HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	20	20
	3 - Site Arm 3	0	34	0	0
	4 - Site Arm 4	0	34	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.40	2.78	0.7	A
2 - B4100 (E)	0.31	2.70	0.5	A
3 - Site Arm 3	0.02	4.64	0.0	A
4 - Site Arm 4	0.03	4.22	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	618	33	2249	0.275	617	0.4	2.268	A
2 - B4100 (E)	437	4	2060	0.212	436	0.3	2.359	A
3 - Site Arm 3	12	421	1136	0.011	12	0.0	4.200	A
4 - Site Arm 4	23	398	1251	0.019	23	0.0	3.844	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	738	40	2245	0.329	738	0.5	2.459	A
2 - B4100 (E)	521	4	2060	0.253	521	0.4	2.492	A
3 - Site Arm 3	14	504	1093	0.013	14	0.0	4.376	A
4 - Site Arm 4	28	476	1209	0.023	28	0.0	3.995	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	904	48	2239	0.404	903	0.7	2.773	A
2 - B4100 (E)	639	6	2059	0.310	638	0.5	2.699	A
3 - Site Arm 3	18	617	1035	0.017	18	0.0	4.643	A
4 - Site Arm 4	34	583	1152	0.030	34	0.0	4.221	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	904	48	2239	0.404	904	0.7	2.776	A
2 - B4100 (E)	639	6	2059	0.310	639	0.5	2.699	A
3 - Site Arm 3	18	618	1035	0.017	18	0.0	4.644	A
4 - Site Arm 4	34	584	1152	0.030	34	0.0	4.222	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	738	40	2245	0.329	739	0.5	2.464	A
2 - B4100 (E)	521	4	2060	0.253	522	0.4	2.493	A
3 - Site Arm 3	14	505	1093	0.013	14	0.0	4.378	A
4 - Site Arm 4	28	477	1209	0.023	28	0.0	3.997	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	618	33	2249	0.275	619	0.4	2.273	A
2 - B4100 (E)	437	4	2060	0.212	437	0.3	2.364	A
3 - Site Arm 3	12	423	1136	0.011	12	0.0	4.203	A
4 - Site Arm 4	23	399	1250	0.019	23	0.0	3.847	A

2025 Baseline + Committed + Eastern Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.86	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	142	2 - B4100 (E)	2.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2025 Baseline + Committed + Eastern Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	510	100.000
2 - B4100 (E)		✓	744	100.000
3 - Site Arm 3		✓	27	100.000
4 - Site Arm 4		✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	508	1	1
	2 - B4100 (E)	715	0	10	19
	3 - Site Arm 3	2	25	0	0
	4 - Site Arm 4	4	48	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	20	20
	3 - Site Arm 3	0	34	0	0
	4 - Site Arm 4	0	34	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.25	2.24	0.3	A
2 - B4100 (E)	0.40	3.06	0.7	A
3 - Site Arm 3	0.03	5.20	0.0	A
4 - Site Arm 4	0.06	4.84	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	384	55	2235	0.172	383	0.2	2.001	A
2 - B4100 (E)	560	2	2062	0.272	559	0.4	2.525	A
3 - Site Arm 3	20	552	1069	0.019	20	0.0	4.487	A
4 - Site Arm 4	39	557	1166	0.034	39	0.0	4.171	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	458	66	2228	0.206	458	0.3	2.095	A
2 - B4100 (E)	669	2	2061	0.324	668	0.5	2.727	A
3 - Site Arm 3	24	660	1012	0.024	24	0.0	4.761	A
4 - Site Arm 4	47	667	1108	0.042	47	0.1	4.430	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	562	80	2218	0.253	561	0.3	2.238	A
2 - B4100 (E)	819	2	2061	0.397	818	0.7	3.055	A
3 - Site Arm 3	30	809	936	0.032	30	0.0	5.194	A
4 - Site Arm 4	57	816	1028	0.056	57	0.1	4.842	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	562	80	2218	0.253	562	0.3	2.238	A
2 - B4100 (E)	819	2	2061	0.397	819	0.7	3.057	A
3 - Site Arm 3	30	809	935	0.032	30	0.0	5.196	A
4 - Site Arm 4	57	817	1027	0.056	57	0.1	4.844	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	458	66	2227	0.206	459	0.3	2.098	A
2 - B4100 (E)	669	2	2061	0.324	670	0.5	2.730	A
3 - Site Arm 3	24	661	1012	0.024	24	0.0	4.764	A
4 - Site Arm 4	47	668	1107	0.042	47	0.1	4.434	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	384	55	2235	0.172	384	0.2	2.005	A
2 - B4100 (E)	560	2	2061	0.272	561	0.4	2.533	A
3 - Site Arm 3	20	554	1068	0.019	20	0.0	4.494	A
4 - Site Arm 4	39	559	1165	0.034	39	0.0	4.175	A

2025 Baseline + Committed + Both Developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.89	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	126	1 - B4100 (W)	2.89	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2025 Baseline + Committed + Both Developments	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	854	100.000
2 - B4100 (E)		✓	637	100.000
3 - Site Arm 3		✓	16	100.000
4 - Site Arm 4		✓	31	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	849	2	3
	2 - B4100 (E)	571	0	22	44
	3 - Site Arm 3	1	15	0	0
	4 - Site Arm 4	2	29	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	20	20
	3 - Site Arm 3	0	34	0	0
	4 - Site Arm 4	0	34	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.42	2.85	0.7	A
2 - B4100 (E)	0.34	2.82	0.5	A
3 - Site Arm 3	0.02	4.80	0.0	A
4 - Site Arm 4	0.03	4.35	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	643	33	2249	0.286	641	0.4	2.303	A
2 - B4100 (E)	480	4	2060	0.233	478	0.3	2.418	A
3 - Site Arm 3	12	464	1114	0.011	12	0.0	4.285	A
4 - Site Arm 4	23	441	1228	0.019	23	0.0	3.917	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	768	40	2245	0.342	767	0.5	2.508	A
2 - B4100 (E)	573	4	2060	0.278	572	0.4	2.574	A
3 - Site Arm 3	14	555	1067	0.013	14	0.0	4.487	A
4 - Site Arm 4	28	527	1182	0.024	28	0.0	4.090	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	940	48	2239	0.420	939	0.7	2.851	A
2 - B4100 (E)	701	6	2059	0.341	701	0.5	2.818	A
3 - Site Arm 3	18	680	1002	0.018	18	0.0	4.796	A
4 - Site Arm 4	34	646	1119	0.031	34	0.0	4.351	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	940	48	2239	0.420	940	0.7	2.853	A
2 - B4100 (E)	701	6	2059	0.341	701	0.5	2.820	A
3 - Site Arm 3	18	680	1002	0.018	18	0.0	4.798	A
4 - Site Arm 4	34	646	1118	0.031	34	0.0	4.352	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	768	40	2245	0.342	769	0.5	2.511	A
2 - B4100 (E)	573	4	2060	0.278	573	0.4	2.578	A
3 - Site Arm 3	14	556	1066	0.013	14	0.0	4.491	A
4 - Site Arm 4	28	528	1181	0.024	28	0.0	4.093	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	643	33	2249	0.286	643	0.4	2.310	A
2 - B4100 (E)	480	4	2060	0.233	480	0.3	2.423	A
3 - Site Arm 3	12	466	1113	0.011	12	0.0	4.290	A
4 - Site Arm 4	23	442	1227	0.019	23	0.0	3.920	A

2025 Baseline + Committed + Both Developments, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	3.11	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	110	2 - B4100 (E)	3.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2025 Baseline + Committed + Both Developments	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	644	100.000
2 - B4100 (E)		✓	859	100.000
3 - Site Arm 3		✓	27	100.000
4 - Site Arm 4		✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	642	1	1
	2 - B4100 (E)	830	0	10	19
	3 - Site Arm 3	2	25	0	0
	4 - Site Arm 4	4	48	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	20	20
	3 - Site Arm 3	0	34	0	0
	4 - Site Arm 4	0	34	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.32	2.46	0.5	A
2 - B4100 (E)	0.46	3.40	0.9	A
3 - Site Arm 3	0.03	5.60	0.0	A
4 - Site Arm 4	0.06	5.21	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	485	55	2235	0.217	484	0.3	2.116	A
2 - B4100 (E)	647	2	2062	0.314	645	0.5	2.676	A
3 - Site Arm 3	20	638	1024	0.020	20	0.0	4.687	A
4 - Site Arm 4	39	643	1120	0.035	39	0.0	4.348	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	579	66	2228	0.260	579	0.4	2.248	A
2 - B4100 (E)	772	2	2061	0.375	772	0.6	2.941	A
3 - Site Arm 3	24	764	959	0.025	24	0.0	5.034	A
4 - Site Arm 4	47	770	1053	0.044	47	0.1	4.673	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	709	80	2218	0.320	709	0.5	2.457	A
2 - B4100 (E)	946	2	2061	0.459	945	0.9	3.397	A
3 - Site Arm 3	30	935	870	0.034	30	0.0	5.599	A
4 - Site Arm 4	57	943	961	0.060	57	0.1	5.204	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	709	80	2218	0.320	709	0.5	2.457	A
2 - B4100 (E)	946	2	2061	0.459	946	0.9	3.402	A
3 - Site Arm 3	30	936	869	0.034	30	0.0	5.602	A
4 - Site Arm 4	57	944	960	0.060	57	0.1	5.207	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	579	66	2227	0.260	579	0.4	2.251	A
2 - B4100 (E)	772	2	2061	0.375	773	0.6	2.948	A
3 - Site Arm 3	24	765	958	0.025	24	0.0	5.039	A
4 - Site Arm 4	47	771	1052	0.044	47	0.1	4.678	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	485	55	2235	0.217	485	0.3	2.121	A
2 - B4100 (E)	647	2	2061	0.314	647	0.5	2.686	A
3 - Site Arm 3	20	641	1023	0.020	20	0.0	4.694	A
4 - Site Arm 4	39	646	1119	0.035	39	0.0	4.354	A

2031 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.54	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	163	1 - B4100 (W)	2.54	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2031 Baseline	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	760	100.000
2 - B4100 (E)		✓	481	100.000
3 - Site Arm 3		✓	0	100.000
4 - Site Arm 4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	760	0	0
	2 - B4100 (E)	481	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.37	2.58	0.6	A
2 - B4100 (E)	0.26	2.47	0.4	A
3 - Site Arm 3	0.00	0.00	0.0	A
4 - Site Arm 4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	572	0	2272	0.252	571	0.3	2.177	A
2 - B4100 (E)	362	0	2062	0.176	361	0.2	2.220	A
3 - Site Arm 3	0	361	1168	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	361	1271	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	683	0	2272	0.301	683	0.4	2.333	A
2 - B4100 (E)	432	0	2062	0.210	432	0.3	2.318	A
3 - Site Arm 3	0	432	1131	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	432	1233	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	837	0	2272	0.368	836	0.6	2.581	A
2 - B4100 (E)	530	0	2062	0.257	529	0.4	2.465	A
3 - Site Arm 3	0	529	1080	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	529	1181	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	837	0	2272	0.368	837	0.6	2.583	A
2 - B4100 (E)	530	0	2062	0.257	530	0.4	2.465	A
3 - Site Arm 3	0	530	1080	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	530	1181	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	683	0	2272	0.301	684	0.4	2.335	A
2 - B4100 (E)	432	0	2062	0.210	433	0.3	2.321	A
3 - Site Arm 3	0	433	1130	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	433	1232	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	572	0	2272	0.252	573	0.3	2.184	A
2 - B4100 (E)	362	0	2062	0.176	362	0.2	2.225	A
3 - Site Arm 3	0	362	1167	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	362	1270	0.000	0	0.0	0.000	A

2031 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.63	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	143	2 - B4100 (E)	2.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2031 Baseline	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	528	100.000
2 - B4100 (E)		✓	744	100.000
3 - Site Arm 3		✓	0	100.000
4 - Site Arm 4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	528	0	0
	2 - B4100 (E)	744	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	2	0	0
	2 - B4100 (E)	2	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.26	2.17	0.4	A
2 - B4100 (E)	0.40	2.95	0.7	A
3 - Site Arm 3	0.00	0.00	0.0	A
4 - Site Arm 4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	398	0	2272	0.175	397	0.2	1.957	A
2 - B4100 (E)	560	0	2062	0.272	559	0.4	2.439	A
3 - Site Arm 3	0	559	1065	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	559	1165	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	475	0	2272	0.209	474	0.3	2.043	A
2 - B4100 (E)	669	0	2062	0.324	668	0.5	2.634	A
3 - Site Arm 3	0	668	1008	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	668	1107	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	581	0	2272	0.256	581	0.3	2.171	A
2 - B4100 (E)	819	0	2062	0.397	818	0.7	2.950	A
3 - Site Arm 3	0	818	930	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	818	1027	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	581	0	2272	0.256	581	0.4	2.171	A
2 - B4100 (E)	819	0	2062	0.397	819	0.7	2.952	A
3 - Site Arm 3	0	819	930	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	819	1026	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	475	0	2272	0.209	475	0.3	2.043	A
2 - B4100 (E)	669	0	2062	0.324	670	0.5	2.637	A
3 - Site Arm 3	0	670	1008	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	670	1106	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	398	0	2272	0.175	398	0.2	1.959	A
2 - B4100 (E)	560	0	2062	0.272	561	0.4	2.445	A
3 - Site Arm 3	0	561	1064	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	561	1164	0.000	0	0.0	0.000	A

2031 Baseline + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.68	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	137	1 - B4100 (W)	2.68	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2031 Baseline + Committed	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	845	100.000
2 - B4100 (E)		✓	532	100.000
3 - Site Arm 3		✓	0	100.000
4 - Site Arm 4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	845	0	0
	2 - B4100 (E)	532	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.41	2.76	0.7	A
2 - B4100 (E)	0.28	2.56	0.4	A
3 - Site Arm 3	0.00	0.00	0.0	A
4 - Site Arm 4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	636	0	2272	0.280	635	0.4	2.263	A
2 - B4100 (E)	401	0	2062	0.194	400	0.3	2.272	A
3 - Site Arm 3	0	400	1148	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	400	1250	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	760	0	2272	0.334	759	0.5	2.451	A
2 - B4100 (E)	478	0	2062	0.232	478	0.3	2.385	A
3 - Site Arm 3	0	478	1107	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	478	1208	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	930	0	2272	0.410	930	0.7	2.761	A
2 - B4100 (E)	586	0	2062	0.284	585	0.4	2.559	A
3 - Site Arm 3	0	585	1051	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	585	1151	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	930	0	2272	0.410	930	0.7	2.763	A
2 - B4100 (E)	586	0	2062	0.284	586	0.4	2.559	A
3 - Site Arm 3	0	586	1051	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	586	1151	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	760	0	2272	0.334	760	0.5	2.456	A
2 - B4100 (E)	478	0	2062	0.232	479	0.3	2.388	A
3 - Site Arm 3	0	479	1107	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	479	1208	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	636	0	2272	0.280	637	0.4	2.269	A
2 - B4100 (E)	401	0	2062	0.194	401	0.3	2.276	A
3 - Site Arm 3	0	401	1147	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	401	1249	0.000	0	0.0	0.000	A

2031 Baseline + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.63	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	143	2 - B4100 (E)	2.63	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2031 Baseline + Committed	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	528	100.000
2 - B4100 (E)		✓	744	100.000
3 - Site Arm 3		✓	0	100.000
4 - Site Arm 4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	528	0	0
	2 - B4100 (E)	744	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	2	0	0
	2 - B4100 (E)	2	0	0	0
	3 - Site Arm 3	0	0	0	0
	4 - Site Arm 4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.26	2.17	0.4	A
2 - B4100 (E)	0.40	2.95	0.7	A
3 - Site Arm 3	0.00	0.00	0.0	A
4 - Site Arm 4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	398	0	2272	0.175	397	0.2	1.957	A
2 - B4100 (E)	560	0	2062	0.272	559	0.4	2.439	A
3 - Site Arm 3	0	559	1065	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	559	1165	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	475	0	2272	0.209	474	0.3	2.043	A
2 - B4100 (E)	669	0	2062	0.324	668	0.5	2.634	A
3 - Site Arm 3	0	668	1008	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	668	1107	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	581	0	2272	0.256	581	0.3	2.171	A
2 - B4100 (E)	819	0	2062	0.397	818	0.7	2.950	A
3 - Site Arm 3	0	818	930	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	818	1027	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	581	0	2272	0.256	581	0.4	2.171	A
2 - B4100 (E)	819	0	2062	0.397	819	0.7	2.952	A
3 - Site Arm 3	0	819	930	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	819	1026	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	475	0	2272	0.209	475	0.3	2.043	A
2 - B4100 (E)	669	0	2062	0.324	670	0.5	2.637	A
3 - Site Arm 3	0	670	1008	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	670	1106	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	398	0	2272	0.175	398	0.2	1.959	A
2 - B4100 (E)	560	0	2062	0.272	561	0.4	2.445	A
3 - Site Arm 3	0	561	1064	0.000	0	0.0	0.000	A
4 - Site Arm 4	0	561	1164	0.000	0	0.0	0.000	A

2031 Baseline + Committed + Eastern Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.85	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	127	1 - B4100 (W)	2.85	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2031 Baseline + Committed + Eastern Development	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	850	100.000
2 - B4100 (E)		✓	598	100.000
3 - Site Arm 3		✓	16	100.000
4 - Site Arm 4		✓	31	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	845	2	3
	2 - B4100 (E)	532	0	22	44
	3 - Site Arm 3	1	15	0	0
	4 - Site Arm 4	2	29	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	34	34
	3 - Site Arm 3	0	20	0	0
	4 - Site Arm 4	0	20	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.42	2.84	0.7	A
2 - B4100 (E)	0.32	2.76	0.5	A
3 - Site Arm 3	0.02	4.24	0.0	A
4 - Site Arm 4	0.03	3.85	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	640	33	2249	0.284	638	0.4	2.299	A
2 - B4100 (E)	450	4	2060	0.219	449	0.3	2.403	A
3 - Site Arm 3	12	435	1129	0.011	12	0.0	3.817	A
4 - Site Arm 4	23	411	1244	0.019	23	0.0	3.493	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	764	40	2245	0.340	764	0.5	2.502	A
2 - B4100 (E)	538	4	2060	0.261	537	0.4	2.543	A
3 - Site Arm 3	14	520	1085	0.013	14	0.0	3.984	A
4 - Site Arm 4	28	492	1201	0.023	28	0.0	3.635	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	936	48	2239	0.418	935	0.7	2.841	A
2 - B4100 (E)	658	6	2059	0.320	658	0.5	2.764	A
3 - Site Arm 3	18	637	1025	0.017	18	0.0	4.237	A
4 - Site Arm 4	34	603	1142	0.030	34	0.0	3.850	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	936	48	2239	0.418	936	0.7	2.844	A
2 - B4100 (E)	658	6	2059	0.320	658	0.5	2.764	A
3 - Site Arm 3	18	637	1024	0.017	18	0.0	4.238	A
4 - Site Arm 4	34	603	1141	0.030	34	0.0	3.851	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	764	40	2245	0.340	765	0.5	2.507	A
2 - B4100 (E)	538	4	2060	0.261	538	0.4	2.547	A
3 - Site Arm 3	14	521	1085	0.013	14	0.0	3.987	A
4 - Site Arm 4	28	493	1200	0.023	28	0.0	3.637	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	640	33	2249	0.284	640	0.4	2.304	A
2 - B4100 (E)	450	4	2060	0.219	451	0.3	2.407	A
3 - Site Arm 3	12	436	1129	0.011	12	0.0	3.823	A
4 - Site Arm 4	23	413	1243	0.019	23	0.0	3.498	A

2031 Baseline + Committed + Eastern Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.82	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	133	2 - B4100 (E)	2.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2031 Baseline + Committed + Eastern Development	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	530	100.000
2 - B4100 (E)		✓	773	100.000
3 - Site Arm 3		✓	27	100.000
4 - Site Arm 4		✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	528	1	1
	2 - B4100 (E)	744	0	10	19
	3 - Site Arm 3	2	25	0	0
	4 - Site Arm 4	4	48	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	2	0	0
	2 - B4100 (E)	2	0	34	34
	3 - Site Arm 3	0	14	0	0
	4 - Site Arm 4	0	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.26	2.25	0.4	A
2 - B4100 (E)	0.41	3.06	0.7	A
3 - Site Arm 3	0.03	4.57	0.0	A
4 - Site Arm 4	0.06	4.26	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	399	55	2235	0.179	398	0.2	1.998	A
2 - B4100 (E)	582	2	2062	0.282	580	0.4	2.499	A
3 - Site Arm 3	20	574	1057	0.019	20	0.0	3.916	A
4 - Site Arm 4	39	579	1154	0.034	39	0.0	3.639	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	476	66	2228	0.214	476	0.3	2.096	A
2 - B4100 (E)	695	2	2061	0.337	694	0.5	2.711	A
3 - Site Arm 3	24	686	999	0.024	24	0.0	4.167	A
4 - Site Arm 4	47	693	1094	0.043	47	0.1	3.877	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	584	80	2218	0.263	583	0.4	2.246	A
2 - B4100 (E)	851	2	2061	0.413	850	0.7	3.059	A
3 - Site Arm 3	30	840	919	0.032	30	0.0	4.567	A
4 - Site Arm 4	57	848	1011	0.057	57	0.1	4.257	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	584	80	2218	0.263	584	0.4	2.246	A
2 - B4100 (E)	851	2	2061	0.413	851	0.7	3.061	A
3 - Site Arm 3	30	841	919	0.032	30	0.0	4.569	A
4 - Site Arm 4	57	849	1010	0.057	57	0.1	4.259	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	476	66	2227	0.214	477	0.3	2.099	A
2 - B4100 (E)	695	2	2061	0.337	696	0.5	2.714	A
3 - Site Arm 3	24	688	998	0.024	24	0.0	4.171	A
4 - Site Arm 4	47	694	1093	0.043	47	0.1	3.882	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	399	55	2235	0.179	399	0.2	2.000	A
2 - B4100 (E)	582	2	2061	0.282	582	0.4	2.505	A
3 - Site Arm 3	20	576	1056	0.019	20	0.0	3.922	A
4 - Site Arm 4	39	581	1153	0.034	39	0.0	3.643	A

2031 Baseline + Committed + Both Developments, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	2.94	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	119	1 - B4100 (W)	2.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2031 Baseline + Committed + Both Developments	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	882	100.000
2 - B4100 (E)		✓	655	100.000
3 - Site Arm 3		✓	16	100.000
4 - Site Arm 4		✓	31	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	877	2	3
	2 - B4100 (E)	589	0	22	44
	3 - Site Arm 3	1	15	0	0
	4 - Site Arm 4	2	29	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	3	0	0
	2 - B4100 (E)	5	0	34	34
	3 - Site Arm 3	0	20	0	0
	4 - Site Arm 4	0	20	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.43	2.92	0.8	A
2 - B4100 (E)	0.35	2.89	0.6	A
3 - Site Arm 3	0.02	4.38	0.0	A
4 - Site Arm 4	0.03	3.97	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	664	33	2249	0.295	662	0.4	2.334	A
2 - B4100 (E)	493	4	2060	0.239	492	0.3	2.461	A
3 - Site Arm 3	12	478	1107	0.011	12	0.0	3.895	A
4 - Site Arm 4	23	454	1221	0.019	23	0.0	3.560	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	793	40	2245	0.353	792	0.6	2.552	A
2 - B4100 (E)	589	4	2060	0.286	588	0.4	2.626	A
3 - Site Arm 3	14	571	1059	0.014	14	0.0	4.085	A
4 - Site Arm 4	28	544	1173	0.024	28	0.0	3.722	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	971	48	2239	0.434	970	0.8	2.920	A
2 - B4100 (E)	721	6	2059	0.350	721	0.6	2.885	A
3 - Site Arm 3	18	700	992	0.018	18	0.0	4.378	A
4 - Site Arm 4	34	666	1108	0.031	34	0.0	3.970	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	971	48	2239	0.434	971	0.8	2.923	A
2 - B4100 (E)	721	6	2059	0.350	721	0.6	2.887	A
3 - Site Arm 3	18	700	992	0.018	18	0.0	4.379	A
4 - Site Arm 4	34	666	1108	0.031	34	0.0	3.971	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	793	40	2245	0.353	794	0.6	2.555	A
2 - B4100 (E)	589	4	2060	0.286	589	0.4	2.628	A
3 - Site Arm 3	14	572	1058	0.014	14	0.0	4.087	A
4 - Site Arm 4	28	544	1173	0.024	28	0.0	3.727	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	664	33	2249	0.295	665	0.4	2.341	A
2 - B4100 (E)	493	4	2060	0.239	493	0.3	2.468	A
3 - Site Arm 3	12	479	1106	0.011	12	0.0	3.900	A
4 - Site Arm 4	23	456	1220	0.019	23	0.0	3.565	A

2031 Baseline + Committed + Both Developments, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - B4100 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Eastern Site Roundabout	Standard Roundabout		1, 2, 3, 4	3.09	A

Junction Network

Driving side	Lighting	Res Cap (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	103	2 - B4100 (E)	3.09	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2031 Baseline + Committed + Both Developments	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - B4100 (W)		✓	665	100.000
2 - B4100 (E)		✓	888	100.000
3 - Site Arm 3		✓	27	100.000
4 - Site Arm 4		✓	52	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	663	1	1
	2 - B4100 (E)	859	0	10	19
	3 - Site Arm 3	2	25	0	0
	4 - Site Arm 4	4	48	0	0

Vehicle Mix

HV %s

		To			
		1 - B4100 (W)	2 - B4100 (E)	3 - Site Arm 3	4 - Site Arm 4
From	1 - B4100 (W)	0	2	0	0
	2 - B4100 (E)	2	0	34	34
	3 - Site Arm 3	0	14	0	0
	4 - Site Arm 4	0	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS
1 - B4100 (W)	0.33	2.47	0.5	A
2 - B4100 (E)	0.47	3.41	0.9	A
3 - Site Arm 3	0.03	4.93	0.0	A
4 - Site Arm 4	0.06	4.58	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	501	55	2235	0.224	499	0.3	2.115	A
2 - B4100 (E)	669	2	2062	0.324	667	0.5	2.650	A
3 - Site Arm 3	20	660	1013	0.020	20	0.0	4.092	A
4 - Site Arm 4	39	665	1108	0.035	39	0.0	3.795	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	598	66	2228	0.268	598	0.4	2.252	A
2 - B4100 (E)	798	2	2061	0.387	798	0.6	2.927	A
3 - Site Arm 3	24	790	945	0.026	24	0.0	4.409	A
4 - Site Arm 4	47	796	1039	0.045	47	0.1	4.092	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	732	80	2218	0.330	732	0.5	2.471	A
2 - B4100 (E)	978	2	2061	0.474	977	0.9	3.409	A
3 - Site Arm 3	30	967	853	0.035	30	0.0	4.930	A
4 - Site Arm 4	57	974	944	0.061	57	0.1	4.581	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	732	80	2218	0.330	732	0.5	2.471	A
2 - B4100 (E)	978	2	2061	0.474	978	0.9	3.415	A
3 - Site Arm 3	30	968	853	0.035	30	0.0	4.933	A
4 - Site Arm 4	57	975	943	0.061	57	0.1	4.584	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	598	66	2227	0.268	598	0.4	2.254	A
2 - B4100 (E)	798	2	2061	0.387	799	0.7	2.936	A
3 - Site Arm 3	24	791	944	0.026	24	0.0	4.414	A
4 - Site Arm 4	47	798	1038	0.045	47	0.1	4.098	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B4100 (W)	501	55	2235	0.224	501	0.3	2.118	A
2 - B4100 (E)	669	2	2061	0.324	669	0.5	2.660	A
3 - Site Arm 3	20	662	1011	0.020	20	0.0	4.098	A
4 - Site Arm 4	39	668	1107	0.035	39	0.0	3.804	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: A43 roundabout existing layout RevB.j10
Path: P:\17000's\17213\Junction Assessments
Report generation date: 22/09/2021 12:27:09

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2019 Baseline							
B4100(E)	8.6	61.88	0.93	-5 % [B4100(E)]	27.9	125.22	1.04	-9 % [B4100(E)]
A43 (S)	3.8	8.36	0.77		15.6	29.75	0.95	
B4100 (W)	2.0	12.64	0.66		1.7	14.57	0.63	
A43 (N)	27.1	49.79	0.99		3.2	7.19	0.75	
	2019 Baseline + Committed							
B4100(E)	14.7	102.09	0.99	-12 % [B4100(E)]	52.3	223.81	1.14	-13 % [B4100(E)]
A43 (S)	6.0	12.22	0.85		66.1	96.66	1.05	
B4100 (W)	2.7	17.23	0.73		2.2	18.46	0.69	
A43 (N)	114.9	163.15	1.10		4.5	9.34	0.81	
	2019 Baseline + Western Development							
B4100(E)	25.6	146.48	1.06	-11 % [B4100(E)]	45.8	191.16	1.11	-12 % [B4100(E)]
A43 (S)	4.6	9.98	0.81		9.6	18.95	0.91	
B4100 (W)	3.3	17.79	0.76		4.3	28.41	0.82	
A43 (N)	44.2	74.78	1.02		3.8	8.40	0.78	
	2019 Baseline + Eastern Development							
B4100(E)	3.6	29.88	0.78	-4 % [A43 (N)]	1.9	14.61	0.65	5 % [A43 (S)]
A43 (S)	3.6	7.88	0.76		10.0	18.86	0.91	
B4100 (W)	2.2	13.80	0.68		1.9	16.24	0.66	
A43 (N)	34.2	60.38	1.00		3.3	7.40	0.76	
	2019 Baseline + Both Developments							
B4100(E)	34.9	187.00	1.10	-13 % [B4100(E)]	69.8	276.80	1.18	-15 % [B4100(E)]
A43 (S)	3.7	8.30	0.76		20.1	37.17	0.97	
B4100 (W)	3.5	19.33	0.77		5.0	32.31	0.84	
A43 (N)	54.6	89.13	1.03		4.0	8.91	0.79	
	2019 Baseline + Committed + Western Development							
B4100(E)	1.8	10.82	0.63	1 % [B4100 (W)]	68.5	286.89	1.19	-14 % [B4100(E)]
A43 (S)	9.1	18.38	0.90		78.4	112.10	1.06	
B4100 (W)	5.3	29.46	0.84		4.9	33.87	0.84	
A43 (N)	1.6	4.94	0.58		5.3	11.03	0.84	
	2019 Baseline + Committed + Eastern Development							
B4100(E)	20.3	129.35	1.02	-14 % [B4100(E)]	73.2	299.88	1.20	-15 % [B4100(E)]
A43 (S)	6.7	13.37	0.86		69.1	100.16	1.05	
B4100 (W)	3.2	19.79	0.75		2.2	18.75	0.69	
A43 (N)	129.6	183.47	1.12		4.7	9.69	0.82	
	2019 Baseline + Committed + Both Developments							
B4100(E)	46.7	303.49	1.14	-19 % [B4100(E)]	97.8	402.58	1.29	-18 % [B4100(E)]
A43 (S)	8.5	16.82	0.89		78.5	111.77	1.06	
B4100 (W)	5.5	30.48	0.85		7.2	47.28	0.90	
A43 (N)	161.2	244.19	1.15		5.9	12.20	0.85	
	2025 Baseline							
B4100(E)	22.5	136.65	1.04	-13 % [B4100(E)]	91.8	371.41	1.26	-17 % [B4100(E)]
A43 (S)	6.2	12.65	0.85		57.2	86.24	1.03	
B4100 (W)	3.8	22.01	0.79		2.8	21.72	0.74	
A43 (N)	110.7	160.51	1.10		5.3	10.81	0.83	
	2025 Baseline + Committed							
B4100(E)	29.4	176.41	1.07	-19 % [B4100(E)]	122.5	534.74	1.39	-20 % [B4100(E)]
A43 (S)	11.8	22.69	0.92		148.3	232.81	1.12	
B4100 (W)	6.4	37.75	0.88		3.0	23.64	0.76	
A43 (N)	229.1	381.06	1.22		8.3	16.14	0.89	
	2025 Baseline + Western Development							
B4100(E)	49.4	311.11	1.15	-18 % [B4100(E)]	91.3	358.70	1.25	-17 % [B4100(E)]
A43 (S)	8.1	16.23	0.88		75.1	109.15	1.06	
B4100 (W)	7.4	38.87	0.89		3.3	24.19	0.78	
A43 (N)	140.2	204.07	1.13		5.6	11.34	0.84	
	2025 Baseline + Eastern Development							
B4100(E)	30.6	172.54	1.07	-15 % [B4100(E)]	115.8	467.41	1.33	-19 % [B4100(E)]
A43 (S)	6.8	13.68	0.86		59.7	89.25	1.04	
B4100 (W)	4.3	24.70	0.81		2.9	22.23	0.75	
A43 (N)	125.7	181.57	1.12		5.5	11.29	0.84	

	2025 Baseline + Both Developments							
B4100(E)	60.3	387.20	1.19	-20 % [B4100(E)]	141.6	614.96	1.42	-22 % [B4100(E)]
A43 (S)	8.6	17.18	0.89		68.3	99.74	1.05	
B4100 (W)	8.4	43.74	0.91		10.8	65.08	0.95	
A43 (N)	155.5	238.30	1.15		7.1	14.57	0.87	
	2025 Baseline + Committed + Western Development							
B4100(E)	59.9	411.15	1.19	-23 % [B4100(E)]	147.8	692.45	1.49	-22 % [B4100(E)]
A43 (S)	16.8	31.55	0.95		159.7	254.37	1.13	
B4100 (W)	15.1	75.60	0.98		12.4	74.92	0.96	
A43 (N)	260.7	459.39	1.25		11.6	22.88	0.93	
	2025 Baseline + Committed + Eastern Development							
B4100(E)	39.0	241.19	1.10	-21 % [B4100(E)]	147.9	664.52	1.46	-22 % [B4100(E)]
A43 (S)	13.6	25.73	0.93		152.2	239.00	1.13	
B4100 (W)	7.8	45.89	0.90		3.1	24.16	0.76	
A43 (N)	246.0	419.46	1.23		8.8	17.14	0.90	
	2025 Baseline + Committed + Both Developments							
B4100(E)	75.3	501.95	1.22	-25 % [B4100(E)]	180.8	829.62	1.56	-24 % [B4100(E)]
A43 (S)	19.5	35.98	0.96		163.8	261.43	1.14	
B4100 (W)	18.5	89.83	1.00		13.1	78.55	0.97	
A43 (N)	281.7	500.28	1.26		12.6	24.62	0.93	
	2031 Baseline							
B4100(E)	57.7	371.69	1.17	-24 % [B4100(E)]	252.9	1204.65	1.74	-28 % [B4100(E)]
A43 (S)	22.9	41.37	0.97		200.1	332.64	1.17	
B4100 (W)	27.2	124.59	1.05		5.4	37.25	0.86	
A43 (N)	318.2	556.89	1.28		21.8	39.51	0.97	
	2031 Baseline + Committed							
B4100(E)	68.6	456.19	1.20	-28 % [B4100(E)]	306.8	1526.04	1.86	-30 % [B4100(E)]
A43 (S)	68.4	99.49	1.05		347.5	569.02	1.26	
B4100 (W)	42.4	191.20	1.11		5.8	40.17	0.87	
A43 (N)	511.1	858.71	1.39		54.5	82.42	1.03	
	2031 Baseline + Committed + Western Development							
B4100(E)	50.8	321.35	1.15	-29 % [A43 (N)]	347.3	1780.35	1.90	-32 % [B4100(E)]
A43 (S)	113.2	157.34	1.10		366.9	597.25	1.27	
B4100 (W)	69.1	333.49	1.18		34.7	171.16	1.07	
A43 (N)	546.5	1009.29	1.40		79.3	114.95	1.06	
	2031 Baseline + Committed + Eastern Development							
B4100(E)	85.4	553.43	1.24	-30 % [B4100(E)]	346.9	1693.93	1.93	-32 % [B4100(E)]
A43 (S)	78.0	111.14	1.06		354.3	577.82	1.26	
B4100 (W)	46.4	216.24	1.12		6.0	41.52	0.87	
A43 (N)	533.0	921.56	1.40		59.8	89.06	1.04	
	2031 Baseline + Committed + Both Developments							
B4100(E)	141.7	901.49	1.36	-33 % [B4100(E)]	386.1	1961.86	1.97	-34 % [B4100(E)]
A43 (S)	104.2	143.58	1.08		375.1	607.85	1.28	
B4100 (W)	73.5	357.41	1.20		35.8	175.90	1.07	
A43 (N)	572.5	1077.62	1.42		84.8	122.09	1.07	

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	22/05/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DTA\arcady

Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75					✓	Delay	0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2019 Baseline + Committed	AM	ONE HOUR	07:45	09:15	15	✓
D4	2019 Baseline + Committed	PM	ONE HOUR	16:45	18:15	15	✓
D5	2019 Baseline + Western Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2019 Baseline + Western Development	PM	ONE HOUR	16:45	18:15	15	✓
D7	2019 Baseline + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2019 Baseline + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2019 Baseline + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓
D10	2019 Baseline + Both Developments	PM	ONE HOUR	16:45	18:15	15	✓
D11	2019 Baseline + Committed + Western Development	AM	ONE HOUR	07:45	09:15	15	✓
D12	2019 Baseline + Committed + Western Development	PM	ONE HOUR	16:45	18:15	15	✓
D13	2019 Baseline + Committed + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓
D14	2019 Baseline + Committed + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓
D15	2019 Baseline + Committed + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓
D16	2019 Baseline + Committed + Both Developments	PM	ONE HOUR	16:45	18:15	15	✓
D17	2025 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D18	2025 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D19	2025 Baseline + Committed	AM	ONE HOUR	07:45	09:15	15	✓
D20	2025 Baseline + Committed	PM	ONE HOUR	16:45	18:15	15	✓
D21	2025 Baseline + Western Development	AM	ONE HOUR	07:45	09:15	15	✓
D22	2025 Baseline + Western Development	PM	ONE HOUR	16:45	18:15	15	✓
D23	2025 Baseline + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓
D24	2025 Baseline + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓
D25	2025 Baseline + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓
D26	2025 Baseline + Both Developments	PM	ONE HOUR	16:45	18:15	15	✓
D27	2025 Baseline + Committed + Western Development	AM	ONE HOUR	07:45	09:15	15	✓

D28	2025 Baseline + Committed + Western Development	PM	ONE HOUR	16:45	18:15	15	✓
D29	2025 Baseline + Committed + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓
D30	2025 Baseline + Committed + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓
D31	2025 Baseline + Committed + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓
D32	2025 Baseline + Committed + Both Developments	PM	ONE HOUR	16:45	18:15	15	✓
D33	2031 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D34	2031 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D35	2031 Baseline + Committed	AM	ONE HOUR	07:45	09:15	15	✓
D36	2031 Baseline + Committed	PM	ONE HOUR	16:45	18:15	15	✓
D37	2031 Baseline + Committed + Western Development	AM	ONE HOUR	07:45	09:15	15	✓
D38	2031 Baseline + Committed + Western Development	PM	ONE HOUR	16:45	18:15	15	✓
D39	2031 Baseline + Committed + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓
D40	2031 Baseline + Committed + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓
D41	2031 Baseline + Committed + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓
D42	2031 Baseline + Committed + Both Developments	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	32.16	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-5	B4100(E)	32.16	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B4100(E)	B4100(E)	
2	A43 (S)	A43 (S)	
3	B4100 (W)	B4100 (W)	
4	A43 (N)	A43 (N)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
B4100(E)	3.65	6.17	11.0	25.2	75.0	26.0		
A43 (S)	7.30	8.40	10.0	40.0	75.0	28.0		
B4100 (W)	3.65	7.30	19.0	25.0	75.0	37.0		
A43 (N)	7.30	8.00	16.5	40.0	75.0	29.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
B4100(E)	Percentage	Observed queuing	92.00
A43 (S)	None		
B4100 (W)	None		
A43 (N)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
B4100(E)	0.474	1457
A43 (S)	0.620	2536
B4100 (W)	0.493	1765
A43 (N)	0.608	2466

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically

D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	485	100.000
A43 (S)		ONE HOUR	✓	1516	100.000
B4100 (W)		ONE HOUR	✓	538	100.000
A43 (N)		ONE HOUR	✓	1825	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	78	175	232
	A43 (S)	204	0	138	1174
	B4100 (W)	256	166	12	104
	A43 (N)	297	1392	136	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	15	4	7
	A43 (S)	8	0	9	17
	B4100 (W)	6	6	8	6
	A43 (N)	7	18	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	0.93	61.88	8.6	F	445	668
A43 (S)	0.77	8.36	3.8	A	1391	2087
B4100 (W)	0.66	12.64	2.0	B	494	741
A43 (N)	0.99	49.79	27.1	E	1675	2512

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	365	91	1277	851	0.429	362	567	0.0	0.8	7.828	A
A43 (S)	1141	285	415	2279	0.501	1137	1225	0.0	1.1	3.609	A
B4100 (W)	405	101	1206	1170	0.346	403	345	0.0	0.6	4.960	A
A43 (N)	1374	343	478	2175	0.632	1366	1131	0.0	1.9	5.088	A

08:00 - 08:15

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
B4100(E)	436	109	1527	733	0.595	433	678	0.8	1.5	12.734	B
A43 (S)	1363	341	496	2228	0.612	1360	1464	1.1	1.8	4.753	A
B4100 (W)	484	121	1444	1053	0.459	482	413	0.6	0.9	6.669	A
A43 (N)	1641	410	572	2117	0.775	1633	1354	1.9	3.8	8.446	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	534	133	1822	593	0.900	514	820	1.5	6.5	41.446	E
A43 (S)	1669	417	589	2170	0.769	1662	1747	1.8	3.7	8.016	A
B4100 (W)	592	148	1756	899	0.659	588	495	0.9	2.0	12.093	B
A43 (N)	2009	502	698	2041	0.985	1944	1646	3.8	20.3	31.183	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	534	133	1855	577	0.925	525	829	6.5	8.6	61.884	F
A43 (S)	1669	417	602	2163	0.772	1669	1779	3.7	3.8	8.362	A
B4100 (W)	592	148	1768	894	0.663	592	502	2.0	2.0	12.638	B
A43 (N)	2009	502	702	2038	0.986	1982	1658	20.3	27.1	49.792	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	436	109	1612	693	0.629	463	699	8.6	1.9	18.553	C
A43 (S)	1363	341	528	2208	0.617	1371	1546	3.8	1.9	4.986	A
B4100 (W)	484	121	1467	1042	0.464	488	432	2.0	0.9	6.945	A
A43 (N)	1641	410	578	2114	0.776	1732	1377	27.1	4.2	13.405	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	365	91	1292	844	0.432	369	572	1.9	0.8	8.189	A
A43 (S)	1141	285	422	2274	0.502	1144	1239	1.9	1.2	3.670	A
B4100 (W)	405	101	1217	1165	0.348	406	350	0.9	0.6	5.042	A
A43 (N)	1374	343	482	2172	0.632	1383	1141	4.2	2.0	5.317	A

2019 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	35.75	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-9	B4100(E)	35.75	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	695	100.000
A43 (S)		ONE HOUR	✓	1826	100.000
B4100 (W)		ONE HOUR	✓	399	100.000
A43 (N)		ONE HOUR	✓	1497	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	150	243	302
	A43 (S)	116	0	128	1582
	B4100 (W)	170	108	16	105
	A43 (N)	239	1169	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	6	1	3
	A43 (S)	3	0	6	7
	B4100 (W)	3	4	0	4
	A43 (N)	4	10	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	1.04	125.22	27.9	F	638	957
A43 (S)	0.95	29.75	15.6	D	1676	2513
B4100 (W)	0.63	14.57	1.7	B	366	549
A43 (N)	0.75	7.19	3.2	A	1374	2061

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	523	131	1036	966	0.542	518	393	0.0	1.2	8.202	A
A43 (S)	1375	344	485	2235	0.615	1368	1070	0.0	1.7	4.398	A
B4100 (W)	300	75	1497	1027	0.292	299	356	0.0	0.4	5.100	A
A43 (N)	1127	282	307	2279	0.495	1123	1489	0.0	1.1	3.368	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	625	156	1240	869	0.719	620	471	1.2	2.5	14.562	B
A43 (S)	1642	410	580	2176	0.754	1636	1280	1.7	3.2	7.026	A
B4100 (W)	359	90	1790	883	0.406	358	425	0.4	0.7	7.075	A
A43 (N)	1346	336	367	2242	0.600	1344	1780	1.1	1.6	4.339	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	765	191	1515	739	1.036	705	573	2.5	17.6	67.112	F
A43 (S)	2010	503	668	2122	0.948	1971	1552	3.2	13.0	21.502	C
B4100 (W)	439	110	2139	711	0.618	436	500	0.7	1.6	13.365	B
A43 (N)	1648	412	446	2194	0.751	1642	2129	1.6	3.2	7.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	765	191	1521	736	1.040	724	577	17.6	27.9	125.217	F
A43 (S)	2010	503	683	2112	0.952	2000	1562	13.0	15.6	29.750	D
B4100 (W)	439	110	2174	693	0.633	439	509	1.6	1.7	14.572	B
A43 (N)	1648	412	450	2192	0.752	1648	2163	3.2	3.2	7.188	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	625	156	1249	865	0.722	725	478	27.9	2.9	41.721	E
A43 (S)	1642	410	663	2125	0.773	1689	1310	15.6	3.8	9.714	A
B4100 (W)	359	90	1885	836	0.429	362	467	1.7	0.8	7.926	A
A43 (N)	1346	336	374	2238	0.601	1352	1874	3.2	1.7	4.443	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	523	131	1043	962	0.544	530	397	2.9	1.3	8.692	A
A43 (S)	1375	344	495	2229	0.617	1383	1078	3.8	1.7	4.582	A
B4100 (W)	300	75	1516	1018	0.295	302	361	0.8	0.4	5.209	A
A43 (N)	1127	282	310	2277	0.495	1129	1508	1.7	1.1	3.414	A

2019 Baseline + Committed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	87.00	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	B4100(E)	87.00	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2019 Baseline + Committed	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	485	100.000
A43 (S)		ONE HOUR	✓	1671	100.000
B4100 (W)		ONE HOUR	✓	538	100.000
A43 (N)		ONE HOUR	✓	2038	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	78	175	232
	A43 (S)	204	0	138	1329
	B4100 (W)	256	166	12	104
	A43 (N)	297	1605	136	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	15	4	7
	A43 (S)	8	0	9	17
	B4100 (W)	6	6	8	6
	A43 (N)	7	18	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	0.99	102.09	14.7	F	445	668
A43 (S)	0.85	12.22	6.0	B	1533	2300
B4100 (W)	0.73	17.23	2.7	C	494	741
A43 (N)	1.10	163.15	114.9	F	1870	2805

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	365	91	1435	777	0.470	361	567	0.0	0.9	9.203	A
A43 (S)	1258	315	414	2279	0.552	1252	1382	0.0	1.4	4.016	A
B4100 (W)	405	101	1322	1113	0.364	403	344	0.0	0.6	5.352	A
A43 (N)	1534	384	478	2175	0.705	1523	1247	0.0	2.7	6.291	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	436	109	1711	646	0.675	431	677	0.9	2.1	17.608	C
A43 (S)	1502	376	494	2229	0.674	1498	1648	1.4	2.3	5.640	A
B4100 (W)	484	121	1581	986	0.491	482	411	0.6	1.0	7.554	A
A43 (N)	1832	458	572	2118	0.865	1816	1491	2.7	6.7	13.152	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	534	133	1919	547	0.976	502	796	2.1	10.2	61.625	F
A43 (S)	1840	460	569	2183	0.843	1826	1852	2.3	5.7	11.211	B
B4100 (W)	592	148	1915	821	0.721	586	480	1.0	2.6	15.838	C
A43 (N)	2244	561	696	2042	1.099	2019	1806	6.7	62.8	71.187	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	534	133	1935	540	0.990	516	803	10.2	14.7	102.092	F
A43 (S)	1840	460	582	2175	0.846	1839	1869	5.7	6.0	12.225	B
B4100 (W)	592	148	1934	812	0.729	592	487	2.6	2.7	17.227	C
A43 (N)	2244	561	702	2039	1.101	2035	1824	62.8	114.9	163.146	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	436	109	1949	533	0.818	471	723	14.7	5.9	70.665	F
A43 (S)	1502	376	546	2197	0.684	1516	1874	6.0	2.5	6.205	A
B4100 (W)	484	121	1616	968	0.499	490	446	2.7	1.1	8.092	A
A43 (N)	1832	458	581	2112	0.867	2091	1526	114.9	50.2	144.204	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	365	91	1607	695	0.525	384	599	5.9	1.2	13.104	B
A43 (S)	1258	315	446	2259	0.557	1262	1545	2.5	1.5	4.177	A
B4100 (W)	405	101	1342	1104	0.367	407	367	1.1	0.6	5.494	A
A43 (N)	1534	384	482	2172	0.706	1724	1266	50.2	2.9	14.103	B

2019 Baseline + Committed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	78.97	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-13	B4100(E)	78.97	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2019 Baseline + Committed	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	695	100.000
A43 (S)		ONE HOUR	✓	2030	100.000
B4100 (W)		ONE HOUR	✓	399	100.000
A43 (N)		ONE HOUR	✓	1615	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	150	243	302
	A43 (S)	116	0	128	1786
	B4100 (W)	170	108	16	105
	A43 (N)	239	1287	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	6	1	3
	A43 (S)	3	0	6	7
	B4100 (W)	3	4	0	4
	A43 (N)	4	10	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	1.14	223.81	52.3	F	638	957
A43 (S)	1.05	96.66	66.1	F	1863	2794
B4100 (W)	0.69	18.46	2.2	C	366	549
A43 (N)	0.81	9.34	4.5	A	1482	2223

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	523	131	1124	924	0.566	518	393	0.0	1.3	9.018	A
A43 (S)	1528	382	485	2235	0.684	1519	1158	0.0	2.3	5.302	A
B4100 (W)	300	75	1649	953	0.315	299	356	0.0	0.5	5.676	A
A43 (N)	1216	304	307	2279	0.534	1211	1640	0.0	1.2	3.647	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	625	156	1346	819	0.763	618	470	1.3	3.1	17.824	C
A43 (S)	1825	456	579	2177	0.838	1813	1385	2.3	5.2	10.247	B
B4100 (W)	359	90	1967	795	0.451	357	425	0.5	0.8	8.467	A
A43 (N)	1452	363	367	2242	0.647	1449	1958	1.2	2.0	4.911	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	765	191	1642	678	1.128	662	567	3.1	28.8	103.168	F
A43 (S)	2235	559	634	2143	1.043	2100	1670	5.2	39.1	47.068	E
B4100 (W)	439	110	2255	654	0.672	435	479	0.8	2.0	16.645	C
A43 (N)	1778	445	440	2198	0.809	1768	2249	2.0	4.4	8.917	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	765	191	1651	674	1.135	671	571	28.8	52.3	223.809	F
A43 (S)	2235	559	642	2138	1.046	2127	1680	39.1	66.1	96.660	F
B4100 (W)	439	110	2284	639	0.687	439	484	2.0	2.2	18.456	C
A43 (N)	1778	445	445	2195	0.810	1778	2278	4.4	4.5	9.344	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	625	156	1358	813	0.768	797	488	52.3	9.1	145.643	F
A43 (S)	1825	456	720	2089	0.874	2047	1435	66.1	10.5	70.591	F
B4100 (W)	359	90	2265	649	0.553	362	503	2.2	1.3	13.137	B
A43 (N)	1452	363	384	2232	0.650	1462	2243	4.5	2.1	5.140	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	523	131	1133	920	0.569	554	399	9.1	1.4	10.971	B
A43 (S)	1528	382	514	2217	0.689	1561	1173	10.5	2.4	6.132	A
B4100 (W)	300	75	1703	926	0.325	304	372	1.3	0.5	6.014	A
A43 (N)	1216	304	313	2275	0.534	1219	1694	2.1	1.3	3.714	A

2019 Baseline + Western Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	53.45	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-11	B4100(E)	53.45	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2019 Baseline + Western Development	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	542	100.000
A43 (S)		ONE HOUR	✓	1558	100.000
B4100 (W)		ONE HOUR	✓	619	100.000
A43 (N)		ONE HOUR	✓	1846	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	78	232	232
	A43 (S)	204	0	180	1174
	B4100 (W)	289	198	12	120
	A43 (N)	297	1392	157	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	15	3	7
	A43 (S)	8	0	15	17
	B4100 (W)	6	13	8	12
	A43 (N)	7	18	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	1.06	146.48	25.6	F	497	746
A43 (S)	0.81	9.98	4.6	A	1430	2144
B4100 (W)	0.76	17.79	3.3	C	568	852
A43 (N)	1.02	74.78	44.2	F	1694	2541

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	408	102	1316	833	0.490	404	591	0.0	1.0	8.844	A
A43 (S)	1173	293	472	2243	0.523	1168	1248	0.0	1.3	3.851	A
B4100 (W)	466	117	1206	1171	0.398	463	434	0.0	0.7	5.542	A
A43 (N)	1390	347	526	2145	0.648	1381	1143	0.0	2.1	5.393	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	487	122	1573	711	0.685	482	707	1.0	2.2	16.410	C
A43 (S)	1401	350	564	2186	0.641	1398	1491	1.3	2.0	5.253	A
B4100 (W)	556	139	1443	1054	0.528	555	519	0.7	1.2	7.851	A
A43 (N)	1660	415	630	2082	0.797	1651	1367	2.1	4.3	9.453	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	597	149	1852	579	1.031	546	849	2.2	14.8	74.453	F
A43 (S)	1715	429	645	2136	0.803	1706	1753	2.0	4.5	9.458	A
B4100 (W)	682	170	1742	906	0.752	674	609	1.2	3.1	16.437	C
A43 (N)	2032	508	767	1999	1.017	1935	1650	4.3	28.7	40.522	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	597	149	1884	563	1.059	554	859	14.8	25.6	146.475	F
A43 (S)	1715	429	655	2130	0.805	1715	1783	4.5	4.6	9.984	A
B4100 (W)	682	170	1754	901	0.757	681	616	3.1	3.3	17.786	C
A43 (N)	2032	508	773	1995	1.019	1971	1661	28.7	44.2	74.781	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	487	122	1716	643	0.757	574	740	25.6	3.9	75.370	F
A43 (S)	1401	350	657	2129	0.658	1410	1633	4.6	2.3	5.864	A
B4100 (W)	556	139	1493	1029	0.541	564	574	3.3	1.3	8.602	A
A43 (N)	1660	415	639	2076	0.799	1817	1418	44.2	5.0	24.768	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	408	102	1334	824	0.495	420	598	3.9	1.1	9.712	A
A43 (S)	1173	293	487	2233	0.525	1177	1267	2.3	1.3	3.951	A
B4100 (W)	466	117	1220	1163	0.401	468	444	1.3	0.7	5.682	A
A43 (N)	1390	347	532	2142	0.649	1401	1157	5.0	2.2	5.698	A

2019 Baseline + Western Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	43.95	E

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-12	B4100(E)	43.95	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2019 Baseline + Western Development	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	716	100.000
A43 (S)		ONE HOUR	✓	1747	100.000
B4100 (W)		ONE HOUR	✓	521	100.000
A43 (N)		ONE HOUR	✓	1508	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	150	264	302
	A43 (S)	116	0	49	1582
	B4100 (W)	237	151	6	127
	A43 (N)	239	1169	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	10	1	5
	A43 (S)	9	0	5	7
	B4100 (W)	2	3	0	3
	A43 (N)	5	10	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	1.11	191.16	45.8	F	657	986
A43 (S)	0.91	18.95	9.6	C	1603	2405
B4100 (W)	0.82	28.41	4.3	D	478	717
A43 (N)	0.78	8.40	3.8	A	1384	2076

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	539	135	1069	950	0.567	534	443	0.0	1.3	8.922	A
A43 (S)	1315	329	501	2225	0.591	1309	1101	0.0	1.5	4.182	A
B4100 (W)	392	98	1497	1027	0.382	390	313	0.0	0.6	5.770	A
A43 (N)	1135	284	382	2233	0.508	1131	1506	0.0	1.1	3.534	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	644	161	1279	850	0.757	637	531	1.3	3.0	17.096	C
A43 (S)	1571	393	599	2165	0.726	1566	1318	1.5	2.8	6.384	A
B4100 (W)	468	117	1790	883	0.531	466	374	0.6	1.1	8.823	A
A43 (N)	1356	339	457	2188	0.620	1353	1800	1.1	1.7	4.674	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	788	197	1560	717	1.099	697	644	3.0	25.9	91.085	F
A43 (S)	1923	481	667	2122	0.906	1900	1590	2.8	8.7	15.866	C
B4100 (W)	574	143	2140	710	0.808	563	426	1.1	3.8	23.585	C
A43 (N)	1660	415	552	2130	0.780	1653	2151	1.7	3.7	8.070	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	788	197	1569	713	1.106	709	651	25.9	45.8	191.163	F
A43 (S)	1923	481	677	2116	0.909	1920	1601	8.7	9.6	18.949	C
B4100 (W)	574	143	2165	698	0.822	572	432	3.8	4.3	28.408	D
A43 (N)	1660	415	560	2125	0.781	1660	2177	3.7	3.8	8.397	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	644	161	1292	844	0.762	809	540	45.8	4.4	110.886	F
A43 (S)	1571	393	736	2080	0.755	1595	1366	9.6	3.4	8.336	A
B4100 (W)	468	117	1892	833	0.562	480	439	4.3	1.4	10.796	B
A43 (N)	1356	339	469	2180	0.622	1364	1903	3.8	1.8	4.838	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	539	135	1077	946	0.570	551	448	4.4	1.4	9.788	A
A43 (S)	1315	329	516	2216	0.594	1323	1112	3.4	1.6	4.349	A
B4100 (W)	392	98	1518	1017	0.386	395	320	1.4	0.7	5.962	A
A43 (N)	1135	284	387	2230	0.509	1138	1526	1.8	1.1	3.592	A

2019 Baseline + Eastern Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	32.98	D

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-4	A43 (N)	32.98	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2019 Baseline + Eastern Development	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	413	100.000
A43 (S)		ONE HOUR	✓	1539	100.000
B4100 (W)		ONE HOUR	✓	543	100.000
A43 (N)		ONE HOUR	✓	1836	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	95	77	241
	A43 (S)	227	0	138	1174
	B4100 (W)	261	166	12	104
	A43 (N)	308	1392	136	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	22	4	8
	A43 (S)	11	0	9	17
	B4100 (W)	7	6	8	6
	A43 (N)	9	18	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	0.78	29.88	3.6	D	379	568
A43 (S)	0.76	7.88	3.6	A	1412	2118
B4100 (W)	0.68	13.80	2.2	B	498	747
A43 (N)	1.00	60.38	34.2	F	1685	2527

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	311	78	1277	852	0.365	308	596	0.0	0.6	7.266	A
A43 (S)	1159	290	348	2320	0.499	1154	1237	0.0	1.1	3.549	A
B4100 (W)	409	102	1231	1158	0.353	406	272	0.0	0.6	5.084	A
A43 (N)	1382	346	499	2162	0.639	1374	1138	0.0	2.0	5.234	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	371	93	1526	733	0.506	369	713	0.6	1.1	10.840	B
A43 (S)	1384	346	417	2277	0.608	1381	1479	1.1	1.8	4.619	A
B4100 (W)	488	122	1473	1039	0.470	487	325	0.6	0.9	6.923	A
A43 (N)	1651	413	597	2102	0.785	1642	1362	2.0	4.0	8.902	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	455	114	1811	598	0.760	447	860	1.1	3.1	24.901	C
A43 (S)	1694	424	501	2225	0.762	1687	1756	1.8	3.6	7.618	A
B4100 (W)	598	149	1797	880	0.680	593	392	0.9	2.2	13.158	B
A43 (N)	2021	505	728	2022	1.000	1942	1661	4.0	23.9	35.301	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	455	114	1844	583	0.781	453	869	3.1	3.6	29.885	D
A43 (S)	1694	424	509	2220	0.763	1694	1788	3.6	3.6	7.878	A
B4100 (W)	598	149	1807	875	0.684	598	396	2.2	2.2	13.804	B
A43 (N)	2021	505	733	2020	1.001	1981	1671	23.9	34.2	60.381	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	371	93	1634	682	0.544	380	739	3.6	1.4	13.487	B
A43 (S)	1384	346	435	2266	0.611	1391	1579	3.6	1.8	4.782	A
B4100 (W)	488	122	1488	1032	0.473	493	338	2.2	1.0	7.186	A
A43 (N)	1651	413	604	2098	0.787	1769	1377	34.2	4.5	17.033	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	311	78	1293	844	0.368	314	602	1.4	0.7	7.515	A
A43 (S)	1159	290	354	2316	0.500	1161	1253	1.8	1.2	3.601	A
B4100 (W)	409	102	1240	1154	0.354	410	275	1.0	0.6	5.168	A
A43 (N)	1382	346	503	2159	0.640	1392	1148	4.5	2.1	5.492	A

2019 Baseline + Eastern Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.04	B

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	5	A43 (S)	14.04	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2019 Baseline + Eastern Development	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	435	100.000
A43 (S)		ONE HOUR	✓	1838	100.000
B4100 (W)		ONE HOUR	✓	400	100.000
A43 (N)		ONE HOUR	✓	1503	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	73	48	314
	A43 (S)	128	0	128	1582
	B4100 (W)	171	108	16	105
	A43 (N)	245	1169	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	9	1	4
	A43 (S)	8	0	6	7
	B4100 (W)	3	4	0	4
	A43 (N)	5	10	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B4100(E)	0.65	14.61	1.9	B	399	599
A43 (S)	0.91	18.86	10.0	C	1687	2530
B4100 (W)	0.66	16.24	1.9	C	367	551
A43 (N)	0.76	7.40	3.3	A	1379	2069

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	327	82	1036	966	0.339	325	408	0.0	0.5	5.856	A
A43 (S)	1384	346	349	2319	0.597	1377	1012	0.0	1.6	4.065	A
B4100 (W)	301	75	1516	1018	0.296	299	211	0.0	0.4	5.170	A
A43 (N)	1132	283	317	2273	0.498	1127	1499	0.0	1.1	3.404	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	391	98	1240	869	0.450	390	488	0.5	0.8	7.829	A
A43 (S)	1652	413	419	2276	0.726	1648	1211	1.6	2.8	6.080	A
B4100 (W)	360	90	1814	871	0.413	358	252	0.4	0.7	7.248	A
A43 (N)	1351	338	379	2235	0.605	1349	1794	1.1	1.6	4.405	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	479	120	1515	739	0.648	475	594	0.8	1.8	14.045	B
A43 (S)	2024	506	510	2219	0.912	1998	1479	2.8	9.2	15.846	C
B4100 (W)	440	110	2202	680	0.648	436	307	0.7	1.8	15.000	C
A43 (N)	1655	414	461	2185	0.757	1648	2177	1.6	3.3	7.202	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	479	120	1521	736	0.651	479	598	1.8	1.9	14.606	B
A43 (S)	2024	506	514	2217	0.913	2020	1486	9.2	10.0	18.865	C
B4100 (W)	440	110	2225	668	0.659	440	309	1.8	1.9	16.238	C
A43 (N)	1655	414	465	2183	0.758	1655	2200	3.3	3.3	7.404	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B4100(E)	391	98	1249	865	0.452	395	494	1.9	0.9	8.080	A
A43 (S)	1652	413	424	2273	0.727	1681	1221	10.0	2.9	6.803	A
B4100 (W)	360	90	1849	854	0.421	364	256	1.9	0.8	7.677	A
A43 (N)	1351	338	386	2231	0.606	1358	1828	3.3	1.7	4.515	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

B4100(E)	327	82	1043	962	0.340	329	411	0.9	0.5	5.948	A
A43 (S)	1384	346	353	2317	0.597	1389	1019	2.9	1.6	4.176	A
B4100 (W)	301	75	1530	1011	0.298	302	212	0.8	0.4	5.261	A
A43 (N)	1132	283	320	2271	0.498	1134	1512	1.7	1.1	3.448	A

2019 Baseline + Both Developments, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	65.45	F

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	-13	B4100(E)	65.45	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2019 Baseline + Both Developments	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
B4100(E)		ONE HOUR	✓	571	100.000
A43 (S)		ONE HOUR	✓	1481	100.000
B4100 (W)		ONE HOUR	✓	623	100.000
A43 (N)		ONE HOUR	✓	1857	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	95	235	241
	A43 (S)	227	0	80	1174
	B4100 (W)	293	198	12	120
	A43 (N)	308	1392	157	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		B4100(E)	A43 (S)	B4100 (W)	A43 (N)
From	B4100(E)	0	22	4	8
	A43 (S)	11	0	15	17
	B4100 (W)	6	13	8	12
	A43 (N)	9	18	13	0