

<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
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Filename: Roundabout Junction.j9

Path: S:\Jobs\2021\21129 LSHD x 2 Athlone TIA+RSA\21129-05 Application 4\Reports\Working\ARCADY

Report generation date: 28/06/2023 12:04:23

- »2021, AM
- »2021, PM
- »2025 no dev, AM
- »2025 no dev, PM
- »2025 with dev, AM
- »2025 with dev, PM
- »2030 no dev, AM
- »2030 no dev, PM
- »2030 with dev, AM
- »2030 with dev, PM
- »2040 no dev, AM
- »2040 no dev, PM
- »2040 with dev, AM
- »2040 with dev, PM
- »2040 with future dev, AM
- »2040 with future dev, PM

Summary of junction performance

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	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2021								
Arm 1	1.2	5.16	0.54	A	0.6	3.67	0.36	A
Arm 2	0.6	5.05	0.38	A	0.7	4.89	0.43	A
Arm 3	0.4	3.44	0.30	A	1.1	5.58	0.53	A
Arm 4	0.1	3.67	0.05	A	0.0	4.84	0.01	A
2025 no dev								
Arm 1	1.3	5.45	0.57	A	0.6	3.77	0.38	A
Arm 2	0.7	5.26	0.40	A	0.8	5.10	0.45	A
Arm 3	0.5	3.52	0.31	A	1.2	5.94	0.55	A
Arm 4	0.1	3.74	0.05	A	0.0	5.02	0.02	A
2025 with dev								
Arm 1	1.5	6.41	0.61	A	0.7	4.09	0.40	A
Arm 2	0.9	6.31	0.47	A	1.1	6.10	0.53	A
Arm 3	0.5	3.81	0.35	A	1.6	7.39	0.62	A
Arm 4	0.3	4.50	0.21	A	0.2	5.95	0.17	A
2030 no dev								
Arm 1	1.5	6.06	0.61	A	0.7	3.96	0.40	A
Arm 2	0.8	5.72	0.43	A	0.9	5.52	0.48	A
Arm 3	0.5	3.67	0.34	A	1.5	6.74	0.60	A
Arm 4	0.1	3.87	0.06	A	0.0	5.39	0.02	A
2030 with dev								
Arm 1	1.8	7.27	0.65	A	0.7	4.32	0.43	A
Arm 2	1.0	6.99	0.51	A	1.3	6.71	0.57	A
Arm 3	0.6	3.99	0.37	A	2.0	8.67	0.67	A
Arm 4	0.3	4.69	0.22	A	0.2	6.48	0.18	A
2040 no dev								
Arm 1	1.7	6.55	0.63	A	0.7	4.11	0.42	A
Arm 2	0.8	6.09	0.46	A	1.0	5.82	0.51	A
Arm 3	0.5	3.79	0.35	A	1.7	7.38	0.63	A
Arm 4	0.1	3.96	0.06	A	0.0	5.66	0.02	A
2040 with dev								
Arm 1	2.1	7.99	0.68	A	0.8	4.49	0.45	A
Arm 2	1.2	7.55	0.54	A	1.4	7.17	0.59	A
Arm 3	0.6	4.13	0.39	A	2.4	9.77	0.71	A
Arm 4	0.3	4.82	0.23	A	0.2	6.88	0.19	A
2040 with future dev								
Arm 1	3.2	12.22	0.77	B	0.9	5.11	0.48	A
Arm 2	1.9	11.31	0.66	B	2.8	11.79	0.74	B
Arm 3	0.8	4.61	0.43	A	4.8	18.44	0.83	C
Arm 4	0.9	7.20	0.48	A	0.7	9.68	0.43	A

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

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

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File summary

File Description

Title	
Location	
Site number	
Date	07/03/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ROADPLAN01\jbyrne
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021	PM	ONE HOUR	16:45	18:15	15	✓
D3	2025 no dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2025 no dev	PM	ONE HOUR	16:45	18:15	15	✓
D5	2025 with dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2025 with dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2030 no dev	AM	ONE HOUR	07:45	09:15	15	✓
D8	2030 no dev	PM	ONE HOUR	16:45	18:15	15	✓
D9	2030 with dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2030 with dev	PM	ONE HOUR	16:45	18:15	15	✓
D11	2040 no dev	AM	ONE HOUR	07:45	09:15	15	✓
D12	2040 no dev	PM	ONE HOUR	16:45	18:15	15	✓
D13	2040 with dev	AM	ONE HOUR	07:45	09:15	15	✓
D14	2040 with dev	PM	ONE HOUR	16:45	18:15	15	✓
D15	2040 with future dev	AM	ONE HOUR	07:45	09:15	15	✓
D16	2040 with future dev	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

2021, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	4.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	N55 (north)	
2	R916	
3	N55 (south)	
4	L8048	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.20	6.00	40.0	25.0	45.0	8.0	
2	3.20	6.00	25.0	18.0	45.0	20.0	
3	3.20	6.50	30.0	20.0	45.0	12.0	
4	3.40	6.20	15.0	20.0	45.0	27.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.674	1806
2	0.625	1641
3	0.669	1816
4	0.607	1578

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	2021	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	749	100.000
2		ONE HOUR	✓	394	100.000
3		ONE HOUR	✓	406	100.000
4		ONE HOUR	✓	45	100.000

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Origin-Destination Data

Demand (Veh/hr)

	To				
	1	2	3	4	
From	1	0	274	474	1
	2	197	8	179	10
	3	284	113	2	7
	4	7	14	24	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.54	5.16	1.2	A	687	1031
2	0.38	5.05	0.6	A	362	542
3	0.30	3.44	0.4	A	373	559
4	0.05	3.67	0.1	A	41	62

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	564	141	121	1560	0.361	562	366	0.0	0.6	3.597	A
2	297	74	376	1257	0.236	295	307	0.0	0.3	3.739	A
3	306	76	162	1543	0.198	305	509	0.0	0.2	2.905	A
4	34	8	453	1159	0.029	34	14	0.0	0.0	3.198	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	673	168	145	1544	0.436	673	438	0.6	0.8	4.126	A
2	354	89	450	1211	0.293	354	367	0.3	0.4	4.200	A
3	365	91	194	1521	0.240	365	610	0.2	0.3	3.113	A
4	40	10	542	1105	0.037	40	16	0.0	0.0	3.381	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	825	206	177	1522	0.542	823	537	0.8	1.2	5.136	A
2	434	108	551	1148	0.378	433	450	0.4	0.6	5.033	A
3	447	112	237	1492	0.300	447	746	0.3	0.4	3.441	A
4	50	12	664	1031	0.048	49	20	0.0	0.1	3.667	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	825	206	177	1522	0.542	825	537	1.2	1.2	5.159	A
2	434	108	552	1147	0.378	434	450	0.6	0.6	5.047	A
3	447	112	238	1492	0.300	447	748	0.4	0.4	3.444	A
4	50	12	665	1031	0.048	50	20	0.1	0.1	3.668	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	673	168	145	1544	0.436	675	439	1.2	0.8	4.149	A
2	354	89	451	1210	0.293	355	368	0.6	0.4	4.215	A
3	365	91	195	1521	0.240	365	612	0.4	0.3	3.116	A
4	40	10	544	1104	0.037	41	16	0.1	0.0	3.386	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	564	141	121	1560	0.361	565	368	0.8	0.6	3.619	A
2	297	74	378	1256	0.236	297	308	0.4	0.3	3.759	A
3	306	76	163	1542	0.198	306	512	0.3	0.2	2.914	A
4	34	8	455	1158	0.029	34	14	0.0	0.0	3.204	A

2021, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	4.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	500	100.000
2		ONE HOUR	✓	498	100.000
3		ONE HOUR	✓	656	100.000
4		ONE HOUR	✓	10	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	202	296	1
	2	364	5	115	14
	3	511	136	0	9
	4	1	6	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.36	3.67	0.6	A	459	688
2	0.43	4.89	0.7	A	457	685
3	0.53	5.58	1.1	A	602	903
4	0.01	4.84	0.0	A	9	14

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	376	94	112	1566	0.240	375	658	0.0	0.3	3.020	A
2	375	94	226	1351	0.278	373	262	0.0	0.4	3.680	A
3	494	123	289	1458	0.339	492	311	0.0	0.5	3.719	A
4	8	2	763	971	0.008	7	18	0.0	0.0	3.734	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	449	112	135	1551	0.290	449	787	0.3	0.4	3.267	A
2	448	112	270	1323	0.338	447	313	0.4	0.5	4.110	A
3	590	147	346	1420	0.415	589	372	0.5	0.7	4.331	A
4	9	2	913	880	0.010	9	22	0.0	0.0	4.133	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	551	138	165	1531	0.360	550	964	0.4	0.6	3.669	A
2	548	137	331	1285	0.427	547	384	0.5	0.7	4.876	A
3	722	181	423	1368	0.528	721	455	0.7	1.1	5.550	A
4	11	3	1117	756	0.015	11	26	0.0	0.0	4.832	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	551	138	165	1530	0.360	551	966	0.6	0.6	3.672	A
2	548	137	331	1285	0.427	548	384	0.7	0.7	4.889	A
3	722	181	424	1367	0.528	722	456	1.1	1.1	5.580	A
4	11	3	1120	755	0.015	11	26	0.0	0.0	4.841	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	449	112	135	1551	0.290	450	790	0.6	0.4	3.274	A
2	448	112	271	1322	0.339	449	314	0.7	0.5	4.124	A
3	590	147	347	1419	0.416	591	373	1.1	0.7	4.359	A
4	9	2	916	878	0.010	9	22	0.0	0.0	4.144	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	376	94	113	1566	0.240	377	661	0.4	0.3	3.031	A
2	375	94	227	1350	0.278	375	263	0.5	0.4	3.698	A
3	494	123	290	1457	0.339	495	312	0.7	0.5	3.747	A
4	8	2	767	969	0.008	8	18	0.0	0.0	3.747	A

2025 no dev, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	4.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 no dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	779	100.000
2		ONE HOUR	✓	408	100.000
3		ONE HOUR	✓	421	100.000
4		ONE HOUR	✓	47	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
From		1	2	3	4
	1	0	285	493	1
	2	205	8	186	9
	3	295	117	2	7
	4	7	15	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.57	5.45	1.3	A	715	1072
2	0.40	5.26	0.7	A	374	562
3	0.31	3.52	0.5	A	386	579
4	0.05	3.74	0.1	A	43	65

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	125	1557	0.377	584	380	0.0	0.6	3.689	A
2	307	77	391	1248	0.246	306	319	0.0	0.3	3.818	A
3	317	79	167	1539	0.206	316	529	0.0	0.3	2.940	A
4	35	9	470	1149	0.031	35	13	0.0	0.0	3.232	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	700	175	150	1541	0.455	699	455	0.6	0.8	4.275	A
2	367	92	468	1199	0.306	366	382	0.3	0.4	4.320	A
3	378	95	200	1517	0.250	378	634	0.3	0.3	3.161	A
4	42	11	563	1092	0.039	42	15	0.0	0.0	3.427	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	858	214	184	1518	0.565	856	557	0.8	1.3	5.421	A
2	449	112	572	1134	0.396	448	467	0.4	0.6	5.244	A
3	464	116	245	1487	0.312	463	776	0.3	0.5	3.514	A
4	52	13	689	1016	0.051	52	19	0.0	0.1	3.733	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	858	214	184	1518	0.565	858	558	1.3	1.3	5.452	A
2	449	112	574	1133	0.396	449	468	0.6	0.7	5.262	A
3	464	116	246	1487	0.312	464	777	0.5	0.5	3.517	A
4	52	13	690	1015	0.051	52	19	0.1	0.1	3.735	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	700	175	150	1540	0.455	702	457	1.3	0.8	4.304	A
2	367	92	470	1198	0.306	368	383	0.7	0.4	4.339	A
3	378	95	201	1516	0.250	379	636	0.5	0.3	3.167	A
4	42	11	565	1091	0.039	42	15	0.1	0.0	3.433	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	126	1557	0.377	587	382	0.8	0.6	3.715	A
2	307	77	393	1246	0.246	308	320	0.4	0.3	3.839	A
3	317	79	168	1538	0.206	317	532	0.3	0.3	2.950	A
4	35	9	473	1147	0.031	35	13	0.0	0.0	3.239	A

2025 no dev, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 no dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	520	100.000
2		ONE HOUR	✓	518	100.000
3		ONE HOUR	✓	681	100.000
4		ONE HOUR	✓	10	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	210	308	1
	2	378	5	120	15
	3	531	141	0	9
	4	1	6	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.38	3.77	0.6	A	477	716
2	0.45	5.10	0.8	A	475	713
3	0.55	5.94	1.2	A	625	937
4	0.02	5.02	0.0	A	9	14

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	391	98	116	1563	0.250	390	683	0.0	0.3	3.066	A
2	390	97	235	1345	0.290	388	272	0.0	0.4	3.757	A
3	513	128	300	1450	0.354	511	323	0.0	0.5	3.823	A
4	8	2	792	954	0.008	7	19	0.0	0.0	3.804	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	467	117	139	1548	0.302	467	818	0.3	0.4	3.330	A
2	466	116	281	1316	0.354	465	325	0.4	0.5	4.228	A
3	612	153	359	1411	0.434	611	387	0.5	0.8	4.499	A
4	9	2	948	859	0.010	9	22	0.0	0.0	4.236	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	573	143	170	1527	0.375	572	1001	0.4	0.6	3.767	A
2	570	143	344	1277	0.447	569	398	0.5	0.8	5.083	A
3	750	187	440	1357	0.553	748	474	0.8	1.2	5.895	A
4	11	3	1160	730	0.015	11	27	0.0	0.0	5.006	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	573	143	171	1527	0.375	573	1003	0.6	0.6	3.771	A
2	570	143	345	1276	0.447	570	399	0.8	0.8	5.098	A
3	750	187	440	1356	0.553	750	475	1.2	1.2	5.935	A
4	11	3	1163	728	0.015	11	28	0.0	0.0	5.017	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	467	117	140	1548	0.302	468	821	0.6	0.4	3.338	A
2	466	116	282	1316	0.354	467	326	0.8	0.6	4.245	A
3	612	153	360	1410	0.434	614	388	1.2	0.8	4.533	A
4	9	2	952	856	0.011	9	23	0.0	0.0	4.248	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	391	98	117	1563	0.250	392	687	0.4	0.3	3.074	A
2	390	97	236	1344	0.290	391	273	0.6	0.4	3.776	A
3	513	128	302	1449	0.354	514	325	0.8	0.6	3.851	A
4	8	2	796	951	0.008	8	19	0.0	0.0	3.818	A

2025 with dev, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2025 with dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	784	100.000
2		ONE HOUR	✓	457	100.000
3		ONE HOUR	✓	456	100.000
4		ONE HOUR	✓	195	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	285	493	6
	2	205	8	186	58
	3	295	117	2	42
	4	29	59	107	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.61	6.41	1.5	A	719	1079
2	0.47	6.31	0.9	A	419	629
3	0.35	3.81	0.5	A	418	628
4	0.21	4.50	0.3	A	179	268

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	590	148	220	1494	0.395	588	397	0.0	0.6	3.962	A
2	344	86	456	1207	0.285	342	352	0.0	0.4	4.157	A
3	343	86	208	1512	0.227	342	591	0.0	0.3	3.074	A
4	147	37	470	1149	0.128	146	79	0.0	0.1	3.589	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	705	176	263	1464	0.481	704	475	0.6	0.9	4.725	A
2	411	103	546	1151	0.357	410	421	0.4	0.6	4.858	A
3	410	102	249	1485	0.276	410	707	0.3	0.4	3.349	A
4	175	44	563	1092	0.160	175	95	0.1	0.2	3.923	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	863	216	322	1425	0.606	861	581	0.9	1.5	6.358	A
2	503	126	668	1074	0.468	502	515	0.6	0.9	6.274	A
3	502	126	304	1447	0.347	501	865	0.4	0.5	3.804	A
4	215	54	689	1016	0.211	214	116	0.2	0.3	4.492	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	863	216	323	1424	0.606	863	582	1.5	1.5	6.414	A
2	503	126	669	1073	0.469	503	516	0.9	0.9	6.313	A
3	502	126	305	1447	0.347	502	868	0.5	0.5	3.809	A
4	215	54	690	1015	0.211	215	117	0.3	0.3	4.497	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	705	176	264	1464	0.481	707	477	1.5	0.9	4.771	A
2	411	103	548	1149	0.358	412	423	0.9	0.6	4.892	A
3	410	102	250	1484	0.276	411	711	0.5	0.4	3.357	A
4	175	44	565	1091	0.161	176	96	0.3	0.2	3.932	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	590	148	221	1493	0.395	591	399	0.9	0.7	3.999	A
2	344	86	459	1205	0.286	345	354	0.6	0.4	4.186	A
3	343	86	209	1511	0.227	344	594	0.4	0.3	3.086	A
4	147	37	473	1147	0.128	147	80	0.2	0.1	3.598	A

2025 with dev, PM

RECEIVED: 03/11/2023

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	6.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2025 with dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	526	100.000
2		ONE HOUR	✓	601	100.000
3		ONE HOUR	✓	730	100.000
4		ONE HOUR	✓	112	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	210	308	7
	2	378	5	120	98
	3	531	141	0	58
	4	12	67	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.40	4.09	0.7	A	483	724
2	0.53	6.10	1.1	A	551	827
3	0.62	7.39	1.6	A	670	1005
4	0.17	5.95	0.2	A	103	154

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	396	99	184	1518	0.261	395	691	0.0	0.4	3.201	A
2	452	113	262	1328	0.341	450	317	0.0	0.5	4.093	A
3	550	137	366	1406	0.391	547	346	0.0	0.6	4.180	A
4	84	21	791	954	0.088	84	122	0.0	0.1	4.136	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	473	118	221	1493	0.317	472	828	0.4	0.5	3.525	A
2	540	135	313	1296	0.417	540	380	0.5	0.7	4.755	A
3	656	164	439	1357	0.484	655	414	0.6	0.9	5.119	A
4	101	25	948	859	0.117	101	146	0.1	0.1	4.747	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	579	145	270	1460	0.397	578	1012	0.5	0.7	4.081	A
2	662	165	384	1252	0.529	660	465	0.7	1.1	6.068	A
3	804	201	537	1292	0.622	801	507	0.9	1.6	7.298	A
4	123	31	1159	731	0.169	123	179	0.1	0.2	5.922	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	579	145	271	1459	0.397	579	1015	0.7	0.7	4.090	A
2	662	165	384	1252	0.529	662	466	1.1	1.1	6.102	A
3	804	201	538	1291	0.623	804	508	1.6	1.6	7.388	A
4	123	31	1163	728	0.169	123	179	0.2	0.2	5.948	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	473	118	222	1492	0.317	474	832	0.7	0.5	3.538	A
2	540	135	314	1295	0.417	542	381	1.1	0.7	4.789	A
3	656	164	441	1356	0.484	659	415	1.6	0.9	5.384	A
4	101	25	953	856	0.118	101	147	0.2	0.1	4.772	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	396	99	186	1517	0.261	396	696	0.5	0.4	3.216	A
2	452	113	263	1327	0.341	453	319	0.7	0.5	4.124	A
3	550	137	369	1404	0.391	551	348	0.9	0.6	4.225	A
4	84	21	797	951	0.089	84	123	0.1	0.1	4.158	A

2030 no dev, AM

RECEIVED: 03/11/2023

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 no dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	831	100.000
2		ONE HOUR	✓	436	100.000
3		ONE HOUR	✓	450	100.000
4		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	304	526	1
	2	218	9	198	11
	3	315	125	2	8
	4	8	16	27	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.61	6.06	1.5	A	763	1144
2	0.43	5.72	0.8	A	400	600
3	0.34	3.67	0.5	A	413	619
4	0.06	3.87	0.1	A	47	70

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	626	156	134	1551	0.403	623	406	0.0	0.7	3.867	A
2	328	82	417	1231	0.267	327	340	0.0	0.4	3.974	A
3	339	85	179	1531	0.221	338	564	0.0	0.3	3.014	A
4	38	10	502	1130	0.034	38	15	0.0	0.0	3.298	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	747	187	161	1533	0.487	746	486	0.7	0.9	4.565	A
2	392	98	499	1180	0.332	391	408	0.4	0.5	4.564	A
3	405	101	215	1507	0.268	404	676	0.3	0.4	3.263	A
4	46	11	601	1069	0.043	46	18	0.0	0.0	3.516	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	915	229	197	1509	0.606	913	595	0.9	1.5	6.013	A
2	480	120	611	1110	0.432	479	499	0.5	0.8	5.695	A
3	495	124	263	1475	0.336	495	827	0.4	0.5	3.670	A
4	56	14	736	988	0.057	56	22	0.0	0.1	3.864	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	915	229	197	1509	0.606	915	596	1.5	1.5	6.060	A
2	480	120	612	1109	0.433	480	500	0.8	0.8	5.722	A
3	495	124	263	1475	0.336	495	829	0.5	0.5	3.674	A
4	56	14	737	987	0.057	56	22	0.1	0.1	3.866	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	747	187	161	1533	0.487	749	487	1.5	1.0	4.607	A
2	392	98	501	1178	0.333	393	409	0.8	0.5	4.591	A
3	405	101	215	1507	0.268	405	679	0.5	0.4	3.271	A
4	46	11	602	1068	0.043	46	18	0.1	0.0	3.522	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	626	156	135	1551	0.403	627	408	1.0	0.7	3.900	A
2	328	82	419	1230	0.267	329	342	0.5	0.4	3.998	A
3	339	85	180	1530	0.221	339	568	0.4	0.3	3.024	A
4	38	10	504	1128	0.034	38	15	0.0	0.0	3.303	A

2030 no dev, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 no dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	554	100.000
2		ONE HOUR	✓	554	100.000
3		ONE HOUR	✓	728	100.000
4		ONE HOUR	✓	11	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	224	328	1
	2	404	6	128	16
	3	567	151	0	10
	4	1	7	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.40	3.96	0.7	A	508	763
2	0.48	5.52	0.9	A	508	763
3	0.60	6.74	1.5	A	668	1002
4	0.02	5.39	0.0	A	10	15

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	417	104	125	1557	0.268	416	729	0.0	0.4	3.148	A
2	417	104	250	1336	0.312	415	291	0.0	0.5	3.905	A
3	548	137	321	1436	0.382	546	344	0.0	0.6	4.032	A
4	8	2	846	921	0.009	8	20	0.0	0.0	3.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	498	125	150	1541	0.323	498	873	0.4	0.5	3.449	A
2	498	125	299	1305	0.382	497	348	0.5	0.6	4.455	A
3	654	164	384	1394	0.470	653	412	0.6	0.9	4.855	A
4	10	2	1013	819	0.012	10	24	0.0	0.0	4.448	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	610	152	183	1518	0.402	609	1069	0.5	0.7	3.957	A
2	610	152	366	1263	0.483	609	426	0.6	0.9	5.494	A
3	802	200	470	1336	0.600	799	505	0.9	1.5	6.673	A
4	12	3	1240	682	0.018	12	30	0.0	0.0	5.376	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	610	152	184	1518	0.402	610	1071	0.7	0.7	3.965	A
2	610	152	367	1263	0.483	610	427	0.9	0.9	5.516	A
3	802	200	471	1336	0.600	801	505	1.5	1.5	6.737	A
4	12	3	1243	680	0.018	12	30	0.0	0.0	5.392	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	498	125	151	1540	0.323	499	877	0.7	0.5	3.458	A
2	498	125	300	1304	0.382	499	350	0.9	0.6	4.480	A
3	654	164	386	1393	0.470	657	413	1.5	0.9	4.908	A
4	10	2	1018	816	0.012	10	24	0.0	0.0	4.466	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	417	104	126	1557	0.268	418	734	0.5	0.4	3.162	A
2	417	104	251	1335	0.312	418	293	0.6	0.5	3.929	A
3	548	137	323	1435	0.382	549	346	0.9	0.6	4.070	A
4	8	2	852	917	0.009	8	20	0.0	0.0	3.961	A

2030 with dev, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	6.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 with dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	836	100.000
2		ONE HOUR	✓	485	100.000
3		ONE HOUR	✓	485	100.000
4		ONE HOUR	✓	199	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	304	526	6
	2	218	9	198	60
	3	315	125	2	43
	4	30	60	109	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.65	7.27	1.8	A	767	1151
2	0.51	6.99	1.0	A	445	668
3	0.37	3.99	0.6	A	445	668
4	0.22	4.69	0.3	A	183	274

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	629	157	229	1488	0.423	626	422	0.0	0.7	4.166	A
2	365	91	482	1191	0.307	363	373	0.0	0.4	4.344	A
3	365	91	220	1504	0.243	364	626	0.0	0.3	3.155	A
4	150	37	502	1130	0.133	149	82	0.0	0.2	3.670	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	752	188	274	1457	0.516	750	506	0.7	1.1	5.083	A
2	436	109	577	1131	0.386	435	447	0.4	0.6	5.169	A
3	436	109	263	1475	0.296	436	749	0.3	0.4	3.464	A
4	179	45	601	1070	0.167	179	98	0.2	0.2	4.040	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	920	230	335	1416	0.650	917	619	1.1	1.8	7.179	A
2	534	133	706	1051	0.508	532	547	0.6	1.0	6.927	A
3	534	133	322	1436	0.372	533	917	0.4	0.6	3.987	A
4	219	55	735	988	0.222	219	120	0.2	0.3	4.678	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	920	230	336	1415	0.650	920	620	1.8	1.8	7.269	A
2	534	133	708	1049	0.509	534	548	1.0	1.0	6.985	A
3	534	133	323	1435	0.372	534	919	0.6	0.6	3.994	A
4	219	55	737	987	0.222	219	120	0.3	0.3	4.687	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	752	188	275	1457	0.516	755	507	1.8	1.1	5.151	A
2	436	109	580	1129	0.386	438	449	1.0	0.6	5.219	A
3	436	109	264	1474	0.296	437	753	0.6	0.4	3.174	A
4	179	45	603	1068	0.167	179	98	0.3	0.2	4.051	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	629	157	230	1487	0.423	631	424	1.1	0.7	4.213	A
2	365	91	485	1189	0.307	366	376	0.6	0.4	4.379	A
3	365	91	221	1503	0.243	366	630	0.4	0.3	3.165	A
4	150	37	504	1128	0.133	150	82	0.2	0.2	3.683	A

2030 with dev, PM

RECEIVED: 03/11/2023

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	6.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 with dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	560	100.000
2		ONE HOUR	✓	637	100.000
3		ONE HOUR	✓	777	100.000
4		ONE HOUR	✓	113	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	224	328	7
	2	404	6	128	99
	3	567	151	0	59
	4	12	68	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.43	4.32	0.7	A	514	771
2	0.57	6.71	1.3	A	585	877
3	0.67	8.67	2.0	A	713	1069
4	0.18	6.48	0.2	A	104	156

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	422	105	193	1511	0.279	420	737	0.0	0.4	3.294	A
2	480	120	277	1319	0.364	477	337	0.0	0.6	4.268	A
3	585	146	387	1392	0.420	582	367	0.0	0.7	4.433	A
4	85	21	846	921	0.092	85	124	0.0	0.1	4.304	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	503	126	232	1486	0.339	503	883	0.4	0.5	3.661	A
2	573	143	331	1285	0.446	572	403	0.6	0.8	5.044	A
3	699	175	464	1340	0.521	697	439	0.7	1.1	5.583	A
4	102	25	1013	819	0.124	101	148	0.1	0.1	5.013	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	617	154	283	1451	0.425	616	1079	0.5	0.7	4.305	A
2	701	175	406	1238	0.566	699	493	0.8	1.3	6.658	A
3	855	214	568	1271	0.673	852	537	1.1	2.0	8.508	A
4	124	31	1238	682	0.182	124	181	0.1	0.2	6.444	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	617	154	284	1450	0.425	617	1083	0.7	0.7	4.317	A
2	701	175	406	1238	0.567	701	494	1.3	1.3	6.710	A
3	855	214	569	1270	0.674	855	538	2.0	2.0	8.674	A
4	124	31	1243	680	0.183	124	182	0.2	0.2	6.481	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	503	126	233	1485	0.339	504	889	0.7	0.5	3.677	A
2	573	143	332	1284	0.446	575	405	1.3	0.8	5.090	A
3	699	175	466	1339	0.522	702	441	2.0	1.1	5.686	A
4	102	25	1020	815	0.125	102	149	0.2	0.1	5.050	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	422	105	195	1511	0.279	422	743	0.5	0.4	3.308	A
2	480	120	278	1318	0.364	481	339	0.8	0.6	4.305	A
3	585	146	390	1390	0.421	586	369	1.1	0.7	4.490	A
4	85	21	852	917	0.093	85	124	0.1	0.1	4.328	A

2040 no dev, AM

RECEIVED: 03/11/2023

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2040 no dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	867	100.000
2		ONE HOUR	✓	456	100.000
3		ONE HOUR	✓	470	100.000
4		ONE HOUR	✓	52	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	317	549	1
	2	228	9	207	12
	3	329	131	2	8
	4	8	16	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.63	6.55	1.7	A	796	1193
2	0.46	6.09	0.8	A	418	628
3	0.35	3.79	0.5	A	431	647
4	0.06	3.96	0.1	A	48	72

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	653	163	140	1548	0.422	650	424	0.0	0.7	3.996	A
2	343	86	435	1220	0.281	342	355	0.0	0.4	4.091	A
3	354	88	187	1526	0.232	353	589	0.0	0.3	3.067	A
4	39	10	524	1116	0.035	39	16	0.0	0.0	3.342	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	779	195	167	1529	0.510	778	507	0.7	1.0	4.786	A
2	410	102	521	1166	0.351	409	425	0.4	0.5	4.751	A
3	423	106	224	1501	0.282	422	706	0.3	0.4	3.338	A
4	47	12	628	1053	0.044	47	19	0.0	0.0	3.576	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	955	239	205	1504	0.635	952	621	1.0	1.7	6.488	A
2	502	126	637	1094	0.459	501	520	0.5	0.8	6.060	A
3	517	129	275	1467	0.353	517	863	0.4	0.5	3.786	A
4	57	14	768	968	0.059	57	23	0.0	0.1	3.953	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	955	239	205	1504	0.635	955	622	1.7	1.7	6.552	A
2	502	126	639	1093	0.460	502	521	0.8	0.8	6.095	A
3	517	129	275	1467	0.353	517	865	0.5	0.5	3.791	A
4	57	14	770	967	0.059	57	23	0.1	0.1	3.956	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	779	195	167	1529	0.510	782	509	1.7	1.1	4.839	A
2	410	102	523	1165	0.352	411	426	0.8	0.5	4.784	A
3	423	106	225	1500	0.282	423	709	0.5	0.4	3.346	A
4	47	12	630	1052	0.044	47	19	0.1	0.0	3.583	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	653	163	140	1547	0.422	654	426	1.1	0.7	4.037	A
2	343	86	437	1218	0.282	344	357	0.5	0.4	4.119	A
3	354	88	189	1525	0.232	354	593	0.4	0.3	3.078	A
4	39	10	527	1114	0.035	39	16	0.0	0.0	3.350	A

2040 no dev, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	5.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2040 no dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	579	100.000
2		ONE HOUR	✓	576	100.000
3		ONE HOUR	✓	759	100.000
4		ONE HOUR	✓	11	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	234	343	1
	2	421	6	133	16
	3	592	157	0	10
	4	1	7	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.42	4.11	0.7	A	531	797
2	0.51	5.82	1.0	A	529	793
3	0.63	7.38	1.7	A	696	1045
4	0.02	5.66	0.0	A	10	15

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	436	109	130	1554	0.280	434	761	0.0	0.4	3.210	A
2	434	108	261	1329	0.326	432	303	0.0	0.5	4.006	A
3	571	143	334	1428	0.400	569	359	0.0	0.7	4.179	A
4	8	2	882	899	0.009	8	20	0.0	0.0	4.042	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	521	130	155	1537	0.339	520	911	0.4	0.5	3.537	A
2	518	129	313	1296	0.399	517	363	0.5	0.7	4.616	A
3	682	171	399	1384	0.493	681	430	0.7	1.0	5.116	A
4	10	2	1056	793	0.012	10	24	0.0	0.0	4.596	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	637	159	190	1514	0.421	637	1114	0.5	0.7	4.099	A
2	634	159	383	1253	0.506	633	444	0.7	1.0	5.796	A
3	836	209	489	1324	0.631	833	527	1.0	1.7	7.290	A
4	12	3	1292	650	0.019	12	30	0.0	0.0	5.643	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	637	159	190	1513	0.421	637	1117	0.7	0.7	4.109	A
2	634	159	383	1252	0.506	634	445	1.0	1.0	5.824	A
3	836	209	490	1323	0.632	836	527	1.7	1.7	7.381	A
4	12	3	1296	648	0.019	12	30	0.0	0.0	5.664	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	521	130	156	1537	0.339	521	916	0.7	0.5	3.548	A
2	518	129	313	1296	0.400	519	364	1.0	0.7	4.643	A
3	682	171	401	1383	0.494	685	431	1.7	1.0	5.382	A
4	10	2	1062	790	0.013	10	24	0.0	0.0	4.617	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	436	109	131	1554	0.281	436	766	0.5	0.4	3.222	A
2	434	108	262	1328	0.327	434	305	0.7	0.5	4.032	A
3	571	143	336	1426	0.401	573	361	1.0	0.7	4.224	A
4	8	2	888	895	0.009	8	20	0.0	0.0	4.058	A

2040 with dev, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	6.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2040 with dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	872	100.000
2		ONE HOUR	✓	505	100.000
3		ONE HOUR	✓	505	100.000
4		ONE HOUR	✓	200	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	317	549	6
	2	228	9	207	61
	3	329	131	2	43
	4	30	60	110	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.68	7.99	2.1	A	800	1200
2	0.54	7.55	1.2	A	463	695
3	0.39	4.13	0.6	A	463	695
4	0.23	4.82	0.3	A	184	275

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	656	164	234	1484	0.442	653	440	0.0	0.8	4.317	A
2	380	95	500	1179	0.322	378	388	0.0	0.5	4.485	A
3	380	95	228	1499	0.254	379	650	0.0	0.3	3.210	A
4	151	38	524	1116	0.135	150	82	0.0	0.2	3.724	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	784	196	280	1453	0.540	782	527	0.8	1.2	5.357	A
2	454	113	599	1118	0.406	453	464	0.5	0.7	5.411	A
3	454	113	273	1468	0.309	454	779	0.3	0.4	3.545	A
4	180	45	628	1053	0.171	180	99	0.2	0.2	4.119	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	343	1411	0.681	956	645	1.2	2.1	7.862	A
2	556	139	732	1034	0.538	554	568	0.7	1.1	7.470	A
3	556	139	334	1428	0.389	555	952	0.4	0.6	4.123	A
4	220	55	768	968	0.227	220	121	0.2	0.3	4.810	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	344	1410	0.681	960	646	2.1	2.1	7.990	A
2	556	139	734	1033	0.538	556	569	1.1	1.2	7.550	A
3	556	139	335	1427	0.390	556	956	0.6	0.6	4.133	A
4	220	55	770	967	0.228	220	121	0.3	0.3	4.819	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	784	196	281	1452	0.540	788	529	2.1	1.2	5.446	A
2	454	113	602	1115	0.407	456	466	1.2	0.7	5.473	A
3	454	113	274	1467	0.309	455	784	0.6	0.5	3.559	A
4	180	45	630	1052	0.171	180	99	0.3	0.2	4.131	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	656	164	235	1483	0.443	658	443	1.2	0.8	4.372	A
2	380	95	503	1177	0.323	381	390	0.7	0.5	4.526	A
3	380	95	229	1497	0.254	381	655	0.5	0.3	3.224	A
4	151	38	527	1114	0.135	151	83	0.2	0.2	3.739	A

2040 with dev, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	7.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2040 with dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	585	100.000
2		ONE HOUR	✓	659	100.000
3		ONE HOUR	✓	808	100.000
4		ONE HOUR	✓	113	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	234	343	7
	2	421	6	133	99
	3	592	157	0	59
	4	12	68	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.45	4.49	0.8	A	537	805
2	0.59	7.17	1.4	A	605	907
3	0.71	9.77	2.4	A	741	1112
4	0.19	6.88	0.2	A	104	156

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	440	110	198	1508	0.292	439	769	0.0	0.4	3.361	A
2	496	124	288	1312	0.378	494	349	0.0	0.6	4.389	A
3	608	152	400	1383	0.440	605	382	0.0	0.8	4.608	A
4	85	21	882	899	0.095	85	124	0.0	0.1	4.419	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	526	131	237	1482	0.355	525	920	0.4	0.5	3.760	A
2	592	148	345	1276	0.464	591	417	0.6	0.9	5.250	A
3	726	182	479	1330	0.546	725	457	0.8	1.2	5.930	A
4	102	25	1056	793	0.128	101	148	0.1	0.1	5.202	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	644	161	289	1447	0.445	643	1125	0.5	0.8	4.474	A
2	726	181	422	1228	0.591	723	510	0.9	1.4	7.104	A
3	890	222	586	1259	0.707	885	559	1.2	2.3	9.517	A
4	124	31	1290	651	0.191	124	181	0.1	0.2	6.827	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	644	161	291	1446	0.445	644	1129	0.8	0.8	4.489	A
2	726	181	423	1227	0.591	726	512	1.4	1.4	7.169	A
3	890	222	588	1258	0.707	889	560	2.3	2.4	9.766	A
4	124	31	1296	648	0.192	124	182	0.2	0.2	6.878	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	526	131	239	1481	0.355	527	927	0.8	0.6	3.779	A
2	592	148	346	1275	0.464	595	420	1.4	0.9	5.304	A
3	726	182	482	1329	0.547	731	459	2.4	1.2	6.069	A
4	102	25	1064	788	0.129	102	149	0.2	0.1	5.245	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	440	110	199	1507	0.292	441	774	0.6	0.4	3.376	A
2	496	124	289	1311	0.379	497	351	0.9	0.6	4.432	A
3	608	152	403	1381	0.440	610	384	1.2	0.8	4.677	A
4	85	21	888	895	0.095	85	125	0.1	0.1	4.448	A

2040 with future dev, AM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	9.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2040 with future dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	877	100.000
2		ONE HOUR	✓	561	100.000
3		ONE HOUR	✓	546	100.000
4		ONE HOUR	✓	424	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	1	2	3	4	
From	1	0	317	549	11
	2	228	9	207	117
	3	329	131	2	84
	4	50	127	247	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
From	1	2	3	4	
	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.77	12.22	3.2	B	805	1207
2	0.66	11.31	1.9	B	515	772
3	0.43	4.61	0.8	A	501	752
4	0.48	7.20	0.9	A	389	584

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	660	165	387	1381	0.478	657	455	0.0	0.9	4.944	A
2	422	106	606	1113	0.379	420	437	0.0	0.6	5.176	A
3	411	103	273	1468	0.280	410	753	0.0	0.4	3.396	A
4	319	80	524	1116	0.286	318	159	0.0	0.4	4.499	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	788	197	463	1330	0.593	786	545	0.9	1.4	6.601	A
2	504	126	726	1038	0.486	503	524	0.6	0.9	6.710	A
3	491	123	327	1432	0.343	490	901	0.4	0.5	3.821	A
4	381	95	627	1053	0.362	381	190	0.4	0.6	5.344	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	966	241	567	1260	0.766	959	666	1.4	3.1	11.703	B
2	618	154	886	938	0.658	614	640	0.9	1.9	10.975	B
3	601	150	399	1384	0.434	600	1100	0.5	0.8	4.589	A
4	467	117	767	968	0.482	465	232	0.6	0.9	7.136	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	966	241	568	1259	0.767	965	668	3.1	3.2	12.221	B
2	618	154	890	935	0.660	617	643	1.9	1.9	11.314	B
3	601	150	402	1382	0.435	601	1106	0.8	0.8	4.609	A
4	467	117	770	967	0.483	467	233	0.9	0.9	7.195	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	788	197	465	1328	0.594	795	548	3.2	1.5	6.842	A
2	504	126	732	1034	0.488	508	528	1.9	1.0	6.893	A
3	491	123	331	1430	0.343	492	910	0.8	0.5	3.342	A
4	381	95	631	1051	0.363	383	192	0.9	0.6	5.394	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	660	165	389	1379	0.479	662	458	1.5	0.9	5.036	A
2	422	106	611	1110	0.381	424	441	1.0	0.6	5.256	A
3	411	103	276	1466	0.280	412	759	0.5	0.4	3.413	A
4	319	80	527	1114	0.287	320	160	0.6	0.4	4.537	A

2040 with future dev, PM

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Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - 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	untitled	Standard Roundabout		1, 2, 3, 4	12.33	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2040 with future dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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 (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	595	100.000
2		ONE HOUR	✓	781	100.000
3		ONE HOUR	✓	880	100.000
4		ONE HOUR	✓	251	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	1	2	3	4
1	1	234	343	17
2	421	6	133	221
3	592	157	0	131
4	33	103	115	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
From		1	2	3	4
	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.48	5.11	0.9	A	546	819
2	0.74	11.79	2.8	B	717	1075
3	0.83	18.44	4.8	C	808	1211
4	0.43	9.68	0.7	A	230	345

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	448	112	285	1450	0.309	446	784	0.0	0.4	3.582	A
2	588	147	357	1269	0.463	585	375	0.0	0.9	5.236	A
3	663	166	499	1317	0.503	659	443	0.0	1.0	5.432	A
4	189	47	881	900	0.210	188	276	0.0	0.3	5.052	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	535	134	342	1412	0.379	534	938	0.4	0.6	4.101	A
2	702	176	427	1225	0.573	700	449	0.9	1.3	6.840	A
3	791	198	597	1251	0.632	788	530	1.0	1.7	7.729	A
4	226	56	1055	794	0.284	225	331	0.3	0.4	6.324	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	655	164	416	1361	0.481	654	1142	0.6	0.9	5.080	A
2	860	215	523	1165	0.738	854	547	1.3	2.7	11.391	B
3	969	242	729	1163	0.833	958	648	1.7	4.5	16.657	C
4	276	69	1283	655	0.422	275	403	0.4	0.7	9.439	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	655	164	419	1359	0.482	655	1152	0.9	0.9	5.112	A
2	860	215	524	1164	0.739	860	550	2.7	2.8	11.793	B
3	969	242	733	1160	0.835	968	651	4.5	4.8	18.440	C
4	276	69	1295	648	0.426	276	406	0.7	0.7	9.676	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	535	134	346	1409	0.380	536	952	0.9	0.6	4.132	A
2	702	176	429	1223	0.574	708	453	2.8	1.4	7.055	A
3	791	198	603	1247	0.634	803	534	4.8	1.8	8.313	A
4	226	56	1071	784	0.288	227	335	0.7	0.4	6.480	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	448	112	288	1448	0.309	449	791	0.6	0.5	3.607	A
2	588	147	359	1267	0.464	590	377	1.4	0.9	5.329	A
3	663	166	503	1314	0.504	665	446	1.8	1.0	5.575	A
4	189	47	890	894	0.211	190	279	0.4	0.3	5.112	A