

Appendix M - J04 Spitfire Roundabout – Lane Reallocation Mitigation Options - Junction Modelling Results

Junctions 9	
ARCADY 9 - Roundabout Module	
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- »Base 2023, AM
- »Base 2023, PM
- »FB 2025, AM
- »FB 2025, PM
- »FB 2028, AM
- »FB 2028, PM
- »DS 2028, PM
- »DS 2028, AM
- »FB 2036, AM
- »FB 2036, PM
- »DS 2036, AM
- »DS 2036, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	[Lane Simulation] - Base 2023							
1 - Wide Lane (N)	6.5	28.21		D	10.8	47.49		E
2 - Mitchell Way (E)	0.3	5.74		A	0.4	5.62		A
3 - George Curl Way (S)	0.2	5.68		A	0.4	7.91		A
4 - Wide Lane (W)	6.9	25.25		D	2.0	10.21		B
	[Lane Simulation] - FB 2025							
1 - Wide Lane (N)	7.9	30.70		D	14.8	54.65		F
2 - Mitchell Way (E)	0.4	5.65		A	0.5	6.09		A
3 - George Curl Way (S)	0.2	5.93		A	0.5	8.24		A
4 - Wide Lane (W)	9.3	31.54		D	2.0	10.10		B
	[Lane Simulation] - FB 2028							
1 - Wide Lane (N)	10.2	38.48		E	27.9	94.42		F
2 - Mitchell Way (E)	0.5	6.11		A	0.7	6.86		A
3 - George Curl Way (S)	0.2	6.27		A	0.5	8.81		A
4 - Wide Lane (W)	14.7	48.60		E	2.3	12.06		B
	[Lane Simulation] - DS 2028							
1 - Wide Lane (N)	19.0	50.03		F	30.9	93.20		F
2 - Mitchell Way (E)	1.4	9.22		A	2.8	12.51		B
3 - George Curl Way (S)	0.2	6.95		A	0.8	12.50		B
4 - Wide Lane (W)	21.9	64.57		F	3.4	16.18		C
	[Lane Simulation] - FB 2036							
1 - Wide Lane (N)	20.9	66.52		F	55.4	170.72		F
2 - Mitchell Way (E)	0.9	6.99		A	1.3	8.20		A
3 - George Curl Way (S)	0.2	6.94		A	0.6	10.69		B
4 - Wide Lane (W)	28.1	81.82		F	3.7	14.54		B
	[Lane Simulation] - DS 2036							
1 - Wide Lane (N)	44.7	107.58		F	57.8	170.71		F
2 - Mitchell Way (E)	2.1	10.87		B	4.8	20.55		C
3 - George Curl Way (S)	0.2	7.69		A	1.0	15.59		C
4 - Wide Lane (W)	51.7	135.83		F	5.6	22.33		C

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Wide Ln, Mitchell Way Rbt
Location	50.947889, -1.365052
Site number	
Date	28/03/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INJV01568
Description	

Units

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

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			31583749	419	26.80

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	Base 2023	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base 2023	PM	ONE HOUR	16:45	18:15	15	✓
D3	FB 2025	AM	ONE HOUR	07:45	09:15	15	✓
D4	FB 2025	PM	ONE HOUR	16:45	18:15	15	✓
D5	FB 2028	AM	ONE HOUR	07:45	09:15	15	✓
D6	FB 2028	PM	ONE HOUR	16:45	18:15	15	✓
D7	DS 2028	PM	ONE HOUR	16:45	18:15	15	✓
D8	DS 2028	AM	ONE HOUR	07:45	09:15	15	✓
D9	FB 2036	AM	ONE HOUR	07:45	09:15	15	✓
D10	FB 2036	PM	ONE HOUR	16:45	18:15	15	✓
D11	DS 2036	AM	ONE HOUR	07:45	09:15	15	✓
D12	DS 2036	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base 2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	23.88	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Wide Lane (N)	
2	Mitchell Way (E)	
3	George Curl Way (S)	
4	Wide Lane (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Wide Lane (N)	3.27	7.00	12.4	29.4	51.4	27.7	
2 - Mitchell Way (E)	5.38	8.06	11.9	16.7	51.4	20.1	
3 - George Curl Way (S)	5.08	7.40	4.7	18.8	51.4	40.3	
4 - Wide Lane (W)	5.00	7.10	11.5	16.4	51.4	18.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Wide Lane (N)	0.591	1604
2 - Mitchell Way (E)	0.694	2154
3 - George Curl Way (S)	0.599	1741
4 - Wide Lane (W)	0.663	1976

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1 - Wide Lane (N)	Evenly split	10.00
2 - Mitchell Way (E)	Evenly split	10.00
3 - George Curl Way (S)	Evenly split	10.00
4 - Wide Lane (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - Wide Lane (N)	Entry	1	1	2, (3)		Infinity		0	99999	
			2	1, 3, 4		Infinity		0	99999	
	Exit	1	1			Infinity				
2 - Mitchell Way (E)	Entry	1	1	3, 4		Infinity		0	99999	
			2	1, 2, (4)		Infinity		0	99999	
	Exit	1	1			Infinity				
3 - George Curl Way (S)	Entry	1	1	1, 4		Infinity		0	99999	
			2	(1), 2, 3		Infinity		0	99999	
	Exit	1	1			Infinity				
4 - Wide Lane (W)	Entry	1	1	1, (2)		Infinity		0	99999	
			2	2, 3, 4		Infinity		0	99999	
	Exit	1	1			Infinity				

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - Wide Lane (N)	Entry	1	1	0.295	802
			2	0.295	802
2 - Mitchell Way (E)	Entry	1	1	0.347	1077
			2	0.347	1077
3 - George Curl Way (S)	Entry	1	1	0.299	871
			2	0.299	871
4 - Wide Lane (W)	Entry	1	1	0.331	988
			2	0.331	988

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			Wide Lane (N)	Mitchell Way (E)	George Curl Way (S)	Wide Lane (W)
1 - Wide Lane (N)	1	1		✓		
		2	✓		✓	✓
2 - Mitchell Way (E)	1	1			✓	✓
		2	✓	✓		
3 - George Curl Way (S)	1	1	✓			✓
		2		✓	✓	
4 - Wide Lane (W)	1	1	✓			
		2		✓	✓	✓

Summary of Entry Lane allowed secondary movements

Arm	Lane Level	Lane	Destination arm			
			Wide Lane (N)	Mitchell Way (E)	George Curl Way (S)	Wide Lane (W)
1 - Wide Lane (N)	1	1			✓	
		2				
2 - Mitchell Way (E)	1	1				
		2				✓
3 - George Curl Way (S)	1	1				
		2	✓			
4 - Wide Lane (W)	1	1		✓		
		2				

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	Base 2023	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	749	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	160	100.000
3 - George Curl Way (S)		ONE HOUR	✓	79	100.000
4 - Wide Lane (W)		ONE HOUR	✓	837	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	4	149	207	389
	2 - Mitchell Way (E)	108	0	11	41
	3 - George Curl Way (S)	38	15	0	26
	4 - Wide Lane (W)	723	56	51	7

Vehicle Mix**Heavy Vehicle Percentages**

	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	14	1	5
	2 - Mitchell Way (E)	9	0	0	21
	3 - George Curl Way (S)	0	7	0	0
	4 - Wide Lane (W)	3	10	0	17

Results**Results Summary for whole modelled period**

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	28.21	6.5	19.0	D	685	1028
2 - Mitchell Way (E)	5.74	0.3	1.7	A	148	222
3 - George Curl Way (S)	5.68	0.2	0.7	A	73	110
4 - Wide Lane (W)	25.25	6.9	21.6	D	770	1155

Main Results for each time segment**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	559	140	97	561	558	659	0.0	1.5	9.962	A
2 - Mitchell Way (E)	120	30	494	119	122	164	0.0	0.2	4.744	A
3 - George Curl Way (S)	62	15	413	62	61	200	0.0	0.1	5.121	A
4 - Wide Lane (W)	631	158	124	631	625	351	0.0	1.5	8.779	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	672	168	120	671	666	789	1.5	2.5	13.142	B
2 - Mitchell Way (E)	147	37	590	147	144	200	0.2	0.2	4.996	A
3 - George Curl Way (S)	72	18	494	72	71	243	0.1	0.1	5.435	A
4 - Wide Lane (W)	760	190	153	756	749	413	1.5	2.8	11.785	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	829	207	142	819	809	958	2.5	6.5	24.102	C
2 - Mitchell Way (E)	177	44	720	176	175	241	0.2	0.3	5.543	A
3 - George Curl Way (S)	86	21	597	86	86	299	0.1	0.2	5.581	A
4 - Wide Lane (W)	915	229	178	921	904	504	2.8	5.8	21.608	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	818	205	142	820	828	968	6.5	6.5	28.212	D
2 - Mitchell Way (E)	178	44	721	177	178	241	0.3	0.3	5.737	A
3 - George Curl Way (S)	87	22	604	88	87	294	0.2	0.1	5.680	A
4 - Wide Lane (W)	928	232	183	927	921	509	5.8	6.9	25.246	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	677	169	117	678	693	780	6.5	2.6	15.633	C
2 - Mitchell Way (E)	144	36	593	144	145	202	0.3	0.2	5.297	A
3 - George Curl Way (S)	74	18	494	74	72	243	0.1	0.1	5.442	A
4 - Wide Lane (W)	750	188	148	749	769	419	6.9	2.4	13.788	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	555	139	99	556	564	660	2.6	1.6	10.376	B
2 - Mitchell Way (E)	122	30	490	122	120	165	0.2	0.2	4.818	A
3 - George Curl Way (S)	60	15	412	60	61	200	0.1	0.1	5.142	A
4 - Wide Lane (W)	635	159	124	634	637	348	2.4	1.5	8.918	A

Queue Variation Results for each time segment**07:45 - 08:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.49	0.00	0.46	3.74	4.76
2 - Mitchell Way (E)	0.18	0.00	0.00	0.37	0.84
3 - George Curl Way (S)	0.06	0.00	0.00	0.00	0.11
4 - Wide Lane (W)	1.50	0.00	0.50	3.60	4.69

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.52	0.00	1.18	5.87	8.01
2 - Mitchell Way (E)	0.23	0.00	0.00	0.60	1.16
3 - George Curl Way (S)	0.10	0.00	0.00	0.00	0.52
4 - Wide Lane (W)	2.80	0.00	1.36	6.51	9.21

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	6.48	0.00	4.20	15.37	19.01
2 - Mitchell Way (E)	0.34	0.00	0.00	0.89	1.72
3 - George Curl Way (S)	0.15	0.00	0.00	0.28	0.72
4 - Wide Lane (W)	5.85	0.00	3.37	13.76	17.51

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	6.46	0.00	3.96	13.59	19.01
2 - Mitchell Way (E)	0.34	0.00	0.00	0.87	1.46
3 - George Curl Way (S)	0.09	0.00	0.00	0.00	0.42
4 - Wide Lane (W)	6.94	0.00	4.26	16.53	21.61

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.60	0.00	1.46	5.69	7.51
2 - Mitchell Way (E)	0.23	0.00	0.00	0.59	1.06
3 - George Curl Way (S)	0.11	0.00	0.00	0.00	0.55
4 - Wide Lane (W)	2.43	0.00	1.12	5.55	7.18

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.58	0.00	0.58	3.66	5.12
2 - Mitchell Way (E)	0.17	0.00	0.00	0.35	0.88
3 - George Curl Way (S)	0.11	0.00	0.00	0.00	0.54
4 - Wide Lane (W)	1.48	0.00	0.29	3.84	5.19

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	121	773	0.156	121	120	0.0	0.2	6.245	A
			2	1, 3, 4	438	773	0.567	440	438	0.0	1.3	10.901	B
	Exit	1	1		659			659	654	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	38	906	0.041	38	38	0.0	0.1	4.777	A
			2	1, 2, (4)	82	906	0.091	82	84	0.0	0.1	4.730	A
	Exit	1	1		164			164	163	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	49	747	0.065	49	48	0.0	0.0	5.188	A
			2	(1), 2, 3	13	747	0.017	13	13	0.0	0.0	4.855	A
	Exit	1	1		200			200	203	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	547	947	0.578	547	540	0.0	1.4	9.452	A
			2	2, 3, 4	84	947	0.089	84	85	0.0	0.1	4.396	A
	Exit	1	1		351			351	346	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	149	766	0.195	149	148	0.2	0.3	6.530	A
			2	1, 3, 4	523	766	0.682	521	519	1.3	2.3	14.866	B
	Exit	1	1		789			789	781	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	46	872	0.053	46	45	0.1	0.1	4.915	A
			2	1, 2, (4)	101	872	0.115	101	99	0.1	0.2	5.031	A
	Exit	1	1		200			200	197	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	57	723	0.079	57	56	0.0	0.1	5.447	A
			2	(1), 2, 3	16	723	0.022	16	15	0.0	0.0	5.392	A
	Exit	1	1		243			243	239	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	655	937	0.699	650	647	1.4	2.7	12.888	B
			2	2, 3, 4	105	937	0.112	105	102	0.1	0.1	4.534	A
	Exit	1	1		413			413	413	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	184	760	0.243	184	183	0.3	0.4	6.920	A
			2	1, 3, 4	645	760	0.848	635	627	2.3	6.1	28.632	D
	Exit	1	1		958			958	941	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	56	827	0.068	56	55	0.1	0.1	5.389	A
			2	1, 2, (4)	120	827	0.145	120	120	0.2	0.2	5.610	A
	Exit	1	1		241			241	241	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	67	692	0.097	67	68	0.1	0.1	5.501	A
			2	(1), 2, 3	19	692	0.027	19	18	0.0	0.0	5.894	A
	Exit	1	1		299			299	292	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	790	929	0.851	796	779	2.7	5.7	24.189	C
			2	2, 3, 4	125	929	0.135	125	125	0.1	0.1	4.798	A
	Exit	1	1		504			504	500	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	183	760	0.241	183	185	0.4	0.4	7.127	A
			2	1, 3, 4	635	760	0.836	637	643	6.1	6.0	33.820	D
	Exit	1	1		968			968	962	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	56	827	0.068	56	56	0.1	0.1	5.639	A
			2	1, 2, (4)	122	827	0.147	122	122	0.2	0.2	5.779	A
	Exit	1	1		241			241	244	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	69	690	0.100	70	68	0.1	0.1	5.678	A
			2	(1), 2, 3	18	690	0.026	18	18	0.0	0.0	5.688	A
	Exit	1	1		294			294	296	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	802	927	0.865	801	796	5.7	6.7	28.380	D
			2	2, 3, 4	126	927	0.136	126	125	0.1	0.2	4.820	A
	Exit	1	1		509			509	512	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	151	767	0.197	151	151	0.4	0.3	6.642	A
			2	1, 3, 4	526	767	0.686	527	542	6.0	2.3	17.995	C
	Exit	1	1		780			780	802	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	47	871	0.054	47	45	0.1	0.1	5.255	A
			2	1, 2, (4)	97	871	0.112	97	100	0.2	0.2	5.315	A
	Exit	1	1		202			202	202	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	58	723	0.081	58	57	0.1	0.1	5.431	A
			2	(1), 2, 3	15	723	0.021	15	16	0.0	0.0	5.485	A
	Exit	1	1		243			243	247	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	647	939	0.689	647	666	6.7	2.3	15.213	C
			2	2, 3, 4	103	939	0.110	103	103	0.2	0.1	4.537	A
	Exit	1	1		419			419	428	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	122	773	0.158	122	123	0.3	0.2	6.424	A
			2	1, 3, 4	433	773	0.561	434	441	2.3	1.4	11.395	B
	Exit	1	1		660			660	664	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	39	907	0.043	39	38	0.1	0.0	4.911	A
			2	1, 2, (4)	83	907	0.092	83	83	0.2	0.1	4.779	A
	Exit	1	1		165			165	165	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	48	747	0.064	48	48	0.1	0.1	5.100	A
			2	(1), 2, 3	12	747	0.016	12	13	0.0	0.0	5.306	A
	Exit	1	1		200			200	201	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	548	947	0.579	547	551	2.3	1.4	9.595	A
			2	2, 3, 4	87	947	0.092	87	86	0.1	0.1	4.479	A
	Exit	1	1		348			348	352	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.22	0.00	0.00	0.53	1.15
			2	1.27	0.00	0.23	3.01	4.38
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.05	0.00	0.00	0.00	0.00
			2	0.12	0.00	0.00	0.00	0.64
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.05	0.00	0.00	0.00	0.00
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.39	0.00	0.39	3.31	4.50
			2	0.11	0.00	0.00	0.00	0.53
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.26	0.00	0.00	0.63	1.20
			2	2.26	0.00	0.88	5.37	7.72
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.06	0.00	0.00	0.00	0.00
			2	0.17	0.00	0.00	0.32	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.07	0.00	0.00	0.00	0.31
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.67	0.00	1.07	6.41	9.01
			2	0.13	0.00	0.00	0.11	0.68
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.39	0.00	0.00	0.96	1.76
			2	6.09	0.00	3.69	15.19	18.81
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.11	0.00	0.00	0.00	0.59
			2	0.23	0.00	0.00	0.51	1.08
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.12	0.00	0.00	0.08	0.60
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	5.73	0.00	3.19	13.62	17.51
			2	0.12	0.00	0.00	0.00	0.56
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.44	0.00	0.00	1.04	1.85
			2	6.02	0.00	3.56	13.02	18.03
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.12	0.00	0.00	0.00	0.61
			2	0.22	0.00	0.00	0.55	0.94
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.06	0.00	0.00	0.00	0.18
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	6.73	0.00	3.98	16.03	21.29
			2	0.21	0.00	0.00	0.50	0.86
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:45 - 09:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.34	0.00	0.00	0.92	1.66
			2	2.26	0.00	1.03	5.32	7.13
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.08	0.00	0.00	0.00	0.08
			2	0.16	0.00	0.00	0.21	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.09	0.00	0.00	0.00	0.41
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.29	0.00	0.95	5.32	7.01
			2	0.15	0.00	0.00	0.18	0.70
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

09:00 - 09:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.22	0.00	0.00	0.58	1.15
			2	1.36	0.00	0.32	3.23	4.71
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.05	0.00	0.00	0.00	0.00
			2	0.13	0.00	0.00	0.03	0.67
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.09	0.00	0.00	0.00	0.44
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.38	0.00	0.16	3.60	4.91
			2	0.10	0.00	0.00	0.00	0.49
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Base 2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	26.49	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Base 2023	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	787	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	215	100.000
3 - George Curl Way (S)		ONE HOUR	✓	173	100.000
4 - Wide Lane (W)		ONE HOUR	✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	32	138	35	582
	2 - Mitchell Way (E)	155	2	4	54
	3 - George Curl Way (S)	111	23	0	39
	4 - Wide Lane (W)	465	73	16	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	6	3	2
	2 - Mitchell Way (E)	7	0	0	10
	3 - George Curl Way (S)	2	0	0	0
	4 - Wide Lane (W)	3	11	7	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	47.49	10.8	26.5	E	724	1086
2 - Mitchell Way (E)	5.62	0.4	2.0	A	194	291
3 - George Curl Way (S)	7.91	0.4	1.5	A	159	238
4 - Wide Lane (W)	10.21	2.0	6.0	B	504	756

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	590	147	90	588	588	567	0.0	1.8	11.264	B
2 - Mitchell Way (E)	160	40	497	162	162	182	0.0	0.1	4.745	A
3 - George Curl Way (S)	128	32	616	127	130	42	0.0	0.2	5.855	A
4 - Wide Lane (W)	417	104	243	415	416	501	0.0	0.9	6.488	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	694	174	110	695	700	680	1.8	3.1	16.010	C
2 - Mitchell Way (E)	192	48	589	194	194	216	0.1	0.3	5.182	A
3 - George Curl Way (S)	158	39	736	158	156	47	0.2	0.2	6.888	A
4 - Wide Lane (W)	500	125	289	502	501	605	0.9	1.0	7.415	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	874	218	127	857	841	824	3.1	9.5	31.936	D
2 - Mitchell Way (E)	230	57	724	230	232	260	0.3	0.4	5.541	A
3 - George Curl Way (S)	190	47	888	190	188	67	0.2	0.4	7.576	A
4 - Wide Lane (W)	606	151	349	601	609	729	1.0	1.9	9.620	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	865	216	123	875	863	833	9.5	10.8	47.491	E
2 - Mitchell Way (E)	234	58	737	234	235	262	0.4	0.4	5.616	A
3 - George Curl Way (S)	191	48	912	192	191	59	0.4	0.4	7.907	A
4 - Wide Lane (W)	603	151	357	600	611	747	1.9	2.0	10.215	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	721	180	99	720	738	670	10.8	4.3	25.204	D
2 - Mitchell Way (E)	191	48	612	191	192	206	0.4	0.3	5.176	A
3 - George Curl Way (S)	156	39	754	155	163	50	0.4	0.4	6.854	A
4 - Wide Lane (W)	482	120	289	480	498	620	2.0	1.1	8.066	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	599	150	88	604	604	562	4.3	1.8	12.493	B
2 - Mitchell Way (E)	156	39	516	155	160	175	0.3	0.3	4.970	A
3 - George Curl Way (S)	130	33	627	131	132	44	0.4	0.2	6.176	A
4 - Wide Lane (W)	418	104	234	415	421	524	1.1	0.9	6.305	A

Queue Variation Results for each time segment**16:45 - 17:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.75	0.00	0.63	4.27	5.32
2 - Mitchell Way (E)	0.13	0.00	0.00	1.00	1.00
3 - George Curl Way (S)	0.20	0.00	0.00	0.49	0.83
4 - Wide Lane (W)	0.92	0.00	0.00	2.21	2.88

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	3.12	0.00	1.56	6.58	9.98
2 - Mitchell Way (E)	0.26	0.00	0.00	0.70	2.00
3 - George Curl Way (S)	0.21	0.00	0.00	0.38	0.84
4 - Wide Lane (W)	1.04	0.00	0.02	2.61	3.59

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	9.53	0.00	7.38	20.90	26.48
2 - Mitchell Way (E)	0.39	0.00	0.00	0.85	1.49
3 - George Curl Way (S)	0.37	0.00	0.00	0.91	1.49
4 - Wide Lane (W)	1.94	0.00	0.75	4.45	4.98

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	10.83	0.12	8.50	20.63	25.95
2 - Mitchell Way (E)	0.36	0.00	0.00	0.87	1.42
3 - George Curl Way (S)	0.41	0.00	0.00	0.93	1.49
4 - Wide Lane (W)	1.97	0.00	0.75	4.38	5.95

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	4.31	0.00	1.89	9.90	13.95
2 - Mitchell Way (E)	0.32	0.00	0.00	0.82	1.59
3 - George Curl Way (S)	0.36	0.00	0.00	0.80	1.32
4 - Wide Lane (W)	1.07	0.00	0.11	2.38	3.99

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.80	0.00	0.70	3.88	4.95
2 - Mitchell Way (E)	0.26	0.00	0.00	0.63	0.94
3 - George Curl Way (S)	0.16	0.00	0.00	0.35	0.70
4 - Wide Lane (W)	0.93	0.00	0.00	2.38	3.49

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	107	775	0.138	106	107	0.0	0.2	5.798	A
			2	1, 3, 4	482	775	0.622	483	482	0.0	1.6	12.417	B
	Exit	1	1		567			567	573	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	44	905	0.049	44	44	0.0	0.0	4.432	A
			2	1, 2, (4)	116	905	0.128	118	119	0.0	0.1	4.859	A
	Exit	1	1		182			182	179	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	105	686	0.152	104	108	0.0	0.2	5.988	A
			2	(1), 2, 3	24	686	0.035	24	23	0.0	0.0	5.216	A
	Exit	1	1		42			42	41	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	348	908	0.383	346	350	0.0	0.8	6.794	A
			2	2, 3, 4	70	908	0.077	68	66	0.0	0.1	4.751	A
	Exit	1	1		501			501	504	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	122	769	0.159	122	125	0.2	0.2	5.669	A
			2	1, 3, 4	572	769	0.743	572	574	1.6	2.9	18.170	C
	Exit	1	1		680			680	690	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	50	872	0.058	51	50	0.0	0.1	4.880	A
			2	1, 2, (4)	142	872	0.162	143	144	0.1	0.2	5.285	A
	Exit	1	1		216			216	212	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	129	650	0.199	130	130	0.2	0.2	7.070	A
			2	(1), 2, 3	28	650	0.043	28	27	0.0	0.0	6.014	A
	Exit	1	1		47			47	49	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	418	892	0.469	419	423	0.8	0.9	7.860	A
			2	2, 3, 4	82	892	0.092	82	79	0.1	0.1	4.834	A
	Exit	1	1		605			605	601	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	157	764	0.205	156	154	0.2	0.3	6.246	A
			2	1, 3, 4	717	764	0.938	701	687	2.9	9.2	37.290	E
	Exit	1	1		824			824	830	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	58	826	0.070	59	60	0.1	0.1	4.740	A
			2	1, 2, (4)	172	826	0.208	172	172	0.2	0.3	5.815	A
	Exit	1	1		260			260	260	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	156	605	0.259	156	156	0.2	0.3	7.916	A
			2	(1), 2, 3	33	605	0.055	34	32	0.0	0.1	5.944	A
	Exit	1	1		67			67	61	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	508	872	0.582	504	510	0.9	1.8	10.407	B
			2	2, 3, 4	98	872	0.112	98	99	0.1	0.1	5.213	A
	Exit	1	1		729			729	718	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	158	765	0.206	158	155	0.3	0.3	6.314	A
			2	1, 3, 4	707	765	0.924	718	708	9.2	10.5	56.066	F
	Exit	1	1		833			833	843	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	58	821	0.071	58	60	0.1	0.1	5.015	A
			2	1, 2, (4)	175	821	0.213	176	175	0.3	0.3	5.818	A
	Exit	1	1		262			262	257	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	155	598	0.260	156	157	0.3	0.3	8.108	A
			2	(1), 2, 3	36	598	0.060	36	33	0.1	0.1	6.968	A
	Exit	1	1		59			59	59	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	512	870	0.589	509	517	1.8	1.8	11.069	B
			2	2, 3, 4	91	870	0.104	91	93	0.1	0.2	5.152	A
	Exit	1	1		747			747	741	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	124	773	0.161	124	128	0.3	0.2	5.779	A
			2	1, 3, 4	597	773	0.772	596	610	10.5	4.1	29.300	D
	Exit	1	1		670			670	693	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	54	864	0.062	54	50	0.1	0.1	4.705	A
			2	1, 2, (4)	137	864	0.159	137	142	0.3	0.2	5.339	A
	Exit	1	1		206			206	215	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	131	645	0.204	131	135	0.3	0.3	7.062	A
			2	(1), 2, 3	24	645	0.038	24	28	0.1	0.0	5.842	A
	Exit	1	1		50			50	50	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	404	892	0.453	403	419	1.8	0.9	8.601	A
			2	2, 3, 4	78	892	0.087	77	78	0.2	0.1	5.034	A
	Exit	1	1		620			620	633	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	102	776	0.132	102	105	0.2	0.1	5.893	A
			2	1, 3, 4	497	776	0.641	502	499	4.1	1.7	13.852	B
	Exit	1	1		562			562	577	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	42	898	0.046	41	42	0.1	0.1	4.523	A
			2	1, 2, (4)	114	898	0.127	114	118	0.2	0.2	5.124	A
	Exit	1	1		175			175	177	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	108	683	0.158	108	110	0.3	0.1	6.344	A
			2	(1), 2, 3	22	683	0.033	22	22	0.0	0.0	5.332	A
	Exit	1	1		44			44	44	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	351	910	0.385	349	354	0.9	0.8	6.617	A
			2	2, 3, 4	67	910	0.074	67	67	0.1	0.1	4.542	A
	Exit	1	1		524			524	519	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.18	0.00	0.00	0.38	0.84
			2	1.57	0.00	0.46	3.82	4.98
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.05	0.00	0.00	0.00	1.00
			2	0.08	0.00	0.00	0.00	1.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.20	0.00	0.00	0.49	0.83
			2	0.00	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.79	0.00	0.00	1.83	2.79
			2	0.13	0.00	0.00	0.00	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:00 - 17:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.23	0.00	0.00	0.56	0.93
			2	2.88	0.00	1.26	6.38	9.98
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.08	0.00	0.00	0.00	0.33
			2	0.17	0.00	0.00	0.41	0.76
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.17	0.00	0.00	0.10	0.77
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.94	0.00	0.00	2.43	3.24
			2	0.10	0.00	0.00	0.00	0.49
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:15 - 17:30

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.29	0.00	0.00	0.77	1.28
			2	9.24	0.00	6.81	20.90	26.48
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.07	0.00	0.00	0.00	0.19
			2	0.31	0.00	0.00	0.73	0.96
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.31	0.00	0.00	0.83	1.42
			2	0.06	0.00	0.00	0.00	1.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.84	0.00	0.63	4.45	4.98
			2	0.10	0.00	0.00	0.00	0.49
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:30 - 17:45

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.31	0.00	0.00	0.75	1.19
			2	10.52	0.00	8.21	19.95	24.90
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.07	0.00	0.00	0.00	0.28
			2	0.29	0.00	0.00	0.76	1.33
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.34	0.00	0.00	0.84	2.00
			2	0.07	0.00	0.00	0.00	0.28
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.80	0.00	0.62	3.97	5.74
			2	0.17	0.00	0.00	0.37	0.75
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:45 - 18:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.21	0.00	0.00	0.52	0.84
			2	4.10	0.00	1.75	9.45	12.90
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.11	0.00	0.00	0.00	0.39
			2	0.21	0.00	0.00	0.49	0.99
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.32	0.00	0.00	0.77	1.24
			2	0.04	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.93	0.00	0.00	1.98	3.65
			2	0.14	0.00	0.00	-0.01	0.85
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

18:00 - 18:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.15	0.00	0.00	0.24	0.75
			2	1.65	0.00	0.56	3.56	4.95
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.06	0.00	0.00	0.00	0.00
			2	0.21	0.00	0.00	0.49	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.13	0.00	0.00	0.21	0.64
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.81	0.00	0.00	1.98	3.39
			2	0.12	0.00	0.00	-0.01	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

FB 2025, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	27.48	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	FB 2025	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	788	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	199	100.000
3 - George Curl Way (S)		ONE HOUR	✓	81	100.000
4 - Wide Lane (W)		ONE HOUR	✓	869	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	4	175	211	398
	2 - Mitchell Way (E)	133	0	11	55
	3 - George Curl Way (S)	39	15	0	27
	4 - Wide Lane (W)	739	71	52	7

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	12	1	5
	2 - Mitchell Way (E)	7	0	0	15
	3 - George Curl Way (S)	0	7	0	0
	4 - Wide Lane (W)	3	8	0	17

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	30.70	7.9	22.3	D	722	1083
2 - Mitchell Way (E)	5.65	0.4	1.6	A	181	272
3 - George Curl Way (S)	5.93	0.2	0.7	A	74	111
4 - Wide Lane (W)	31.54	9.3	24.4	D	799	1198

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	598	150	108	596	584	699	0.0	2.0	10.623	B
2 - Mitchell Way (E)	148	37	511	148	149	194	0.0	0.2	4.717	A
3 - George Curl Way (S)	61	15	449	60	62	210	0.0	0.1	5.140	A
4 - Wide Lane (W)	662	165	147	661	651	363	0.0	1.8	8.700	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	699	175	127	704	699	834	2.0	2.8	14.560	B
2 - Mitchell Way (E)	179	45	605	180	180	227	0.2	0.2	5.142	A
3 - George Curl Way (S)	71	18	539	71	72	246	0.1	0.1	5.512	A
4 - Wide Lane (W)	777	194	173	788	773	438	1.8	2.2	12.494	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	878	219	159	864	857	1000	2.8	7.2	25.177	D
2 - Mitchell Way (E)	211	53	734	210	218	290	0.2	0.4	5.404	A
3 - George Curl Way (S)	87	22	650	87	88	294	0.1	0.1	5.926	A
4 - Wide Lane (W)	961	240	206	953	931	532	2.2	7.4	24.160	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	852	213	155	851	862	1005	7.2	7.9	30.698	D
2 - Mitchell Way (E)	215	54	729	215	220	277	0.4	0.4	5.651	A
3 - George Curl Way (S)	94	23	649	93	91	296	0.1	0.2	5.885	A
4 - Wide Lane (W)	955	239	214	946	952	528	7.4	9.3	31.536	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	713	178	125	720	734	831	7.9	2.5	17.341	C
2 - Mitchell Way (E)	184	46	610	185	180	235	0.4	0.2	5.280	A
3 - George Curl Way (S)	74	19	549	74	75	246	0.2	0.1	5.489	A
4 - Wide Lane (W)	778	195	176	780	809	447	9.3	3.1	16.424	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	591	148	110	587	601	691	2.5	1.7	10.456	B
2 - Mitchell Way (E)	152	38	504	152	149	192	0.2	0.2	4.809	A
3 - George Curl Way (S)	59	15	448	58	60	208	0.1	0.1	4.836	A
4 - Wide Lane (W)	658	165	145	655	666	361	3.1	1.9	9.035	A

Queue Variation Results for each time segment**07:45 - 08:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.02	0.00	1.00	4.37	5.58
2 - Mitchell Way (E)	0.18	0.00	0.00	0.33	0.94
3 - George Curl Way (S)	0.10	0.00	0.00	-0.03	0.53
4 - Wide Lane (W)	1.75	0.00	0.74	3.92	5.26

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.84	0.00	1.59	5.80	9.43
2 - Mitchell Way (E)	0.23	0.00	0.00	0.57	1.06
3 - George Curl Way (S)	0.11	0.00	0.00	0.05	0.56
4 - Wide Lane (W)	2.18	0.00	0.79	4.70	6.65

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	7.18	0.00	5.27	15.20	18.60
2 - Mitchell Way (E)	0.40	0.00	0.00	0.87	1.55
3 - George Curl Way (S)	0.10	0.00	0.00	-0.03	0.53
4 - Wide Lane (W)	7.43	0.00	5.20	15.60	21.30

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	7.91	0.00	5.00	18.30	22.30
2 - Mitchell Way (E)	0.36	0.00	0.00	0.94	1.48
3 - George Curl Way (S)	0.17	0.00	0.00	0.41	0.73
4 - Wide Lane (W)	9.28	0.00	6.38	21.40	24.43

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.50	0.00	1.35	5.27	7.30
2 - Mitchell Way (E)	0.20	0.00	0.00	0.47	0.95
3 - George Curl Way (S)	0.08	0.00	0.00	0.00	0.37
4 - Wide Lane (W)	3.06	0.00	1.52	7.52	8.86

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.68	0.00	0.67	3.51	4.10
2 - Mitchell Way (E)	0.20	0.00	0.00	0.45	0.84
3 - George Curl Way (S)	0.14	0.00	0.00	0.24	0.69
4 - Wide Lane (W)	1.90	0.00	0.80	4.37	5.58

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	142	770	0.184	142	143	0.0	0.3	6.318	A
			2	1, 3, 4	456	770	0.593	454	442	0.0	1.7	11.910	B
	Exit	1	1		699			699	688	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	43	900	0.048	43	46	0.0	0.1	4.590	A
			2	1, 2, (4)	105	900	0.116	105	103	0.0	0.1	4.771	A
	Exit	1	1		194			194	197	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	47	736	0.064	47	48	0.0	0.1	4.998	A
			2	(1), 2, 3	14	736	0.019	14	14	0.0	0.0	5.640	A
	Exit	1	1		210			210	205	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	566	939	0.602	565	555	0.0	1.6	9.432	A
			2	2, 3, 4	96	939	0.102	96	96	0.0	0.1	4.373	A
	Exit	1	1		363			363	358	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	164	764	0.215	165	165	0.3	0.2	6.549	A
			2	1, 3, 4	535	764	0.700	539	533	1.7	2.6	16.870	C
	Exit	1	1		834			834	819	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	55	867	0.063	56	56	0.1	0.0	4.930	A
			2	1, 2, (4)	124	867	0.143	125	123	0.1	0.2	5.234	A
	Exit	1	1		227			227	226	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	55	709	0.077	55	57	0.1	0.1	5.612	A
			2	(1), 2, 3	16	709	0.023	16	15	0.0	0.0	5.105	A
	Exit	1	1		246			246	244	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	665	931	0.714	676	661	1.6	2.1	13.803	B
			2	2, 3, 4	112	931	0.120	112	111	0.1	0.1	4.562	A
	Exit	1	1		438			438	434	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	218	755	0.289	216	212	0.2	0.5	7.573	A
			2	1, 3, 4	659	755	0.874	648	645	2.6	6.6	30.513	D
	Exit	1	1		1000			1000	985	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	65	822	0.079	64	69	0.0	0.2	5.237	A
			2	1, 2, (4)	146	822	0.178	147	149	0.2	0.2	5.479	A
	Exit	1	1		290			290	284	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	70	676	0.103	70	69	0.1	0.1	5.970	A
			2	(1), 2, 3	17	676	0.026	17	18	0.0	0.0	5.743	A
	Exit	1	1		294			294	291	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	819	920	0.891	810	793	2.1	7.3	27.379	D
			2	2, 3, 4	142	920	0.155	143	138	0.1	0.2	4.796	A
	Exit	1	1		532			532	533	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	207	756	0.273	206	209	0.5	0.4	7.073	A
			2	1, 3, 4	646	756	0.854	646	653	6.6	7.5	37.748	E
	Exit	1	1		1005			1005	1006	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	65	824	0.079	65	69	0.2	0.1	5.461	A
			2	1, 2, (4)	150	824	0.182	150	151	0.2	0.3	5.732	A
	Exit	1	1		277			277	281	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	73	676	0.108	73	72	0.1	0.1	5.840	A
			2	(1), 2, 3	21	676	0.031	21	19	0.0	0.0	6.056	A
	Exit	1	1		296			296	300	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	821	917	0.895	811	811	7.3	9.1	36.051	E
			2	2, 3, 4	135	917	0.147	136	140	0.2	0.2	4.836	A
	Exit	1	1		528			528	536	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	174	765	0.227	173	175	0.4	0.3	6.774	A
			2	1, 3, 4	539	765	0.705	547	558	7.5	2.2	20.549	C
	Exit	1	1		831			831	853	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	59	865	0.068	58	56	0.1	0.1	5.078	A
			2	1, 2, (4)	125	865	0.145	127	124	0.3	0.1	5.368	A
	Exit	1	1		235			235	239	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	59	706	0.084	59	58	0.1	0.1	5.428	A
			2	(1), 2, 3	15	706	0.021	15	16	0.0	0.0	5.723	A
	Exit	1	1		246			246	251	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	665	929	0.715	669	692	9.1	2.8	18.439	C
			2	2, 3, 4	114	929	0.122	111	117	0.2	0.3	4.678	A
	Exit	1	1		447			447	455	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	140	769	0.182	139	143	0.3	0.3	6.680	A
			2	1, 3, 4	451	769	0.586	448	458	2.2	1.4	11.567	B
	Exit	1	1		691			691	698	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	46	902	0.051	46	47	0.1	0.0	4.605	A
			2	1, 2, (4)	105	902	0.117	105	102	0.1	0.2	4.897	A
	Exit	1	1		192			192	199	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	47	737	0.063	46	48	0.1	0.1	4.867	A
			2	(1), 2, 3	12	737	0.017	12	12	0.0	0.0	4.713	A
	Exit	1	1		208			208	209	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	560	940	0.596	558	567	2.8	1.7	9.805	A
			2	2, 3, 4	98	940	0.104	97	99	0.3	0.2	4.546	A
	Exit	1	1		361			361	369	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.31	0.00	0.00	0.90	1.59
			2	1.72	0.00	0.46	4.10	5.43
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.07	0.00	0.00	0.00	0.06
			2	0.11	0.00	0.00	0.00	0.61
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.07	0.00	0.00	0.00	1.00
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.61	0.00	0.58	3.92	5.26
			2	0.14	0.00	0.00	0.24	0.69
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.22	0.00	0.00	0.51	0.90
			2	2.62	0.00	1.33	5.72	9.15
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.03	0.00	0.00	0.00	0.00
			2	0.20	0.00	0.00	0.43	0.95
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.10	0.00	0.00	0.00	0.48
			2	0.01	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.05	0.00	0.60	4.62	6.30
			2	0.13	0.00	0.00	0.05	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.54	0.00	0.00	1.54	1.96
			2	6.63	0.00	4.70	14.53	18.60
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.18	0.00	0.00	0.29	1.05
			2	0.22	0.00	0.00	0.51	0.86
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.10	0.00	0.00	-0.03	0.53
			2	0.00	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	7.27	0.00	5.18	15.60	21.30
			2	0.16	0.00	0.00	0.24	0.85
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.45	0.00	0.00	1.15	1.75
			2	7.46	0.00	4.56	18.20	22.30
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.08	0.00	0.00	0.00	0.33
			2	0.28	0.00	0.00	0.76	1.29
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.13	0.00	0.00	1.00	1.00
			2	0.04	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	9.08	0.00	6.25	21.40	24.43
			2	0.20	0.00	0.00	0.48	0.89
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:45 - 09:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.32	0.00	0.00	0.75	1.22
			2	2.18	0.00	0.93	4.92	6.65
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.10	0.00	0.00	0.00	0.54
			2	0.10	0.00	0.00	1.00	1.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.07	0.00	0.00	0.00	1.00
			2	0.01	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.78	0.00	1.23	7.10	8.65
			2	0.28	0.00	0.00	0.76	1.29
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

09:00 - 09:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.28	0.00	0.00	0.73	1.38
			2	1.40	0.00	0.43	3.16	3.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.04	0.00	0.00	0.00	0.00
			2	0.16	0.00	0.00	0.29	0.71
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.11	0.00	0.00	1.00	1.00
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.70	0.00	0.58	3.76	5.15
			2	0.20	0.00	0.00	0.51	0.90
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

FB 2025, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	29.15	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	FB 2025	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	819	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	259	100.000
3 - George Curl Way (S)		ONE HOUR	✓	176	100.000
4 - Wide Lane (W)		ONE HOUR	✓	583	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	33	155	36	595
	2 - Mitchell Way (E)	186	2	4	67
	3 - George Curl Way (S)	113	23	0	40
	4 - Wide Lane (W)	475	91	17	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	6	3	2
	2 - Mitchell Way (E)	6	0	0	8
	3 - George Curl Way (S)	2	0	0	0
	4 - Wide Lane (W)	3	8	7	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	54.65	14.8	37.8	F	750	1125
2 - Mitchell Way (E)	6.09	0.5	2.1	A	240	360
3 - George Curl Way (S)	8.24	0.5	1.8	A	161	241
4 - Wide Lane (W)	10.10	2.0	5.8	B	536	804

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	615	154	102	615	615	603	0.0	2.3	12.518	B
2 - Mitchell Way (E)	199	50	509	200	199	208	0.0	0.3	4.851	A
3 - George Curl Way (S)	130	33	664	130	133	45	0.0	0.2	6.177	A
4 - Wide Lane (W)	430	108	273	433	436	522	0.0	0.6	6.696	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	728	182	124	720	721	729	2.3	3.9	17.665	C
2 - Mitchell Way (E)	238	59	606	237	229	238	0.3	0.4	5.253	A
3 - George Curl Way (S)	155	39	791	157	157	53	0.2	0.3	6.966	A
4 - Wide Lane (W)	532	133	321	532	528	627	0.6	1.2	7.554	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	899	225	145	884	871	901	3.9	12.0	39.524	E
2 - Mitchell Way (E)	290	73	732	290	283	296	0.4	0.4	6.093	A
3 - George Curl Way (S)	193	48	960	193	189	63	0.3	0.4	8.242	A
4 - Wide Lane (W)	646	162	400	646	647	753	1.2	1.9	10.096	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	897	224	144	886	890	885	12.0	14.8	54.647	F
2 - Mitchell Way (E)	289	72	737	287	284	293	0.4	0.5	5.895	A
3 - George Curl Way (S)	195	49	963	195	199	62	0.4	0.5	8.223	A
4 - Wide Lane (W)	638	159	396	633	637	762	1.9	2.0	10.057	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	738	184	119	744	782	729	14.8	4.9	33.728	D
2 - Mitchell Way (E)	231	58	617	233	234	246	0.5	0.3	5.711	A
3 - George Curl Way (S)	160	40	800	159	159	51	0.5	0.3	7.180	A
4 - Wide Lane (W)	528	132	320	529	529	639	2.0	1.3	7.994	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	622	155	103	620	632	606	4.9	2.1	14.467	B
2 - Mitchell Way (E)	193	48	513	194	194	210	0.3	0.2	5.117	A
3 - George Curl Way (S)	132	33	666	132	134	42	0.3	0.3	6.411	A
4 - Wide Lane (W)	442	111	266	443	443	532	1.3	1.0	6.873	A

Queue Variation Results for each time segment**16:45 - 17:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.25	0.00	0.62	4.75	7.63
2 - Mitchell Way (E)	0.33	0.00	0.00	0.71	0.93
3 - George Curl Way (S)	0.22	0.00	0.00	0.57	0.95
4 - Wide Lane (W)	0.63	0.00	0.00	1.50	1.88

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	3.87	0.00	1.90	8.83	11.63
2 - Mitchell Way (E)	0.37	0.00	0.00	0.80	1.05
3 - George Curl Way (S)	0.28	0.00	0.00	0.66	0.92
4 - Wide Lane (W)	1.19	0.00	0.19	2.93	3.75

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	12.04	0.11	9.50	27.75	31.75
2 - Mitchell Way (E)	0.44	0.00	0.00	1.19	1.91
3 - George Curl Way (S)	0.44	0.00	0.00	0.93	1.75
4 - Wide Lane (W)	1.93	0.00	0.70	4.50	5.65

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	14.83	0.08	11.63	31.50	37.75
2 - Mitchell Way (E)	0.53	0.00	0.00	1.31	2.06
3 - George Curl Way (S)	0.52	0.00	0.00	1.25	1.83
4 - Wide Lane (W)	2.01	0.00	0.82	4.42	5.75

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	4.87	0.00	2.31	13.50	17.63
2 - Mitchell Way (E)	0.33	0.00	0.00	0.80	1.21
3 - George Curl Way (S)	0.33	0.00	0.00	0.90	1.61
4 - Wide Lane (W)	1.30	0.00	0.38	2.86	4.06

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.14	0.00	0.97	4.92	5.88
2 - Mitchell Way (E)	0.23	0.00	0.00	0.58	0.90
3 - George Curl Way (S)	0.27	0.00	0.00	0.79	1.41
4 - Wide Lane (W)	0.97	0.00	0.08	2.41	2.93

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	121	772	0.156	122	119	0.0	0.2	5.896	A
			2	1, 3, 4	494	772	0.641	493	497	0.0	2.0	14.022	B
	Exit	1	1		603			603	609	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	50	900	0.056	49	51	0.0	0.1	4.390	A
			2	1, 2, (4)	149	900	0.166	150	148	0.0	0.2	5.009	A
	Exit	1	1		208			208	205	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	108	672	0.160	108	110	0.0	0.2	6.271	A
			2	(1), 2, 3	23	672	0.034	22	23	0.0	0.0	5.724	A
	Exit	1	1		45			45	44	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	349	898	0.389	351	356	0.0	0.5	7.110	A
			2	2, 3, 4	81	898	0.090	82	80	0.0	0.1	4.761	A
	Exit	1	1		522			522	525	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	132	765	0.172	131	135	0.2	0.3	5.837	A
			2	1, 3, 4	596	765	0.779	589	586	2.0	3.6	20.270	C
	Exit	1	1		729			729	725	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	66	866	0.076	65	60	0.1	0.1	4.841	A
			2	1, 2, (4)	172	866	0.198	172	169	0.2	0.3	5.398	A
	Exit	1	1		238			238	236	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	130	634	0.204	131	131	0.2	0.3	7.190	A
			2	(1), 2, 3	26	634	0.041	26	25	0.0	0.0	5.823	A
	Exit	1	1		53			53	51	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	432	882	0.490	432	431	0.5	1.1	8.157	A
			2	2, 3, 4	100	882	0.113	101	97	0.1	0.1	4.787	A
	Exit	1	1		627			627	622	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	175	759	0.231	174	172	0.3	0.3	6.528	A
			2	1, 3, 4	724	759	0.954	709	698	3.6	11.7	47.053	E
	Exit	1	1		901			901	888	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	74	823	0.090	75	75	0.1	0.1	5.077	A
			2	1, 2, (4)	216	823	0.263	215	208	0.3	0.4	6.450	A
	Exit	1	1		296			296	296	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	160	583	0.275	161	157	0.3	0.4	8.610	A
			2	(1), 2, 3	33	583	0.056	33	31	0.0	0.1	6.421	A
	Exit	1	1		63			63	61	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	530	855	0.619	529	529	1.1	1.8	11.130	B
			2	2, 3, 4	117	855	0.136	117	118	0.1	0.2	5.199	A
	Exit	1	1		753			753	744	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	172	759	0.227	172	176	0.3	0.3	6.639	A
			2	1, 3, 4	725	759	0.955	713	714	11.7	14.5	65.833	F
	Exit	1	1		885			885	887	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	77	821	0.094	78	76	0.1	0.1	5.642	A
			2	1, 2, (4)	212	821	0.258	210	209	0.4	0.4	5.986	A
	Exit	1	1		293			293	298	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	162	582	0.279	162	164	0.4	0.5	8.636	A
			2	(1), 2, 3	32	582	0.056	33	34	0.1	0.0	6.250	A
	Exit	1	1		62			62	65	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	522	857	0.609	519	521	1.8	1.7	11.102	B
			2	2, 3, 4	116	857	0.135	114	115	0.2	0.3	5.118	A
	Exit	1	1		762			762	760	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	145	767	0.190	145	144	0.3	0.3	6.398	A
			2	1, 3, 4	592	767	0.772	599	637	14.5	4.6	40.054	E
	Exit	1	1		729			729	733	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	61	863	0.071	61	62	0.1	0.1	4.782	A
			2	1, 2, (4)	169	863	0.196	171	173	0.4	0.2	6.039	A
	Exit	1	1		246			246	245	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	135	631	0.214	134	134	0.5	0.3	7.376	A
			2	(1), 2, 3	25	631	0.039	25	25	0.0	0.0	6.139	A
	Exit	1	1		51			51	52	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	432	882	0.490	432	433	1.7	1.2	8.634	A
			2	2, 3, 4	96	882	0.109	97	96	0.3	0.1	4.974	A
	Exit	1	1		639			639	674	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	121	772	0.157	120	119	0.3	0.2	5.842	A
			2	1, 3, 4	501	772	0.649	500	513	4.6	1.9	16.436	C
	Exit	1	1		606			606	609	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	51	899	0.057	50	50	0.1	0.1	4.499	A
			2	1, 2, (4)	143	899	0.159	144	144	0.2	0.1	5.328	A
	Exit	1	1		210			210	207	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	108	671	0.161	108	111	0.3	0.2	6.608	A
			2	(1), 2, 3	25	671	0.037	24	23	0.0	0.1	5.475	A
	Exit	1	1		42			42	43	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	361	900	0.402	361	362	1.2	0.8	7.322	A
			2	2, 3, 4	81	900	0.090	81	80	0.1	0.1	4.766	A
	Exit	1	1		532			532	544	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.22	0.00	0.00	0.55	1.21
			2	2.03	0.00	0.39	4.70	7.13
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.11	0.00	0.00	0.05	0.57
			2	0.22	0.00	0.00	0.47	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.18	0.00	0.00	0.43	0.82
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.50	0.00	0.00	1.23	1.75
			2	0.13	0.00	0.00	0.14	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:00 - 17:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.25	0.00	0.00	0.65	1.25
			2	3.62	0.00	1.63	8.88	11.13
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.10	0.00	0.00	0.00	0.54
			2	0.27	0.00	0.00	0.61	0.88
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.25	0.00	0.00	0.63	0.91
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.06	0.00	0.00	2.93	3.75
			2	0.13	0.00	0.00	1.00	1.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:15 - 17:30

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.34	0.00	0.00	0.85	2.00
			2	11.70	-0.04	8.90	26.50	31.75
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.06	0.00	0.00	0.00	0.00
			2	0.38	0.00	0.00	0.93	1.71
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.37	0.00	0.00	0.91	1.61
			2	0.07	0.00	0.00	0.00	0.05
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.77	0.00	0.61	3.83	5.56
			2	0.17	0.00	0.00	0.35	0.79
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:30 - 17:45

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.33	0.00	0.00	0.78	1.56
			2	14.50	0.00	11.30	31.50	36.75
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.10	0.00	0.00	0.00	0.46
			2	0.43	0.00	0.00	1.06	1.78
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.48	0.00	0.00	1.17	1.81
			2	0.04	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.70	0.00	0.45	4.36	5.42
			2	0.31	0.00	0.00	0.88	1.53
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

17:45 - 18:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.25	0.00	0.00	0.71	1.32
			2	4.62	0.00	1.97	13.50	17.25
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.11	0.00	0.00	0.05	0.57
			2	0.22	0.00	0.00	0.53	0.89
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.30	0.00	0.00	0.81	1.54
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.18	0.00	0.20	2.75	4.06
			2	0.12	0.00	0.00	0.05	0.63
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

18:00 - 18:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.23	0.00	0.00	0.63	2.00
			2	1.90	0.00	0.67	4.38	5.65
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.10	0.00	0.00	0.00	0.46
			2	0.13	0.00	0.00	0.14	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.22	0.00	0.00	0.55	1.21
			2	0.05	0.00	0.00	0.00	1.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	0.84	0.00	0.00	2.28	2.92
			2	0.12	0.00	0.00	-0.06	0.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

FB 2028, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	37.37	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	FB 2028	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	862	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	277	100.000
3 - George Curl Way (S)		ONE HOUR	✓	83	100.000
4 - Wide Lane (W)		ONE HOUR	✓	925	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	4	227	215	416
	2 - Mitchell Way (E)	183	0	11	83
	3 - George Curl Way (S)	40	15	0	28
	4 - Wide Lane (W)	762	101	54	8

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	9	1	5
	2 - Mitchell Way (E)	5	0	0	9
	3 - George Curl Way (S)	0	7	0	0
	4 - Wide Lane (W)	3	5	0	16

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	38.48	10.2	30.5	E	797	1196
2 - Mitchell Way (E)	6.11	0.5	2.0	A	256	383
3 - George Curl Way (S)	6.27	0.2	0.7	A	76	114
4 - Wide Lane (W)	48.60	14.7	40.5	E	844	1266

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	653	163	131	654	646	740	0.0	2.0	10.793	B
2 - Mitchell Way (E)	207	52	523	206	208	262	0.0	0.3	4.807	A
3 - George Curl Way (S)	63	16	517	63	64	212	0.0	0.1	5.555	A
4 - Wide Lane (W)	689	172	181	690	689	399	0.0	1.6	9.255	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	799	200	159	794	773	868	2.0	3.6	14.738	B
2 - Mitchell Way (E)	242	61	637	242	245	317	0.3	0.5	5.255	A
3 - George Curl Way (S)	76	19	623	76	74	256	0.1	0.1	5.845	A
4 - Wide Lane (W)	815	204	213	814	813	486	1.6	3.1	13.539	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	944	236	202	938	920	1065	3.6	9.3	30.783	D
2 - Mitchell Way (E)	307	77	758	309	304	382	0.5	0.5	5.793	A
3 - George Curl Way (S)	90	23	756	92	91	310	0.1	0.1	6.271	A
4 - Wide Lane (W)	1026	256	267	1000	980	581	3.1	12.4	33.569	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	964	241	194	964	952	1076	9.3	10.2	38.483	E
2 - Mitchell Way (E)	308	77	781	309	304	377	0.5	0.5	6.111	A
3 - George Curl Way (S)	89	22	776	89	90	314	0.1	0.2	6.244	A
4 - Wide Lane (W)	1010	253	268	1002	1010	597	12.4	14.7	48.602	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	779	195	159	787	806	898	10.2	3.2	21.805	C
2 - Mitchell Way (E)	256	64	638	255	253	309	0.5	0.4	5.527	A
3 - George Curl Way (S)	76	19	643	76	77	250	0.2	0.1	5.831	A
4 - Wide Lane (W)	825	206	221	836	877	498	14.7	4.2	26.563	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	647	162	132	647	653	748	3.2	1.8	11.248	B
2 - Mitchell Way (E)	211	53	518	211	211	260	0.4	0.3	4.978	A
3 - George Curl Way (S)	63	16	524	64	65	205	0.1	0.1	5.630	A
4 - Wide Lane (W)	697	174	184	696	706	404	4.2	2.3	10.984	B

Queue Variation Results for each time segment**07:45 - 08:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.98	0.00	0.95	4.00	6.13
2 - Mitchell Way (E)	0.30	0.00	0.00	0.77	2.00
3 - George Curl Way (S)	0.14	0.00	0.00	0.13	0.66
4 - Wide Lane (W)	1.61	0.00	0.67	3.57	4.69

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	3.58	0.00	1.69	8.40	11.25
2 - Mitchell Way (E)	0.46	0.00	0.00	1.00	1.77
3 - George Curl Way (S)	0.11	0.00	0.00	0.00	0.57
4 - Wide Lane (W)	3.11	0.00	1.80	6.50	9.25

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	9.29	0.00	6.00	21.50	25.25
2 - Mitchell Way (E)	0.51	0.00	0.00	1.07	1.63
3 - George Curl Way (S)	0.09	0.00	0.00	0.00	0.46
4 - Wide Lane (W)	12.39	0.00	8.60	27.00	31.50

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	10.22	0.14	7.44	24.00	30.50
2 - Mitchell Way (E)	0.48	0.00	0.00	1.37	1.82
3 - George Curl Way (S)	0.15	0.00	0.00	0.24	0.74
4 - Wide Lane (W)	14.74	0.00	9.33	33.00	40.50

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	3.23	0.00	1.75	7.50	10.17
2 - Mitchell Way (E)	0.41	0.00	0.00	1.00	1.85
3 - George Curl Way (S)	0.14	0.00	0.00	0.19	0.72
4 - Wide Lane (W)	4.22	0.00	1.77	10.00	14.75

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	1.80	0.00	0.79	3.91	5.70
2 - Mitchell Way (E)	0.31	0.00	0.00	0.78	1.28
3 - George Curl Way (S)	0.05	0.00	0.00	0.00	-0.07
4 - Wide Lane (W)	2.34	0.00	1.25	4.82	6.50

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	188	763	0.246	188	186	0.0	0.3	6.331	A
			2	1, 3, 4	465	763	0.610	465	461	0.0	1.7	12.498	B
	Exit	1	1		740			740	740	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	70	896	0.078	70	68	0.0	0.1	4.653	A
			2	1, 2, (4)	137	896	0.153	137	140	0.0	0.2	4.880	A
	Exit	1	1		262			262	260	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	49	716	0.069	49	51	0.0	0.1	5.639	A
			2	(1), 2, 3	14	716	0.020	14	13	0.0	0.0	5.208	A
	Exit	1	1		212			212	211	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	572	928	0.617	573	570	0.0	1.4	10.234	B
			2	2, 3, 4	117	928	0.126	117	119	0.0	0.2	4.485	A
	Exit	1	1		399			399	396	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	228	755	0.302	228	222	0.3	0.5	7.275	A
			2	1, 3, 4	571	755	0.757	566	551	1.7	3.1	17.588	C
	Exit	1	1		868			868	869	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	80	856	0.093	80	81	0.1	0.1	4.974	A
			2	1, 2, (4)	163	856	0.190	162	165	0.2	0.3	5.388	A
	Exit	1	1		317			317	308	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	61	684	0.089	61	59	0.1	0.1	5.815	A
			2	(1), 2, 3	15	684	0.021	15	15	0.0	0.0	5.971	A
	Exit	1	1		256			256	252	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	670	917	0.730	669	670	1.4	2.9	15.396	C
			2	2, 3, 4	145	917	0.158	145	143	0.2	0.2	4.731	A
	Exit	1	1		486			486	477	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	267	742	0.360	268	266	0.5	0.6	8.111	A
			2	1, 3, 4	677	742	0.912	670	653	3.1	8.7	39.344	E
	Exit	1	1		1065			1065	1050	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	104	814	0.127	104	99	0.1	0.2	5.222	A
			2	1, 2, (4)	204	814	0.250	205	205	0.3	0.3	6.062	A
	Exit	1	1		382			382	374	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	70	644	0.109	71	72	0.1	0.1	6.389	A
			2	(1), 2, 3	20	644	0.031	21	19	0.0	0.0	5.803	A
	Exit	1	1		310			310	302	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	842	900	0.936	817	802	2.9	12.1	39.532	E
			2	2, 3, 4	184	900	0.204	183	178	0.2	0.3	5.243	A
	Exit	1	1		581			581	568	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	276	745	0.371	275	274	0.6	0.6	8.185	A
			2	1, 3, 4	688	745	0.924	690	678	8.7	9.6	50.139	F
	Exit	1	1		1076			1076	1078	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	98	806	0.122	98	98	0.2	0.2	5.623	A
			2	1, 2, (4)	210	806	0.261	211	207	0.3	0.3	6.335	A
	Exit	1	1		377			377	380	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	71	638	0.111	71	71	0.1	0.1	6.313	A
			2	(1), 2, 3	18	638	0.028	18	19	0.0	0.0	5.977	A
	Exit	1	1		314			314	306	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	832	899	0.926	824	830	12.1	14.5	57.843	F
			2	2, 3, 4	178	899	0.198	178	180	0.3	0.3	5.195	A
	Exit	1	1		597			597	594	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	218	755	0.289	219	220	0.6	0.5	7.377	A
			2	1, 3, 4	561	755	0.743	568	586	9.6	2.8	27.223	D
	Exit	1	1		898			898	938	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	84	856	0.098	83	82	0.2	0.1	5.226	A
			2	1, 2, (4)	172	856	0.201	172	171	0.3	0.3	5.667	A
	Exit	1	1		309			309	311	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	60	678	0.088	60	61	0.1	0.1	5.831	A
			2	(1), 2, 3	16	678	0.024	16	16	0.0	0.0	5.830	A
	Exit	1	1		250			250	260	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	684	915	0.747	692	732	14.5	4.1	31.034	D
			2	2, 3, 4	142	915	0.155	144	146	0.3	0.2	5.077	A
	Exit	1	1		498			498	505	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	Entry	1	1	2, (3)	182	763	0.238	182	183	0.5	0.3	6.666	A
			2	1, 3, 4	465	763	0.610	464	471	2.8	1.5	12.959	B
	Exit	1	1		748			748	757	0.0	0.0	0.000	A
2 - Mitchell Way (E)	Entry	1	1	3, 4	70	897	0.078	70	70	0.1	0.1	4.764	A
			2	1, 2, (4)	142	897	0.158	141	141	0.3	0.2	5.081	A
	Exit	1	1		260			260	260	0.0	0.0	0.000	A
3 - George Curl Way (S)	Entry	1	1	1, 4	49	714	0.069	50	51	0.1	0.0	5.628	A
			2	(1), 2, 3	14	714	0.020	14	13	0.0	0.0	5.639	A
	Exit	1	1		205			205	209	0.0	0.0	0.000	A
4 - Wide Lane (W)	Entry	1	1	1, (2)	580	927	0.626	579	586	4.1	2.2	12.297	B
			2	2, 3, 4	117	927	0.126	117	119	0.2	0.1	4.593	A
	Exit	1	1		404			404	409	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.27	0.00	0.00	0.70	1.06
			2	1.71	0.00	0.67	3.67	6.10
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.12	0.00	0.00	0.00	0.63
			2	0.18	0.00	0.00	0.44	0.78
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.12	0.00	0.00	0.00	0.54
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	1.45	0.00	0.47	3.20	4.64
			2	0.16	0.00	0.00	0.23	0.88
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.47	0.00	0.00	0.96	2.50
			2	3.11	0.00	1.29	7.00	9.70
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.12	0.00	0.00	0.00	0.58
			2	0.35	0.00	0.00	0.82	1.31
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.09	0.00	0.00	0.00	0.46
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.92	0.00	1.54	6.40	8.50
			2	0.19	0.00	0.00	0.43	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.61	0.00	0.00	1.59	1.83
			2	8.68	0.00	5.65	21.00	24.50
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.16	0.00	0.00	0.29	0.79
			2	0.35	0.00	0.00	0.82	1.19
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.07	0.00	0.00	0.00	1.00
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	12.08	0.00	8.20	27.00	30.50
			2	0.31	0.00	0.00	0.78	1.44
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.62	0.00	0.00	1.70	2.36
			2	9.59	0.00	6.50	23.25	29.50
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.18	0.00	0.00	0.36	0.93
			2	0.30	0.00	0.00	0.80	1.35
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.12	0.00	0.00	0.07	0.63
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	14.48	0.00	9.20	33.00	40.50
			2	0.26	0.00	0.00	0.62	0.87
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:45 - 09:00

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.45	0.00	0.00	1.07	1.63
			2	2.78	0.00	1.32	6.50	9.75
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.12	0.00	0.00	0.00	0.65
			2	0.29	0.00	0.00	0.71	1.25
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.11	0.00	0.00	0.00	0.58
			2	0.03	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	4.06	0.00	1.69	9.75	14.75
			2	0.16	0.00	0.00	0.36	0.70
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

09:00 - 09:15

Arm	Side	Lane level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	Entry	1	1	0.31	0.00	0.00	0.81	1.45
			2	1.49	0.00	0.40	3.58	4.75
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - Mitchell Way (E)	Entry	1	1	0.10	0.00	0.00	0.00	0.46
			2	0.21	0.00	0.00	0.48	0.88
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - George Curl Way (S)	Entry	1	1	0.04	0.00	0.00	0.00	0.00
			2	0.02	0.00	0.00	0.00	0.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
4 - Wide Lane (W)	Entry	1	1	2.21	0.00	1.18	4.67	6.38
			2	0.13	0.00	0.00	0.17	0.64
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

FB 2028, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Wide Ln, Mitchell Way Rbt	Standard Roundabout		1, 2, 3, 4	46.41	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	FB 2028	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Wide Lane (N)		ONE HOUR	✓	887	100.000
2 - Mitchell Way (E)		ONE HOUR	✓	349	100.000
3 - George Curl Way (S)		ONE HOUR	✓	180	100.000
4 - Wide Lane (W)		ONE HOUR	✓	645	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	33	189	37	628
	2 - Mitchell Way (E)	248	2	4	95
	3 - George Curl Way (S)	115	23	0	42
	4 - Wide Lane (W)	498	130	17	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Wide Lane (N)	2 - Mitchell Way (E)	3 - George Curl Way (S)	4 - Wide Lane (W)
	1 - Wide Lane (N)	0	4	3	2
	2 - Mitchell Way (E)	4	0	0	6
	3 - George Curl Way (S)	2	0	0	0
	4 - Wide Lane (W)	3	6	6	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Wide Lane (N)	94.42	27.9	70.8	F	817	1226
2 - Mitchell Way (E)	6.86	0.7	2.7	A	323	484
3 - George Curl Way (S)	8.81	0.5	2.0	A	165	248
4 - Wide Lane (W)	12.06	2.3	8.1	B	589	884

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	669	167	131	664	655	673	0.0	2.7	12.663	B
2 - Mitchell Way (E)	272	68	534	272	264	261	0.0	0.4	5.199	A
3 - George Curl Way (S)	136	34	765	135	136	41	0.0	0.3	6.367	A
4 - Wide Lane (W)	482	121	321	483	486	579	0.0	0.9	7.009	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	800	200	153	800	787	805	2.7	4.5	20.460	C
2 - Mitchell Way (E)	313	78	645	313	311	307	0.4	0.4	5.457	A
3 - George Curl Way (S)	164	41	909	162	160	50	0.3	0.5	7.499	A
4 - Wide Lane (W)	582	145	377	581	580	694	0.9	1.4	7.877	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	988	247	193	926	916	981	4.5	20.4	53.480	F
2 - Mitchell Way (E)	383	96	739	383	379	379	0.4	0.7	6.426	A
3 - George Curl Way (S)	204	51	1061	204	197	62	0.5	0.5	8.785	A
4 - Wide Lane (W)	712	178	458	716	707	806	1.4	2.0	11.234	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	981	245	189	946	940	980	20.4	27.9	94.416	F
2 - Mitchell Way (E)	393	98	757	394	390	379	0.7	0.7	6.856	A
3 - George Curl Way (S)	193	48	1087	192	199	64	0.5	0.5	8.805	A
4 - Wide Lane (W)	705	176	462	707	714	818	2.0	2.3	12.064	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	795	199	153	835	865	797	27.9	12.1	72.665	F
2 - Mitchell Way (E)	314	78	677	314	314	311	0.7	0.5	6.015	A
3 - George Curl Way (S)	158	40	936	158	161	55	0.5	0.4	8.088	A
4 - Wide Lane (W)	576	144	376	574	580	718	2.3	1.5	8.612	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wide Lane (N)	668	167	128	683	708	668	12.1	2.9	26.377	D
2 - Mitchell Way (E)	262	65	550	262	261	261	0.5	0.4	5.445	A
3 - George Curl Way (S)	136	34	767	137	137	45	0.4	0.2	6.851	A
4 - Wide Lane (W)	480	120	316	480	486	588	1.5	0.8	6.752	A

Queue Variation Results for each time segment**16:45 - 17:00**

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.71	0.00	1.30	5.85	8.63
2 - Mitchell Way (E)	0.38	0.00	0.00	0.89	1.53
3 - George Curl Way (S)	0.26	0.00	0.00	0.61	0.89
4 - Wide Lane (W)	0.87	0.00	0.00	1.94	2.75

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	4.53	0.00	2.31	10.50	16.17
2 - Mitchell Way (E)	0.44	0.00	0.00	0.95	1.48
3 - George Curl Way (S)	0.45	0.00	0.00	1.33	1.81
4 - Wide Lane (W)	1.38	0.00	0.53	2.84	3.89

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	20.44	1.54	17.25	38.83	46.75
2 - Mitchell Way (E)	0.71	0.00	0.00	1.61	2.28
3 - George Curl Way (S)	0.48	0.00	0.00	1.23	1.88
4 - Wide Lane (W)	2.05	0.00	0.74	4.93	6.56

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	27.89	1.46	22.92	57.25	70.75
2 - Mitchell Way (E)	0.75	0.00	0.00	1.79	2.66
3 - George Curl Way (S)	0.52	0.00	0.00	1.05	2.04
4 - Wide Lane (W)	2.30	0.00	1.01	5.50	8.08

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	12.13	0.00	5.32	32.25	43.25
2 - Mitchell Way (E)	0.53	0.00	0.00	1.26	1.84
3 - George Curl Way (S)	0.41	0.00	0.00	0.88	1.88
4 - Wide Lane (W)	1.47	0.00	0.54	3.14	4.06

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1 - Wide Lane (N)	2.93	0.00	1.43	6.58	8.63
2 - Mitchell Way (E)	0.41	0.00	0.00	0.88	1.43
3 - George Curl Way (S)	0.19	0.00	0.00	0.46	0.88
4 - Wide Lane (W)	0.78	0.00	0.00	2.11	2.80