Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 - Botwell Ln- Church Rd Mini Roundabout.j9
Path: C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 and 2029 scenarios
Report generation date: 23/01/2017 14:02:14

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2016							
1 - Church Rd	2.4	19.98	0.70	C	0.9	11.87	0.46	B
2 - Botwell Lane (S)	55.6	241.71	1.13	F	12.9	67.51	0.95	F
3 - Botwell Lane (W)	2.0	13.24	0.65	B	5.0	28.26	0.83	D
	2024 Baseline							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2024 Baseline+Dev							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2029 Baseline							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F
3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F
	2029 Baseline+Dev							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F

3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DEMETRIS-PSYLLI\Demetris Psyllides
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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	2016	AM	ONE HOUR	07:45	09:15	15	✓
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D8	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D9	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2029 Baseline+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

2016, AM

Data Errors and Warnings
No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	116.14	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Church Rd	
2	Botwell Lane (S)	
3	Botwell Lane (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Church Rd	3.50	3.50	5.50	1.0	15.30	11.00	0.0	✓
2 - Botwell Lane (S)	3.20	3.20	4.30	1.0	14.80	12.80	0.0	✓
3 - Botwell Lane (W)	3.60	3.60	5.00	1.0	14.80	11.30	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Church Rd	0.512	886
2 - Botwell Lane (S)	0.504	849
3 - Botwell Lane (W)	0.515	885

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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	410	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	718	100.000

3 - Botwell Lane (W)		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	139	271
	2 - Botwell Lane (S)	88	0	630
	3 - Botwell Lane (W)	72	421	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.70	19.98	2.4	C	376	564
2 - Botwell Lane (S)	1.13	241.71	55.6	F	659	988
3 - Botwell Lane (W)	0.65	13.24	2.0	B	452	679

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)	LOS
1 - Church Rd	309	77	314	725	0.426	305	119	0.0	0.8	9.373	A
2 - Botwell Lane (S)	541	135	202	748	0.723	530	418	0.0	2.7	17.422	C
3 - Botwell Lane (W)	371	93	65	852	0.436	368	667	0.0	0.8	8.125	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)	LOS
1 - Church Rd	369	92	377	693	0.532	367	142	0.8	1.2	12.097	B
2 - Botwell Lane (S)	645	161	243	727	0.888	630	502	2.7	6.5	36.058	E
3 - Botwell Lane (W)	443	111	77	846	0.524	442	796	0.8	1.2	9.771	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)	LOS
1 - Church Rd	451	113	461	650	0.695	447	163	1.2	2.3	19.103	C
2 - Botwell Lane (S)	791	198	295	701	1.128	688	613	6.5	32.1	118.233	F
3 - Botwell Lane (W)	543	136	84	842	0.645	540	899	1.2	1.9	12.978	B

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)	LOS
1 - Church Rd	451	113	463	648	0.696	451	165	2.3	2.4	19.978	C
2 - Botwell Lane (S)	791	198	298	699	1.131	696	616	32.1	55.6	238.805	F
3 - Botwell Lane (W)	543	136	85	841	0.645	543	909	1.9	2.0	13.237	B

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)	LOS
1 - Church Rd	369	92	381	691	0.534	373	152	2.4	1.3	12.640	B
2 - Botwell Lane (S)	645	161	247	725	0.890	711	507	55.6	39.2	241.711	F
3 - Botwell Lane (W)	443	111	87	840	0.527	446	871	2.0	1.3	10.111	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)	LOS
1 - Church Rd	309	77	318	723	0.427	311	138	1.3	0.8	9.650	A
2 - Botwell Lane (S)	541	135	205	746	0.725	684	423	39.2	3.5	95.668	F
3 - Botwell Lane (W)	371	93	84	842	0.441	373	805	1.3	0.9	8.461	A

2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	42.44	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	262	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	663	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	110	152
	2 - Botwell Lane (S)	146	0	517
	3 - Botwell Lane (W)	138	469	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.46	11.87	0.9	B	240	361
2 - Botwell Lane (S)	0.95	67.51	12.9	F	608	913
3 - Botwell Lane (W)	0.83	28.26	5.0	D	557	835

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)	LOS

1 - Church Rd	197	49	349	707	0.279	196	211	0.0	0.4	7.718	A
2 - Botwell Lane (S)	499	125	113	792	0.630	492	431	0.0	1.8	12.898	B
3 - Botwell Lane (W)	457	114	108	830	0.551	452	497	0.0	1.3	10.343	B

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)	LOS
1 - Church Rd	236	59	419	671	0.351	235	253	0.4	0.6	9.064	A
2 - Botwell Lane (S)	596	149	136	781	0.763	590	518	1.8	3.3	20.150	C
3 - Botwell Lane (W)	546	136	130	818	0.667	543	596	1.3	2.1	14.183	B

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)	LOS
1 - Church Rd	288	72	509	625	0.461	287	304	0.6	0.9	11.662	B
2 - Botwell Lane (S)	730	182	167	766	0.954	702	629	3.3	10.3	48.055	E
3 - Botwell Lane (W)	668	167	155	806	0.829	658	714	2.1	4.6	25.228	D

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)	LOS
1 - Church Rd	288	72	515	622	0.464	288	310	0.9	0.9	11.868	B
2 - Botwell Lane (S)	730	182	167	765	0.954	720	636	10.3	12.9	67.512	F
3 - Botwell Lane (W)	668	167	158	804	0.832	667	728	4.6	5.0	28.263	D

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)	LOS
1 - Church Rd	236	59	430	666	0.354	237	266	0.9	0.6	9.263	A
2 - Botwell Lane (S)	596	149	137	780	0.764	632	529	12.9	3.9	31.324	D
3 - Botwell Lane (W)	546	136	139	814	0.671	556	630	5.0	2.3	15.953	C

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)	LOS
1 - Church Rd	197	49	356	703	0.280	198	216	0.6	0.4	7.845	A
2 - Botwell Lane (S)	499	125	115	792	0.631	507	439	3.9	1.9	14.276	B
3 - Botwell Lane (W)	457	114	112	828	0.552	461	510	2.3	1.4	10.897	B

2024 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F
2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F

3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2024 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F

2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F
3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2029 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS

1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F
2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F

2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

2029 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F

2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F
2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 - Botwell Ln- Church Rd Mini Roundabout.j9
Path: C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 and 2029 scenarios
Report generation date: 23/01/2017 14:02:14

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2016							
1 - Church Rd	2.4	19.98	0.70	C	0.9	11.87	0.46	B
2 - Botwell Lane (S)	55.6	241.71	1.13	F	12.9	67.51	0.95	F
3 - Botwell Lane (W)	2.0	13.24	0.65	B	5.0	28.26	0.83	D
	2024 Baseline							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2024 Baseline+Dev							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2029 Baseline							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F
3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F
	2029 Baseline+Dev							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F

3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DEMETRIS-PSYLLI\Demetris Psyllides
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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	2016	AM	ONE HOUR	07:45	09:15	15	✓
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D8	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D9	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2029 Baseline+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

2016, AM

Data Errors and Warnings
No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	116.14	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Church Rd	
2	Botwell Lane (S)	
3	Botwell Lane (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Church Rd	3.50	3.50	5.50	1.0	15.30	11.00	0.0	✓
2 - Botwell Lane (S)	3.20	3.20	4.30	1.0	14.80	12.80	0.0	✓
3 - Botwell Lane (W)	3.60	3.60	5.00	1.0	14.80	11.30	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Church Rd	0.512	886
2 - Botwell Lane (S)	0.504	849
3 - Botwell Lane (W)	0.515	885

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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	410	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	718	100.000

3 - Botwell Lane (W)		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	139	271
	2 - Botwell Lane (S)	88	0	630
	3 - Botwell Lane (W)	72	421	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.70	19.98	2.4	C	376	564
2 - Botwell Lane (S)	1.13	241.71	55.6	F	659	988
3 - Botwell Lane (W)	0.65	13.24	2.0	B	452	679

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)	LOS
1 - Church Rd	309	77	314	725	0.426	305	119	0.0	0.8	9.373	A
2 - Botwell Lane (S)	541	135	202	748	0.723	530	418	0.0	2.7	17.422	C
3 - Botwell Lane (W)	371	93	65	852	0.436	368	667	0.0	0.8	8.125	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)	LOS
1 - Church Rd	369	92	377	693	0.532	367	142	0.8	1.2	12.097	B
2 - Botwell Lane (S)	645	161	243	727	0.888	630	502	2.7	6.5	36.058	E
3 - Botwell Lane (W)	443	111	77	846	0.524	442	796	0.8	1.2	9.771	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)	LOS
1 - Church Rd	451	113	461	650	0.695	447	163	1.2	2.3	19.103	C
2 - Botwell Lane (S)	791	198	295	701	1.128	688	613	6.5	32.1	118.233	F
3 - Botwell Lane (W)	543	136	84	842	0.645	540	899	1.2	1.9	12.978	B

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)	LOS
1 - Church Rd	451	113	463	648	0.696	451	165	2.3	2.4	19.978	C
2 - Botwell Lane (S)	791	198	298	699	1.131	696	616	32.1	55.6	238.805	F
3 - Botwell Lane (W)	543	136	85	841	0.645	543	909	1.9	2.0	13.237	B

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)	LOS
1 - Church Rd	369	92	381	691	0.534	373	152	2.4	1.3	12.640	B
2 - Botwell Lane (S)	645	161	247	725	0.890	711	507	55.6	39.2	241.711	F
3 - Botwell Lane (W)	443	111	87	840	0.527	446	871	2.0	1.3	10.111	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)	LOS
1 - Church Rd	309	77	318	723	0.427	311	138	1.3	0.8	9.650	A
2 - Botwell Lane (S)	541	135	205	746	0.725	684	423	39.2	3.5	95.668	F
3 - Botwell Lane (W)	371	93	84	842	0.441	373	805	1.3	0.9	8.461	A

2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	42.44	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	262	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	663	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	110	152
	2 - Botwell Lane (S)	146	0	517
	3 - Botwell Lane (W)	138	469	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.46	11.87	0.9	B	240	361
2 - Botwell Lane (S)	0.95	67.51	12.9	F	608	913
3 - Botwell Lane (W)	0.83	28.26	5.0	D	557	835

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)	LOS

1 - Church Rd	197	49	349	707	0.279	196	211	0.0	0.4	7.718	A
2 - Botwell Lane (S)	499	125	113	792	0.630	492	431	0.0	1.8	12.898	B
3 - Botwell Lane (W)	457	114	108	830	0.551	452	497	0.0	1.3	10.343	B

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)	LOS
1 - Church Rd	236	59	419	671	0.351	235	253	0.4	0.6	9.064	A
2 - Botwell Lane (S)	596	149	136	781	0.763	590	518	1.8	3.3	20.150	C
3 - Botwell Lane (W)	546	136	130	818	0.667	543	596	1.3	2.1	14.183	B

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)	LOS
1 - Church Rd	288	72	509	625	0.461	287	304	0.6	0.9	11.662	B
2 - Botwell Lane (S)	730	182	167	766	0.954	702	629	3.3	10.3	48.055	E
3 - Botwell Lane (W)	668	167	155	806	0.829	658	714	2.1	4.6	25.228	D

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)	LOS
1 - Church Rd	288	72	515	622	0.464	288	310	0.9	0.9	11.868	B
2 - Botwell Lane (S)	730	182	167	765	0.954	720	636	10.3	12.9	67.512	F
3 - Botwell Lane (W)	668	167	158	804	0.832	667	728	4.6	5.0	28.263	D

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)	LOS
1 - Church Rd	236	59	430	666	0.354	237	266	0.9	0.6	9.263	A
2 - Botwell Lane (S)	596	149	137	780	0.764	632	529	12.9	3.9	31.324	D
3 - Botwell Lane (W)	546	136	139	814	0.671	556	630	5.0	2.3	15.953	C

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)	LOS
1 - Church Rd	197	49	356	703	0.280	198	216	0.6	0.4	7.845	A
2 - Botwell Lane (S)	499	125	115	792	0.631	507	439	3.9	1.9	14.276	B
3 - Botwell Lane (W)	457	114	112	828	0.552	461	510	2.3	1.4	10.897	B

2024 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F
2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F

3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2024 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F

2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F
3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2029 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS

1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F
2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F

2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

2029 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F

2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F
2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 - Botwell Ln- Church Rd Mini Roundabout.j9
Path: C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 and 2029 scenarios
Report generation date: 23/01/2017 14:02:14

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2016							
1 - Church Rd	2.4	19.98	0.70	C	0.9	11.87	0.46	B
2 - Botwell Lane (S)	55.6	241.71	1.13	F	12.9	67.51	0.95	F
3 - Botwell Lane (W)	2.0	13.24	0.65	B	5.0	28.26	0.83	D
	2024 Baseline							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2024 Baseline+Dev							
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
	2029 Baseline							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F
3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F
	2029 Baseline+Dev							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F

3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DEMETRIS-PSYLLI\Demetris Psyllides
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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	2016	AM	ONE HOUR	07:45	09:15	15	✓
D2	2016	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D8	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D9	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2029 Baseline+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

2016, AM

Data Errors and Warnings
No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	116.14	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Church Rd	
2	Botwell Lane (S)	
3	Botwell Lane (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Church Rd	3.50	3.50	5.50	1.0	15.30	11.00	0.0	✓
2 - Botwell Lane (S)	3.20	3.20	4.30	1.0	14.80	12.80	0.0	✓
3 - Botwell Lane (W)	3.60	3.60	5.00	1.0	14.80	11.30	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Church Rd	0.512	886
2 - Botwell Lane (S)	0.504	849
3 - Botwell Lane (W)	0.515	885

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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	410	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	718	100.000

3 - Botwell Lane (W)		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	139	271
	2 - Botwell Lane (S)	88	0	630
	3 - Botwell Lane (W)	72	421	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.70	19.98	2.4	C	376	564
2 - Botwell Lane (S)	1.13	241.71	55.6	F	659	988
3 - Botwell Lane (W)	0.65	13.24	2.0	B	452	679

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)	LOS
1 - Church Rd	309	77	314	725	0.426	305	119	0.0	0.8	9.373	A
2 - Botwell Lane (S)	541	135	202	748	0.723	530	418	0.0	2.7	17.422	C
3 - Botwell Lane (W)	371	93	65	852	0.436	368	667	0.0	0.8	8.125	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)	LOS
1 - Church Rd	369	92	377	693	0.532	367	142	0.8	1.2	12.097	B
2 - Botwell Lane (S)	645	161	243	727	0.888	630	502	2.7	6.5	36.058	E
3 - Botwell Lane (W)	443	111	77	846	0.524	442	796	0.8	1.2	9.771	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)	LOS
1 - Church Rd	451	113	461	650	0.695	447	163	1.2	2.3	19.103	C
2 - Botwell Lane (S)	791	198	295	701	1.128	688	613	6.5	32.1	118.233	F
3 - Botwell Lane (W)	543	136	84	842	0.645	540	899	1.2	1.9	12.978	B

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)	LOS
1 - Church Rd	451	113	463	648	0.696	451	165	2.3	2.4	19.978	C
2 - Botwell Lane (S)	791	198	298	699	1.131	696	616	32.1	55.6	238.805	F
3 - Botwell Lane (W)	543	136	85	841	0.645	543	909	1.9	2.0	13.237	B

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)	LOS
1 - Church Rd	369	92	381	691	0.534	373	152	2.4	1.3	12.640	B
2 - Botwell Lane (S)	645	161	247	725	0.890	711	507	55.6	39.2	241.711	F
3 - Botwell Lane (W)	443	111	87	840	0.527	446	871	2.0	1.3	10.111	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)	LOS
1 - Church Rd	309	77	318	723	0.427	311	138	1.3	0.8	9.650	A
2 - Botwell Lane (S)	541	135	205	746	0.725	684	423	39.2	3.5	95.668	F
3 - Botwell Lane (W)	371	93	84	842	0.441	373	805	1.3	0.9	8.461	A

2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	42.44	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2016	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	262	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	663	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	110	152
	2 - Botwell Lane (S)	146	0	517
	3 - Botwell Lane (W)	138	469	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.46	11.87	0.9	B	240	361
2 - Botwell Lane (S)	0.95	67.51	12.9	F	608	913
3 - Botwell Lane (W)	0.83	28.26	5.0	D	557	835

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)	LOS

1 - Church Rd	197	49	349	707	0.279	196	211	0.0	0.4	7.718	A
2 - Botwell Lane (S)	499	125	113	792	0.630	492	431	0.0	1.8	12.898	B
3 - Botwell Lane (W)	457	114	108	830	0.551	452	497	0.0	1.3	10.343	B

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)	LOS
1 - Church Rd	236	59	419	671	0.351	235	253	0.4	0.6	9.064	A
2 - Botwell Lane (S)	596	149	136	781	0.763	590	518	1.8	3.3	20.150	C
3 - Botwell Lane (W)	546	136	130	818	0.667	543	596	1.3	2.1	14.183	B

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)	LOS
1 - Church Rd	288	72	509	625	0.461	287	304	0.6	0.9	11.662	B
2 - Botwell Lane (S)	730	182	167	766	0.954	702	629	3.3	10.3	48.055	E
3 - Botwell Lane (W)	668	167	155	806	0.829	658	714	2.1	4.6	25.228	D

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)	LOS
1 - Church Rd	288	72	515	622	0.464	288	310	0.9	0.9	11.868	B
2 - Botwell Lane (S)	730	182	167	765	0.954	720	636	10.3	12.9	67.512	F
3 - Botwell Lane (W)	668	167	158	804	0.832	667	728	4.6	5.0	28.263	D

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)	LOS
1 - Church Rd	236	59	430	666	0.354	237	266	0.9	0.6	9.263	A
2 - Botwell Lane (S)	596	149	137	780	0.764	632	529	12.9	3.9	31.324	D
3 - Botwell Lane (W)	546	136	139	814	0.671	556	630	5.0	2.3	15.953	C

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)	LOS
1 - Church Rd	197	49	356	703	0.280	198	216	0.6	0.4	7.845	A
2 - Botwell Lane (S)	499	125	115	792	0.631	507	439	3.9	1.9	14.276	B
3 - Botwell Lane (W)	457	114	112	828	0.552	461	510	2.3	1.4	10.897	B

2024 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F
2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F

3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2024 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F

2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F
3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2029 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS

1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F
2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F

2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

2029 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F

2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F
2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 - Botwell Ln- Church Rd Mini Roundabout.j9
Path: C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 Cumulative
Report generation date: 24/01/2017 09:55:20

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2024 Baseline								
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F
2024 Baseline+Dev								
1 - Church Rd	40.9	222.76	1.12	F	2.1	19.72	0.66	C
2 - Botwell Lane (S)	280.6	1486.08	1.54	F	131.6	619.74	1.29	F
3 - Botwell Lane (W)	9.2	46.27	0.91	E	15.9	75.75	0.97	F

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	DEMETRIS-PSYLLI\Demetris Psyllides
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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
D3	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Baseline+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

2024 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Church Rd	
2	Botwell Lane (S)	
3	Botwell Lane (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Church Rd	3.50	3.50	5.50	1.0	15.30	11.00	0.0	✓
2 - Botwell Lane (S)	3.20	3.20	4.30	1.0	14.80	12.80	0.0	✓
3 - Botwell Lane (W)	3.60	3.60	5.00	1.0	14.80	11.30	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Church Rd	0.512	886
2 - Botwell Lane (S)	0.504	849
3 - Botwell Lane (W)	0.515	885

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
D3	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D
2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F
2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F

3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F
3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C

2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

2024 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	700.26	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	566	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	924	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	180	386
	2 - Botwell Lane (S)	125	0	799
	3 - Botwell Lane (W)	110	587	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.12	222.76	40.9	F	519	779
2 - Botwell Lane (S)	1.54	1486.08	280.6	F	848	1272
3 - Botwell Lane (W)	0.91	46.27	9.2	E	640	959

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)	LOS
1 - Church Rd	426	107	436	662	0.643	419	169	0.0	1.9	15.789	C
2 - Botwell Lane (S)	696	174	285	706	0.986	647	569	0.0	12.2	49.890	E
3 - Botwell Lane (W)	525	131	88	840	0.624	518	845	0.0	1.8	12.028	B

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)	LOS
1 - Church Rd	509	127	523	618	0.824	499	189	1.9	4.3	31.030	D

2 - Botwell Lane (S)	831	208	340	678	1.225	673	682	12.2	51.4	186.847	F
3 - Botwell Lane (W)	627	157	91	838	0.747	622	923	1.8	3.0	17.825	C

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)	LOS
1 - Church Rd	623	156	630	563	1.106	547	207	4.3	23.4	111.063	F
2 - Botwell Lane (S)	1017	254	373	661	1.538	661	804	51.4	140.5	533.852	F
3 - Botwell Lane (W)	767	192	89	839	0.914	748	945	3.0	8.0	36.825	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)	LOS
1 - Church Rd	623	156	642	557	1.119	553	210	23.4	40.9	222.757	F
2 - Botwell Lane (S)	1017	254	377	659	1.543	659	818	140.5	230.0	1028.858	F
3 - Botwell Lane (W)	767	192	89	839	0.914	763	947	8.0	9.2	46.269	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)	LOS
1 - Church Rd	509	127	547	606	0.840	590	190	40.9	20.7	192.104	F
2 - Botwell Lane (S)	831	208	402	647	1.284	647	735	230.0	276.0	1392.979	F
3 - Botwell Lane (W)	627	157	87	840	0.746	649	961	9.2	3.5	22.772	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)	LOS
1 - Church Rd	426	107	447	657	0.649	500	175	20.7	2.2	36.194	E
2 - Botwell Lane (S)	696	174	341	678	1.027	677	606	276.0	280.6	1486.079	F
3 - Botwell Lane (W)	525	131	92	838	0.626	531	927	3.5	1.9	13.140	B

2024 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS

1	untitled	Mini-roundabout	1,2,3	307.55	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2024 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	354	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	861	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	720	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	143	211
	2 - Botwell Lane (S)	161	0	700
	3 - Botwell Lane (W)	184	536	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.66	19.72	2.1	C	325	487
2 - Botwell Lane (S)	1.29	619.74	131.6	F	790	1185
3 - Botwell Lane (W)	0.97	75.75	15.9	F	661	991

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)	LOS
1 - Church Rd	267	67	398	682	0.391	264	254	0.0	0.7	9.403	A
2 - Botwell Lane (S)	648	162	157	770	0.842	629	504	0.0	4.9	25.298	D
3 - Botwell Lane (W)	542	136	118	825	0.657	534	668	0.0	2.0	13.276	B

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)	LOS
1 - Church Rd	318	80	477	642	0.496	317	299	0.7	1.1	12.130	B
2 - Botwell Lane (S)	774	194	189	754	1.026	722	604	4.9	17.8	72.922	F
3 - Botwell Lane (W)	647	162	135	816	0.793	640	776	2.0	3.8	21.657	C

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)	LOS
1 - Church Rd	390	97	565	597	0.653	386	331	1.1	2.0	18.502	C
2 - Botwell Lane (S)	948	237	230	733	1.292	731	721	17.8	72.0	234.998	F
3 - Botwell Lane (W)	793	198	137	815	0.973	759	825	3.8	12.3	51.710	F

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)	LOS
1 - Church Rd	390	97	579	589	0.662	389	336	2.0	2.1	19.724	C
2 - Botwell Lane (S)	948	237	232	733	1.294	732	736	72.0	126.0	492.151	F
3 - Botwell Lane (W)	793	198	137	815	0.973	778	827	12.3	15.9	75.747	F

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)	LOS
1 - Church Rd	318	80	515	622	0.512	322	317	2.1	1.2	13.335	B
2 - Botwell Lane (S)	774	194	192	753	1.028	752	645	126.0	131.6	619.738	F
3 - Botwell Lane (W)	647	162	141	813	0.796	692	803	15.9	4.9	39.395	E

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)	LOS
1 - Church Rd	267	67	411	675	0.395	268	284	1.2	0.7	9.777	A
2 - Botwell Lane (S)	648	162	160	769	0.843	762	520	131.6	103.0	554.974	F
3 - Botwell Lane (W)	542	136	143	812	0.668	552	780	4.9	2.3	15.804	C

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 - Botwell Ln- Church Rd Mini Roundabout.j9
Path: C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2029 Cumulative
Report generation date: 24/01/2017 15:17:58

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2029 Baseline							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F
3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F
	2029 Baseline+Dev							
1 - Church Rd	48.3	259.09	1.15	F	2.2	20.97	0.68	C
2 - Botwell Lane (S)	307.8	1652.27	1.57	F	151.1	702.18	1.33	F
3 - Botwell Lane (W)	10.6	52.20	0.93	F	20.3	91.75	1.00	F

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	DEMETRIS-PSYLLI\Demetris Psyllides
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

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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
D7	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D8	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D9	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2029 Baseline+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

2029 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	Church Rd	
2	Botwell Lane (S)	
3	Botwell Lane (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Church Rd	3.50	3.50	5.50	1.0	15.30	11.00	0.0	✓
2 - Botwell Lane (S)	3.20	3.20	4.30	1.0	14.80	12.80	0.0	✓
3 - Botwell Lane (W)	3.60	3.60	5.00	1.0	14.80	11.30	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Church Rd	0.512	886
2 - Botwell Lane (S)	0.504	849
3 - Botwell Lane (W)	0.515	885

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
D7	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D
2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F
2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F

3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F
2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline	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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C

2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C

2029 Baseline+Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1,2,3	782.53	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	576	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	942	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	0	183	393
	2 - Botwell Lane (S)	127	0	815
	3 - Botwell Lane (W)	111	598	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	2 - Botwell Lane (S)	3 - Botwell Lane (W)
From	1 - Church Rd	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	1.15	259.09	48.3	F	529	793
2 - Botwell Lane (S)	1.57	1652.27	307.8	F	864	1297
3 - Botwell Lane (W)	0.93	52.20	10.6	F	651	976

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)	LOS
1 - Church Rd	434	108	444	658	0.659	426	170	0.0	2.0	16.496	C
2 - Botwell Lane (S)	709	177	290	703	1.009	652	579	0.0	14.2	55.457	F
3 - Botwell Lane (W)	534	133	88	840	0.635	526	855	0.0	1.8	12.354	B

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)	LOS
1 - Church Rd	518	129	533	613	0.845	506	190	2.0	4.9	33.997	D

2 - Botwell Lane (S)	847	212	346	675	1.254	672	694	14.2	57.9	209.360	F
3 - Botwell Lane (W)	637	159	91	839	0.760	632	927	1.8	3.2	18.637	C

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)	LOS
1 - Church Rd	634	159	639	559	1.135	546	208	4.9	27.0	125.056	F
2 - Botwell Lane (S)	1037	259	372	662	1.567	662	812	57.9	151.8	581.142	F
3 - Botwell Lane (W)	781	195	89	839	0.930	758	945	3.2	9.0	40.034	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)	LOS
1 - Church Rd	634	159	653	551	1.150	549	210	27.0	48.3	259.091	F
2 - Botwell Lane (S)	1037	259	374	661	1.570	661	827	151.8	245.9	1102.896	F
3 - Botwell Lane (W)	781	195	89	840	0.930	774	946	9.0	10.6	52.202	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)	LOS
1 - Church Rd	518	129	561	599	0.865	585	191	48.3	31.4	246.517	F
2 - Botwell Lane (S)	847	212	399	648	1.307	648	747	245.9	295.6	1500.459	F
3 - Botwell Lane (W)	637	159	87	840	0.758	665	960	10.6	3.8	25.253	D

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)	LOS
1 - Church Rd	434	108	456	652	0.665	550	174	31.4	2.4	68.661	F
2 - Botwell Lane (S)	709	177	375	660	1.074	660	631	295.6	307.8	1652.270	F
3 - Botwell Lane (W)	534	133	89	840	0.636	541	946	3.8	2.0	13.551	B

2029 Baseline+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 81% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS

1	untitled	Mini-roundabout	1,2,3	350.41	F

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2029 Baseline+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 (PCU/hr)	Scaling Factor (%)
1 - Church Rd		ONE HOUR	✓	361	100.000
2 - Botwell Lane (S)		ONE HOUR	✓	880	100.000
3 - Botwell Lane (W)		ONE HOUR	✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	0	146	215
	2 - Botwell Lane (S)	165	0	715
	3 - Botwell Lane (W)	188	549	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Church Rd	**2 - Botwell Lane (S)**	**3 - Botwell Lane (W)**
From	**1 - Church Rd**	10	10	10
	2 - Botwell Lane (S)	10	10	10
	3 - Botwell Lane (W)	10	10	10

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)
1 - Church Rd	0.68	20.97	2.2	C	331	497
2 - Botwell Lane (S)	1.33	702.18	151.1	F	808	1211
3 - Botwell Lane (W)	1.00	91.75	20.3	F	676	1014

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)	LOS
1 - Church Rd	272	68	407	677	0.401	269	259	0.0	0.7	9.629	A
2 - Botwell Lane (S)	663	166	160	769	0.862	641	516	0.0	5.5	27.439	D
3 - Botwell Lane (W)	555	139	120	824	0.674	546	681	0.0	2.2	13.879	B

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)	LOS
1 - Church Rd	325	81	487	636	0.510	323	303	0.7	1.1	12.579	B
2 - Botwell Lane (S)	791	198	192	753	1.051	728	618	5.5	21.4	83.306	F
3 - Botwell Lane (W)	663	166	136	815	0.813	654	784	2.2	4.2	23.448	C

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)	LOS
1 - Church Rd	397	99	573	592	0.671	393	333	1.1	2.1	19.530	C
2 - Botwell Lane (S)	969	242	234	731	1.325	730	732	21.4	81.2	266.069	F
3 - Botwell Lane (W)	811	203	137	815	0.996	770	827	4.2	14.7	58.813	F

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)	LOS
1 - Church Rd	397	99	588	585	0.680	397	338	2.1	2.2	20.968	C
2 - Botwell Lane (S)	969	242	236	730	1.327	730	748	81.2	140.9	551.288	F
3 - Botwell Lane (W)	811	203	137	815	0.996	789	830	14.7	20.3	91.749	F

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)	LOS
1 - Church Rd	325	81	537	611	0.531	328	325	2.2	1.3	14.196	B
2 - Botwell Lane (S)	791	198	196	751	1.054	750	670	140.9	151.1	702.178	F
3 - Botwell Lane (W)	663	166	141	813	0.815	721	805	20.3	5.7	52.844	F

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)	LOS
1 - Church Rd	272	68	423	669	0.406	274	288	1.3	0.8	10.070	B
2 - Botwell Lane (S)	663	166	163	767	0.863	762	534	151.1	126.3	656.245	F
3 - Botwell Lane (W)	555	139	143	812	0.683	568	782	5.7	2.5	16.994	C