Norwich Western Link

Transport Assessment - Appendix 11 – Junction Model Results

Sub Appendix 11s – Junction 22a A140/ A1270 northern roundabout and Junction 22b A140/ A1270 Southern Roundabout junction

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Document Reference: 4.01.11s

Version Number: 00

Date: March 2024

Contents

Figures

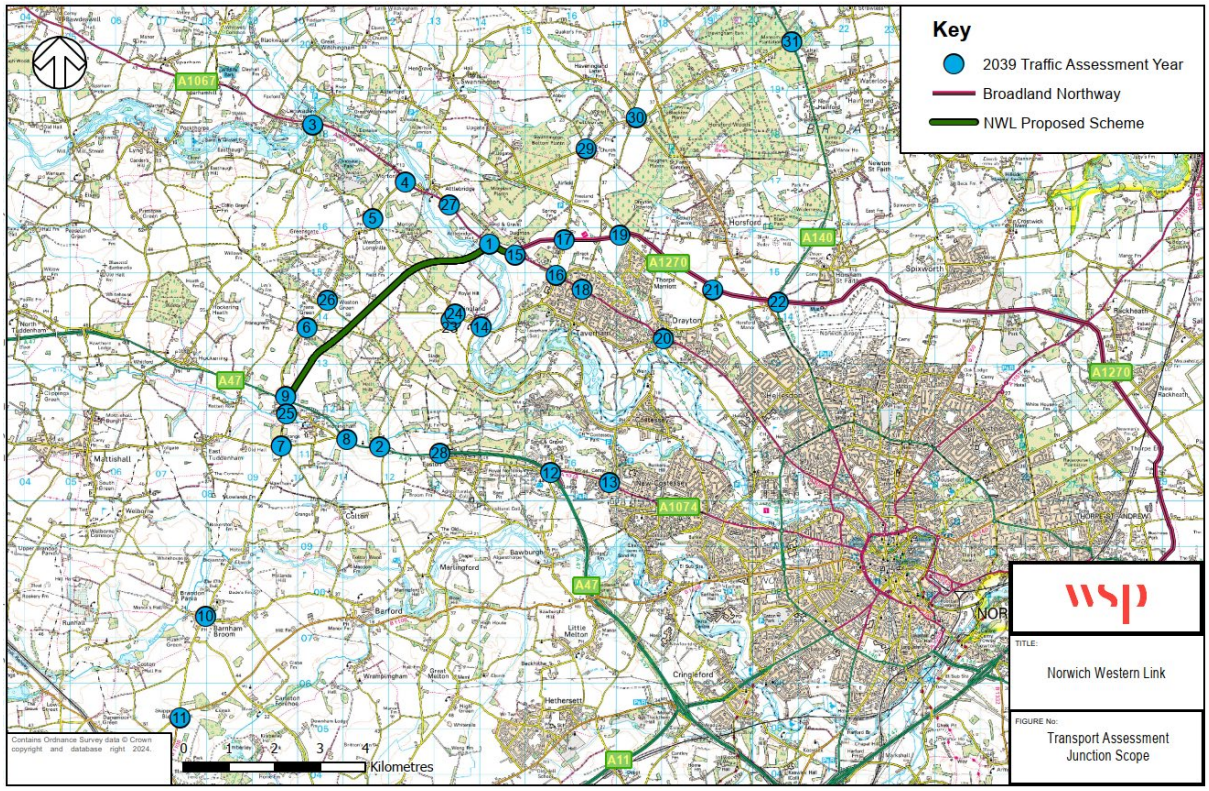
1 Junction Model Results

1.1.1 Junctions 10 modelling software output file that shows the junction capacity results for Junction 22a and Junction 22b of the TA.

1.1.2 We have included a summary of key information shown in this document in an accessible format. However, some users may not be able to access all technical details. If you require this document in a more accessible format please contact norwichwesternlink@norfolk.gov.uk

1.1.3 The TA scope map is shown below as a location plan.

Figure 1-1 Junction Assessment Scope



1.1.4 The model results are presented for 2029 and 2039 future assessment years for AM and PM peak hours, taking 7.30-8.30am and AM peak and 5pm-6pm as PM peak.

1.1.5 The scenarios tested are as follows:

- Do Minimum – the baseline future situation with committed developments and planned highway improvements but without the Proposed Scheme.
- Do Something - the baseline future situation with the Proposed Scheme.
- Do Something + Mitigation - the baseline future situation with the Proposed Scheme added plus a package of traffic mitigation measures in the wider network (north of A1067 and south of A47 plus Honingham Lane closure).

J22a - A140/ A1270 grade separated junction northern roundabout

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.4.1693

Filename: Import of J22a - updated ArmB + AGREED FLOWS (AECOM) SoCG (Balance AM flows).j10
Path: \\corp.pbwan.net\IN\IN_Projects\70118686-70061370-Norwich Western Link 2019 20\04 Record of Issue\4A Internal WSP Doc Registers\20240129_Model Reports (wo 2044)\J22\J22a - Copy
Report generation date: 21/03/2024 13:03:42

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2029DM									
A - A140 North	D1	39.2	93.93	1.03	F	D2	2.0	7.32	0.67	A
B - Connecting to Zone		0.4	4.59	0.26	A		2.0	9.63	0.67	A
D - A140 South		1.5	3.91	0.59	A		3.0	6.48	0.75	A
E - A1270 Off slip		0.3	4.77	0.21	A		0.1	5.18	0.09	A
	2029DS									
A - A140 North	D3	22.0	59.58	0.99	F	D4	1.8	6.64	0.64	A
B - Connecting to Zone		0.4	4.53	0.26	A		1.9	8.97	0.66	A
D - A140 South		1.4	3.86	0.58	A		2.7	5.93	0.73	A
E - A1270 Off slip		0.3	4.73	0.21	A		0.1	5.02	0.09	A
	2029DS_Mitigation									
A - A140 North	D5	88.0	185.22	1.11	F	D6	2.7	8.90	0.73	A
B - Connecting to Zone		0.4	4.67	0.26	A		2.3	10.84	0.70	B
D - A140 South		1.4	3.78	0.58	A		2.7	5.86	0.73	A
E - A1270 Off slip		0.3	4.68	0.21	A		0.1	5.00	0.09	A
	2039DM									
A - A140 North	D7	63.7	159.71	1.09	F	D8	1.9	6.89	0.65	A
B - Connecting to Zone		0.4	5.39	0.29	A		1.9	8.91	0.66	A
D - A140 South		1.5	3.95	0.59	A		2.6	5.77	0.72	A
E - A1270 Off slip		3.3	16.36	0.77	C		0.1	4.97	0.09	A
	2039DS									
A - A140 North	D9	41.0	111.72	1.04	F	D10	1.6	6.11	0.61	A
B - Connecting to Zone		0.4	5.39	0.29	A		1.7	8.17	0.64	A
D - A140 South		1.4	3.84	0.58	A		2.2	5.08	0.69	A
E - A1270 Off slip		2.7	13.94	0.73	B		0.1	4.72	0.08	A
	2039DS_Mitigation									
A - A140 North	D11	122.2	296.20	1.19	F	D12	2.4	8.06	0.71	A
B - Connecting to Zone		0.4	5.46	0.29	A		2.0	9.63	0.67	A
D - A140 South		1.4	3.85	0.58	A		2.1	5.03	0.68	A
E - A1270 Off slip		4.1	19.71	0.81	C		0.1	4.71	0.08	A

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

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

File summary

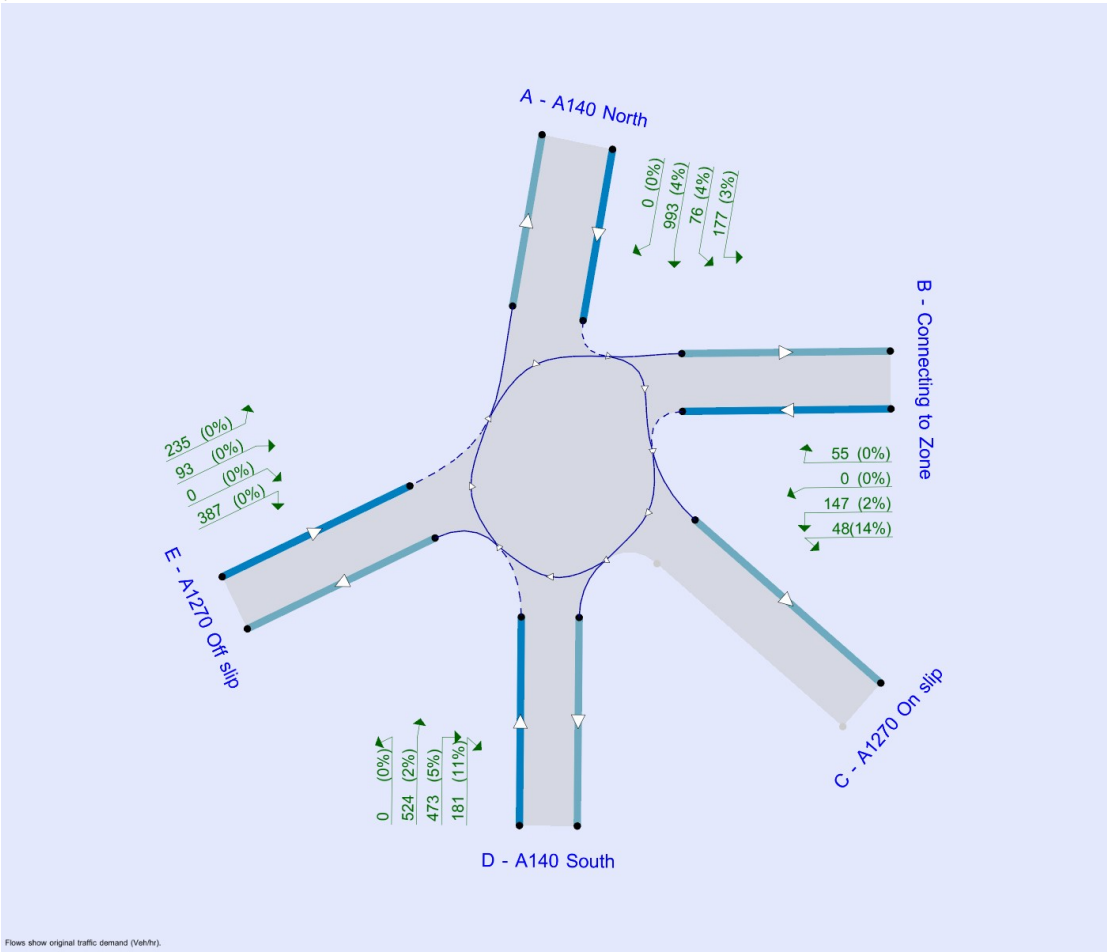
File Description

Title	A140 / Holt Road / B1149
Location	52.682431, 1.260925
Site number	J22a
Date	22/03/2023

Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INVN01911
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2029DM	AM	ONE HOUR	07:15	08:45	15	✓
D2	2029DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029DS	AM	ONE HOUR	07:15	08:45	15	✓
D4	2029DS	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029DS_Mitigation	AM	ONE HOUR	07:15	08:45	15	✓
D6	2029DS_Mitigation	PM	ONE HOUR	16:45	18:15	15	✓
D7	2039DM	AM	ONE HOUR	07:15	08:45	15	✓
D8	2039DM	PM	ONE HOUR	16:45	18:15	15	✓
D9	2039DS	AM	ONE HOUR	07:15	08:45	15	✓
D10	2039DS	PM	ONE HOUR	16:45	18:15	15	✓
D11	2039DS_Mitigation	AM	ONE HOUR	07:15	08:45	15	✓
D12	2039DS_Mitigation	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)

A1	✓	100.000	100.000

2029DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	43.02	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	43.02	E

Arms

Arms

Arm	Name	Description	No give-way line
A	A140 North		
B	Connecting to Zone		
C	A1270 On slip		
D	A140 South		
E	A1270 Off slip		

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)	Entry only	Exit only
A - A140 North	3.70	7.00	37.5	20.0	90.0	48.0		
B - Connecting to Zone	3.25	6.48	46.8	17.6	90.0	37.6		
C - A1270 On slip								✓
D - A140 South	7.30	8.00	14.4	20.0	90.0	34.0		
E - A1270 Off slip	3.70	7.30	9.9	20.0	90.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A140 North	0.455	1783
B - Connecting to Zone	0.453	1727
C - A1270 On slip		
D - A140 South	0.547	2362
E - A1270 Off slip	0.433	1580

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	2029DM	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1271	100.000
B - Connecting to Zone		ONE HOUR	✓	249	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1199	100.000
E - A1270 Off slip		ONE HOUR	✓	186	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	101	992	0
	B - Connecting to Zone	55	0	62	132	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	617	380	201	0	0
	E - A1270 Off slip	0	186	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.14	0.08	0.78	0.00
	B - Connecting to Zone	0.22	0.00	0.25	0.53	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.51	0.32	0.17	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	1	3	1	0
	B - Connecting to Zone	0	0	10	0	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	6	10	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.012	1.032	1.014	1.000
	B - Connecting to Zone	1.000	1.000	1.104	1.000	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.010	1.055	1.101	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A140 North	957	971
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	902	938
	E - A1270 Off slip	140	140
07:30-07:45	A - A140 North	1142	1159
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1078	1120
	E - A1270 Off slip	167	167
07:45-08:00	A - A140 North	1399	1420
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1320	1372
	E - A1270 Off slip	205	205
08:00-08:15	A - A140 North	1399	1420
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1320	1372
	E - A1270 Off slip	205	205
08:15-08:30	A - A140 North	1142	1159
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1078	1120
	E - A1270 Off slip	167	167
08:30-08:45	A - A140 North	957	971
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	902	938
	E - A1270 Off slip	140	140

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	1.03	93.93	39.2	F	1183	1775
B - Connecting to Zone	0.26	4.59	0.4	A	234	352
C - A1270 On slip						
D - A140 South	0.59	3.91	1.5	A	1144	1715
E - A1270 Off slip	0.21	4.77	0.3	A	171	256

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	971	243	607	1507	0.644	964	509	0.0	1.8	6.647	A
B - Connecting to Zone	192	48	996	1276	0.151	192	574	0.0	0.2	3.404	A
C - A1270 On slip			892				296				
D - A140 South	938	235	41	2340	0.401	935	851	0.0	0.7	2.660	A
E - A1270 Off slip	140	35	977	1157	0.121	139	0	0.0	0.1	3.537	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1159	290	726	1452	0.798	1152	609	1.8	3.8	11.838	B
B - Connecting to Zone	230	57	1191	1188	0.193	229	687	0.2	0.2	3.852	A
C - A1270 On slip			1066				354				
D - A140 South	1120	280	49	2335	0.480	1119	1017	0.7	1.0	3.075	A
E - A1270 Off slip	167	42	1169	1073	0.156	167	0	0.1	0.2	3.971	A

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)	Unsignalised level of service
A - A140 North	1420	355	889	1378	1.030	1335	746	3.8	24.9	49.963	E
B - Connecting to Zone	281	70	1394	1096	0.257	281	831	0.2	0.4	4.529	A
C - A1270 On slip			1247				427				
D - A140 South	1372	343	60	2329	0.589	1370	1187	1.0	1.5	3.894	A
E - A1270 Off slip	205	51	1431	960	0.213	204	0	0.2	0.3	4.763	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1420	355	890	1378	1.031	1363	747	24.9	39.2	93.930	F
B - Connecting to Zone	281	70	1418	1085	0.259	281	836	0.4	0.4	4.594	A
C - A1270 On slip			1269				430				
D - A140 South	1372	343	61	2329	0.589	1372	1209	1.5	1.5	3.911	A
E - A1270 Off slip	205	51	1433	959	0.214	205	0	0.3	0.3	4.772	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1159	290	728	1451	0.799	1298	611	39.2	4.5	38.606	E
B - Connecting to Zone	230	57	1318	1130	0.203	230	709	0.4	0.3	4.103	A
C - A1270 On slip			1181				366				
D - A140 South	1120	280	50	2335	0.480	1122	1132	1.5	1.0	3.093	A
E - A1270 Off slip	167	42	1172	1072	0.156	168	0	0.3	0.2	3.983	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	971	243	610	1505	0.645	981	511	4.5	1.9	7.106	A
B - Connecting to Zone	192	48	1012	1269	0.152	193	579	0.3	0.2	3.434	A
C - A1270 On slip			907				298				
D - A140 South	938	235	41	2340	0.401	939	865	1.0	0.7	2.674	A
E - A1270 Off slip	140	35	981	1155	0.121	140	0	0.2	0.1	3.550	A

2029DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	7.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.38	A

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	2029DM	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	890	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1543	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	137	689	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1035	184	324	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.07	0.15	0.77	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.67	0.12	0.21	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	17	3	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	0	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.167	1.029	1.001	1.000
	B - Connecting to Zone	1.000	1.000	1.006	1.013	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.007	1.000	1.001	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	670	682
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1162	1167
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	800	814
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1387	1394
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	980	997
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1699	1707
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	980	997
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1699	1707
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	800	814
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1387	1394
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	670	682
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1162	1167
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.67	7.32	2.0	A	831	1247
B - Connecting to Zone	0.67	9.63	2.0	A	646	969
C - A1270 On slip						
D - A140 South	0.75	6.48	3.0	A	1423	2134
E - A1270 Off slip	0.09	5.18	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	682	170	428	1588	0.429	679	903	0.0	0.8	4.016	A
B - Connecting to Zone	530	132	866	1335	0.397	527	240	0.0	0.7	4.479	A
C - A1270 On slip			903				491				
D - A140 South	1167	292	121	2296	0.508	1163	781	0.0	1.0	3.182	A
E - A1270 Off slip	47	12	1284	1023	0.046	46	0	0.0	0.0	3.685	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	814	204	512	1550	0.525	813	1081	0.8	1.1	4.961	A
B - Connecting to Zone	633	158	1037	1258	0.503	631	288	0.7	1.0	5.782	A
C - A1270 On slip			1081				587				
D - A140 South	1394	348	145	2283	0.611	1392	936	1.0	1.6	4.050	A
E - A1270 Off slip	56	14	1537	914	0.061	56	0	0.0	0.1	4.195	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	997	249	626	1498	0.666	994	1321	1.1	2.0	7.213	A
B - Connecting to Zone	775	194	1268	1153	0.672	771	352	1.0	2.0	9.400	A
C - A1270 On slip			1321				718				
D - A140 South	1707	427	177	2265	0.754	1701	1143	1.6	3.0	6.352	A
E - A1270 Off slip	68	17	1879	766	0.089	68	0	0.1	0.1	5.160	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	997	249	628	1497	0.666	997	1325	2.0	2.0	7.323	A
B - Connecting to Zone	775	194	1272	1151	0.673	775	353	2.0	2.0	9.633	A
C - A1270 On slip			1326				721				
D - A140 South	1707	427	178	2265	0.754	1707	1148	3.0	3.0	6.479	A
E - A1270 Off slip	68	17	1885	763	0.089	68	0	0.1	0.1	5.181	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	814	204	515	1549	0.526	818	1087	2.0	1.1	5.036	A
B - Connecting to Zone	633	158	1043	1255	0.504	637	289	2.0	1.0	5.908	A
C - A1270 On slip			1089				591				
D - A140 South	1394	348	147	2282	0.611	1400	942	3.0	1.6	4.125	A
E - A1270 Off slip	56	14	1546	910	0.061	56	0	0.1	0.1	4.215	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	682	170	430	1587	0.430	683	908	1.1	0.8	4.061	A
B - Connecting to Zone	530	132	872	1332	0.398	531	242	1.0	0.7	4.538	A
C - A1270 On slip			909				494				
D - A140 South	1167	292	122	2295	0.509	1169	787	1.6	1.0	3.221	A
E - A1270 Off slip	47	12	1292	1020	0.046	47	0	0.1	0.0	3.698	A

2029DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	27.61	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	27.61	D

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	2029DS	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1216	100.000
B - Connecting to Zone		ONE HOUR	✓	249	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1186	100.000
E - A1270 Off slip		ONE HOUR	✓	186	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	85	954	0
	B - Connecting to Zone	55	0	62	132	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	601	380	205	0	0
	E - A1270 Off slip	0	186	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.15	0.07	0.78	0.00
	B - Connecting to Zone	0.22	0.00	0.25	0.53	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.51	0.32	0.17	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	1	3	1	0
	B - Connecting to Zone	0	0	10	0	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	5	10	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.012	1.025	1.015	1.000
	B - Connecting to Zone	1.000	1.000	1.104	1.000	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.011	1.052	1.104	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

07:15-07:30	A - A140 North	916	929
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	893	929
	E - A1270 Off slip	140	140
07:30-07:45	A - A140 North	1093	1110
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1066	1109
	E - A1270 Off slip	167	167
07:45-08:00	A - A140 North	1339	1359
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1306	1358
	E - A1270 Off slip	205	205
08:00-08:15	A - A140 North	1339	1359
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1306	1358
	E - A1270 Off slip	205	205
08:15-08:30	A - A140 North	1093	1110
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1066	1109
	E - A1270 Off slip	167	167
08:30-08:45	A - A140 North	916	929
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	893	929
	E - A1270 Off slip	140	140

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.99	59.58	22.0	F	1133	1699
B - Connecting to Zone	0.26	4.53	0.4	A	234	352
C - A1270 On slip						
D - A140 South	0.58	3.86	1.4	A	1132	1698
E - A1270 Off slip	0.21	4.73	0.3	A	171	256

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	929	232	609	1506	0.617	923	497	0.0	1.6	6.204	A
B - Connecting to Zone	192	48	959	1293	0.149	192	574	0.0	0.2	3.351	A
C - A1270 On slip			864				286				
D - A140 South	929	232	41	2340	0.397	926	823	0.0	0.7	2.644	A
E - A1270 Off slip	140	35	967	1161	0.121	139	0	0.0	0.1	3.523	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1110	277	729	1451	0.765	1103	595	1.6	3.1	10.325	B
B - Connecting to Zone	230	57	1146	1208	0.190	229	686	0.2	0.2	3.773	A
C - A1270 On slip			1033				343				
D - A140 South	1109	277	49	2335	0.475	1108	984	0.7	0.9	3.048	A
E - A1270 Off slip	167	42	1157	1078	0.155	167	0	0.1	0.2	3.949	A

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)	Unsignalised level of service
A - A140 North	1359	340	893	1377	0.987	1306	728	3.1	16.3	37.171	E
B - Connecting to Zone	281	70	1365	1109	0.254	281	834	0.2	0.3	4.458	A
C - A1270 On slip			1230				416				
D - A140 South	1358	340	60	2329	0.583	1356	1169	0.9	1.4	3.840	A
E - A1270 Off slip	205	51	1416	966	0.212	204	0	0.2	0.3	4.724	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1359	340	894	1376	0.987	1336	729	16.3	22.0	59.583	F
B - Connecting to Zone	281	70	1391	1097	0.256	281	839	0.3	0.4	4.526	A
C - A1270 On slip			1254				419				
D - A140 South	1358	340	61	2329	0.583	1358	1193	1.4	1.4	3.856	A
E - A1270 Off slip	205	51	1419	965	0.212	205	0	0.3	0.3	4.734	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1110	277	731	1450	0.765	1184	597	22.0	3.5	17.244	C
B - Connecting to Zone	230	57	1215	1177	0.195	230	699	0.4	0.3	3.904	A
C - A1270 On slip			1097				349				
D - A140 South	1109	277	50	2335	0.475	1111	1047	1.4	0.9	3.062	A
E - A1270 Off slip	167	42	1160	1077	0.155	168	0	0.3	0.2	3.961	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	929	232	612	1504	0.618	937	499	3.5	1.7	6.513	A
B - Connecting to Zone	192	48	971	1288	0.149	193	578	0.3	0.2	3.375	A
C - A1270 On slip			875				288				
D - A140 South	929	232	41	2340	0.397	930	834	0.9	0.7	2.659	A
E - A1270 Off slip	140	35	971	1159	0.121	140	0	0.2	0.1	3.533	A

2029DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	6.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.79	A

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	2029DS	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	859	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1498	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	124	671	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1012	184	302	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.07	0.14	0.78	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.68	0.12	0.20	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	17	1	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	0	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.167	1.008	1.001	1.000
	B - Connecting to Zone	1.000	1.000	1.006	1.014	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.006	1.000	1.000	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	647	656
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1128	1132
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	772	783
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1347	1352
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	946	959
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1649	1656
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	946	959
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1649	1656
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	772	783
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1347	1352
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	647	656
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1128	1132
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.64	6.64	1.8	A	799	1199
B - Connecting to Zone	0.66	8.97	1.9	A	646	969
C - A1270 On slip						
D - A140 South	0.73	5.93	2.7	A	1380	2070
E - A1270 Off slip	0.09	5.02	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	656	164	411	1596	0.411	653	885	0.0	0.7	3.860	A
B - Connecting to Zone	530	132	824	1354	0.391	527	241	0.0	0.6	4.378	A
C - A1270 On slip			889				462				
D - A140 South	1132	283	121	2296	0.493	1128	768	0.0	1.0	3.086	A
E - A1270 Off slip	47	12	1250	1038	0.045	46	0	0.0	0.0	3.629	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	783	196	492	1559	0.502	782	1059	0.7	1.0	4.689	A
B - Connecting to Zone	633	158	986	1281	0.494	632	288	0.6	1.0	5.580	A
C - A1270 On slip			1064				553				
D - A140 South	1352	338	145	2283	0.592	1350	919	1.0	1.4	3.868	A
E - A1270 Off slip	56	14	1496	932	0.060	56	0	0.0	0.1	4.108	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	959	240	602	1509	0.635	956	1295	1.0	1.7	6.567	A
B - Connecting to Zone	775	194	1206	1181	0.656	771	352	1.0	1.9	8.783	A
C - A1270 On slip			1301				676				
D - A140 South	1656	414	178	2265	0.731	1651	1124	1.4	2.7	5.840	A
E - A1270 Off slip	68	17	1829	788	0.087	68	0	0.1	0.1	5.004	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	959	240	603	1508	0.636	959	1299	1.7	1.8	6.641	A
B - Connecting to Zone	775	194	1209	1180	0.657	775	353	1.9	1.9	8.965	A
C - A1270 On slip			1306				678				
D - A140 South	1656	414	178	2265	0.731	1656	1128	2.7	2.7	5.932	A
E - A1270 Off slip	68	17	1834	785	0.087	68	0	0.1	0.1	5.021	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	783	196	494	1558	0.503	786	1065	1.8	1.0	4.745	A
B - Connecting to Zone	633	158	991	1278	0.495	636	289	1.9	1.0	5.688	A
C - A1270 On slip			1071				556				
D - A140 South	1352	338	146	2282	0.592	1357	925	2.7	1.5	3.928	A
E - A1270 Off slip	56	14	1503	928	0.060	56	0	0.1	0.1	4.126	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	656	164	413	1595	0.411	657	890	1.0	0.7	3.898	A
B - Connecting to Zone	530	132	828	1352	0.392	531	242	1.0	0.7	4.430	A
C - A1270 On slip			895				465				
D - A140 South	1132	283	122	2295	0.493	1134	773	1.5	1.0	3.120	A
E - A1270 Off slip	47	12	1257	1035	0.045	47	0	0.1	0.0	3.643	A

2029DS_Mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	86.72	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	86.72	F

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	2029DS_Mitigation	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1373	100.000
B - Connecting to Zone		ONE HOUR	✓	249	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1169	100.000
E - A1270 Off slip		ONE HOUR	✓	186	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	85	1111	0
	B - Connecting to Zone	55	0	62	132	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	586	380	203	0	0
	E - A1270 Off slip	0	186	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.13	0.06	0.81	0.00
	B - Connecting to Zone	0.22	0.00	0.25	0.53	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.50	0.33	0.17	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	1	4	1	0
	B - Connecting to Zone	0	0	11	0	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	5	11	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.012	1.038	1.012	1.000
	B - Connecting to Zone	1.000	1.000	1.106	1.000	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.011	1.052	1.105	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

07:15-07:30	A - A140 North	1034	1048
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	880	916
	E - A1270 Off slip	140	140
07:30-07:45	A - A140 North	1234	1251
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1051	1094
	E - A1270 Off slip	167	167
07:45-08:00	A - A140 North	1512	1533
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1287	1339
	E - A1270 Off slip	205	205
08:00-08:15	A - A140 North	1512	1533
	B - Connecting to Zone	274	281
	C - A1270 On slip	0	0
	D - A140 South	1287	1339
	E - A1270 Off slip	205	205
08:15-08:30	A - A140 North	1234	1251
	B - Connecting to Zone	224	230
	C - A1270 On slip	0	0
	D - A140 South	1051	1094
	E - A1270 Off slip	167	167
08:30-08:45	A - A140 North	1034	1048
	B - Connecting to Zone	187	192
	C - A1270 On slip	0	0
	D - A140 South	880	916
	E - A1270 Off slip	140	140

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	1.11	185.22	88.0	F	1277	1916
B - Connecting to Zone	0.26	4.67	0.4	A	235	352
C - A1270 On slip						
D - A140 South	0.58	3.78	1.4	A	1116	1674
E - A1270 Off slip	0.21	4.68	0.3	A	171	256

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1048	262	608	1506	0.696	1039	486	0.0	2.3	7.671	A
B - Connecting to Zone	192	48	1073	1241	0.155	192	573	0.0	0.2	3.520	A
C - A1270 On slip			980				286				
D - A140 South	916	229	41	2340	0.391	913	938	0.0	0.7	2.622	A
E - A1270 Off slip	140	35	954	1166	0.120	139	0	0.0	0.1	3.504	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1251	313	727	1452	0.862	1238	582	2.3	5.6	16.120	C
B - Connecting to Zone	230	57	1280	1148	0.200	230	685	0.2	0.3	4.024	A
C - A1270 On slip			1168				341				
D - A140 South	1094	273	49	2335	0.468	1093	1119	0.7	0.9	3.012	A
E - A1270 Off slip	167	42	1142	1085	0.154	167	0	0.1	0.2	3.920	A

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)	Unsignalised level of service
A - A140 North	1533	383	890	1378	1.112	1361	712	5.6	48.5	82.327	F
B - Connecting to Zone	281	70	1432	1079	0.261	281	819	0.3	0.4	4.630	A
C - A1270 On slip			1305				408				
D - A140 South	1339	335	60	2329	0.575	1337	1245	0.9	1.4	3.769	A
E - A1270 Off slip	205	51	1398	974	0.210	204	0	0.2	0.3	4.675	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1533	383	892	1377	1.113	1375	713	48.5	88.0	185.225	F
B - Connecting to Zone	281	70	1444	1073	0.262	281	822	0.4	0.4	4.667	A
C - A1270 On slip			1317				409				
D - A140 South	1339	335	61	2329	0.575	1339	1256	1.4	1.4	3.784	A
E - A1270 Off slip	205	51	1400	973	0.210	205	0	0.3	0.3	4.684	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1251	313	729	1451	0.862	1435	583	88.0	42.2	165.464	F
B - Connecting to Zone	230	57	1452	1070	0.215	230	712	0.4	0.3	4.403	A
C - A1270 On slip			1327				355				
D - A140 South	1094	273	50	2335	0.468	1095	1278	1.4	0.9	3.028	A
E - A1270 Off slip	167	42	1145	1084	0.154	168	0	0.3	0.2	3.932	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1048	262	610	1505	0.696	1207	488	42.2	2.4	20.346	C
B - Connecting to Zone	192	48	1221	1174	0.164	193	597	0.3	0.2	3.767	A
C - A1270 On slip			1116				297				
D - A140 South	916	229	41	2340	0.391	917	1075	0.9	0.7	2.636	A
E - A1270 Off slip	140	35	958	1165	0.120	140	0	0.2	0.1	3.514	A

2029DS_Mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	7.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.84	A

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	2029DS_Mitigation	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	977	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1490	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	116	797	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	986	184	320	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.07	0.12	0.82	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.66	0.12	0.21	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	10	3	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	0	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.103	1.034	1.003	1.000
	B - Connecting to Zone	1.000	1.000	1.007	1.013	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.006	1.000	1.001	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	736	745
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1122	1127
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	878	890
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1339	1345
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	1076	1090
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1641	1648
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	1076	1090
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1641	1648
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	878	890
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1339	1345
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	736	745
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1122	1127
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.73	8.90	2.7	A	908	1363
B - Connecting to Zone	0.70	10.84	2.3	B	646	969
C - A1270 On slip						
D - A140 South	0.73	5.86	2.7	A	1373	2060
E - A1270 Off slip	0.09	5.00	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	745	186	425	1589	0.469	742	866	0.0	0.9	4.285	A
B - Connecting to Zone	530	132	929	1306	0.406	527	237	0.0	0.7	4.642	A
C - A1270 On slip			984				472				
D - A140 South	1127	282	121	2296	0.491	1123	863	0.0	1.0	3.072	A
E - A1270 Off slip	47	12	1244	1041	0.045	46	0	0.0	0.0	3.620	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	890	222	509	1551	0.574	888	1036	0.9	1.3	5.483	A
B - Connecting to Zone	633	158	1112	1223	0.517	631	284	0.7	1.1	6.112	A
C - A1270 On slip			1178				565				
D - A140 South	1345	336	145	2283	0.589	1343	1033	1.0	1.4	3.841	A
E - A1270 Off slip	56	14	1489	935	0.060	56	0	0.0	0.1	4.095	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1090	272	622	1500	0.727	1085	1266	1.3	2.6	8.684	A
B - Connecting to Zone	775	194	1359	1112	0.697	770	348	1.1	2.2	10.490	B
C - A1270 On slip			1439				691				
D - A140 South	1648	412	177	2265	0.727	1643	1262	1.4	2.6	5.764	A
E - A1270 Off slip	68	17	1820	791	0.086	68	0	0.1	0.1	4.979	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1090	272	624	1499	0.727	1090	1270	2.6	2.7	8.899	A
B - Connecting to Zone	775	194	1365	1109	0.699	775	349	2.2	2.3	10.836	B
C - A1270 On slip			1446				693				
D - A140 South	1648	412	178	2265	0.728	1648	1268	2.6	2.7	5.858	A
E - A1270 Off slip	68	17	1826	789	0.087	68	0	0.1	0.1	4.996	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	890	222	511	1550	0.574	895	1042	2.7	1.4	5.609	A
B - Connecting to Zone	633	158	1120	1220	0.519	637	286	2.3	1.1	6.283	A
C - A1270 On slip			1189				569				
D - A140 South	1345	336	147	2282	0.590	1350	1042	2.7	1.5	3.899	A
E - A1270 Off slip	56	14	1497	931	0.060	56	0	0.1	0.1	4.112	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	745	186	427	1588	0.469	747	870	1.4	0.9	4.345	A
B - Connecting to Zone	530	132	936	1304	0.406	531	239	1.1	0.7	4.710	A
C - A1270 On slip			992				475				
D - A140 South	1127	282	122	2295	0.491	1129	869	1.5	1.0	3.103	A
E - A1270 Off slip	47	12	1251	1038	0.045	47	0	0.1	0.0	3.634	A

2039DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	61.11	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	61.11	F

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	2039DM	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1140	100.000
B - Connecting to Zone		ONE HOUR	✓	249	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1196	100.000
E - A1270 Off slip		ONE HOUR	✓	671	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	89	874	0
	B - Connecting to Zone	55	0	48	146	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	544	475	177	0	0
	E - A1270 Off slip	177	91	0	403	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.16	0.08	0.77	0.00
	B - Connecting to Zone	0.22	0.00	0.19	0.59	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.45	0.40	0.15	0.00	0.00
	E - A1270 Off slip	0.26	0.14	0.00	0.60	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	3	3	3	0
	B - Connecting to Zone	0	0	14	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	2	5	12	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.032	1.032	1.030	1.000
	B - Connecting to Zone	1.000	1.000	1.143	1.013	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.017	1.049	1.123	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

07:15-07:30	A - A140 North	858	884
	B - Connecting to Zone	187	194
	C - A1270 On slip	0	0
	D - A140 South	900	941
	E - A1270 Off slip	505	505
07:30-07:45	A - A140 North	1025	1056
	B - Connecting to Zone	224	232
	C - A1270 On slip	0	0
	D - A140 South	1075	1124
	E - A1270 Off slip	603	603
07:45-08:00	A - A140 North	1255	1294
	B - Connecting to Zone	274	284
	C - A1270 On slip	0	0
	D - A140 South	1317	1377
	E - A1270 Off slip	739	739
08:00-08:15	A - A140 North	1255	1294
	B - Connecting to Zone	274	284
	C - A1270 On slip	0	0
	D - A140 South	1317	1377
	E - A1270 Off slip	739	739
08:15-08:30	A - A140 North	1025	1056
	B - Connecting to Zone	224	232
	C - A1270 On slip	0	0
	D - A140 South	1075	1124
	E - A1270 Off slip	603	603
08:30-08:45	A - A140 North	858	884
	B - Connecting to Zone	187	194
	C - A1270 On slip	0	0
	D - A140 South	900	941
	E - A1270 Off slip	505	505

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	1.09	159.71	63.7	F	1078	1617
B - Connecting to Zone	0.29	5.39	0.4	A	237	355
C - A1270 On slip						
D - A140 South	0.59	3.95	1.5	A	1147	1721
E - A1270 Off slip	0.77	16.36	3.3	C	616	924

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	884	221	893	1377	0.642	877	589	0.0	1.8	7.326	A
B - Connecting to Zone	194	49	1192	1188	0.163	193	578	0.0	0.2	3.744	A
C - A1270 On slip			1126				259				
D - A140 South	941	235	41	2340	0.402	938	1085	0.0	0.7	2.679	A
E - A1270 Off slip	505	126	980	1155	0.437	502	0	0.0	0.8	5.487	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1056	264	1069	1297	0.814	1047	705	1.8	4.2	14.314	B
B - Connecting to Zone	232	58	1424	1082	0.214	231	692	0.2	0.3	4.379	A
C - A1270 On slip			1345				310				
D - A140 South	1124	281	49	2335	0.481	1123	1296	0.7	1.0	3.101	A
E - A1270 Off slip	603	151	1172	1072	0.563	601	0	0.8	1.3	7.617	A

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)	Unsignalised level of service
A - A140 North	1294	323	1305	1190	1.087	1166	861	4.2	36.0	74.047	F
B - Connecting to Zone	284	71	1643	983	0.289	283	828	0.3	0.4	5.317	A
C - A1270 On slip			1556				370				
D - A140 South	1377	344	60	2329	0.591	1374	1496	1.0	1.5	3.933	A
E - A1270 Off slip	739	185	1435	958	0.771	731	0	1.3	3.1	15.387	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1294	323	1311	1187	1.090	1182	864	36.0	63.7	159.709	F
B - Connecting to Zone	284	71	1661	975	0.291	284	833	0.4	0.4	5.392	A
C - A1270 On slip			1573				372				
D - A140 South	1377	344	61	2329	0.591	1376	1512	1.5	1.5	3.950	A
E - A1270 Off slip	739	185	1437	957	0.772	738	0	3.1	3.3	16.361	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1056	264	1078	1293	0.817	1272	709	63.7	9.7	109.725	F
B - Connecting to Zone	232	58	1620	993	0.233	232	729	0.4	0.3	4.901	A
C - A1270 On slip			1525				328				
D - A140 South	1124	281	50	2335	0.481	1126	1475	1.5	1.0	3.119	A
E - A1270 Off slip	603	151	1176	1070	0.564	611	0	3.3	1.3	7.962	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	884	221	899	1374	0.644	916	592	9.7	1.9	8.633	A
B - Connecting to Zone	194	49	1228	1171	0.166	195	587	0.3	0.2	3.817	A
C - A1270 On slip			1160				263				
D - A140 South	941	235	42	2339	0.402	942	1118	1.0	0.7	2.694	A
E - A1270 Off slip	505	126	984	1153	0.438	507	0	1.3	0.8	5.588	A

2039DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	6.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.78	A

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	2039DM	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	885	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1479	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	116	706	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1027	184	268	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.07	0.13	0.80	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.69	0.12	0.18	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	19	3	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	1	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.186	1.035	1.000	1.000
	B - Connecting to Zone	1.000	1.000	1.007	1.013	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.007	1.006	1.001	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	667	679
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1113	1120
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	796	811
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1330	1337
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	975	993
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1628	1638
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	975	993
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1628	1638
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	796	811
	B - Connecting to Zone	627	633
	C - A1270 On slip	0	0
	D - A140 South	1330	1337
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	667	679
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1113	1120
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.65	6.89	1.9	A	827	1241
B - Connecting to Zone	0.66	8.91	1.9	A	646	969
C - A1270 On slip						
D - A140 South	0.72	5.77	2.6	A	1365	2048
E - A1270 Off slip	0.09	4.97	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	679	170	387	1607	0.422	676	897	0.0	0.7	3.925	A
B - Connecting to Zone	530	132	820	1356	0.391	527	242	0.0	0.6	4.368	A
C - A1270 On slip			915				433				
D - A140 South	1120	280	121	2296	0.488	1116	793	0.0	1.0	3.059	A
E - A1270 Off slip	47	12	1237	1044	0.045	46	0	0.0	0.0	3.610	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	811	203	463	1572	0.516	809	1074	0.7	1.1	4.795	A
B - Connecting to Zone	633	158	982	1283	0.493	631	290	0.6	1.0	5.562	A
C - A1270 On slip			1095				518				
D - A140 South	1337	334	145	2283	0.586	1335	950	1.0	1.4	3.816	A
E - A1270 Off slip	56	14	1481	938	0.059	56	0	0.0	0.1	4.079	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	993	248	566	1525	0.651	990	1313	1.1	1.9	6.802	A
B - Connecting to Zone	775	194	1201	1183	0.655	771	355	1.0	1.9	8.732	A
C - A1270 On slip			1339				633				
D - A140 South	1638	409	178	2265	0.723	1633	1161	1.4	2.6	5.688	A
E - A1270 Off slip	68	17	1811	795	0.086	68	0	0.1	0.1	4.951	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	993	248	568	1525	0.651	993	1317	1.9	1.9	6.888	A
B - Connecting to Zone	775	194	1204	1182	0.656	775	356	1.9	1.9	8.910	A
C - A1270 On slip			1344				636				
D - A140 South	1638	409	178	2265	0.723	1638	1165	2.6	2.6	5.773	A
E - A1270 Off slip	68	17	1816	793	0.086	68	0	0.1	0.1	4.967	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	811	203	465	1571	0.516	814	1079	1.9	1.1	4.860	A
B - Connecting to Zone	633	158	987	1280	0.494	636	291	1.9	1.0	5.668	A
C - A1270 On slip			1102				521				
D - A140 South	1337	334	146	2282	0.586	1342	956	2.6	1.4	3.871	A
E - A1270 Off slip	56	14	1488	935	0.060	56	0	0.1	0.1	4.095	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	679	170	389	1606	0.423	680	902	1.1	0.8	3.967	A
B - Connecting to Zone	530	132	825	1354	0.391	531	244	1.0	0.7	4.420	A
C - A1270 On slip			921				436				
D - A140 South	1120	280	122	2295	0.488	1122	799	1.4	1.0	3.092	A
E - A1270 Off slip	47	12	1244	1041	0.045	47	0	0.1	0.0	3.621	A

2039DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	43.10	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	43.10	E

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	2039DS	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1081	100.000
B - Connecting to Zone		ONE HOUR	✓	250	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1174	100.000
E - A1270 Off slip		ONE HOUR	✓	646	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	74	830	0
	B - Connecting to Zone	55	0	48	147	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	523	473	178	0	0
	E - A1270 Off slip	135	93	0	418	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.16	0.07	0.77	0.00
	B - Connecting to Zone	0.22	0.00	0.19	0.59	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.45	0.40	0.15	0.00	0.00
	E - A1270 Off slip	0.21	0.14	0.00	0.65	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	3	3	4	0
	B - Connecting to Zone	0	0	14	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	2	5	13	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.033	1.025	1.036	1.000
	B - Connecting to Zone	1.000	1.000	1.144	1.013	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.016	1.046	1.128	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

07:15-07:30	A - A140 North	814	842
	B - Connecting to Zone	188	195
	C - A1270 On slip	0	0
	D - A140 South	884	923
	E - A1270 Off slip	486	486
07:30-07:45	A - A140 North	972	1005
	B - Connecting to Zone	225	233
	C - A1270 On slip	0	0
	D - A140 South	1055	1103
	E - A1270 Off slip	581	581
07:45-08:00	A - A140 North	1190	1231
	B - Connecting to Zone	275	285
	C - A1270 On slip	0	0
	D - A140 South	1293	1350
	E - A1270 Off slip	711	711
08:00-08:15	A - A140 North	1190	1231
	B - Connecting to Zone	275	285
	C - A1270 On slip	0	0
	D - A140 South	1293	1350
	E - A1270 Off slip	711	711
08:15-08:30	A - A140 North	972	1005
	B - Connecting to Zone	225	233
	C - A1270 On slip	0	0
	D - A140 South	1055	1103
	E - A1270 Off slip	581	581
08:30-08:45	A - A140 North	814	842
	B - Connecting to Zone	188	195
	C - A1270 On slip	0	0
	D - A140 South	884	923
	E - A1270 Off slip	486	486

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	1.04	111.72	41.0	F	1026	1539
B - Connecting to Zone	0.29	5.39	0.4	A	238	356
C - A1270 On slip						
D - A140 South	0.58	3.84	1.4	A	1125	1688
E - A1270 Off slip	0.73	13.94	2.7	B	593	889

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	842	210	904	1372	0.614	836	541	0.0	1.6	6.870	A
B - Connecting to Zone	195	49	1162	1201	0.162	194	577	0.0	0.2	3.697	A
C - A1270 On slip			1108				249				
D - A140 South	923	231	41	2340	0.395	921	1067	0.0	0.7	2.646	A
E - A1270 Off slip	486	122	962	1163	0.418	483	0	0.0	0.7	5.276	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1005	251	1082	1291	0.779	998	647	1.6	3.4	12.429	B
B - Connecting to Zone	233	58	1390	1098	0.212	232	691	0.2	0.3	4.306	A
C - A1270 On slip			1325				297				
D - A140 South	1103	276	49	2335	0.472	1102	1276	0.7	0.9	3.045	A
E - A1270 Off slip	581	145	1151	1081	0.537	579	0	0.7	1.1	7.146	A

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)	Unsignalised level of service
A - A140 North	1231	308	1322	1182	1.042	1144	792	3.4	25.1	57.342	F
B - Connecting to Zone	285	71	1634	987	0.289	284	832	0.3	0.4	5.301	A
C - A1270 On slip			1560				359				
D - A140 South	1350	338	60	2329	0.580	1348	1500	0.9	1.4	3.827	A
E - A1270 Off slip	711	178	1409	969	0.734	705	0	1.1	2.6	13.347	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1231	308	1328	1179	1.044	1168	794	25.1	41.0	111.720	F
B - Connecting to Zone	285	71	1658	976	0.292	285	838	0.4	0.4	5.391	A
C - A1270 On slip			1582				361				
D - A140 South	1350	338	61	2329	0.580	1350	1522	1.4	1.4	3.842	A
E - A1270 Off slip	711	178	1411	968	0.734	711	0	2.6	2.7	13.938	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1005	251	1090	1287	0.781	1153	651	41.0	4.1	46.905	E
B - Connecting to Zone	233	58	1525	1037	0.224	233	718	0.4	0.3	4.643	A
C - A1270 On slip			1450				308				
D - A140 South	1103	276	50	2335	0.472	1105	1400	1.4	0.9	3.062	A
E - A1270 Off slip	581	145	1154	1080	0.538	587	0	2.7	1.2	7.388	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	842	210	910	1369	0.615	852	544	4.1	1.7	7.334	A
B - Connecting to Zone	195	49	1180	1193	0.163	195	582	0.3	0.2	3.739	A
C - A1270 On slip			1124				250				
D - A140 South	923	231	41	2339	0.395	924	1083	0.9	0.7	2.659	A
E - A1270 Off slip	486	122	966	1161	0.419	488	0	1.2	0.7	5.364	A

2039DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	6.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.08	A

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	2039DS	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	836	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1401	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	87	686	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	971	184	246	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.08	0.10	0.82	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.69	0.13	0.18	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	19	0	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	1	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.186	1.004	1.003	1.000
	B - Connecting to Zone	1.000	1.000	1.008	1.012	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.008	1.006	1.001	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	630	640
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1054	1061
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	752	765
	B - Connecting to Zone	627	632
	C - A1270 On slip	0	0
	D - A140 South	1259	1267
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	921	936
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1542	1552
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	921	936
	B - Connecting to Zone	769	775
	C - A1270 On slip	0	0
	D - A140 South	1542	1552
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	752	765
	B - Connecting to Zone	627	632
	C - A1270 On slip	0	0
	D - A140 South	1259	1267
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	630	640
	B - Connecting to Zone	525	530
	C - A1270 On slip	0	0
	D - A140 South	1054	1061
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.61	6.11	1.6	A	780	1171
B - Connecting to Zone	0.64	8.17	1.7	A	646	968
C - A1270 On slip						
D - A140 South	0.69	5.08	2.2	A	1293	1940
E - A1270 Off slip	0.08	4.72	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	640	160	370	1614	0.397	638	855	0.0	0.7	3.740	A
B - Connecting to Zone	530	132	766	1381	0.384	527	242	0.0	0.6	4.240	A
C - A1270 On slip			901				392				
D - A140 South	1061	265	121	2296	0.462	1058	779	0.0	0.9	2.917	A
E - A1270 Off slip	47	12	1179	1069	0.044	46	0	0.0	0.0	3.520	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	765	191	443	1581	0.484	764	1023	0.7	0.9	4.471	A
B - Connecting to Zone	632	158	917	1312	0.482	631	290	0.6	0.9	5.319	A
C - A1270 On slip			1078				469				
D - A140 South	1267	317	145	2283	0.555	1266	933	0.9	1.2	3.557	A
E - A1270 Off slip	56	14	1411	968	0.058	56	0	0.0	0.1	3.944	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	936	234	542	1536	0.610	934	1252	0.9	1.6	6.054	A
B - Connecting to Zone	775	194	1121	1219	0.635	771	355	0.9	1.7	8.043	A
C - A1270 On slip			1319				574				
D - A140 South	1552	388	178	2265	0.685	1548	1141	1.2	2.2	5.030	A
E - A1270 Off slip	68	17	1726	832	0.082	68	0	0.1	0.1	4.713	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	936	234	543	1536	0.610	936	1255	1.6	1.6	6.110	A
B - Connecting to Zone	775	194	1124	1218	0.636	775	356	1.7	1.7	8.173	A
C - A1270 On slip			1323				576				
D - A140 South	1552	388	178	2265	0.685	1552	1145	2.2	2.2	5.080	A
E - A1270 Off slip	68	17	1730	830	0.082	68	0	0.1	0.1	4.724	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	765	191	445	1580	0.484	767	1028	1.6	1.0	4.514	A
B - Connecting to Zone	632	158	921	1310	0.483	636	291	1.7	1.0	5.402	A
C - A1270 On slip			1085				472				
D - A140 South	1267	317	146	2282	0.555	1271	938	2.2	1.3	3.596	A
E - A1270 Off slip	56	14	1417	966	0.058	56	0	0.1	0.1	3.958	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	640	160	372	1613	0.397	641	860	1.0	0.7	3.770	A
B - Connecting to Zone	530	132	770	1379	0.384	531	244	1.0	0.6	4.288	A
C - A1270 On slip			907				394				
D - A140 South	1061	265	122	2295	0.462	1063	784	1.3	0.9	2.944	A
E - A1270 Off slip	47	12	1185	1066	0.044	47	0	0.1	0.0	3.530	A

2039DS_Mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	115.20	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	115.20	F

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	2039DS_Mitigation	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	1246	100.000
B - Connecting to Zone		ONE HOUR	✓	250	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1178	100.000
E - A1270 Off slip		ONE HOUR	✓	715	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	177	76	993	0
	B - Connecting to Zone	55	0	48	147	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	524	473	181	0	0
	E - A1270 Off slip	235	93	0	387	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.14	0.06	0.80	0.00
	B - Connecting to Zone	0.22	0.00	0.19	0.59	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.44	0.40	0.15	0.00	0.00
	E - A1270 Off slip	0.33	0.13	0.00	0.54	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	3	4	4	0
	B - Connecting to Zone	0	0	14	2	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	2	5	11	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.033	1.038	1.036	1.000
	B - Connecting to Zone	1.000	1.000	1.145	1.018	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.017	1.048	1.111	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

07:15-07:30	A - A140 North	938	972
	B - Connecting to Zone	188	195
	C - A1270 On slip	0	0
	D - A140 South	887	926
	E - A1270 Off slip	538	538
07:30-07:45	A - A140 North	1120	1161
	B - Connecting to Zone	225	233
	C - A1270 On slip	0	0
	D - A140 South	1059	1105
	E - A1270 Off slip	643	643
07:45-08:00	A - A140 North	1372	1421
	B - Connecting to Zone	275	286
	C - A1270 On slip	0	0
	D - A140 South	1297	1354
	E - A1270 Off slip	787	787
08:00-08:15	A - A140 North	1372	1421
	B - Connecting to Zone	275	286
	C - A1270 On slip	0	0
	D - A140 South	1297	1354
	E - A1270 Off slip	787	787
08:15-08:30	A - A140 North	1120	1161
	B - Connecting to Zone	225	233
	C - A1270 On slip	0	0
	D - A140 South	1059	1105
	E - A1270 Off slip	643	643
08:30-08:45	A - A140 North	938	972
	B - Connecting to Zone	188	195
	C - A1270 On slip	0	0
	D - A140 South	887	926
	E - A1270 Off slip	538	538

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	1.19	296.20	122.2	F	1185	1777
B - Connecting to Zone	0.29	5.46	0.4	A	238	357
C - A1270 On slip						
D - A140 South	0.58	3.85	1.4	A	1128	1692
E - A1270 Off slip	0.81	19.71	4.1	C	656	984

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	972	243	882	1382	0.703	962	617	0.0	2.4	8.711	A
B - Connecting to Zone	195	49	1266	1154	0.169	195	578	0.0	0.2	3.895	A
C - A1270 On slip			1210				251				
D - A140 South	926	231	41	2340	0.396	923	1169	0.0	0.7	2.648	A
E - A1270 Off slip	538	135	964	1162	0.463	535	0	0.0	0.9	5.710	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1161	290	1056	1303	0.891	1142	738	2.4	7.0	21.172	C
B - Connecting to Zone	233	58	1508	1044	0.223	233	690	0.2	0.3	4.605	A
C - A1270 On slip			1441				300				
D - A140 South	1105	276	49	2335	0.473	1104	1392	0.7	0.9	3.049	A
E - A1270 Off slip	643	161	1154	1080	0.595	640	0	0.9	1.4	8.148	A

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)	Unsignalised level of service
A - A140 North	1421	355	1288	1197	1.187	1189	902	7.0	65.2	119.982	F
B - Connecting to Zone	286	71	1662	975	0.293	285	814	0.3	0.4	5.421	A
C - A1270 On slip			1593				354				
D - A140 South	1354	338	60	2329	0.581	1352	1533	0.9	1.4	3.836	A
E - A1270 Off slip	787	197	1412	968	0.813	777	0	1.4	3.9	18.007	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1421	355	1295	1194	1.190	1193	906	65.2	122.2	284.841	F
B - Connecting to Zone	286	71	1671	970	0.295	286	817	0.4	0.4	5.461	A
C - A1270 On slip			1602				355				
D - A140 South	1354	338	61	2329	0.581	1354	1542	1.4	1.4	3.851	A
E - A1270 Off slip	787	197	1414	967	0.814	786	0	3.9	4.1	19.709	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1161	290	1066	1298	0.894	1287	744	122.2	90.6	296.198	F
B - Connecting to Zone	233	58	1639	985	0.237	234	714	0.4	0.3	4.981	A
C - A1270 On slip			1564				309				
D - A140 South	1105	276	50	2335	0.473	1107	1515	1.4	0.9	3.064	A
E - A1270 Off slip	643	161	1157	1079	0.596	653	0	4.1	1.5	8.667	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	972	243	888	1379	0.705	1322	621	90.6	3.0	116.784	F
B - Connecting to Zone	195	49	1579	1012	0.193	196	631	0.3	0.3	4.583	A
C - A1270 On slip			1501				274				
D - A140 South	926	231	41	2340	0.396	927	1460	0.9	0.7	2.660	A
E - A1270 Off slip	538	135	968	1160	0.464	541	0	1.5	0.9	5.836	A

2039DS_Mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - A140 North - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	B - Connecting to Zone - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22a	A140 / A1270 Slip road	Standard Roundabout		A, B, C, D, E	7.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.00	A

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	2039DS_Mitigation	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 (Veh/hr)	Scaling Factor (%)
A - A140 North		ONE HOUR	✓	972	100.000
B - Connecting to Zone		ONE HOUR	✓	698	100.000
C - A1270 On slip					
D - A140 South		ONE HOUR	✓	1395	100.000
E - A1270 Off slip		ONE HOUR	✓	62	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	64	77	832	0
	B - Connecting to Zone	162	0	188	348	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	967	184	245	0	0
	E - A1270 Off slip	0	62	0	0	0

Proportions

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0.00	0.07	0.08	0.86	0.00
	B - Connecting to Zone	0.23	0.00	0.27	0.50	0.00
	C - A1270 On slip	0.20	0.20	0.20	0.20	0.20
	D - A140 South	0.69	0.13	0.18	0.00	0.00
	E - A1270 Off slip	0.00	1.00	0.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	0	14	2	0	0
	B - Connecting to Zone	0	0	1	1	0
	C - A1270 On slip	0	0	0	0	0
	D - A140 South	1	1	0	0	0
	E - A1270 Off slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - A140 North	B - Connecting to Zone	C - A1270 On slip	D - A140 South	E - A1270 Off slip
From	A - A140 North	1.000	1.141	1.017	1.003	1.000
	B - Connecting to Zone	1.000	1.000	1.007	1.011	1.000
	C - A1270 On slip	1.000	1.000	1.000	1.000	1.000
	D - A140 South	1.007	1.006	1.001	1.000	1.000
	E - A1270 Off slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)

16:45-17:00	A - A140 North	732	742
	B - Connecting to Zone	525	529
	C - A1270 On slip	0	0
	D - A140 South	1050	1057
	E - A1270 Off slip	47	47
17:00-17:15	A - A140 North	874	886
	B - Connecting to Zone	627	632
	C - A1270 On slip	0	0
	D - A140 South	1254	1262
	E - A1270 Off slip	56	56
17:15-17:30	A - A140 North	1071	1085
	B - Connecting to Zone	769	774
	C - A1270 On slip	0	0
	D - A140 South	1536	1545
	E - A1270 Off slip	68	68
17:30-17:45	A - A140 North	1071	1085
	B - Connecting to Zone	769	774
	C - A1270 On slip	0	0
	D - A140 South	1536	1545
	E - A1270 Off slip	68	68
17:45-18:00	A - A140 North	874	886
	B - Connecting to Zone	627	632
	C - A1270 On slip	0	0
	D - A140 South	1254	1262
	E - A1270 Off slip	56	56
18:00-18:15	A - A140 North	732	742
	B - Connecting to Zone	525	529
	C - A1270 On slip	0	0
	D - A140 South	1050	1057
	E - A1270 Off slip	47	47

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A140 North	0.71	8.06	2.4	A	904	1356
B - Connecting to Zone	0.67	9.63	2.0	A	645	968
C - A1270 On slip						
D - A140 South	0.68	5.03	2.1	A	1288	1932
E - A1270 Off slip	0.08	4.71	0.1	A	57	85

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	742	185	369	1615	0.459	738	852	0.0	0.9	4.145	A
B - Connecting to Zone	529	132	867	1334	0.397	527	240	0.0	0.7	4.476	A
C - A1270 On slip			1010				384				
D - A140 South	1057	264	121	2296	0.460	1053	889	0.0	0.9	2.907	A
E - A1270 Off slip	47	12	1175	1071	0.044	46	0	0.0	0.0	3.514	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	886	221	442	1582	0.560	884	1019	0.9	1.3	5.214	A
B - Connecting to Zone	632	158	1038	1257	0.503	631	287	0.7	1.0	5.779	A
C - A1270 On slip			1209				460				
D - A140 South	1262	315	145	2283	0.553	1260	1064	0.9	1.2	3.537	A
E - A1270 Off slip	56	14	1406	971	0.057	56	0	0.0	0.1	3.933	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1085	271	541	1537	0.706	1080	1247	1.3	2.4	7.911	A
B - Connecting to Zone	774	194	1269	1152	0.672	770	352	1.0	2.0	9.394	A
C - A1270 On slip			1477				562				
D - A140 South	1545	386	177	2265	0.682	1542	1300	1.2	2.1	4.981	A
E - A1270 Off slip	68	17	1719	835	0.082	68	0	0.1	0.1	4.695	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	1085	271	542	1536	0.706	1084	1250	2.4	2.4	8.064	A
B - Connecting to Zone	774	194	1274	1150	0.673	774	352	2.0	2.0	9.630	A
C - A1270 On slip			1484				564				
D - A140 South	1545	386	178	2265	0.682	1545	1305	2.1	2.1	5.031	A
E - A1270 Off slip	68	17	1724	833	0.082	68	0	0.1	0.1	4.706	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	886	221	444	1581	0.560	890	1024	2.4	1.3	5.312	A
B - Connecting to Zone	632	158	1045	1254	0.504	636	289	2.0	1.0	5.909	A
C - A1270 On slip			1218				463				
D - A140 South	1262	315	147	2282	0.553	1265	1072	2.1	1.3	3.572	A
E - A1270 Off slip	56	14	1412	968	0.058	56	0	0.1	0.1	3.946	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A140 North	742	185	371	1614	0.460	743	856	1.3	0.9	4.199	A
B - Connecting to Zone	529	132	873	1332	0.397	531	241	1.0	0.7	4.535	A
C - A1270 On slip			1017				387				
D - A140 South	1057	264	122	2295	0.460	1058	895	1.3	0.9	2.932	A
E - A1270 Off slip	47	12	1181	1068	0.044	47	0	0.1	0.0	3.523	A

J22b - A140/ A1270 southern roundabout junction Results

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.4.1693

Filename: J22b (Balance connector flows).j10
Path: \\corp.pbwan.net\IN\IN_Projects\70118686-70061370-Norwich Western Link 2019 20\04 Record of Issue\4A Internal WSP Doc Registers\20240129_Model Reports (wo 2044)\J22\J22b - Copy
Report generation date: 21/03/2024 12:36:06

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2029DM									
A - Connector Link	D1	3.6	7.61	0.79	A	D2	1.6	4.19	0.61	A
B - WB Off Slip		379.3	2339.48	2.35	F		11.1	72.47	0.95	F
C - Holt Road		1.9	6.01	0.65	A		121.0	208.08	1.13	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2029DS									
A - Connector Link	D3	3.5	7.48	0.78	A	D4	1.6	4.19	0.61	A
B - WB Off Slip		386.2	2347.36	2.35	F		11.7	75.47	0.96	F
C - Holt Road		2.3	6.91	0.69	A		95.8	159.28	1.10	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2029DS_Mitigation									
A - Connector Link	D5	5.0	9.87	0.83	A	D6	2.0	4.89	0.67	A
B - WB Off Slip		393.2	2823.78	2.62	F		25.1	149.93	1.05	F
C - Holt Road		2.4	7.25	0.70	A		129.8	238.02	1.14	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2039DM									
A - Connector Link	D7	2.6	5.85	0.72	A	D8	2.4	5.61	0.71	A
B - WB Off Slip		160.8	911.52	1.62	F		39.3	231.64	1.13	F
C - Holt Road		3.4	9.07	0.77	A		138.0	266.90	1.15	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2039DS									
A - Connector Link	D9	2.5	5.68	0.71	A	D10	2.5	5.64	0.71	A
B - WB Off Slip		156.2	808.68	1.59	F		28.0	177.84	1.08	F
C - Holt Road		4.0	10.45	0.80	B		114.1	202.34	1.12	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2039DS_Mitigation									
A - Connector Link	D11	3.5	7.48	0.78	A	D12	3.5	7.47	0.78	A
B - WB Off Slip		195.7	1144.93	1.83	F		57.4	371.16	1.26	F
C - Holt Road		4.6	11.93	0.82	B		144.7	291.25	1.16	F
D - Access Road		0.0	0.00	0.00	A		0.0	0.00	0.00	A
E - WB On slip		0.0	0.00	0.00	A		0.0	0.00	0.00	A

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

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

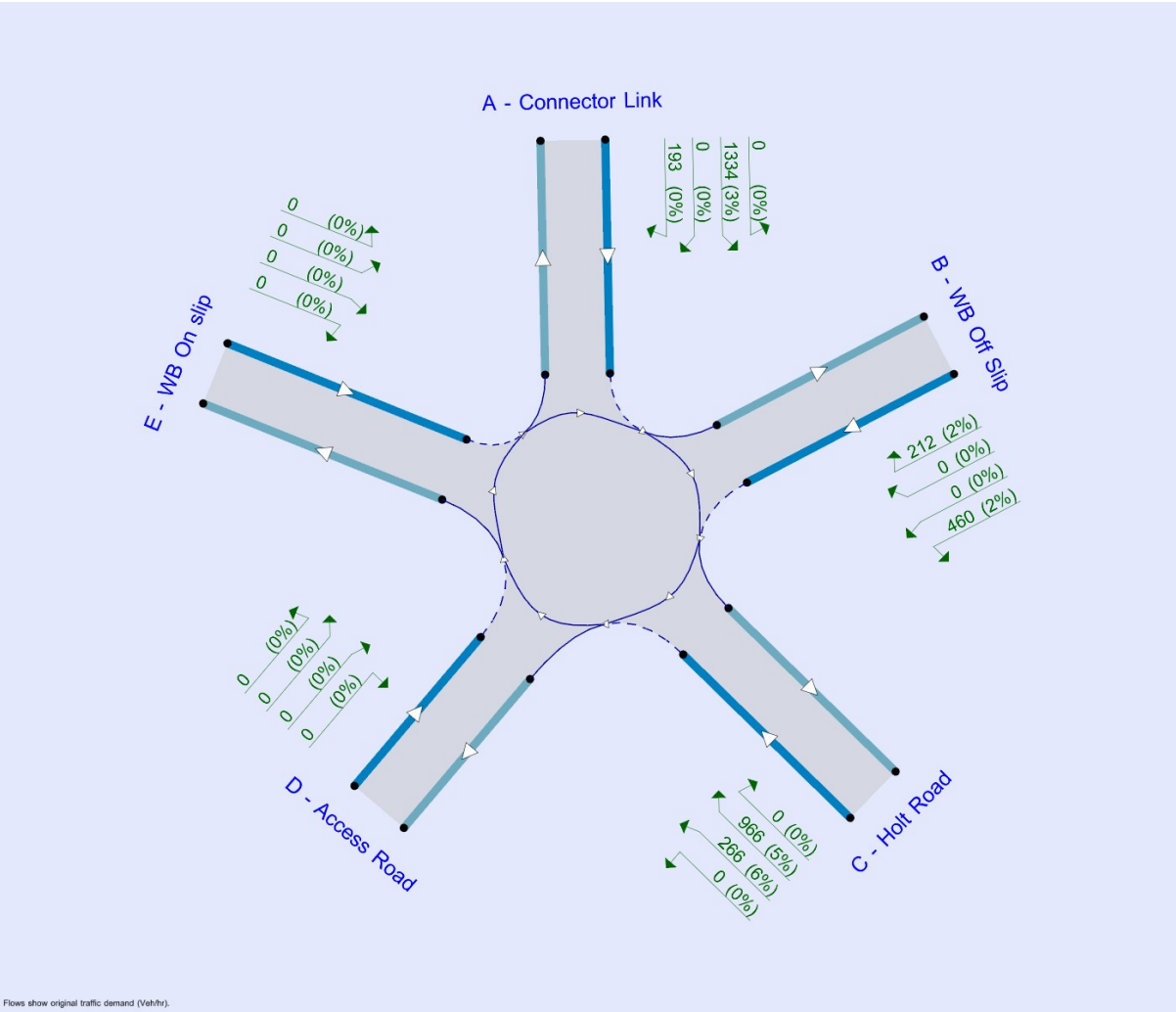
File summary

File Description

Title	A1470/A1270 WB On-slip Road
Location	1.261313 ,52.679194
Site number	J22b
Date	11/05/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INVN01911
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2029DM	AM	ONE HOUR	07:15	08:45	15	✓
D2	2029DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029DS	AM	ONE HOUR	07:15	08:45	15	✓
D4	2029DS	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029DS_Mitigation	AM	ONE HOUR	07:15	08:45	15	✓
D6	2029DS_Mitigation	PM	ONE HOUR	16:45	18:15	15	✓
D7	2039DM	AM	ONE HOUR	07:15	08:45	15	✓
D8	2039DM	PM	ONE HOUR	16:45	18:15	15	✓
D9	2039DS	AM	ONE HOUR	07:15	08:45	15	✓
D10	2039DS	PM	ONE HOUR	16:45	18:15	15	✓
D11	2039DS_Mitigation	AM	ONE HOUR	07:15	08:45	15	✓
D12	2039DS_Mitigation	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2029DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	582.62	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	582.62	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Connector Link		
B	WB Off Slip		
C	Holt Road		
D	Access Road		
E	WB On slip		

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)	Entry only	Exit only
A - Connector Link	7.30	7.60	2.7	20.0	65.0	37.0		
B - WB Off Slip	3.70	8.80	14.5	20.0	65.0	39.0		
C - Holt Road	4.00	7.60	45.3	20.0	65.0	50.0		
D - Access Road	3.00	4.50	12.3	20.0	65.0	27.0		
E - WB On slip	3.70	4.50	28.0	12.0	65.0	37.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - Connector Link	None		
B - WB Off Slip	Direct		-450
C - Holt Road	None		
D - Access Road	None		
E - WB On slip	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Connector Link	0.610	2224
B - WB Off Slip	0.537	1340
C - Holt Road	0.552	1937
D - Access Road	0.458	1249
E - WB On slip	0.444	1267

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	2029DM	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1568	100.000
B - WB Off Slip		ONE HOUR	✓	845	100.000
C - Holt Road		ONE HOUR	✓	989	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1439	0	129
	B - WB Off Slip	329	0	516	0	0
	C - Holt Road	740	0	0	0	249
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.92	0.00	0.08
	B - WB Off Slip	0.39	0.00	0.61	0.00	0.00
	C - Holt Road	0.75	0.00	0.00	0.00	0.25
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	0
	B - WB Off Slip	1	0	2	0	0
	C - Holt Road	5	0	0	0	5
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.013	1.000	1.000
	B - WB Off Slip	1.010	1.000	1.023	1.000	1.000
	C - Holt Road	1.050	1.000	1.000	1.000	1.051
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1180	1194
	B - WB Off Slip	636	648
	C - Holt Road	745	782
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1410	1426
	B - WB Off Slip	760	773
	C - Holt Road	889	934
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1726	1746
	B - WB Off Slip	931	947
	C - Holt Road	1089	1144
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1726	1746
	B - WB Off Slip	931	947
	C - Holt Road	1089	1144
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1410	1426
	B - WB Off Slip	760	773
	C - Holt Road	889	934
	D - Access Road	0	0
	E - WB On slip	0	0

08:30-08:45	A - Connector Link	1180	1194
	B - WB Off Slip	636	648
	C - Holt Road	745	782
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.79	7.61	3.6	A	1455	2183
B - WB Off Slip	2.35	2339.48	379.3	F	789	1184
C - Holt Road	0.65	6.01	1.9	A	954	1430
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1194	299	0	2224	0.537	1189	821	0.0	1.2	3.505	A
B - WB Off Slip	648	162	1189	702	0.923	618	0	0.0	7.5	35.886	E
C - Holt Road	782	196	336	1752	0.447	779	1472	0.0	0.8	3.874	A
D - Access Road	0	0	1115	738	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	821	902	0.000	0	293	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1426	356	0	2224	0.641	1423	919	1.2	1.8	4.550	A
B - WB Off Slip	773	193	1423	576	1.342	573	0	7.5	57.6	243.635	F
C - Holt Road	934	234	337	1751	0.534	933	1659	0.8	1.2	4.615	A
D - Access Road	0	0	1270	667	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	919	859	0.000	0	351	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1746	437	0	2224	0.785	1739	1011	1.8	3.6	7.407	A
B - WB Off Slip	947	237	1739	407	2.329	407	0	57.6	192.7	1078.086	F
C - Holt Road	1144	286	299	1772	0.646	1141	1847	1.2	1.9	5.968	A
D - Access Road	0	0	1440	589	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1011	818	0.000	0	429	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1746	437	0	2224	0.785	1746	1011	3.6	3.6	7.613	A
B - WB Off Slip	947	237	1746	403	2.350	403	0	192.7	328.7	2339.482	F
C - Holt Road	1144	286	298	1773	0.645	1144	1851	1.9	1.9	6.013	A
D - Access Road	0	0	1442	588	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1011	818	0.000	0	431	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1426	356	0	2224	0.641	1433	921	3.6	1.8	4.648	A
B - WB Off Slip	773	193	1433	571	1.354	571	0	328.7	379.3	1995.865	F
C - Holt Road	934	234	337	1751	0.534	937	1667	1.9	1.2	4.660	A
D - Access Road	0	0	1274	665	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	921	858	0.000	0	353	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1194	299	0	2224	0.537	1197	855	1.8	1.2	3.556	A
B - WB Off Slip	648	162	1197	698	0.928	696	0	379.3	367.1	1930.215	F
C - Holt Road	782	196	366	1735	0.451	784	1526	1.2	0.9	3.983	A
D - Access Road	0	0	1150	722	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	855	887	0.000	0	295	0.0	0.0	0.000	A

2029DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	117.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	117.00	F

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	2029DM	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1228	100.000
B - WB Off Slip		ONE HOUR	✓	524	100.000
C - Holt Road		ONE HOUR	✓	1774	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1030	0	198
	B - WB Off Slip	113	0	411	0	0
	C - Holt Road	1326	0	0	0	448
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.84	0.00	0.16
	B - WB Off Slip	0.22	0.00	0.78	0.00	0.00
	C - Holt Road	0.75	0.00	0.00	0.00	0.25
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	1
	B - WB Off Slip	0	0	1	0	0
	C - Holt Road	1	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.006	1.000	1.005
	B - WB Off Slip	1.004	1.000	1.010	1.000	1.000
	C - Holt Road	1.005	1.000	1.000	1.000	1.016
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	925	930
	B - WB Off Slip	394	398
	C - Holt Road	1336	1346
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1104	1110
	B - WB Off Slip	471	475
	C - Holt Road	1595	1607
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1352	1360
	B - WB Off Slip	577	582
	C - Holt Road	1953	1969
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1352	1360
	B - WB Off Slip	577	582
	C - Holt Road	1953	1969
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1104	1110
	B - WB Off Slip	471	475
	C - Holt Road	1595	1607
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	925	930
	B - WB Off Slip	394	398
	C - Holt Road	1336	1346
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.61	4.19	1.6	A	1133	1700
B - WB Off Slip	0.95	72.47	11.1	F	485	727
C - Holt Road	1.13	208.08	121.0	F	1641	2461
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	930	232	0	2224	0.418	927	1080	0.0	0.7	2.786	A
B - WB Off Slip	398	99	927	843	0.472	394	0	0.0	0.9	8.034	A
C - Holt Road	1346	337	234	1808	0.744	1335	1087	0.0	2.8	7.495	A
D - Access Road	0	0	1569	530	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1080	787	0.000	0	489	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1110	278	0	2224	0.499	1109	1285	0.7	1.0	3.246	A
B - WB Off Slip	475	119	1109	745	0.638	472	0	0.9	1.7	13.135	B
C - Holt Road	1607	402	280	1783	0.902	1588	1301	2.8	7.7	17.094	C
D - Access Road	0	0	1868	393	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1285	696	0.000	0	583	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1360	340	0	2224	0.612	1357	1414	1.0	1.6	4.169	A
B - WB Off Slip	582	145	1357	612	0.951	554	0	1.7	8.7	48.824	E
C - Holt Road	1969	492	338	1751	1.124	1737	1574	7.7	65.6	84.941	F
D - Access Road	0	0	2075	298	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1414	639	0.000	0	661	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1360	340	0	2224	0.612	1360	1425	1.6	1.6	4.190	A
B - WB Off Slip	582	145	1360	610	0.953	572	0	8.7	11.1	72.474	F
C - Holt Road	1969	492	342	1749	1.126	1747	1590	65.6	121.0	197.865	F
D - Access Road	0	0	2089	292	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1425	634	0.000	0	664	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1110	278	0	2224	0.499	1112	1424	1.6	1.0	3.264	A
B - WB Off Slip	475	119	1112	743	0.639	512	0	11.1	1.9	18.077	C
C - Holt Road	1607	402	289	1778	0.904	1763	1335	121.0	82.1	208.079	F
D - Access Road	0	0	2052	309	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1424	634	0.000	0	628	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	930	232	0	2224	0.418	931	1325	1.0	0.7	2.802	A
B - WB Off Slip	398	99	931	841	0.473	402	0	1.9	0.9	8.340	A
C - Holt Road	1346	337	236	1807	0.745	1662	1096	82.1	3.2	64.754	F
D - Access Road	0	0	1898	380	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1325	678	0.000	0	573	0.0	0.0	0.000	A

2029DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	581.22	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	581.22	F

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	2029DS	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1552	100.000
B - WB Off Slip		ONE HOUR	✓	857	100.000
C - Holt Road		ONE HOUR	✓	1050	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1411	0	141
	B - WB Off Slip	324	0	533	0	0
	C - Holt Road	726	0	0	0	324
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.91	0.00	0.09
	B - WB Off Slip	0.38	0.00	0.62	0.00	0.00
	C - Holt Road	0.69	0.00	0.00	0.00	0.31
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	2	0	0
	B - WB Off Slip	1	0	2	0	0
	C - Holt Road	5	0	0	0	6
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.017	1.000	1.000
	B - WB Off Slip	1.010	1.000	1.022	1.000	1.000
	C - Holt Road	1.051	1.000	1.000	1.000	1.059
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1168	1187
	B - WB Off Slip	645	656
	C - Holt Road	790	833
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1395	1417
	B - WB Off Slip	770	784
	C - Holt Road	944	995
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1709	1736
	B - WB Off Slip	944	960
	C - Holt Road	1156	1218
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1709	1736
	B - WB Off Slip	944	960
	C - Holt Road	1156	1218
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1395	1417
	B - WB Off Slip	770	784
	C - Holt Road	944	995
	D - Access Road	0	0
	E - WB On slip	0	0
08:30-08:45	A - Connector Link	1168	1187
	B - WB Off Slip	645	656
	C - Holt Road	790	833
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.78	7.48	3.5	A	1447	2170
B - WB Off Slip	2.35	2347.36	386.2	F	800	1200
C - Holt Road	0.69	6.91	2.3	A	1015	1523
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1187	297	0	2224	0.534	1182	806	0.0	1.2	3.496	A
B - WB Off Slip	656	164	1182	706	0.930	625	0	0.0	7.9	36.959	E
C - Holt Road	833	208	340	1750	0.476	829	1467	0.0	0.9	4.105	A
D - Access Road	0	0	1169	713	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	806	909	0.000	0	363	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1417	354	0	2224	0.637	1415	902	1.2	1.8	4.507	A
B - WB Off Slip	784	196	1415	581	1.349	578	0	7.9	59.4	249.171	F
C - Holt Road	995	249	343	1748	0.569	993	1649	0.9	1.4	5.013	A
D - Access Road	0	0	1336	637	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	902	866	0.000	0	434	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1736	434	0	2224	0.781	1729	992	1.8	3.5	7.289	A
B - WB Off Slip	960	240	1729	412	2.329	412	0	59.4	196.4	1086.463	F
C - Holt Road	1218	305	309	1767	0.690	1215	1832	1.4	2.3	6.825	A
D - Access Road	0	0	1524	551	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	992	826	0.000	0	531	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1736	434	0	2224	0.781	1735	994	3.5	3.5	7.482	A
B - WB Off Slip	960	240	1735	409	2.349	409	0	196.4	334.2	2347.362	F
C - Holt Road	1218	305	308	1767	0.689	1218	1836	2.3	2.3	6.906	A
D - Access Road	0	0	1526	550	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	994	825	0.000	0	533	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1417	354	0	2224	0.637	1424	905	3.5	1.8	4.612	A
B - WB Off Slip	784	196	1424	576	1.361	576	0	334.2	386.2	2015.477	F
C - Holt Road	995	249	343	1748	0.569	998	1657	2.3	1.4	5.084	A
D - Access Road	0	0	1341	634	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	905	865	0.000	0	437	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1187	297	0	2224	0.534	1189	838	1.8	1.2	3.543	A
B - WB Off Slip	656	164	1189	702	0.935	700	0	386.2	375.3	1958.142	F
C - Holt Road	833	208	369	1734	0.480	835	1521	1.4	1.0	4.228	A
D - Access Road	0	0	1204	698	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	838	894	0.000	0	365	0.0	0.0	0.000	A

2029DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	92.11	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	92.11	F

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	2029DS	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1228	100.000
B - WB Off Slip		ONE HOUR	✓	527	100.000
C - Holt Road		ONE HOUR	✓	1733	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1049	0	179
	B - WB Off Slip	120	0	407	0	0
	C - Holt Road	1274	0	0	0	459
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.85	0.00	0.15
	B - WB Off Slip	0.23	0.00	0.77	0.00	0.00
	C - Holt Road	0.74	0.00	0.00	0.00	0.26
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	1
	B - WB Off Slip	0	0	1	0	0
	C - Holt Road	0	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.006	1.000	1.006
	B - WB Off Slip	1.005	1.000	1.010	1.000	1.000
	C - Holt Road	1.005	1.000	1.000	1.000	1.020
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	925	930
	B - WB Off Slip	397	400
	C - Holt Road	1305	1316
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1104	1110
	B - WB Off Slip	474	478
	C - Holt Road	1558	1571
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1352	1360
	B - WB Off Slip	580	585
	C - Holt Road	1908	1925
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1352	1360
	B - WB Off Slip	580	585
	C - Holt Road	1908	1925
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1104	1110
	B - WB Off Slip	474	478
	C - Holt Road	1558	1571
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	925	930
	B - WB Off Slip	397	400
	C - Holt Road	1305	1316
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.61	4.19	1.6	A	1133	1700
B - WB Off Slip	0.96	75.47	11.7	F	488	732
C - Holt Road	1.10	159.28	95.8	F	1604	2406
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	930	232	0	2224	0.418	927	1046	0.0	0.7	2.786	A
B - WB Off Slip	400	100	927	843	0.475	397	0	0.0	0.9	8.076	A
C - Holt Road	1316	329	225	1813	0.726	1306	1098	0.0	2.6	7.018	A
D - Access Road	0	0	1531	548	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1046	802	0.000	0	485	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1110	278	0	2224	0.499	1109	1247	0.7	1.0	3.246	A
B - WB Off Slip	478	119	1109	745	0.642	475	0	0.9	1.7	13.264	B
C - Holt Road	1571	393	269	1789	0.879	1556	1314	2.6	6.4	14.708	B
D - Access Road	0	0	1825	413	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1247	713	0.000	0	578	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1360	340	0	2224	0.612	1357	1399	1.0	1.6	4.169	A
B - WB Off Slip	585	146	1357	612	0.957	556	0	1.7	9.1	50.108	F
C - Holt Road	1925	481	324	1758	1.094	1739	1590	6.4	52.9	70.880	F
D - Access Road	0	0	2063	304	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1399	645	0.000	0	663	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1360	340	0	2224	0.612	1360	1414	1.6	1.6	4.190	A
B - WB Off Slip	585	146	1360	610	0.959	575	0	9.1	11.7	75.468	F
C - Holt Road	1925	481	329	1756	1.096	1753	1606	52.9	95.8	159.279	F
D - Access Road	0	0	2082	295	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1414	639	0.000	0	668	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1110	278	0	2224	0.499	1112	1409	1.6	1.0	3.264	A
B - WB Off Slip	478	119	1112	743	0.643	517	0	11.7	1.9	18.676	C
C - Holt Road	1571	393	279	1783	0.881	1764	1350	95.8	47.6	148.172	F
D - Access Road	0	0	2044	313	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1409	641	0.000	0	635	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	930	232	0	2224	0.418	931	1186	1.0	0.7	2.804	A
B - WB Off Slip	400	100	931	841	0.476	404	0	1.9	0.9	8.391	A
C - Holt Road	1316	329	227	1812	0.726	1495	1108	47.6	2.8	19.531	C
D - Access Road	0	0	1722	460	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1186	740	0.000	0	536	0.0	0.0	0.000	A

2029DS_Mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	650.30	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	650.30	F

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	2029DS_Mitigation	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1661	100.000
B - WB Off Slip		ONE HOUR	✓	806	100.000
C - Holt Road		ONE HOUR	✓	1039	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1430	0	230
	B - WB Off Slip	291	0	515	0	0
	C - Holt Road	742	0	0	0	297
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.86	0.00	0.14
	B - WB Off Slip	0.36	0.00	0.64	0.00	0.00
	C - Holt Road	0.71	0.00	0.00	0.00	0.29
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	2	0	0
	B - WB Off Slip	1	0	2	0	0
	C - Holt Road	5	0	0	0	6
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.017	1.000	1.000
	B - WB Off Slip	1.011	1.000	1.023	1.000	1.000
	C - Holt Road	1.050	1.000	1.000	1.000	1.065
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1250	1269
	B - WB Off Slip	607	618
	C - Holt Road	782	825
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1493	1515
	B - WB Off Slip	724	738
	C - Holt Road	934	985
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1828	1855
	B - WB Off Slip	887	904
	C - Holt Road	1144	1206
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1828	1855
	B - WB Off Slip	887	904
	C - Holt Road	1144	1206
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1493	1515
	B - WB Off Slip	724	738
	C - Holt Road	934	985
	D - Access Road	0	0
	E - WB On slip	0	0
08:30-08:45	A - Connector Link	1250	1269
	B - WB Off Slip	607	618
	C - Holt Road	782	825
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.83	9.87	5.0	A	1546	2320
B - WB Off Slip	2.62	2823.78	393.2	F	753	1130
C - Holt Road	0.70	7.25	2.4	A	1005	1508
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1269	317	0	2224	0.571	1263	794	0.0	1.3	3.782	A
B - WB Off Slip	618	154	1263	662	0.933	586	0	0.0	7.9	39.137	E
C - Holt Road	825	206	383	1726	0.478	821	1467	0.0	1.0	4.177	A
D - Access Road	0	0	1204	697	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	794	914	0.000	0	410	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1515	379	0	2224	0.681	1512	888	1.3	2.1	5.108	A
B - WB Off Slip	738	184	1512	529	1.395	526	0	7.9	60.8	287.690	F
C - Holt Road	985	246	395	1719	0.573	983	1643	1.0	1.4	5.145	A
D - Access Road	0	0	1378	617	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	888	872	0.000	0	491	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1855	464	0	2224	0.834	1845	981	2.1	4.8	9.383	A
B - WB Off Slip	904	226	1845	350	2.582	350	0	60.8	199.2	1262.836	F
C - Holt Road	1206	302	377	1729	0.698	1203	1817	1.4	2.4	7.155	A
D - Access Road	0	0	1580	525	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	981	831	0.000	0	599	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1855	464	0	2224	0.834	1855	981	4.8	5.0	9.865	A
B - WB Off Slip	904	226	1855	345	2.622	345	0	199.2	339.0	2823.781	F
C - Holt Road	1206	302	377	1729	0.698	1206	1823	2.4	2.4	7.252	A
D - Access Road	0	0	1583	524	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	981	831	0.000	0	602	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1515	379	0	2224	0.681	1526	890	5.0	2.2	5.315	A
B - WB Off Slip	738	184	1526	521	1.416	521	0	339.0	393.2	2197.745	F
C - Holt Road	985	246	395	1719	0.573	989	1652	2.4	1.4	5.224	A
D - Access Road	0	0	1384	615	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	890	871	0.000	0	494	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1269	317	0	2224	0.571	1272	823	2.2	1.4	3.852	A
B - WB Off Slip	618	154	1272	657	0.940	656	0	393.2	383.7	2132.442	F
C - Holt Road	825	206	409	1712	0.482	827	1519	1.4	1.0	4.297	A
D - Access Road	0	0	1236	683	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	823	901	0.000	0	413	0.0	0.0	0.000	A

2029DS_Mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	138.73	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	138.73	F

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	2029DS_Mitigation	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1340	100.000
B - WB Off Slip		ONE HOUR	✓	516	100.000
C - Holt Road		ONE HOUR	✓	1742	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1046	0	294
	B - WB Off Slip	108	0	408	0	0
	C - Holt Road	1278	0	0	0	464
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.78	0.00	0.22
	B - WB Off Slip	0.21	0.00	0.79	0.00	0.00
	C - Holt Road	0.73	0.00	0.00	0.00	0.27
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	0
	B - WB Off Slip	0	0	1	0	0
	C - Holt Road	0	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.006	1.000	1.003
	B - WB Off Slip	1.005	1.000	1.010	1.000	1.000
	C - Holt Road	1.005	1.000	1.000	1.000	1.019
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	1009	1014
	B - WB Off Slip	388	392
	C - Holt Road	1311	1323
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1205	1211
	B - WB Off Slip	464	468
	C - Holt Road	1566	1580
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1475	1483
	B - WB Off Slip	568	573
	C - Holt Road	1918	1934
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1475	1483
	B - WB Off Slip	568	573
	C - Holt Road	1918	1934
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1205	1211
	B - WB Off Slip	464	468
	C - Holt Road	1566	1580
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	1009	1014
	B - WB Off Slip	388	392
	C - Holt Road	1311	1323
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.67	4.89	2.0	A	1236	1854
B - WB Off Slip	1.05	149.93	25.1	F	478	716
C - Holt Road	1.14	238.02	129.8	F	1612	2418
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1014	254	0	2224	0.456	1011	1039	0.0	0.8	2.974	A
B - WB Off Slip	392	98	1011	798	0.491	388	0	0.0	1.0	8.785	A
C - Holt Road	1323	331	302	1770	0.747	1311	1097	0.0	2.9	7.724	A
D - Access Road	0	0	1614	510	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1039	805	0.000	0	574	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1211	303	0	2224	0.545	1210	1235	0.8	1.2	3.564	A
B - WB Off Slip	468	117	1210	691	0.677	464	0	1.0	2.0	15.687	C
C - Holt Road	1580	395	362	1738	0.909	1558	1312	2.9	8.2	18.340	C
D - Access Road	0	0	1920	370	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1235	718	0.000	0	684	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1483	371	0	2224	0.667	1480	1341	1.2	2.0	4.846	A
B - WB Off Slip	573	143	1480	546	1.050	519	0	2.0	15.6	79.863	F
C - Holt Road	1934	484	432	1699	1.139	1687	1566	8.2	70.0	92.420	F
D - Access Road	0	0	2120	278	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1341	671	0.000	0	778	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1483	371	0	2224	0.667	1483	1350	2.0	2.0	4.886	A
B - WB Off Slip	573	143	1483	544	1.053	535	0	15.6	25.1	149.933	F
C - Holt Road	1934	484	436	1696	1.140	1695	1582	70.0	129.8	217.606	F
D - Access Road	0	0	2132	272	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1350	667	0.000	0	781	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1211	303	0	2224	0.545	1214	1368	2.0	1.2	3.597	A
B - WB Off Slip	468	117	1214	689	0.680	559	0	25.1	2.3	45.022	E
C - Holt Road	1580	395	382	1726	0.915	1713	1391	129.8	96.5	238.016	F
D - Access Road	0	0	2095	289	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1368	659	0.000	0	727	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1014	254	0	2224	0.456	1016	1321	1.2	0.8	3.000	A
B - WB Off Slip	392	98	1016	795	0.493	397	0	2.3	1.0	9.240	A
C - Holt Road	1323	331	305	1769	0.748	1695	1108	96.5	3.5	94.702	F
D - Access Road	0	0	2000	333	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1321	680	0.000	0	679	0.0	0.0	0.000	A

2039DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	195.91	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	195.91	F

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	2039DM	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1423	100.000
B - WB Off Slip		ONE HOUR	✓	697	100.000
C - Holt Road		ONE HOUR	✓	1174	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1322	0	101
	B - WB Off Slip	243	0	454	0	0
	C - Holt Road	954	0	0	0	220
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.93	0.00	0.07
	B - WB Off Slip	0.35	0.00	0.65	0.00	0.00
	C - Holt Road	0.81	0.00	0.00	0.00	0.19
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	2	0	0
	B - WB Off Slip	1	0	2	0	0
	C - Holt Road	6	0	0	0	5
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.021	1.000	1.004
	B - WB Off Slip	1.014	1.000	1.018	1.000	1.000
	C - Holt Road	1.058	1.000	1.000	1.000	1.048
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1071	1092
	B - WB Off Slip	525	534
	C - Holt Road	884	933
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1279	1304
	B - WB Off Slip	627	637
	C - Holt Road	1055	1114
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1567	1597
	B - WB Off Slip	767	781
	C - Holt Road	1293	1365
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1567	1597
	B - WB Off Slip	767	781
	C - Holt Road	1293	1365
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1279	1304
	B - WB Off Slip	627	637
	C - Holt Road	1055	1114
	D - Access Road	0	0
	E - WB On slip	0	0
08:30-08:45	A - Connector Link	1071	1092
	B - WB Off Slip	525	534
	C - Holt Road	884	933
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.72	5.85	2.6	A	1331	1997
B - WB Off Slip	1.62	911.52	160.8	F	650	976
C - Holt Road	0.77	9.07	3.4	A	1137	1706
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1092	273	0	2224	0.491	1088	938	0.0	1.0	3.221	A
B - WB Off Slip	534	133	1088	756	0.706	524	0	0.0	2.3	15.254	C
C - Holt Road	933	233	258	1795	0.520	929	1354	0.0	1.1	4.366	A
D - Access Road	0	0	1187	705	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	938	850	0.000	0	249	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1304	326	0	2224	0.586	1302	1113	1.0	1.4	3.974	A
B - WB Off Slip	637	159	1302	641	0.994	598	0	2.3	12.0	60.129	F
C - Holt Road	1114	279	299	1772	0.629	1112	1601	1.1	1.8	5.733	A
D - Access Road	0	0	1411	603	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1113	772	0.000	0	298	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1597	399	0	2224	0.718	1593	1274	1.4	2.5	5.779	A
B - WB Off Slip	781	195	1593	485	1.608	484	0	12.0	86.1	380.084	F
C - Holt Road	1365	341	280	1783	0.765	1359	1797	1.8	3.3	8.826	A
D - Access Road	0	0	1638	498	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1274	701	0.000	0	364	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1597	399	0	2224	0.718	1597	1279	2.5	2.6	5.854	A
B - WB Off Slip	781	195	1597	483	1.616	483	0	86.1	160.5	808.491	F
C - Holt Road	1365	341	280	1783	0.765	1364	1800	3.3	3.4	9.065	A
D - Access Road	0	0	1644	496	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1279	699	0.000	0	365	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1304	326	0	2224	0.586	1308	1133	2.6	1.5	4.028	A
B - WB Off Slip	637	159	1308	638	0.999	636	0	160.5	160.8	911.516	F
C - Holt Road	1114	279	313	1765	0.631	1120	1632	3.4	1.8	5.955	A
D - Access Road	0	0	1433	592	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1133	764	0.000	0	300	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1092	273	0	2224	0.491	1094	1022	1.5	1.0	3.253	A
B - WB Off Slip	534	133	1094	753	0.709	748	0	160.8	107.2	645.990	F
C - Holt Road	933	233	337	1751	0.533	936	1506	1.8	1.2	4.674	A
D - Access Road	0	0	1272	666	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1022	813	0.000	0	251	0.0	0.0	0.000	A

2039DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	160.91	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	160.91	F

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	2039DM	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1425	100.000
B - WB Off Slip		ONE HOUR	✓	503	100.000
C - Holt Road		ONE HOUR	✓	1746	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1148	0	277
	B - WB Off Slip	153	0	350	0	0
	C - Holt Road	1247	0	0	0	499
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.81	0.00	0.19
	B - WB Off Slip	0.30	0.00	0.70	0.00	0.00
	C - Holt Road	0.71	0.00	0.00	0.00	0.29
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	1
	B - WB Off Slip	0	0	1	0	0
	C - Holt Road	1	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.006	1.000	1.006
	B - WB Off Slip	1.004	1.000	1.010	1.000	1.000
	C - Holt Road	1.006	1.000	1.000	1.000	1.018
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	1073	1079
	B - WB Off Slip	379	382
	C - Holt Road	1314	1327
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1281	1289
	B - WB Off Slip	452	456
	C - Holt Road	1570	1584
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1569	1578
	B - WB Off Slip	554	559
	C - Holt Road	1922	1940
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1569	1578
	B - WB Off Slip	554	559
	C - Holt Road	1922	1940
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1281	1289
	B - WB Off Slip	452	456
	C - Holt Road	1570	1584
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	1073	1079
	B - WB Off Slip	379	382
	C - Holt Road	1314	1327
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.71	5.61	2.4	A	1316	1973
B - WB Off Slip	1.13	231.64	39.3	F	466	698
C - Holt Road	1.15	266.90	138.0	F	1617	2425
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1079	270	0	2224	0.485	1076	1050	0.0	0.9	3.145	A
B - WB Off Slip	382	95	1076	763	0.501	378	0	0.0	1.0	9.333	A
C - Holt Road	1327	332	323	1759	0.754	1315	1130	0.0	3.0	7.977	A
D - Access Road	0	0	1638	499	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1050	800	0.000	0	588	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1289	322	0	2224	0.580	1287	1247	0.9	1.4	3.861	A
B - WB Off Slip	456	114	1287	649	0.702	451	0	1.0	2.2	17.864	C
C - Holt Road	1584	396	387	1724	0.919	1560	1352	3.0	9.0	19.768	C
D - Access Road	0	0	1947	357	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1247	713	0.000	0	699	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1578	395	0	2224	0.710	1574	1340	1.4	2.4	5.544	A
B - WB Off Slip	559	140	1574	495	1.128	479	0	2.2	22.1	110.966	F
C - Holt Road	1940	485	451	1689	1.149	1679	1603	9.0	74.3	98.147	F
D - Access Road	0	0	2129	274	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1340	672	0.000	0	789	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1578	395	0	2224	0.710	1578	1348	2.4	2.4	5.612	A
B - WB Off Slip	559	140	1578	493	1.133	490	0	22.1	39.3	231.638	F
C - Holt Road	1940	485	455	1686	1.150	1685	1614	74.3	138.0	232.380	F
D - Access Road	0	0	2140	269	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1348	668	0.000	0	792	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1289	322	0	2224	0.580	1293	1382	2.4	1.4	3.911	A
B - WB Off Slip	456	114	1293	646	0.706	601	0	39.3	3.0	114.103	F
C - Holt Road	1584	396	433	1698	0.933	1686	1461	138.0	112.5	266.903	F
D - Access Road	0	0	2119	278	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1382	653	0.000	0	737	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1079	270	0	2224	0.485	1081	1357	1.4	1.0	3.177	A
B - WB Off Slip	382	95	1081	760	0.503	390	0	3.0	1.0	9.993	A
C - Holt Road	1327	332	328	1756	0.755	1741	1143	112.5	9.0	129.780	F
D - Access Road	0	0	2069	301	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1357	664	0.000	0	711	0.0	0.0	0.000	A

2039DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	174.46	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	174.46	F

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	2039DS	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1396	100.000
B - WB Off Slip		ONE HOUR	✓	701	100.000
C - Holt Road		ONE HOUR	✓	1220	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1286	0	110
	B - WB Off Slip	237	0	464	0	0
	C - Holt Road	938	0	0	0	282
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.92	0.00	0.08
	B - WB Off Slip	0.34	0.00	0.66	0.00	0.00
	C - Holt Road	0.77	0.00	0.00	0.00	0.23
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	3	0	0
	B - WB Off Slip	1	0	2	0	0
	C - Holt Road	5	0	0	0	5
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.026	1.000	1.004
	B - WB Off Slip	1.015	1.000	1.019	1.000	1.000
	C - Holt Road	1.055	1.000	1.000	1.000	1.053
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1051	1077
	B - WB Off Slip	528	537
	C - Holt Road	918	968
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1255	1285
	B - WB Off Slip	630	641
	C - Holt Road	1097	1156
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1537	1574
	B - WB Off Slip	772	785
	C - Holt Road	1343	1416
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1537	1574
	B - WB Off Slip	772	785
	C - Holt Road	1343	1416
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1255	1285
	B - WB Off Slip	630	641
	C - Holt Road	1097	1156
	D - Access Road	0	0
	E - WB On slip	0	0
08:30-08:45	A - Connector Link	1051	1077
	B - WB Off Slip	528	537
	C - Holt Road	918	968
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.71	5.68	2.5	A	1312	1968
B - WB Off Slip	1.59	808.68	156.2	F	654	982
C - Holt Road	0.80	10.45	4.0	B	1180	1771
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1077	269	0	2224	0.484	1073	919	0.0	1.0	3.193	A
B - WB Off Slip	537	134	1073	765	0.702	528	0	0.0	2.3	14.960	B
C - Holt Road	968	242	261	1793	0.540	964	1340	0.0	1.2	4.549	A
D - Access Road	0	0	1224	688	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	919	858	0.000	0	305	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1285	321	0	2224	0.578	1284	1091	1.0	1.4	3.916	A
B - WB Off Slip	641	160	1284	651	0.985	605	0	2.3	11.4	57.006	F
C - Holt Road	1156	289	303	1770	0.653	1154	1585	1.2	1.9	6.127	A
D - Access Road	0	0	1457	582	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1091	782	0.000	0	365	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1574	394	0	2224	0.708	1570	1251	1.4	2.4	5.608	A
B - WB Off Slip	785	196	1570	497	1.579	496	0	11.4	83.6	359.908	F
C - Holt Road	1416	354	289	1778	0.797	1408	1778	1.9	3.9	10.056	B
D - Access Road	0	0	1697	472	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1251	711	0.000	0	446	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1574	394	0	2224	0.708	1574	1256	2.4	2.5	5.677	A
B - WB Off Slip	785	196	1574	495	1.586	495	0	83.6	156.2	774.362	F
C - Holt Road	1416	354	288	1778	0.797	1416	1781	3.9	4.0	10.449	B
D - Access Road	0	0	1704	468	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1256	709	0.000	0	448	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1285	321	0	2224	0.578	1290	1113	2.5	1.4	3.966	A
B - WB Off Slip	641	160	1290	648	0.989	646	0	156.2	155.0	808.675	F
C - Holt Road	1156	289	317	1762	0.656	1164	1618	4.0	2.1	6.431	A
D - Access Road	0	0	1482	570	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1113	772	0.000	0	368	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1077	269	0	2224	0.484	1078	1002	1.4	1.0	3.226	A
B - WB Off Slip	537	134	1078	761	0.705	757	0	155.0	100.1	608.433	F
C - Holt Road	968	242	338	1751	0.553	971	1497	2.1	1.3	4.891	A
D - Access Road	0	0	1310	649	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1002	822	0.000	0	307	0.0	0.0	0.000	A

2039DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	121.64	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	121.64	F

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	2039DS	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1427	100.000
B - WB Off Slip		ONE HOUR	✓	478	100.000
C - Holt Road		ONE HOUR	✓	1711	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1160	0	267
	B - WB Off Slip	137	0	340	0	0
	C - Holt Road	1186	0	0	0	525
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.81	0.00	0.19
	B - WB Off Slip	0.29	0.00	0.71	0.00	0.00
	C - Holt Road	0.69	0.00	0.00	0.00	0.31
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	1
	B - WB Off Slip	0	0	1	0	0
	C - Holt Road	1	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.007	1.000	1.006
	B - WB Off Slip	1.005	1.000	1.010	1.000	1.000
	C - Holt Road	1.006	1.000	1.000	1.000	1.021
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	1074	1081
	B - WB Off Slip	360	363
	C - Holt Road	1288	1302
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1283	1291
	B - WB Off Slip	429	433
	C - Holt Road	1538	1555
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1571	1581
	B - WB Off Slip	526	530
	C - Holt Road	1884	1904
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1571	1581
	B - WB Off Slip	526	530
	C - Holt Road	1884	1904
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1283	1291
	B - WB Off Slip	429	433
	C - Holt Road	1538	1555
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	1074	1081
	B - WB Off Slip	360	363
	C - Holt Road	1288	1302
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.71	5.64	2.5	A	1318	1977
B - WB Off Slip	1.08	177.84	28.0	F	442	663
C - Holt Road	1.12	202.34	114.1	F	1587	2380
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1081	270	0	2224	0.486	1078	994	0.0	0.9	3.152	A
B - WB Off Slip	363	91	1078	762	0.476	359	0	0.0	0.9	8.935	A
C - Holt Road	1302	325	304	1769	0.736	1291	1132	0.0	2.7	7.447	A
D - Access Road	0	0	1595	518	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	994	825	0.000	0	602	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1291	323	0	2224	0.581	1289	1183	0.9	1.4	3.873	A
B - WB Off Slip	433	108	1289	648	0.668	429	0	0.9	1.9	16.259	C
C - Holt Road	1555	389	364	1736	0.895	1536	1354	2.7	7.3	16.796	C
D - Access Road	0	0	1900	378	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1183	741	0.000	0	717	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1581	395	0	2224	0.711	1577	1298	1.4	2.4	5.570	A
B - WB Off Slip	530	133	1577	494	1.074	471	0	1.9	16.8	91.200	F
C - Holt Road	1904	476	430	1700	1.120	1686	1618	7.3	62.0	83.270	F
D - Access Road	0	0	2116	280	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1298	690	0.000	0	817	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1581	395	0	2224	0.711	1581	1309	2.4	2.5	5.641	A
B - WB Off Slip	530	133	1581	491	1.079	485	0	16.8	28.0	177.842	F
C - Holt Road	1904	476	435	1697	1.122	1696	1632	62.0	114.1	192.960	F
D - Access Road	0	0	2130	273	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1309	685	0.000	0	821	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1291	323	0	2224	0.581	1295	1329	2.5	1.4	3.923	A
B - WB Off Slip	433	108	1295	645	0.671	536	0	28.0	2.3	57.984	F
C - Holt Road	1555	389	396	1719	0.904	1704	1436	114.1	76.8	202.340	F
D - Access Road	0	0	2100	287	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1329	676	0.000	0	770	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1081	270	0	2224	0.486	1083	1207	1.4	1.0	3.182	A
B - WB Off Slip	363	91	1083	759	0.478	368	0	2.3	0.9	9.404	A
C - Holt Road	1302	325	308	1767	0.737	1597	1143	76.8	3.1	56.446	F
D - Access Road	0	0	1905	376	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1207	730	0.000	0	698	0.0	0.0	0.000	A

2039DS_Mitigation, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	227.89	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	227.89	F

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	2039DS_Mitigation	AM	ONE HOUR	07:15	08:45	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1527	100.000
B - WB Off Slip		ONE HOUR	✓	672	100.000
C - Holt Road		ONE HOUR	✓	1232	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1334	0	193
	B - WB Off Slip	212	0	460	0	0
	C - Holt Road	966	0	0	0	266
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.87	0.00	0.13
	B - WB Off Slip	0.32	0.00	0.68	0.00	0.00
	C - Holt Road	0.78	0.00	0.00	0.00	0.22
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	3	0	0
	B - WB Off Slip	2	0	2	0	0
	C - Holt Road	5	0	0	0	6
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.032	1.000	1.004
	B - WB Off Slip	1.015	1.000	1.019	1.000	1.000
	C - Holt Road	1.055	1.000	1.000	1.000	1.058
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Connector Link	1150	1183
	B - WB Off Slip	506	515
	C - Holt Road	928	979
	D - Access Road	0	0
	E - WB On slip	0	0
07:30-07:45	A - Connector Link	1373	1412
	B - WB Off Slip	604	615
	C - Holt Road	1108	1169
	D - Access Road	0	0
	E - WB On slip	0	0
07:45-08:00	A - Connector Link	1681	1730
	B - WB Off Slip	740	753
	C - Holt Road	1356	1432
	D - Access Road	0	0
	E - WB On slip	0	0
08:00-08:15	A - Connector Link	1681	1730
	B - WB Off Slip	740	753
	C - Holt Road	1356	1432
	D - Access Road	0	0
	E - WB On slip	0	0
08:15-08:30	A - Connector Link	1373	1412
	B - WB Off Slip	604	615
	C - Holt Road	1108	1169
	D - Access Road	0	0
	E - WB On slip	0	0
08:30-08:45	A - Connector Link	1150	1183
	B - WB Off Slip	506	515
	C - Holt Road	928	979
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.78	7.48	3.5	A	1441	2162
B - WB Off Slip	1.83	1144.93	195.7	F	627	941
C - Holt Road	0.82	11.93	4.6	B	1193	1790
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1183	296	0	2224	0.532	1178	922	0.0	1.2	3.526	A
B - WB Off Slip	515	129	1178	708	0.727	505	0	0.0	2.5	17.265	C
C - Holt Road	979	245	304	1769	0.553	974	1379	0.0	1.3	4.746	A
D - Access Road	0	0	1278	663	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	922	857	0.000	0	356	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1412	353	0	2224	0.635	1410	1089	1.2	1.8	4.537	A
B - WB Off Slip	615	154	1410	584	1.053	557	0	2.5	16.9	83.506	F
C - Holt Road	1169	292	349	1745	0.670	1166	1618	1.3	2.1	6.528	A
D - Access Road	0	0	1515	555	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1089	783	0.000	0	426	0.0	0.0	0.000	A

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)	Unsignalised level of service
A - Connector Link	1730	432	0	2224	0.778	1723	1245	1.8	3.5	7.296	A
B - WB Off Slip	753	188	1723	416	1.812	415	0	16.9	101.4	530.192	F
C - Holt Road	1432	358	343	1748	0.819	1422	1795	2.1	4.5	11.341	B
D - Access Road	0	0	1765	440	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1245	714	0.000	0	520	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1730	432	0	2224	0.778	1729	1251	3.5	3.5	7.484	A
B - WB Off Slip	753	188	1729	412	1.828	412	0	101.4	186.6	1028.906	F
C - Holt Road	1432	358	343	1748	0.819	1431	1798	4.5	4.6	11.934	B
D - Access Road	0	0	1774	436	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1251	711	0.000	0	523	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1412	353	0	2224	0.635	1419	1106	3.5	1.8	4.643	A
B - WB Off Slip	615	154	1419	579	1.063	578	0	186.6	195.7	1144.934	F
C - Holt Road	1169	292	357	1740	0.672	1179	1640	4.6	2.2	6.879	A
D - Access Road	0	0	1536	545	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1106	776	0.000	0	430	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1183	296	0	2224	0.532	1185	990	1.8	1.2	3.574	A
B - WB Off Slip	515	129	1185	704	0.731	700	0	195.7	149.3	887.456	F
C - Holt Road	979	245	367	1735	0.564	982	1519	2.2	1.4	5.069	A
D - Access Road	0	0	1349	631	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	990	827	0.000	0	359	0.0	0.0	0.000	A

2039DS_Mitigation, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	C - Holt Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J22b	A1470/A1270 WB On-slip Road	Standard Roundabout		A, B, C, D, E	182.35	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	182.35	F

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	2039DS_Mitigation	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 (Veh/hr)	Scaling Factor (%)
A - Connector Link		ONE HOUR	✓	1570	100.000
B - WB Off Slip		ONE HOUR	✓	463	100.000
C - Holt Road		ONE HOUR	✓	1711	100.000
D - Access Road		ONE HOUR	✓	0	100.000
E - WB On slip		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1175	0	395
	B - WB Off Slip	125	0	337	0	0
	C - Holt Road	1191	0	0	0	519
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Proportions

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0.00	0.00	0.75	0.00	0.25
	B - WB Off Slip	0.27	0.00	0.73	0.00	0.00
	C - Holt Road	0.70	0.00	0.00	0.00	0.30
	D - Access Road	0.20	0.20	0.20	0.20	0.20
	E - WB On slip	0.20	0.20	0.20	0.20	0.20

Vehicle Mix

Heavy Vehicle Percentages

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	0	0	1	0	0
	B - WB Off Slip	1	0	1	0	0
	C - Holt Road	1	0	0	0	2
	D - Access Road	0	0	0	0	0
	E - WB On slip	0	0	0	0	0

Average PCU Per Veh

		To				
		A - Connector Link	B - WB Off Slip	C - Holt Road	D - Access Road	E - WB On slip
From	A - Connector Link	1.000	1.000	1.007	1.000	1.004
	B - WB Off Slip	1.005	1.000	1.010	1.000	1.000
	C - Holt Road	1.006	1.000	1.000	1.000	1.020
	D - Access Road	1.000	1.000	1.000	1.000	1.000
	E - WB On slip	1.000	1.000	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Connector Link	1182	1189
	B - WB Off Slip	348	351
	C - Holt Road	1288	1301
	D - Access Road	0	0
	E - WB On slip	0	0
17:00-17:15	A - Connector Link	1411	1420
	B - WB Off Slip	416	420
	C - Holt Road	1538	1553
	D - Access Road	0	0
	E - WB On slip	0	0
17:15-17:30	A - Connector Link	1729	1739
	B - WB Off Slip	509	514
	C - Holt Road	1883	1902
	D - Access Road	0	0
	E - WB On slip	0	0
17:30-17:45	A - Connector Link	1729	1739
	B - WB Off Slip	509	514
	C - Holt Road	1883	1902
	D - Access Road	0	0
	E - WB On slip	0	0
17:45-18:00	A - Connector Link	1411	1420
	B - WB Off Slip	416	420
	C - Holt Road	1538	1553
	D - Access Road	0	0
	E - WB On slip	0	0
18:00-18:15	A - Connector Link	1182	1189
	B - WB Off Slip	348	351
	C - Holt Road	1288	1301
	D - Access Road	0	0
	E - WB On slip	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Connector Link	0.78	7.47	3.5	A	1450	2174
B - WB Off Slip	1.26	371.16	57.4	F	428	642
C - Holt Road	1.16	291.25	144.7	F	1585	2378
D - Access Road	0.00	0.00	0.0	A	0	0
E - WB On slip	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1189	297	0	2224	0.535	1185	987	0.0	1.1	3.470	A
B - WB Off Slip	351	88	1185	704	0.499	347	0	0.0	1.0	10.065	B
C - Holt Road	1301	325	392	1721	0.756	1289	1141	0.0	3.0	8.192	A
D - Access Road	0	0	1680	479	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	987	828	0.000	0	693	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1420	355	0	2224	0.639	1418	1171	1.1	1.8	4.481	A
B - WB Off Slip	420	105	1418	579	0.724	414	0	1.0	2.4	21.213	C
C - Holt Road	1553	388	468	1679	0.925	1527	1363	3.0	9.4	21.081	C
D - Access Road	0	0	1995	335	0.000	0	0	0.0	0.0	0.000	A

E - WB On slip	0	0	1171	747	0.000	0	825	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1739	435	0	2224	0.782	1732	1238	1.8	3.5	7.269	A
B - WB Off Slip	514	128	1732	410	1.252	402	0	2.4	30.4	167.781	F
C - Holt Road	1902	476	544	1637	1.162	1629	1590	9.4	77.9	105.319	F
D - Access Road	0	0	2172	254	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1238	717	0.000	0	935	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1739	435	0	2224	0.782	1739	1243	3.5	3.5	7.465	A
B - WB Off Slip	514	128	1739	407	1.263	406	0	30.4	57.4	371.156	F
C - Holt Road	1902	476	547	1636	1.163	1635	1598	77.9	144.7	250.306	F
D - Access Road	0	0	2181	250	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1243	715	0.000	0	938	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1420	355	0	2224	0.639	1427	1292	3.5	1.8	4.586	A
B - WB Off Slip	420	105	1427	574	0.731	564	0	57.4	21.2	253.366	F
C - Holt Road	1553	388	511	1655	0.938	1644	1480	144.7	122.0	291.254	F
D - Access Road	0	0	2155	262	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1292	693	0.000	0	863	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Connector Link	1189	297	0	2224	0.535	1192	1291	1.8	1.2	3.521	A
B - WB Off Slip	351	88	1192	701	0.502	432	0	21.2	1.0	18.171	C
C - Holt Road	1301	325	416	1708	0.762	1694	1208	122.0	23.8	158.218	F
D - Access Road	0	0	2110	282	0.000	0	0	0.0	0.0	0.000	A
E - WB On slip	0	0	1291	693	0.000	0	819	0.0	0.0	0.000	A