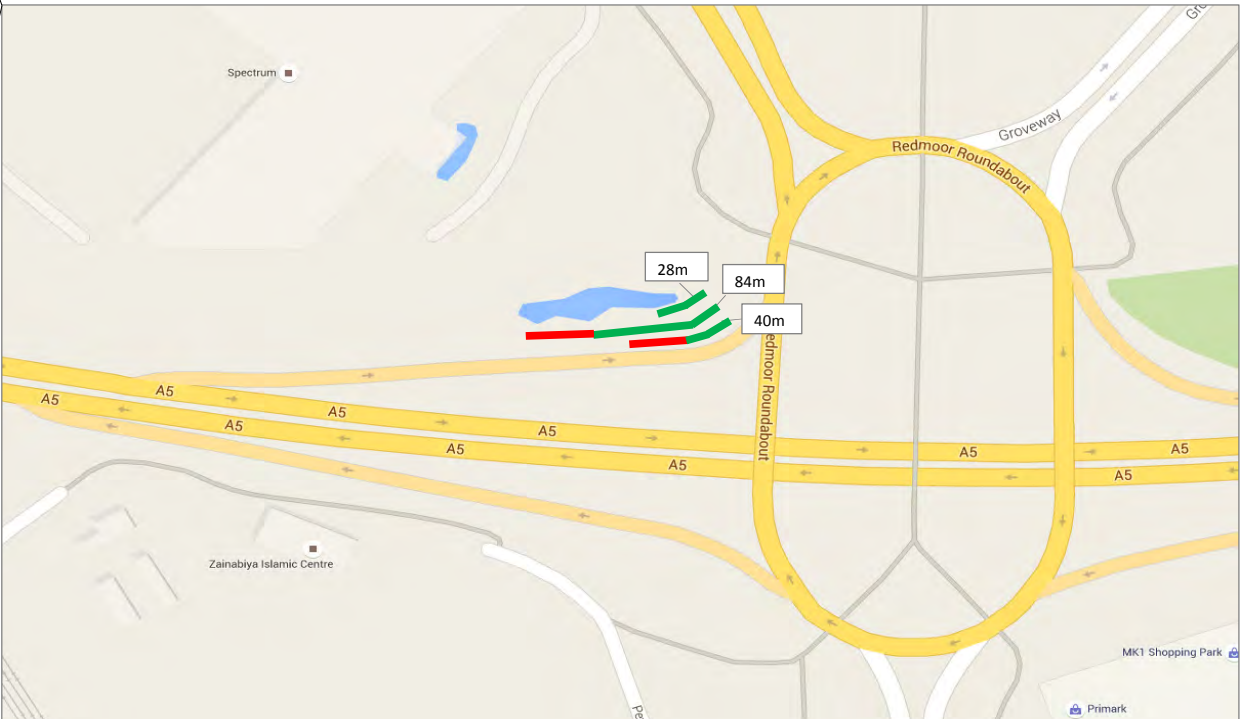
Google Traffic - typical traffic - shows a small queue at the top of the slip road.



From Queue Lengths - 2015



From Analysis - 2026 + Development



Appendix T Mitigated Junction Modelling Results

Bleak Hall Roundabout

Revised Junction Layout

Junctions 8	
ARCADY 8 - Roundabout Module	
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016	
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Filename: IMP Bleak Hall Roundabout_Mitigation_SH.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\Roundabout improvements\Mitigation 2016-05-09_SH

Report generation date: 10/05/2016 10:32:12

- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM
- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

File summary

Title	Bleak Hall Roundabout
Location	Grafton Street / Standing Way
Site Number	
Date	06/11/2014
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	A Lechmere
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

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, AM	Scenario 1 - 2026 Forecast + Committed	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			57.23	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Grafton Street (W)	
2	2	Standing Way (N)	
3	3	Grafton Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	7.50	12.70	6.24	28.80	55.00	39.00	
2	6.70	9.50	17.50	53.50	55.00	36.00	
3	7.10	11.00	11.00	28.00	55.00	29.00	
4	7.20	10.00	10.30	55.00	55.00	36.00	

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)	0.754	2658.195
2		(calculated)	(calculated)	0.754	2616.604
3		(calculated)	(calculated)	0.780	2752.085
4		(calculated)	(calculated)	0.762	2662.452

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	✓	951.00	100.000
2	ONE HOUR	✓	1399.00	100.000
3	ONE HOUR	✓	1206.00	100.000
4	ONE HOUR	✓	1659.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	31.000	41.000	595.000	284.000
	2	244.000	0.000	200.000	955.000
	3	819.000	74.000	0.000	313.000
	4	477.000	951.000	213.000	18.000

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

	To				
		1	2	3	4
From	1	0.03	0.04	0.63	0.30
	2	0.17	0.00	0.14	0.68
	3	0.68	0.06	0.00	0.26
	4	0.29	0.57	0.13	0.01

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.62	5.63	1.62	A
2	0.91	23.27	9.37	C
3	0.92	28.33	9.80	D
4	1.08	136.46	78.89	F

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	715.96	713.63	940.59	0.00	1948.98	0.367	0.58	2.941	A
2	1053.24	1048.65	855.84	0.00	1971.61	0.534	1.15	3.924	A
3	907.94	904.10	1148.59	0.00	1855.77	0.489	0.96	3.808	A
4	1248.98	1242.31	875.61	0.00	1995.14	0.626	1.67	4.793	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	854.93	853.68	1122.71	0.00	1811.66	0.472	0.90	3.794	A
2	1257.67	1253.79	1023.33	0.00	1845.38	0.682	2.12	6.112	A
3	1084.17	1080.79	1373.40	0.00	1680.34	0.645	1.80	6.037	A
4	1491.41	1482.71	1046.79	0.00	1864.68	0.800	3.84	9.321	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1047.07	1044.27	1270.50	0.00	1700.22	0.616	1.60	5.526	A
2	1540.33	1515.10	1231.93	0.00	1688.17	0.912	8.43	18.818	C
3	1327.83	1302.14	1662.53	0.00	1454.72	0.913	8.23	21.094	C
4	1826.59	1671.07	1262.48	0.00	1700.30	1.074	42.72	59.847	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1047.07	1046.97	1279.44	0.00	1693.49	0.618	1.62	5.627	A
2	1540.33	1536.54	1236.03	0.00	1685.09	0.914	9.37	23.270	C
3	1327.83	1321.52	1681.91	0.00	1439.59	0.922	9.80	28.329	D
4	1826.59	1681.94	1280.66	0.00	1686.45	1.083	78.89	136.460	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	854.93	857.01	1340.38	0.00	1647.54	0.519	1.10	4.617	A
2	1257.67	1285.76	1068.63	0.00	1811.24	0.694	2.35	7.281	A
3	1084.17	1115.55	1405.18	0.00	1655.54	0.655	1.96	7.123	A
4	1491.41	1785.22	1078.21	0.00	1840.74	0.810	5.43	81.743	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	715.96	717.99	956.37	0.00	1937.08	0.370	0.60	2.992	A
2	1053.24	1057.94	863.00	0.00	1966.21	0.536	1.18	4.027	A
3	907.94	911.84	1158.23	0.00	1848.25	0.491	0.98	3.903	A
4	1248.98	1263.79	883.10	0.00	1989.43	0.628	1.73	5.116	A

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, PM	Scenario 1 - 2026 Forecast + Committed	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			100.20	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Grafton Street (W)	
2	2	Standing Way (N)	
3	3	Grafton Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	7.50	12.70	6.24	28.80	55.00	39.00	
2	6.70	9.50	17.50	53.50	55.00	36.00	
3	7.10	11.00	11.00	28.00	55.00	29.00	
4	7.20	10.00	10.30	55.00	55.00	36.00	

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)	0.754	2658.195
2		(calculated)	(calculated)	0.754	2616.604
3		(calculated)	(calculated)	0.780	2752.085
4		(calculated)	(calculated)	0.762	2662.452

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	✓	1507.00	100.000
2	ONE HOUR	✓	1017.00	100.000
3	ONE HOUR	✓	1198.00	100.000
4	ONE HOUR	✓	1572.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	47.000	857.000	603.000
	2	17.000	0.000	17.000	983.000
	3	531.000	184.000	0.000	483.000
	4	204.000	846.000	518.000	4.000

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

		To			
From		1	2	3	4
	1	0.00	0.03	0.57	0.40
	2	0.02	0.00	0.02	0.97
	3	0.44	0.15	0.00	0.40
	4	0.13	0.54	0.33	0.00

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.21	293.43	149.33	F
2	0.95	42.70	12.47	E
3	0.90	22.63	7.82	C
4	0.84	11.28	5.25	B

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1134.55	1127.57	1163.92	0.00	1780.59	0.637	1.75	5.516	A
2	765.65	761.47	1483.90	0.00	1498.28	0.511	1.04	4.913	A
3	901.92	897.95	1202.92	0.00	1813.37	0.497	0.99	3.960	A
4	1183.48	1179.01	548.65	0.00	2244.32	0.527	1.12	3.403	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1354.76	1341.98	1392.01	0.00	1608.61	0.842	4.94	13.068	B
2	914.26	908.79	1768.38	0.00	1283.88	0.712	2.41	9.567	A
3	1076.98	1073.27	1434.16	0.00	1632.93	0.660	1.92	6.461	A
4	1413.20	1410.16	655.75	0.00	2162.70	0.653	1.88	4.817	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1659.24	1370.65	1694.95	0.00	1380.18	1.202	77.09	116.815	F
2	1119.74	1088.17	1898.50	0.00	1185.82	0.944	10.30	30.541	D
3	1319.02	1299.64	1622.80	0.00	1485.72	0.888	6.76	17.967	C
4	1730.80	1718.33	793.85	0.00	2057.45	0.841	5.00	10.371	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1659.24	1370.27	1707.27	0.00	1370.90	1.210	149.33	293.431	F
2	1119.74	1111.08	1901.93	0.00	1183.23	0.946	12.47	42.698	E
3	1319.02	1314.82	1645.19	0.00	1468.24	0.898	7.82	22.627	C
4	1730.80	1729.80	803.29	0.00	2050.25	0.844	5.25	11.277	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1354.76	1584.38	1409.92	0.00	1595.10	0.849	91.93	272.350	F
2	914.26	942.34	2008.59	0.00	1102.85	0.829	5.45	25.436	D
3	1076.98	1098.37	1564.18	0.00	1531.46	0.703	2.47	8.795	A
4	1413.20	1426.31	671.29	0.00	2150.85	0.657	1.97	5.113	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1134.55	1494.81	1172.09	0.00	1774.42	0.639	1.86	46.239	E
2	765.65	780.61	1842.27	0.00	1228.19	0.623	1.71	8.392	A
3	901.92	907.07	1368.70	0.00	1684.01	0.536	1.18	4.716	A
4	1183.48	1186.79	554.41	0.00	2239.93	0.528	1.14	3.468	A

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, AM	Scenario 2 - 2026 Forecast + Committed + Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			68.48	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Grafton Street (W)	
2	2	Standing Way (N)	
3	3	Grafton Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	7.50	12.70	6.24	28.80	55.00	39.00	
2	6.70	9.50	17.50	53.50	55.00	36.00	
3	7.10	11.00	11.00	28.00	55.00	29.00	
4	7.20	10.00	10.30	55.00	55.00	36.00	

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)	0.754	2658.195
2		(calculated)	(calculated)	0.754	2616.604
3		(calculated)	(calculated)	0.780	2752.085
4		(calculated)	(calculated)	0.762	2662.452

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	✓	1030.00	100.000
2	ONE HOUR	✓	1381.00	100.000
3	ONE HOUR	✓	1224.00	100.000
4	ONE HOUR	✓	1688.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	34.000	41.000	622.000	333.000
	2	239.000	0.000	167.000	975.000
	3	824.000	75.000	0.000	325.000
	4	472.000	1010.000	185.000	21.000

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

		To			
From		1	2	3	4
	1	0.03	0.04	0.60	0.32
	2	0.17	0.00	0.12	0.71
	3	0.67	0.06	0.00	0.27
	4	0.28	0.60	0.11	0.01

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.67	6.66	2.07	A
2	0.93	26.89	10.65	D
3	0.98	49.30	17.94	E
4	1.10	154.14	90.90	F

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	775.44	772.74	966.63	0.00	1929.35	0.402	0.68	3.141	A
2	1039.69	1035.07	896.21	0.00	1941.19	0.536	1.15	3.997	A
3	921.49	917.36	1200.96	0.00	1814.90	0.508	1.03	4.036	A
4	1270.81	1263.81	878.42	0.00	1993.00	0.638	1.75	4.944	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	925.95	924.35	1153.28	0.00	1788.61	0.518	1.07	4.203	A
2	1241.49	1237.45	1071.55	0.00	1809.04	0.686	2.16	6.324	A
3	1100.35	1096.29	1435.93	0.00	1631.55	0.674	2.05	6.749	A
4	1517.48	1507.69	1049.87	0.00	1862.33	0.815	4.20	9.996	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1134.05	1130.19	1291.98	0.00	1684.03	0.673	2.04	6.526	A
2	1520.51	1491.70	1290.54	0.00	1644.00	0.925	9.37	20.873	C
3	1347.65	1304.07	1734.94	0.00	1398.20	0.964	12.94	30.284	D
4	1858.52	1682.55	1253.28	0.00	1707.32	1.089	48.19	65.546	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1134.05	1133.92	1297.12	0.00	1680.15	0.675	2.07	6.658	A
2	1520.51	1515.36	1294.74	0.00	1640.83	0.927	10.65	26.888	D
3	1347.65	1327.66	1757.13	0.00	1380.89	0.976	17.94	49.304	E
4	1858.52	1687.68	1274.82	0.00	1690.90	1.099	90.90	154.140	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	925.95	928.83	1367.93	0.00	1626.76	0.569	1.35	5.237	A
2	1241.49	1274.53	1111.52	0.00	1778.92	0.698	2.39	7.673	A
3	1100.35	1162.99	1473.75	0.00	1602.03	0.687	2.28	9.481	A
4	1517.48	1799.98	1105.42	0.00	1820.00	0.834	20.28	114.729	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	775.44	778.01	1025.40	0.00	1885.03	0.411	0.71	3.294	A
2	1039.69	1044.50	911.13	0.00	1929.94	0.539	1.19	4.133	A
3	921.49	926.36	1212.13	0.00	1806.19	0.510	1.06	4.160	A
4	1270.81	1344.62	886.84	0.00	1986.59	0.640	1.83	6.348	A

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, PM	Scenario 2 - 2026 Forecast + Committed + Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			106.16	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Grafton Street (W)	
2	2	Standing Way (N)	
3	3	Grafton Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	7.50	12.70	6.24	28.80	55.00	39.00	
2	6.70	9.50	17.50	53.50	55.00	36.00	
3	7.10	11.00	11.00	28.00	55.00	29.00	
4	7.20	10.00	10.30	55.00	55.00	36.00	

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)	0.754	2658.195
2		(calculated)	(calculated)	0.754	2616.604
3		(calculated)	(calculated)	0.780	2752.085
4		(calculated)	(calculated)	0.762	2662.452

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	✓	1540.00	100.000
2	ONE HOUR	✓	1044.00	100.000
3	ONE HOUR	✓	1235.00	100.000
4	ONE HOUR	✓	1577.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	51.000	910.000	579.000
	2	23.000	0.000	18.000	1003.000
	3	539.000	192.000	0.000	504.000
	4	236.000	873.000	463.000	5.000

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

		To			
From		1	2	3	4
	1	0.00	0.03	0.59	0.38
	2	0.02	0.00	0.02	0.96
	3	0.44	0.16	0.00	0.41
	4	0.15	0.55	0.29	0.00

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		1	2	3	4
	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.22	308.45	159.30	F
2	0.94	40.83	12.23	E
3	0.93	29.27	10.38	D
4	0.85	12.09	5.63	B

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1159.39	1152.10	1149.59	0.00	1791.39	0.647	1.82	5.632	A
2	785.98	781.65	1464.93	0.00	1512.57	0.520	1.08	4.951	A
3	929.77	925.55	1205.09	0.00	1811.68	0.513	1.06	4.087	A
4	1187.25	1182.69	565.06	0.00	2231.82	0.532	1.14	3.456	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1384.43	1370.35	1374.79	0.00	1621.59	0.854	5.34	13.777	B
2	938.53	932.79	1744.75	0.00	1301.69	0.721	2.52	9.718	A
3	1110.24	1106.04	1436.41	0.00	1631.17	0.681	2.11	6.876	A
4	1417.69	1414.52	675.22	0.00	2147.86	0.660	1.93	4.941	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1695.57	1388.65	1672.34	0.00	1397.23	1.214	82.07	122.213	F
2	1149.47	1118.54	1853.93	0.00	1219.41	0.943	10.25	29.750	D
3	1359.76	1333.87	1626.82	0.00	1482.58	0.917	8.58	21.549	C
4	1736.31	1722.79	814.17	0.00	2041.97	0.850	5.31	10.967	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1695.57	1386.64	1685.68	0.00	1387.18	1.222	159.30	308.448	F
2	1149.47	1141.55	1855.62	0.00	1218.13	0.944	12.23	40.833	E
3	1359.76	1352.56	1648.71	0.00	1465.50	0.928	10.38	29.267	D
4	1736.31	1735.05	825.73	0.00	2033.15	0.854	5.63	12.095	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1384.43	1596.14	1395.10	0.00	1606.27	0.862	106.38	296.842	F
2	938.53	965.84	1968.26	0.00	1133.24	0.828	5.40	24.272	C
3	1110.24	1140.93	1553.83	0.00	1539.53	0.721	2.70	9.793	A
4	1417.69	1432.03	696.60	0.00	2131.57	0.665	2.04	5.305	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	1159.39	1577.01	1157.99	0.00	1785.06	0.650	1.97	71.650	F
2	785.98	799.71	1878.16	0.00	1201.15	0.654	1.97	9.359	A
3	929.77	935.47	1382.61	0.00	1673.15	0.556	1.28	4.970	A
4	1187.25	1190.76	571.33	0.00	2227.04	0.533	1.16	3.523	A

Elfield Park Roundabout Revised Junction Layout

Junctions 8	
ARCADY 8 - Roundabout Module	
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016	
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Filename: IMP Elfield Park Roundabout - Mouchel measurements_Mitigation_SH.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\Roundabout improvements\Mitigation 2016-05-09_SH

Report generation date: 10/05/2016 06:43:02

- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM
- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

File summary

Title	Elfield Park Roundabout
Location	Watling Street / Standing Way
Site Number	
Date	06/11/2014
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	A Lechmere
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

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, AM	Scenario 1 - 2026 Forecast + Committed	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Elfield Park Roundabout	Roundabout	1,2,3,4			382.49	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Watling Street (W)	
2	2	Standing Way (N)	
3	3	Watling Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	4.60	9.20	11.70	44.80	56.00	16.00	
2	7.20	10.50	11.00	30.40	56.00	23.00	
3	4.90	11.20	14.70	111.90	56.00	16.00	
4	7.50	11.00	24.50	23.70	56.00	40.00	

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)	0.683	2163.174
2		(calculated)	(calculated)	0.789	2802.166
3		(calculated)	(calculated)	0.746	2492.842
4		(calculated)	(calculated)	0.791	2919.089

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	✓	729.00	100.000
2	ONE HOUR	✓	1519.00	100.000
3	ONE HOUR	✓	1496.00	100.000
4	ONE HOUR	✓	2166.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	194.000	467.000	68.000
	2	226.000	0.000	63.000	1230.000
	3	752.000	359.000	133.000	252.000
	4	239.000	1106.000	795.000	26.000

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

	To				
		1	2	3	4
From	1	0.00	0.27	0.64	0.09
	2	0.15	0.00	0.04	0.81
	3	0.50	0.24	0.09	0.17
	4	0.11	0.51	0.37	0.01

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.11	203.68	48.46	F
2	0.97	40.56	17.96	E
3	1.33	497.57	207.86	F
4	1.26	602.98	300.81	F

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	548.83	543.16	1804.85	0.00	930.26	0.590	1.42	9.273	A
2	1143.58	1137.75	1110.34	0.00	1926.39	0.594	1.46	4.581	A
3	1126.27	1117.40	1160.62	0.00	1626.96	0.692	2.22	7.026	A
4	1630.68	1615.64	1098.45	0.00	2049.96	0.795	3.76	8.120	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	655.36	638.62	2071.94	0.00	747.81	0.876	5.60	29.729	D
2	1365.55	1358.84	1283.90	0.00	1789.50	0.763	3.14	8.323	A
3	1344.87	1318.37	1384.16	0.00	1460.19	0.921	8.84	22.428	C
4	1947.19	1841.56	1298.46	0.00	1891.71	1.029	30.17	42.592	E

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	802.64	712.24	2102.29	0.00	727.08	1.104	28.20	101.704	F
2	1672.45	1628.69	1353.97	0.00	1734.24	0.964	14.08	27.242	D
3	1647.13	1257.77	1650.36	0.00	1261.59	1.306	106.18	173.824	F
4	2384.81	1898.07	1288.22	0.00	1899.81	1.255	151.85	178.623	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	802.64	721.62	2105.12	0.00	725.14	1.107	48.46	203.683	F
2	1672.45	1656.93	1362.95	0.00	1727.16	0.968	17.96	40.563	E
3	1647.13	1240.43	1678.42	0.00	1240.65	1.328	207.86	442.785	F
4	2384.81	1907.67	1278.01	0.00	1907.89	1.250	271.14	408.157	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	655.36	721.76	2088.04	0.00	736.81	0.889	31.86	202.535	F
2	1365.55	1421.81	1347.46	0.00	1739.37	0.785	3.89	13.305	B
3	1344.87	1402.67	1452.11	0.00	1409.49	0.954	193.41	497.567	F
4	1947.19	1828.49	1377.93	0.00	1828.83	1.065	300.81	576.834	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	548.83	664.08	2061.07	0.00	755.24	0.727	3.05	66.373	F
2	1143.58	1151.87	1283.58	0.00	1789.75	0.639	1.82	5.779	A
3	1126.27	1599.10	1186.75	0.00	1607.46	0.701	75.20	304.053	F
4	1630.68	1725.56	1501.11	0.00	1731.36	0.942	277.09	602.979	F

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, PM	Scenario 1 - 2026 Forecast + Committed	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Elfield Park Roundabout	Roundabout	1,2,3,4			104.24	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Watling Street (W)	
2	2	Standing Way (N)	
3	3	Watling Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	4.60	9.20	11.70	44.80	56.00	16.00	
2	7.20	10.50	11.00	30.40	56.00	23.00	
3	4.90	11.20	14.70	111.90	56.00	16.00	
4	7.50	11.00	24.50	23.70	56.00	40.00	

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)	0.683	2163.174
2		(calculated)	(calculated)	0.789	2802.166
3		(calculated)	(calculated)	0.746	2492.842
4		(calculated)	(calculated)	0.791	2919.089

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	✓	594.00	100.000
2	ONE HOUR	✓	2095.00	100.000
3	ONE HOUR	✓	524.00	100.000
4	ONE HOUR	✓	1748.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	128.000	355.000	111.000
	2	353.000	0.000	94.000	1648.000
	3	335.000	164.000	24.000	1.000
	4	34.000	1279.000	343.000	92.000

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

		To			
From		1	2	3	4
	1	0.00	0.22	0.60	0.19
	2	0.17	0.00	0.04	0.79
	3	0.64	0.31	0.05	0.00
	4	0.02	0.73	0.20	0.05

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.89	39.86	6.76	E
2	1.15	221.78	159.41	F
3	0.64	11.21	1.77	B
4	0.88	13.13	6.75	B

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	447.19	444.78	1426.50	0.00	1188.72	0.376	0.60	4.877	A
2	1577.23	1568.00	693.20	0.00	2255.41	0.699	2.31	5.227	A
3	394.49	392.67	1649.77	0.00	1262.03	0.313	0.46	4.178	A
4	1315.99	1311.12	656.12	0.00	2399.95	0.548	1.22	3.328	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	533.99	531.84	1705.66	0.00	998.02	0.535	1.14	7.771	A
2	1883.36	1866.70	828.87	0.00	2148.40	0.877	6.47	12.253	B
3	471.07	469.51	1964.84	0.00	1026.97	0.459	0.85	6.510	A
4	1571.42	1567.70	783.15	0.00	2299.44	0.683	2.15	4.949	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	654.01	635.99	2076.19	0.00	744.91	0.878	5.65	29.647	D
2	2306.64	2000.61	999.91	0.00	2013.50	1.146	82.98	88.187	F
3	576.93	573.40	2130.09	0.00	903.69	0.638	1.73	10.903	B
4	1924.58	1907.57	909.40	0.00	2199.54	0.875	6.40	11.834	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	654.01	649.55	2092.72	0.00	733.62	0.891	6.76	39.857	E
2	2306.64	2000.89	1014.59	0.00	2001.92	1.152	159.41	220.744	F
3	576.93	576.78	2133.71	0.00	900.99	0.640	1.77	11.213	B
4	1924.58	1923.19	912.82	0.00	2196.84	0.876	6.75	13.135	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	533.99	556.13	1727.82	0.00	982.88	0.543	1.23	8.958	A
2	1883.36	2115.64	853.40	0.00	2129.06	0.885	101.35	221.779	F
3	471.07	472.93	2208.27	0.00	845.36	0.557	1.30	9.822	A
4	1571.42	1589.06	828.50	0.00	2263.55	0.694	2.34	5.531	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	447.19	449.62	1436.84	0.00	1181.66	0.378	0.62	4.989	A
2	1577.23	1972.70	699.43	0.00	2250.50	0.701	2.48	45.207	E
3	394.49	396.91	2037.69	0.00	972.62	0.406	0.70	6.347	A
4	1315.99	1320.11	728.55	0.00	2342.64	0.562	1.31	3.572	A

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, AM	Scenario 2 - 2026 Forecast + Committed + Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Elfield Park Roundabout	Roundabout	1,2,3,4			431.98	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Watling Street (W)	
2	2	Standing Way (N)	
3	3	Watling Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	4.60	9.20	11.70	44.80	56.00	16.00	
2	7.20	10.50	11.00	30.40	56.00	23.00	
3	4.90	11.20	14.70	111.90	56.00	16.00	
4	7.50	11.00	24.50	23.70	56.00	40.00	

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)	0.683	2163.174
2		(calculated)	(calculated)	0.789	2802.166
3		(calculated)	(calculated)	0.746	2492.842
4		(calculated)	(calculated)	0.791	2919.089

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	✓	779.00	100.000
2	ONE HOUR	✓	1599.00	100.000
3	ONE HOUR	✓	1472.00	100.000
4	ONE HOUR	✓	2179.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	223.000	474.000	82.000
	2	238.000	0.000	61.000	1300.000
	3	735.000	364.000	150.000	223.000
	4	245.000	1100.000	810.000	24.000

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

		To			
From		1	2	3	4
	1	0.00	0.29	0.61	0.11
	2	0.15	0.00	0.04	0.81
	3	0.50	0.25	0.10	0.15
	4	0.11	0.50	0.37	0.01

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.20	395.61	80.72	F
2	1.02	77.04	39.51	F
3	1.35	586.39	225.71	F
4	1.26	601.13	301.58	F

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	586.47	579.51	1825.70	0.00	916.02	0.640	1.74	10.610	B
2	1203.81	1196.90	1147.42	0.00	1897.15	0.635	1.73	5.148	A
3	1108.20	1098.87	1230.13	0.00	1575.10	0.704	2.33	7.504	A
4	1640.47	1624.66	1110.55	0.00	2040.39	0.804	3.95	8.460	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	700.31	671.01	2084.44	0.00	739.28	0.947	9.07	42.191	E
2	1437.47	1427.67	1315.04	0.00	1764.94	0.814	4.18	10.497	B
3	1323.30	1289.26	1464.12	0.00	1400.54	0.945	10.84	27.035	D
4	1958.88	1841.27	1306.45	0.00	1885.39	1.039	33.35	45.902	E

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	857.69	712.82	2114.37	0.00	718.82	1.193	45.28	152.423	F
2	1760.53	1674.96	1361.34	0.00	1728.42	1.019	25.57	41.828	E
3	1620.70	1216.36	1707.07	0.00	1219.28	1.329	111.93	191.069	F
4	2399.12	1903.68	1281.39	0.00	1905.21	1.259	157.21	186.013	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	857.69	715.95	2117.11	0.00	716.95	1.196	80.72	327.025	F
2	1760.53	1704.78	1365.68	0.00	1725.00	1.021	39.51	77.044	F
3	1620.70	1197.37	1736.20	0.00	1197.55	1.353	217.76	488.140	F
4	2399.12	1914.24	1269.72	0.00	1914.45	1.253	278.43	416.674	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	700.31	714.61	2107.44	0.00	723.56	0.968	77.14	395.606	F
2	1437.47	1573.44	1355.97	0.00	1732.66	0.830	5.52	34.734	D
3	1323.30	1291.48	1609.19	0.00	1292.31	1.024	225.71	586.390	F
4	1958.88	1866.31	1330.02	0.00	1866.73	1.049	301.58	575.727	F

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	586.47	733.79	2078.38	0.00	743.41	0.789	40.31	291.036	F
2	1203.81	1216.60	1344.98	0.00	1741.32	0.691	2.32	7.099	A
3	1108.20	1541.03	1266.55	0.00	1547.94	0.716	117.51	402.085	F
4	1640.47	1735.40	1488.66	0.00	1741.22	0.942	277.84	601.130	F

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, PM	Scenario 2 - 2026 Forecast + Committed + Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Elfield Park Roundabout	Roundabout	1,2,3,4			116.22	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Watling Street (W)	
2	2	Standing Way (N)	
3	3	Watling Street (E)	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	4.60	9.20	11.70	44.80	56.00	16.00	
2	7.20	10.50	11.00	30.40	56.00	23.00	
3	4.90	11.20	14.70	111.90	56.00	16.00	
4	7.50	11.00	24.50	23.70	56.00	40.00	

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)	0.683	2163.174
2		(calculated)	(calculated)	0.789	2802.166
3		(calculated)	(calculated)	0.746	2492.842
4		(calculated)	(calculated)	0.791	2919.089

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	✓	564.00	100.000
2	ONE HOUR	✓	2106.00	100.000
3	ONE HOUR	✓	499.00	100.000
4	ONE HOUR	✓	1839.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	85.000	365.000	114.000
	2	319.000	0.000	25.000	1762.000
	3	346.000	142.000	11.000	0.000
	4	39.000	1349.000	359.000	92.000

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

		To			
From		1	2	3	4
	1	0.00	0.15	0.65	0.20
	2	0.15	0.00	0.01	0.84
	3	0.69	0.28	0.02	0.00
	4	0.02	0.73	0.20	0.05

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		1	2	3	4
	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.89	41.67	6.71	E
2	1.17	248.58	171.88	F
3	0.64	11.74	1.76	B
4	0.90	15.87	8.50	C

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	424.61	422.30	1464.60	0.00	1162.69	0.365	0.58	4.901	A
2	1585.51	1575.99	705.14	0.00	2245.99	0.706	2.38	5.359	A
3	375.67	373.88	1711.64	0.00	1215.87	0.309	0.45	4.314	A
4	1384.50	1379.21	612.60	0.00	2434.38	0.569	1.32	3.433	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	507.02	504.95	1751.05	0.00	967.01	0.524	1.09	7.842	A
2	1893.25	1874.93	843.10	0.00	2137.18	0.886	6.96	13.054	B
3	448.59	446.97	2037.23	0.00	972.97	0.461	0.85	6.899	A
4	1653.22	1648.97	730.97	0.00	2340.72	0.706	2.38	5.229	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	620.98	603.40	2127.59	0.00	709.80	0.875	5.49	30.364	D
2	2318.75	1989.93	1015.64	0.00	2001.09	1.159	89.16	94.520	F
3	549.41	545.91	2188.46	0.00	860.14	0.639	1.73	11.456	B
4	2024.78	2002.68	847.33	0.00	2248.66	0.900	7.91	13.721	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	620.98	616.08	2147.95	0.00	695.89	0.892	6.71	41.669	E
2	2318.75	1987.89	1031.33	0.00	1988.72	1.166	171.88	238.470	F
3	549.41	549.28	2189.99	0.00	859.00	0.640	1.76	11.737	B
4	2024.78	2022.43	850.38	0.00	2246.24	0.901	8.50	15.872	C

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	507.02	529.13	1779.35	0.00	947.68	0.535	1.19	9.143	A
2	1893.25	2103.17	870.54	0.00	2115.54	0.895	119.40	248.577	F
3	448.59	450.35	2269.04	0.00	800.03	0.561	1.32	10.464	B
4	1653.22	1676.82	768.92	0.00	2310.70	0.715	2.60	5.949	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	424.61	426.99	1475.55	0.00	1155.21	0.368	0.59	5.013	A
2	1585.51	2052.67	711.65	0.00	2240.86	0.708	2.61	71.990	F
3	375.67	377.80	2184.10	0.00	863.39	0.435	0.79	7.529	A
4	1384.50	1389.17	688.72	0.00	2374.15	0.583	1.43	3.714	A

Emerson Roundabout Revised Junction Layout

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016
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Filename: IMP Emerson Roundabout - Mouchel measurements_Mitigation_SH.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\Roundabout improvements\Mitigation 2016-05-09_SH

Report generation date: 10/05/2016 06:14:12

- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM
- » Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM
- » Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

File summary

Title	Emerson Roundabout
Location	Fulmer Street / Standing Way / Shenley Road
Site Number	
Date	06/11/2014
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	A Lechmere
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

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, AM	Scenario 1 - 2026 Forecast + Committed	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			40.57	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fulmer Street	
2	2	Standing Way (N)	
3	3	Shenley Way	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.11	9.50	20.00	116.75	56.00	21.00	
2	7.58	9.41	16.00	46.47	56.00	20.00	
3	3.64	10.00	13.00	43.43	56.00	12.00	
4	7.48	13.50	9.60	31.84	56.00	25.00	

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)	0.659	2036.001
2		(calculated)	(calculated)	0.807	2871.725
3		(calculated)	(calculated)	0.661	2018.777
4		(calculated)	(calculated)	0.818	2975.205

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	✓	380.00	100.000
2	ONE HOUR	✓	1280.00	100.000
3	ONE HOUR	✓	1144.00	100.000
4	ONE HOUR	✓	1511.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	15.000	318.000	47.000
	2	124.000	0.000	186.000	970.000
	3	343.000	621.000	0.000	180.000
	4	5.000	1298.000	208.000	0.000

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

	To				
		1	2	3	4
From	1	0.00	0.04	0.84	0.12
	2	0.10	0.00	0.15	0.76
	3	0.30	0.54	0.00	0.16
	4	0.00	0.86	0.14	0.00

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.80	33.68	3.69	D
2	0.60	3.81	1.48	A
3	1.06	125.17	48.00	F
4	0.81	9.38	4.22	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	286.08	284.44	1594.29	0.00	985.14	0.290	0.41	5.183	A
2	963.65	961.17	429.27	0.00	2525.24	0.382	0.62	2.323	A
3	861.26	855.47	856.68	0.00	1452.77	0.593	1.45	6.037	A
4	1137.56	1133.66	813.98	0.00	2309.03	0.493	0.98	3.086	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	341.61	340.15	1905.73	0.00	779.86	0.438	0.78	8.251	A
2	1150.69	1149.64	513.34	0.00	2457.38	0.468	0.89	2.780	A
3	1028.43	1021.61	1024.65	0.00	1341.79	0.766	3.15	11.135	B
4	1358.36	1355.65	972.24	0.00	2179.52	0.623	1.65	4.404	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	418.39	408.75	2277.73	0.00	534.66	0.783	3.19	27.121	D
2	1409.31	1406.98	620.33	0.00	2371.02	0.594	1.47	3.765	A
3	1259.57	1158.65	1253.08	0.00	1190.86	1.058	28.38	61.080	F
4	1663.64	1654.25	1112.65	0.00	2064.60	0.806	4.00	8.677	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	418.39	416.38	2298.40	0.00	521.04	0.803	3.69	33.678	D
2	1409.31	1409.24	628.84	0.00	2364.16	0.596	1.48	3.810	A
3	1259.57	1181.10	1255.96	0.00	1188.96	1.059	48.00	125.174	F
4	1663.64	1662.76	1131.79	0.00	2048.94	0.812	4.22	9.383	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	341.61	352.49	2017.08	0.00	706.47	0.484	0.97	10.585	B
2	1150.69	1153.01	526.78	0.00	2446.53	0.470	0.90	2.818	A
3	1028.43	1205.56	1029.06	0.00	1338.88	0.768	3.72	51.289	F
4	1358.36	1367.19	1127.57	0.00	2052.39	0.662	2.01	5.377	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	286.08	288.26	1610.17	0.00	974.67	0.294	0.42	5.318	A
2	963.65	964.75	434.03	0.00	2521.40	0.382	0.63	2.341	A
3	861.26	870.12	860.21	0.00	1450.43	0.594	1.50	6.363	A
4	1137.56	1141.62	826.68	0.00	2298.64	0.495	1.00	3.158	A

Existing Junction Layout - Scenario 1 - 2026 Forecast + Committed, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 1 - 2026 Forecast + Committed, PM	Scenario 1 - 2026 Forecast + Committed	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			128.49	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fulmer Street	
2	2	Standing Way (N)	
3	3	Shenley Way	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.11	9.50	20.00	116.75	56.00	21.00	
2	7.58	9.41	16.00	46.47	56.00	20.00	
3	3.64	10.00	13.00	43.43	56.00	12.00	
4	7.48	13.50	9.60	31.84	56.00	25.00	

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)	0.659	2036.001
2		(calculated)	(calculated)	0.807	2871.725
3		(calculated)	(calculated)	0.661	2018.777
4		(calculated)	(calculated)	0.818	2975.205

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	✓	671.00	100.000
2	ONE HOUR	✓	1995.00	100.000
3	ONE HOUR	✓	1035.00	100.000
4	ONE HOUR	✓	1146.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	205.000	408.000	58.000
	2	307.000	17.000	391.000	1280.000
	3	510.000	408.000	0.000	117.000
	4	0.000	1002.000	144.000	0.000

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

		To			
From		1	2	3	4
	1	0.00	0.31	0.61	0.09
	2	0.15	0.01	0.20	0.64
	3	0.49	0.39	0.00	0.11
	4	0.00	0.87	0.13	0.00

Vehicle Mix

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

	To				
		1	2	3	4
From	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.75	14.97	3.00	B
2	0.94	23.74	13.60	C
3	1.40	541.40	166.89	F
4	0.60	4.38	1.53	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	505.16	502.48	1177.21	0.00	1260.06	0.401	0.67	4.788	A
2	1501.94	1495.93	457.05	0.00	2502.81	0.600	1.50	3.592	A
3	779.20	771.83	1246.18	0.00	1195.43	0.652	1.84	8.453	A
4	862.77	860.20	927.53	0.00	2216.10	0.389	0.64	2.680	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	603.22	601.18	1402.79	0.00	1111.37	0.543	1.18	7.105	A
2	1793.46	1788.35	546.79	0.00	2430.39	0.738	2.78	5.624	A
3	930.44	909.95	1489.81	0.00	1034.46	0.899	6.97	25.874	D
4	1030.23	1028.85	1097.52	0.00	2076.98	0.496	0.99	3.468	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	738.78	731.81	1603.68	0.00	978.95	0.755	2.92	14.339	B
2	2196.54	2160.28	666.51	0.00	2333.75	0.941	11.84	18.121	C
3	1139.56	826.11	1800.15	0.00	829.42	1.374	85.33	213.324	F
4	1261.77	1259.62	1083.57	0.00	2088.40	0.604	1.52	4.380	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	738.78	738.49	1601.03	0.00	980.70	0.753	3.00	14.973	B
2	2196.54	2189.50	671.42	0.00	2329.79	0.943	13.60	23.741	C
3	1139.56	813.32	1824.22	0.00	813.52	1.401	166.89	523.326	F
4	1261.77	1261.76	1076.97	0.00	2093.80	0.603	1.53	4.374	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	603.22	610.04	1442.86	0.00	1084.95	0.556	1.29	7.769	A
2	1793.46	1836.10	553.34	0.00	2425.10	0.740	2.94	6.614	A
3	930.44	1002.51	1528.97	0.00	1008.58	0.923	148.87	541.398	F
4	1030.23	1032.02	1187.38	0.00	2003.44	0.514	1.08	3.755	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	505.16	507.13	1342.14	0.00	1151.34	0.439	0.80	5.668	A
2	1501.94	1507.57	460.73	0.00	2499.85	0.601	1.54	3.690	A
3	779.20	1180.96	1255.93	0.00	1188.98	0.655	48.43	303.256	F
4	862.77	863.76	1292.30	0.00	1917.57	0.450	0.83	3.456	A

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, AM	Scenario 2 - 2026 Forecast + Committed + Development	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			45.34	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fulmer Street	
2	2	Standing Way (N)	
3	3	Shenley Way	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.11	9.50	20.00	116.75	56.00	21.00	
2	7.58	9.41	16.00	46.47	56.00	20.00	
3	3.64	10.00	13.00	43.43	56.00	12.00	
4	7.48	13.50	9.60	31.84	56.00	25.00	

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)	0.659	2036.001
2		(calculated)	(calculated)	0.807	2871.725
3		(calculated)	(calculated)	0.661	2018.777
4		(calculated)	(calculated)	0.818	2975.205

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	✓	386.00	100.000
2	ONE HOUR	✓	1398.00	100.000
3	ONE HOUR	✓	1090.00	100.000
4	ONE HOUR	✓	1614.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	34.000	294.000	58.000
	2	124.000	0.000	211.000	1063.000
	3	339.000	552.000	0.000	199.000
	4	6.000	1401.000	201.000	6.000

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

		To			
From		1	2	3	4
	1	0.00	0.09	0.76	0.15
	2	0.09	0.00	0.15	0.76
	3	0.31	0.51	0.00	0.18
	4	0.00	0.87	0.12	0.00

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
		1	2	3	4
From	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.85	43.09	4.75	E
2	0.65	4.34	1.84	A
3	1.08	150.50	55.77	F
4	0.84	10.36	4.96	B

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	290.60	288.88	1619.03	0.00	968.83	0.300	0.43	5.340	A
2	1052.49	1049.63	418.73	0.00	2533.75	0.415	0.72	2.448	A
3	820.61	814.96	939.12	0.00	1398.30	0.587	1.41	6.181	A
4	1215.10	1210.82	759.27	0.00	2353.81	0.516	1.07	3.173	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	347.01	345.39	1935.15	0.00	760.47	0.456	0.83	8.735	A
2	1256.77	1255.46	500.66	0.00	2467.62	0.509	1.04	3.000	A
3	979.89	972.88	1123.26	0.00	1276.64	0.768	3.16	11.717	B
4	1450.95	1447.84	906.62	0.00	2233.22	0.650	1.85	4.615	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	424.99	412.51	2308.95	0.00	514.08	0.827	3.96	32.617	D
2	1539.23	1536.14	602.62	0.00	2385.32	0.645	1.82	4.271	A
3	1200.11	1085.76	1372.83	0.00	1111.75	1.079	31.75	70.272	F
4	1777.05	1765.66	1023.78	0.00	2137.33	0.831	4.69	9.513	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	424.99	421.82	2328.50	0.00	501.19	0.848	4.75	43.092	E
2	1539.23	1539.12	612.44	0.00	2377.39	0.647	1.84	4.341	A
3	1200.11	1104.05	1376.81	0.00	1109.12	1.082	55.77	150.498	F
4	1777.05	1775.99	1039.00	0.00	2124.87	0.836	4.96	10.365	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	347.01	361.68	2057.23	0.00	680.00	0.510	1.08	11.936	B
2	1256.77	1259.86	517.25	0.00	2454.22	0.512	1.07	3.056	A
3	979.89	1187.24	1129.49	0.00	1272.52	0.770	3.93	74.436	F
4	1450.95	1461.42	1082.23	0.00	2089.50	0.694	2.34	5.887	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	290.60	293.14	1636.12	0.00	957.57	0.303	0.44	5.497	A
2	1052.49	1053.87	423.80	0.00	2529.65	0.416	0.72	2.469	A
3	820.61	830.46	943.39	0.00	1395.48	0.588	1.47	6.549	A
4	1215.10	1220.09	772.32	0.00	2343.13	0.519	1.10	3.256	A

Existing Junction Layout - Scenario 2 - 2026 Forecast + Committed + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Junction Layout	ARCADY			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)	Single Time Segment Only	Locked
Scenario 2 - 2026 Forecast + Committed + Development, PM	Scenario 2 - 2026 Forecast + Committed + Development	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Emerson Roundabout	Roundabout	1,2,3,4			221.50	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Fulmer Street	
2	2	Standing Way (N)	
3	3	Shenley Way	
4	4	Standing Way (S)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.11	9.50	20.00	116.75	56.00	21.00	
2	7.58	9.41	16.00	46.47	56.00	20.00	
3	3.64	10.00	13.00	43.43	56.00	12.00	
4	7.48	13.50	9.60	31.84	56.00	25.00	

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)	0.659	2036.001
2		(calculated)	(calculated)	0.807	2871.725
3		(calculated)	(calculated)	0.661	2018.777
4		(calculated)	(calculated)	0.818	2975.205

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	✓	651.00	100.000
2	ONE HOUR	✓	2148.00	100.000
3	ONE HOUR	✓	1021.00	100.000
4	ONE HOUR	✓	1284.00	100.000

Turning Proportions

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

		To			
From		1	2	3	4
	1	0.000	194.000	391.000	66.000
	2	296.000	17.000	372.000	1463.000
	3	477.000	395.000	0.000	149.000
	4	0.000	1129.000	155.000	0.000

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

		To			
From		1	2	3	4
	1	0.00	0.30	0.60	0.10
	2	0.14	0.01	0.17	0.68
	3	0.47	0.39	0.00	0.15
	4	0.00	0.88	0.12	0.00

Vehicle Mix

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

		To			
From		1	2	3	4
	1	1.011	1.011	1.011	1.011
	2	1.011	1.011	1.011	1.011
	3	1.011	1.011	1.011	1.011
	4	1.011	1.011	1.011	1.011

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
From		1	2	3	4
	1	1.1	1.1	1.1	1.1
	2	1.1	1.1	1.1	1.1
	3	1.1	1.1	1.1	1.1
	4	1.1	1.1	1.1	1.1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.79	18.63	3.59	C
2	1.02	63.87	44.18	F
3	1.58	955.19	234.70	F
4	0.64	4.64	1.81	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	490.11	487.34	1270.33	0.00	1198.68	0.409	0.69	5.097	A
2	1617.13	1609.83	458.44	0.00	2501.70	0.646	1.82	4.048	A
3	768.66	759.81	1380.44	0.00	1106.72	0.695	2.21	10.248	B
4	966.66	963.64	883.50	0.00	2252.14	0.429	0.76	2.819	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	585.24	582.94	1505.25	0.00	1043.83	0.561	1.27	7.858	A
2	1931.01	1923.20	548.36	0.00	2429.11	0.795	3.78	7.086	A
3	917.86	872.18	1649.23	0.00	929.13	0.988	13.63	46.109	E
4	1154.29	1152.60	1025.14	0.00	2136.22	0.540	1.18	3.694	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	716.76	707.89	1712.55	0.00	907.19	0.790	3.48	17.535	C
2	2364.99	2265.50	667.29	0.00	2333.12	1.014	28.65	34.116	D
3	1124.14	732.63	1944.92	0.00	733.77	1.532	111.51	321.568	F
4	1413.71	1411.19	955.83	0.00	2192.94	0.645	1.81	4.641	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	716.76	716.34	1707.66	0.00	910.41	0.787	3.59	18.629	C
2	2364.99	2302.88	673.53	0.00	2328.09	1.016	44.18	63.873	F
3	1124.14	712.70	1976.68	0.00	712.78	1.577	214.37	768.760	F
4	1413.71	1413.71	944.26	0.00	2202.41	0.642	1.81	4.614	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	585.24	594.40	1496.94	0.00	1049.31	0.558	1.30	8.155	A
2	1931.01	2090.95	556.91	0.00	2422.22	0.797	4.19	16.612	C
3	917.86	836.55	1789.09	0.00	836.72	1.097	234.70	955.185	F
4	1154.29	1156.75	1019.15	0.00	2141.12	0.539	1.19	3.705	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	490.11	492.08	1403.28	0.00	1111.04	0.441	0.81	5.900	A
2	1617.13	1626.38	462.25	0.00	2498.62	0.647	1.88	4.217	A
3	768.66	1092.65	1394.61	0.00	1097.36	0.700	153.70	640.813	F
4	966.66	967.69	1170.19	0.00	2017.51	0.479	0.94	3.472	A

Newton Longville Crossroads

Revised Junction Layout

Junctions 8				
ARCADY 8 - Roundabout Module				
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016				
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Filename: Junction 5 Mini Rbt.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\01 Modelling\Junctions\2016-03-14 Mitigation\Mitigation Reports

Report generation date: 10/05/2016 15:23:40

- » (Default Analysis Set) - 2026 Base, AM
- » (Default Analysis Set) - 2026 Base, PM
- » (Default Analysis Set) - 2026 Base + Dev, AM
- » (Default Analysis Set) - 2026 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2026 Base				
Arm 1	0.84	10.16	0.44	B
Arm 2	2.55	21.01	0.72	C
Arm 3	0.68	9.76	0.40	A
Arm 4	0.84	9.55	0.45	A

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

"D1 - 2026 Base, AM" model duration: 07:45 - 09:15

"D2 - 2026 Base, PM" model duration: 16:45 - 18:15

"D3 - 2026 Base + Dev, AM" model duration: 07:45 - 09:15

"D4 - 2026 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 10/05/2016 15:23:38

File summary

Title	South West Milton keynes Junction 5
Location	Milton Keynes
Site Number	Junction 5
Date	16/03/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rsanthak
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) - 2026 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D1 - 2026 Base, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, AM	2026 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	13.63	B

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Bletchley Road	
2	2	Stoke Road	
3	3	Drayton Road	
4	4	Whaddon Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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	3.50	3.50	3.58	0.73	9.30	5.60	0.00	
2	3.00	3.00	3.33	8.21	9.09	4.82	0.00	
3	3.09	3.09	4.03	3.92	13.35	10.65	0.00	
4	3.23	3.23	3.53	0.77	9.93	5.55	0.00	

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)	0.532	848.240
2		(calculated)	(calculated)	0.519	739.850
3		(calculated)	(calculated)	0.540	880.657
4		(calculated)	(calculated)	0.523	823.414

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	✓	272.35	100.000
2	ONE HOUR	✓	408.53	100.000
3	ONE HOUR	✓	229.48	100.000
4	ONE HOUR	✓	290.02	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.000	113.480	128.610	30.260
	2	40.350	0.000	42.870	325.310
	3	118.520	27.740	0.000	83.220
	4	50.440	189.140	50.440	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.42	0.47	0.11
	2	0.10	0.00	0.10	0.80
	3	0.52	0.12	0.00	0.36
	4	0.17	0.65	0.17	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.000	108.440	83.220	30.260
	2	63.050	0.000	50.440	325.310
	3	103.390	32.780	0.000	100.870
	4	78.180	335.400	73.130	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.49	0.38	0.14
	2	0.14	0.00	0.11	0.74
	3	0.44	0.14	0.00	0.43
	4	0.16	0.69	0.15	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.000	100.870	80.700	55.480
	2	58.000	0.000	40.350	257.220
	3	73.130	27.740	0.000	73.130
	4	40.350	249.660	60.520	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.43	0.34	0.23
	2	0.16	0.00	0.11	0.72
	3	0.42	0.16	0.00	0.42
	4	0.12	0.71	0.17	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.000	83.220	88.260	40.350
	2	50.440	0.000	55.480	234.530
	3	88.260	45.390	0.000	95.830
	4	73.130	249.660	42.870	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.39	0.42	0.19
	2	0.15	0.00	0.16	0.69
	3	0.38	0.20	0.00	0.42
	4	0.20	0.68	0.12	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.000	98.350	151.310	52.960
	2	52.960	0.000	63.050	262.270
	3	181.570	65.570	0.000	143.740
	4	20.170	242.090	32.780	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.32	0.50	0.18
	2	0.14	0.00	0.17	0.69
	3	0.46	0.17	0.00	0.37
	4	0.07	0.82	0.11	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.000	118.520	95.830	45.390
	2	30.260	0.000	50.440	148.790
	3	95.830	30.260	0.000	93.310
	4	32.780	128.610	10.090	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.46	0.37	0.17
	2	0.13	0.00	0.22	0.65
	3	0.44	0.14	0.00	0.43
	4	0.19	0.75	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.022	1.020	1.000
	2	1.000	1.000	1.118	1.000
	3	1.021	1.000	1.000	1.000
	4	1.000	1.013	1.100	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	2.2	2.0	0.0
	2	0.0	0.0	11.8	0.0
	3	2.1	0.0	0.0	0.0
	4	0.0	1.3	10.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.040	1.000	1.150	1.000
	3	1.024	1.000	1.000	1.075
	4	1.000	1.030	1.069	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	4.0	0.0	15.0	0.0
	3	2.4	0.0	0.0	7.5
	4	0.0	3.0	6.9	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.125	1.063	1.000
	2	1.000	1.000	1.313	1.000
	3	1.069	1.000	1.000	1.000
	4	1.063	1.030	1.042	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	12.5	6.3	0.0
	2	0.0	0.0	31.3	0.0
	3	6.9	0.0	0.0	0.0
	4	6.3	3.0	4.2	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	1.000	1.061	1.029	1.000
	2	1.050	1.000	1.182	1.000
	3	1.057	1.000	1.000	1.026
	4	1.035	1.040	1.059	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.0	6.1	2.9	0.0
	2	5.0	0.0	18.2	0.0
	3	5.7	0.0	0.0	2.6
	4	3.5	4.0	5.9	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	1.000	1.026	1.000	1.000
	2	1.000	1.000	1.280	1.000
	3	1.014	1.000	1.000	1.035
	4	1.000	1.042	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	2.6	0.0	0.0
	2	0.0	0.0	28.0	0.0
	3	1.4	0.0	0.0	3.5
	4	0.0	4.2	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.026	1.000
	2	1.000	1.000	1.150	1.017
	3	1.026	1.000	1.000	1.000
	4	1.000	1.098	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	2.6	0.0
	2	0.0	0.0	15.0	1.7
	3	2.6	0.0	0.0	0.0
	4	0.0	9.8	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.44	10.16	0.84	B
2	0.72	21.01	2.55	C
3	0.40	9.76	0.68	A
4	0.45	9.55	0.84	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	205.04	203.50	199.73	0.00	741.91	0.276	0.38	6.791	A
2	307.56	304.09	156.39	0.00	658.70	0.467	0.87	10.170	B
3	172.76	171.50	294.79	0.00	721.33	0.240	0.32	6.604	A
4	218.34	216.68	139.34	0.00	750.59	0.291	0.42	6.891	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	244.84	244.33	246.77	0.00	716.86	0.342	0.51	7.612	A
2	367.26	365.66	164.18	0.00	654.66	0.561	1.27	12.644	B
3	206.30	205.80	356.94	0.00	687.74	0.300	0.44	7.771	A
4	260.72	260.14	170.69	0.00	734.21	0.355	0.56	7.817	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	299.86	298.57	321.59	0.00	677.03	0.443	0.84	10.164	B
2	449.80	444.93	226.29	0.00	622.43	0.723	2.48	20.294	C
3	252.66	251.72	464.11	0.00	629.82	0.401	0.68	9.762	A
4	319.32	318.23	218.39	0.00	709.28	0.450	0.83	9.509	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	299.86	299.98	305.59	0.00	685.55	0.437	0.81	9.671	A
2	449.80	449.53	219.64	0.00	625.88	0.719	2.55	21.010	C
3	252.66	252.69	434.05	0.00	646.07	0.391	0.67	9.452	A
4	319.32	319.28	213.91	0.00	711.62	0.449	0.84	9.553	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	244.84	245.86	278.25	0.00	700.10	0.350	0.55	8.011	A
2	367.26	371.67	194.84	0.00	638.74	0.575	1.45	14.213	B
3	206.30	207.22	352.84	0.00	689.96	0.299	0.44	7.615	A
4	260.72	261.75	183.00	0.00	727.78	0.358	0.58	8.004	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	205.04	205.68	201.29	0.00	741.07	0.277	0.39	6.796	A
2	307.56	309.81	125.12	0.00	674.93	0.456	0.89	10.331	B
3	172.76	173.26	277.97	0.00	730.42	0.237	0.32	6.542	A
4	218.34	218.90	140.57	0.00	749.95	0.291	0.44	7.274	A

(Default Analysis Set) - 2026 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D2 - 2026 Base, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, PM	2026 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	7.00	A

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Bletchley Road	
2	2	Stoke Road	
3	3	Drayton Road	
4	4	Whaddon Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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	3.50	3.50	3.58	0.73	9.30	5.60	0.00	
2	3.00	3.00	3.33	8.21	9.09	4.82	0.00	
3	3.09	3.09	4.03	3.92	13.35	10.65	0.00	
4	3.23	3.23	3.53	0.77	9.93	5.55	0.00	

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)	0.532	848.240
2		(calculated)	(calculated)	0.519	739.850
3		(calculated)	(calculated)	0.540	880.657
4		(calculated)	(calculated)	0.523	823.414

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	✓	99.69	100.000
2	ONE HOUR	✓	204.50	100.000
3	ONE HOUR	✓	120.15	100.000
4	ONE HOUR	✓	204.49	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	35.790	30.670	33.230
	2	46.010	0.000	23.010	135.480
	3	56.240	28.120	0.000	35.790
	4	40.900	138.030	25.560	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.36	0.31	0.33
	2	0.22	0.00	0.11	0.66
	3	0.47	0.23	0.00	0.30
	4	0.20	0.67	0.12	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	51.120	48.570	38.340
	2	43.460	0.000	35.790	181.490
	3	61.350	12.780	0.000	38.340
	4	30.670	184.050	30.670	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.37	0.35	0.28
	2	0.17	0.00	0.14	0.70
	3	0.55	0.11	0.00	0.34
	4	0.12	0.75	0.12	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	74.130	79.240	86.910
	2	58.790	0.000	40.900	339.970
	3	122.700	53.680	0.000	69.020
	4	46.010	301.630	94.580	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.31	0.33	0.36
	2	0.13	0.00	0.09	0.77
	3	0.50	0.22	0.00	0.28
	4	0.10	0.68	0.21	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	58.790	74.130	51.120
	2	74.130	0.000	71.570	283.740
	3	99.690	40.900	0.000	58.790
	4	46.010	232.610	74.130	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.32	0.40	0.28
	2	0.17	0.00	0.17	0.66
	3	0.50	0.21	0.00	0.29
	4	0.13	0.66	0.21	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	51.120	92.020	38.340
	2	76.690	0.000	40.900	224.950
	3	84.350	63.910	0.000	38.340
	4	33.230	309.300	66.460	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.28	0.51	0.21
	2	0.22	0.00	0.12	0.66
	3	0.45	0.34	0.00	0.21
	4	0.08	0.76	0.16	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.000	28.120	76.690	40.900
	2	76.690	0.000	38.340	227.500
	3	89.470	35.790	0.000	35.790
	4	35.790	237.730	69.020	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.00	0.19	0.53	0.28
	2	0.22	0.00	0.11	0.66
	3	0.56	0.22	0.00	0.22
	4	0.10	0.69	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.077
	2	1.167	1.000	1.222	1.000
	3	1.000	1.000	1.000	1.071
	4	1.063	1.056	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	7.7
	2	16.7	0.0	22.2	0.0
	3	0.0	0.0	0.0	7.1
	4	6.3	5.6	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.028	1.083	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	2.8	8.3	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.069	1.000	1.000
	2	1.044	1.000	1.125	1.000
	3	1.021	1.000	1.000	1.000
	4	1.000	1.025	1.027	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	6.9	0.0	0.0
	2	4.4	0.0	12.5	0.0
	3	2.1	0.0	0.0	0.0
	4	0.0	2.5	2.7	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.035	1.000	1.071	1.018
	3	1.026	1.000	1.000	1.000
	4	1.000	1.011	1.069	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	3.5	0.0	7.1	1.8
	3	2.6	0.0	0.0	0.0
	4	0.0	1.1	6.9	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.063	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.008	1.039	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	6.3	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.8	3.9	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.063
	2	1.033	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	6.3
	2	3.3	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.15	5.96	0.18	A
2	0.33	8.21	0.51	A
3	0.18	5.89	0.21	A
4	0.30	6.95	0.43	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	75.05	74.61	143.38	0.00	771.91	0.097	0.11	5.285	A
2	153.96	152.79	66.94	0.00	705.11	0.218	0.29	6.866	A
3	90.46	89.93	160.47	0.00	793.93	0.114	0.13	5.214	A
4	153.95	152.91	97.52	0.00	772.45	0.199	0.26	6.089	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	89.62	89.52	172.89	0.00	756.20	0.119	0.13	5.400	A
2	183.84	183.59	79.32	0.00	698.69	0.263	0.35	6.986	A
3	108.01	107.90	183.31	0.00	781.58	0.138	0.16	5.344	A
4	183.83	183.59	101.81	0.00	770.21	0.239	0.32	6.323	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	109.76	109.57	230.13	0.00	725.72	0.151	0.18	5.959	A
2	225.16	224.57	123.68	0.00	675.67	0.333	0.50	8.098	A
3	132.29	132.07	243.20	0.00	749.21	0.177	0.21	5.892	A
4	225.15	224.72	124.96	0.00	758.11	0.297	0.43	6.899	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	109.76	109.77	222.96	0.00	729.54	0.150	0.18	5.808	A
2	225.16	225.12	122.03	0.00	676.53	0.333	0.51	8.209	A
3	132.29	132.29	218.30	0.00	762.67	0.173	0.21	5.784	A
4	225.15	225.13	132.08	0.00	754.39	0.298	0.43	6.945	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	89.62	89.77	206.14	0.00	738.49	0.121	0.14	5.552	A
2	183.84	184.41	94.48	0.00	690.82	0.266	0.37	7.170	A
3	108.01	108.22	181.30	0.00	782.67	0.138	0.16	5.339	A
4	183.83	184.25	127.09	0.00	757.00	0.243	0.33	6.367	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	75.05	75.16	158.37	0.00	763.92	0.098	0.11	5.314	A
2	153.96	154.27	91.64	0.00	692.30	0.222	0.29	6.745	A
3	90.46	90.58	158.05	0.00	795.23	0.114	0.13	5.111	A
4	153.95	154.25	105.00	0.00	768.54	0.200	0.25	5.863	A

(Default Analysis Set) - 2026 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D3 - 2026 Base + Dev, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base + Dev, AM	2026 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	17.65	C

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Bletchley Road	
2	2	Stoke Road	
3	3	Drayton Road	
4	4	Whaddon Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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	3.50	3.50	3.58	0.73	9.30	5.60	0.00	
2	3.00	3.00	3.33	8.21	9.09	4.82	0.00	
3	3.09	3.09	4.03	3.92	13.35	10.65	0.00	
4	3.23	3.23	3.53	0.77	9.93	5.55	0.00	

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)	0.532	848.240
2		(calculated)	(calculated)	0.519	739.850
3		(calculated)	(calculated)	0.540	880.657
4		(calculated)	(calculated)	0.523	823.414

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	✓	272.35	100.000
2	ONE HOUR	✓	432.70	100.000
3	ONE HOUR	✓	231.30	100.000
4	ONE HOUR	✓	409.67	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.000	113.480	128.610	30.260
	2	40.350	0.000	42.870	349.480
	3	118.520	27.740	0.000	85.040
	4	50.440	271.240	87.990	0.000

Turning Proportions (PCU) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.42	0.47	0.11
	2	0.09	0.00	0.10	0.81
	3	0.51	0.12	0.00	0.37
	4	0.12	0.66	0.21	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.000	108.440	83.220	30.260
	2	63.050	0.000	50.440	349.480
	3	103.390	32.780	0.000	103.080
	4	78.180	481.000	127.590	0.000

Turning Proportions (PCU) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	0.00	0.49	0.38	0.14
	2	0.14	0.00	0.11	0.75
	3	0.43	0.14	0.00	0.43
	4	0.11	0.70	0.19	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.000	100.870	80.700	55.480
	2	58.000	0.000	40.350	276.720
	3	73.130	27.740	0.000	74.910
	4	40.350	367.150	104.460	0.000

Turning Proportions (PCU) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.00	0.43	0.34	0.23
	2	0.15	0.00	0.11	0.74
	3	0.42	0.16	0.00	0.43
	4	0.08	0.72	0.20	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.000	83.220	88.260	40.350
	2	50.440	0.000	55.480	254.550
	3	88.260	45.390	0.000	97.660
	4	73.130	370.330	88.000	0.000

Turning Proportions (PCU) - Junction 1 - (08:30-08:45)

	To				
		1	2	3	4
From	1	0.00	0.39	0.42	0.19
	2	0.14	0.00	0.15	0.71
	3	0.38	0.20	0.00	0.42
	4	0.14	0.70	0.17	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.000	98.350	151.310	52.960
	2	52.960	0.000	63.050	286.120
	3	181.570	65.570	0.000	145.920
	4	20.170	385.840	86.540	0.000

Turning Proportions (PCU) - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.00	0.32	0.50	0.18
	2	0.13	0.00	0.16	0.71
	3	0.46	0.17	0.00	0.37
	4	0.04	0.78	0.18	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.000	118.520	95.830	45.390
	2	30.260	0.000	50.440	162.320
	3	95.830	30.260	0.000	94.720
	4	32.780	204.980	26.630	0.000

Turning Proportions (PCU) - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.00	0.46	0.37	0.17
	2	0.12	0.00	0.21	0.67
	3	0.43	0.14	0.00	0.43
	4	0.12	0.78	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

	To				
		1	2	3	4
From	1	1.000	1.022	1.020	1.000
	2	1.000	1.000	1.118	1.000
	3	1.021	1.000	1.000	1.000
	4	1.000	1.013	1.100	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

	To				
		1	2	3	4
From	1	0.0	2.2	2.0	0.0
	2	0.0	0.0	11.8	0.0
	3	2.1	0.0	0.0	0.0
	4	0.0	1.3	10.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.040	1.000	1.150	1.000
	3	1.024	1.000	1.000	1.075
	4	1.000	1.030	1.069	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	4.0	0.0	15.0	0.0
	3	2.4	0.0	0.0	7.5
	4	0.0	3.0	6.9	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.125	1.063	1.000
	2	1.000	1.000	1.313	1.000
	3	1.069	1.000	1.000	1.000
	4	1.063	1.030	1.042	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	12.5	6.3	0.0
	2	0.0	0.0	31.3	0.0
	3	6.9	0.0	0.0	0.0
	4	6.3	3.0	4.2	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.061	1.029	1.000
	2	1.050	1.000	1.182	1.000
	3	1.057	1.000	1.000	1.026
	4	1.035	1.040	1.059	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	6.1	2.9	0.0
	2	5.0	0.0	18.2	0.0
	3	5.7	0.0	0.0	2.6
	4	3.5	4.0	5.9	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.026	1.000	1.000
	2	1.000	1.000	1.280	1.000
	3	1.014	1.000	1.000	1.035
	4	1.000	1.042	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To				
		1	2	3	4
From	1	0.0	2.6	0.0	0.0
	2	0.0	0.0	28.0	0.0
	3	1.4	0.0	0.0	3.5
	4	0.0	4.2	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.026	1.000
	2	1.000	1.000	1.150	1.017
	3	1.026	1.000	1.000	1.000
	4	1.000	1.098	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To				
		1	2	3	4
From	1	0.0	0.0	2.6	0.0
	2	0.0	0.0	15.0	1.7
	3	2.6	0.0	0.0	0.0
	4	0.0	9.8	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.49	12.42	1.02	B
2	0.79	28.05	3.56	D
3	0.41	10.16	0.71	B
4	0.64	14.38	1.77	B

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	205.04	203.35	288.70	0.00	694.54	0.295	0.42	7.439	A
2	325.76	321.73	184.26	0.00	644.24	0.506	1.01	11.147	B
3	174.13	172.84	312.45	0.00	711.79	0.245	0.32	6.735	A
4	308.42	305.59	139.29	0.00	750.62	0.411	0.71	8.274	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	244.84	244.20	353.62	0.00	659.97	0.371	0.58	8.646	A
2	388.99	386.92	193.27	0.00	639.56	0.608	1.52	14.402	B
3	207.93	207.40	378.06	0.00	676.32	0.307	0.46	7.990	A
4	368.28	367.04	170.65	0.00	734.23	0.502	1.02	10.096	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	299.86	298.11	452.71	0.00	607.22	0.494	1.02	12.419	B
2	476.41	468.93	262.49	0.00	603.64	0.789	3.39	26.065	D
3	254.67	253.66	488.02	0.00	616.90	0.413	0.71	10.156	B
4	451.06	448.19	217.95	0.00	709.51	0.636	1.74	14.101	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	299.86	300.00	439.14	0.00	614.45	0.488	0.98	11.857	B
2	476.41	475.76	256.94	0.00	606.52	0.785	3.56	28.051	D
3	254.67	254.69	460.49	0.00	631.78	0.403	0.70	9.859	A
4	451.06	450.91	213.92	0.00	711.62	0.634	1.77	14.378	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	244.84	246.24	390.10	0.00	640.56	0.382	0.63	9.238	A
2	388.99	395.93	231.06	0.00	619.95	0.627	1.82	17.119	C
3	207.93	208.92	377.04	0.00	676.88	0.307	0.46	7.859	A
4	368.28	371.04	183.48	0.00	727.53	0.506	1.08	10.505	B

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	205.04	205.85	295.65	0.00	690.84	0.297	0.43	7.506	A
2	325.76	328.96	143.77	0.00	665.25	0.490	1.02	11.236	B
3	174.13	174.66	297.03	0.00	720.12	0.242	0.33	6.680	A
4	308.42	309.70	140.86	0.00	749.80	0.411	0.76	8.814	A

(Default Analysis Set) - 2026 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D4 - 2026 Base + Dev, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base + Dev, PM	2026 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3,4	7.73	A

Junction Network Options

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

Arms

Arms

Arm	Arm	Name	Description
1	1	Bletchley Road	
2	2	Stoke Road	
3	3	Drayton Road	
4	4	Whaddon Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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	3.50	3.50	3.58	0.73	9.30	5.60	0.00	
2	3.00	3.00	3.33	8.21	9.09	4.82	0.00	
3	3.09	3.09	4.03	3.92	13.35	10.65	0.00	
4	3.23	3.23	3.53	0.77	9.93	5.55	0.00	

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)	0.532	848.240
2		(calculated)	(calculated)	0.519	739.850
3		(calculated)	(calculated)	0.540	880.657
4		(calculated)	(calculated)	0.523	823.414

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

Am	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	99.69	100.000
2	ONE HOUR	✓	257.27	100.000
3	ONE HOUR	✓	120.15	100.000
4	ONE HOUR	✓	225.88	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	35.790	30.670	33.230
	2	46.010	0.000	23.010	188.250
	3	56.240	28.120	0.000	35.790
	4	40.900	152.920	32.060	0.000

Turning Proportions (PCU) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.36	0.31	0.33
	2	0.18	0.00	0.09	0.73
	3	0.47	0.23	0.00	0.30
	4	0.18	0.68	0.14	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	51.120	48.570	38.340
	2	43.460	0.000	35.790	252.190
	3	61.350	12.780	0.000	38.340
	4	30.670	203.890	38.470	0.000

Turning Proportions (PCU) - Junction 1 - (17:00-17:15)

	To				
		1	2	3	4
From	1	0.00	0.37	0.35	0.28
	2	0.13	0.00	0.11	0.76
	3	0.55	0.11	0.00	0.34
	4	0.11	0.75	0.14	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	0.000	74.130	79.240	86.910
	2	58.790	0.000	40.900	467.750
	3	122.700	53.680	0.000	111.030
	4	46.010	337.500	108.670	0.000

Turning Proportions (PCU) - Junction 1 - (17:15-17:30)

	To				
		1	2	3	4
From	1	0.00	0.31	0.33	0.36
	2	0.10	0.00	0.07	0.82
	3	0.43	0.19	0.00	0.39
	4	0.09	0.69	0.22	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.000	58.790	74.130	51.120
	2	74.130	0.000	71.570	392.650
	3	99.690	40.900	0.000	58.790
	4	46.010	263.190	86.140	0.000

Turning Proportions (PCU) - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.00	0.32	0.40	0.28
	2	0.14	0.00	0.13	0.73
	3	0.50	0.21	0.00	0.29
	4	0.12	0.67	0.22	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.000	51.120	92.020	38.340
	2	76.690	0.000	40.900	329.560
	3	84.350	63.910	0.000	38.340
	4	33.230	338.670	78.000	0.000

Turning Proportions (PCU) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.28	0.51	0.21
	2	0.17	0.00	0.09	0.74
	3	0.45	0.34	0.00	0.21
	4	0.07	0.75	0.17	0.00

Turning Counts / Proportions (PCU/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	28.120	76.690	40.900
	2	76.690	0.000	38.340	333.300
	3	89.470	35.790	0.000	35.790
	4	35.790	260.300	81.000	0.000

Turning Proportions (PCU) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.19	0.53	0.28
	2	0.17	0.00	0.09	0.74
	3	0.56	0.22	0.00	0.22
	4	0.09	0.69	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.077
	2	1.167	1.000	1.222	1.000
	3	1.000	1.000	1.000	1.071
	4	1.063	1.056	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	7.7
	2	16.7	0.0	22.2	0.0
	3	0.0	0.0	0.0	7.1
	4	6.3	5.6	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.028	1.083	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To				
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	2.8	8.3	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

	To				
From		1	2	3	4
	1	1.000	1.069	1.000	1.000
	2	1.044	1.000	1.125	1.000
	3	1.021	1.000	1.000	1.000
	4	1.000	1.025	1.027	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

	To				
From		1	2	3	4
	1	0.0	6.9	0.0	0.0
	2	4.4	0.0	12.5	0.0
	3	2.1	0.0	0.0	0.0
	4	0.0	2.5	2.7	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

	To				
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.035	1.000	1.071	1.018
	3	1.026	1.000	1.000	1.000
	4	1.000	1.011	1.069	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To				
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	3.5	0.0	7.1	1.8
	3	2.6	0.0	0.0	0.0
	4	0.0	1.1	6.9	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To				
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.063	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.008	1.039	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	6.3	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.8	3.9	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.063
	2	1.033	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	6.3
	2	3.3	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.15	6.06	0.18	A
2	0.42	9.48	0.74	A
3	0.18	6.20	0.23	A
4	0.33	7.27	0.50	A

Main Results for each time segment

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	75.05	74.61	159.35	0.00	763.41	0.098	0.11	5.350	A
2	193.69	192.12	71.79	0.00	702.60	0.276	0.39	7.338	A
3	90.46	89.92	199.80	0.00	772.67	0.117	0.13	5.371	A
4	170.05	168.88	97.49	0.00	772.46	0.220	0.29	6.243	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	89.62	89.52	192.24	0.00	745.89	0.120	0.14	5.485	A
2	231.28	230.88	84.94	0.00	695.77	0.332	0.49	7.738	A
3	108.01	107.89	230.87	0.00	755.88	0.143	0.17	5.554	A
4	203.06	202.77	101.48	0.00	770.38	0.264	0.37	6.543	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	109.76	109.57	249.60	0.00	715.36	0.153	0.18	6.061	A
2	283.26	282.33	130.42	0.00	672.17	0.421	0.72	9.327	A
3	132.29	132.05	301.49	0.00	717.71	0.184	0.23	6.197	A
4	248.70	248.22	110.37	0.00	765.73	0.325	0.49	7.113	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	109.76	109.77	246.88	0.00	716.80	0.153	0.18	5.930	A
2	283.26	283.20	128.90	0.00	672.96	0.421	0.74	9.483	A
3	132.29	132.29	276.28	0.00	731.34	0.181	0.22	6.087	A
4	248.70	248.65	132.10	0.00	754.38	0.330	0.50	7.273	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	89.62	89.78	225.39	0.00	728.25	0.123	0.14	5.639	A
2	231.28	232.18	99.84	0.00	688.04	0.336	0.52	7.958	A
3	108.01	108.24	229.83	0.00	756.44	0.143	0.17	5.557	A
4	203.06	203.56	125.64	0.00	757.75	0.268	0.37	6.584	A

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

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	75.05	75.17	174.48	0.00	755.35	0.099	0.11	5.381	A
2	193.69	194.16	97.15	0.00	689.44	0.281	0.40	7.318	A
3	90.46	90.59	198.60	0.00	773.32	0.117	0.13	5.275	A
4	170.05	170.41	103.69	0.00	769.23	0.221	0.29	6.015	A

Bottle Dump Roundabout

Revised Junction Layout

Junctions 8			
ARCADY 8 - Roundabout Module			
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016			
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Filename: Junction 3_FSC.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\01 Modelling\Junctions\2016-03-14 Mitigation\Mitigation Reports

Report generation date: 10/05/2016 15:12:33

- » (Default Analysis Set) - 2026 Base, AM
- » (Default Analysis Set) - 2026 Base, PM
- » (Default Analysis Set) - 2026 Base+Dev, AM
- » (Default Analysis Set) - 2026 Base+Dev, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 - 2026 Base								
Arm 1	2.60	6.54	0.73	A	2.92	6.63	0.75	A
Arm 2	1.03	7.14	0.51	A	0.31	4.67	0.24	A
Arm 3	15.80	28.77	0.97	D	2.72	6.29	0.74	A
A1 - 2026 Base+Dev								
Arm 1	2.64	6.63	0.73	A	5.17	11.24	0.85	B
Arm 2	10.00	38.83	0.94	E	0.45	5.26	0.31	A
Arm 3	46.02	84.42	1.05	F	4.72	9.85	0.83	A

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

"D3 - 2026 Base, AM " model duration: 07:45 - 09:15

"D4 - 2026 Base, PM" model duration: 16:45 - 18:15

"D5 - 2026 Base+Dev, AM" model duration: 07:45 - 09:15

"D6 - 2026 Base+Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 10/05/2016 15:12:32

File summary

Title	(untitled)
Location	
Site Number	
Date	04/12/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	fsuarez
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	Veh	Veh	perHour	s	-Min	perMin

(Default Analysis Set) - 2026 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D3 - 2026 Base, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, AM	2026 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			17.53	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	H8 Standing Way	
2	2	Whaddon Rd	
3	3	A421	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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)	Exit Only
1	7.51	7.60	0.70	39.49	55.00	33.00	
2	3.00	7.61	27.80	50.07	55.00	23.00	
3	3.50	9.50	38.18	39.08	55.00	35.00	

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)	0.702	2326.346
2		(calculated)	(calculated)	0.639	1919.315
3		(calculated)	(calculated)	0.692	2284.988

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1321.43	100.000
2	ONE HOUR	✓	476.62	100.000
3	ONE HOUR	✓	1752.65	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	994.84	1046.06		
07:45-08:00	2	358.82	364.52		
07:45-08:00	3	1319.49	1351.72		
08:00-08:15	1	1187.94	1256.48		
08:00-08:15	2	428.47	440.05		
08:00-08:15	3	1575.60	1621.86		
08:15-08:30	1	1454.92	1558.39		
08:15-08:30	2	524.77	536.35		
08:15-08:30	3	1929.70	2012.15		
08:30-08:45	1	1454.92	1555.71		
08:30-08:45	2	524.77	542.62		
08:30-08:45	3	1929.70	2007.82		
08:45-09:00	1	1187.94	1266.24		
08:45-09:00	2	428.47	449.09		
08:45-09:00	3	1575.60	1673.44		
09:00-09:15	1	994.84	1076.25		
09:00-09:15	2	358.82	369.80		
09:00-09:15	3	1319.49	1409.17		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

		To		
From		1	2	3
	1	0.000	274.880	1046.550
	2	305.140	0.000	171.480
	3	1732.480	20.170	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

		To		
From		1	2	3
	1	0.00	0.21	0.79
	2	0.64	0.00	0.36
	3	0.99	0.01	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.000	257.220	1054.110
	2	282.440	0.000	277.400
	3	1578.650	226.960	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.00	0.20	0.80
	2	0.50	0.00	0.50
	3	0.87	0.13	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.000	242.090	1033.940
	2	264.790	0.000	191.660
	3	1616.470	95.830	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.00	0.19	0.81
	2	0.58	0.00	0.42
	3	0.94	0.06	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.000	168.960	996.110
	2	146.260	0.000	224.440
	3	1455.080	226.960	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.39	0.00	0.61
	3	0.87	0.13	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.000	272.350	799.410
	2	307.660	0.000	163.920
	3	1432.380	70.610	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.00	0.25	0.75
	2	0.65	0.00	0.35
	3	0.95	0.05	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	0.000	181.570	774.190
	2	90.780	0.000	239.570
	3	1291.160	45.390	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	0.00	0.19	0.81
	2	0.27	0.00	0.73
	3	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

	To			
		1	2	3
From	1	1.000	1.018	1.060
	2	1.000	1.000	1.044
	3	1.022	1.250	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

	To			
		1	2	3
From	1	0.0	1.8	6.0
	2	0.0	0.0	4.4
	3	2.2	25.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	1.000	1.029	1.065
	2	1.036	1.000	1.018
	3	1.029	1.033	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.0	2.9	6.5
	2	3.6	0.0	1.8
	3	2.9	3.3	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	1.000	1.021	1.083
	2	1.019	1.000	1.026
	3	1.044	1.026	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.0	2.1	8.3
	2	1.9	0.0	2.6
	3	4.4	2.6	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	1.000	1.015	1.079
	2	1.000	1.000	1.056
	3	1.042	1.033	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.0	1.5	7.9
	2	0.0	0.0	5.6
	3	4.2	3.3	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	1.000	1.028	1.079
	2	1.025	1.000	1.092
	3	1.063	1.036	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.0	2.8	7.9
	2	2.5	0.0	9.2
	3	6.3	3.6	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	1.000	1.028	1.095
	2	1.056	1.000	1.021
	3	1.065	1.167	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	0.0	2.8	9.5
	2	5.6	0.0	2.1
	3	6.5	16.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.73	6.54	2.60	A
2	0.51	7.14	1.03	A
3	0.97	28.77	15.80	D

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	994.85	991.56	15.11	0.00	2199.84	0.452	0.82	2.972	A
2	358.82	357.41	785.30	0.00	1365.65	0.263	0.35	3.566	A
3	1319.48	1312.60	228.82	0.00	2075.83	0.636	1.72	4.675	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1187.93	1185.86	196.41	0.00	2064.66	0.575	1.34	4.086	A
2	428.47	427.77	953.21	0.00	1237.46	0.346	0.53	4.442	A
3	1575.59	1569.94	216.01	0.00	2069.15	0.761	3.09	7.133	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1454.92	1451.44	106.02	0.00	2100.67	0.693	2.21	5.515	A
2	524.77	523.15	1176.04	0.00	1081.71	0.485	0.93	6.427	A
3	1929.70	1878.80	303.32	0.00	1986.27	0.972	15.82	25.987	D

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1454.92	1453.37	255.45	0.00	2002.36	0.727	2.60	6.536	A
2	524.77	524.41	1242.20	0.00	1028.40	0.510	1.03	7.136	A
3	1929.70	1930.02	207.60	0.00	2057.81	0.938	15.75	28.774	D

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1187.94	1193.23	81.71	0.00	2126.73	0.559	1.28	3.879	A
2	428.47	430.46	891.13	0.00	1245.18	0.344	0.53	4.429	A
3	1575.59	1621.69	279.80	0.00	1966.17	0.802	4.25	11.700	B

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	994.84	996.39	45.34	0.00	2116.28	0.470	0.89	3.218	A
2	358.82	359.35	806.77	0.00	1314.50	0.273	0.38	3.770	A
3	1319.49	1329.32	99.55	0.00	2071.54	0.637	1.78	4.912	A

(Default Analysis Set) - 2026 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D4 - 2026 Base, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, PM	2026 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			6.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	H8 Standing Way	
2	2	Whaddon Rd	
3	3	A421	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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)	Exit Only
1	7.51	7.60	0.70	39.49	55.00	33.00	
2	3.00	7.61	27.80	50.07	55.00	23.00	
3	3.50	9.50	38.18	39.08	55.00	35.00	

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)	0.702	2326.346
2		(calculated)	(calculated)	0.639	1919.315
3		(calculated)	(calculated)	0.692	2284.988

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1480.04	100.000
2	ONE HOUR	✓	217.27	100.000
3	ONE HOUR	✓	1431.48	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	1114.25	1152.79		
16:45-17:00	2	163.57	169.35		
16:45-17:00	3	1077.69	1110.37		
17:00-17:15	1	1330.53	1378.25		
17:00-17:15	2	195.32	195.32		
17:00-17:15	3	1286.87	1317.74		
17:15-17:30	1	1629.55	1684.22		
17:15-17:30	2	239.22	241.05		
17:15-17:30	3	1576.09	1610.74		
17:30-17:45	1	1629.55	1656.82		
17:30-17:45	2	239.22	242.57		
17:30-17:45	3	1576.09	1610.50		
17:45-18:00	1	1330.53	1358.36		
17:45-18:00	2	195.32	197.05		
17:45-18:00	3	1286.87	1330.55		
18:00-18:15	1	1114.25	1135.34		
18:00-18:15	2	163.57	164.97		
18:00-18:15	3	1077.69	1106.10		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To		
From		1	2	3
	1	0.000	171.270	1308.770
	2	112.470	0.000	104.800
	3	1334.340	97.140	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To		
From		1	2	3
	1	0.00	0.12	0.88
	2	0.52	0.00	0.48
	3	0.93	0.07	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.000	189.160	1308.770
	2	186.600	0.000	107.360
	3	1278.100	107.360	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.00	0.13	0.87
	2	0.63	0.00	0.37
	3	0.92	0.08	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.000	245.400	1048.040
	2	268.400	0.000	194.270
	3	1638.520	97.140	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.00	0.19	0.81
	2	0.58	0.00	0.42
	3	0.94	0.06	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.000	260.730	1421.250
	2	199.380	0.000	166.150
	3	1260.210	145.700	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.00	0.16	0.84
	2	0.55	0.00	0.45
	3	0.90	0.10	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.000	242.840	1344.560
	2	145.700	0.000	143.150
	3	1137.510	219.830	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.50	0.00	0.50
	3	0.84	0.16	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.000	155.930	1193.750
	2	207.050	0.000	92.020
	3	1290.880	163.600	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.00	0.12	0.88
	2	0.69	0.00	0.31
	3	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

	To			
		1	2	3
From	1	1.000	1.030	1.035
	2	1.068	1.000	1.000
	3	1.029	1.053	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

	To			
		1	2	3
From	1	0.0	3.0	3.5
	2	6.8	0.0	0.0
	3	2.9	5.3	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	1.000	1.014	1.039
	2	1.000	1.000	1.000
	3	1.022	1.048	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.0	1.4	3.9
	2	0.0	0.0	0.0
	3	2.2	4.8	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	1.000	1.011	1.039
	2	1.013	1.000	1.000
	3	1.022	1.020	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.0	1.1	3.9
	2	1.3	0.0	0.0
	3	2.2	2.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	1.000	1.010	1.018
	2	1.000	1.000	1.031
	3	1.020	1.035	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.0	1.0	1.8
	2	0.0	0.0	3.1
	3	2.0	3.5	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	1.000	1.000	1.025
	2	1.018	1.000	1.000
	3	1.036	1.023	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.0	0.0	2.5
	2	1.8	0.0	0.0
	3	3.6	2.3	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	1.000	1.000	1.021
	2	1.000	1.000	1.028
	3	1.030	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.0	0.0	2.1
	2	0.0	0.0	2.8
	3	3.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.75	6.63	2.92	A
2	0.24	4.67	0.31	A
3	0.74	6.29	2.72	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1114.25	1110.16	72.86	0.00	2196.53	0.507	1.02	3.302	A
2	163.57	162.96	981.70	0.00	1226.65	0.133	0.15	3.382	A
3	1077.70	1073.73	84.36	0.00	2157.19	0.500	0.99	3.310	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1330.52	1328.39	99.53	0.00	2175.15	0.612	1.56	4.240	A
2	195.32	195.11	1160.68	0.00	1148.51	0.170	0.20	3.775	A
3	1286.88	1284.93	123.78	0.00	2147.71	0.599	1.48	4.163	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1629.56	1624.46	88.06	0.00	2189.82	0.744	2.83	6.308	A
2	239.22	238.84	1316.65	0.00	1037.45	0.231	0.30	4.506	A
3	1576.09	1571.12	138.60	0.00	2140.68	0.736	2.72	6.265	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1629.55	1629.09	162.82	0.00	2171.46	0.750	2.95	6.626	A
2	239.22	239.18	1376.15	0.00	1009.92	0.237	0.31	4.670	A
3	1576.09	1576.05	130.50	0.00	2147.73	0.734	2.73	6.294	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1330.53	1335.60	208.56	0.00	2132.00	0.624	1.68	4.550	A
2	195.32	195.75	1131.25	0.00	1168.30	0.167	0.20	3.705	A
3	1286.88	1291.70	98.79	0.00	2142.84	0.601	1.52	4.254	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1114.25	1116.84	121.76	0.00	2199.21	0.507	1.03	3.333	A
2	163.57	163.77	987.56	0.00	1263.90	0.129	0.15	3.272	A
3	1077.69	1079.73	113.23	0.00	2149.82	0.501	1.01	3.369	A

(Default Analysis Set) - 2026 Base+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D5 - 2026 Base+Dev, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base+Dev, AM	2026 Base+Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			48.13	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	H8 Standing Way	
2	2	Whaddon Rd	
3	3	A421	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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)	Exit Only
1	7.51	7.60	0.70	39.49	55.00	33.00	
2	3.00	7.61	27.80	50.07	55.00	23.00	
3	3.50	9.50	38.18	39.08	55.00	35.00	

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)	0.702	2326.346
2		(calculated)	(calculated)	0.639	1919.315
3		(calculated)	(calculated)	0.692	2284.988

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1321.43	100.000
2	ONE HOUR	✓	877.25	100.000
3	ONE HOUR	✓	1764.71	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	994.84	1046.06		
07:45-08:00	2	660.44	671.37		
07:45-08:00	3	1328.57	1361.41		
08:00-08:15	1	1187.94	1256.48		
08:00-08:15	2	788.63	809.71		
08:00-08:15	3	1586.44	1633.11		
08:15-08:30	1	1454.92	1558.39		
08:15-08:30	2	965.87	987.57		
08:15-08:30	3	1942.98	2025.54		
08:30-08:45	1	1454.92	1555.71		
08:30-08:45	2	965.87	996.61		
08:30-08:45	3	1942.98	2021.45		
08:45-09:00	1	1187.94	1266.24		
08:45-09:00	2	788.63	831.09		
08:45-09:00	3	1586.44	1684.35		
09:00-09:15	1	994.84	1076.25		
09:00-09:15	2	660.44	679.16		
09:00-09:15	3	1328.57	1420.25		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

		To		
From		1	2	3
	1	0.000	274.880	1046.550
	2	547.990	0.000	329.260
	3	1742.120	22.590	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

		To		
From		1	2	3
	1	0.00	0.21	0.79
	2	0.62	0.00	0.38
	3	0.99	0.01	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.000	257.220	1054.110
	2	507.230	0.000	532.630
	3	1587.440	254.140	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.00	0.20	0.80
	2	0.49	0.00	0.51
	3	0.86	0.14	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.000	242.090	1033.940
	2	475.390	0.000	430.780
	3	1624.710	121.300	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.00	0.19	0.81
	2	0.52	0.00	0.48
	3	0.93	0.07	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.000	168.960	996.110
	2	342.990	0.000	447.810
	3	1462.770	250.750	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.43	0.00	0.57
	3	0.85	0.15	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.000	272.350	799.410
	2	493.900	0.000	375.380
	3	1439.660	93.130	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.00	0.25	0.75
	2	0.57	0.00	0.43
	3	0.94	0.06	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	0.000	181.570	774.190
	2	145.740	0.000	548.640
	3	1297.730	59.870	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

	To			
		1	2	3
From	1	0.00	0.19	0.81
	2	0.21	0.00	0.79
	3	0.96	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

	To			
		1	2	3
From	1	1.000	1.018	1.060
	2	1.000	1.000	1.044
	3	1.022	1.250	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

	To			
		1	2	3
From	1	0.0	1.8	6.0
	2	0.0	0.0	4.4
	3	2.2	25.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	1.000	1.029	1.065
	2	1.036	1.000	1.018
	3	1.029	1.033	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

	To			
		1	2	3
From	1	0.0	2.9	6.5
	2	3.6	0.0	1.8
	3	2.9	3.3	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	1.000	1.021	1.083
	2	1.019	1.000	1.026
	3	1.044	1.026	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

	To			
		1	2	3
From	1	0.0	2.1	8.3
	2	1.9	0.0	2.6
	3	4.4	2.6	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	1.000	1.015	1.079
	2	1.000	1.000	1.056
	3	1.042	1.033	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

	To			
		1	2	3
From	1	0.0	1.5	7.9
	2	0.0	0.0	5.6
	3	4.2	3.3	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	1.000	1.028	1.079
	2	1.025	1.000	1.092
	3	1.063	1.036	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

	To			
		1	2	3
From	1	0.0	2.8	7.9
	2	2.5	0.0	9.2
	3	6.3	3.6	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

	To			
		1	2	3
	1	1.000	1.028	1.095
	2	1.056	1.000	1.021
	3	1.065	1.167	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

	To			
		1	2	3
	1	0.0	2.8	9.5
	2	5.6	0.0	2.1
	3	6.5	16.7	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.73	6.63	2.64	A
2	0.94	38.83	10.00	E
3	1.05	84.42	46.02	F

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	994.85	991.56	16.90	0.00	2198.35	0.453	0.82	2.976	A
2	660.44	656.73	785.29	0.00	1364.73	0.484	0.93	5.059	A
3	1328.57	1320.22	410.24	0.00	1952.65	0.680	2.09	5.621	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1187.93	1185.78	216.55	0.00	2050.81	0.579	1.36	4.152	A
2	788.63	785.45	953.14	0.00	1237.85	0.637	1.71	7.902	A
3	1586.44	1578.11	383.64	0.00	1952.23	0.813	4.11	9.426	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1454.92	1451.33	127.37	0.00	2086.31	0.697	2.26	5.636	A
2	965.87	946.14	1175.95	0.00	1081.33	0.893	6.65	23.838	C
3	1942.98	1817.01	496.10	0.00	1856.26	1.047	35.61	48.725	E

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1454.92	1453.42	267.26	0.00	1994.40	0.729	2.63	6.633	A
2	965.87	952.63	1242.24	0.00	1030.80	0.937	9.98	38.832	E
3	1942.97	1900.76	415.60	0.00	1919.34	1.012	46.19	84.424	F

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1187.94	1193.23	121.64	0.00	2099.51	0.566	1.32	3.996	A
2	788.63	821.32	891.14	0.00	1239.46	0.637	1.79	9.266	A
3	1586.43	1742.59	461.43	0.00	1848.30	0.860	7.20	46.865	E

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	994.84	996.50	59.95	0.00	2105.28	0.473	0.90	3.253	A
2	660.44	663.28	806.85	0.00	1316.86	0.501	1.02	5.535	A
3	1328.56	1349.75	141.76	0.00	2040.81	0.651	1.90	5.367	A

(Default Analysis Set) - 2026 Base+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D6 - 2026 Base+Dev, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base+Dev, PM	2026 Base+Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3			10.09	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	H8 Standing Way	
2	2	Whaddon Rd	
3	3	A421	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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)	Exit Only
1	7.51	7.60	0.70	39.49	55.00	33.00	
2	3.00	7.61	27.80	50.07	55.00	23.00	
3	3.50	9.50	38.18	39.08	55.00	35.00	

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)	0.702	2326.346
2		(calculated)	(calculated)	0.639	1919.315
3		(calculated)	(calculated)	0.692	2284.988

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1483.86	100.000
2	ONE HOUR	✓	281.61	100.000
3	ONE HOUR	✓	1577.14	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	1117.13	1155.77		
16:45-17:00	2	212.01	218.73		
16:45-17:00	3	1187.35	1225.75		
17:00-17:15	1	1333.96	1381.82		
17:00-17:15	2	253.16	253.16		
17:00-17:15	3	1417.82	1455.23		
17:15-17:30	1	1633.76	1690.44		
17:15-17:30	2	310.06	313.07		
17:15-17:30	3	1736.46	1773.86		
17:30-17:45	1	1633.76	1661.10		
17:30-17:45	2	310.06	314.67		
17:30-17:45	3	1736.46	1776.87		
17:45-18:00	1	1333.96	1361.88		
17:45-18:00	2	253.16	255.29		
17:45-18:00	3	1417.82	1464.35		
18:00-18:15	1	1117.13	1138.28		
18:00-18:15	2	212.01	213.94		
18:00-18:15	3	1187.35	1216.29		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To		
From		1	2	3
	1	0.000	171.270	1312.590
	2	130.960	0.000	150.650
	3	1337.330	239.810	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To		
From		1	2	3
	1	0.00	0.12	0.88
	2	0.47	0.00	0.53
	3	0.85	0.15	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.000	189.160	1312.590
	2	217.280	0.000	154.330
	3	1280.960	265.060	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.00	0.13	0.87
	2	0.58	0.00	0.42
	3	0.83	0.17	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.000	230.060	1320.590
	2	421.830	0.000	150.660
	3	1161.070	426.770	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.74	0.00	0.26
	3	0.73	0.27	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.000	260.730	1425.400
	2	232.720	0.000	217.200
	3	1263.320	317.100	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.52	0.00	0.48
	3	0.80	0.20	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.000	242.840	1348.450
	2	176.920	0.000	190.950
	3	1140.420	380.320	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.00	0.15	0.85
	2	0.48	0.00	0.52
	3	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.000	155.930	1197.200
	2	251.410	0.000	122.750
	3	1294.190	283.030	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.00	0.12	0.88
	2	0.67	0.00	0.33
	3	0.82	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

	To			
		1	2	3
From	1	1.000	1.030	1.035
	2	1.068	1.000	1.000
	3	1.029	1.053	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

	To			
		1	2	3
From	1	0.0	3.0	3.5
	2	6.8	0.0	0.0
	3	2.9	5.3	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	1.000	1.014	1.039
	2	1.000	1.000	1.000
	3	1.022	1.048	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

	To			
		1	2	3
From	1	0.0	1.4	3.9
	2	0.0	0.0	0.0
	3	2.2	4.8	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	1.000	1.011	1.039
	2	1.013	1.000	1.000
	3	1.022	1.020	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

	To			
		1	2	3
From	1	0.0	1.1	3.9
	2	1.3	0.0	0.0
	3	2.2	2.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	1.000	1.010	1.018
	2	1.000	1.000	1.031
	3	1.020	1.035	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To			
		1	2	3
From	1	0.0	1.0	1.8
	2	0.0	0.0	3.1
	3	2.0	3.5	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	1.000	1.000	1.025
	2	1.018	1.000	1.000
	3	1.036	1.023	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To			
		1	2	3
From	1	0.0	0.0	2.5
	2	1.8	0.0	0.0
	3	3.6	2.3	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	1.000	1.000	1.021
	2	1.000	1.000	1.028
	3	1.030	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To			
		1	2	3
From	1	0.0	0.0	2.1
	2	0.0	0.0	2.8
	3	3.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.85	11.24	5.17	B
2	0.31	5.26	0.45	A
3	0.83	9.85	4.72	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1117.13	1112.71	179.79	0.00	2120.16	0.527	1.10	3.557	A
2	212.01	211.18	984.28	0.00	1229.25	0.172	0.21	3.532	A
3	1187.36	1182.43	98.21	0.00	2143.06	0.554	1.23	3.730	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1333.95	1331.27	242.48	0.00	2073.65	0.643	1.78	4.832	A
2	253.16	252.86	1163.63	0.00	1146.57	0.221	0.28	4.027	A
3	1417.82	1414.87	147.74	0.00	2126.50	0.667	1.97	5.037	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1633.76	1620.33	462.95	0.00	1927.93	0.847	5.13	11.244	B
2	310.06	309.39	1380.10	0.00	993.63	0.312	0.45	5.255	A
3	1736.46	1725.35	227.80	0.00	2080.30	0.835	4.74	9.847	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1633.76	1637.43	349.79	0.00	2037.67	0.802	4.21	9.092	A
2	310.06	310.08	1384.35	0.00	1003.74	0.309	0.45	5.189	A
3	1736.46	1736.98	160.78	0.00	2124.24	0.817	4.61	9.330	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1333.96	1343.00	356.24	0.00	2028.07	0.658	1.95	5.321	A
2	253.16	253.84	1138.01	0.00	1164.38	0.217	0.28	3.957	A
3	1417.82	1428.11	122.14	0.00	2129.27	0.666	2.03	5.209	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1117.13	1120.52	214.20	0.00	2135.49	0.523	1.11	3.560	A
2	212.01	212.31	991.10	0.00	1260.91	0.168	0.20	3.433	A
3	1187.35	1190.40	142.45	0.00	2134.22	0.556	1.27	3.825	A

Whaddon Crossroads

Revised Junction Layout

Junctions 8			
ARCADY 8 - Roundabout Module			
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016			
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Filename: Junction 2 Calibrated_MitigationSH.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\02 Jn Modelling\BCC Mitigation

Report generation date: 08/08/2016 19:34:45

- » (Default Analysis Set) - Base 2026, AM
- » (Default Analysis Set) - Base 2026, PM
- » (Default Analysis Set) - Base 2026+Dev, AM
- » (Default Analysis Set) - Base 2026+Dev, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 - Base 2026								
Arm 1	0.72	16.09	0.42	C	0.31	9.24	0.24	A
Arm 2	3.56	9.71	0.78	A	5.85	13.81	0.87	B
Arm 3	1.46	12.64	0.60	B	0.74	10.60	0.43	B
Arm 4	74.22	133.97	1.08	F	5.10	12.76	0.84	B
A1 - Base 2026+Dev								
Arm 1	1.01	18.07	0.51	C	0.44	12.54	0.31	B
Arm 2	11.32	27.17	0.93	D	7.08	16.42	0.89	C
Arm 3	2.46	21.73	0.72	C	1.05	12.90	0.52	B
Arm 4	95.99	172.88	1.11	F	11.41	27.04	0.93	D

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

"D3 - Base 2026, AM" model duration: 07:45 - 09:15

"D4 - Base 2026, PM" model duration: 16:45 - 18:15

"D5 - Base 2026+Dev, AM" model duration: 07:45 - 09:15

"D6 - Base 2026+Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 08/08/2016 19:34:43

File summary

Title	(untitled)
Location	
Site Number	
Date	04/12/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	fsuarez
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	Veh	Veh	perHour	s	-Min	perMin

(Default Analysis Set) - Base 2026, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D3 - Base 2026, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

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
Base 2026, AM	Base 2026	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				69.71	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Coddemor Ln	
2	2	A421 (East)	
3	3	Whaddon Rd	
4	4	A421 (West)	

Capacity Options

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

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)	Exit Only
1	2.82	7.13	9.69	36.48	50.00	24.00	
2	2.76	10.00	24.00	41.67	50.00	40.00	
3	2.99	6.19	13.04	15.49	50.00	38.00	
4	3.01	8.70	24.90	15.58	50.00	48.00	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct Intercept Adjustment (PCU/hr)	Percentage Intercept Adjustment (%)
1	None			
2	None			
3	None			
4	Percentage			110.00

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)	0.574	1453.151
2		(calculated)	(calculated)	0.650	1934.388
3		(calculated)	(calculated)	0.537	1388.222
4		(calculated)	(calculated)	0.598	1938.477

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	148.79	100.000
2	ONE HOUR	✓	1218.03	100.000
3	ONE HOUR	✓	380.80	100.000
4	ONE HOUR	✓	1608.91	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	112.02	112.02		
07:45-08:00	2	917.00	970.13		
07:45-08:00	3	286.69	288.58		
07:45-08:00	4	1211.27	1241.68		
08:00-08:15	1	133.76	133.76		
08:00-08:15	2	1094.98	1155.10		
08:00-08:15	3	342.33	342.33		
08:00-08:15	4	1446.38	1490.39		
08:15-08:30	1	163.82	163.82		
08:15-08:30	2	1341.08	1440.41		
08:15-08:30	3	419.27	424.41		
08:15-08:30	4	1771.44	1846.45		
08:30-08:45	1	163.82	163.82		
08:30-08:45	2	1341.08	1440.86		
08:30-08:45	3	419.27	422.74		
08:30-08:45	4	1771.44	1844.67		
08:45-09:00	1	133.76	133.76		
08:45-09:00	2	1094.98	1183.80		
08:45-09:00	3	342.33	345.69		
08:45-09:00	4	1446.38	1541.56		
09:00-09:15	1	112.02	112.02		
09:00-09:15	2	917.00	987.71		
09:00-09:15	3	286.69	289.91		
09:00-09:15	4	1211.27	1297.95		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

	To				
		1	2	3	4
From	1	0.000	68.090	42.870	37.830
	2	10.090	0.000	103.390	1104.550
	3	204.270	148.790	0.000	27.740
	4	47.910	1535.780	25.220	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

	To				
		1	2	3	4
From	1	0.00	0.46	0.29	0.25
	2	0.01	0.00	0.08	0.91
	3	0.54	0.39	0.00	0.07
	4	0.03	0.95	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	0.000	40.350	73.130	30.260
	2	12.610	0.000	194.180	1124.720
	3	181.570	133.660	0.000	45.390
	4	55.480	1631.600	55.480	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

	To				
		1	2	3	4
From	1	0.00	0.28	0.51	0.21
	2	0.01	0.00	0.15	0.84
	3	0.50	0.37	0.00	0.13
	4	0.03	0.94	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.000	63.050	68.090	37.830
	2	20.170	0.000	181.570	1023.850
	3	168.960	148.790	0.000	93.310
	4	60.520	1500.470	47.910	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

	To				
		1	2	3	4
From	1	0.00	0.37	0.40	0.22
	2	0.02	0.00	0.15	0.84
	3	0.41	0.36	0.00	0.23
	4	0.04	0.93	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.000	47.910	52.960	25.220
	2	25.220	0.000	201.740	993.590
	3	95.830	163.920	0.000	45.390
	4	70.610	1470.210	45.390	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.38	0.42	0.20
	2	0.02	0.00	0.17	0.81
	3	0.31	0.54	0.00	0.15
	4	0.04	0.93	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.000	50.440	47.910	17.650
	2	17.650	0.000	158.870	786.800
	3	27.740	174.000	0.000	55.480
	4	75.650	1278.550	25.220	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.43	0.41	0.15
	2	0.02	0.00	0.16	0.82
	3	0.11	0.68	0.00	0.22
	4	0.05	0.93	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.000	35.310	30.260	25.220
	2	15.130	0.000	136.180	862.460
	3	58.000	126.090	0.000	40.350
	4	75.650	1175.160	17.650	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.39	0.33	0.28
	2	0.01	0.00	0.13	0.85
	3	0.26	0.56	0.00	0.18
	4	0.06	0.93	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.064
	3	1.000	1.017	1.000	1.000
	4	1.000	1.026	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	6.4
	3	0.0	1.7	0.0	0.0
	4	0.0	2.6	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.065
	3	1.000	1.000	1.000	1.000
	4	1.000	1.033	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	6.5
	3	0.0	0.0	0.0	0.0
	4	0.0	3.3	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.014	1.086
	3	1.000	1.034	1.000	1.000
	4	1.000	1.045	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	1.4	8.6
	3	0.0	3.4	0.0	0.0
	4	0.0	4.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.091
	3	1.000	1.015	1.000	1.000
	4	1.000	1.045	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	9.1
	3	0.0	1.5	0.0	0.0
	4	0.0	4.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.048	1.090
	3	1.000	1.015	1.000	1.000
	4	1.000	1.071	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	4.8	9.0
	3	0.0	1.5	0.0	0.0
	4	0.0	7.1	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.037	1.085
	3	1.000	1.020	1.000	1.000
	4	1.033	1.075	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	3.7	8.5
	3	0.0	2.0	0.0	0.0
	4	3.3	7.5	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.42	16.09	0.72	C	136.53	204.80	39.12	11.46	0.43	39.13	11.46
2	0.78	9.71	3.56	A	1117.68	1676.53	184.91	6.62	2.05	184.93	6.62
3	0.60	12.64	1.46	B	349.42	524.14	77.30	8.85	0.86	77.31	8.85
4	1.08	133.97	74.22	F	1476.39	2214.58	2166.85	58.71	24.08	2166.99	58.71

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	112.02	28.00	111.26	196.13	1277.67	0.00	701.21	414.94	0.160	0.00	0.19	6.095	A
2	916.99	229.25	912.78	1309.74	79.19	0.00	1779.76	1674.34	0.515	0.00	1.05	4.133	A
3	286.69	71.67	284.80	128.38	863.59	0.00	889.76	452.84	0.322	0.00	0.47	5.933	A
4	1211.28	302.82	1202.19	876.78	271.62	0.00	1731.35	1636.07	0.700	0.00	2.27	6.694	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	133.76	33.44	133.27	228.01	1515.70	0.00	557.91	422.85	0.240	0.19	0.31	8.471	A
2	1094.98	273.74	1092.58	1507.72	141.26	0.00	1746.61	1614.97	0.627	1.05	1.65	5.485	A
3	342.33	85.58	341.50	272.25	961.59	0.00	839.11	551.29	0.408	0.47	0.68	7.223	A
4	1446.38	361.59	1434.75	994.12	308.95	0.00	1701.85	1592.48	0.850	2.27	5.18	12.940	B

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	163.82	40.96	162.60	254.47	1721.09	0.00	422.60	413.15	0.388	0.31	0.62	13.759	B
2	1341.08	335.27	1333.80	1733.02	150.67	0.00	1709.91	1615.25	0.784	1.65	3.47	9.391	A
3	419.27	104.82	416.17	311.87	1172.60	0.00	697.90	529.94	0.601	0.68	1.45	12.642	B
4	1771.44	442.86	1631.69	1244.89	343.88	0.00	1659.63	1605.56	1.068	5.18	40.12	60.046	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	163.82	40.96	163.43	231.51	1786.39	0.00	386.67	382.23	0.424	0.62	0.72	16.091	C
2	1341.08	335.27	1340.79	1801.52	148.29	0.00	1710.69	1629.77	0.784	3.47	3.54	9.711	A
3	419.27	104.82	419.26	336.91	1152.15	0.00	709.42	546.26	0.591	1.45	1.45	12.409	B
4	1771.44	442.86	1633.80	1187.34	384.08	0.00	1638.63	1572.35	1.081	40.12	74.52	133.974	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	133.76	33.44	134.30	145.42	1783.97	0.00	369.22	333.61	0.362	0.72	0.58	15.361	C
2	1094.99	273.75	1102.07	1809.18	109.09	0.00	1723.78	1658.72	0.635	3.54	1.77	5.854	A
3	342.33	85.58	345.30	270.27	940.89	0.00	830.98	545.77	0.412	1.45	0.71	7.455	A
4	1446.37	361.59	1637.95	994.76	291.44	0.00	1660.06	1558.37	0.875	74.52	26.60	114.376	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	112.02	28.00	113.42	165.08	1391.17	0.00	600.63	382.41	0.187	0.58	0.23	7.408	A
2	917.00	229.25	919.60	1416.73	87.85	0.00	1742.82	1641.69	0.526	1.77	1.12	4.388	A
3	286.69	71.67	287.63	180.38	827.06	0.00	897.95	498.03	0.319	0.71	0.47	5.909	A
4	1211.27	302.82	1306.69	865.12	249.57	0.00	1668.59	1564.08	0.726	26.60	2.75	12.693	B

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.74	0.18	6.095	A	A
2	15.27	1.02	4.133	A	A
3	6.82	0.45	5.933	A	A
4	31.93	2.13	6.694	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.53	0.30	8.471	A	A
2	23.91	1.59	5.485	A	A
3	9.89	0.66	7.223	A	A
4	69.01	4.60	12.940	B	B

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.78	0.59	13.759	B	B
2	48.03	3.20	9.391	A	A
3	20.37	1.36	12.642	B	B
4	360.40	24.03	60.046	F	E

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.41	0.69	16.091	C	B
2	52.73	3.52	9.711	A	A
3	21.81	1.45	12.409	B	B
4	861.33	57.42	133.974	F	F

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.06	0.60	15.361	C	B
2	27.86	1.86	5.854	A	A
3	11.12	0.74	7.455	A	A
4	758.42	50.56	114.376	F	F

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.61	0.24	7.408	A	A
2	17.34	1.16	4.388	A	A
3	7.30	0.49	5.909	A	A
4	86.25	5.75	12.693	B	B

(Default Analysis Set) - Base 2026, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D4 - Base 2026, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

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
Base 2026, PM	Base 2026	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				12.95	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Coddemor Ln	
2	2	A421 (East)	
3	3	Whaddon Rd	
4	4	A421 (West)	

Capacity Options

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

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)	Exit Only
1	2.82	7.13	9.69	36.48	50.00	24.00	
2	2.76	10.00	24.00	41.67	50.00	40.00	
3	2.99	6.19	13.04	15.49	50.00	38.00	
4	3.01	8.70	24.90	15.58	50.00	48.00	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct Intercept Adjustment (PCU/hr)	Percentage Intercept Adjustment (%)
1	None			
2	None			
3	None			
4	Percentage			110.00

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)	0.574	1453.151
2		(calculated)	(calculated)	0.650	1934.388
3		(calculated)	(calculated)	0.537	1388.222
4		(calculated)	(calculated)	0.598	1938.477

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	112.47	100.000
2	ONE HOUR	✓	1413.58	100.000
3	ONE HOUR	✓	230.06	100.000
4	ONE HOUR	✓	1357.35	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	84.67	84.67		
16:45-17:00	2	1064.22	1098.87		
16:45-17:00	3	173.20	177.05		
16:45-17:00	4	1021.88	1054.64		
17:00-17:15	1	101.11	105.32		
17:00-17:15	2	1270.78	1316.62		
17:00-17:15	3	206.82	206.82		
17:00-17:15	4	1220.23	1250.65		
17:15-17:30	1	123.83	123.83		
17:15-17:30	2	1556.38	1612.53		
17:15-17:30	3	253.30	255.36		
17:15-17:30	4	1494.47	1526.57		
17:30-17:45	1	123.83	123.83		
17:30-17:45	2	1556.38	1586.51		
17:30-17:45	3	253.30	253.30		
17:30-17:45	4	1494.47	1530.52		
17:45-18:00	1	101.11	102.76		
17:45-18:00	2	1270.78	1299.15		
17:45-18:00	3	206.82	208.91		
17:45-18:00	4	1220.23	1265.75		
18:00-18:15	1	84.67	84.67		
18:00-18:15	2	1064.22	1087.72		
18:00-18:15	3	173.20	173.20		
18:00-18:15	4	1021.88	1052.48		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	7.670	46.010	58.790
	2	12.780	0.000	153.370	1247.430
	3	33.230	155.930	0.000	40.900
	4	53.680	1267.880	35.790	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.07	0.41	0.52
	2	0.01	0.00	0.11	0.88
	3	0.14	0.68	0.00	0.18
	4	0.04	0.93	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	20.450	51.120	51.120
	2	25.560	0.000	194.270	1196.300
	3	25.560	132.920	0.000	89.470
	4	66.460	1232.090	33.230	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.17	0.42	0.42
	2	0.02	0.00	0.14	0.84
	3	0.10	0.54	0.00	0.36
	4	0.05	0.93	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	30.670	43.460	74.130
	2	33.230	0.000	163.600	1219.310
	3	61.350	148.260	0.000	104.800
	4	63.910	1232.090	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.21	0.29	0.50
	2	0.02	0.00	0.12	0.86
	3	0.20	0.47	0.00	0.33
	4	0.05	0.94	0.01	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	25.560	10.220	74.130
	2	23.010	0.000	247.950	1316.440
	3	35.790	171.270	0.000	81.800
	4	35.790	1209.080	28.120	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.23	0.09	0.67
	2	0.01	0.00	0.16	0.83
	3	0.12	0.59	0.00	0.28
	4	0.03	0.95	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	33.230	69.020	53.680
	2	15.340	0.000	209.610	1262.760
	3	17.890	161.040	0.000	74.130
	4	40.900	1163.070	30.670	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.21	0.44	0.34
	2	0.01	0.00	0.14	0.85
	3	0.07	0.64	0.00	0.29
	4	0.03	0.94	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	30.670	86.910	63.910
	2	20.450	0.000	155.930	1099.170
	3	25.560	125.250	0.000	74.130
	4	46.010	1298.550	20.450	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.17	0.48	0.35
	2	0.02	0.00	0.12	0.86
	3	0.11	0.56	0.00	0.33
	4	0.03	0.95	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.037
	3	1.000	1.016	1.000	1.063
	4	1.000	1.032	1.071	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	3.7
	3	0.0	1.6	0.0	6.3
	4	0.0	3.2	7.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.250	1.000	1.000
	2	1.000	1.000	1.000	1.043
	3	1.000	1.000	1.000	1.000
	4	1.000	1.023	1.154	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	25.0	0.0	0.0
	2	0.0	0.0	0.0	4.3
	3	0.0	0.0	0.0	0.0
	4	0.0	2.3	15.4	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.031	1.038
	3	1.000	1.017	1.000	1.000
	4	1.040	1.021	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	3.1	3.8
	3	0.0	1.7	0.0	0.0
	4	4.0	2.1	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.010	1.021
	3	1.000	1.000	1.000	1.000
	4	1.000	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	1.0	2.1
	3	0.0	0.0	0.0	0.0
	4	0.0	2.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	1.000	1.000	1.037	1.000
	2	1.000	1.000	1.000	1.026
	3	1.000	1.000	1.000	1.035
	4	1.000	1.040	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

	To				
		1	2	3	4
From	1	0.0	0.0	3.7	0.0
	2	0.0	0.0	0.0	2.6
	3	0.0	0.0	0.0	3.5
	4	0.0	4.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.125	1.000	1.000	1.023
	3	1.000	1.000	1.000	1.000
	4	1.056	1.030	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

	To				
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	12.5	0.0	0.0	2.3
	3	0.0	0.0	0.0	0.0
	4	5.6	3.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.24	9.24	0.31	A	103.21	154.81	17.61	6.82	0.20	17.61	6.82
2	0.87	13.81	5.85	B	1297.12	1945.67	278.50	8.59	3.09	278.53	8.59
3	0.43	10.60	0.74	B	211.10	316.65	40.39	7.65	0.45	40.39	7.65
4	0.84	12.76	5.10	B	1245.54	1868.31	245.73	7.89	2.73	245.76	7.89

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	84.67	21.17	84.21	74.64	1093.09	0.00	805.78	331.87	0.105	0.00	0.12	4.986	A
2	1064.22	266.06	1058.55	1072.02	105.27	0.00	1805.89	1649.39	0.589	0.00	1.42	4.781	A
3	173.20	43.30	172.14	176.10	987.72	0.00	820.58	465.44	0.211	0.00	0.27	5.542	A
4	1021.89	255.47	1016.63	1008.75	151.11	0.00	1789.55	1644.73	0.571	0.00	1.32	4.626	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	101.11	25.28	100.89	104.83	1267.36	0.00	679.95	339.57	0.149	0.12	0.17	6.212	A
2	1270.78	317.70	1266.93	1253.74	114.49	0.00	1792.28	1659.03	0.709	1.42	2.38	6.802	A
3	206.82	51.70	206.37	246.05	1135.38	0.00	753.30	510.64	0.275	0.27	0.37	6.576	A
4	1220.23	305.06	1217.26	1186.83	154.92	0.00	1800.81	1683.28	0.678	1.32	2.06	6.137	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	123.83	30.96	123.39	157.73	1529.44	0.00	557.10	383.13	0.222	0.17	0.28	8.292	A
2	1556.37	389.09	1542.67	1543.16	109.66	0.00	1798.19	1668.00	0.866	2.38	5.80	13.412	B
3	253.30	63.33	251.85	226.44	1425.89	0.00	590.14	459.48	0.429	0.37	0.74	10.597	B
4	1494.47	373.62	1483.15	1473.73	204.01	0.00	1776.99	1693.14	0.841	2.06	4.89	11.815	B

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	123.83	30.96	123.71	96.79	1601.08	0.00	513.28	331.10	0.241	0.28	0.31	9.237	A
2	1556.37	389.09	1556.19	1597.12	127.68	0.00	1815.76	1711.90	0.857	5.80	5.85	13.811	B
3	253.30	63.33	253.45	286.55	1397.32	0.00	622.10	475.47	0.407	0.74	0.70	9.773	A
4	1494.48	373.62	1493.58	1446.46	204.30	0.00	1773.49	1679.16	0.843	4.89	5.12	12.757	B

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	101.11	25.28	101.65	68.90	1323.33	0.00	656.66	309.32	0.154	0.31	0.18	6.494	A
2	1270.78	317.70	1284.73	1314.46	110.50	0.00	1820.94	1708.08	0.698	5.85	2.36	6.882	A
3	206.82	51.70	208.08	256.48	1138.76	0.00	753.30	516.56	0.275	0.70	0.38	6.619	A
4	1220.24	305.06	1231.73	1186.34	160.50	0.00	1776.54	1647.90	0.687	5.12	2.24	6.743	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	84.67	21.17	84.94	71.31	1087.85	0.00	811.90	339.88	0.104	0.18	0.12	4.953	A
2	1064.22	266.05	1068.11	1086.78	86.00	0.00	1837.87	1697.01	0.579	2.36	1.39	4.701	A
3	173.20	43.30	173.71	186.85	967.27	0.00	855.57	503.15	0.202	0.38	0.26	5.283	A
4	1021.88	255.47	1025.56	1007.38	133.59	0.00	1803.17	1668.34	0.567	2.24	1.32	4.650	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.71	0.11	4.986	A	A
2	20.38	1.36	4.781	A	A
3	3.86	0.26	5.542	A	A
4	18.96	1.26	4.626	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.54	0.17	6.212	A	A
2	33.88	2.26	6.802	A	A
3	5.48	0.37	6.576	A	A
4	29.59	1.97	6.137	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.11	0.27	8.292	A	A
2	76.46	5.10	13.412	B	B
3	10.54	0.70	10.597	B	B
4	65.63	4.38	11.815	B	B

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.63	0.31	9.237	A	A
2	87.43	5.83	13.811	B	B
3	10.61	0.71	9.773	A	A
4	75.46	5.03	12.757	B	B

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.83	0.19	6.494	A	A
2	38.24	2.55	6.882	A	A
3	5.93	0.40	6.619	A	A
4	35.94	2.40	6.743	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.80	0.12	4.953	A	A
2	21.63	1.44	4.701	A	A
3	3.93	0.26	5.283	A	A
4	20.54	1.37	4.650	A	A

(Default Analysis Set) - Base 2026+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D5 - Base 2026+Dev, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

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	Relati
Base 2026+Dev, AM	Base 2026+Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				90.97	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Coddemor Ln	
2	2	A421 (East)	
3	3	Whaddon Rd	
4	4	A421 (West)	

Capacity Options

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

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)	Exit Only
1	2.82	7.13	9.69	36.48	50.00	24.00	
2	2.76	10.00	24.00	41.67	50.00	40.00	
3	2.99	6.19	13.04	15.49	50.00	38.00	
4	3.01	8.70	24.90	15.58	50.00	48.00	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct Intercept Adjustment (PCU/hr)	Percentage Intercept Adjustment (%)
1	None			
2	None			
3	None			
4	Percentage			110.00

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)	0.574	1453.151
2		(calculated)	(calculated)	0.650	1934.388
3		(calculated)	(calculated)	0.537	1388.222
4		(calculated)	(calculated)	0.598	1938.477

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	188.06	100.000
2	ONE HOUR	✓	1446.41	100.000
3	ONE HOUR	✓	380.80	100.000
4	ONE HOUR	✓	1621.07	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	141.58	141.58		
07:45-08:00	2	1088.93	1149.92		
07:45-08:00	3	286.69	288.58		
07:45-08:00	4	1220.43	1251.08		
08:00-08:15	1	169.06	169.06		
08:00-08:15	2	1300.29	1368.93		
08:00-08:15	3	342.33	342.33		
08:00-08:15	4	1457.31	1501.68		
08:15-08:30	1	207.06	207.06		
08:15-08:30	2	1592.53	1705.98		
08:15-08:30	3	419.27	424.41		
08:15-08:30	4	1784.83	1860.44		
08:30-08:45	1	207.06	207.06		
08:30-08:45	2	1592.53	1707.04		
08:30-08:45	3	419.27	422.74		
08:30-08:45	4	1784.83	1858.66		
08:45-09:00	1	169.06	169.06		
08:45-09:00	2	1300.29	1401.88		
08:45-09:00	3	342.33	345.69		
08:45-09:00	4	1457.31	1553.26		
09:00-09:15	1	141.58	141.58		
09:00-09:15	2	1088.93	1170.38		
09:00-09:15	3	286.69	289.91		
09:00-09:15	4	1220.43	1307.79		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.000	107.360	42.870	37.830
	2	59.080	0.000	119.700	1267.630
	3	204.270	148.790	0.000	27.740
	4	47.910	1547.940	25.220	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.57	0.23	0.20
	2	0.04	0.00	0.08	0.88
	3	0.54	0.39	0.00	0.07
	4	0.03	0.95	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.000	63.620	73.130	30.260
	2	73.850	0.000	224.800	1290.780
	3	181.570	133.660	0.000	45.390
	4	55.480	1644.530	55.480	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.38	0.44	0.18
	2	0.05	0.00	0.14	0.81
	3	0.50	0.37	0.00	0.13
	4	0.03	0.94	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.000	85.250	68.090	37.830
	2	78.610	0.000	210.790	1182.310
	3	168.960	148.790	0.000	93.310
	4	60.520	1512.810	47.910	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.45	0.36	0.20
	2	0.05	0.00	0.14	0.80
	3	0.41	0.36	0.00	0.23
	4	0.04	0.93	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.000	68.970	52.960	25.220
	2	80.630	0.000	229.450	1143.850
	3	95.830	163.920	0.000	45.390
	4	70.610	1481.910	45.390	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.47	0.36	0.17
	2	0.06	0.00	0.16	0.79
	3	0.31	0.54	0.00	0.15
	4	0.04	0.93	0.03	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.000	68.100	47.910	17.650
	2	64.130	0.000	182.110	912.840
	3	27.740	174.000	0.000	55.480
	4	75.650	1288.360	25.220	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.51	0.36	0.13
	2	0.06	0.00	0.16	0.79
	3	0.11	0.68	0.00	0.22
	4	0.05	0.93	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.000	47.670	30.260	25.220
	2	54.970	0.000	156.100	1000.610
	3	58.000	126.090	0.000	40.350
	4	75.650	1184.180	17.650	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.46	0.29	0.24
	2	0.05	0.00	0.13	0.83
	3	0.26	0.56	0.00	0.18
	4	0.06	0.93	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.064
	3	1.000	1.017	1.000	1.000
	4	1.000	1.026	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	6.4
	3	0.0	1.7	0.0	0.0
	4	0.0	2.6	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.065
	3	1.000	1.000	1.000	1.000
	4	1.000	1.033	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	6.5
	3	0.0	0.0	0.0	0.0
	4	0.0	3.3	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.014	1.086
	3	1.000	1.034	1.000	1.000
	4	1.000	1.045	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	1.4	8.6
	3	0.0	3.4	0.0	0.0
	4	0.0	4.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.091
	3	1.000	1.015	1.000	1.000
	4	1.000	1.045	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	9.1
	3	0.0	1.5	0.0	0.0
	4	0.0	4.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.048	1.090
	3	1.000	1.015	1.000	1.000
	4	1.000	1.071	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	4.8	9.0
	3	0.0	1.5	0.0	0.0
	4	0.0	7.1	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.037	1.085
	3	1.000	1.020	1.000	1.000
	4	1.033	1.075	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	3.7	8.5
	3	0.0	2.0	0.0	0.0
	4	3.3	7.5	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.51	18.07	1.01	C	172.57	258.85	55.48	12.86	0.62	55.49	12.86
2	0.93	27.17	11.32	D	1327.26	1990.89	427.20	12.87	4.75	427.25	12.88
3	0.72	21.73	2.46	C	349.42	524.14	112.30	12.86	1.25	112.31	12.86
4	1.11	172.88	95.99	F	1487.55	2231.32	3081.58	82.86	34.24	3081.75	82.87

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	141.58	35.40	140.57	232.61	1286.11	0.00	696.24	432.91	0.203	0.00	0.25	6.466	A
2	1088.94	272.23	1082.75	1347.51	79.16	0.00	1783.06	1702.03	0.611	0.00	1.55	5.096	A
3	286.69	71.67	284.49	140.48	1021.43	0.00	801.35	448.13	0.358	0.00	0.55	6.936	A
4	1220.43	305.11	1210.73	997.92	307.99	0.00	1710.10	1606.13	0.714	0.00	2.42	7.078	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	169.06	42.27	168.34	277.55	1523.89	0.00	553.05	442.23	0.306	0.25	0.43	9.340	A
2	1300.29	325.07	1295.17	1542.77	149.47	0.00	1745.06	1637.82	0.745	1.55	2.83	7.914	A
3	342.33	85.58	341.13	301.77	1142.86	0.00	737.17	542.89	0.464	0.55	0.85	9.062	A
4	1457.30	364.33	1443.00	1125.54	358.45	0.00	1673.08	1561.40	0.871	2.42	6.00	14.792	B

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	207.06	51.76	205.31	313.38	1696.18	0.00	437.55	432.67	0.473	0.43	0.87	15.386	C
2	1592.53	398.13	1563.58	1740.09	161.39	0.00	1707.99	1632.00	0.933	2.83	10.06	21.587	C
3	419.27	104.82	413.10	344.72	1380.25	0.00	581.19	523.50	0.721	0.85	2.39	20.708	C
4	1784.84	446.21	1606.45	1390.25	403.11	0.00	1625.65	1573.64	1.098	6.00	50.60	73.280	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	207.06	51.76	206.50	289.87	1755.68	0.00	405.00	401.22	0.511	0.87	1.01	18.069	C
2	1592.52	398.13	1587.66	1806.65	155.52	0.00	1710.29	1648.70	0.931	10.06	11.28	27.167	D
3	419.27	104.82	418.99	370.00	1373.19	0.00	583.93	536.80	0.718	2.39	2.46	21.725	C
4	1784.84	446.21	1601.68	1348.29	443.87	0.00	1604.18	1543.80	1.112	50.60	96.38	171.922	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	169.06	42.27	169.85	197.25	1763.92	0.00	382.83	354.77	0.442	1.01	0.81	16.971	C
2	1300.30	325.07	1332.66	1817.04	116.72	0.00	1724.16	1672.54	0.754	11.28	3.19	9.900	A
3	342.33	85.58	348.40	303.55	1145.83	0.00	714.75	536.56	0.479	2.46	0.94	9.982	A
4	1457.32	364.33	1613.51	1146.58	347.65	0.00	1630.41	1527.54	0.899	96.38	57.29	172.882	F

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	141.58	35.40	143.34	207.77	1515.76	0.00	524.10	398.80	0.270	0.81	0.38	9.496	A
2	1088.94	272.23	1094.89	1561.31	97.80	0.00	1740.55	1657.15	0.626	3.19	1.70	5.625	A
3	286.69	71.67	288.20	204.53	988.15	0.00	806.83	491.98	0.355	0.94	0.56	6.963	A
4	1220.42	305.11	1437.49	990.30	286.05	0.00	1648.86	1538.55	0.741	57.29	3.04	36.943	E

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.67	0.24	6.466	A	A
2	22.16	1.48	5.096	A	A
3	7.93	0.53	6.936	A	A
4	33.92	2.26	7.078	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.27	0.42	9.340	A	A
2	39.84	2.66	7.914	A	A
3	12.27	0.82	9.062	A	A
4	78.35	5.22	14.792	B	B

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.25	0.82	15.386	C	B
2	120.17	8.01	21.587	C	C
3	31.88	2.13	20.708	C	C
4	440.79	29.39	73.280	F	E

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.64	0.98	18.069	C	B
2	161.40	10.76	27.167	D	C
3	36.45	2.43	21.725	C	C
4	1103.24	73.55	171.922	F	F

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.75	0.85	16.971	C	B
2	57.23	3.82	9.900	A	A
3	15.10	1.01	9.982	A	A
4	1152.59	76.84	172.882	F	F

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.90	0.39	9.496	A	A
2	26.62	1.77	5.625	A	A
3	8.66	0.58	6.963	A	A
4	267.98	17.87	36.943	E	D

(Default Analysis Set) - Base 2026+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D6 - Base 2026+Dev, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

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	Relati
Base 2026+Dev, PM	Base 2026+Dev	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				20.73	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Coddemor Ln	
2	2	A421 (East)	
3	3	Whaddon Rd	
4	4	A421 (West)	

Capacity Options

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

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)	Exit Only
1	2.82	7.13	9.69	36.48	50.00	24.00	
2	2.76	10.00	24.00	41.67	50.00	40.00	
3	2.99	6.19	13.04	15.49	50.00	38.00	
4	3.01	8.70	24.90	15.58	50.00	48.00	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct Intercept Adjustment (PCU/hr)	Percentage Intercept Adjustment (%)
1	None			
2	None			
3	None			
4	Percentage			110.00

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)	0.574	1453.151
2		(calculated)	(calculated)	0.650	1934.388
3		(calculated)	(calculated)	0.537	1388.222
4		(calculated)	(calculated)	0.598	1938.477

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	119.47	100.000
2	ONE HOUR	✓	1458.02	100.000
3	ONE HOUR	✓	268.15	100.000
4	ONE HOUR	✓	1475.80	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	89.94	89.94		
16:45-17:00	2	1097.67	1133.21		
16:45-17:00	3	201.88	206.20		
16:45-17:00	4	1111.06	1146.70		
17:00-17:15	1	107.40	114.83		
17:00-17:15	2	1310.73	1357.49		
17:00-17:15	3	241.06	241.06		
17:00-17:15	4	1326.71	1359.57		
17:15-17:30	1	131.54	131.54		
17:15-17:30	2	1605.31	1662.61		
17:15-17:30	3	295.24	297.89		
17:15-17:30	4	1624.89	1659.69		
17:30-17:45	1	131.54	131.54		
17:30-17:45	2	1605.31	1636.08		
17:30-17:45	3	295.24	295.24		
17:30-17:45	4	1624.89	1664.27		
17:45-18:00	1	107.40	108.97		
17:45-18:00	2	1310.73	1339.68		
17:45-18:00	3	241.06	243.23		
17:45-18:00	4	1326.71	1376.47		
18:00-18:15	1	89.94	89.94		
18:00-18:15	2	1097.67	1123.66		
18:00-18:15	3	201.88	201.88		
18:00-18:15	4	1111.06	1144.28		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	14.670	46.010	58.790
	2	20.670	0.000	158.040	1279.310
	3	33.230	194.020	0.000	40.900
	4	53.680	1386.330	35.790	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.12	0.39	0.49
	2	0.01	0.00	0.11	0.88
	3	0.12	0.72	0.00	0.15
	4	0.04	0.94	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	39.120	51.120	51.120
	2	41.340	0.000	200.190	1226.880
	3	25.560	165.390	0.000	89.470
	4	66.460	1347.200	33.230	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.28	0.36	0.36
	2	0.03	0.00	0.14	0.84
	3	0.09	0.59	0.00	0.32
	4	0.05	0.93	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	49.740	43.460	74.130
	2	49.350	0.000	169.640	1250.540
	3	61.350	181.420	0.000	104.800
	4	63.910	1349.660	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.30	0.26	0.44
	2	0.03	0.00	0.12	0.85
	3	0.18	0.52	0.00	0.30
	4	0.04	0.95	0.01	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	45.070	10.220	74.130
	2	39.500	0.000	254.140	1348.400
	3	35.790	205.200	0.000	81.800
	4	35.790	1329.390	28.120	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.35	0.08	0.57
	2	0.02	0.00	0.15	0.82
	3	0.11	0.64	0.00	0.25
	4	0.03	0.95	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	51.980	69.020	53.680
	2	31.180	0.000	215.550	1293.460
	3	17.890	193.640	0.000	74.520
	4	40.900	1278.660	30.670	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.30	0.40	0.31
	2	0.02	0.00	0.14	0.84
	3	0.06	0.68	0.00	0.26
	4	0.03	0.95	0.02	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	47.980	86.910	63.910
	2	41.580	0.000	160.350	1125.890
	3	25.560	150.610	0.000	74.520
	4	46.010	1427.600	20.450	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.24	0.44	0.32
	2	0.03	0.00	0.12	0.85
	3	0.10	0.60	0.00	0.30
	4	0.03	0.96	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.037
	3	1.000	1.016	1.000	1.063
	4	1.000	1.032	1.071	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	3.7
	3	0.0	1.6	0.0	6.3
	4	0.0	3.2	7.1	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.250	1.000	1.000
	2	1.000	1.000	1.000	1.043
	3	1.000	1.000	1.000	1.000
	4	1.000	1.023	1.154	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	25.0	0.0	0.0
	2	0.0	0.0	0.0	4.3
	3	0.0	0.0	0.0	0.0
	4	0.0	2.3	15.4	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.031	1.038
	3	1.000	1.017	1.000	1.000
	4	1.040	1.021	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	3.1	3.8
	3	0.0	1.7	0.0	0.0
	4	4.0	2.1	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.010	1.021
	3	1.000	1.000	1.000	1.000
	4	1.000	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	1.0	2.1
	3	0.0	0.0	0.0	0.0
	4	0.0	2.5	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.000	1.037	1.000
	2	1.000	1.000	1.000	1.026
	3	1.000	1.000	1.000	1.035
	4	1.000	1.040	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	0.0	3.7	0.0
	2	0.0	0.0	0.0	2.6
	3	0.0	0.0	0.0	3.5
	4	0.0	4.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	1.000	1.000	1.000	1.000
	2	1.125	1.000	1.000	1.023
	3	1.000	1.000	1.000	1.000
	4	1.056	1.030	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.0	0.0	0.0	0.0
	2	12.5	0.0	0.0	2.3
	3	0.0	0.0	0.0	0.0
	4	5.6	3.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.31	12.54	0.44	B	109.63	164.45	23.15	8.45	0.26	23.15	8.45
2	0.89	16.42	7.08	C	1337.90	2006.85	322.61	9.65	3.58	322.64	9.65
3	0.52	12.90	1.05	B	246.05	369.08	54.20	8.81	0.60	54.21	8.81
4	0.93	27.04	11.41	D	1354.23	2031.35	430.59	12.72	4.78	430.64	12.72

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	89.94	22.49	89.39	80.50	1209.35	0.00	737.13	323.52	0.122	0.00	0.14	5.553	A
2	1097.67	274.42	1091.56	1193.55	105.20	0.00	1806.25	1668.24	0.608	0.00	1.53	4.996	A
3	201.88	50.47	200.55	179.53	1017.24	0.00	805.25	464.23	0.251	0.00	0.33	5.940	A
4	1111.06	277.77	1104.42	1032.35	185.44	0.00	1769.34	1633.21	0.628	0.00	1.66	5.363	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	107.40	26.85	107.08	119.31	1403.24	0.00	588.29	324.90	0.183	0.14	0.22	7.476	A
2	1310.73	327.68	1306.36	1402.42	107.89	0.00	1797.12	1692.55	0.729	1.53	2.62	7.270	A
3	241.06	60.27	240.45	247.03	1167.23	0.00	735.70	506.92	0.328	0.33	0.48	7.260	A
4	1326.72	331.68	1321.89	1207.02	200.66	0.00	1774.39	1662.24	0.748	1.66	2.87	7.870	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	131.54	32.88	130.88	176.48	1677.84	0.00	470.11	376.24	0.280	0.22	0.38	10.592	B
2	1605.30	401.33	1587.66	1705.05	103.67	0.00	1802.61	1694.17	0.891	2.62	7.03	15.595	C
3	295.24	73.81	292.98	229.25	1462.09	0.00	569.89	459.82	0.518	0.48	1.04	12.896	B
4	1624.88	406.22	1596.46	1497.19	257.87	0.00	1745.21	1673.90	0.931	2.87	9.98	21.051	C

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	131.54	32.88	131.26	114.30	1764.04	0.00	417.93	326.98	0.315	0.38	0.45	12.544	B
2	1605.31	401.33	1604.93	1777.51	117.79	0.00	1822.32	1740.68	0.881	7.03	7.12	16.418	C
3	295.24	73.81	295.49	290.07	1432.65	0.00	602.73	480.34	0.490	1.04	0.98	11.733	B
4	1624.89	406.22	1619.05	1468.87	259.28	0.00	1741.24	1658.63	0.933	9.98	11.45	27.041	D

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	107.40	26.85	108.28	83.36	1482.83	0.00	564.89	307.05	0.190	0.45	0.24	7.899	A
2	1310.73	327.68	1328.72	1484.37	106.73	0.00	1823.82	1728.97	0.719	7.12	2.62	7.523	A
3	241.06	60.27	243.00	259.37	1176.09	0.00	733.91	513.14	0.329	0.98	0.49	7.360	A
4	1326.72	331.68	1359.46	1212.36	206.73	0.00	1749.91	1629.35	0.758	11.45	3.26	9.939	A

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

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	89.94	22.49	90.34	89.39	1204.77	0.00	743.19	340.00	0.121	0.24	0.14	5.516	A
2	1097.67	274.42	1102.17	1211.22	83.89	0.00	1836.41	1711.52	0.598	2.62	1.51	4.933	A
3	201.88	50.47	202.57	188.16	997.89	0.00	837.79	498.88	0.241	0.49	0.32	5.673	A
4	1111.06	277.76	1117.31	1023.62	176.84	0.00	1776.81	1643.46	0.625	3.26	1.69	5.508	A

Queueing Delay Results for each time segment

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.01	0.13	5.553	A	A
2	21.91	1.46	4.996	A	A
3	4.81	0.32	5.940	A	A
4	23.74	1.58	5.363	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.23	0.22	7.476	A	A
2	37.15	2.48	7.270	A	A
3	7.02	0.47	7.260	A	A
4	40.46	2.70	7.870	A	A

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.51	0.37	10.592	B	B
2	90.16	6.01	15.595	C	B
3	14.72	0.98	12.896	B	B
4	119.73	7.98	21.051	C	C

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.58	0.44	12.544	B	B
2	106.18	7.08	16.418	C	B
3	14.95	1.00	11.733	B	B
4	162.48	10.83	27.041	D	C

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

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.69	0.25	7.899	A	A
2	43.25	2.88	7.523	A	A
3	7.72	0.51	7.360	A	A
4	58.57	3.90	9.939	A	A

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

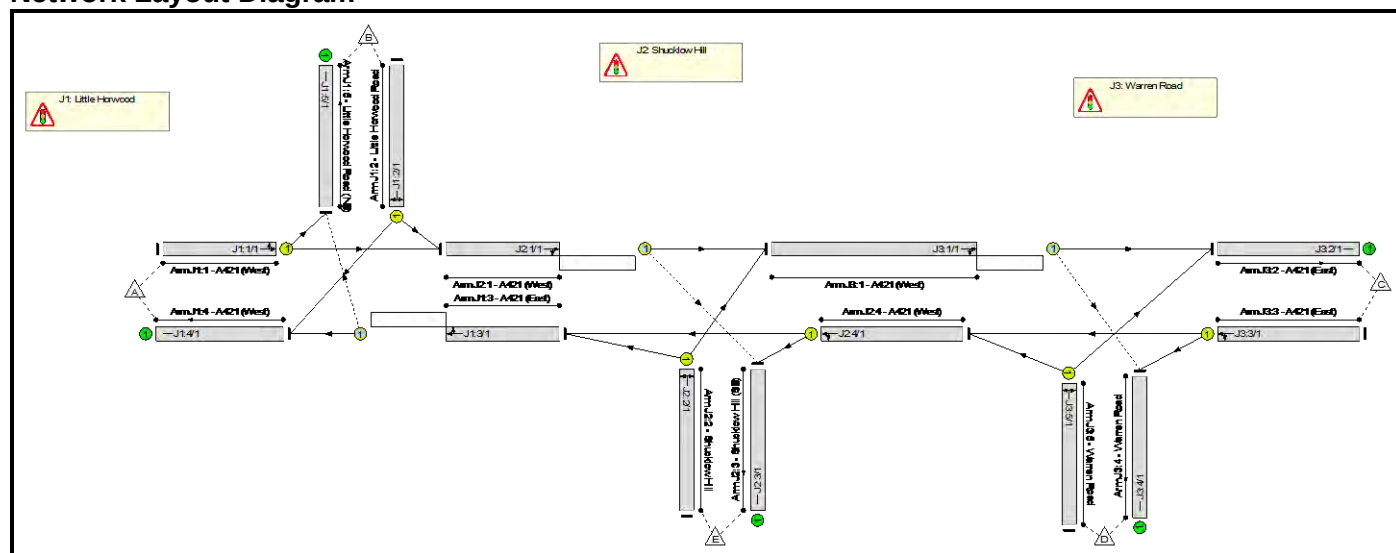
Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.13	0.14	5.516	A	A
2	23.46	1.56	4.933	A	A
3	4.93	0.33	5.673	A	A
4	26.57	1.77	5.508	A	A



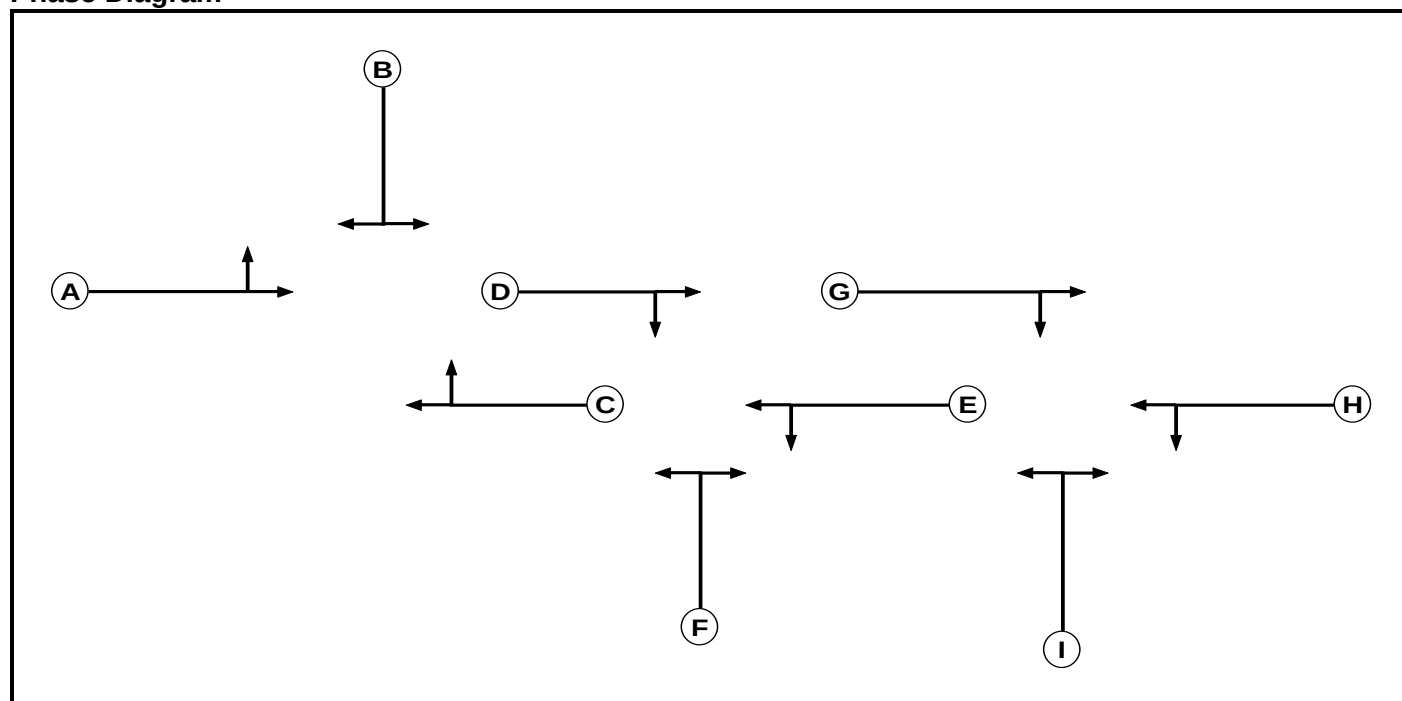
User and Project Details

Project:	South West milton Keynes
Title:	Signalisation of Little Horwood Junction
Location:	Woking
File name:	Little Horwood Junction A421_Little Horwood.lsg3x
Author:	
Company:	Mouchel
Address:	Export house, Cawsey Way
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	2		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Traffic	3		7	7

Phase Intergreens Matrix

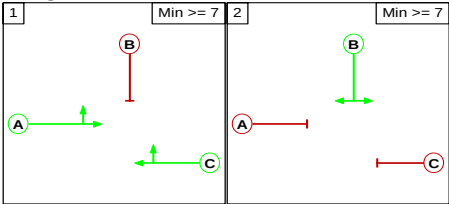
Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		6	-	-	-	-	-	-	-
	B	7		5	-	-	-	-	-	-
	C	-	6		-	-	-	-	-	-
	D	-	-	-		-	6	-	-	-
	E	-	-	-	-		7	-	-	-
	F	-	-	-	5	5		-	-	-
	G	-	-	-	-	-	-		-	6
	H	-	-	-	-	-	-	-		8
	I	-	-	-	-	-	-	5	5	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D E
2	2	F
3	1	G H
3	2	I

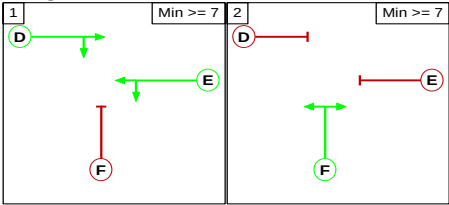
Stage Diagram

Stage Stream: 1

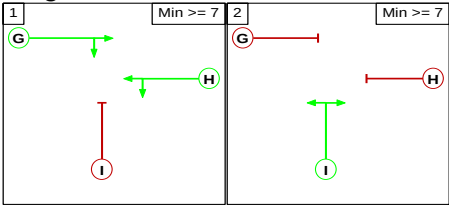


Full Input Data And Results

Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

Term.	Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined						

Stage Stream: 2

Term.	Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined						

Stage Stream: 3

Term.	Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined						

Prohibited Stage Change

Stage Stream: 1

From Stage	To Stage	
	1	2
	1	6
	2	7

Stage Stream: 2

From Stage	To Stage	
	1	2
	1	7
	2	5

Stage Stream: 3

From Stage	To Stage	
	1	2
	1	8
	2	5

Give-Way Lane Input Data

Junction: J1: Little Horwood											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J1:3/1 (A421 (East))	J1:5/1 (Right)	1439	0	J1:1/1	1.09	All	8.00	8.00	0.50	8	2.00

Junction: J2: Shucklow Hill											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J2:1/1 (A421 (West))	J2:3/1 (Right)	1439	0	J2:4/1	1.09	All	8.00	8.00	0.50	8	2.00

Junction: J3: Warren Road											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J3:1/1 (A421 (West))	J3:4/1 (Right)	1439	0	J3:3/1	1.09	All	7.00	7.00	0.50	7	2.00

Lane Input Data

Junction: J1: Little Horwood												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (A421 (West))	U	A	2	3	60.0	Geom	-	4.50	0.00	Y	Arm J2:1 Ahead	Inf
											Arm J1:5 Left	22.00
J1:2/1 (Little Horwood Road)	U	B	2	3	60.0	Geom	-	3.34	0.00	Y	Arm J2:1 Left	Inf
											Arm J1:4 Right	32.99
J1:3/1 (A421 (East))	O	C	2	3	9.1	Geom	-	4.56	0.00	Y	Arm J1:4 Ahead	Inf
											Arm J1:5 Right	21.50
J1:4/1 (A421 (West))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/1 (Little Horwood Road (NB))	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: J2: Shucklow Hill												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (A421 (West))	O	D	2	3	9.1	Geom	-	4.50	0.00	Y	Arm J3:1 Ahead	Inf
											Arm J2:3 Right	18.28
J2:2/1 (Shucklow Hill)	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:3 Left	Inf
											Arm J3:1 Right	Inf
J2:3/1 (Shucklow Hill (SB))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:4/1 (A421 (West))	U	E	2	3	173.9	Geom	-	4.56	0.00	Y	Arm J1:3 Ahead	Inf
											Arm J2:3 Left	21.47

Full Input Data And Results

Junction: J3: Warren Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J3:1/1 (A421 (West))	O	G	2	3	173.9	Geom	-	4.30	0.00	Y	Arm J3:2 Ahead	Inf
											Arm J3:4 Right	18.33
J3:2/1 (A421 (East))	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:3/1 (A421 (East))	U	H	2	3	60.0	Geom	-	4.57	0.00	Y	Arm J2:4 Ahead	Inf
											Arm J3:4 Left	20.16
J3:4/1 (Warren Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:5/1 (Warren Road)	U	I	2	3	60.0	Geom	-	4.98	0.00	Y	Arm J2:4 Left	20.40
											Arm J3:2 Right	40.47

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM'	08:00	09:00	01:00	
2: 'PM'	17:00	18:00	01:00	
3: 'Copy of AM'	08:00	09:00	01:00	
4: 'Copy of PM'	17:00	18:00	01:00	
5: 'Copy of Copy of AM'	08:00	09:00	01:00	
6: 'Copy of Copy of PM'	17:00	18:00	01:00	

Scenario 1: 'Base Year 2015 AM' (FG1: 'AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	6	1082	3	22	1113
	B	5	0	31	0	0	36
	C	735	36	0	51	13	835
	D	12	0	98	0	0	110
	E	31	0	12	0	0	43
	Tot.	783	42	1223	54	35	2137

Traffic Lane Flows

Lane	Scenario 1: Base Year 2015 AM		
Junction: J1: Little Horwood			
J1:1/1			1113
J1:2/1			36
J1:3/1			814
J1:4/1			783
J1:5/1			42
Junction: J2: Shucklow Hill			
J2:1/1			1138
J2:2/1			43
J2:3/1			35
J2:4/1			796
Junction: J3: Warren Road			
J3:1/1			1128
J3:2/1			1223
J3:3/1			835
J3:4/1			54
J3:5/1			110

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.5 %	2064	2064	
				Arm J1:5 Left	22.00	0.5 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	86.1 %	1937	1937	
				Arm J1:4 Right	32.99	13.9 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	95.6 %	2065	2065	
				Arm J1:5 Right	21.50	4.4 %			
J1:4/1 (A421 (West) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf

Junction: J2: Shucklow Hill									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	98.1 %	2062	2062	
				Arm J2:3 Right	18.28	1.9 %			
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	72.1 %	1940	1940	
				Arm J3:1 Right	Inf	27.9 %			
J2:3/1 (Shucklow Hill (SB) Lane 1)			Infinite Saturation Flow				Inf	Inf	
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	98.4 %	2069	2069	
				Arm J2:3 Left	21.47	1.6 %			

Full Input Data And Results

Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.7 %	2045	2045	
				Arm J3:4 Right	18.33	0.3 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	93.9 %	2063	2063	
				Arm J3:4 Left	20.16	6.1 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	10.9 %	2030	2030	
				Arm J3:2 Right	40.47	89.1 %			

Scenario 2: 'Base Year 2015 PM' (FG2: 'PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	4	968	4	24	1000
	B	1	0	32	0	0	33
	C	966	37	0	81	5	1089
	D	7	0	39	0	0	46
	E	21	0	7	0	0	28
Tot.	995	41	1046	85	29		2196

Traffic Lane Flows

Lane	Scenario 2: Base Year 2015 PM
Junction: J1: Little Horwood	
J1:1/1	1000
J1:2/1	33
J1:3/1	1031
J1:4/1	995
J1:5/1	41
Junction: J2: Shucklow Hill	
J2:1/1	1028
J2:2/1	28
J2:3/1	29
J2:4/1	1015
Junction: J3: Warren Road	
J3:1/1	1011
J3:2/1	1046
J3:3/1	1089
J3:4/1	85
J3:5/1	46

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.6 %	2064	2064	
				Arm J1:5 Left	22.00	0.4 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	97.0 %	1946	1946	
				Arm J1:4 Right	32.99	3.0 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	96.4 %	2066	2066	
				Arm J1:5 Right	21.50	3.6 %			
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf

Junction: J2: Shucklow Hill								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	97.7 %	2061	2061
				Arm J2:3 Right	18.28	2.3 %		
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	75.0 %	1940	1940
				Arm J3:1 Right	Inf	25.0 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	99.5 %	2070	2070
				Arm J2:3 Left	21.47	0.5 %		

Full Input Data And Results

Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.6 %	2044	2044	
				Arm J3:4 Right	18.33	0.4 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	92.6 %	2061	2061	
				Arm J3:4 Left	20.16	7.4 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	15.2 %	2027	2027	
				Arm J3:2 Right	40.47	84.8 %			

Scenario 3: 'Base Year 2026 AM' (FG3: 'Copy of AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	6	1361	3	25	1395
	B	5	0	39	0	0	44
	C	932	33	0	65	18	1048
	D	13	0	125	0	0	138
	E	37	0	17	0	0	54
Tot.	987	39	1542	68	43		2679

Traffic Lane Flows

Scenario 3: Base Year 2026 AM	
Lane	
Junction: J1: Little Horwood	
J1:1/1	1395
J1:2/1	44
J1:3/1	1015
J1:4/1	987
J1:5/1	39
Junction: J2: Shucklow Hill	
J2:1/1	1428
J2:2/1	54
J2:3/1	43
J2:4/1	996
Junction: J3: Warren Road	
J3:1/1	1420
J3:2/1	1542
J3:3/1	1048
J3:4/1	68
J3:5/1	138

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.6 %	2064	2064	
				Arm J1:5 Left	22.00	0.4 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	88.6 %	1939	1939	
				Arm J1:4 Right	32.99	11.4 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	96.7 %	2066	2066	
				Arm J1:5 Right	21.50	3.3 %			
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf

Junction: J2: Shucklow Hill								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	98.2 %	2062	2062
				Arm J2:3 Right	18.28	1.8 %		
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	68.5 %	1940	1940
				Arm J3:1 Right	Inf	31.5 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	98.2 %	2068	2068
				Arm J2:3 Left	21.47	1.8 %		

Full Input Data And Results

Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	2045	2045	
				Arm J3:4 Right	18.33	0.2 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	93.8 %	2062	2062	
				Arm J3:4 Left	20.16	6.2 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	9.4 %	2031	2031	
				Arm J3:2 Right	40.47	90.6 %			

Scenario 4: 'Base Year 2026 PM' (FG4: 'Copy of PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	3	1235	3	28	1269
	B	1	0	39	0	0	40
	C	1219	47	0	104	9	1379
	D	6	0	51	0	0	57
	E	45	0	11	0	0	56
Tot.	1271	50	1336	107	37		2801

Traffic Lane Flows

Scenario 4: Base Year 2026 PM	
Junction: J1: Little Horwood	
J1:1/1	1269
J1:2/1	40
J1:3/1	1317
J1:4/1	1271
J1:5/1	50
Junction: J2: Shucklow Hill	
J2:1/1	1305
J2:2/1	56
J2:3/1	37
J2:4/1	1281
Junction: J3: Warren Road	
J3:1/1	1288
J3:2/1	1336
J3:3/1	1379
J3:4/1	107
J3:5/1	57

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.8 %	2065	2065	
				Arm J1:5 Left	22.00	0.2 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	97.5 %	1947	1947	
				Arm J1:4 Right	32.99	2.5 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	96.4 %	2066	2066	
				Arm J1:5 Right	21.50	3.6 %			
J1:4/1 (A421 (West) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf

Junction: J2: Shucklow Hill									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	97.9 %	2061	2061	
				Arm J2:3 Right	18.28	2.1 %			
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	80.4 %	1940	1940	
				Arm J3:1 Right	Inf	19.6 %			
J2:3/1 (Shucklow Hill (SB) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	99.3 %	2070	2070	
				Arm J2:3 Left	21.47	0.7 %			

Full Input Data And Results

Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	2045	2045	2045
				Arm J3:4 Right	18.33	0.2 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	92.5 %	2060	2060	2060
				Arm J3:4 Left	20.16	7.5 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	10.5 %	2030	2030	2030
				Arm J3:2 Right	40.47	89.5 %			

Scenario 5: 'Base 2026 + Development AM' (FG5: 'Copy of Copy of AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	6	1366	3	25	1400
	B	5	0	40	0	0	45
	C	1044	45	0	91	18	1198
	D	12	0	131	0	0	143
	E	37	0	17	0	0	54
Tot.	1098	51	1554	94	43		2840

Traffic Lane Flows

Lane	Scenario 5: Base 2026 + Development AM	
Junction: J1: Little Horwood		
J1:1/1		1400
J1:2/1		45
J1:3/1		1138
J1:4/1		1098
J1:5/1		51
Junction: J2: Shucklow Hill		
J2:1/1		1434
J2:2/1		54
J2:3/1		43
J2:4/1		1119
Junction: J3: Warren Road		
J3:1/1		1426
J3:2/1		1554
J3:3/1		1198
J3:4/1		94
J3:5/1		143

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.6 %	2064	2064	
				Arm J1:5 Left	22.00	0.4 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	88.9 %	1939	1939	
				Arm J1:4 Right	32.99	11.1 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	96.0 %	2065	2065	
				Arm J1:5 Right	21.50	4.0 %			
J1:4/1 (A421 (West) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)			Infinite Saturation Flow				Inf	Inf	Inf

Junction: J2: Shucklow Hill									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	98.3 %	2062	2062	
				Arm J2:3 Right	18.28	1.7 %			
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	68.5 %	1940	1940	
				Arm J3:1 Right	Inf	31.5 %			
J2:3/1 (Shucklow Hill (SB) Lane 1)			Infinite Saturation Flow				Inf	Inf	
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	98.4 %	2069	2069	
				Arm J2:3 Left	21.47	1.6 %			

Full Input Data And Results

Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	2045	2045	
				Arm J3:4 Right	18.33	0.2 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	92.4 %	2060	2060	
				Arm J3:4 Left	20.16	7.6 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	8.4 %	2031	2031	
				Arm J3:2 Right	40.47	91.6 %			

Scenario 6: 'Base 2026 + Development PM' (FG6: 'Copy of Copy of PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	4	1309	4	17	1334
	B	1	0	44	0	0	45
	C	1229	29	0	110	7	1375
	D	8	0	67	0	0	75
	E	52	0	35	0	0	87
Tot.	1290	33	1455	114	24		2916

Traffic Lane Flows

Lane	Scenario 6: Base 2026 + Development PM
Junction: J1: Little Horwood	
J1:1/1	1334
J1:2/1	45
J1:3/1	1318
J1:4/1	1290
J1:5/1	33
Junction: J2: Shucklow Hill	
J2:1/1	1374
J2:2/1	87
J2:3/1	24
J2:4/1	1273
Junction: J3: Warren Road	
J3:1/1	1392
J3:2/1	1455
J3:3/1	1375
J3:4/1	114
J3:5/1	75

Lane Saturation Flows

Junction: J1: Little Horwood									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J1:1/1 (A421 (West))	4.50	0.00	Y	Arm J2:1 Ahead	Inf	99.7 %	2065	2065	
				Arm J1:5 Left	22.00	0.3 %			
J1:2/1 (Little Horwood Road)	3.34	0.00	Y	Arm J2:1 Left	Inf	97.8 %	1947	1947	
				Arm J1:4 Right	32.99	2.2 %			
J1:3/1 (A421 (East))	4.56	0.00	Y	Arm J1:4 Ahead	Inf	97.8 %	2068	2068	
				Arm J1:5 Right	21.50	2.2 %			
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf	Inf

Junction: J2: Shucklow Hill								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	4.50	0.00	Y	Arm J3:1 Ahead	Inf	98.8 %	2063	2063
				Arm J2:3 Right	18.28	1.2 %		
J2:2/1 (Shucklow Hill)	3.25	0.00	Y	Arm J1:3 Left	Inf	59.8 %	1940	1940
				Arm J3:1 Right	Inf	40.2 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (West))	4.56	0.00	Y	Arm J1:3 Ahead	Inf	99.5 %	2070	2070
				Arm J2:3 Left	21.47	0.5 %		

Full Input Data And Results

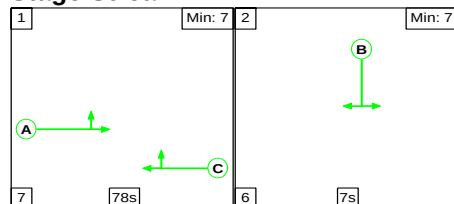
Junction: J3: Warren Road									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J3:1/1 (A421 (West))	4.30	0.00	Y	Arm J3:2 Ahead	Inf	99.7 %	2045	2045	
				Arm J3:4 Right		0.3 %			
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:3/1 (A421 (East))	4.57	0.00	Y	Arm J2:4 Ahead	Inf	92.0 %	2060	2060	
				Arm J3:4 Left		8.0 %			
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf	
J3:5/1 (Warren Road)	4.98	0.00	Y	Arm J2:4 Left	20.40	10.7 %	2030	2030	
				Arm J3:2 Right		89.3 %			

Full Input Data And Results

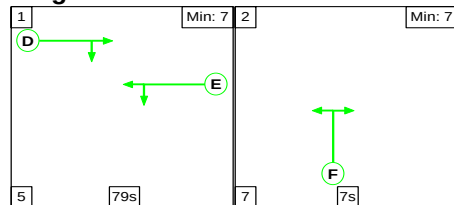
Scenario 3: 'Base Year 2026 AM' (FG3: 'Copy of AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

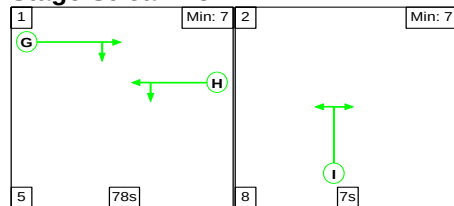
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	78	7
Change Point	26	13

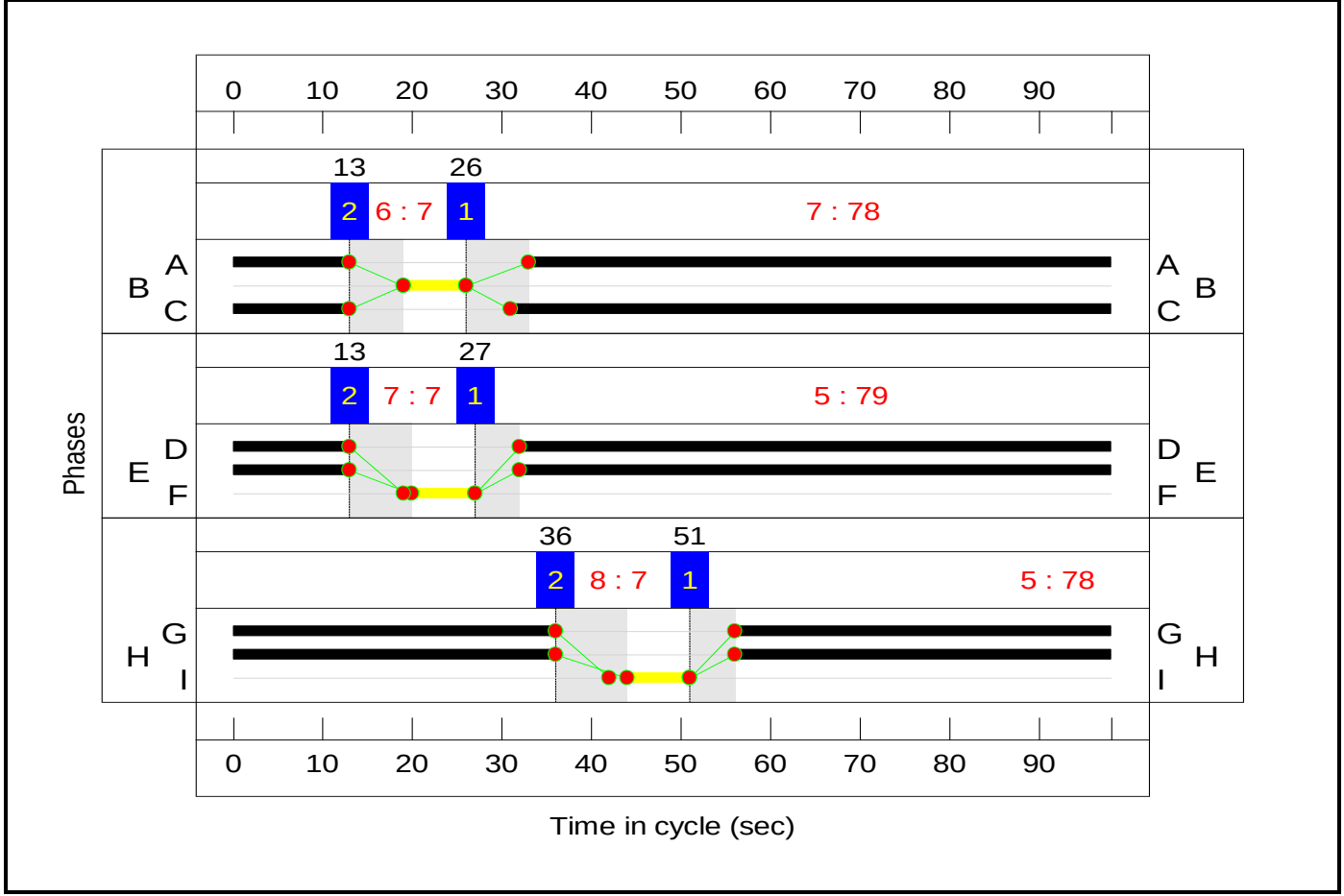
Stage Stream: 2

Stage	1	2
Duration	79	7
Change Point	27	13

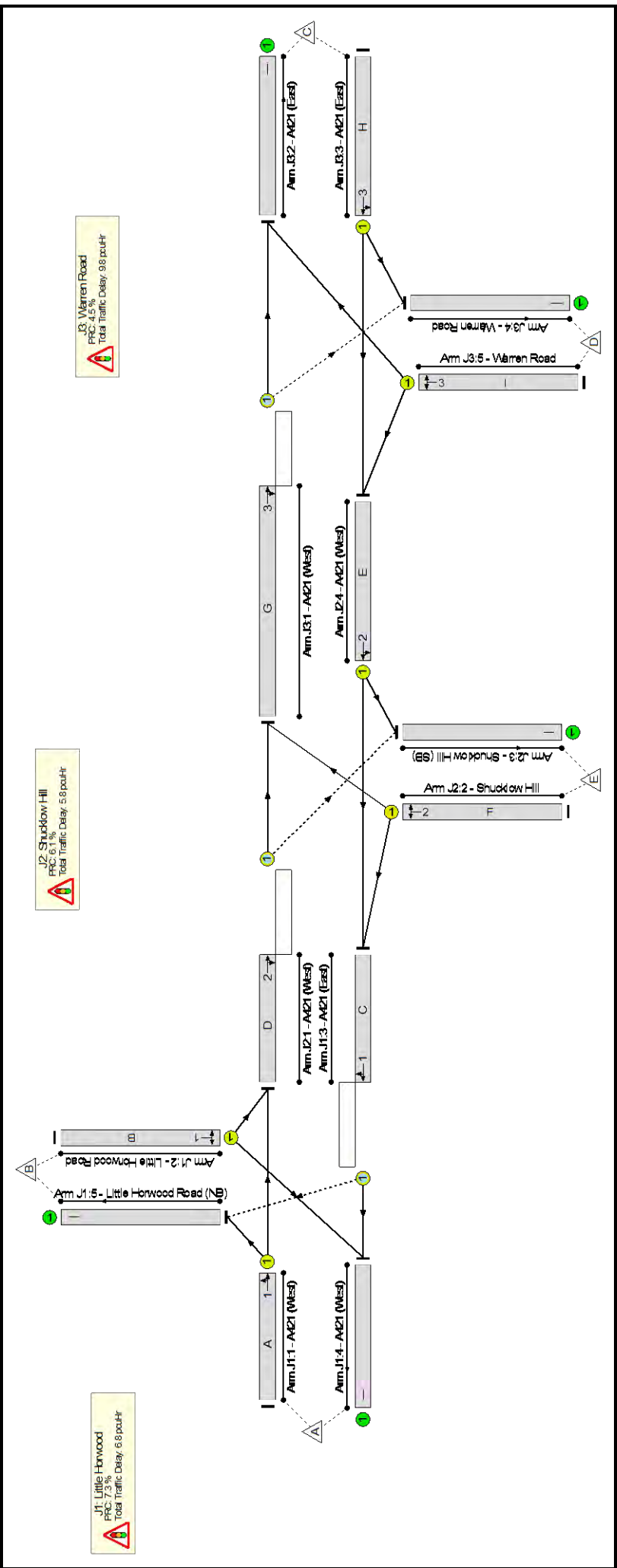
Stage Stream: 3

Stage	1	2
Duration	78	7
Change Point	51	36

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Signalisation of Little Horwood Junction	-	-	N/A	-	-		-	-	-	-	-	-	86.1%
	-	-	N/A	-	-		-	-	-	-	-	-	83.8%
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	78	-	1395	2064	1664	83.8%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	44	1939	158	27.8%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	80	-	1015	2066	1708	59.4%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	987	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	39	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	N/A	-	-		-	-	-	-	-	-	84.8%
1/1	A421 (West) Ahead Right	O	2	N/A	D		1	79	-	1428	2062	1683	84.8%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	54	1940	158	34.1%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
4/1	A421 (West) Ahead Left	U	2	N/A	E		1	79	-	996	2068	1688	59.0%
J3: Warren Road	-	-	N/A	-	-		-	-	-	-	-	-	86.1%
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	78	-	1420	2045	1649	86.1%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1542	Inf	Inf	0.0%
3/1	A421 (East) Ahead Left	U	3	N/A	H		1	78	-	1048	2062	1662	63.0%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	68	Inf	Inf	0.0%
5/1	Warren Road Left Right	U	3	N/A	I		1	7	-	138	2031	166	83.2%

Full Input Data And Results

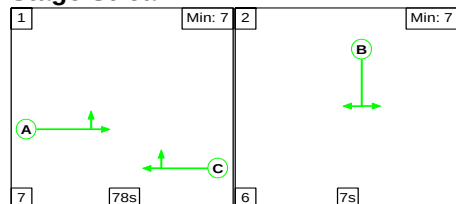
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Signalisation of Little Horwood Junction	-	-	22	0	39	8.8	13.2	0.4	22.4	-	-	-	-
J1: Little Horwood	-	-	0	0	33	2.9	3.5	0.4	6.8	-	-	-	-
1/1	1395	1395	-	-	-	2.2	2.5	-	4.7	12.3	22.5	2.5	25.0
2/1	44	44	-	-	-	0.5	0.2	-	0.7	58.0	1.1	0.2	1.3
3/1	1015	1015	0	0	33	0.2	0.7	0.4	1.3	4.7	2.3	0.7	3.1
4/1	987	987	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	39	39	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	-	-	20	0	5	2.1	3.7	0.0	5.8	-	-	-	-
1/1	1428	1428	20	0	5	0.3	2.7	0.0	3.0	7.6	3.4	2.7	6.2
2/1	54	54	-	-	-	0.6	0.3	-	0.9	59.7	1.4	0.3	1.6
3/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	996	996	-	-	-	1.1	0.7	-	1.9	6.7	11.2	0.7	11.9
J3: Warren Road	-	-	3	0	0	3.8	6.0	0.0	9.8	-	-	-	-
1/1	1420	1420	3	0	0	1.0	3.0	0.0	4.0	10.2	8.6	3.0	11.6
2/1	1542	1542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1048	1048	-	-	-	1.1	0.9	-	1.9	6.7	11.1	0.9	11.9
4/1	68	68	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	138	138	-	-	-	1.7	2.1	-	3.9	100.4	3.7	2.1	5.8
C1	Stream: 1	Stream: 1	PRC for Signalised Lanes (%):	7.3	Total Delay for Signalised Lanes (pcuHr):	6.79	Cycle Time (s):	98					
C1	Stream: 2	Stream: 2	PRC for Signalised Lanes (%):	6.1	Total Delay for Signalised Lanes (pcuHr):	5.78	Cycle Time (s):	98					
C1	Stream: 3	Stream: 3	PRC for Signalised Lanes (%):	4.5	Total Delay for Signalised Lanes (pcuHr):	9.82	Cycle Time (s):	98					
			PRC Over All Lanes (%):	4.5	Total Delay Over All Lanes (pcuHr):	22.39							

Full Input Data And Results

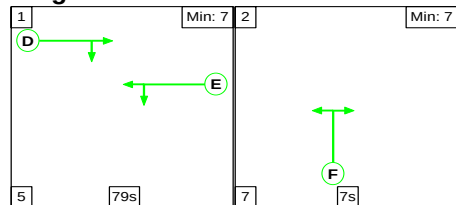
Scenario 4: 'Base Year 2026 PM' (FG4: 'Copy of PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

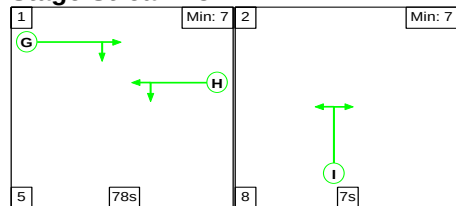
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	78	7
Change Point	28	15

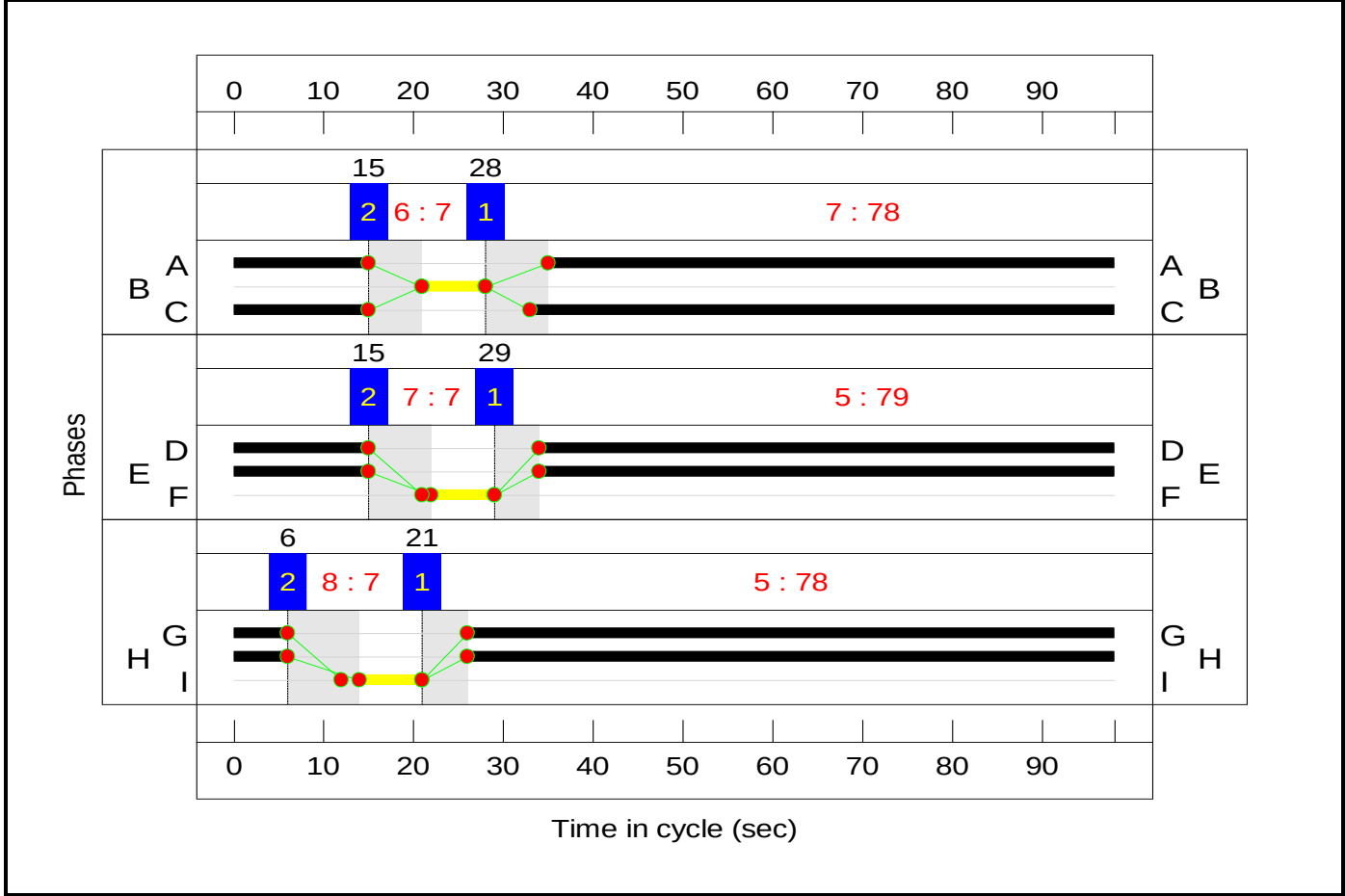
Stage Stream: 2

Stage	1	2
Duration	79	7
Change Point	29	15

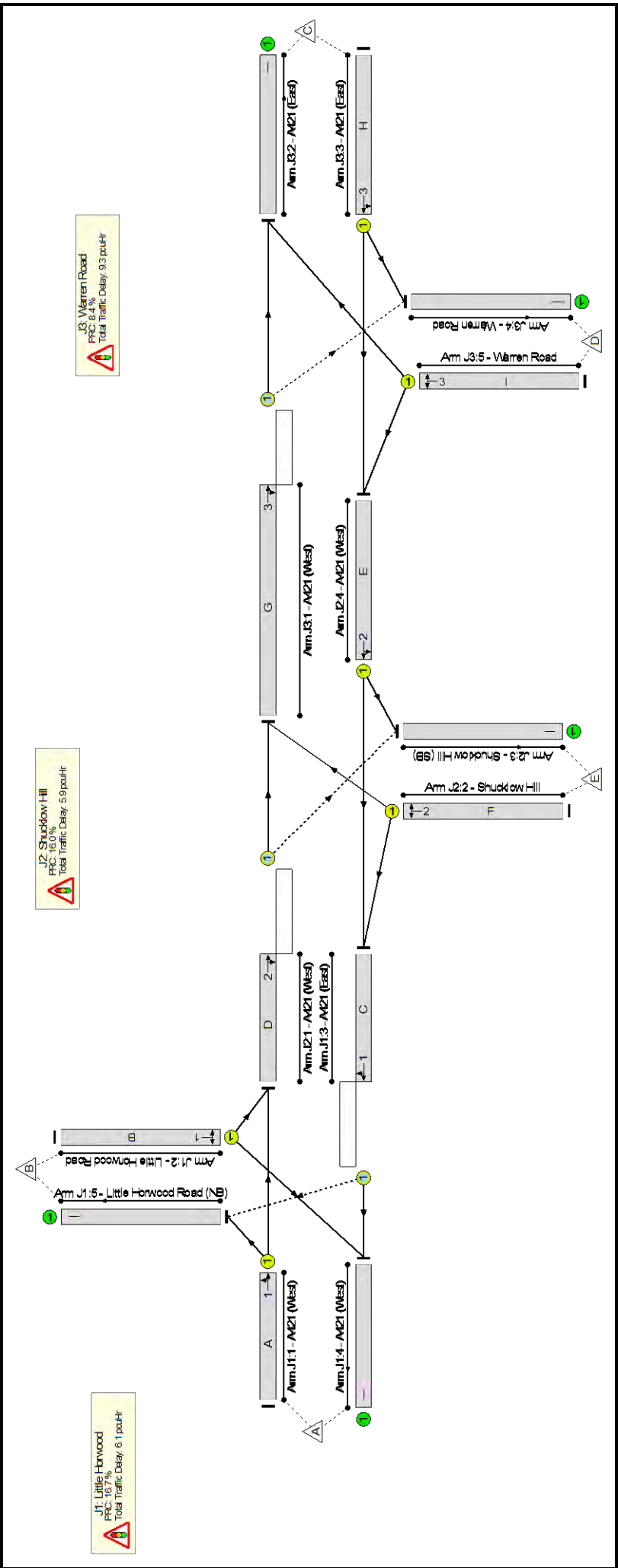
Stage Stream: 3

Stage	1	2
Duration	78	7
Change Point	21	6

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Signalisation of Little Horwood Junction	-	-	N/A	-	-		-	-	-	-	-	-	83.0%
	-	-	N/A	-	-		-	-	-	-	-	-	77.1%
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	78	-	1269	2065	1665	76.2%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	40	1947	159	25.2%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	80	-	1317	2066	1708	77.1%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1271	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	50	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	N/A	-	-		-	-	-	-	-	-	77.6%
1/1	A421 (West) Ahead Right	O	2	N/A	D		1	79	-	1305	2061	1682	77.6%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	56	1940	158	35.4%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	37	Inf	Inf	0.0%
4/1	A421 (West) Ahead Left	U	2	N/A	E		1	79	-	1281	2070	1690	75.8%
J3: Warren Road	-	-	N/A	-	-		-	-	-	-	-	-	83.0%
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	78	-	1288	2045	1649	78.1%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1336	Inf	Inf	0.0%
3/1	A421 (East) Ahead Left	U	3	N/A	H		1	78	-	1379	2060	1661	83.0%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	107	Inf	Inf	0.0%
5/1	Warren Road Left Right	U	3	N/A	I		1	7	-	57	2030	166	34.4%

Full Input Data And Results

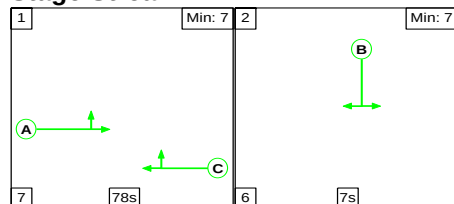
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Signalisation of Little Horwood Junction	-	-	39	0	39	9.4	11.4	0.4	21.3	-	-	-	-
J1: Little Horwood	-	-	27	0	20	2.4	3.4	0.3	6.1	-	-	-	-
1/1	1269	1269	-	-	-	1.7	1.6	-	3.3	9.3	17.3	1.6	18.9
2/1	40	40	-	-	-	0.5	0.2	-	0.6	57.3	1.0	0.2	1.2
3/1	1317	1317	27	0	20	0.3	1.7	0.3	2.2	6.0	12.1	1.7	13.8
4/1	1271	1271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	50	50	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	-	-	11	0	17	2.2	3.5	0.1	5.9	-	-	-	-
1/1	1305	1305	11	0	17	0.3	1.7	0.1	2.1	5.7	2.3	1.7	4.1
2/1	56	56	-	-	-	0.7	0.3	-	0.9	60.1	1.4	0.3	1.7
3/1	37	37	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1281	1281	-	-	-	1.3	1.6	-	2.9	8.1	10.6	1.6	12.1
J3: Warren Road	-	-	0	0	3	4.8	4.4	0.0	9.3	-	-	-	-
1/1	1288	1288	0	0	3	2.0	1.8	0.0	3.8	10.6	16.5	1.8	18.3
2/1	1336	1336	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1379	1379	-	-	-	2.1	2.4	-	4.5	11.9	21.8	2.4	24.2
4/1	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	57	57	-	-	-	0.7	0.3	-	0.9	59.0	1.5	0.3	1.7
C1	Stream: 1	Stream: 1	PRC for Signalised Lanes (%)	16.7	16.7	Total Delay for Signalised Lanes (pcuHr):	6.12	Cycle Time (s):	98				
C1	Stream: 2	Stream: 2	PRC for Signalised Lanes (%)	16.0	16.0	Total Delay for Signalised Lanes (pcuHr):	5.89	Cycle Time (s):	98				
C1	Stream: 3	Stream: 3	PRC for Signalised Lanes (%)	8.4	8.4	Total Delay for Signalised Lanes (pcuHr):	9.25	Cycle Time (s):	98				
			PRC Over All Lanes (%)	8.4	8.4	Total Delay Over All Lanes (pcuHr):	21.26						

Full Input Data And Results

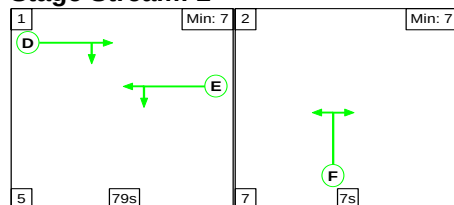
Scenario 5: 'Base 2026 + Development AM' (FG5: 'Copy of Copy of AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

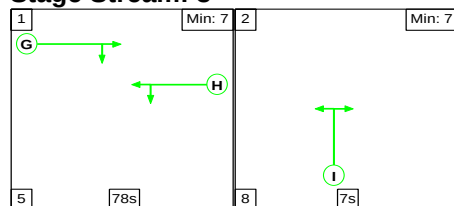
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	78	7
Change Point	21	8

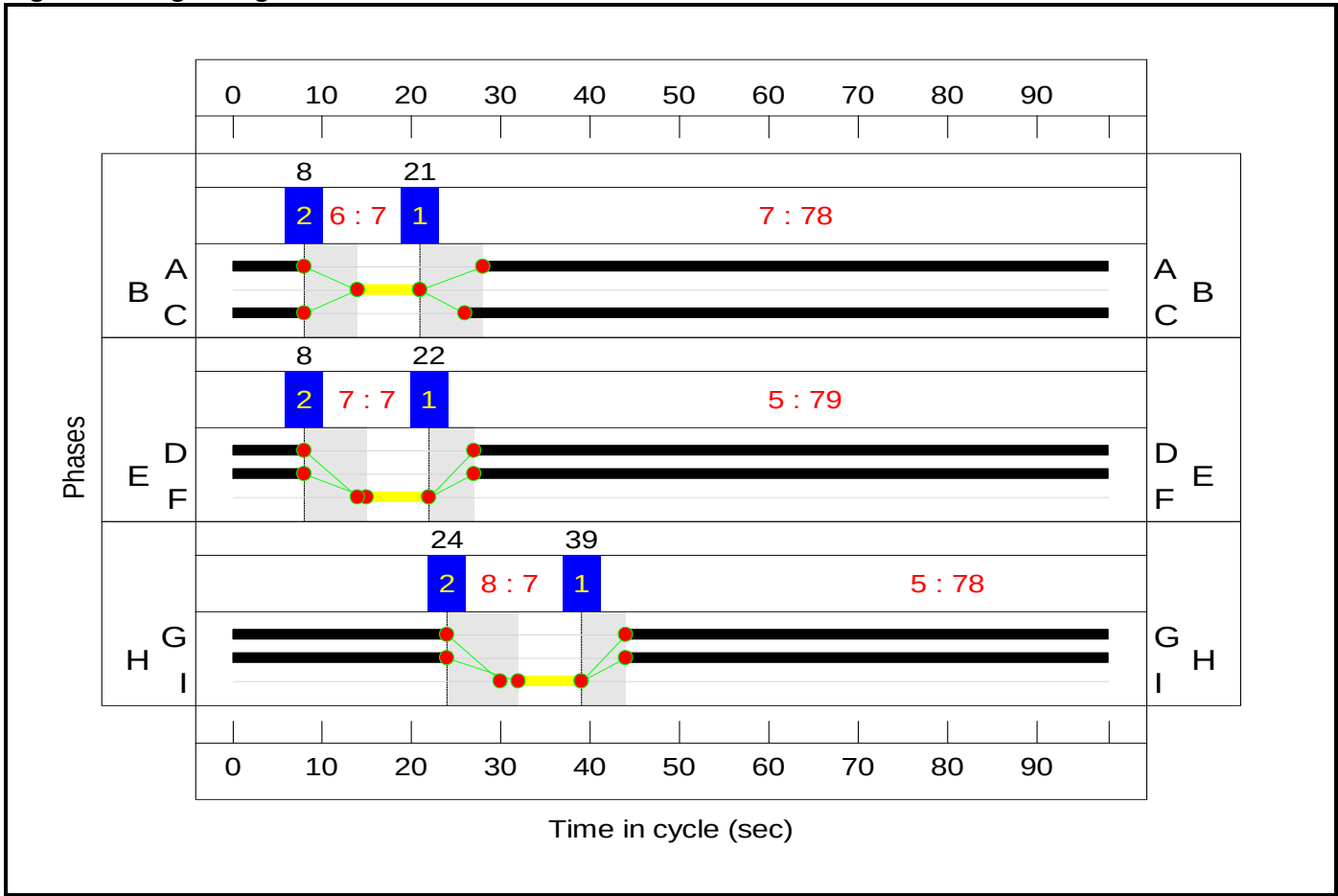
Stage Stream: 2

Stage	1	2
Duration	79	7
Change Point	22	8

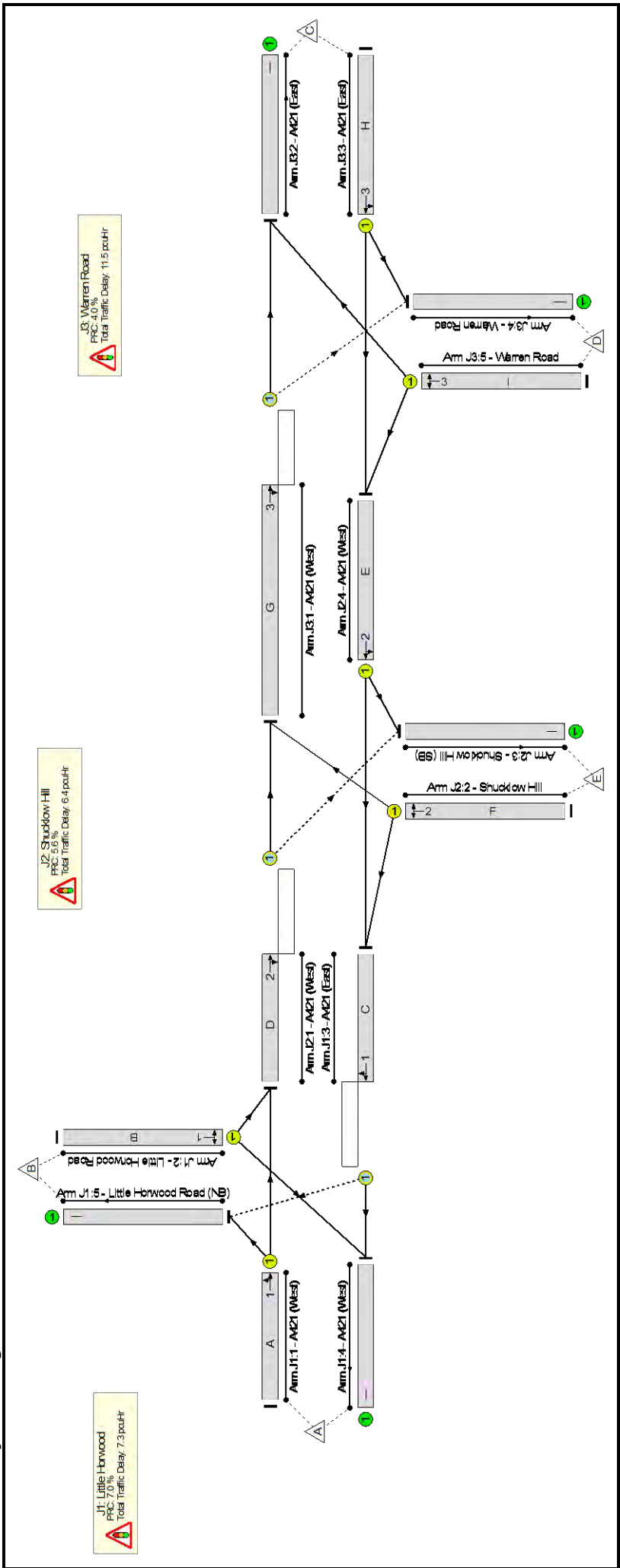
Stage Stream: 3

Stage	1	2
Duration	78	7
Change Point	39	24

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Signalisation of Little Horwood Junction	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
	J1: Little Horwood	-	N/A	-	-		-	-	-	-	-	-	84.1%
	1/1	A421 (West) Ahead Left	U	1	N/A	A	1	78	-	1400	2064	1664	84.1%
	2/1	Little Horwood Road Left Right	U	1	N/A	B	1	7	-	45	1939	158	28.4%
	3/1	A421 (East) Ahead Right	O	1	N/A	C	1	80	-	1138	2065	1707	66.7%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1098	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	N/A	-	-		-	-	-	-	-	-	85.2%
1/1	A421 (West) Ahead Right	O	2	N/A	D		1	79	-	1434	2062	1683	85.2%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	54	1940	158	34.1%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
4/1	A421 (West) Ahead Left	U	2	N/A	E		1	79	-	1119	2069	1689	66.3%
J3: Warren Road	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	78	-	1426	2045	1649	86.5%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1554	Inf	Inf	0.0%
3/1	A421 (East) Ahead Left	U	3	N/A	H		1	78	-	1198	2060	1661	72.1%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	94	Inf	Inf	0.0%
5/1	Warren Road Left Right	U	3	N/A	I		1	7	-	143	2031	166	86.3%

Full Input Data And Results

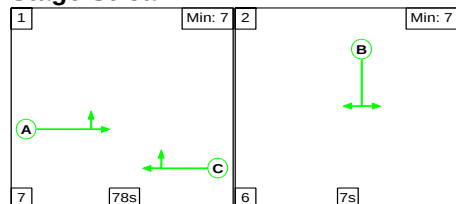
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Signalisation of Little Horwood Junction	-	-	21	0	52	9.9	14.8	0.5	25.2	-	-	-	-
	-	-	0	0	45	3.0	3.8	0.5	7.3	-	-	-	-
	1400	1400	-	-	-	2.2	2.6	-	4.8	12.4	22.9	2.6	25.5
	45	45	-	-	-	0.5	0.2	-	0.7	58.2	1.1	0.2	1.3
	1138	1138	0	0	45	0.2	1.0	0.5	1.7	5.5	2.9	1.0	3.9
4/1	1098	1098	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	
5/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	
J2: Shucklow Hill	-	-	18	0	7	2.3	4.0	0.0	6.4	-	-	-	-
1/1	1434	1434	18	0	7	0.3	2.8	0.0	3.1	7.8	6.3	2.8	9.1
2/1	54	54	-	-	-	0.6	0.3	-	0.9	59.7	1.4	0.3	1.6
3/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1119	1119	-	-	-	1.4	1.0	-	2.4	7.7	13.9	1.0	14.9
J3: Warren Road	-	-	3	0	0	4.6	7.0	0.0	11.5	-	-	-	-
1/1	1426	1426	3	0	0	1.3	3.1	0.0	4.5	11.3	9.8	3.1	12.9
2/1	1554	1554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1198	1198	-	-	-	1.5	1.3	-	2.8	8.3	15.0	1.3	16.3
4/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	143	143	-	-	-	1.8	2.6	-	4.3	108.9	3.8	2.6	6.4
C1 Stream: 1 PRC for Signalled Lanes (%) 7.0 Total Delay for Signalled Lanes (pcuHr): 7.28 Cycle Time (s): 98													
C1 Stream: 2 PRC for Signalled Lanes (%) 5.6 Total Delay for Signalled Lanes (pcuHr): 6.41 Cycle Time (s): 98													
C1 Stream: 3 PRC for Signalled Lanes (%) 4.0 Total Delay for Signalled Lanes (pcuHr): 11.55 Cycle Time (s): 98													
PRC Over All Lanes (%): 4.0 Total Delay Over All Lanes(pcuHr): 25.24													

Full Input Data And Results

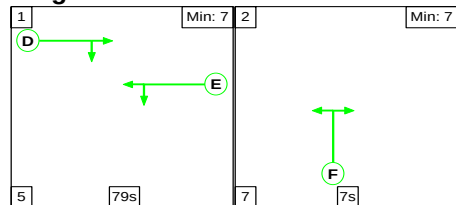
Scenario 6: 'Base 2026 + Development PM' (FG6: 'Copy of Copy of PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

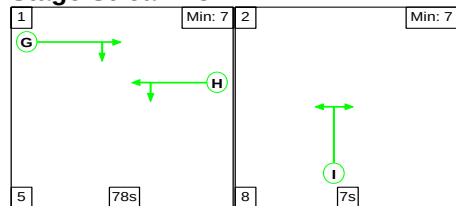
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	78	7
Change Point	28	15

Stage Stream: 2

Stage	1	2
Duration	79	7
Change Point	28	14

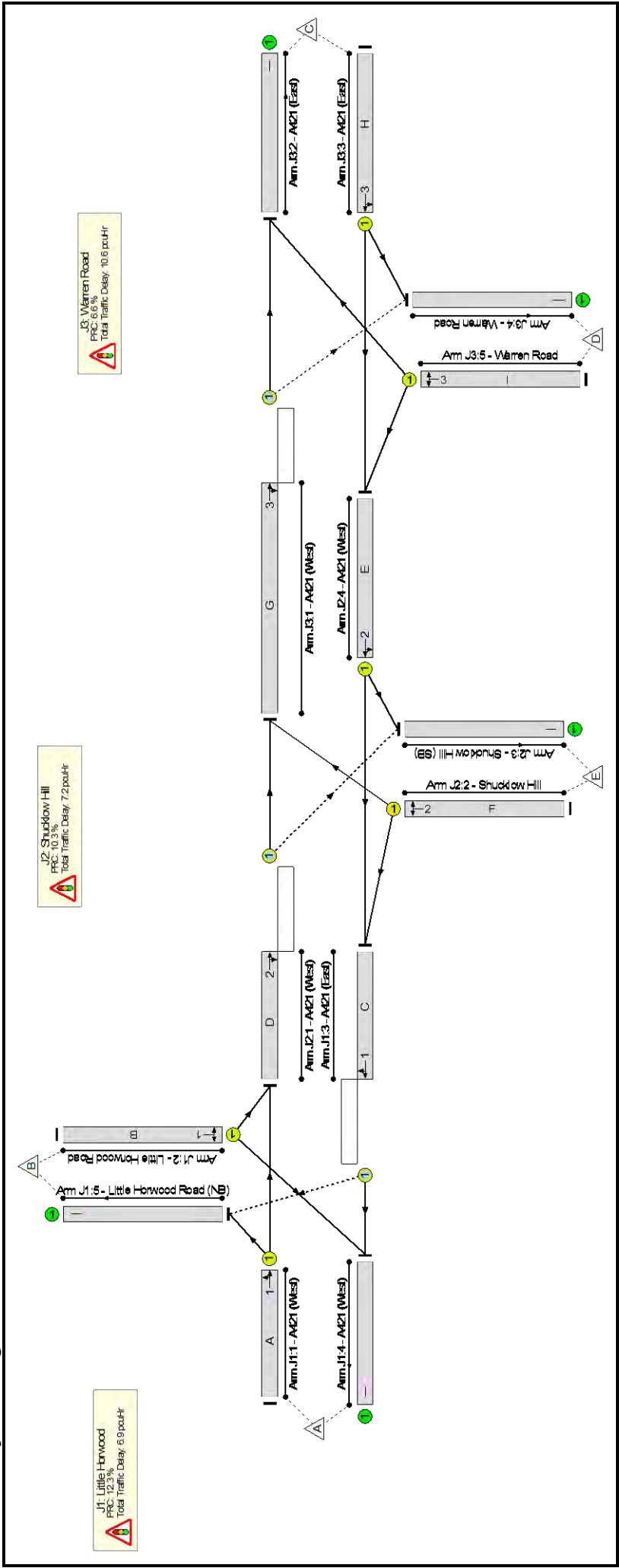
Stage Stream: 3

Stage	1	2
Duration	78	7
Change Point	26	11



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Signalisation of Little Horwood Junction	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
	J1: Little Horwood	-	N/A	-	-		-	-	-	-	-	-	80.1%
	1/1	A421 (West) Ahead Left	U	1	N/A	A	1	78	-	1334	2065	1665	80.1%
	2/1	Little Horwood Road Left Right	U	1	N/A	B	1	7	-	45	1947	159	28.3%
	3/1	A421 (East) Ahead Right	O	1	N/A	C	1	80	-	1318	2068	1709	77.1%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1290	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	33	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	N/A	-	-		-	-	-	-	-	-	81.6%
1/1	A421 (West) Ahead Right	O	2	N/A	D		1	79	-	1374	2063	1684	81.6%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	87	1940	158	54.9%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
4/1	A421 (West) Ahead Left	U	2	N/A	E		1	79	-	1273	2070	1690	75.3%
J3: Warren Road	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	78	-	1392	2045	1649	84.4%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1455	Inf	Inf	0.0%
3/1	A421 (East) Ahead Left	U	3	N/A	H		1	78	-	1375	2060	1661	82.8%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	114	Inf	Inf	0.0%
5/1	Warren Road Left Right	U	3	N/A	I		1	7	-	75	2030	166	45.3%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Signalisation of Little Horwood Junction	-	-	8	0	42	10.7	13.6	0.4	24.7	-	-	-	-
J1: Little Horwood	-	-	0	0	29	2.8	3.9	0.3	6.9	-	-	-	-
1/1	1334	1334	-	-	-	1.9	2.0	-	3.9	10.6	19.6	2.0	21.6
2/1	45	45	-	-	-	0.5	0.2	-	0.7	58.1	1.1	0.2	1.3
3/1	1318	1318	0	0	29	0.3	1.7	0.3	2.3	6.2	14.5	1.7	16.2
4/1	1290	1290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	33	33	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	-	-	8	0	9	2.9	4.3	0.1	7.2	-	-	-	-
1/1	1374	1374	8	0	9	0.3	2.2	0.1	2.6	6.7	2.9	2.2	5.1
2/1	87	87	-	-	-	1.0	0.6	-	1.6	68.1	2.3	0.6	2.9
3/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1273	1273	-	-	-	1.5	1.5	-	3.0	8.5	12.5	1.5	14.0
J3: Warren Road	-	-	0	0	4	5.1	5.4	0.0	10.6	-	-	-	-
1/1	1392	1392	0	0	4	2.1	2.7	0.0	4.8	12.4	16.2	2.7	18.8
2/1	1455	1455	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1375	1375	-	-	-	2.1	2.4	-	4.5	11.7	21.8	2.4	24.1
4/1	114	114	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	75	75	-	-	-	0.9	0.4	-	1.3	62.6	1.9	0.4	2.3
C1	Stream: 1	Stream: 1	PRC for Signalled Lanes (%)	12.3	Total Delay for Signalled Lanes (pcuHr)	6.91	Cycle Time (s)	98					
C1	Stream: 2	Stream: 2	PRC for Signalled Lanes (%)	10.3	Total Delay for Signalled Lanes (pcuHr)	7.23	Cycle Time (s)	98					
C1	Stream: 3	Stream: 3	PRC for Signalled Lanes (%)	6.6	Total Delay for Signalled Lanes (pcuHr)	10.58	Cycle Time (s)	98					
			PRC Over All Lanes (%)	6.6	Total Delay Over All Lanes (pcuHr)	24.71							

A421/Nash Road/Winslow Road Revised Junction Layout

Junctions 8							
ARCADY 8 - Roundabout Module							
Version: 8.0.6.541 [19821,26/11/2015] © Copyright TRL Limited, 2016							
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Filename: Junction 11_FSC.arc8

Path: L:\106xxx\1067760 South West Milton Keynes\09 Docs\C-Cals\02 Jn Modelling\BCC Mitigation

Report generation date: 25/07/2016 11:10:55

- » (Default Analysis Set) - 2026 Base, AM
- » (Default Analysis Set) - 2026 Base, PM
- » (Default Analysis Set) - 2026 Base+Dev, AM
- » (Default Analysis Set) - 2026 Base+Dev, PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 - 2026 Base								
Arm 1	2.55	6.70	0.72	A	2.77	6.77	0.74	A
Arm 2	1.77	12.97	0.65	B	0.70	7.61	0.42	A
Arm 3	4.42	14.90	0.83	B	2.69	9.29	0.74	A
Arm 4	0.41	9.59	0.29	A	0.28	8.05	0.20	A
A1 - 2026 Base+Dev								
Arm 1	3.90	9.29	0.80	A	2.89	6.94	0.75	A
Arm 2	2.43	17.91	0.72	C	0.76	7.98	0.44	A
Arm 3	4.51	15.13	0.83	C	3.55	11.58	0.79	B
Arm 4	0.41	9.65	0.29	A	0.23	8.36	0.17	A

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

"D3 - 2026 Base, AM" model duration: 07:45 - 09:15

"D4 - 2026 Base, PM" model duration: 16:45 - 18:15

"D5 - 2026 Base+Dev, AM" model duration: 07:45 - 09:15

"D6 - 2026 Base+Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 25/07/2016 11:10:54

File summary

Title	(untitled)
Location	
Site Number	
Date	04/12/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	fsuarez
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	Veh	Veh	perHour	s	-Min	perMin

(Default Analysis Set) - 2026 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D3 - 2026 Base, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, AM	2026 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			10.66	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A421 (East)	
2	2	B4033 Nash Road	
3	3	A421 (West)	
4	4	Winslow Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.80	9.70	19.60	47.36	50.00	21.00	
2	3.43	6.98	17.30	9.92	50.00	50.00	
3	3.80	7.52	9.19	23.64	50.00	24.00	
4	3.30	6.60	6.64	17.34	50.00	36.00	

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)	0.717	2184.620
2		(calculated)	(calculated)	0.534	1487.492
3		(calculated)	(calculated)	0.615	1689.032
4		(calculated)	(calculated)	0.534	1346.657

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1245.77	100.000
2	ONE HOUR	✓	458.97	100.000
3	ONE HOUR	✓	978.46	100.000
4	ONE HOUR	✓	141.22	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	937.88	987.21		
07:45-08:00	2	345.54	356.91		
07:45-08:00	3	736.64	755.63		
07:45-08:00	4	106.32	113.91		
08:00-08:15	1	1119.92	1189.92		
08:00-08:15	2	412.60	428.27		
08:00-08:15	3	879.62	899.92		
08:00-08:15	4	126.95	134.89		
08:15-08:30	1	1371.62	1435.38		
08:15-08:30	2	505.34	524.94		
08:15-08:30	3	1077.30	1108.31		
08:15-08:30	4	155.49	155.49		
08:30-08:45	1	1371.62	1489.52		
08:30-08:45	2	505.34	532.22		
08:30-08:45	3	1077.30	1106.72		
08:30-08:45	4	155.49	163.67		
08:45-09:00	1	1119.92	1188.46		
08:45-09:00	2	412.60	454.45		
08:45-09:00	3	879.62	917.99		
08:45-09:00	4	126.95	126.95		
09:00-09:15	1	937.88	1019.44		
09:00-09:15	2	345.54	365.47		
09:00-09:15	3	736.64	790.05		
09:00-09:15	4	106.32	121.51		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.000	156.350	1044.030	45.390
	2	418.620	0.000	15.130	25.220
	3	938.110	0.000	0.000	40.350
	4	10.090	55.480	75.650	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.13	0.84	0.04
	2	0.91	0.00	0.03	0.05
	3	0.96	0.00	0.00	0.04
	4	0.07	0.39	0.54	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.000	176.530	867.500	85.740
	2	368.180	0.000	25.220	5.040
	3	1018.810	0.000	0.000	75.650
	4	15.130	30.260	35.310	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.16	0.77	0.08
	2	0.92	0.00	0.06	0.01
	3	0.93	0.00	0.00	0.07
	4	0.19	0.37	0.44	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.000	206.790	796.890	80.700
	2	453.920	0.000	50.440	15.130
	3	812.020	5.040	0.000	60.520
	4	10.090	65.570	50.440	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.19	0.73	0.07
	2	0.87	0.00	0.10	0.03
	3	0.93	0.01	0.00	0.07
	4	0.08	0.52	0.40	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.000	226.960	837.240	50.440
	2	368.180	0.000	90.780	15.130
	3	1059.160	5.040	0.000	45.390
	4	5.040	50.440	40.350	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.20	0.75	0.05
	2	0.78	0.00	0.19	0.03
	3	0.95	0.00	0.00	0.04
	4	0.05	0.53	0.42	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.000	186.610	539.670	15.130
	2	272.350	0.000	60.520	15.130
	3	1139.850	0.000	0.000	15.130
	4	15.130	65.570	35.310	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.25	0.73	0.02
	2	0.78	0.00	0.17	0.04
	3	0.99	0.00	0.00	0.01
	4	0.13	0.57	0.30	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.000	116.000	675.840	20.170
	2	242.090	0.000	20.170	0.000
	3	1018.810	0.000	0.000	25.220
	4	0.000	15.130	20.170	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.14	0.83	0.02
	2	0.92	0.00	0.08	0.00
	3	0.98	0.00	0.00	0.02
	4	0.00	0.43	0.57	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.065	1.053	1.000
	2	1.036	1.000	1.000	1.000
	3	1.027	1.000	1.000	1.000
	4	1.000	1.182	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	6.5	5.3	0.0
	2	3.6	0.0	0.0	0.0
	3	2.7	0.0	0.0	0.0
	4	0.0	18.2	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.200	1.041	1.000
	2	1.041	1.000	1.000	1.000
	3	1.025	1.000	1.000	1.000
	4	1.333	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	20.0	4.1	0.0
	2	4.1	0.0	0.0	0.0
	3	2.5	0.0	0.0	0.0
	4	33.3	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.122	1.032	1.000
	2	1.044	1.000	1.000	1.000
	3	1.031	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	12.2	3.2	0.0
	2	4.4	0.0	0.0	0.0
	3	3.1	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.133	1.078	1.000
	2	1.055	1.000	1.056	1.000
	3	1.029	1.000	1.000	1.000
	4	1.000	1.000	1.125	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	13.3	7.8	0.0
	2	5.5	0.0	5.6	0.0
	3	2.9	0.0	0.0	0.0
	4	0.0	0.0	12.5	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.108	1.047	1.000
	2	1.130	1.000	1.000	1.000
	3	1.044	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.0	10.8	4.7	0.0
	2	13.0	0.0	0.0	0.0
	3	4.4	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	1.000	1.130	1.082	1.000
	2	1.063	1.000	1.000	1.000
	3	1.074	1.000	1.000	1.000
	4	1.000	1.333	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.0	13.0	8.2	0.0
	2	6.3	0.0	0.0	0.0
	3	7.4	0.0	0.0	0.0
	4	0.0	33.3	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.72	6.70	2.55	A
2	0.65	12.97	1.77	B
3	0.83	14.90	4.42	B
4	0.29	9.59	0.41	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	937.88	934.38	98.10	0.00	2003.46	0.468	0.87	3.356	A
2	345.54	343.33	873.71	0.00	966.74	0.357	0.55	5.756	A
3	736.64	732.38	366.06	0.00	1420.47	0.519	1.06	5.200	A
4	106.32	105.65	1015.32	0.00	736.25	0.144	0.17	5.703	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1119.92	1118.31	102.99	0.00	1986.62	0.564	1.28	4.138	A
2	412.60	411.48	999.16	0.00	900.89	0.458	0.83	7.340	A
3	879.61	876.70	470.23	0.00	1359.04	0.647	1.79	7.417	A
4	126.95	126.68	1196.42	0.00	648.73	0.196	0.24	6.893	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1371.62	1367.96	148.50	0.00	1985.64	0.691	2.19	5.793	A
2	505.33	502.33	1169.29	0.00	814.32	0.621	1.58	11.429	B
3	1077.30	1066.69	555.48	0.00	1298.35	0.830	4.45	14.895	B
4	155.49	154.95	1432.22	0.00	555.66	0.280	0.38	8.971	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1371.61	1370.34	152.09	0.00	1906.32	0.720	2.51	6.697	A
2	505.34	504.59	1156.82	0.00	780.97	0.647	1.78	12.973	B
3	1077.30	1078.54	470.81	0.00	1349.60	0.798	4.14	13.388	B
4	155.49	155.38	1426.39	0.00	530.79	0.293	0.41	9.586	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1119.92	1124.70	111.21	0.00	1982.98	0.565	1.31	4.218	A
2	412.60	416.30	881.17	0.00	905.14	0.456	0.85	7.417	A
3	879.62	888.96	366.97	0.00	1378.11	0.638	1.80	7.493	A
4	126.95	127.65	1202.61	0.00	661.82	0.192	0.24	6.746	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	937.88	939.32	106.33	0.00	1929.96	0.486	0.95	3.641	A
2	345.54	346.54	865.17	0.00	936.61	0.369	0.59	6.111	A
3	736.63	739.11	342.86	0.00	1367.16	0.539	1.18	5.754	A
4	106.32	106.45	1040.73	0.00	658.57	0.162	0.19	6.522	A

(Default Analysis Set) - 2026 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D4 - 2026 Base, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base, PM	2026 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			7.81	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A421 (East)	
2	2	B4033 Nash Road	
3	3	A421 (West)	
4	4	Winslow Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.80	9.70	19.60	47.36	50.00	21.00	
2	3.43	6.98	17.30	9.92	50.00	50.00	
3	3.80	7.52	9.19	23.64	50.00	24.00	
4	3.30	6.60	6.64	17.34	50.00	36.00	

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)	0.717	2184.620
2		(calculated)	(calculated)	0.534	1487.492
3		(calculated)	(calculated)	0.615	1689.032
4		(calculated)	(calculated)	0.534	1346.657

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1339.45	100.000
2	ONE HOUR	✓	306.75	100.000
3	ONE HOUR	✓	976.47	100.000
4	ONE HOUR	✓	102.25	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	1008.41	1043.07		
16:45-17:00	2	230.94	234.78		
16:45-17:00	3	735.14	750.50		
16:45-17:00	4	76.98	80.83		
17:00-17:15	1	1204.14	1262.00		
17:00-17:15	2	275.76	286.36		
17:00-17:15	3	877.83	904.29		
17:00-17:15	4	91.92	91.92		
17:15-17:30	1	1474.76	1535.66		
17:15-17:30	2	337.74	345.42		
17:15-17:30	3	1075.11	1079.61		
17:15-17:30	4	112.58	112.58		
17:30-17:45	1	1474.76	1502.33		
17:30-17:45	2	337.74	347.96		
17:30-17:45	3	1075.11	1089.56		
17:30-17:45	4	112.58	128.67		
17:45-18:00	1	1204.14	1256.12		
17:45-18:00	2	275.76	280.88		
17:45-18:00	3	877.83	908.45		
17:45-18:00	4	91.92	91.92		
18:00-18:15	1	1008.41	1041.45		
18:00-18:15	2	230.94	240.76		
18:00-18:15	3	735.14	752.87		
18:00-18:15	4	76.98	76.98		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	173.820	1124.730	40.900
	2	276.070	0.000	15.340	15.340
	3	915.120	15.340	0.000	46.010
	4	20.450	61.350	20.450	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.13	0.84	0.03
	2	0.90	0.00	0.05	0.05
	3	0.94	0.02	0.00	0.05
	4	0.20	0.60	0.20	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	230.060	812.870	20.450
	2	194.270	0.000	56.240	15.340
	3	1134.950	30.670	0.000	20.450
	4	0.000	20.450	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.22	0.76	0.02
	2	0.73	0.00	0.21	0.06
	3	0.96	0.03	0.00	0.02
	4	0.00	0.67	0.33	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	255.620	945.790	35.790
	2	148.260	0.000	61.350	15.340
	3	1140.070	40.900	0.000	46.010
	4	0.000	30.670	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.21	0.76	0.03
	2	0.66	0.00	0.27	0.07
	3	0.93	0.03	0.00	0.04
	4	0.00	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	337.420	986.690	46.010
	2	270.960	0.000	56.240	10.220
	3	1068.490	30.670	0.000	46.010
	4	0.000	35.790	0.000	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.25	0.72	0.03
	2	0.80	0.00	0.17	0.03
	3	0.93	0.03	0.00	0.04
	4	0.00	1.00	0.00	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	260.730	1017.370	25.560
	2	219.830	0.000	51.120	5.110
	3	817.980	35.790	0.000	25.560
	4	0.000	35.790	5.110	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.20	0.78	0.02
	2	0.80	0.00	0.19	0.02
	3	0.93	0.04	0.00	0.03
	4	0.00	0.88	0.12	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	189.160	1017.370	40.900
	2	204.500	0.000	30.670	5.110
	3	981.580	30.670	0.000	46.010
	4	0.000	10.220	15.340	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.15	0.82	0.03
	2	0.85	0.00	0.13	0.02
	3	0.93	0.03	0.00	0.04
	4	0.00	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.088	1.027	1.000
	2	1.019	1.000	1.000	1.000
	3	1.022	1.000	1.000	1.000
	4	1.250	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	8.8	2.7	0.0
	2	1.9	0.0	0.0	0.0
	3	2.2	0.0	0.0	0.0
	4	25.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.044	1.050	1.000
	2	1.053	1.000	1.000	1.000
	3	1.032	1.000	1.000	1.000
	4	1.333	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	4.4	5.0	0.0
	2	5.3	0.0	0.0	0.0
	3	3.2	0.0	0.0	0.0
	4	33.3	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.060	1.038	1.000
	2	1.035	1.000	1.000	1.000
	3	1.005	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	6.0	3.8	0.0
	2	3.5	0.0	0.0	0.0
	3	0.5	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.046	1.010	1.000
	2	1.038	1.000	1.000	1.000
	3	1.014	1.000	1.000	1.000
	4	1.000	1.143	1.250	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	4.6	1.0	0.0
	2	3.8	0.0	0.0	0.0
	3	1.4	0.0	0.0	0.0
	4	0.0	14.3	25.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.098	1.030	1.000
	2	1.023	1.000	1.000	1.000
	3	1.038	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	9.8	3.0	0.0
	2	2.3	0.0	0.0	0.0
	3	3.8	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	1.000	1.081	1.025	1.000
	2	1.050	1.000	1.000	1.000
	3	1.026	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.0	8.1	2.5	0.0
	2	5.0	0.0	0.0	0.0
	3	2.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.74	6.77	2.77	A
2	0.42	7.61	0.70	A
3	0.74	9.29	2.69	A
4	0.20	8.05	0.28	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1008.41	1004.61	72.74	0.00	2061.59	0.489	0.95	3.393	A
2	230.94	229.72	889.55	0.00	983.64	0.235	0.30	4.767	A
3	735.14	731.34	248.91	0.00	1502.31	0.489	0.95	4.648	A
4	76.98	76.56	903.62	0.00	813.66	0.095	0.10	4.882	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1204.13	1201.99	114.32	0.00	2006.26	0.600	1.48	4.464	A
2	275.76	275.24	972.81	0.00	908.33	0.304	0.43	5.681	A
3	877.83	875.97	240.37	0.00	1489.96	0.589	1.41	5.845	A
4	91.92	91.78	1062.10	0.00	760.07	0.121	0.14	5.385	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1474.77	1469.69	147.98	0.00	1995.99	0.739	2.75	6.773	A
2	337.74	336.64	1194.10	0.00	808.48	0.418	0.71	7.606	A
3	1075.11	1070.98	287.39	0.00	1501.20	0.716	2.45	8.286	A
4	112.58	112.33	1252.93	0.00	671.60	0.168	0.20	6.433	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1474.77	1475.05	141.18	0.00	2033.54	0.725	2.68	6.451	A
2	337.74	337.96	1112.39	0.00	861.23	0.392	0.65	6.885	A
3	1075.11	1074.06	330.81	0.00	1459.95	0.736	2.71	9.292	A
4	112.58	112.35	1301.91	0.00	559.41	0.201	0.25	8.050	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1204.14	1208.77	128.10	0.00	2006.39	0.600	1.52	4.539	A
2	275.76	276.68	977.93	0.00	932.57	0.296	0.42	5.495	A
3	877.83	882.75	249.34	0.00	1481.32	0.593	1.48	6.064	A
4	91.92	92.32	1077.31	0.00	751.36	0.122	0.14	5.465	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1008.41	1010.57	98.57	0.00	2046.72	0.493	0.98	3.480	A
2	230.94	231.35	903.06	0.00	953.64	0.242	0.32	4.986	A
3	735.13	737.18	234.77	0.00	1502.36	0.489	0.97	4.718	A
4	76.98	77.14	902.01	0.00	850.65	0.090	0.10	4.656	A

(Default Analysis Set) - 2026 Base+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D5 - 2026 Base+Dev, AM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base+Dev, AM	2026 Base+Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			12.54	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A421 (East)	
2	2	B4033 Nash Road	
3	3	A421 (West)	
4	4	Winslow Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.80	9.70	19.60	47.36	50.00	21.00	
2	3.43	6.98	17.30	9.92	50.00	50.00	
3	3.80	7.52	9.19	23.64	50.00	24.00	
4	3.30	6.60	6.64	17.34	50.00	36.00	

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)	0.717	2184.620
2		(calculated)	(calculated)	0.534	1487.492
3		(calculated)	(calculated)	0.615	1689.032
4		(calculated)	(calculated)	0.534	1346.657

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1382.06	100.000
2	ONE HOUR	✓	460.34	100.000
3	ONE HOUR	✓	981.80	100.000
4	ONE HOUR	✓	141.22	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	1040.49	1095.33		
07:45-08:00	2	346.57	357.98		
07:45-08:00	3	739.15	758.22		
07:45-08:00	4	106.32	113.91		
08:00-08:15	1	1242.44	1319.79		
08:00-08:15	2	413.84	429.56		
08:00-08:15	3	882.62	903.00		
08:00-08:15	4	126.95	134.89		
08:15-08:30	1	1521.68	1595.55		
08:15-08:30	2	506.84	526.56		
08:15-08:30	3	1080.98	1112.20		
08:15-08:30	4	155.49	155.49		
08:30-08:45	1	1521.68	1655.00		
08:30-08:45	2	506.84	533.81		
08:30-08:45	3	1080.98	1110.60		
08:30-08:45	4	155.49	163.67		
08:45-09:00	1	1242.44	1321.03		
08:45-09:00	2	413.84	455.85		
08:45-09:00	3	882.62	921.21		
08:45-09:00	4	126.95	126.95		
09:00-09:15	1	1040.49	1130.57		
09:00-09:15	2	346.57	366.57		
09:00-09:15	3	739.15	792.75		
09:00-09:15	4	106.32	121.51		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.000	164.150	1172.520	45.390
	2	419.990	0.000	15.130	25.220
	3	941.450	0.000	0.000	40.350
	4	10.090	55.480	75.650	0.000

Turning Proportions (Veh) - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.00	0.12	0.85	0.03
	2	0.91	0.00	0.03	0.05
	3	0.96	0.00	0.00	0.04
	4	0.07	0.39	0.54	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.000	185.330	974.270	85.740
	2	369.390	0.000	25.220	5.040
	3	1022.430	0.000	0.000	75.650
	4	15.130	30.260	35.310	0.000

Turning Proportions (Veh) - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.00	0.15	0.78	0.07
	2	0.92	0.00	0.06	0.01
	3	0.93	0.00	0.00	0.07
	4	0.19	0.37	0.44	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.000	215.280	899.870	80.700
	2	455.090	0.000	50.440	15.130
	3	815.520	5.040	0.000	60.520
	4	10.090	65.570	50.440	0.000

Turning Proportions (Veh) - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.00	0.18	0.75	0.07
	2	0.87	0.00	0.10	0.03
	3	0.93	0.01	0.00	0.07
	4	0.08	0.52	0.40	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.000	236.060	947.590	50.440
	2	369.430	0.000	90.780	15.130
	3	1062.900	5.040	0.000	45.390
	4	5.040	50.440	40.350	0.000

Turning Proportions (Veh) - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.00	0.19	0.77	0.04
	2	0.78	0.00	0.19	0.03
	3	0.95	0.00	0.00	0.04
	4	0.05	0.53	0.42	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.000	194.300	632.890	15.130
	2	273.410	0.000	60.520	15.130
	3	1143.020	0.000	0.000	15.130
	4	15.130	65.570	35.310	0.000

Turning Proportions (Veh) - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.00	0.23	0.75	0.02
	2	0.78	0.00	0.17	0.04
	3	0.99	0.00	0.00	0.01
	4	0.13	0.57	0.30	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.000	120.780	792.590	20.170
	2	243.030	0.000	20.170	0.000
	3	1021.640	0.000	0.000	25.220
	4	0.000	15.130	20.170	0.000

Turning Proportions (Veh) - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.00	0.13	0.85	0.02
	2	0.92	0.00	0.08	0.00
	3	0.98	0.00	0.00	0.02
	4	0.00	0.43	0.57	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	1.000	1.065	1.053	1.000
	2	1.036	1.000	1.000	1.000
	3	1.027	1.000	1.000	1.000
	4	1.000	1.182	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (07:45-08:00)

		To			
From		1	2	3	4
	1	0.0	6.5	5.3	0.0
	2	3.6	0.0	0.0	0.0
	3	2.7	0.0	0.0	0.0
	4	0.0	18.2	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	1.000	1.199	1.042	1.000
	2	1.041	1.000	1.000	1.000
	3	1.025	1.000	1.000	1.000
	4	1.333	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:00-08:15)

		To			
From		1	2	3	4
	1	0.0	19.9	4.2	0.0
	2	4.1	0.0	0.0	0.0
	3	2.5	0.0	0.0	0.0
	4	33.3	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	1.000	1.122	1.035	1.000
	2	1.045	1.000	1.000	1.000
	3	1.031	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:15-08:30)

		To			
From		1	2	3	4
	1	0.0	12.2	3.5	0.0
	2	4.5	0.0	0.0	0.0
	3	3.1	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	1.000	1.133	1.081	1.000
	2	1.055	1.000	1.056	1.000
	3	1.029	1.000	1.000	1.000
	4	1.000	1.000	1.125	1.000

Heavy Vehicle Percentages - Junction 1 - (08:30-08:45)

		To			
From		1	2	3	4
	1	0.0	13.3	8.1	0.0
	2	5.5	0.0	5.6	0.0
	3	2.9	0.0	0.0	0.0
	4	0.0	0.0	12.5	0.0

Average PCU Per Vehicle - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	1.000	1.108	1.051	1.000
	2	1.130	1.000	1.000	1.000
	3	1.044	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (08:45-09:00)

		To			
From		1	2	3	4
	1	0.0	10.8	5.1	0.0
	2	13.0	0.0	0.0	0.0
	3	4.4	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	1.000	1.130	1.082	1.000
	2	1.063	1.000	1.000	1.000
	3	1.074	1.000	1.000	1.000
	4	1.000	1.333	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (09:00-09:15)

		To			
From		1	2	3	4
	1	0.0	13.0	8.2	0.0
	2	6.3	0.0	0.0	0.0
	3	7.4	0.0	0.0	0.0
	4	0.0	33.3	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.80	9.29	3.90	A
2	0.72	17.91	2.43	C
3	0.83	15.13	4.51	C
4	0.29	9.65	0.41	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1040.49	1036.20	98.10	0.00	2003.25	0.519	1.07	3.706	A
2	346.57	344.15	969.72	0.00	914.44	0.379	0.60	6.286	A
3	739.15	734.86	366.87	0.00	1419.97	0.521	1.07	5.223	A
4	106.32	105.65	1018.64	0.00	734.55	0.145	0.17	5.718	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1242.45	1240.16	102.99	0.00	1987.09	0.625	1.65	4.805	A
2	413.84	412.44	1111.21	0.00	840.38	0.492	0.95	8.385	A
3	882.62	879.66	471.71	0.00	1358.13	0.650	1.81	7.478	A
4	126.95	126.68	1200.35	0.00	646.70	0.196	0.24	6.920	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1521.67	1515.46	148.49	0.00	1981.75	0.768	3.19	7.619	A
2	506.84	502.39	1304.87	0.00	740.10	0.685	2.07	14.871	B
3	1080.98	1070.10	556.13	0.00	1297.81	0.833	4.54	15.130	C
4	155.49	154.95	1435.90	0.00	553.56	0.281	0.39	9.018	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1521.67	1519.16	152.09	0.00	1903.55	0.800	3.82	9.288	A
2	506.84	505.42	1294.11	0.00	704.39	0.720	2.43	17.908	C
3	1080.98	1082.22	472.07	0.00	1348.69	0.801	4.23	13.622	B
4	155.49	155.38	1431.17	0.00	528.24	0.294	0.41	9.651	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1242.44	1250.86	111.22	0.00	1978.99	0.628	1.71	4.999	A
2	413.84	419.62	1002.00	0.00	841.89	0.492	0.98	8.637	A
3	882.62	892.22	369.50	0.00	1376.35	0.641	1.83	7.579	A
4	126.95	127.66	1208.70	0.00	658.33	0.193	0.24	6.791	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1040.48	1042.61	106.33	0.00	1930.65	0.539	1.18	4.063	A
2	346.57	347.83	967.64	0.00	880.54	0.393	0.66	6.776	A
3	739.15	741.68	343.30	0.00	1366.83	0.541	1.19	5.783	A
4	106.32	106.46	1044.51	0.00	656.67	0.162	0.19	6.544	A

(Default Analysis Set) - 2026 Base+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Profile Type	D6 - 2026 Base+Dev, PM	'Turning counts vary over time' option has been selected but all arms use ONE HOUR profile types. Are you sure this is correct?

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			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)	Single Time Segment Only	Locked
2026 Base+Dev, PM	2026 Base+Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4			8.81	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A421 (East)	
2	2	B4033 Nash Road	
3	3	A421 (West)	
4	4	Winslow Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00
4	0.00	99999.00

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)	Exit Only
1	3.80	9.70	19.60	47.36	50.00	21.00	
2	3.43	6.98	17.30	9.92	50.00	50.00	
3	3.80	7.52	9.19	23.64	50.00	24.00	
4	3.30	6.60	6.64	17.34	50.00	36.00	

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)	0.717	2184.620
2		(calculated)	(calculated)	0.534	1487.492
3		(calculated)	(calculated)	0.615	1689.032
4		(calculated)	(calculated)	0.534	1346.657

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 (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	1365.27	100.000
2	ONE HOUR	✓	316.24	100.000
3	ONE HOUR	✓	1041.84	100.000
4	ONE HOUR	✓	81.80	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (Veh/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (Veh/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	1027.85	1063.10		
16:45-17:00	2	238.08	242.06		
16:45-17:00	3	784.35	800.81		
16:45-17:00	4	61.58	61.58		
17:00-17:15	1	1227.35	1286.46		
17:00-17:15	2	284.29	295.34		
17:00-17:15	3	936.59	965.53		
17:00-17:15	4	73.54	73.54		
17:15-17:30	1	1503.19	1565.31		
17:15-17:30	2	348.19	356.37		
17:15-17:30	3	1147.09	1153.19		
17:15-17:30	4	90.06	90.06		
17:30-17:45	1	1503.19	1531.07		
17:30-17:45	2	348.19	358.81		
17:30-17:45	3	1147.09	1162.26		
17:30-17:45	4	90.06	102.93		
17:45-18:00	1	1227.35	1279.88		
17:45-18:00	2	284.29	289.51		
17:45-18:00	3	936.59	968.14		
17:45-18:00	4	73.54	73.54		
18:00-18:15	1	1027.85	1061.48		
18:00-18:15	2	238.08	248.26		
18:00-18:15	3	784.35	803.38		
18:00-18:15	4	61.58	61.58		

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.000	175.300	1149.070	40.900
	2	285.560	0.000	15.340	15.340
	3	980.490	15.340	0.000	46.010
	4	0.000	61.350	20.450	0.000

Turning Proportions (Veh) - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.00	0.13	0.84	0.03
	2	0.90	0.00	0.05	0.05
	3	0.94	0.01	0.00	0.04
	4	0.00	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.000	232.010	830.470	20.450
	2	200.950	0.000	56.240	15.340
	3	1216.020	30.670	0.000	20.450
	4	0.000	20.450	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.00	0.21	0.77	0.02
	2	0.74	0.00	0.21	0.06
	3	0.96	0.02	0.00	0.02
	4	0.00	0.67	0.33	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.000	257.720	964.660	35.790
	2	155.420	0.000	61.350	15.340
	3	1227.000	40.900	0.000	46.010
	4	0.000	30.670	10.220	0.000

Turning Proportions (Veh) - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.00	0.20	0.77	0.03
	2	0.67	0.00	0.26	0.07
	3	0.93	0.03	0.00	0.04
	4	0.00	0.75	0.25	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.000	339.640	1006.650	46.010
	2	278.530	0.000	56.240	10.220
	3	1160.470	30.670	0.000	46.010
	4	0.000	35.790	0.000	0.000

Turning Proportions (Veh) - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.00	0.24	0.72	0.03
	2	0.81	0.00	0.16	0.03
	3	0.94	0.02	0.00	0.04
	4	0.00	1.00	0.00	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.000	262.650	1034.640	25.560
	2	226.390	0.000	51.120	5.110
	3	897.590	35.790	0.000	25.990
	4	0.000	35.790	5.110	0.000

Turning Proportions (Veh) - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.00	0.20	0.78	0.02
	2	0.80	0.00	0.18	0.02
	3	0.94	0.04	0.00	0.03
	4	0.00	0.88	0.12	0.00

Turning Counts / Proportions (Veh/hr) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.000	190.550	1034.640	40.900
	2	210.590	0.000	30.670	5.110
	3	1077.110	30.670	0.000	46.790
	4	0.000	10.220	15.340	0.000

Turning Proportions (Veh) - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.00	0.15	0.82	0.03
	2	0.85	0.00	0.12	0.02
	3	0.93	0.03	0.00	0.04
	4	0.00	0.40	0.60	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	1.000	1.088	1.027	1.000
	2	1.019	1.000	1.000	1.000
	3	1.022	1.000	1.000	1.000
	4	1.250	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (16:45-17:00)

		To			
From		1	2	3	4
	1	0.0	8.8	2.7	0.0
	2	1.9	0.0	0.0	0.0
	3	2.2	0.0	0.0	0.0
	4	25.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	1.000	1.044	1.050	1.000
	2	1.053	1.000	1.000	1.000
	3	1.032	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:00-17:15)

		To			
From		1	2	3	4
	1	0.0	4.4	5.0	0.0
	2	5.3	0.0	0.0	0.0
	3	3.2	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	1.000	1.060	1.038	1.000
	2	1.035	1.000	1.000	1.000
	3	1.006	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:15-17:30)

		To			
From		1	2	3	4
	1	0.0	6.0	3.8	0.0
	2	3.5	0.0	0.0	0.0
	3	0.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	1.000	1.046	1.010	1.000
	2	1.038	1.000	1.000	1.000
	3	1.014	1.000	1.000	1.000
	4	1.000	1.143	1.250	1.000

Heavy Vehicle Percentages - Junction 1 - (17:30-17:45)

		To			
From		1	2	3	4
	1	0.0	4.6	1.0	0.0
	2	3.8	0.0	0.0	0.0
	3	1.4	0.0	0.0	0.0
	4	0.0	14.3	25.0	0.0

Average PCU Per Vehicle - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	1.000	1.098	1.030	1.000
	2	1.023	1.000	1.000	1.000
	3	1.036	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (17:45-18:00)

		To			
From		1	2	3	4
	1	0.0	9.8	3.0	0.0
	2	2.3	0.0	0.0	0.0
	3	3.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Average PCU Per Vehicle - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	1.000	1.081	1.025	1.000
	2	1.050	1.000	1.000	1.000
	3	1.026	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 - (18:00-18:15)

		To			
From		1	2	3	4
	1	0.0	8.1	2.5	0.0
	2	5.0	0.0	0.0	0.0
	3	2.6	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.75	6.94	2.89	A
2	0.44	7.98	0.76	A
3	0.79	11.58	3.55	B
4	0.17	8.36	0.23	A

Main Results for each time segment

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1027.85	1023.90	72.75	0.00	2061.72	0.499	0.99	3.456	A
2	238.08	236.80	907.74	0.00	973.76	0.245	0.32	4.877	A
3	784.35	780.00	255.98	0.00	1497.84	0.524	1.09	4.986	A
4	61.58	61.26	959.38	0.00	823.94	0.075	0.08	4.718	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1227.35	1225.14	95.98	0.00	2018.60	0.608	1.53	4.524	A
2	284.29	283.74	987.45	0.00	899.85	0.316	0.46	5.838	A
3	936.59	934.22	248.57	0.00	1483.73	0.631	1.68	6.522	A
4	73.54	73.41	1128.44	0.00	723.33	0.102	0.11	5.537	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1503.19	1497.83	125.32	0.00	2011.53	0.747	2.87	6.937	A
2	348.19	346.96	1213.45	0.00	797.22	0.437	0.76	7.976	A
3	1147.09	1141.13	297.91	0.00	1492.74	0.768	3.17	10.066	B
4	90.06	89.85	1333.74	0.00	627.35	0.144	0.17	6.694	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1503.18	1503.53	118.36	0.00	2052.14	0.732	2.79	6.571	A
2	348.19	348.42	1137.35	0.00	848.01	0.411	0.70	7.212	A
3	1147.08	1145.47	340.95	0.00	1453.86	0.789	3.58	11.582	B
4	90.06	89.88	1383.78	0.00	520.66	0.173	0.21	8.357	A

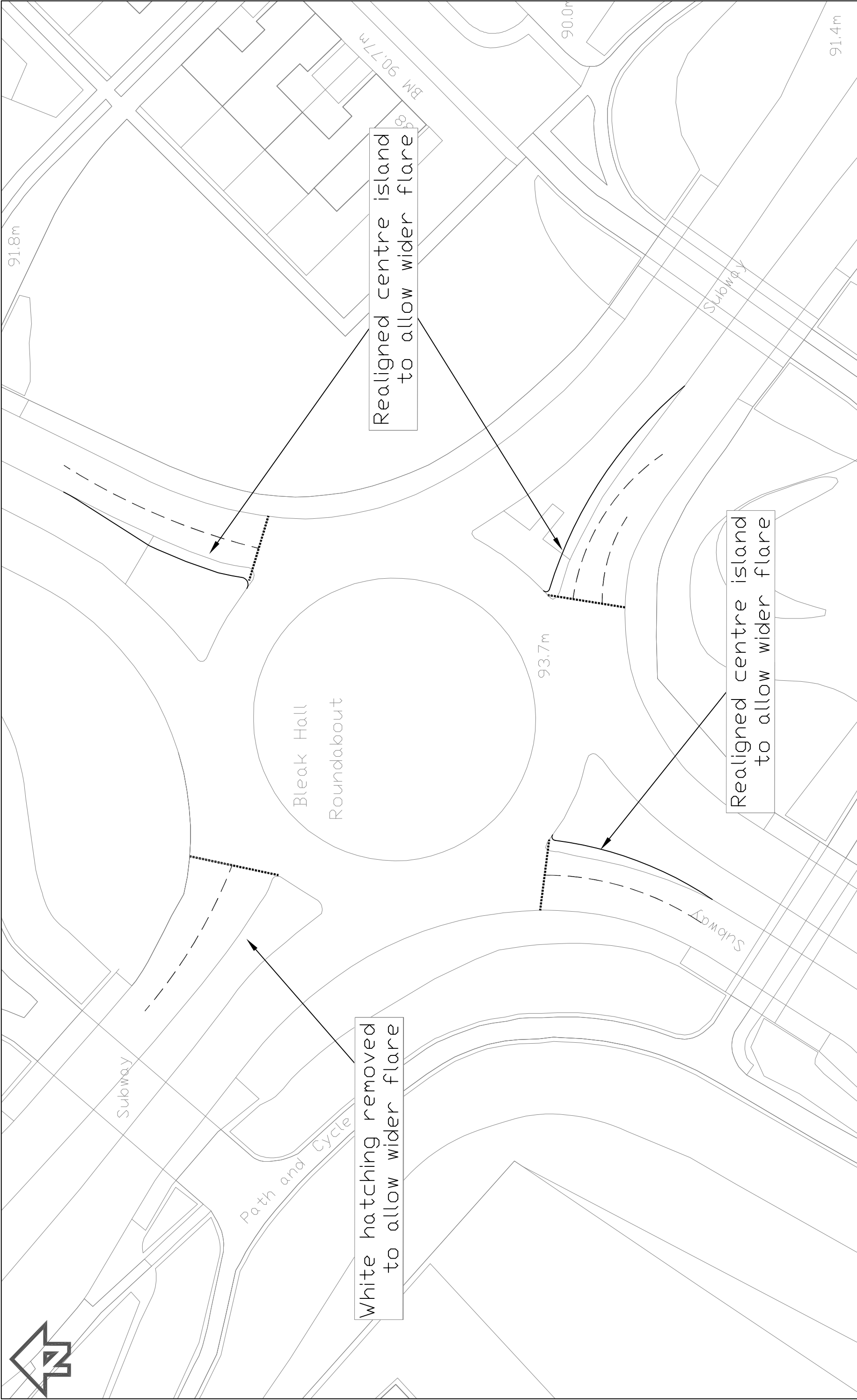
Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1227.35	1232.21	108.90	0.00	2020.33	0.608	1.57	4.597	A
2	284.29	285.32	996.17	0.00	923.02	0.308	0.45	5.653	A
3	936.59	943.83	257.72	0.00	1478.06	0.634	1.76	6.826	A
4	73.54	73.87	1146.69	0.00	713.81	0.103	0.12	5.630	A

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

Arm	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
1	1027.84	1030.09	82.70	0.00	2057.84	0.499	1.01	3.512	A
2	238.08	238.53	911.58	0.00	948.88	0.251	0.34	5.072	A
3	784.35	786.96	241.93	0.00	1497.65	0.524	1.11	5.083	A
4	61.58	61.72	958.95	0.00	819.38	0.075	0.08	4.753	A

Appendix U Junction Mitigation – Improvement Designs



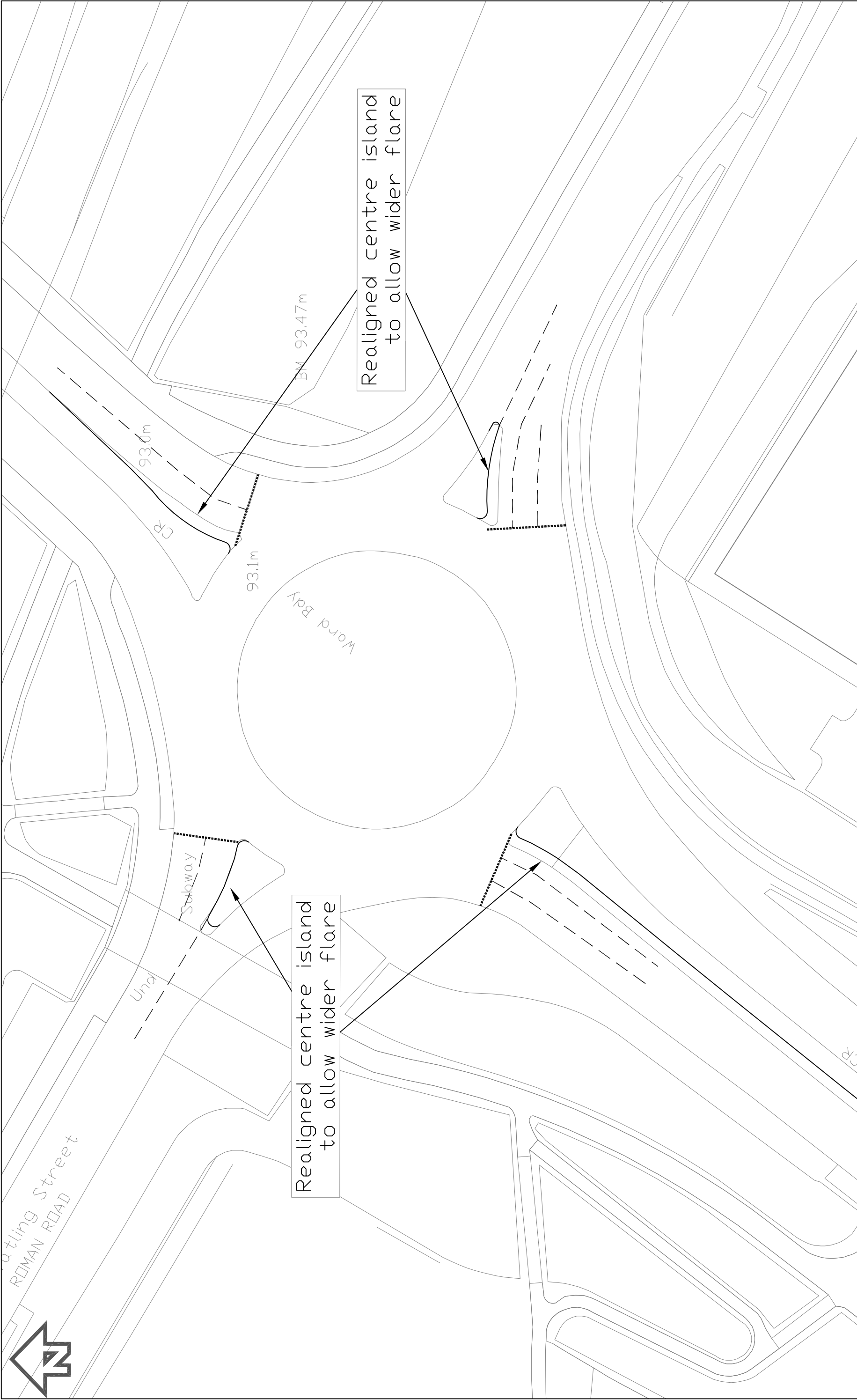
At original drawing size (A3) this line measures 50mm		Master 2016-05-09										Drawn	CEW	Date	11-05-2016	Checked	SH	Date	11-05-16	Approved	MP	Date	11-05-16
Contains DS data ©Crown copyright (and database right) (2015)		Project										SOUTH WEST MILTON KEYNES											
		Title										BLEAK HALL ROUNDABOUT POTENTIAL MITIGATION											
PRELIMINARY FOR APPROVAL		Amendment										By	Chkd.	Date	Appd.	Export House Woking, Surrey. GU21 6QX Tel: +44 (0)1483 731000 Fax: +44 (0)1483 731010 Client SWMK Consortium							
												Rev.											



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Drawing No.
D026



atling Street
ROMAN ROAD

Una

Subway

93.1m

93.0m

Ward Bdy

BM 93.47m

Realigned centre island
to allow wider flare

Realigned centre island
to allow wider flare

At original drawing size (A3) this line measures 50mm										Master 2016-05-09				Drawn	CEW	Date	11-05-2016	Checked	SH	Date	11-05-16	Approved	MP	Date	11-05-16																																		
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