

Junctions 9

ARCADY 9 - Roundabout Module

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Filename: Peel Hall A50_HildenRd_Roundabout Existing Arrangement - Option A.j9
Path: C:\Users\Brad\Highgate Transportation\HTp - Documents\1900 - Projects\1901 - Peel Hall\Modelling\Junctions 9\A50 Hilden Road Roundabout
Report generation date: 30/01/2020 12:59:04

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A50-Conjunction - 2018 Validation								
1 - Hilden Rd	1.2	7.58	0.55	A	1.4	7.67	0.58	A
2 - Orford Rd	3.3	14.13	0.77	B	5.2	21.12	0.85	C
3 - Smith Drive	0.8	7.57	0.44	A	0.1	5.41	0.12	A
4 - A50	2.6	13.36	0.72	B	3.0	12.83	0.75	B
A50-Conjunction - 2022 Do Minimum								
1 - Hilden Rd	1.5	8.65	0.60	A	1.6	8.34	0.61	A
2 - Orford Rd	4.4	18.26	0.82	C	7.9	31.26	0.90	D
3 - Smith Drive	0.9	8.08	0.47	A	0.2	5.51	0.13	A
4 - A50	3.3	16.50	0.77	C	3.9	15.86	0.80	C
A50-Conjunction - 2022 Do Something								
1 - Hilden Rd	1.6	9.40	0.62	A	1.8	9.06	0.63	A
2 - Orford Rd	5.8	23.36	0.86	C	9.4	37.00	0.92	E
3 - Smith Drive	1.0	8.57	0.49	A	0.2	5.93	0.14	A
4 - A50	4.2	20.10	0.81	C	4.6	18.30	0.82	C
A50-Conjunction - 2022 Do Something Full								
1 - Hilden Rd	3.0	14.32	0.75	B	1.9	9.60	0.65	A
2 - Orford Rd	14.0	51.85	0.96	F	23.9	80.06	1.00	F
3 - Smith Drive	1.1	9.70	0.52	A	0.3	6.46	0.21	A
4 - A50	6.6	30.88	0.88	D	6.4	25.25	0.87	D
A50-Conjunction - 2027 Do Minimum								
1 - Hilden Rd	1.8	9.89	0.64	A	1.7	8.96	0.63	A
2 - Orford Rd	6.8	27.25	0.88	D	12.2	46.20	0.95	E
3 - Smith Drive	1.1	9.17	0.52	A	0.2	5.71	0.15	A
4 - A50	4.8	22.69	0.83	C	5.0	19.48	0.84	C
A50-Conjunction - 2027 Do Something								
1 - Hilden Rd	2.5	12.82	0.72	B	2.1	10.30	0.67	B
2 - Orford Rd	20.1	69.50	0.99	F	34.7	108.17	1.04	F
3 - Smith Drive	1.3	10.73	0.56	B	0.3	6.54	0.22	A
4 - A50	7.8	35.55	0.90	E	7.6	29.31	0.89	D

A50-Conjunction - 2032 Do Minimum								
1 - Hilden Rd	2.0	11.14	0.67	B	2.0	9.87	0.66	A
2 - Orford Rd	10.9	41.75	0.93	E	22.1	75.69	1.00	F
3 - Smith Drive	1.3	10.82	0.57	B	0.2	6.07	0.20	A
4 - A50	6.4	29.56	0.87	D	5.8	22.53	0.86	C
A50-Conjunction - 2032 Do Something Full								
1 - Hilden Rd	3.4	15.49	0.78	C	2.5	11.61	0.71	B
2 - Orford Rd	43.4	129.30	1.06	F	63.3	179.39	1.10	F
3 - Smith Drive	1.1	10.44	0.53	B	0.4	6.76	0.26	A
4 - A50	8.9	39.88	0.91	E	9.7	37.14	0.92	E

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

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

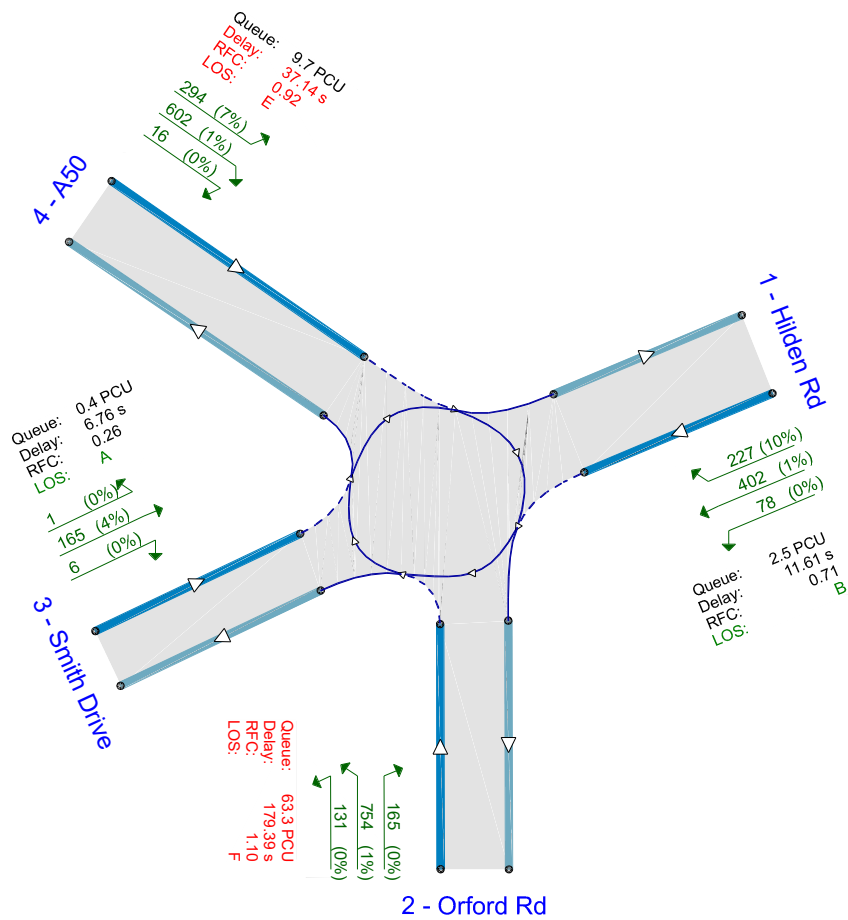
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	17/10/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
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



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Validation	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D3	2022 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D4	2022 Do Something Full	AM	ONE HOUR	07:45	09:15	15	✓
D5	2027 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D6	2027 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D8	2032 Do Something Full	AM	ONE HOUR	07:45	09:15	15	✓
D9	2018 Validation	PM	ONE HOUR	16:45	18:15	15	✓
D10	2022 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D11	2022 Do Something	PM	ONE HOUR	16:45	18:15	15	✓
D12	2022 Do Something Full	PM	ONE HOUR	16:45	18:15	15	✓
D13	2027 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D14	2027 Do Something	PM	ONE HOUR	16:45	18:15	15	✓
D15	2032 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D16	2032 Do Something Full	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AV-1	A50-Conjunction	✓	100.000	100.000

A50-Conjunction - 2018 Validation, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	11.43	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hilden Rd	Hilden Rd
2	Orford Rd	
3	Smith Drive	
4	A50	

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 - Hilden Rd	3.70	5.50	11.3	31.3	78.0	54.5	
2 - Orford Rd	4.35	4.35	0.0	26.8	78.0	25.1	
3 - Smith Drive	3.60	4.40	3.8	15.0	78.0	32.0	
4 - A50	3.85	3.85	0.0	48.7	78.0	20.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Hilden Rd	0.415	1383
2 - Orford Rd	0.433	1357
3 - Smith Drive	0.399	1207
4 - A50	0.423	1239

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Validation	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 - Hilden Rd		ONE HOUR	✓	527	100.000
2 - Orford Rd		ONE HOUR	✓	782	100.000
3 - Smith Drive		ONE HOUR	✓	345	100.000
4 - A50		ONE HOUR	✓	642	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	52	384	91
	2 - Orford Rd	208	0	80	494
	3 - Smith Drive	234	108	0	3
	4 - A50	44	579	19	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	2	1	1
	2 - Orford Rd	0	0	3	4
	3 - Smith Drive	1	0	0	0
	4 - A50	1	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.55	7.58	1.2	2.0	A	484	725
2 - Orford Rd	0.77	14.13	3.3	15.0	B	718	1076
3 - Smith Drive	0.44	7.57	0.8	3.0	A	317	475
4 - A50	0.72	13.36	2.6	10.1	B	589	884

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalled level of service
1 - Hilden Rd	397	99	528	1163	0.341	395	364	0.0	0.5	4.722	A
2 - Orford Rd	589	147	370	1197	0.492	585	553	0.0	1.0	6.011	A
3 - Smith Drive	260	65	593	970	0.268	258	362	0.0	0.4	5.079	A
4 - A50	483	121	412	1065	0.454	480	440	0.0	0.8	6.291	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	474	118	633	1120	0.423	473	436	0.5	0.7	5.619	A
2 - Orford Rd	703	176	443	1165	0.603	701	662	1.0	1.5	7.936	A
3 - Smith Drive	310	78	711	923	0.336	310	433	0.4	0.5	5.899	A
4 - A50	577	144	493	1030	0.560	575	527	0.8	1.3	8.103	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	580	145	772	1062	0.546	578	532	0.7	1.2	7.498	A
2 - Orford Rd	861	215	542	1122	0.767	854	809	1.5	3.2	13.493	B
3 - Smith Drive	380	95	867	861	0.441	379	530	0.5	0.8	7.496	A
4 - A50	707	177	603	984	0.718	702	643	1.3	2.5	12.902	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	580	145	777	1060	0.547	580	535	1.2	1.2	7.581	A
2 - Orford Rd	861	215	544	1121	0.768	861	813	3.2	3.3	14.135	B
3 - Smith Drive	380	95	873	859	0.442	380	532	0.8	0.8	7.565	A
4 - A50	707	177	605	983	0.719	707	647	2.5	2.6	13.365	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	474	118	640	1117	0.424	476	440	1.2	0.8	5.691	A
2 - Orford Rd	703	176	446	1164	0.604	710	669	3.3	1.6	8.269	A
3 - Smith Drive	310	78	719	920	0.337	311	436	0.8	0.5	5.965	A
4 - A50	577	144	497	1028	0.561	582	533	2.6	1.3	8.376	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	397	99	533	1161	0.342	398	367	0.8	0.5	4.774	A
2 - Orford Rd	589	147	373	1195	0.492	591	558	1.6	1.0	6.147	A
3 - Smith Drive	260	65	599	968	0.268	260	365	0.5	0.4	5.125	A
4 - A50	483	121	415	1063	0.455	485	444	1.3	0.9	6.424	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.52	0.52	1.01	1.42	1.47			N/A	N/A
2 - Orford Rd	0.98	0.57	1.03	1.44	1.49			N/A	N/A
3 - Smith Drive	0.37	0.00	0.00	0.37	0.37			N/A	N/A
4 - A50	0.84	0.57	1.03	1.44	1.49			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.73	0.11	0.86	1.40	1.47			N/A	N/A
2 - Orford Rd	1.53	0.06	0.85	3.59	5.13			N/A	N/A
3 - Smith Drive	0.50	0.50	1.01	1.41	1.46			N/A	N/A
4 - A50	1.28	0.07	0.94	2.64	3.62			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.20	0.03	0.26	1.20	1.20			N/A	N/A
2 - Orford Rd	3.19	0.03	0.31	3.64	14.97			N/A	N/A
3 - Smith Drive	0.78	0.03	0.26	0.78	0.78			N/A	N/A
4 - A50	2.50	0.03	0.30	2.50	10.14			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.21	0.03	0.27	1.21	1.98			N/A	N/A
2 - Orford Rd	3.29	0.03	0.29	3.29	8.50			N/A	N/A
3 - Smith Drive	0.79	0.03	0.28	0.88	3.01			N/A	N/A
4 - A50	2.56	0.03	0.28	2.56	5.64			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.75	0.14	0.90	1.41	1.47			N/A	N/A
2 - Orford Rd	1.60	0.06	0.68	3.96	5.97			N/A	N/A
3 - Smith Drive	0.52	0.52	1.01	1.41	1.46			N/A	N/A
4 - A50	1.34	0.06	0.81	2.97	4.26			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.53	0.05	0.48	1.31	1.41			N/A	N/A
2 - Orford Rd	1.01	0.04	0.39	2.52	4.39			N/A	N/A
3 - Smith Drive	0.37	0.03	0.27	0.48	0.52			N/A	N/A
4 - A50	0.87	0.04	0.42	1.99	3.22			N/A	N/A

A50-Conjunction - 2022 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	14.02	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	563	100.000
2 - Orford Rd		ONE HOUR	✓	823	100.000
3 - Smith Drive		ONE HOUR	✓	364	100.000
4 - A50		ONE HOUR	✓	680	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	56	423	84
	2 - Orford Rd	215	0	92	516
	3 - Smith Drive	245	115	0	4
	4 - A50	46	614	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	2	1	1
	2 - Orford Rd	0	0	2	4
	3 - Smith Drive	1	0	0	0
	4 - A50	1	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.60	8.65	1.5	2.1	A	517	775
2 - Orford Rd	0.82	18.26	4.4	22.7	C	755	1133
3 - Smith Drive	0.47	8.08	0.9	3.0	A	334	501
4 - A50	0.77	16.50	3.3	16.0	C	624	936

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	424	106	560	1150	0.369	422	378	0.0	0.6	4.979	A
2 - Orford Rd	620	155	395	1186	0.522	615	587	0.0	1.1	6.429	A
3 - Smith Drive	274	69	609	964	0.284	272	400	0.0	0.4	5.230	A
4 - A50	512	128	430	1057	0.484	508	452	0.0	1.0	6.699	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	506	127	671	1104	0.458	505	454	0.6	0.8	6.065	A
2 - Orford Rd	740	185	473	1152	0.642	737	703	1.1	1.8	8.848	A
3 - Smith Drive	327	82	730	916	0.357	327	480	0.4	0.6	6.145	A
4 - A50	611	153	516	1021	0.599	609	541	1.0	1.5	8.941	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	620	155	818	1043	0.594	617	553	0.8	1.4	8.501	A
2 - Orford Rd	906	227	578	1107	0.819	896	857	1.8	4.2	16.854	C
3 - Smith Drive	401	100	888	853	0.470	399	586	0.6	0.9	7.975	A
4 - A50	749	187	629	973	0.770	742	659	1.5	3.2	15.583	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	620	155	824	1040	0.596	620	557	1.4	1.5	8.647	A
2 - Orford Rd	906	227	580	1106	0.820	905	864	4.2	4.4	18.262	C
3 - Smith Drive	401	100	897	849	0.472	401	589	0.9	0.9	8.077	A
4 - A50	749	187	633	971	0.771	748	664	3.2	3.3	16.501	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	506	127	680	1100	0.460	509	459	1.5	0.9	6.174	A
2 - Orford Rd	740	185	476	1151	0.643	750	713	4.4	1.9	9.445	A
3 - Smith Drive	327	82	742	911	0.359	329	484	0.9	0.6	6.234	A
4 - A50	611	153	521	1018	0.600	618	550	3.3	1.6	9.398	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	424	106	566	1147	0.369	425	382	0.9	0.6	5.044	A
2 - Orford Rd	620	155	398	1185	0.523	623	593	1.9	1.1	6.613	A
3 - Smith Drive	274	69	616	961	0.285	275	404	0.6	0.4	5.286	A
4 - A50	512	128	434	1055	0.485	514	457	1.6	1.0	6.874	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.58	0.56	1.01	1.42	1.47			N/A	N/A
2 - Orford Rd	1.11	0.56	1.03	1.44	1.49			N/A	N/A
3 - Smith Drive	0.40	0.00	0.00	0.40	0.40			N/A	N/A
4 - A50	0.95	0.57	1.03	1.44	1.49			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.85	0.09	0.87	1.51	1.55			N/A	N/A
2 - Orford Rd	1.80	0.06	0.79	4.49	6.70			N/A	N/A
3 - Smith Drive	0.55	0.55	1.01	1.41	1.46			N/A	N/A
4 - A50	1.50	0.07	0.91	3.39	4.84			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.45	0.03	0.27	1.45	1.45			N/A	N/A
2 - Orford Rd	4.22	0.03	0.35	8.59	22.73			N/A	N/A
3 - Smith Drive	0.88	0.03	0.26	0.88	0.88			N/A	N/A
4 - A50	3.20	0.03	0.32	4.66	16.00			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.47	0.03	0.27	1.47	2.05			N/A	N/A
2 - Orford Rd	4.42	0.03	0.30	4.42	17.62			N/A	N/A
3 - Smith Drive	0.89	0.03	0.28	0.89	2.99			N/A	N/A
4 - A50	3.33	0.03	0.29	3.33	10.71			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.87	0.11	0.91	1.51	1.54			N/A	N/A
2 - Orford Rd	1.90	0.05	0.48	5.05	8.17			N/A	N/A
3 - Smith Drive	0.57	0.08	0.78	1.36	1.44			N/A	N/A
4 - A50	1.58	0.05	0.57	3.96	6.05			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.60	0.05	0.50	1.38	1.49			N/A	N/A
2 - Orford Rd	1.14	0.04	0.35	2.76	5.59			N/A	N/A
3 - Smith Drive	0.40	0.03	0.31	0.96	1.24			N/A	N/A
4 - A50	0.98	0.04	0.38	2.42	4.36			N/A	N/A

A50-Conjunction - 2022 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	17.04	C

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	2022 Do Something	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 - Hilden Rd		ONE HOUR	✓	579	100.000
2 - Orford Rd		ONE HOUR	✓	856	100.000
3 - Smith Drive		ONE HOUR	✓	370	100.000
4 - A50		ONE HOUR	✓	708	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	61	429	89
	2 - Orford Rd	221	0	95	540
	3 - Smith Drive	251	115	0	4
	4 - A50	47	641	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	2	2	3
	2 - Orford Rd	1	0	6	8
	3 - Smith Drive	2	1	0	0
	4 - A50	2	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.62	9.40	1.6	2.4	A	531	797
2 - Orford Rd	0.86	23.36	5.8	29.4	C	785	1178
3 - Smith Drive	0.49	8.57	1.0	3.1	A	340	509
4 - A50	0.81	20.10	4.2	21.4	C	650	975

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	436	109	580	1142	0.382	433	388	0.0	0.6	5.173	A
2 - Orford Rd	644	161	403	1182	0.545	639	610	0.0	1.2	6.959	A
3 - Smith Drive	279	70	635	954	0.292	277	407	0.0	0.4	5.395	A
4 - A50	533	133	439	1053	0.506	529	473	0.0	1.1	7.191	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	521	130	695	1094	0.476	519	465	0.6	0.9	6.385	A
2 - Orford Rd	770	192	483	1148	0.670	766	732	1.2	2.1	9.896	A
3 - Smith Drive	333	83	761	903	0.368	332	488	0.4	0.6	6.396	A
4 - A50	636	159	526	1016	0.626	634	567	1.1	1.7	9.868	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	637	159	846	1032	0.618	635	566	0.9	1.6	9.200	A
2 - Orford Rd	942	236	590	1102	0.856	929	891	2.1	5.4	20.660	C
3 - Smith Drive	407	102	924	839	0.486	406	595	0.6	0.9	8.431	A
4 - A50	780	195	641	968	0.806	771	688	1.7	4.0	18.488	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	637	159	854	1028	0.620	637	571	1.6	1.6	9.400	A
2 - Orford Rd	942	236	592	1100	0.856	941	899	5.4	5.8	23.355	C
3 - Smith Drive	407	102	934	834	0.488	407	599	0.9	1.0	8.570	A
4 - A50	780	195	646	966	0.807	779	696	4.0	4.2	20.096	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	521	130	707	1089	0.478	523	472	1.6	0.9	6.531	A
2 - Orford Rd	770	192	486	1146	0.671	784	744	5.8	2.2	10.906	B
3 - Smith Drive	333	83	777	897	0.371	334	493	1.0	0.6	6.517	A
4 - A50	636	159	533	1013	0.628	646	579	4.2	1.8	10.585	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	436	109	587	1139	0.383	437	392	0.9	0.6	5.249	A
2 - Orford Rd	644	161	406	1181	0.546	648	618	2.2	1.3	7.203	A
3 - Smith Drive	279	70	643	950	0.293	279	411	0.6	0.4	5.461	A
4 - A50	533	133	444	1051	0.507	536	479	1.8	1.1	7.418	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.62	0.56	1.02	1.43	1.48			N/A	N/A
2 - Orford Rd	1.25	0.58	1.06	1.48	1.54			N/A	N/A
3 - Smith Drive	0.42	0.00	0.00	0.42	0.42			N/A	N/A
4 - A50	1.06	0.58	1.06	1.48	1.53			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.91	0.09	0.89	1.40	1.81			N/A	N/A
2 - Orford Rd	2.09	0.06	0.83	5.32	8.07			N/A	N/A
3 - Smith Drive	0.59	0.10	0.84	1.39	1.46			N/A	N/A
4 - A50	1.72	0.07	0.93	4.07	5.93			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.61	0.03	0.28	1.61	1.88			N/A	N/A
2 - Orford Rd	5.42	0.04	0.41	13.95	29.35			N/A	N/A
3 - Smith Drive	0.94	0.03	0.26	0.94	0.94			N/A	N/A
4 - A50	3.97	0.04	0.36	8.26	21.42			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.64	0.03	0.28	1.64	2.39			N/A	N/A
2 - Orford Rd	5.81	0.03	0.34	8.03	28.68			N/A	N/A
3 - Smith Drive	0.96	0.03	0.28	0.96	3.06			N/A	N/A
4 - A50	4.18	0.03	0.31	4.18	17.40			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.95	0.10	0.93	1.45	1.83			N/A	N/A
2 - Orford Rd	2.23	0.05	0.46	6.10	10.39			N/A	N/A
3 - Smith Drive	0.61	0.09	0.82	1.38	1.45			N/A	N/A
4 - A50	1.83	0.05	0.50	4.85	7.79			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.64	0.05	0.49	1.41	1.41			N/A	N/A
2 - Orford Rd	1.29	0.03	0.35	2.84	6.56			N/A	N/A
3 - Smith Drive	0.43	0.03	0.34	1.13	1.33			N/A	N/A
4 - A50	1.10	0.04	0.36	2.66	5.28			N/A	N/A

A50-Conjunction - 2022 Do Something Full, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	30.94	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	2022 Do Something Full	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 - Hilden Rd		ONE HOUR	✓	702	100.000
2 - Orford Rd		ONE HOUR	✓	937	100.000
3 - Smith Drive		ONE HOUR	✓	371	100.000
4 - A50		ONE HOUR	✓	748	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	139	439	124
	2 - Orford Rd	282	0	91	564
	3 - Smith Drive	266	101	0	4
	4 - A50	69	659	19	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
	1 - Hilden Rd	0	1	2	2
	2 - Orford Rd	1	0	6	8
	3 - Smith Drive	2	0	0	0
	4 - A50	20	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.75	14.32	3.0	13.0	B	644	966
2 - Orford Rd	0.96	51.85	14.0	67.0	F	860	1290
3 - Smith Drive	0.52	9.70	1.1	3.3	A	340	511
4 - A50	0.88	30.88	6.6	36.2	D	686	1030

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	529	132	582	1141	0.463	525	461	0.0	0.9	5.918	A
2 - Orford Rd	705	176	436	1168	0.604	699	671	0.0	1.6	8.005	A
3 - Smith Drive	279	70	725	918	0.304	278	410	0.0	0.4	5.688	A
4 - A50	563	141	485	1034	0.545	558	517	0.0	1.2	7.885	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	631	158	698	1093	0.577	629	552	0.9	1.4	7.866	A
2 - Orford Rd	842	211	522	1131	0.745	837	804	1.6	2.9	12.706	B
3 - Smith Drive	334	83	868	861	0.387	333	492	0.4	0.6	6.904	A
4 - A50	672	168	581	993	0.677	669	619	1.2	2.1	11.551	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	773	193	844	1032	0.749	767	667	1.4	2.9	13.516	B
2 - Orford Rd	1032	258	637	1081	0.954	998	975	2.9	11.3	36.273	E
3 - Smith Drive	408	102	1038	793	0.515	407	597	0.6	1.1	9.413	A
4 - A50	824	206	703	942	0.875	808	742	2.1	6.0	25.825	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	773	193	856	1027	0.752	772	676	2.9	3.0	14.324	B
2 - Orford Rd	1032	258	641	1079	0.956	1021	987	11.3	14.0	51.851	F
3 - Smith Drive	408	102	1059	785	0.521	408	603	1.1	1.1	9.701	A
4 - A50	824	206	711	938	0.878	821	756	6.0	6.6	30.877	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	631	158	717	1085	0.582	637	570	3.0	1.4	8.297	A
2 - Orford Rd	842	211	530	1128	0.747	885	825	14.0	3.3	18.116	C
3 - Smith Drive	334	83	913	843	0.396	335	502	1.1	0.7	7.214	A
4 - A50	672	168	598	986	0.682	690	650	6.6	2.3	13.457	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	529	132	591	1137	0.465	531	468	1.4	0.9	6.066	A
2 - Orford Rd	705	176	441	1166	0.605	712	681	3.3	1.7	8.492	A
3 - Smith Drive	279	70	737	913	0.306	280	415	0.7	0.5	5.779	A
4 - A50	563	141	491	1031	0.546	567	526	2.3	1.3	8.243	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.87	0.56	1.02	1.43	1.48			N/A	N/A
2 - Orford Rd	1.57	0.60	1.47	2.00	2.27			N/A	N/A
3 - Smith Drive	0.44	0.00	0.00	0.44	0.44			N/A	N/A
4 - A50	1.23	0.58	1.10	1.47	1.47			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.36	0.06	0.85	2.98	4.27			N/A	N/A
2 - Orford Rd	2.93	0.06	0.97	7.90	12.13			N/A	N/A
3 - Smith Drive	0.63	0.11	0.86	1.39	1.46			N/A	N/A
4 - A50	2.12	0.06	0.93	5.38	8.06			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.87	0.03	0.31	2.87	12.98			N/A	N/A
2 - Orford Rd	11.28	0.11	3.51	31.29	46.29			N/A	N/A
3 - Smith Drive	1.06	0.03	0.27	1.06	1.06			N/A	N/A
4 - A50	5.98	0.05	0.48	16.79	30.97			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.99	0.03	0.29	2.99	7.94			N/A	N/A
2 - Orford Rd	14.04	0.07	1.78	41.20	66.97			N/A	N/A
3 - Smith Drive	1.09	0.03	0.28	1.09	3.31			N/A	N/A
4 - A50	6.64	0.04	0.37	14.04	36.22			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.45	0.06	0.74	3.42	4.98			N/A	N/A
2 - Orford Rd	3.31	0.04	0.43	8.98	16.94			N/A	N/A
3 - Smith Drive	0.67	0.10	0.85	1.39	1.46			N/A	N/A
4 - A50	2.35	0.04	0.45	6.40	11.19			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.89	0.04	0.39	2.13	3.70			N/A	N/A
2 - Orford Rd	1.65	0.03	0.32	2.19	8.04			N/A	N/A
3 - Smith Drive	0.45	0.04	0.38	1.22	1.37			N/A	N/A
4 - A50	1.29	0.03	0.34	2.57	6.62			N/A	N/A

A50-Conjunction - 2027 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	19.27	C

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	2027 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	590	100.000
2 - Orford Rd		ONE HOUR	✓	871	100.000
3 - Smith Drive		ONE HOUR	✓	384	100.000
4 - A50		ONE HOUR	✓	723	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	45	431	114
	2 - Orford Rd	230	0	98	543
	3 - Smith Drive	259	121	0	4
	4 - A50	43	659	20	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	2	1	1
	2 - Orford Rd	0	0	2	4
	3 - Smith Drive	1	0	0	0
	4 - A50	1	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.64	9.89	1.8	2.8	A	541	812
2 - Orford Rd	0.88	27.25	6.8	36.9	D	799	1199
3 - Smith Drive	0.52	9.17	1.1	3.0	A	352	529
4 - A50	0.83	22.69	4.8	24.3	C	663	995

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	444	111	598	1134	0.392	442	398	0.0	0.6	5.235	A
2 - Orford Rd	656	164	424	1173	0.559	651	616	0.0	1.3	7.006	A
3 - Smith Drive	289	72	663	942	0.307	287	411	0.0	0.4	5.519	A
4 - A50	544	136	456	1046	0.520	540	495	0.0	1.1	7.253	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	530	133	717	1085	0.489	529	477	0.6	1.0	6.533	A
2 - Orford Rd	783	196	508	1137	0.689	779	739	1.3	2.2	10.228	B
3 - Smith Drive	345	86	795	890	0.388	344	492	0.4	0.6	6.634	A
4 - A50	650	162	547	1008	0.645	647	593	1.1	1.8	10.183	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	650	162	871	1021	0.636	647	580	1.0	1.7	9.640	A
2 - Orford Rd	959	240	620	1088	0.881	943	898	2.2	6.3	23.158	C
3 - Smith Drive	423	106	963	823	0.514	421	600	0.6	1.0	8.981	A
4 - A50	796	199	666	957	0.832	785	718	1.8	4.5	20.356	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	650	162	881	1017	0.639	649	585	1.7	1.8	9.889	A
2 - Orford Rd	959	240	623	1087	0.882	957	907	6.3	6.8	27.248	D
3 - Smith Drive	423	106	976	818	0.517	423	604	1.0	1.1	9.168	A
4 - A50	796	199	671	955	0.834	795	727	4.5	4.8	22.693	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	530	133	731	1079	0.492	533	485	1.8	1.0	6.705	A
2 - Orford Rd	783	196	512	1135	0.690	801	753	6.8	2.4	11.607	B
3 - Smith Drive	345	86	815	882	0.391	347	498	1.1	0.7	6.792	A
4 - A50	650	162	555	1004	0.647	661	607	4.8	1.9	11.129	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	444	111	606	1131	0.393	446	402	1.0	0.7	5.318	A
2 - Orford Rd	656	164	427	1172	0.560	660	624	2.4	1.3	7.281	A
3 - Smith Drive	289	72	672	939	0.308	290	415	0.7	0.5	5.592	A
4 - A50	544	136	461	1044	0.522	548	501	1.9	1.1	7.504	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.64	0.56	1.01	1.42	1.47			N/A	N/A
2 - Orford Rd	1.28	0.58	1.14	1.47	1.76			N/A	N/A
3 - Smith Drive	0.44	0.00	0.00	0.44	0.44			N/A	N/A
4 - A50	1.10	0.57	1.03	1.44	1.49			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.95	0.08	0.88	1.58	1.94			N/A	N/A
2 - Orford Rd	2.19	0.06	0.78	5.76	8.81			N/A	N/A
3 - Smith Drive	0.63	0.11	0.86	1.38	1.45			N/A	N/A
4 - A50	1.81	0.06	0.87	4.46	6.58			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.72	0.03	0.28	1.72	2.83			N/A	N/A
2 - Orford Rd	6.26	0.05	0.45	17.42	32.83			N/A	N/A
3 - Smith Drive	1.04	0.03	0.26	1.04	1.04			N/A	N/A
4 - A50	4.48	0.04	0.38	10.76	24.29			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.76	0.03	0.27	1.76	2.64			N/A	N/A
2 - Orford Rd	6.84	0.04	0.35	13.37	36.90			N/A	N/A
3 - Smith Drive	1.06	0.03	0.28	1.06	3.04			N/A	N/A
4 - A50	4.79	0.03	0.32	5.45	22.47			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.99	0.09	0.92	1.64	1.97			N/A	N/A
2 - Orford Rd	2.37	0.04	0.44	6.48	11.39			N/A	N/A
3 - Smith Drive	0.66	0.10	0.83	1.38	1.44			N/A	N/A
4 - A50	1.95	0.05	0.46	5.22	8.68			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.66	0.05	0.47	1.52	1.66			N/A	N/A
2 - Orford Rd	1.33	0.03	0.33	2.67	6.84			N/A	N/A
3 - Smith Drive	0.45	0.04	0.38	1.22	1.37			N/A	N/A
4 - A50	1.14	0.03	0.34	2.63	5.71			N/A	N/A

A50-Conjunction - 2027 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	38.53	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	2027 Do Something	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 - Hilden Rd		ONE HOUR	✓	653	100.000
2 - Orford Rd		ONE HOUR	✓	967	100.000
3 - Smith Drive		ONE HOUR	✓	391	100.000
4 - A50		ONE HOUR	✓	767	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	90	420	143
	2 - Orford Rd	261	0	100	606
	3 - Smith Drive	269	117	0	5
	4 - A50	52	694	19	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	1	2	2
	2 - Orford Rd	1	0	5	7
	3 - Smith Drive	2	0	0	0
	4 - A50	27	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.72	12.82	2.5	9.1	B	599	899
2 - Orford Rd	0.99	69.50	20.1	78.3	F	887	1331
3 - Smith Drive	0.56	10.73	1.3	3.5	B	359	538
4 - A50	0.90	35.55	7.8	42.6	E	704	1056

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	492	123	621	1125	0.437	488	435	0.0	0.8	5.736	A
2 - Orford Rd	728	182	437	1168	0.623	721	673	0.0	1.7	8.355	A
3 - Smith Drive	294	74	755	906	0.325	292	403	0.0	0.5	5.933	A
4 - A50	577	144	483	1034	0.558	572	564	0.0	1.3	8.119	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	587	147	744	1074	0.547	585	521	0.8	1.2	7.484	A
2 - Orford Rd	869	217	523	1130	0.769	863	806	1.7	3.3	13.828	B
3 - Smith Drive	352	88	904	847	0.415	351	483	0.5	0.7	7.345	A
4 - A50	690	172	579	994	0.694	686	675	1.3	2.3	12.123	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	719	180	898	1010	0.712	714	626	1.2	2.4	12.210	B
2 - Orford Rd	1065	266	638	1080	0.985	1019	974	3.3	14.8	43.847	E
3 - Smith Drive	430	108	1072	779	0.552	428	585	0.7	1.2	10.339	B
4 - A50	844	211	698	944	0.895	826	802	2.3	6.9	28.596	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	719	180	913	1004	0.716	719	635	2.4	2.5	12.818	B
2 - Orford Rd	1065	266	643	1079	0.987	1043	989	14.8	20.1	69.501	F
3 - Smith Drive	430	108	1095	770	0.559	430	591	1.2	1.3	10.728	B
4 - A50	844	211	706	940	0.898	841	819	6.9	7.8	35.553	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	587	147	768	1064	0.552	592	544	2.5	1.3	7.849	A
2 - Orford Rd	869	217	530	1127	0.771	934	830	20.1	3.8	24.954	C
3 - Smith Drive	352	88	969	820	0.428	353	495	1.3	0.8	7.847	A
4 - A50	690	172	601	985	0.700	710	722	7.8	2.6	14.760	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	492	123	631	1121	0.439	494	441	1.3	0.8	5.864	A
2 - Orford Rd	728	182	441	1166	0.625	736	683	3.8	1.8	8.968	A
3 - Smith Drive	294	74	770	900	0.327	295	408	0.8	0.5	6.046	A
4 - A50	577	144	490	1031	0.560	582	575	2.6	1.4	8.518	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.78	0.56	1.02	1.43	1.48			N/A	N/A
2 - Orford Rd	1.70	0.57	1.57	2.38	2.88			N/A	N/A
3 - Smith Drive	0.48	0.00	0.00	0.48	0.48			N/A	N/A
4 - A50	1.30	0.59	1.16	1.51	1.81			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.21	0.07	0.88	2.46	3.36			N/A	N/A
2 - Orford Rd	3.29	0.06	1.09	8.94	13.67			N/A	N/A
3 - Smith Drive	0.71	0.11	0.87	1.40	1.46			N/A	N/A
4 - A50	2.29	0.06	0.95	5.90	8.83			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.41	0.03	0.29	2.41	9.13			N/A	N/A
2 - Orford Rd	14.76	0.26	7.55	37.42	51.61			N/A	N/A
3 - Smith Drive	1.22	0.03	0.27	1.22	1.22			N/A	N/A
4 - A50	6.86	0.05	0.72	19.80	34.04			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.50	0.03	0.28	2.50	5.44			N/A	N/A
2 - Orford Rd	20.08	0.18	8.10	54.47	78.30			N/A	N/A
3 - Smith Drive	1.26	0.03	0.28	1.26	3.48			N/A	N/A
4 - A50	7.80	0.04	0.41	19.32	42.62			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.28	0.07	0.86	2.73	3.82			N/A	N/A
2 - Orford Rd	3.83	0.04	0.43	10.42	19.87			N/A	N/A
3 - Smith Drive	0.77	0.10	0.87	1.43	1.50			N/A	N/A
4 - A50	2.57	0.04	0.44	7.07	12.55			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.81	0.04	0.41	1.83	2.89			N/A	N/A
2 - Orford Rd	1.79	0.03	0.31	1.94	8.28			N/A	N/A
3 - Smith Drive	0.50	0.04	0.43	1.29	1.42			N/A	N/A
4 - A50	1.37	0.03	0.33	2.49	7.00			N/A	N/A

A50-Conjunction - 2032 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	26.65	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
D7	2032 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	613	100.000
2 - Orford Rd		ONE HOUR	✓	913	100.000
3 - Smith Drive		ONE HOUR	✓	408	100.000
4 - A50		ONE HOUR	✓	747	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	47	406	160
	2 - Orford Rd	239	0	107	567
	3 - Smith Drive	277	127	0	4
	4 - A50	36	688	20	3

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	2	1	1
	2 - Orford Rd	0	0	3	4
	3 - Smith Drive	1	0	0	0
	4 - A50	1	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.67	11.14	2.0	5.3	B	562	844
2 - Orford Rd	0.93	41.75	10.9	57.1	E	838	1257
3 - Smith Drive	0.57	10.82	1.3	3.4	B	374	562
4 - A50	0.87	29.56	6.4	34.4	D	685	1028

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	461	115	626	1123	0.411	459	412	0.0	0.7	5.456	A
2 - Orford Rd	687	172	441	1166	0.589	682	644	0.0	1.4	7.553	A
3 - Smith Drive	307	77	724	918	0.334	305	399	0.0	0.5	5.892	A
4 - A50	562	141	481	1035	0.543	558	548	0.0	1.2	7.667	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	551	138	750	1071	0.514	550	494	0.7	1.1	6.954	A
2 - Orford Rd	821	205	528	1128	0.728	816	771	1.4	2.6	11.678	B
3 - Smith Drive	367	92	867	861	0.426	366	478	0.5	0.7	7.302	A
4 - A50	672	168	576	995	0.675	668	657	1.2	2.1	11.194	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	675	169	908	1006	0.671	671	599	1.1	2.0	10.755	B
2 - Orford Rd	1005	251	645	1078	0.933	979	934	2.6	9.2	31.296	D
3 - Smith Drive	449	112	1042	791	0.568	447	581	0.7	1.3	10.464	B
4 - A50	822	206	699	943	0.872	808	791	2.1	5.8	24.942	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	675	169	920	1001	0.675	675	606	2.0	2.0	11.143	B
2 - Orford Rd	1005	251	648	1076	0.934	999	947	9.2	10.9	41.750	E
3 - Smith Drive	449	112	1061	784	0.573	449	586	1.3	1.3	10.817	B
4 - A50	822	206	706	940	0.875	820	804	5.8	6.4	29.560	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	551	138	770	1063	0.518	555	507	2.0	1.1	7.210	A
2 - Orford Rd	821	205	533	1126	0.729	853	791	10.9	2.9	14.977	B
3 - Smith Drive	367	92	900	848	0.433	369	486	1.3	0.8	7.605	A
4 - A50	672	168	589	990	0.678	688	681	6.4	2.3	12.870	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	461	115	635	1119	0.412	463	418	1.1	0.7	5.559	A
2 - Orford Rd	687	172	445	1164	0.590	693	653	2.9	1.5	7.945	A
3 - Smith Drive	307	77	735	914	0.336	308	403	0.8	0.5	5.996	A
4 - A50	562	141	487	1033	0.544	566	556	2.3	1.3	7.998	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.70	0.56	1.01	1.42	1.47			N/A	N/A
2 - Orford Rd	1.45	0.59	1.34	1.84	1.98			N/A	N/A
3 - Smith Drive	0.50	0.00	0.00	0.50	0.50			N/A	N/A
4 - A50	1.20	0.57	1.07	1.36	1.36			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.05	0.07	0.89	1.88	2.56			N/A	N/A
2 - Orford Rd	2.62	0.06	0.85	7.04	10.89			N/A	N/A
3 - Smith Drive	0.74	0.11	0.86	1.40	1.47			N/A	N/A
4 - A50	2.06	0.06	0.88	5.22	7.85			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.99	0.03	0.28	1.99	5.34			N/A	N/A
2 - Orford Rd	9.24	0.08	1.59	26.65	41.89			N/A	N/A
3 - Smith Drive	1.29	0.03	0.27	1.29	1.47			N/A	N/A
4 - A50	5.76	0.05	0.45	16.03	30.04			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.05	0.03	0.28	2.05	3.57			N/A	N/A
2 - Orford Rd	10.91	0.05	0.51	31.20	57.11			N/A	N/A
3 - Smith Drive	1.33	0.03	0.28	1.33	3.44			N/A	N/A
4 - A50	6.36	0.04	0.36	12.82	34.44			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.11	0.08	0.91	1.97	2.75			N/A	N/A
2 - Orford Rd	2.91	0.04	0.42	7.90	14.73			N/A	N/A
3 - Smith Drive	0.78	0.09	0.84	1.10	1.10			N/A	N/A
4 - A50	2.25	0.04	0.44	6.13	10.71			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.72	0.04	0.44	1.46	2.03			N/A	N/A
2 - Orford Rd	1.51	0.03	0.32	2.30	7.56			N/A	N/A
3 - Smith Drive	0.51	0.04	0.43	1.31	1.43			N/A	N/A
4 - A50	1.25	0.03	0.33	2.52	6.41			N/A	N/A

A50-Conjunction - 2032 Do Something Full, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	61.48	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2032 Do Something Full	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 - Hilden Rd		ONE HOUR	✓	738	100.000
2 - Orford Rd		ONE HOUR	✓	1020	100.000
3 - Smith Drive		ONE HOUR	✓	358	100.000
4 - A50		ONE HOUR	✓	785	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	143	403	192
	2 - Orford Rd	298	0	109	613
	3 - Smith Drive	291	61	0	6
	4 - A50	100	663	17	5

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
	1 - Hilden Rd	0	0	0	1
	2 - Orford Rd	1	0	9	5
	3 - Smith Drive	2	0	0	14
	4 - A50	14	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.78	15.49	3.4	15.7	C	677	1016
2 - Orford Rd	1.06	129.30	43.4	102.4	F	936	1404
3 - Smith Drive	0.53	10.44	1.1	3.4	B	329	493
4 - A50	0.91	39.88	8.9	48.4	E	720	1080

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	556	139	557	1152	0.482	552	514	0.0	0.9	5.984	A
2 - Orford Rd	768	192	461	1157	0.664	760	647	0.0	2.0	9.269	A
3 - Smith Drive	270	67	826	877	0.307	268	395	0.0	0.4	5.996	A
4 - A50	591	148	485	1034	0.572	586	609	0.0	1.4	8.277	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	663	166	667	1106	0.600	661	615	0.9	1.5	8.078	A
2 - Orford Rd	917	229	553	1118	0.821	908	775	2.0	4.3	17.143	C
3 - Smith Drive	322	80	987	813	0.396	321	473	0.4	0.7	7.436	A
4 - A50	706	176	581	993	0.711	701	727	1.4	2.4	12.666	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	813	203	803	1049	0.774	806	729	1.5	3.2	14.400	B
2 - Orford Rd	1123	281	673	1065	1.054	1036	935	4.3	26.2	66.356	F
3 - Smith Drive	394	99	1140	752	0.524	392	569	0.7	1.1	10.134	B
4 - A50	864	216	688	948	0.912	843	844	2.4	7.7	31.037	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	813	203	817	1043	0.779	812	738	3.2	3.4	15.487	C
2 - Orford Rd	1123	281	679	1063	1.056	1054	950	26.2	43.4	129.300	F
3 - Smith Drive	394	99	1158	745	0.529	394	575	1.1	1.1	10.441	B
4 - A50	864	216	695	945	0.915	859	857	7.7	8.9	39.881	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	663	166	692	1095	0.606	671	667	3.4	1.6	8.637	A
2 - Orford Rd	917	229	561	1114	0.823	1065	801	43.4	6.3	82.351	F
3 - Smith Drive	322	80	1130	756	0.426	323	496	1.1	0.8	8.500	A
4 - A50	706	176	629	973	0.725	730	825	8.9	2.9	16.785	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	556	139	567	1147	0.484	558	525	1.6	1.0	6.151	A
2 - Orford Rd	768	192	467	1155	0.665	785	658	6.3	2.1	10.560	B
3 - Smith Drive	270	67	850	868	0.311	271	402	0.8	0.5	6.149	A
4 - A50	591	148	495	1029	0.574	597	625	2.9	1.4	8.791	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.92	0.55	1.00	1.40	1.45			N/A	N/A
2 - Orford Rd	1.99	0.30	1.20	3.37	4.14			N/A	N/A
3 - Smith Drive	0.45	0.00	0.00	0.45	0.45			N/A	N/A
4 - A50	1.36	0.59	1.24	1.71	1.90			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.47	0.06	0.80	3.45	4.96			N/A	N/A
2 - Orford Rd	4.32	0.08	1.49	11.74	17.62			N/A	N/A
3 - Smith Drive	0.66	0.12	0.88	1.40	1.46			N/A	N/A
4 - A50	2.44	0.06	0.98	6.34	9.54			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	3.22	0.03	0.31	4.29	15.70			N/A	N/A
2 - Orford Rd	26.20	3.38	20.91	52.05	64.31			N/A	N/A
3 - Smith Drive	1.10	0.03	0.27	1.10	1.10			N/A	N/A
4 - A50	7.71	0.06	1.29	22.38	36.61			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	3.38	0.03	0.29	3.38	10.46			N/A	N/A
2 - Orford Rd	43.36	7.22	35.91	83.81	102.35			N/A	N/A
3 - Smith Drive	1.13	0.03	0.28	1.13	3.41			N/A	N/A
4 - A50	8.94	0.05	0.45	24.37	48.43			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.58	0.05	0.65	3.90	5.89			N/A	N/A
2 - Orford Rd	6.30	0.05	0.73	18.16	30.93			N/A	N/A
3 - Smith Drive	0.77	0.15	0.92	1.42	1.48			N/A	N/A
4 - A50	2.91	0.05	0.46	8.07	14.15			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.95	0.04	0.37	2.35	4.22			N/A	N/A
2 - Orford Rd	2.13	0.03	0.30	2.13	8.80			N/A	N/A
3 - Smith Drive	0.46	0.04	0.40	1.25	1.39			N/A	N/A
4 - A50	1.44	0.03	0.32	2.43	7.28			N/A	N/A

A50-Conjunction - 2018 Validation, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	14.20	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2018 Validation	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 - Hilden Rd		ONE HOUR	✓	600	100.000
2 - Orford Rd		ONE HOUR	✓	836	100.000
3 - Smith Drive		ONE HOUR	✓	88	100.000
4 - A50		ONE HOUR	✓	790	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	49	314	237
	2 - Orford Rd	90	0	117	629
	3 - Smith Drive	83	5	0	0
	4 - A50	277	500	13	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	4	3	4
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	4	0	0	0
	4 - A50	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.58	7.67	1.4	1.6	A	551	826
2 - Orford Rd	0.85	21.12	5.2	26.4	C	767	1151
3 - Smith Drive	0.12	5.41	0.1	0.5	A	81	121
4 - A50	0.75	12.83	3.0	12.8	B	725	1087

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	452	113	387	1222	0.370	449	337	0.0	0.6	4.808	A
2 - Orford Rd	629	157	422	1174	0.536	625	414	0.0	1.1	6.552	A
3 - Smith Drive	66	17	715	922	0.072	66	332	0.0	0.1	4.364	A
4 - A50	595	149	133	1182	0.503	591	648	0.0	1.0	6.184	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	539	135	464	1190	0.453	538	403	0.6	0.8	5.710	A
2 - Orford Rd	752	188	506	1138	0.661	749	497	1.1	1.9	9.245	A
3 - Smith Drive	79	20	856	865	0.091	79	398	0.1	0.1	4.750	A
4 - A50	710	178	160	1171	0.606	708	776	1.0	1.5	7.918	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	661	165	567	1147	0.576	658	492	0.8	1.4	7.586	A
2 - Orford Rd	920	230	619	1089	0.845	909	606	1.9	4.9	18.985	C
3 - Smith Drive	97	24	1042	791	0.122	97	486	0.1	0.1	5.375	A
4 - A50	870	217	195	1156	0.752	864	944	1.5	2.9	12.367	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	661	165	570	1146	0.576	661	495	1.4	1.4	7.671	A
2 - Orford Rd	920	230	621	1088	0.846	919	610	4.9	5.2	21.121	C
3 - Smith Drive	97	24	1052	788	0.123	97	489	0.1	0.1	5.408	A
4 - A50	870	217	196	1156	0.753	869	953	2.9	3.0	12.825	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	539	135	469	1188	0.454	541	408	1.4	0.9	5.781	A
2 - Orford Rd	752	188	509	1136	0.661	764	502	5.2	2.0	10.047	B
3 - Smith Drive	79	20	871	860	0.092	79	402	0.1	0.1	4.789	A
4 - A50	710	178	162	1170	0.607	716	789	3.0	1.6	8.202	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	452	113	391	1220	0.370	453	340	0.9	0.6	4.860	A
2 - Orford Rd	629	157	426	1173	0.537	633	419	2.0	1.2	6.759	A
3 - Smith Drive	66	17	723	919	0.072	66	335	0.1	0.1	4.383	A
4 - A50	595	149	134	1182	0.503	597	655	1.6	1.1	6.322	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.60	0.57	1.03	1.45	1.50			N/A	N/A
2 - Orford Rd	1.15	0.55	1.01	1.41	1.46			N/A	N/A
3 - Smith Drive	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4 - A50	1.02	0.56	1.02	1.43	1.48			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.85	0.10	0.90	1.44	1.44			N/A	N/A
2 - Orford Rd	1.91	0.06	0.74	4.87	7.39			N/A	N/A
3 - Smith Drive	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4 - A50	1.54	0.06	0.91	3.55	5.04			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.38	0.03	0.27	1.38	1.38			N/A	N/A
2 - Orford Rd	4.85	0.04	0.37	11.69	26.35			N/A	N/A
3 - Smith Drive	0.14	0.03	0.27	0.48	0.51			N/A	N/A
4 - A50	2.95	0.03	0.30	2.95	12.76			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.39	0.03	0.28	1.39	1.63			N/A	N/A
2 - Orford Rd	5.16	0.03	0.31	5.68	24.00			N/A	N/A
3 - Smith Drive	0.14	0.03	0.26	0.47	0.49			N/A	N/A
4 - A50	3.03	0.03	0.28	3.03	6.05			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.87	0.14	0.95	1.26	1.26			N/A	N/A
2 - Orford Rd	2.03	0.05	0.45	5.51	9.20			N/A	N/A
3 - Smith Drive	0.11	0.00	0.00	0.11	0.11			N/A	N/A
4 - A50	1.61	0.06	0.78	3.91	5.79			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.61	0.06	0.58	1.39	1.49			N/A	N/A
2 - Orford Rd	1.19	0.03	0.34	2.69	5.98			N/A	N/A
3 - Smith Drive	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4 - A50	1.05	0.04	0.41	2.62	4.33			N/A	N/A

A50-Conjunction - 2022 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	19.12	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2022 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	625	100.000
2 - Orford Rd		ONE HOUR	✓	882	100.000
3 - Smith Drive		ONE HOUR	✓	91	100.000
4 - A50		ONE HOUR	✓	838	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	52	340	233
	2 - Orford Rd	95	0	121	666
	3 - Smith Drive	84	6	0	1
	4 - A50	295	529	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	4	2	4
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	3	0	0	0
	4 - A50	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.61	8.34	1.6	1.8	A	574	860
2 - Orford Rd	0.90	31.26	7.9	43.5	D	809	1214
3 - Smith Drive	0.13	5.51	0.2	0.5	A	84	125
4 - A50	0.80	15.86	3.9	19.5	C	769	1153

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	471	118	410	1212	0.388	468	354	0.0	0.6	4.960	A
2 - Orford Rd	664	166	439	1167	0.569	659	439	0.0	1.3	7.072	A
3 - Smith Drive	69	17	743	911	0.075	68	355	0.0	0.1	4.388	A
4 - A50	631	158	138	1180	0.535	626	673	0.0	1.2	6.598	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	562	140	492	1178	0.477	561	425	0.6	0.9	5.986	A
2 - Orford Rd	793	198	527	1129	0.702	789	526	1.3	2.3	10.548	B
3 - Smith Drive	82	20	890	852	0.096	82	426	0.1	0.1	4.802	A
4 - A50	753	188	166	1169	0.645	751	806	1.2	1.8	8.759	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	688	172	599	1134	0.607	686	517	0.9	1.6	8.219	A
2 - Orford Rd	971	243	644	1078	0.901	952	641	2.3	7.1	25.572	D
3 - Smith Drive	100	25	1077	777	0.129	100	519	0.1	0.2	5.460	A
4 - A50	923	231	201	1153	0.800	915	975	1.8	3.8	14.944	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	688	172	604	1132	0.608	688	521	1.6	1.6	8.344	A
2 - Orford Rd	971	243	646	1077	0.902	968	646	7.1	7.9	31.261	D
3 - Smith Drive	100	25	1092	772	0.130	100	522	0.2	0.2	5.509	A
4 - A50	923	231	203	1153	0.800	922	988	3.8	3.9	15.863	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	562	140	499	1176	0.478	564	431	1.6	1.0	6.087	A
2 - Orford Rd	793	198	530	1127	0.703	815	533	7.9	2.5	12.336	B
3 - Smith Drive	82	20	913	843	0.097	82	431	0.2	0.1	4.863	A
4 - A50	753	188	169	1167	0.645	761	826	3.9	1.9	9.250	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	471	118	415	1210	0.389	472	358	1.0	0.7	5.023	A
2 - Orford Rd	664	166	443	1165	0.570	669	444	2.5	1.4	7.372	A
3 - Smith Drive	69	17	753	907	0.076	69	359	0.1	0.1	4.414	A
4 - A50	631	158	140	1180	0.535	634	681	1.9	1.2	6.786	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.65	0.57	1.03	1.44	1.49			N/A	N/A
2 - Orford Rd	1.31	0.57	1.18	1.63	1.83			N/A	N/A
3 - Smith Drive	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4 - A50	1.16	0.56	1.02	1.43	1.48			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.93	0.09	0.91	1.41	1.82			N/A	N/A
2 - Orford Rd	2.29	0.06	0.76	6.06	9.38			N/A	N/A
3 - Smith Drive	0.11	0.00	0.00	0.11	0.11			N/A	N/A
4 - A50	1.81	0.06	0.87	4.46	6.56			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.55	0.03	0.27	1.55	1.55			N/A	N/A
2 - Orford Rd	7.09	0.05	0.60	20.46	35.82			N/A	N/A
3 - Smith Drive	0.15	0.03	0.26	0.48	0.50			N/A	N/A
4 - A50	3.79	0.03	0.33	6.18	19.51			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.58	0.03	0.28	1.58	1.71			N/A	N/A
2 - Orford Rd	7.91	0.04	0.38	18.74	43.51			N/A	N/A
3 - Smith Drive	0.15	0.03	0.26	0.46	0.49			N/A	N/A
4 - A50	3.93	0.03	0.29	3.93	12.62			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.95	0.11	0.96	1.36	1.77			N/A	N/A
2 - Orford Rd	2.49	0.04	0.42	6.81	12.28			N/A	N/A
3 - Smith Drive	0.11	0.00	0.00	0.11	0.11			N/A	N/A
4 - A50	1.91	0.05	0.51	5.03	7.93			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.66	0.05	0.56	1.26	1.26			N/A	N/A
2 - Orford Rd	1.36	0.03	0.32	2.48	6.97			N/A	N/A
3 - Smith Drive	0.08	0.00	0.00	0.08	0.08			N/A	N/A
4 - A50	1.19	0.04	0.37	2.99	5.63			N/A	N/A

A50-Conjunction - 2022 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	22.11	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2022 Do Something	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 - Hilden Rd		ONE HOUR	✓	646	100.000
2 - Orford Rd		ONE HOUR	✓	893	100.000
3 - Smith Drive		ONE HOUR	✓	99	100.000
4 - A50		ONE HOUR	✓	859	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	54	344	248
	2 - Orford Rd	100	0	122	671
	3 - Smith Drive	92	6	0	1
	4 - A50	310	535	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	4	3	9
	2 - Orford Rd	0	0	0	2
	3 - Smith Drive	8	0	0	0
	4 - A50	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.63	9.06	1.8	2.1	A	593	889
2 - Orford Rd	0.92	37.00	9.4	51.3	E	819	1229
3 - Smith Drive	0.14	5.93	0.2	0.5	A	91	136
4 - A50	0.82	18.30	4.6	23.8	C	788	1182

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	486	122	415	1210	0.402	484	375	0.0	0.7	5.196	A
2 - Orford Rd	672	168	454	1160	0.579	667	445	0.0	1.4	7.323	A
3 - Smith Drive	75	19	761	903	0.083	74	359	0.0	0.1	4.661	A
4 - A50	647	162	148	1176	0.550	642	687	0.0	1.2	6.925	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	581	145	497	1176	0.494	579	450	0.7	1.0	6.340	A
2 - Orford Rd	803	201	544	1121	0.716	798	533	1.4	2.5	11.159	B
3 - Smith Drive	89	22	912	843	0.106	89	430	0.1	0.1	5.125	A
4 - A50	772	193	177	1164	0.664	769	823	1.2	2.0	9.395	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	711	178	605	1131	0.629	708	546	1.0	1.7	8.897	A
2 - Orford Rd	983	246	664	1069	0.920	960	649	2.5	8.2	28.833	D
3 - Smith Drive	109	27	1101	768	0.142	109	524	0.1	0.2	5.865	A
4 - A50	946	236	215	1148	0.824	936	994	2.0	4.4	16.910	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	711	178	611	1129	0.630	711	552	1.7	1.8	9.062	A
2 - Orford Rd	983	246	667	1068	0.921	978	655	8.2	9.4	37.005	E
3 - Smith Drive	109	27	1118	761	0.143	109	528	0.2	0.2	5.927	A
4 - A50	946	236	217	1147	0.825	945	1009	4.4	4.6	18.299	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	581	145	505	1173	0.495	584	458	1.8	1.0	6.464	A
2 - Orford Rd	803	201	548	1120	0.717	830	541	9.4	2.7	13.672	B
3 - Smith Drive	89	22	941	832	0.107	89	437	0.2	0.1	5.206	A
4 - A50	772	193	181	1162	0.665	782	848	4.6	2.1	10.077	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	486	122	420	1208	0.403	488	380	1.0	0.7	5.270	A
2 - Orford Rd	672	168	457	1159	0.580	677	450	2.7	1.4	7.665	A
3 - Smith Drive	75	19	772	899	0.083	75	363	0.1	0.1	4.692	A
4 - A50	647	162	150	1175	0.550	650	697	2.1	1.3	7.153	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.70	0.58	1.05	1.47	1.53			N/A	N/A
2 - Orford Rd	1.37	0.58	1.26	1.74	1.90			N/A	N/A
3 - Smith Drive	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4 - A50	1.25	0.57	1.04	1.45	1.50			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.01	0.09	0.94	1.68	2.04			N/A	N/A
2 - Orford Rd	2.45	0.06	0.79	6.57	10.12			N/A	N/A
3 - Smith Drive	0.13	0.00	0.00	0.13	0.13			N/A	N/A
4 - A50	1.99	0.06	0.89	4.99	7.41			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.74	0.03	0.28	1.74	2.12			N/A	N/A
2 - Orford Rd	8.22	0.06	1.34	23.91	39.13			N/A	N/A
3 - Smith Drive	0.18	0.03	0.28	0.50	0.52			N/A	N/A
4 - A50	4.40	0.04	0.36	9.14	23.81			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.77	0.03	0.28	1.77	2.00			N/A	N/A
2 - Orford Rd	9.45	0.04	0.44	25.68	51.33			N/A	N/A
3 - Smith Drive	0.18	0.03	0.27	0.48	0.51			N/A	N/A
4 - A50	4.62	0.03	0.31	4.62	18.38			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.05	0.10	0.99	1.70	2.03			N/A	N/A
2 - Orford Rd	2.69	0.04	0.41	7.32	13.51			N/A	N/A
3 - Smith Drive	0.13	0.00	0.00	0.13	0.13			N/A	N/A
4 - A50	2.12	0.05	0.49	5.73	9.30			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.72	0.05	0.54	1.58	1.70			N/A	N/A
2 - Orford Rd	1.43	0.03	0.31	2.33	7.22			N/A	N/A
3 - Smith Drive	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4 - A50	1.29	0.04	0.36	3.14	6.33			N/A	N/A

A50-Conjunction - 2022 Do Something Full, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	40.43	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
D12	2022 Do Something Full	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 - Hilden Rd		ONE HOUR	✓	663	100.000
2 - Orford Rd		ONE HOUR	✓	974	100.000
3 - Smith Drive		ONE HOUR	✓	145	100.000
4 - A50		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	73	368	222
	2 - Orford Rd	155	0	117	702
	3 - Smith Drive	138	6	0	1
	4 - A50	314	544	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
	1 - Hilden Rd	0	3	3	11
	2 - Orford Rd	0	0	0	2
	3 - Smith Drive	5	0	0	0
	4 - A50	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.65	9.60	1.9	3.2	A	608	913
2 - Orford Rd	1.00	80.06	23.9	82.0	F	894	1341
3 - Smith Drive	0.21	6.46	0.3	1.3	A	133	200
4 - A50	0.87	25.25	6.4	33.2	D	800	1200

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	499	125	421	1208	0.413	496	453	0.0	0.7	5.319	A
2 - Orford Rd	733	183	452	1161	0.632	726	465	0.0	1.7	8.279	A
3 - Smith Drive	109	27	805	886	0.123	109	373	0.0	0.1	4.849	A
4 - A50	656	164	223	1144	0.574	651	691	0.0	1.4	7.490	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	596	149	505	1173	0.508	595	543	0.7	1.1	6.552	A
2 - Orford Rd	876	219	542	1122	0.780	869	558	1.7	3.4	14.044	B
3 - Smith Drive	130	33	964	823	0.158	130	447	0.1	0.2	5.444	A
4 - A50	784	196	268	1126	0.696	780	826	1.4	2.3	10.695	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	730	182	612	1129	0.647	727	654	1.1	1.9	9.380	A
2 - Orford Rd	1072	268	662	1070	1.002	1019	677	3.4	16.7	47.784	E
3 - Smith Drive	160	40	1140	752	0.212	159	541	0.2	0.3	6.357	A
4 - A50	960	240	320	1103	0.870	946	979	2.3	5.9	21.931	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	730	182	620	1125	0.649	730	663	1.9	1.9	9.598	A
2 - Orford Rd	1072	268	665	1069	1.003	1044	685	16.7	23.9	80.061	F
3 - Smith Drive	160	40	1163	743	0.215	160	546	0.3	0.3	6.461	A
4 - A50	960	240	325	1101	0.872	958	998	5.9	6.4	25.246	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	596	149	517	1168	0.510	599	564	1.9	1.1	6.719	A
2 - Orford Rd	876	219	546	1120	0.782	955	570	23.9	4.0	30.215	D
3 - Smith Drive	130	33	1041	792	0.165	131	460	0.3	0.2	5.706	A
4 - A50	784	196	282	1120	0.700	799	890	6.4	2.5	12.177	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	499	125	427	1205	0.414	501	460	1.1	0.8	5.403	A
2 - Orford Rd	733	183	456	1159	0.632	742	472	4.0	1.8	8.923	A
3 - Smith Drive	109	27	821	880	0.124	109	378	0.2	0.1	4.898	A
4 - A50	656	164	227	1143	0.574	661	703	2.5	1.4	7.816	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.74	0.58	1.06	1.48	1.53			N/A	N/A
2 - Orford Rd	1.70	0.52	1.04	2.55	2.96			N/A	N/A
3 - Smith Drive	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4 - A50	1.37	0.59	1.20	1.65	1.86			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.07	0.08	0.95	1.86	2.40			N/A	N/A
2 - Orford Rd	3.37	0.06	1.07	9.20	14.16			N/A	N/A
3 - Smith Drive	0.20	0.00	0.00	0.20	0.20			N/A	N/A
4 - A50	2.29	0.06	0.92	5.94	8.94			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.88	0.03	0.29	1.88	3.24			N/A	N/A
2 - Orford Rd	16.71	0.49	10.08	39.96	53.38			N/A	N/A
3 - Smith Drive	0.28	0.03	0.27	0.48	0.51			N/A	N/A
4 - A50	5.87	0.04	0.43	15.88	31.49			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.92	0.03	0.29	1.92	2.29			N/A	N/A
2 - Orford Rd	23.88	0.40	13.09	60.03	82.01			N/A	N/A
3 - Smith Drive	0.28	0.03	0.31	0.92	1.26			N/A	N/A
4 - A50	6.37	0.03	0.34	10.66	33.16			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.12	0.09	1.00	1.89	2.44			N/A	N/A
2 - Orford Rd	3.97	0.04	0.42	10.83	20.72			N/A	N/A
3 - Smith Drive	0.21	0.00	0.00	0.21	0.21			N/A	N/A
4 - A50	2.52	0.05	0.46	6.94	11.94			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.75	0.05	0.51	1.36	1.93			N/A	N/A
2 - Orford Rd	1.79	0.03	0.30	1.79	7.99			N/A	N/A
3 - Smith Drive	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4 - A50	1.43	0.03	0.34	3.08	7.31			N/A	N/A

A50-Conjunction - 2027 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	25.96	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
D13	2027 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	641	100.000
2 - Orford Rd		ONE HOUR	✓	920	100.000
3 - Smith Drive		ONE HOUR	✓	102	100.000
4 - A50		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	55	356	230
	2 - Orford Rd	100	0	125	695
	3 - Smith Drive	95	6	0	1
	4 - A50	300	557	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	4	2	4
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	3	0	0	0
	4 - A50	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.63	8.96	1.7	2.0	A	588	882
2 - Orford Rd	0.95	46.20	12.2	61.2	E	844	1266
3 - Smith Drive	0.15	5.71	0.2	0.5	A	94	140
4 - A50	0.84	19.48	5.0	25.7	C	800	1200

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	483	121	432	1203	0.401	480	370	0.0	0.7	5.100	A
2 - Orford Rd	693	173	450	1162	0.596	687	462	0.0	1.5	7.543	A
3 - Smith Drive	77	19	766	902	0.085	76	371	0.0	0.1	4.482	A
4 - A50	656	164	150	1175	0.559	651	692	0.0	1.3	6.967	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	576	144	518	1168	0.493	575	443	0.7	1.0	6.236	A
2 - Orford Rd	827	207	539	1123	0.736	822	553	1.5	2.7	11.846	B
3 - Smith Drive	92	23	917	841	0.109	92	444	0.1	0.1	4.936	A
4 - A50	784	196	180	1163	0.674	781	828	1.3	2.1	9.567	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	706	176	629	1121	0.629	703	538	1.0	1.7	8.789	A
2 - Orford Rd	1013	253	659	1072	0.945	983	673	2.7	10.1	33.395	D
3 - Smith Drive	112	28	1102	767	0.146	112	540	0.1	0.2	5.645	A
4 - A50	960	240	218	1147	0.837	949	996	2.1	4.7	17.782	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	706	176	636	1119	0.631	706	544	1.7	1.7	8.959	A
2 - Orford Rd	1013	253	662	1070	0.946	1005	680	10.1	12.2	46.197	E
3 - Smith Drive	112	28	1121	760	0.148	112	545	0.2	0.2	5.714	A
4 - A50	960	240	220	1145	0.838	959	1013	4.7	5.0	19.478	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	576	144	527	1164	0.495	579	453	1.7	1.0	6.363	A
2 - Orford Rd	827	207	543	1122	0.737	864	563	12.2	3.0	15.871	C
3 - Smith Drive	92	23	954	826	0.111	92	453	0.2	0.1	5.041	A
4 - A50	784	196	185	1160	0.676	795	861	5.0	2.2	10.365	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	483	121	437	1201	0.402	484	375	1.0	0.7	5.173	A
2 - Orford Rd	693	173	454	1160	0.597	698	468	3.0	1.5	7.947	A
3 - Smith Drive	77	19	777	897	0.086	77	375	0.1	0.1	4.514	A
4 - A50	656	164	152	1174	0.559	660	702	2.2	1.3	7.208	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.68	0.57	1.03	1.44	1.49			N/A	N/A
2 - Orford Rd	1.46	0.57	1.36	1.86	1.99			N/A	N/A
3 - Smith Drive	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4 - A50	1.27	0.56	1.02	1.43	1.48			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.99	0.08	0.91	1.65	2.00			N/A	N/A
2 - Orford Rd	2.68	0.06	0.84	7.25	11.25			N/A	N/A
3 - Smith Drive	0.12	0.00	0.00	0.12	0.12			N/A	N/A
4 - A50	2.05	0.06	0.87	5.22	7.85			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.70	0.03	0.28	1.70	2.03			N/A	N/A
2 - Orford Rd	10.10	0.09	2.48	28.62	43.48			N/A	N/A
3 - Smith Drive	0.17	0.03	0.26	0.47	0.50			N/A	N/A
4 - A50	4.71	0.04	0.36	10.65	25.67			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.73	0.03	0.28	1.73	1.93			N/A	N/A
2 - Orford Rd	12.20	0.06	1.25	35.72	61.16			N/A	N/A
3 - Smith Drive	0.18	0.03	0.26	0.46	0.49			N/A	N/A
4 - A50	4.98	0.03	0.31	4.98	21.49			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.02	0.10	0.97	1.65	1.98			N/A	N/A
2 - Orford Rd	2.98	0.04	0.41	8.05	15.20			N/A	N/A
3 - Smith Drive	0.13	0.00	0.00	0.13	0.13			N/A	N/A
4 - A50	2.20	0.05	0.47	5.98	9.89			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.70	0.05	0.52	1.54	1.65			N/A	N/A
2 - Orford Rd	1.52	0.03	0.31	2.09	7.46			N/A	N/A
3 - Smith Drive	0.10	0.00	0.00	0.10	0.10			N/A	N/A
4 - A50	1.32	0.04	0.35	3.16	6.64			N/A	N/A

A50-Conjunction - 2027 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	52.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2027 Do Something	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 - Hilden Rd		ONE HOUR	✓	671	100.000
2 - Orford Rd		ONE HOUR	✓	998	100.000
3 - Smith Drive		ONE HOUR	✓	146	100.000
4 - A50		ONE HOUR	✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	65	371	235
	2 - Orford Rd	130	0	123	745
	3 - Smith Drive	139	6	0	1
	4 - A50	304	585	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	3	3	10
	2 - Orford Rd	0	0	0	2
	3 - Smith Drive	5	0	0	0
	4 - A50	7	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.67	10.30	2.1	4.7	B	616	924
2 - Orford Rd	1.04	108.17	34.7	93.0	F	916	1374
3 - Smith Drive	0.22	6.54	0.3	1.3	A	134	201
4 - A50	0.89	29.31	7.6	41.8	D	830	1244

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	505	126	452	1195	0.423	502	428	0.0	0.8	5.451	A
2 - Orford Rd	751	188	465	1156	0.650	744	490	0.0	1.8	8.728	A
3 - Smith Drive	110	27	828	877	0.125	109	381	0.0	0.1	4.915	A
4 - A50	681	170	205	1152	0.591	675	732	0.0	1.5	7.727	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	603	151	542	1158	0.521	602	512	0.8	1.1	6.805	A
2 - Orford Rd	897	224	557	1116	0.804	889	587	1.8	3.8	15.586	C
3 - Smith Drive	131	33	990	812	0.162	131	456	0.1	0.2	5.537	A
4 - A50	813	203	246	1135	0.716	809	875	1.5	2.5	11.287	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	739	185	656	1110	0.665	735	615	1.1	2.0	10.010	B
2 - Orford Rd	1099	275	680	1062	1.034	1026	711	3.8	22.0	58.402	F
3 - Smith Drive	161	40	1157	745	0.216	160	549	0.2	0.3	6.441	A
4 - A50	995	249	293	1115	0.893	978	1024	2.5	6.9	24.546	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	739	185	665	1106	0.668	739	623	2.0	2.1	10.297	B
2 - Orford Rd	1099	275	684	1061	1.036	1048	720	22.0	34.7	108.173	F
3 - Smith Drive	161	40	1178	737	0.218	161	554	0.3	0.3	6.540	A
4 - A50	995	249	296	1113	0.894	992	1042	6.9	7.6	29.307	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	603	151	558	1151	0.524	607	537	2.1	1.2	7.014	A
2 - Orford Rd	897	224	562	1114	0.806	1017	603	34.7	4.9	54.970	F
3 - Smith Drive	131	33	1104	767	0.171	132	475	0.3	0.2	5.941	A
4 - A50	813	203	263	1127	0.721	832	972	7.6	2.8	13.364	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	505	126	460	1192	0.424	507	435	1.2	0.8	5.548	A
2 - Orford Rd	751	188	469	1154	0.651	763	497	4.9	1.9	9.618	A
3 - Smith Drive	110	27	847	869	0.126	110	386	0.2	0.2	4.968	A
4 - A50	681	170	209	1150	0.592	686	748	2.8	1.5	8.109	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.76	0.58	1.05	1.47	1.53			N/A	N/A
2 - Orford Rd	1.83	0.35	1.11	2.93	3.68			N/A	N/A
3 - Smith Drive	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4 - A50	1.47	0.60	1.35	1.81	1.95			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.13	0.08	0.95	2.01	2.76			N/A	N/A
2 - Orford Rd	3.84	0.07	1.26	10.48	15.95			N/A	N/A
3 - Smith Drive	0.20	0.00	0.00	0.20	0.20			N/A	N/A
4 - A50	2.51	0.06	0.95	6.60	9.99			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.03	0.03	0.29	2.03	4.68			N/A	N/A
2 - Orford Rd	22.04	1.59	16.35	46.82	59.34			N/A	N/A
3 - Smith Drive	0.29	0.03	0.27	0.48	0.51			N/A	N/A
4 - A50	6.89	0.05	0.49	19.64	35.53			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.08	0.03	0.29	2.08	2.83			N/A	N/A
2 - Orford Rd	34.73	2.95	26.22	73.63	93.04			N/A	N/A
3 - Smith Drive	0.29	0.03	0.31	0.96	1.29			N/A	N/A
4 - A50	7.62	0.04	0.37	16.64	41.77			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.18	0.08	0.99	2.07	2.86			N/A	N/A
2 - Orford Rd	4.89	0.04	0.45	13.70	25.22			N/A	N/A
3 - Smith Drive	0.22	0.00	0.00	0.22	0.22			N/A	N/A
4 - A50	2.80	0.05	0.45	7.75	13.60			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.78	0.05	0.49	1.57	2.13			N/A	N/A
2 - Orford Rd	1.95	0.03	0.30	1.95	8.19			N/A	N/A
3 - Smith Drive	0.15	0.00	0.00	0.15	0.15			N/A	N/A
4 - A50	1.53	0.03	0.34	3.10	7.97			N/A	N/A

A50-Conjunction - 2032 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	37.87	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
D15	2032 Do Minimum	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 - Hilden Rd		ONE HOUR	✓	663	100.000
2 - Orford Rd		ONE HOUR	✓	961	100.000
3 - Smith Drive		ONE HOUR	✓	133	100.000
4 - A50		ONE HOUR	✓	884	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	58	377	228
	2 - Orford Rd	106	0	130	725
	3 - Smith Drive	123	6	0	4
	4 - A50	281	587	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	4	2	4
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	2	0	0	0
	4 - A50	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.66	9.87	2.0	3.9	A	608	913
2 - Orford Rd	1.00	75.69	22.1	79.4	F	882	1323
3 - Smith Drive	0.20	6.07	0.2	1.0	A	122	183
4 - A50	0.86	22.53	5.8	29.3	C	811	1217

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	499	125	455	1194	0.418	496	381	0.0	0.7	5.286	A
2 - Orford Rd	723	181	465	1156	0.626	717	486	0.0	1.6	8.150	A
3 - Smith Drive	100	25	791	892	0.112	100	391	0.0	0.1	4.626	A
4 - A50	666	166	176	1164	0.572	660	714	0.0	1.3	7.182	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	596	149	545	1156	0.515	595	457	0.7	1.1	6.576	A
2 - Orford Rd	864	216	557	1116	0.774	858	583	1.6	3.2	13.712	B
3 - Smith Drive	120	30	946	830	0.144	119	468	0.1	0.2	5.161	A
4 - A50	795	199	210	1150	0.691	791	855	1.3	2.2	10.104	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	730	182	662	1108	0.659	727	552	1.1	1.9	9.625	A
2 - Orford Rd	1058	265	680	1062	0.996	1008	708	3.2	15.7	46.029	E
3 - Smith Drive	146	37	1122	760	0.193	146	567	0.2	0.2	5.974	A
4 - A50	973	243	253	1132	0.860	960	1015	2.2	5.4	19.992	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	730	182	669	1105	0.661	730	558	1.9	2.0	9.867	A
2 - Orford Rd	1058	265	684	1061	0.997	1033	716	15.7	22.1	75.695	F
3 - Smith Drive	146	37	1144	751	0.195	146	572	0.2	0.2	6.067	A
4 - A50	973	243	256	1130	0.861	972	1034	5.4	5.8	22.527	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	596	149	557	1151	0.518	599	471	2.0	1.1	6.749	A
2 - Orford Rd	864	216	562	1114	0.776	937	595	22.1	3.8	27.327	D
3 - Smith Drive	120	30	1016	802	0.149	120	482	0.2	0.2	5.379	A
4 - A50	795	199	220	1146	0.694	808	917	5.8	2.4	11.244	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	499	125	461	1191	0.419	501	386	1.1	0.7	5.375	A
2 - Orford Rd	723	181	469	1154	0.627	732	493	3.8	1.7	8.754	A
3 - Smith Drive	100	25	805	886	0.113	100	396	0.2	0.1	4.668	A
4 - A50	666	166	178	1163	0.572	670	727	2.4	1.4	7.467	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.73	0.57	1.03	1.44	1.49			N/A	N/A
2 - Orford Rd	1.65	0.52	1.50	2.42	2.86			N/A	N/A
3 - Smith Drive	0.13	0.00	0.00	0.13	0.13			N/A	N/A
4 - A50	1.33	0.57	1.16	1.56	1.80			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.08	0.08	0.92	1.91	2.59			N/A	N/A
2 - Orford Rd	3.25	0.06	1.02	8.87	13.70			N/A	N/A
3 - Smith Drive	0.17	0.00	0.00	0.17	0.17			N/A	N/A
4 - A50	2.20	0.06	0.87	5.70	8.60			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.93	0.03	0.28	1.93	3.92			N/A	N/A
2 - Orford Rd	15.73	0.38	8.98	38.42	51.89			N/A	N/A
3 - Smith Drive	0.24	0.03	0.26	0.47	0.49			N/A	N/A
4 - A50	5.40	0.04	0.40	13.83	29.29			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.97	0.03	0.28	1.97	2.49			N/A	N/A
2 - Orford Rd	22.08	0.29	10.98	57.13	79.42			N/A	N/A
3 - Smith Drive	0.25	0.03	0.28	0.51	0.99			N/A	N/A
4 - A50	5.79	0.03	0.32	7.69	28.28			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.12	0.08	0.97	1.94	2.62			N/A	N/A
2 - Orford Rd	3.79	0.04	0.41	10.29	19.77			N/A	N/A
3 - Smith Drive	0.18	0.00	0.00	0.18	0.18			N/A	N/A
4 - A50	2.38	0.05	0.46	6.57	11.14			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.75	0.05	0.49	1.44	1.98			N/A	N/A
2 - Orford Rd	1.74	0.03	0.30	1.74	7.80			N/A	N/A
3 - Smith Drive	0.13	0.00	0.00	0.13	0.13			N/A	N/A
4 - A50	1.38	0.03	0.34	3.13	7.07			N/A	N/A

A50-Conjunction - 2032 Do Something Full, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	81.52	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2032 Do Something Full	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 - Hilden Rd		ONE HOUR	✓	707	100.000
2 - Orford Rd		ONE HOUR	✓	1050	100.000
3 - Smith Drive		ONE HOUR	✓	172	100.000
4 - A50		ONE HOUR	✓	912	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	78	402	227
	2 - Orford Rd	165	0	131	754
	3 - Smith Drive	165	6	0	1
	4 - A50	294	602	16	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
	1 - Hilden Rd	0	0	1	10
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	4	0	0	0
	4 - A50	7	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Hilden Rd	0.71	11.61	2.5	8.0	B	649	973
2 - Orford Rd	1.10	179.39	63.3	120.8	F	963	1445
3 - Smith Drive	0.26	6.76	0.4	1.5	A	158	237
4 - A50	0.92	37.14	9.7	52.6	E	837	1255

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	532	133	466	1189	0.448	529	466	0.0	0.8	5.620	A
2 - Orford Rd	790	198	483	1148	0.689	782	512	0.0	2.2	9.691	A
3 - Smith Drive	129	32	854	866	0.149	129	410	0.0	0.2	5.065	A
4 - A50	687	172	251	1133	0.606	680	732	0.0	1.5	8.082	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Hilden Rd	636	159	558	1151	0.552	634	557	0.8	1.3	7.186	A
2 - Orford Rd	944	236	578	1106	0.853	932	613	2.2	5.1	19.559	C
3 - Smith Drive	155	39	1019	800	0.193	154	491	0.2	0.2	5.783	A
4 - A50	820	205	300	1112	0.737	815	874	1.5	2.8	12.272	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	778	195	672	1104	0.705	774	660	1.3	2.4	11.153	B
2 - Orford Rd	1156	289	706	1051	1.100	1033	740	5.1	35.8	84.251	F
3 - Smith Drive	189	47	1153	747	0.253	189	586	0.2	0.3	6.692	A
4 - A50	1004	251	350	1091	0.921	981	991	2.8	8.4	29.168	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	778	195	684	1099	0.708	778	668	2.4	2.5	11.606	B
2 - Orford Rd	1156	289	710	1050	1.102	1046	752	35.8	63.3	179.387	F
3 - Smith Drive	189	47	1165	742	0.255	189	590	0.3	0.4	6.761	A
4 - A50	1004	251	353	1090	0.922	999	1002	8.4	9.7	37.143	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	636	159	579	1142	0.556	640	592	2.5	1.3	7.490	A
2 - Orford Rd	944	236	584	1104	0.855	1087	634	63.3	27.7	154.015	F
3 - Smith Drive	155	39	1157	746	0.207	155	514	0.4	0.3	6.330	A
4 - A50	820	205	325	1101	0.744	846	987	9.7	3.2	15.794	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Through put (PCU/hr)	Through put (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignal ised level of service
1 - Hilden Rd	532	133	474	1186	0.449	534	488	1.3	0.9	5.739	A
2 - Orford Rd	790	198	487	1146	0.690	892	521	27.7	2.3	20.393	C
3 - Smith Drive	129	32	952	827	0.157	130	427	0.3	0.2	5.361	A
4 - A50	687	172	269	1125	0.610	693	813	3.2	1.6	8.683	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.83	0.57	1.04	1.45	1.50			N/A	N/A
2 - Orford Rd	2.15	0.18	1.20	4.04	5.25			N/A	N/A
3 - Smith Drive	0.18	0.00	0.00	0.18	0.18			N/A	N/A
4 - A50	1.55	0.61	1.47	1.89	2.01			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.26	0.07	0.91	2.58	3.54			N/A	N/A
2 - Orford Rd	5.11	0.09	1.50	13.76	20.26			N/A	N/A
3 - Smith Drive	0.25	0.00	0.00	0.25	0.25			N/A	N/A
4 - A50	2.75	0.06	1.02	7.30	11.08			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.38	0.03	0.29	2.38	8.04			N/A	N/A
2 - Orford Rd	35.84	9.57	31.59	62.63	74.04			N/A	N/A
3 - Smith Drive	0.35	0.03	0.26	0.48	0.50			N/A	N/A
4 - A50	8.43	0.06	1.38	24.53	40.07			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	2.46	0.03	0.28	2.46	4.16			N/A	N/A
2 - Orford Rd	63.33	21.83	57.88	104.33	120.84			N/A	N/A
3 - Smith Drive	0.35	0.03	0.33	1.21	1.51			N/A	N/A
4 - A50	9.68	0.04	0.45	26.36	52.60			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	1.32	0.07	0.93	2.77	3.84			N/A	N/A
2 - Orford Rd	27.67	6.60	23.98	49.31	58.71			N/A	N/A
3 - Smith Drive	0.27	0.00	0.00	0.27	0.27			N/A	N/A
4 - A50	3.16	0.04	0.44	8.80	15.78			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - Hilden Rd	0.85	0.04	0.44	1.90	2.94			N/A	N/A
2 - Orford Rd	2.35	0.03	0.29	2.35	8.99			N/A	N/A
3 - Smith Drive	0.19	0.00	0.00	0.19	0.19			N/A	N/A
4 - A50	1.65	0.03	0.33	3.03	8.55			N/A	N/A