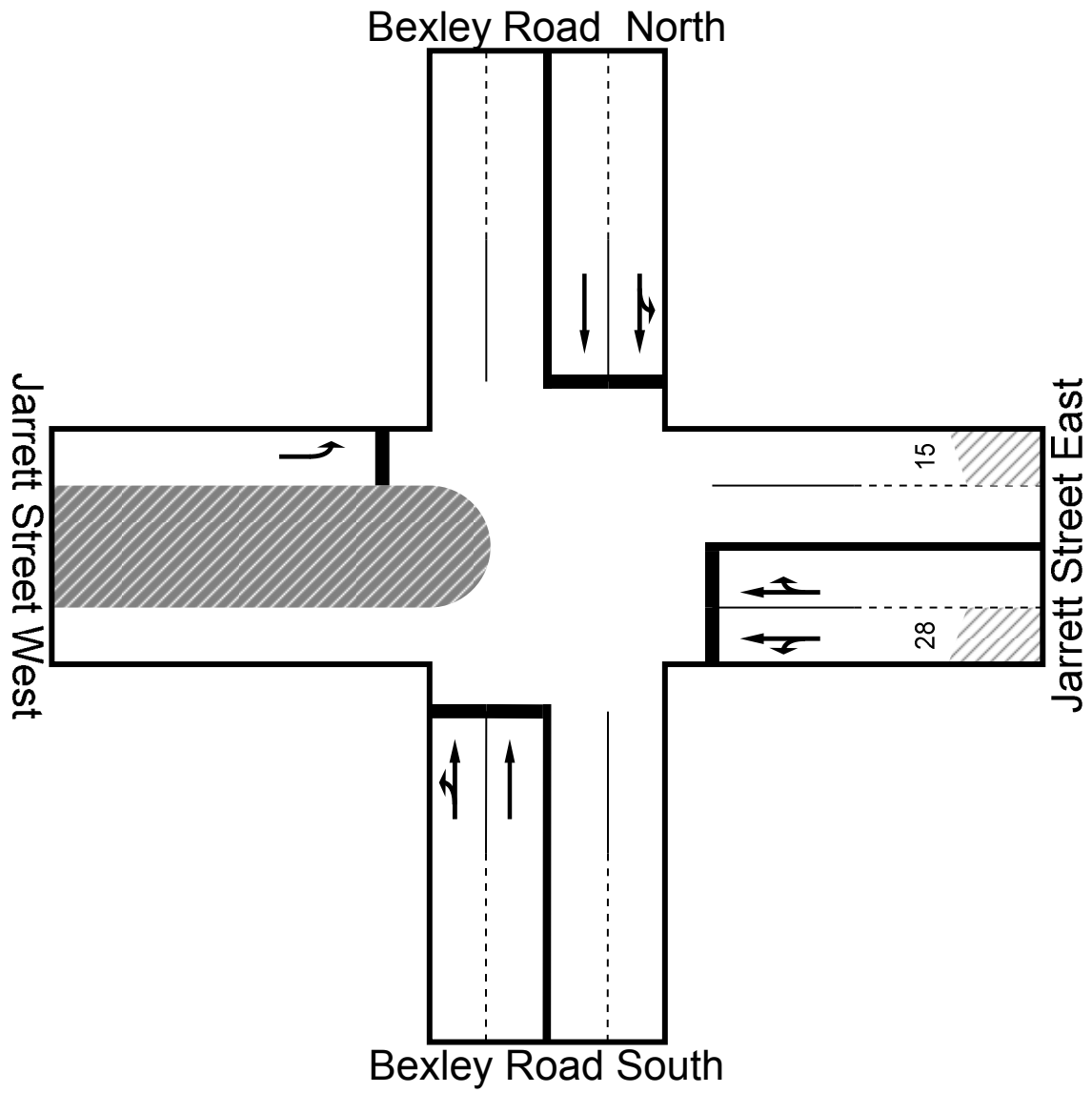




appendix 3a: SIDRA outputs (existing am peak)





Movement Summary

Bexley Rd and Jarrett St

Existing AM

Signalised - Fixed time

Cycle Time = 50 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road South										
1	L	8	0.0	0.222	12.7	LOS A	29	0.47	0.75	44.4
2	T	518	3.1	0.222	4.5	LOS A	29	0.47	0.40	53.4
Approach		526	3.0	0.222	4.6	LOS A	29	0.47	0.40	53.2
Jarrett Street East										
4	L	46	0.0	0.177	28.9	LOS C	11	0.92	0.73	30.5
5	T	11	0.0	0.203	21.9	LOS B	12	0.92	0.69	34.0
6	R	40	0.0	0.203	29.1	LOS C	12	0.92	0.74	30.4
Approach		97	0.0	0.203	28.2	LOS B	12	0.92	0.73	30.8
Bexley Road North										
7	L	8	0.0	0.174	12.6	LOS A	22	0.45	0.74	44.6
8	T	406	3.0	0.175	4.4	LOS A	22	0.45	0.38	53.6
Approach		414	2.9	0.175	4.5	LOS A	22	0.45	0.38	53.4
Jarrett Street West										
10	L	13	0.0	0.050	28.2	LOS B	3	0.89	0.68	30.8
Approach		13	0.0	0.050	28.2	LOS B	3	0.89	0.68	30.8
All Vehicles		1050	2.7	0.222	7.1	LOS A	29	0.51	0.43	49.5

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Conversion of Bexley Rd and Jarrett St AM

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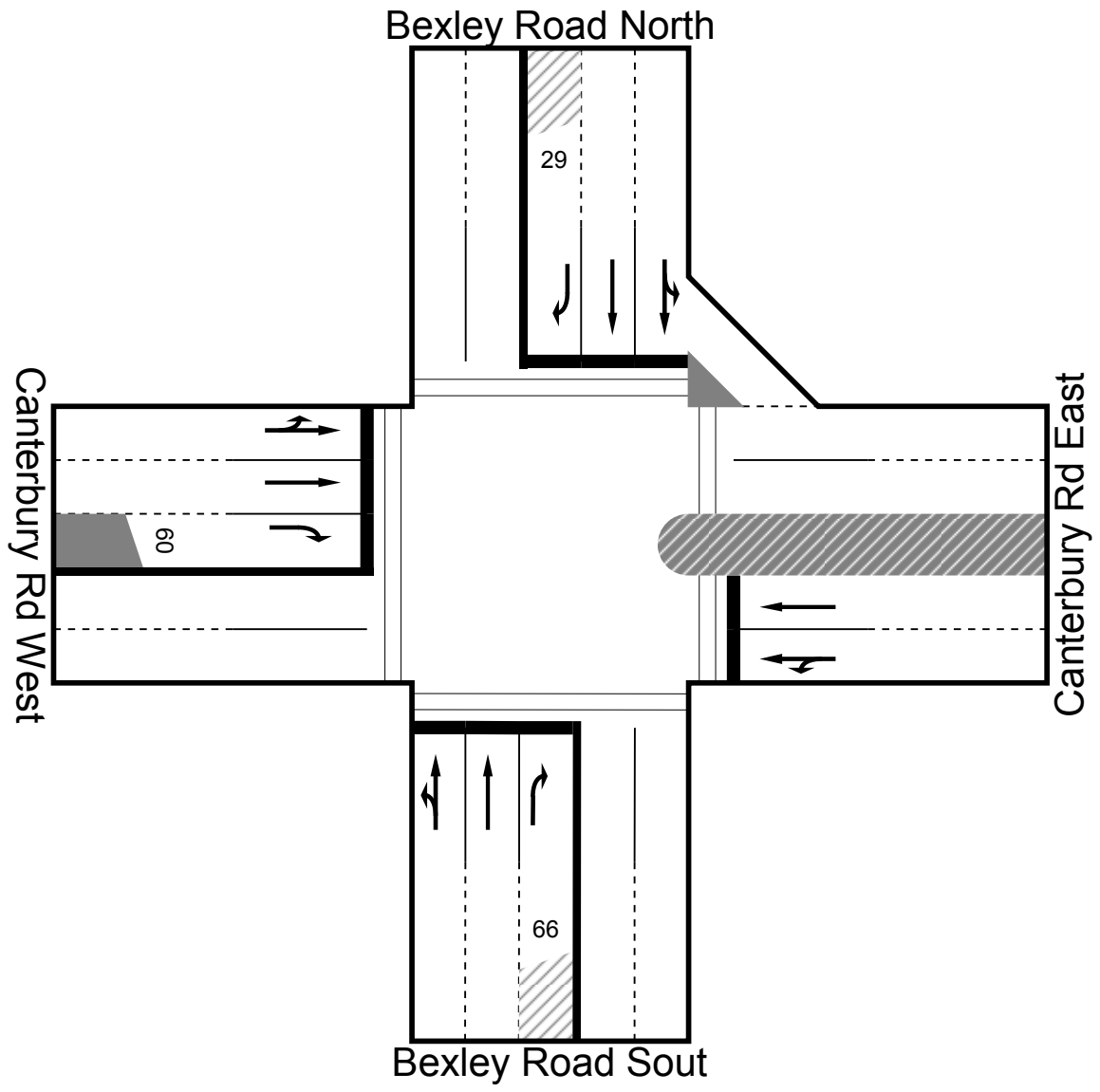
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Movement Summary

Canterbury Rd and Bexley Rd

Existing AM

Signalised - Actuated coordinated

Cycle Time = 133 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road Sout										
1	L	93	3.2	0.758	60.9	LOS E	136	0.95	0.84	22.4
2	T	469	3.0	0.758	55.4	LOS D	142	0.97	0.82	23.8
3	R	238	2.9	0.969	67.6	LOS E	123	0.96	0.86	21.0
Approach		800	3.0	0.969	59.6	LOS E	142	0.96	0.83	22.7
Canterbury Rd East										
4	L	124	3.2	0.479	29.2	LOS C	97	0.56	0.78	33.3
5	T	558	3.0	0.479	20.9	LOS B	99	0.56	0.48	38.1
Approach		682	3.1	0.479	22.4	LOS B	99	0.56	0.54	37.1
Bexley Road North										
7	L	40	2.5	0.484	69.6	LOS E	125	0.89	0.88	20.6
8	T	383	2.9	0.485	56.2	LOS D	125	0.89	0.78	23.6
9	R	59	3.4	0.483	53.9	LOS D	28	0.81	0.74	24.2
Approach		482	2.9	0.485	57.0	LOS E	125	0.88	0.78	23.4
Canterbury Rd West										
10	L	74	2.7	0.675	21.1	LOS B	144	0.49	0.78	38.0
11	T	1126	3.0	0.675	12.8	LOS A	145	0.49	0.45	44.4
12	R	158	3.2	0.646	25.8	LOS B	46	0.64	0.76	35.1
Approach		1358	3.0	0.675	14.7	LOS B	145	0.51	0.50	42.7
All Vehicles		3322	3.0	0.969	33.3	LOS C	145	0.68	0.63	31.3

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	21	60.6	LOS F	0	0.95	0.95
P3	26	60.6	LOS F	0	0.95	0.95
P5	21	60.6	LOS F	0	0.95	0.95
P7	21	60.6	LOS F	0	0.95	0.95

All Peds	89	60.6	LOS E	0	0.95	0.95
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Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Bexley Rd AM

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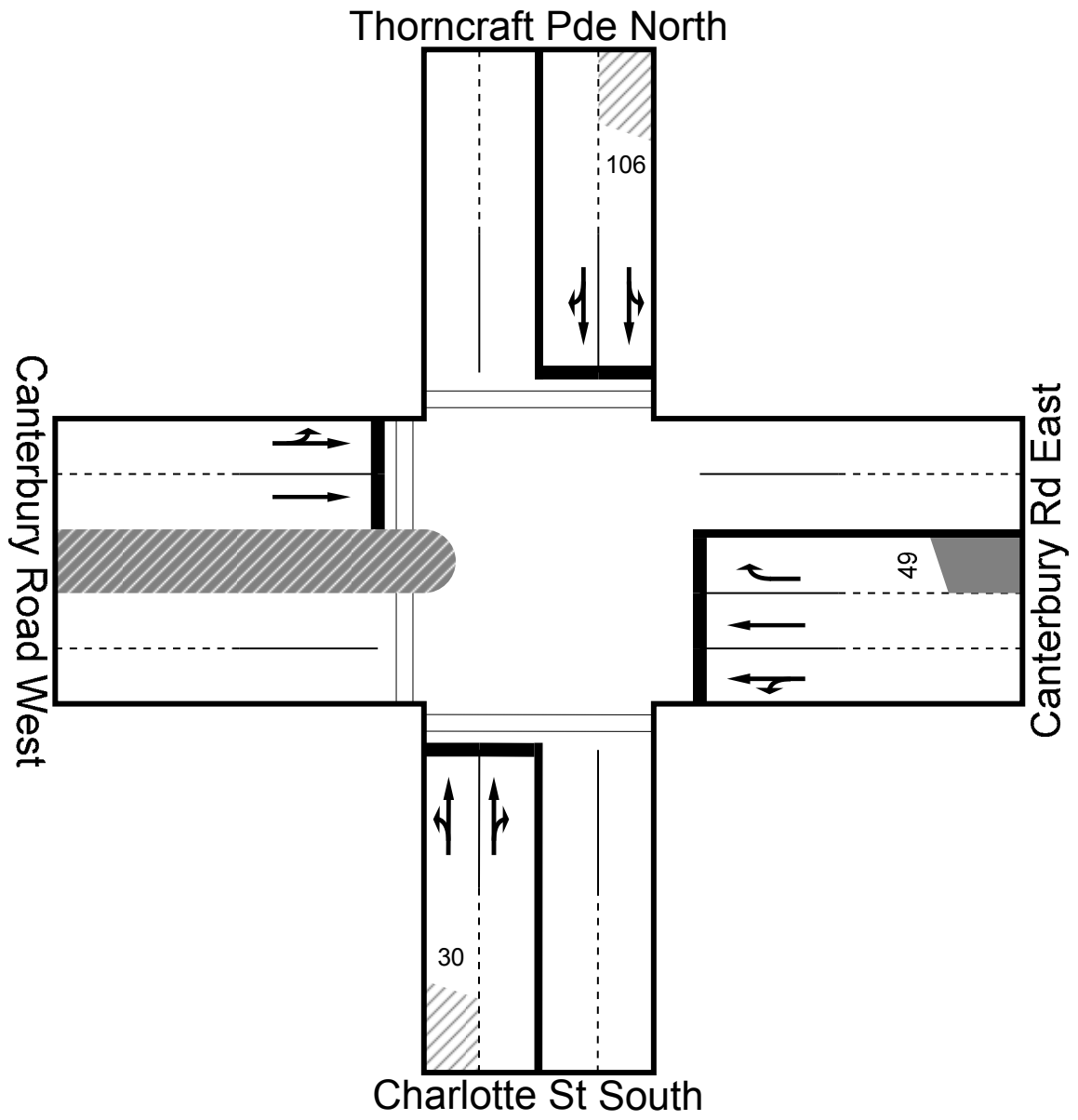
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Movement Summary

Canterbury Rd and Charlotte St AM

Existing AM

Signalised - Fixed time

Cycle Time = 70 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Charlotte St South										
1	L	2	0.0	0.778	39.0	LOS C	52	0.91	0.92	28.9
2	T	342	0.0	0.772	32.7	LOS C	69	0.95	0.90	31.6
3	R	51	2.0	0.772	42.6	LOS D	69	1.00	0.93	27.6
Approach		395	0.3	0.772	34.0	LOS C	69	0.96	0.90	31.0
Canterbury Rd East										
4	L	51	3.9	0.314	14.3	LOS A	54	0.48	0.76	43.1
5	T	718	3.1	0.314	6.0	LOS A	54	0.48	0.42	51.5
6	R	184	0.0	0.625	34.6	LOS C	54	0.99	0.88	30.7
Approach		953	2.5	0.624	12.0	LOS A	54	0.58	0.53	45.2
Thorncraft Pde North										
7	L	67	0.0	0.599	35.8	LOS C	67	0.95	0.82	30.2
8	T	264	1.1	0.599	29.3	LOS C	67	0.96	0.80	33.3
9	R	52	1.9	0.599	40.8	LOS C	45	0.98	0.82	28.2
Approach		384	1.0	0.599	32.0	LOS C	67	0.96	0.80	31.9
Canterbury Road West										
10	L	122	0.0	0.792	27.1	LOS B	165	0.90	0.93	34.3
11	T	1372	0.0	0.792	18.9	LOS B	166	0.90	0.87	39.5
Approach		1494	0.0	0.792	19.6	LOS B	166	0.90	0.87	39.0
All Vehicles		3226	0.9	0.792	20.6	LOS B	166	0.82	0.77	38.3

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	13.8	LOS B	0	0.63	0.63
P5	53	13.8	LOS B	0	0.63	0.63
P7	53	28.4	LOS C	0	0.90	0.90
All Peds	159	18.7	LOS B	0	0.72	0.72

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Charlotte St AM

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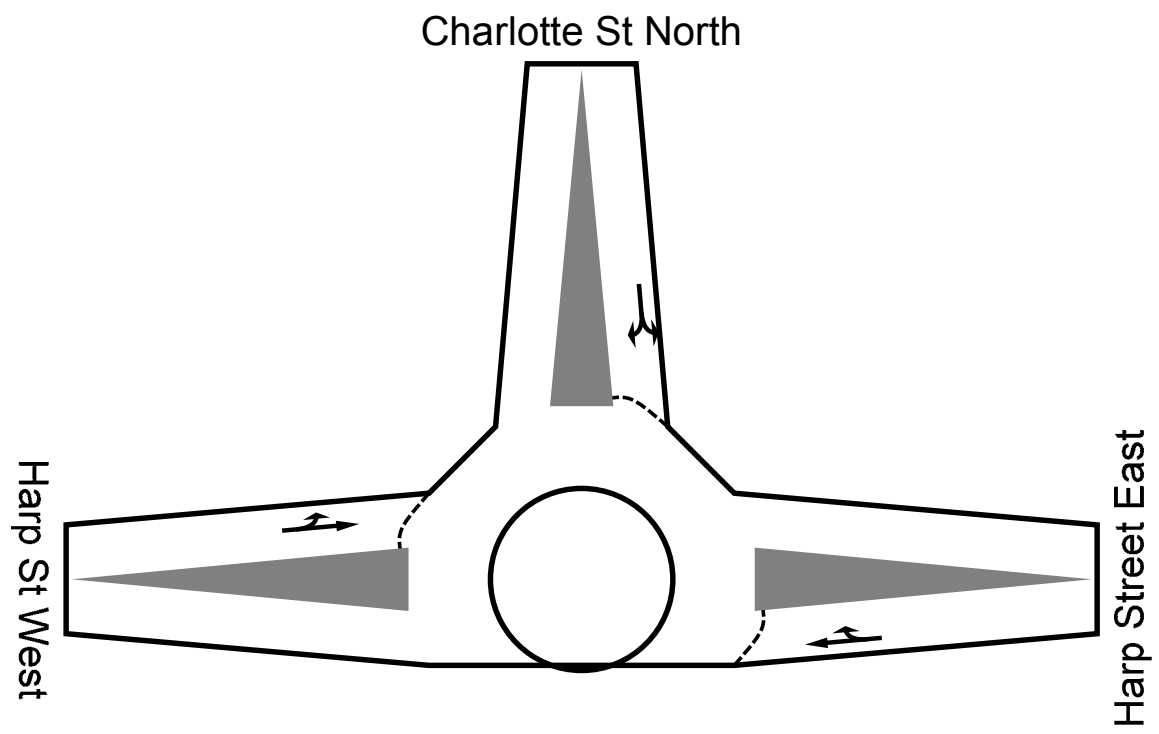
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Movement Summary

Charlotte St and Harp St

Existing AM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street East										
5	T	57	3.5	0.192	6.9	LOS A	10	0.45	0.60	42.4
6	R	136	3.7	0.192	10.5	LOS A	10	0.45	0.68	40.0
Approach		192	3.6	0.192	9.4	LOS A	10	0.45	0.66	40.7
Charlotte St North										
7	L	99	0.0	0.248	4.9	LOS A	14	0.29	0.46	43.7
9	R	234	3.0	0.247	9.5	LOS A	14	0.29	0.63	40.5
Approach		333	2.1	0.247	8.1	LOS A	14	0.29	0.58	41.4
Harp St West										
10	L	272	0.0	0.289	5.1	LOS A	16	0.36	0.49	43.4
11	T	101	4.0	0.289	4.2	LOS A	16	0.36	0.43	44.1
Approach		373	1.1	0.289	4.9	LOS A	16	0.36	0.47	43.6
All Vehicles		898	2.0	0.289	7.0	LOS A	16	0.36	0.55	42.1

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and Harp Street AM

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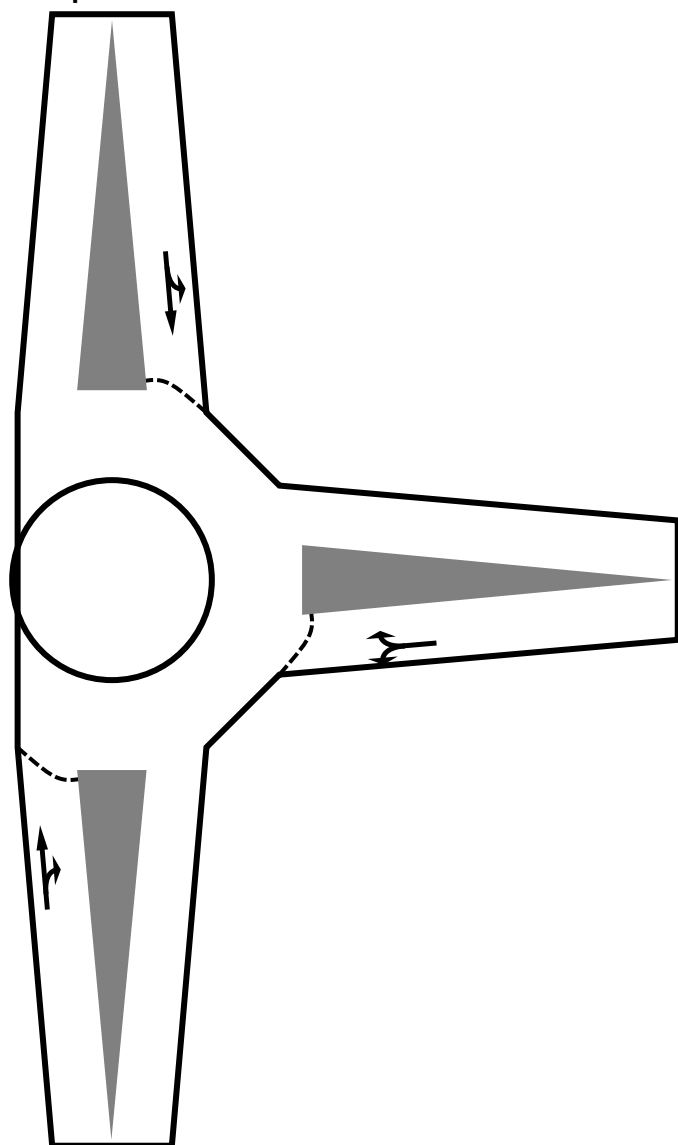
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Harp Street



Alfred Street South

Jarrett Street East



Movement Summary

Harp St and Alfred St AM

Existing AM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Alfred Street South										
2	T	166	0.0	0.157	7.8	LOS A	8	0.19	0.59	48.7
3	R	36	2.8	0.157	11.0	LOS A	8	0.19	0.69	45.9
Approach		202	0.5	0.157	8.4	LOS A	8	0.19	0.61	48.2
Jarrett Street East										
4	L	23	0.0	0.064	9.6	LOS A	3	0.28	0.66	47.1
6	R	48	0.0	0.064	11.2	LOS A	3	0.28	0.68	45.7
Approach		71	0.0	0.064	10.7	LOS A	3	0.28	0.68	46.1
Harp Street										
7	L	26	3.7	0.112	9.2	LOS A	5	0.15	0.67	47.6
8	T	114	2.7	0.113	7.9	LOS A	5	0.15	0.59	48.9
Approach		140	2.9	0.113	8.1	LOS A	5	0.15	0.61	48.6
All Vehicles		413	1.2	0.157	8.7	LOS A	8	0.19	0.62	48.0

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Harp St and Alfred St AM

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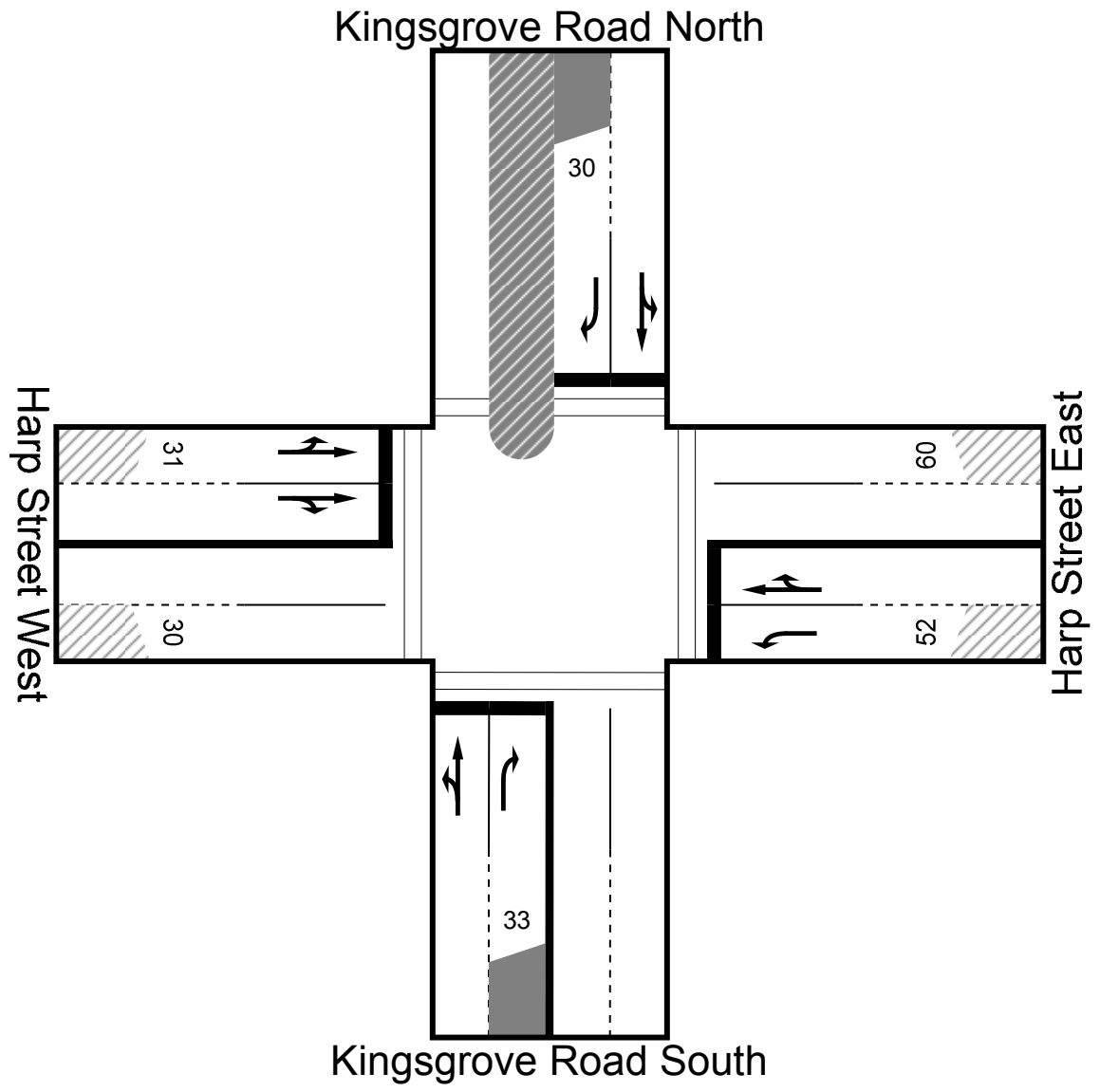
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Movement Summary

Kingsgrove Rd and Harp St

Existing AM

Signalised - Fixed time

Cycle Time = 80 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Kingsgrove Road South										
1	L	35	0.0	0.647	22.9	LOS B	137	0.77	0.85	36.8
2	T	612	3.3	0.647	14.7	LOS B	137	0.77	0.69	42.7
3	R	221	0.5	0.624	19.8	LOS B	36	0.82	0.81	38.9
Approach		868	2.4	0.646	16.3	LOS B	137	0.79	0.73	41.4
Harp Street East										
4	L	203	3.0	0.638	42.0	LOS C	68	0.98	0.84	25.8
5	T	79	0.0	0.326	32.3	LOS C	34	0.92	0.72	29.2
6	R	17	11.8	0.325	39.9	LOS C	34	0.92	0.77	26.6
Approach		299	2.7	0.638	39.3	LOS C	68	0.96	0.80	26.7
Kingsgrove Road North										
7	L	64	0.0	0.635	22.7	LOS B	132	0.77	0.84	36.9
8	T	582	0.0	0.634	14.5	LOS B	132	0.77	0.69	42.9
9	R	7	0.0	0.020	17.4	LOS B	1	0.66	0.68	40.5
Approach		653	0.0	0.634	15.4	LOS B	132	0.77	0.70	42.2
Harp Street West										
10	L	21	0.0	0.184	37.7	LOS C	13	0.87	0.72	27.1
11	T	86	0.0	0.498	36.1	LOS C	38	0.96	0.74	27.8
12	R	32	0.0	0.498	44.5	LOS D	38	0.98	0.78	25.0
Approach		139	0.0	0.498	38.3	LOS C	38	0.95	0.75	27.0
All Vehicles		1959	1.5	0.647	21.1	LOS B	137	0.82	0.73	37.1

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	34.2	LOS D	0	0.93	0.93
P3	53	13.2	LOS B	0	0.57	0.57
P5	53	32.4	LOS D	0	0.90	0.90

P7	53	13.2	LOS B	0	0.57	0.57
All Peds	212	23.3	LOS B	0	0.74	0.74

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Kingsgrove Rd and Harp St AM

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appendix 3b:

SIDRA outputs (existing pm peak)



Movement Summary

Bexley Rd and Jarrett St PM

Existing PM

Signalised - Fixed time

Cycle Time = 50 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road South										
1	L	13	0.0	0.415	23.0	LOS B	47	0.83	0.80	36.7
2	T	495	3.0	0.415	14.8	LOS B	47	0.83	0.69	42.6
Approach		508	3.0	0.415	15.0	LOS B	47	0.83	0.69	42.5
Jarrett Street East										
4	L	171	0.0	0.456	16.6	LOS B	26	0.65	0.75	36.8
5	T	4	0.0	0.044	8.7	LOS A	5	0.59	0.44	42.7
6	R	26	0.0	0.044	15.9	LOS B	5	0.59	0.70	37.3
Approach		201	0.0	0.456	16.4	LOS B	26	0.64	0.74	37.0
Bexley Road North										
7	L	44	0.0	0.465	23.3	LOS B	53	0.85	0.81	36.5
8	T	524	3.1	0.465	15.1	LOS B	53	0.85	0.71	42.4
Approach		568	2.8	0.465	15.8	LOS B	53	0.85	0.72	41.9
Jarrett Street West										
10	L	15	0.0	0.052	15.7	LOS B	2	0.58	0.67	37.4
11	T	11	0.0	0.025	8.6	LOS A	3	0.59	0.42	42.8
12	R	6	0.0	0.025	15.8	LOS B	3	0.59	0.69	37.4
Approach		32	0.0	0.052	13.3	LOS A	3	0.59	0.59	39.1
All Vehicles		1309	2.4	0.465	15.5	LOS B	53	0.80	0.71	41.2

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Conversion of Bexley Rd and Jarrett St PM

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Movement Summary

Canterbury Rd and Bexley Rd

Existing PM

Signalised - Actuated coordinated Cycle Time = 127 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road Sout										
1	L	131	3.1	0.759	54.2	LOS D	152	0.92	0.87	24.1
2	T	480	2.6	0.759	49.7	LOS D	160	0.95	0.84	25.4
3	R	333	3.7	1.000#	58.7	LOS E	123	0.95	0.83	22.9
Approach		944	3.0	1.000	52.9	LOS D	160	0.95	0.84	24.5
Canterbury Rd East										
4	L	236	3.0	0.962	44.1	LOS D	343	0.99	1.03	27.1
5	T	1200	3.0	0.962	35.8	LOS C	348	0.99	1.02	30.3
Approach		1436	3.0	0.962	37.2	LOS C	348	0.99	1.02	29.7
Bexley Road North										
7	L	57	3.5	0.732	74.9	LOS F	126	0.98	0.92	19.6
8	T	384	3.0	0.734	63.0	LOS E	126	0.98	0.86	22.0
9	R	126	3.4	1.001#	63.6	LOS E	57	0.93	0.78	21.8
Approach		569	3.2	1.000	64.3	LOS E	126	0.97	0.85	21.7
Canterbury Rd West										
10	L	63	3.2	0.520	17.2	LOS B	81	0.34	0.74	40.7
11	T	907	3.0	0.521	8.9	LOS A	82	0.34	0.30	48.2
12	R	126	3.1	0.771	40.2	LOS C	41	0.98	0.79	28.5
Approach		1097	3.0	0.771	13.0	LOS A	82	0.41	0.38	44.2
All Vehicles		4046	3.0	1.001	38.1	LOS C	348	0.82	0.78	29.3

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	21	57.6	LOS E	0	0.95	0.95
P3	26	57.6	LOS E	0	0.95	0.95
P5	53	57.6	LOS E	0	0.95	0.95
P7	53	57.6	LOS E	0	0.95	0.95

All Peds	153	57.6	LOS E	0	0.95	0.95
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Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Bexley Rd PM

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Movement Summary

Canterbury Rd and Charlotte St AM

Existing PM

Signalised - Fixed time

Cycle Time = 60 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Charlotte St South										
1	L	20	0.0	0.560	26.8	LOS B	35	0.82	0.78	34.5
2	T	267	0.0	0.561	21.6	LOS B	46	0.88	0.72	37.7
3	R	49	2.0	0.561	32.8	LOS C	46	0.95	0.81	31.6
Approach		336	0.3	0.561	23.5	LOS B	46	0.89	0.73	36.4
Canterbury Rd East										
4	L	84	3.5	0.585	18.0	LOS B	97	0.71	0.83	40.2
5	T	1143	3.0	0.586	9.7	LOS A	97	0.71	0.64	47.3
6	R	158	0.0	0.443	26.9	LOS B	38	0.91	0.80	34.4
Approach		1386	2.7	0.586	12.2	LOS A	97	0.74	0.67	44.9
Thorncraft Pde North										
7	L	93	0.0	0.694	30.4	LOS C	85	0.95	0.88	32.6
8	T	380	1.1	0.694	23.3	LOS B	85	0.95	0.85	36.6
9	R	119	0.8	0.694	34.5	LOS C	57	0.97	0.89	30.7
Approach		592	0.8	0.694	26.7	LOS B	85	0.96	0.86	34.6
Canterbury Road West										
10	L	122	0.0	0.712	27.1	LOS B	103	0.92	0.89	34.4
11	T	891	0.0	0.713	18.9	LOS B	104	0.92	0.83	39.5
Approach		1013	0.0	0.713	19.8	LOS B	104	0.92	0.84	38.8
All Vehicles		3327	1.3	0.713	18.2	LOS B	104	0.85	0.76	40.0

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	17.6	LOS B	0	0.77	0.77
P5	53	17.6	LOS B	0	0.77	0.77
P7	53	21.7	LOS C	0	0.85	0.85
All Peds	159	19.0	LOS B	0	0.79	0.79

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Charlotte St PM

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Movement Summary

Charlotte St and Harp St

Existing PM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street East										
5	T	85	3.5	0.198	7.6	LOS A	10	0.52	0.64	42.1
6	R	98	4.1	0.198	11.1	LOS A	10	0.52	0.72	39.8
Approach		183	3.8	0.198	9.5	LOS A	10	0.52	0.68	40.8
Charlotte St North										
7	L	157	0.0	0.344	4.8	LOS A	20	0.29	0.46	43.8
9	R	326	3.1	0.343	9.5	LOS A	20	0.29	0.63	40.5
Approach		484	2.1	0.343	8.0	LOS A	20	0.29	0.57	41.5
Harp St West										
10	L	229	0.0	0.233	4.9	LOS A	13	0.30	0.46	43.7
11	T	84	3.6	0.233	3.9	LOS A	13	0.30	0.40	44.5
Approach		313	1.0	0.233	4.6	LOS A	13	0.30	0.44	43.9
All Vehicles		980	2.0	0.344	7.2	LOS A	20	0.33	0.55	42.1

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and Harp Street PM

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Movement Summary

Harp St and Alfred St PM

Existing PM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Alfred Street South										
2	T	21	0.0	0.124	7.6	LOS A	6	0.12	0.59	49.1
3	R	149	2.7	0.124	10.8	LOS A	6	0.12	0.70	46.2
Approach		170	2.4	0.124	10.4	LOS A	6	0.12	0.69	46.5
Jarrett Street East										
4	L	38	0.0	0.058	9.8	LOS A	3	0.34	0.66	46.9
6	R	23	0.0	0.058	11.5	LOS A	3	0.34	0.68	45.5
Approach		61	0.0	0.058	10.4	LOS A	3	0.34	0.67	46.4
Harp Street										
7	L	67	1.5	0.207	10.0	LOS A	10	0.35	0.68	46.9
8	T	156	3.2	0.207	8.6	LOS A	10	0.35	0.62	48.0
Approach		223	2.7	0.207	9.0	LOS A	10	0.35	0.64	47.6
All Vehicles		454	2.2	0.207	9.8	LOS A	10	0.26	0.66	47.0

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Harp St and Alfred St PM

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Movement Summary

Kingsgrove Rd and Harp St

Existing PM

Signalised - Fixed time

Cycle Time = 70 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Kingsgrove Road South										
1	L	58	0.0	0.890	41.5	LOS C	200	1.00	1.12	28.0
2	T	619	3.2	0.888	33.3	LOS C	200	1.00	1.12	31.3
3	R	205	1.0	0.566	21.7	LOS B	36	0.91	0.80	37.6
Approach		882	2.5	0.888	31.1	LOS C	200	0.98	1.04	32.3
Harp Street East										
4	L	323	4.0	0.904	40.0	LOS C	96	0.96	0.98	26.4
5	T	132	0.8	0.355	23.5	LOS B	43	0.86	0.70	33.1
6	R	28	7.1	0.355	31.0	LOS C	43	0.86	0.79	29.7
Approach		484	3.3	0.904	34.9	LOS C	96	0.93	0.89	28.2
Kingsgrove Road North										
7	L	25	0.0	0.702	27.7	LOS B	120	0.90	0.87	34.0
8	T	519	1.7	0.705	19.5	LOS B	120	0.90	0.80	39.1
9	R	13	0.0	0.045	22.7	LOS B	2	0.87	0.68	36.9
Approach		556	1.6	0.705	19.9	LOS B	120	0.89	0.80	38.8
Harp Street West										
10	L	15	0.0	0.111	28.4	LOS B	8	0.78	0.70	30.7
11	T	40	0.0	0.300	28.5	LOS C	20	0.89	0.67	30.8
12	R	32	0.0	0.300	38.9	LOS C	20	0.94	0.75	26.7
Approach		87	0.0	0.300	32.3	LOS C	20	0.89	0.71	29.1
All Vehicles		2009	2.3	0.904	29.0	LOS C	200	0.94	0.93	32.5

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	25.7	LOS C	0	0.86	0.86
P3	53	17.9	LOS B	0	0.71	0.71
P5	53	24.0	LOS C	0	0.83	0.83

P7	53	17.9	LOS B	0	0.71	0.71
All Peds	212	21.4	LOS B	0	0.78	0.78

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Kingsgrove Rd and Harp St PM

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appendix 3c: SIDRA outputs (future am peak)



Movement Summary

Bexley Rd and Jarrett St

Future AM

Signalised - Fixed time

Cycle Time = 65 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road South										
1	L	8	0.0	0.213	13.2	LOS A	34	0.44	0.75	44.0
2	T	518	3.1	0.213	5.0	LOS A	34	0.44	0.37	52.7
Approach		526	3.0	0.213	5.2	LOS A	34	0.44	0.38	52.5
Jarrett Street East										
4	L	46	0.0	0.217	32.9	LOS C	14	0.89	0.73	28.9
5	T	17	0.0	0.212	26.3	LOS B	17	0.90	0.68	31.8
6	R	40	0.0	0.213	33.5	LOS C	17	0.90	0.75	28.6
Approach		103	0.0	0.217	32.0	LOS C	17	0.89	0.73	29.2
Bexley Road North										
7	L	8	0.0	0.167	13.1	LOS A	26	0.42	0.74	44.1
8	T	406	3.0	0.168	4.9	LOS A	26	0.42	0.35	52.9
Approach		414	2.9	0.168	5.0	LOS A	26	0.42	0.36	52.7
Jarrett Street West										
10	L	45	0.0	0.143	32.8	LOS C	13	0.89	0.73	28.9
Approach		45	0.0	0.143	32.8	LOS C	13	0.89	0.73	28.9
All Vehicles		1088	2.6	0.217	8.8	LOS A	34	0.49	0.42	47.4

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Conversion of Bexley Rd and Jarrett St AM

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Movement Summary

Canterbury Rd and Bexley Rd

Future AM

Signalised - Actuated coordinated

Cycle Time = 133 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road Sout										
1	L	97	3.1	0.773	61.0	LOS E	139	0.95	0.84	22.4
2	T	476	2.9	0.773	55.5	LOS D	144	0.97	0.82	23.7
3	R	238	2.9	0.969	67.6	LOS E	123	0.96	0.86	21.0
Approach		811	3.0	0.969	59.7	LOS E	144	0.96	0.83	22.7
Canterbury Rd East										
4	L	124	3.2	0.534	29.8	LOS C	112	0.59	0.79	33.0
5	T	637	3.0	0.534	21.5	LOS B	114	0.59	0.51	37.7
Approach		761	3.0	0.534	22.8	LOS B	114	0.59	0.56	36.9
Bexley Road North										
7	L	40	2.5	0.484	70.0	LOS E	127	0.89	0.88	20.5
8	T	383	2.9	0.485	56.4	LOS D	127	0.89	0.78	23.5
9	R	69	2.9	0.562	54.2	LOS D	32	0.82	0.74	24.1
Approach		492	2.8	0.562	57.2	LOS E	127	0.88	0.78	23.3
Canterbury Rd West										
10	L	81	2.5	0.730	21.5	LOS B	167	0.54	0.80	37.7
11	T	1216	3.0	0.729	13.3	LOS A	168	0.54	0.49	44.0
12	R	158	3.2	0.711	27.0	LOS B	49	0.70	0.77	34.5
Approach		1454	3.0	0.729	15.2	LOS B	168	0.56	0.54	42.3
All Vehicles		3518	3.0	0.969	33.0	LOS C	168	0.70	0.64	31.5

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	21	60.6	LOS F	0	0.95	0.95
P3	26	60.6	LOS F	0	0.95	0.95
P5	21	60.6	LOS F	0	0.95	0.95
P7	21	60.6	LOS F	0	0.95	0.95

All Peds	89	60.6	LOS E	0	0.95	0.95
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Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Bexley Rd AM

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Movement Summary

Canterbury Rd and Charlotte St AM

Future AM

Signalised - Fixed time

Cycle Time = 100 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Charlotte St South										
1	L	19	0.0	0.890	44.2	LOS D	61	0.87	0.86	27.0
2	T	358	0.0	0.891	46.5	LOS D	143	0.94	0.96	26.3
3	R	133	2.3	0.892	62.9	LOS E	143	1.00	1.10	22.0
Approach		510	0.6	0.891	50.7	LOS D	143	0.95	0.99	25.1
Canterbury Rd East										
4	L	129	3.1	0.406	22.2	LOS B	95	0.62	0.80	37.3
5	T	718	3.1	0.406	13.9	LOS A	96	0.62	0.55	43.4
6	R	184	0.0	0.912	74.9	LOS F	88	1.00	1.18	19.6
Approach		1032	2.5	0.912	25.8	LOS B	96	0.69	0.69	35.1
Thorncraft Pde North										
7	L	67	0.0	0.431	34.1	LOS C	72	0.79	0.80	30.9
8	T	280	1.1	0.431	29.6	LOS C	72	0.83	0.69	33.1
9	R	52	1.9	0.430	43.6	LOS D	60	0.90	0.81	27.2
Approach		399	1.0	0.431	32.2	LOS C	72	0.83	0.72	31.8
Canterbury Road West										
10	L	122	0.0	0.875	44.5	LOS D	265	0.98	1.03	27.0
11	T	1372	0.0	0.874	36.2	LOS C	267	0.98	1.01	30.1
Approach		1494	0.0	0.874	36.9	LOS C	267	0.98	1.02	29.8
All Vehicles		3435	1.0	0.912	35.1	LOS C	267	0.87	0.88	30.6

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	20.5	LOS C	0	0.64	0.64
P5	53	20.5	LOS C	0	0.64	0.64
P7	53	26.6	LOS C	0	0.73	0.73
All Peds	159	22.5	LOS B	0	0.67	0.67

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Charlotte St AM

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Movement Summary

Charlotte St and Harp St

Future AM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street East										
5	T	177	4.0	0.328	7.2	LOS A	19	0.52	0.63	42.1
6	R	148	4.1	0.327	10.8	LOS A	19	0.52	0.70	39.8
Approach		325	4.0	0.328	8.8	LOS A	19	0.52	0.66	41.0
Charlotte St North										
7	L	106	0.0	0.294	5.5	LOS A	17	0.44	0.53	43.0
9	R	244	2.9	0.293	10.1	LOS A	17	0.44	0.67	40.0
Approach		350	2.0	0.293	8.7	LOS A	17	0.44	0.63	40.9
Harp St West										
10	L	315	0.0	0.400	5.3	LOS A	26	0.43	0.51	43.1
11	T	200	4.0	0.400	4.4	LOS A	26	0.43	0.46	43.7
Approach		515	1.6	0.400	4.9	LOS A	26	0.43	0.49	43.3
All Vehicles		1190	2.4	0.400	7.1	LOS A	26	0.46	0.58	41.9

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and Harp Street AM

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Movement Summary

Charlotte St and New Troy St

Future AM

Give-way

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
New S leg										
2	T	463	1.9	0.240	0.0	LOS A	0	0.00	0.00	60.0
3	R	43	0.0	0.062	10.2	LOS A	2	0.45	0.71	46.8
Approach		506	1.8	0.240	0.9	LOS A	2	0.04	0.06	58.6
New E leg										
4	L	18	5.3	0.024	10.3	LOS A	1	0.42	0.69	46.8
6	R	102	2.0	0.490	32.8	LOS C	20	0.87	1.06	31.5
Approach		121	2.5	0.490	29.3	LOS C	20	0.80	1.00	33.2
New N leg										
7	L	79	0.0	0.216	8.2	LOS A	0	0.00	0.67	49.0
8	T	333	2.1	0.216	0.0	LOS A	0	0.00	0.00	60.0
Approach		412	1.7	0.216	1.6	LOS A		0.00	0.13	57.5
All Vehicles		1039	1.8	0.490	4.5	Not Applicable	20	0.11	0.20	53.5

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and New Troy St AM

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Movement Summary

Harp St and Alfred St AM

Future AM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Alfred Street South										
2	T	214	0.0	0.205	8.0	LOS A	10	0.26	0.59	48.4
3	R	36	2.8	0.205	11.2	LOS A	10	0.26	0.68	45.7
Approach		250	0.4	0.205	8.5	LOS A	10	0.26	0.60	48.0
Jarrett Street East										
4	L	23	0.0	0.097	9.9	LOS A	4	0.34	0.67	46.9
6	R	80	0.0	0.098	11.6	LOS A	4	0.34	0.69	45.5
Approach		103	0.0	0.098	11.2	LOS A	4	0.34	0.69	45.8
Harp Street										
7	L	59	1.7	0.176	9.2	LOS A	9	0.16	0.67	47.5
8	T	163	3.1	0.176	7.9	LOS A	9	0.16	0.59	48.9
Approach		222	2.7	0.176	8.2	LOS A	9	0.16	0.61	48.5
All Vehicles		575	1.2	0.205	8.9	LOS A	10	0.24	0.62	47.8

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Harp St and Alfred St AM

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Movement Summary

Kingsgrove Rd and Harp St

Future AM

Signalised - Fixed time

Cycle Time = 70 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Kingsgrove Road South										
1	L	35	0.0	0.743	26.1	LOS B	141	0.88	0.89	34.9
2	T	612	3.3	0.743	17.9	LOS B	141	0.88	0.81	40.2
3	R	268	0.4	0.834	30.7	LOS C	58	1.00	0.97	32.5
Approach		915	2.3	0.834	22.0	LOS B	141	0.92	0.86	37.4
Harp Street East										
4	L	246	2.4	0.674	37.1	LOS C	71	0.98	0.87	27.4
5	T	84	0.0	0.651	30.8	LOS C	56	0.98	0.84	29.8
6	R	99	2.0	0.651	38.1	LOS C	56	0.98	0.86	27.0
Approach		429	1.9	0.674	36.1	LOS C	71	0.98	0.86	27.7
Kingsgrove Road North										
7	L	143	0.0	0.821	30.7	LOS C	173	0.94	0.98	32.5
8	T	582	0.0	0.821	22.5	LOS B	173	0.94	0.93	37.1
9	R	7	0.0	0.019	18.8	LOS B	1	0.75	0.67	39.5
Approach		732	0.0	0.821	24.0	LOS B	173	0.93	0.94	36.1
Harp Street West										
10	L	21	0.0	0.175	32.4	LOS C	12	0.85	0.72	29.1
11	T	102	0.0	0.474	30.3	LOS C	37	0.94	0.74	30.0
12	R	32	0.0	0.474	38.7	LOS C	37	0.96	0.78	26.8
Approach		155	0.0	0.475	32.3	LOS C	37	0.93	0.74	29.2
All Vehicles		2231	1.3	0.834	26.1	LOS B	173	0.94	0.88	34.1

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	53	29.3	LOS C	0	0.91	0.91
P3	53	15.1	LOS B	0	0.66	0.66
P5	53	27.5	LOS C	0	0.89	0.89

P7	53	15.1	LOS B	0	0.66	0.66
All Peds	212	21.7	LOS B	0	0.78	0.78

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



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Site: Kingsgrove Rd and Harp St AM

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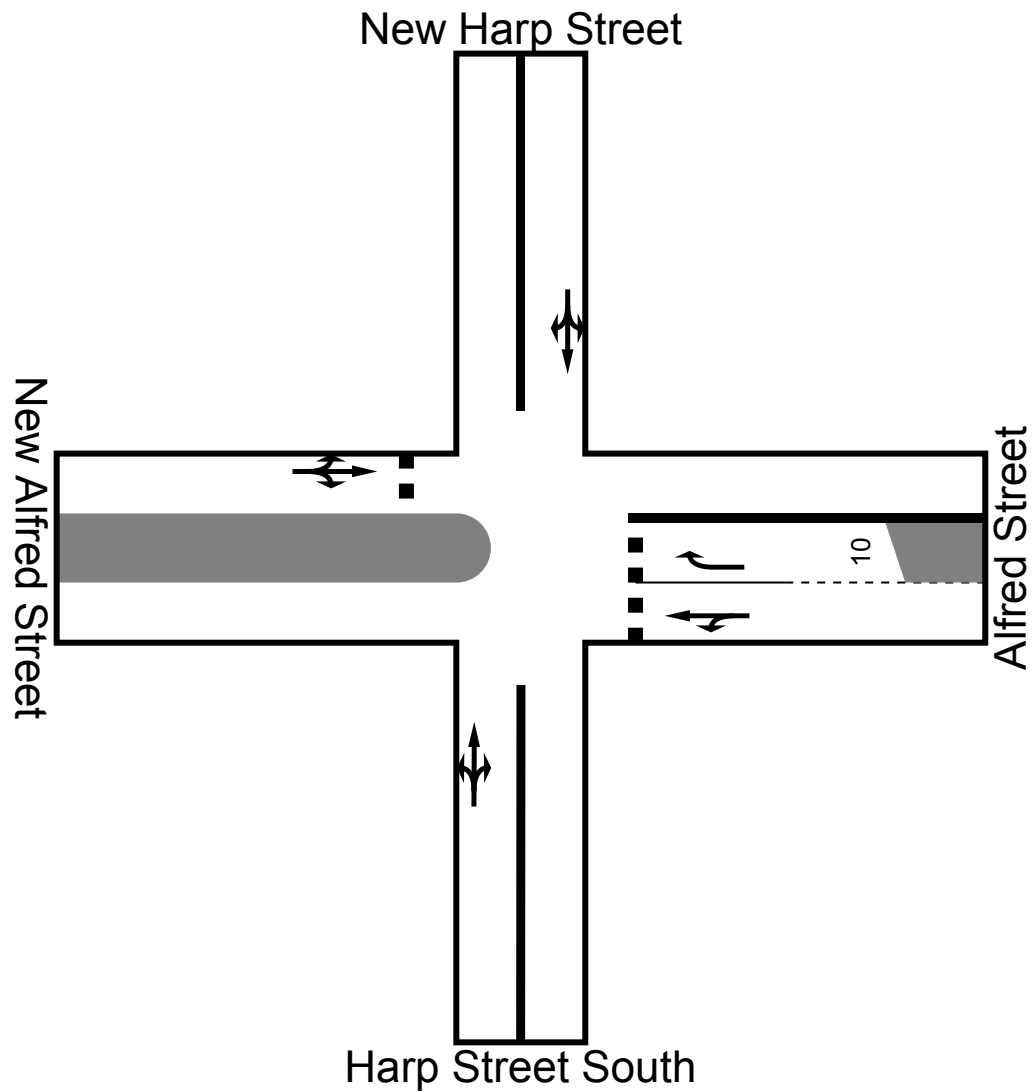
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Movement Summary

New Harp St and New Alfred St

Future AM

Give-way

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
New S leg										
1	L	16	0.0	0.157	8.8	LOS A	7	0.27	0.49	47.8
2	T	32	3.1	0.157	0.6	LOS A	7	0.27	0.00	56.4
3	R	167	1.8	0.157	9.0	LOS A	7	0.27	0.64	47.7
Approach		215	1.9	0.157	7.7	LOS A	7	0.27	0.53	48.8
New E leg										
4	L	42	0.0	0.069	9.4	LOS A	2	0.25	0.62	47.7
5	T	21	0.0	0.069	8.1	LOS A	2	0.25	0.63	49.0
6	R	16	0.0	0.028	11.5	LOS A	1	0.45	0.70	45.5
Approach		79	0.0	0.069	9.5	LOS A	2	0.29	0.64	47.6
New N leg										
7	L	59	0.0	0.077	8.4	LOS A	4	0.18	0.55	48.1
8	T	72	0.0	0.077	0.2	LOS A	4	0.18	0.00	57.5
9	R	11	0.0	0.077	8.5	LOS A	4	0.18	0.62	48.0
Approach		142	0.0	0.077	4.2	LOS A	4	0.18	0.28	52.5
New W leg										
10	L	9	0.0	0.037	10.2	LOS A	1	0.20	0.60	46.8
11	T	11	0.0	0.037	8.9	LOS A	1	0.20	0.61	48.1
12	R	7	0.0	0.037	10.4	LOS A	1	0.20	0.69	46.6
Approach		27	0.0	0.037	9.7	LOS A	1	0.20	0.63	47.3
All Vehicles										
		463	0.9	0.157	7.0	Not Applicable	7	0.24	0.48	49.6

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: New Harp St and New Alfred St AM

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appendix 3d: SIDRA outputs (future pm peak)



Movement Summary

Bexley Rd and Jarrett St

Future PM

Signalised - Fixed time

Cycle Time = 95 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road South										
1	L	57	0.0	0.292	23.3	LOS B	65	0.63	0.79	36.5
2	T	495	3.0	0.293	15.1	LOS B	66	0.63	0.54	42.4
Approach		552	2.7	0.293	16.0	LOS B	66	0.63	0.56	41.7
Jarrett Street East										
4	L	171	0.0	0.200	27.1	LOS B	13	0.66	0.71	31.3
5	T	16	0.0	0.304	2.5	LOS A	51	0.08	0.07	33.7
6	R	26	0.0	0.304	29.6	LOS C	51	0.74	0.78	30.2
Approach		213	0.0	0.303	10.5	LOS A	51	0.27	0.28	31.3
Bexley Road North										
7	L	44	0.0	0.300	23.4	LOS B	67	0.63	0.79	36.5
8	T	524	3.1	0.301	15.2	LOS B	68	0.63	0.54	42.3
Approach		568	2.8	0.301	15.8	LOS B	68	0.63	0.56	41.8
Jarrett Street West										
10	L	69	0.0	0.098	27.5	LOS B	21	0.68	0.74	31.1
Approach		69	0.0	0.098	27.5	LOS B	21	0.68	0.74	31.1
All Vehicles		1402	2.2	0.304	15.6	LOS B	68	0.58	0.53	40.1

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Conversion of Bexley Rd and Jarrett St PM

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Movement Summary

Canterbury Rd and Bexley Rd

Future PM

Signalised - Actuated coordinated

Cycle Time = 117 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Bexley Road Sout										
1	L	146	2.7	0.874	57.1	LOS E	169	0.98	0.94	23.3
2	T	526	2.7	0.874	53.0	LOS D	176	0.99	0.94	24.4
3	R	341	3.5	1.000#	55.8	LOS D	123	0.95	0.83	23.7
Approach		1014	3.0	1.000	54.4	LOS D	176	0.98	0.91	24.1
Canterbury Rd East										
4	L	236	3.0	0.970	42.4	LOS C	353	0.99	1.07	27.7
5	T	1305	3.0	0.970	34.1	LOS C	358	0.99	1.06	31.0
Approach		1541	3.0	0.969	35.3	LOS C	358	0.99	1.06	30.4
Bexley Road North										
7	L	57	3.5	0.945	84.6	LOS F	148	1.00	1.05	18.0
8	T	384	2.8	0.948	74.0	LOS F	148	1.00	1.03	19.8
9	R	158	4.2	1.000#	62.9	LOS E	57	0.95	0.78	22.0
Approach		600	3.2	1.000	72.8	LOS F	148	0.99	0.98	20.0
Canterbury Rd West										
10	L	104	2.9	0.557	14.0	LOS A	68	0.27	0.73	43.4
11	T	1002	3.0	0.557	5.7	LOS A	68	0.27	0.24	51.9
12	R	126	3.1	0.713	36.8	LOS C	35	0.96	0.78	29.8
Approach		1233	3.0	0.713	9.6	LOS A	68	0.34	0.34	47.5
All Vehicles		4388	3.0	1.000	37.6	LOS C	358	0.81	0.81	29.5

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	21	52.7	LOS E	0	0.95	0.95
P3	26	52.7	LOS E	0	0.95	0.95
P5	53	52.7	LOS E	0	0.95	0.95
P7	53	52.7	LOS E	0	0.95	0.95

All Peds	153	52.7	LOS D	0	0.95	0.95
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Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Bexley Rd PM

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Movement Summary

Charlotte St and Harp St

PM Future

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street East										
5	T	286	3.8	0.496	8.4	LOS A	33	0.70	0.74	41.4
6	R	158	3.8	0.495	12.0	LOS A	33	0.70	0.79	39.2
Approach		444	3.8	0.495	9.7	LOS A	33	0.70	0.76	40.6
Charlotte St North										
7	L	162	0.0	0.443	6.1	LOS A	29	0.57	0.60	42.4
9	R	342	2.9	0.442	10.7	LOS A	29	0.57	0.71	39.7
Approach		504	2.0	0.442	9.2	LOS A	29	0.57	0.67	40.5
Harp St West										
10	L	304	0.0	0.443	5.4	LOS A	31	0.48	0.52	42.8
11	T	259	3.9	0.443	4.5	LOS A	31	0.48	0.47	43.5
Approach		563	1.8	0.443	5.0	LOS A	31	0.48	0.50	43.1
All Vehicles		1511	2.4	0.496	7.8	LOS A	33	0.57	0.63	41.4

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and Harp Street PM

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Movement Summary

Canterbury Rd and Charlotte St AM

Future PM

Signalised - Actuated coordinated Cycle Time = 104 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Charlotte St South										
1	L	47	0.0	0.901	37.6	LOS C	59	0.86	0.84	29.5
2	T	295	0.0	0.898	32.8	LOS C	160	0.92	0.86	31.5
3	R	314	1.9	0.899	45.3	LOS D	160	1.00	1.00	26.7
Approach		655	0.9	0.898	39.1	LOS C	160	0.95	0.92	28.9
Canterbury Rd East										
4	L	223	3.1	0.871	42.1	LOS C	247	0.97	0.93	27.8
5	T	1143	3.0	0.871	33.7	LOS C	251	0.97	0.91	31.1
6	R	158	0.0	0.720	37.8	LOS C	47	0.99	0.80	29.4
Approach		1524	2.7	0.871	35.4	LOS C	251	0.97	0.90	30.4
Thorncraft Pde North										
7	L	93	0.0	0.754	49.8	LOS D	132	0.96	0.85	25.3
8	T	407	1.0	0.755	41.8	LOS C	132	0.96	0.82	27.9
9	R	119	0.8	0.755	50.3	LOS D	107	0.96	0.84	25.1
Approach		619	0.8	0.755	44.7	LOS D	132	0.96	0.83	26.9
Canterbury Road West										
10	L	122	0.0	0.906	51.5	LOS D	194	0.99	0.93	24.8
11	T	891	0.0	0.906	43.3	LOS D	196	0.99	0.92	27.4
Approach		1013	0.0	0.906	44.3	LOS D	196	0.99	0.92	27.1
All Vehicles		3811	1.4	0.906	39.9	LOS C	251	0.97	0.90	28.6

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	37	46.2	LOS E	0	0.94	0.94
P5	37	46.2	LOS E	0	0.94	0.94
P7	53	46.2	LOS E	0	0.94	0.94
All Peds	127	46.2	LOS D	0	0.94	0.94

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Canterbury Rd and Charlotte St PM

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Movement Summary

Charlotte St and Harp St

Future PM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street East										
5	T	286	3.8	0.496	8.4	LOS A	33	0.70	0.74	41.4
6	R	158	3.8	0.495	12.0	LOS A	33	0.70	0.79	39.2
Approach		444	3.8	0.495	9.7	LOS A	33	0.70	0.76	40.6
Charlotte St North										
7	L	162	0.0	0.443	6.1	LOS A	29	0.57	0.60	42.4
9	R	342	2.9	0.442	10.7	LOS A	29	0.57	0.71	39.7
Approach		504	2.0	0.442	9.2	LOS A	29	0.57	0.67	40.5
Harp St West										
10	L	304	0.0	0.443	5.4	LOS A	31	0.48	0.52	42.8
11	T	259	3.9	0.443	4.5	LOS A	31	0.48	0.47	43.5
Approach		563	1.8	0.443	5.0	LOS A	31	0.48	0.50	43.1
All Vehicles		1511	2.4	0.496	7.8	LOS A	33	0.57	0.63	41.4

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and Harp Street PM

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Movement Summary

Charlotte Street and New Troy St PM

Future PM

Give-way

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Charlotte St South										
2	T	229	0.0	0.194	2.2	LOS A	12	0.52	0.00	53.5
3	R	75	1.4	0.194	10.5	LOS A	12	0.52	0.76	46.6
Approach		303	0.3	0.194	4.2	LOS A	12	0.52	0.18	51.6
New Troy St										
4	L	21	0.0	0.026	10.1	LOS A	1	0.41	0.68	46.9
6	R	131	2.3	0.440	23.8	LOS B	19	0.78	1.03	36.2
Approach		152	2.0	0.440	21.9	LOS B	19	0.73	0.98	37.4
Charlotte Street North										
7	L	61	0.0	0.197	8.2	LOS A	0	0.00	0.67	49.0
8	T	321	0.0	0.197	0.0	LOS A	0	0.00	0.00	60.0
Approach		382	0.0	0.197	1.3	LOS A		0.00	0.11	57.9
All Vehicles		837	0.5	0.440	6.1	Not Applicable	19	0.32	0.29	50.7

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Charlotte St and New Troy

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Movement Summary

Harp St and Alfred St AM

Future PM

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Alfred Street South										
2	T	104	0.0	0.208	8.0	LOS A	11	0.27	0.59	48.4
3	R	149	2.7	0.208	11.2	LOS A	11	0.27	0.68	45.7
Approach		253	1.6	0.207	9.9	LOS A	11	0.27	0.64	46.7
Jarrett Street East										
4	L	38	0.0	0.120	10.4	LOS A	6	0.43	0.69	46.6
6	R	79	0.0	0.120	12.0	LOS A	6	0.43	0.71	45.2
Approach		117	0.0	0.120	11.5	LOS A	6	0.43	0.71	45.6
Harp Street										
7	L	122	1.6	0.330	10.1	LOS A	19	0.41	0.68	46.7
8	T	237	3.0	0.329	8.8	LOS A	19	0.41	0.63	47.7
Approach		359	2.5	0.329	9.2	LOS A	19	0.41	0.65	47.4
All Vehicles		729	1.8	0.330	9.8	LOS A	19	0.36	0.66	46.9

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: Harp St and Alfred St PM

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Movement Summary

Kingsgrove Rd and Harp St

Future PM

Signalised - Fixed time

Cycle Time = 92 seconds

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Kingsgrove Road South										
1	L	58	0.0	0.866	41.8	LOS C	237	0.98	1.02	27.9
2	T	619	3.1	0.864	33.7	LOS C	237	0.98	1.01	31.2
3	R	288	0.8	1.000#	41.2	LOS C	66	1.00	0.91	28.1
Approach		965	2.3	1.000	36.2	LOS C	237	0.98	0.98	30.1
Harp Street East										
4	L	399	3.3	0.834	40.6	LOS C	130	0.85	0.99	26.2
5	T	137	0.7	0.776	36.7	LOS C	97	0.99	1.00	27.6
6	R	164	1.2	0.776	43.9	LOS D	97	0.99	1.01	25.2
Approach		700	2.3	0.835	40.6	LOS C	130	0.91	1.00	26.2
Kingsgrove Road North										
7	L	164	0.0	0.862	42.2	LOS C	227	0.98	1.02	27.7
8	T	519	1.7	0.862	34.1	LOS C	227	0.98	1.01	31.0
9	R	13	0.0	0.051	26.4	LOS B	3	0.86	0.69	34.7
Approach		695	1.3	0.862	35.8	LOS C	227	0.98	1.00	30.2
Harp Street West										
10	L	15	0.0	0.176	41.0	LOS C	12	0.86	0.71	26.1
11	T	67	0.0	0.476	41.5	LOS C	36	0.95	0.73	26.0
12	R	32	0.0	0.476	51.2	LOS D	36	0.98	0.77	23.2
Approach		114	0.0	0.476	44.2	LOS D	36	0.95	0.74	25.2
All Vehicles		2474	1.9	1.000	37.7	LOS C	237	0.96	0.98	28.7

Pedestrian Movements

Mov ID	Dem Flow (ped/h)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate
P1	26	28.2	LOS C	0	0.78	0.78
P3	21	19.6	LOS B	0	0.65	0.65
P5	26	37.4	LOS D	0	0.90	0.90

P7	26	19.6	LOS B	0	0.65	0.65
All Peds	99	26.5	LOS B	0	0.75	0.75

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



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Site: Kingsgrove Rd and Harp St PM

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Movement Summary

New Alfred St and Harp Street PM

Future PM

Two-way stop

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Harp Street South										
1	L	17	0.0	0.156	9.0	LOS A	8	0.34	0.44	47.5
2	T	158	0.0	0.156	0.9	LOS A	8	0.34	0.00	55.5
3	R	79	0.0	0.156	9.2	LOS A	8	0.34	0.65	47.4
Approach		254	0.0	0.156	4.0	LOS A	8	0.34	0.23	52.1
Alfred Street										
4	L	74	0.0	0.073	11.4	LOS A	2	0.27	0.88	46.2
5	T	37	0.0	0.192	14.5	LOS B	4	0.53	0.92	43.7
6	R	28	0.0	0.192	14.9	LOS B	4	0.53	0.95	43.4
Approach		139	0.0	0.191	12.9	LOS A	4	0.39	0.91	44.9
New Harp Street										
7	L	57	0.0	0.105	8.9	LOS A	6	0.37	0.42	47.3
8	T	128	0.0	0.105	0.7	LOS A	6	0.37	0.00	55.2
9	R	11	0.0	0.106	9.2	LOS A	6	0.37	0.65	47.2
Approach		196	0.0	0.105	3.6	LOS A	6	0.37	0.16	52.2
New Alfred St										
10	L	11	0.0	0.054	13.9	LOS A	2	0.43	0.81	44.2
11	T	16	0.0	0.054	13.4	LOS A	2	0.43	0.91	44.5
12	R	7	0.0	0.054	13.7	LOS A	2	0.43	0.91	44.2
Approach		34	0.0	0.054	13.6	LOS A	2	0.43	0.88	44.3
All Vehicles		623	0.0	0.192	6.4	Not Applicable	8	0.37	0.39	49.9

Symbols which may appear in this table:

Following Degree of Saturation

x = 1.00 for Short Lane with resulting Excess Flow

* x = 1.00 due to minimum capacity

Following LOS

- Based on density for continuous movements

Following Queue

- Density for continuous movement



Site: New Alfred St and Harp Street PM

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appendix 4: swept path analysis

