



Norwich Western Link

Transport Assessment - Appendix 11 – Junction Model Results

Sub Appendix 11n – Junction 17 A1270 Broadland Northway/ Fir Covert Road roundabout

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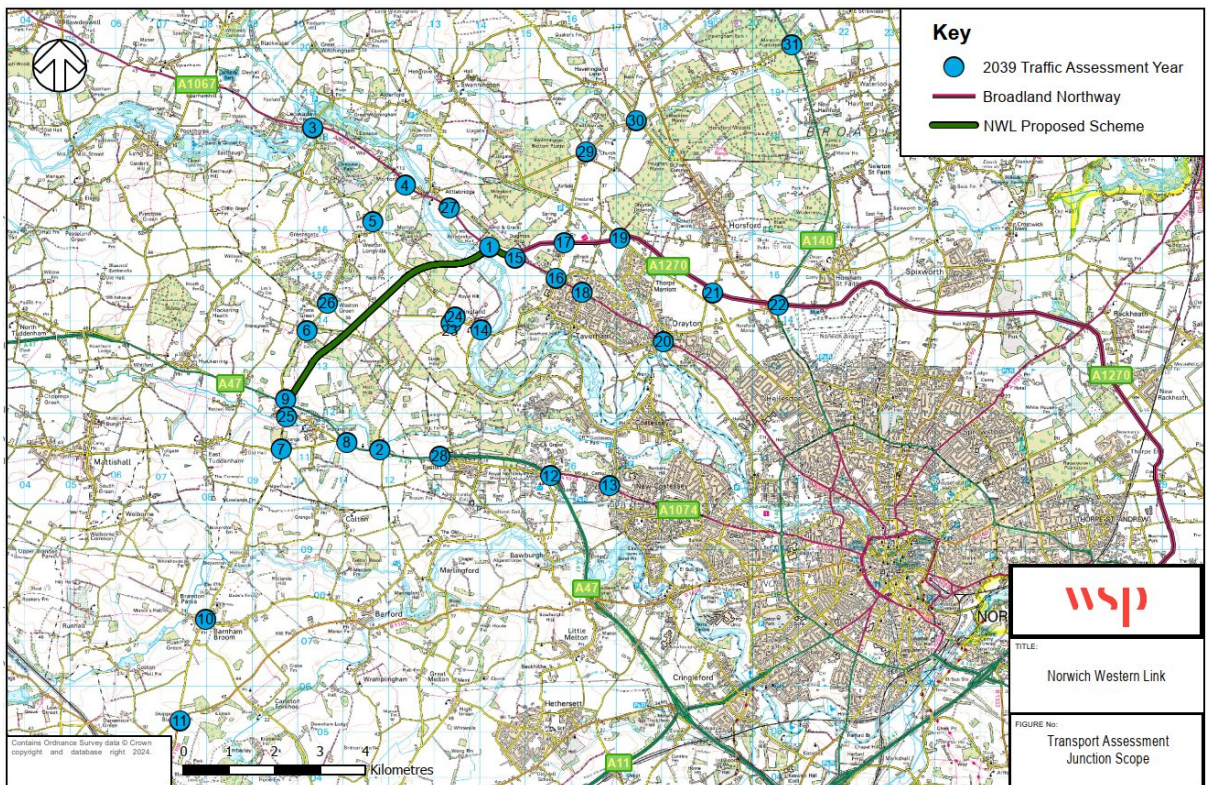
1 Junction Model Results

1.1.1 Junctions 10 modelling software output file that shows the junction capacity results for Junction 17 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).



J17 – A1270 Broadland Northway/ Fir Covert Road roundabout Results

<h1>Junctions 10</h1>
<h2>ARCADY 10 - Roundabout Module</h2>
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Filename: J17_FP.j10

Path: C:\Users\NCS04445\OneDrive - WSP O365\WSP\Projects\38 NWL\Working\20240216\J17

Report generation date: 16/02/2024 11:51:58

- »2029DM, AM
- »2029DM, PM
- »2029DS, AM
- »2029DS, PM
- »2029DS_Mitigation, AM
- »2029DS_Mitigation, PM
- »2039DM, AM
- »2039DM, PM
- »2039DS, AM
- »2039DS, PM
- »2039DS_Mitigation, AM
- »2039DS_Mitigation, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2029DM										
A - Fir Covert Road (N)	D1	0.3	4.80	0.24	A	D2	0.1	3.83	0.11	A
B - Broadland Northway (E)		0.4	1.82	0.27	A		0.6	2.06	0.38	A
C - Fir Covert Road (S)		0.7	4.85	0.43	A		0.8	5.29	0.45	A
D - Broadland Northway (W)		0.4	2.01	0.26	A		0.2	1.79	0.20	A
2029DS										
A - Fir Covert Road (N)	D3	1.3	10.30	0.56	B	D4	0.4	6.31	0.30	A
B - Broadland Northway (E)		0.8	2.52	0.42	A		0.7	2.37	0.40	A
C - Fir Covert Road (S)		1.2	7.49	0.54	A		1.0	6.34	0.51	A
D - Broadland Northway (W)		1.1	2.99	0.52	A		1.1	3.00	0.53	A
2029DS_Mitigation										
A - Fir Covert Road (N)	D5	0.8	8.67	0.44	A	D6	0.3	6.18	0.23	A
B - Broadland Northway (E)		0.9	2.59	0.46	A		0.7	2.41	0.42	A
C - Fir Covert Road (S)		1.2	7.73	0.55	A		1.1	6.43	0.52	A
D - Broadland Northway (W)		1.1	3.04	0.53	A		1.2	3.12	0.54	A
2039DM										
A - Fir Covert Road (N)	D7	0.4	5.64	0.30	A	D8	0.2	4.11	0.15	A
B - Broadland Northway (E)		0.4	1.92	0.30	A		0.7	2.24	0.42	A
C - Fir Covert Road (S)		0.9	5.49	0.48	A		0.9	5.78	0.49	A
D - Broadland Northway (W)		0.5	2.22	0.33	A		0.3	1.86	0.23	A
2039DS										
A - Fir Covert Road (N)	D9	2.6	19.78	0.73	C	D10	0.7	8.15	0.39	A
B - Broadland Northway (E)		0.9	2.73	0.45	A		1.0	2.91	0.50	A
C - Fir Covert Road (S)		1.5	9.10	0.61	A		1.4	8.32	0.59	A
D - Broadland Northway (W)		1.9	4.01	0.65	A		1.7	3.85	0.63	A
2039DS_Mitigation										
A - Fir Covert Road (N)	D11	3.2	25.58	0.77	D	D12	0.4	7.96	0.30	A
B - Broadland Northway (E)		1.0	2.87	0.49	A		1.1	2.97	0.52	A
C - Fir Covert Road (S)		1.8	10.25	0.64	B		1.5	8.44	0.60	A
D - Broadland Northway (W)		2.0	4.28	0.66	A		1.9	4.05	0.65	A

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

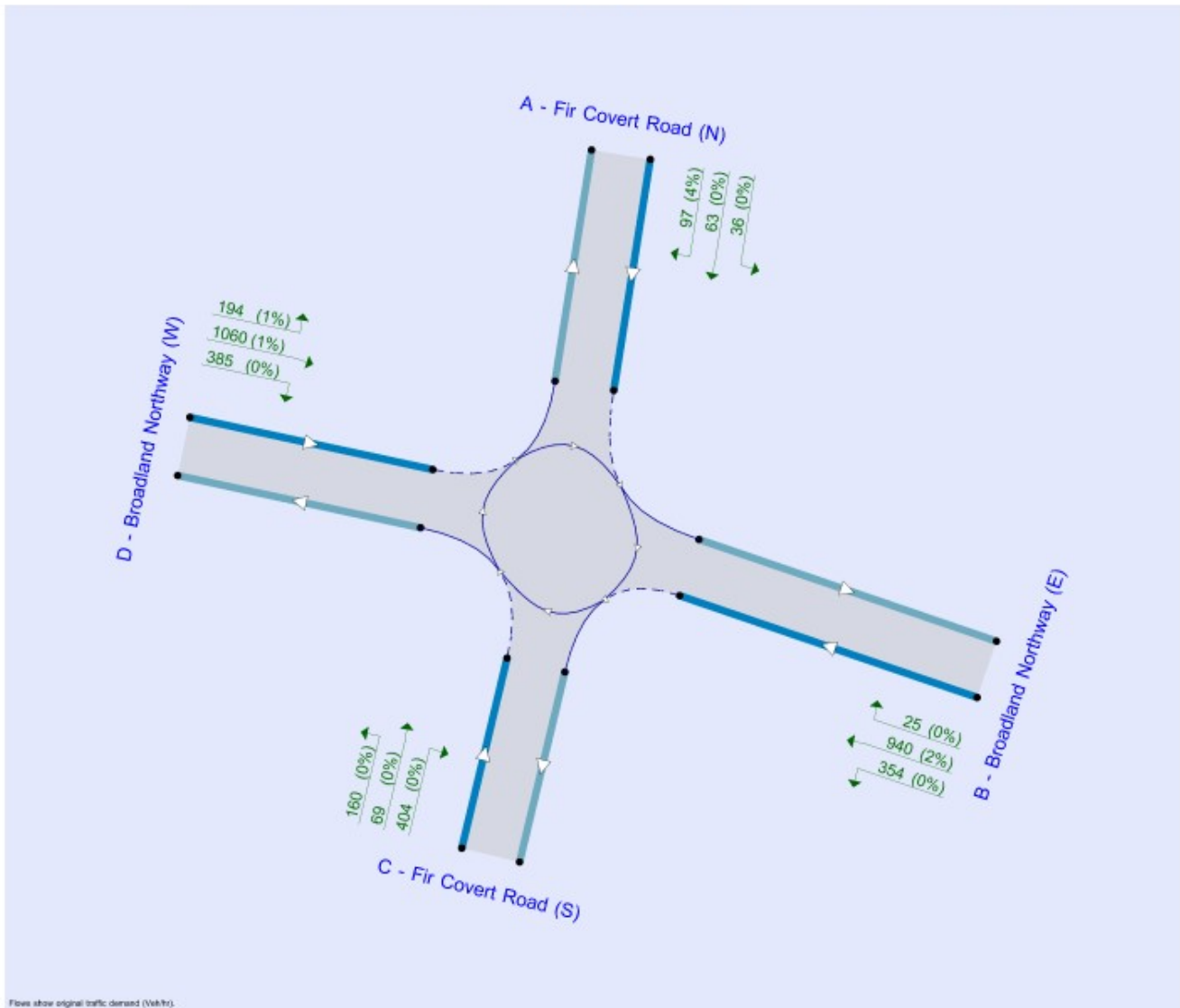
File summary

File Description

Title	Broadland Northway/ Fir Covert Road
Location	52.696295750976454, 1.1932144601539612
Site number	J17
Date	16/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INCS04445
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



Flows show original traffic demand (Veh/hr).

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 period length (min)	Time segment length (min)	Run automatically
D1	2029DM	AM	FLAT	07:15	08:15	60	15	✓
D2	2029DM	PM	FLAT	16:45	17:45	60	15	✓
D3	2029DS	AM	FLAT	07:15	08:15	60	15	✓
D4	2029DS	PM	FLAT	16:45	17:45	60	15	✓
D5	2029DS_Mitigation	AM	FLAT	07:15	08:15	60	15	✓
D6	2029DS_Mitigation	PM	FLAT	16:45	17:45	60	15	✓
D7	2039DM	AM	FLAT	07:15	08:15	60	15	✓
D8	2039DM	PM	FLAT	16:45	17:45	60	15	✓
D9	2039DS	AM	FLAT	07:15	08:15	60	15	✓
D10	2039DS	PM	FLAT	16:45	17:45	60	15	✓
D11	2039DS_Mitigation	AM	FLAT	07:15	08:15	60	15	✓
D12	2039DS_Mitigation	PM	FLAT	16:45	17:45	60	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

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	2.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.98	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Fir Covert Road (N)		
B	Broadland Northway (E)		
C	Fir Covert Road (S)		
D	Broadland Northway (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Fir Covert Road (N)	3.10	6.90	10.6	20.7	90.0	40.0		
B - Broadland Northway (E)	8.00	10.50	14.4	19.6	90.0	29.0		
C - Fir Covert Road (S)	3.50	7.40	10.1	20.6	90.0	43.0		
D - Broadland Northway (W)	8.20	11.00	11.4	20.6	90.0	40.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Fir Covert Road (N)	0.410	1427
B - Broadland Northway (E)	0.630	2918
C - Fir Covert Road (S)	0.421	1520
D - Broadland Northway (W)	0.614	2861

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 period length (min)	Time segment length (min)	Run automatically
D1	2029DM	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	231	100.000
B - Broadland Northway (E)		FLAT	✓	741	100.000
C - Fir Covert Road (S)		FLAT	✓	555	100.000
D - Broadland Northway (W)		FLAT	✓	636	100.000

Origin-Destination Data

Demand (Veh/hr)

From		To			
		A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
From	A - Fir Covert Road (N)	0	45	184	2
	B - Broadland Northway (E)	50	0	244	447
	C - Fir Covert Road (S)	92	430	0	34
	D - Broadland Northway (W)	2	599	35	0

Proportions

From		To		
		A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
From	A - Fir Covert Road (N)	0.00	0.19	0.80
	B - Broadland Northway (E)	0.07	0.00	0.33
	C - Fir Covert Road (S)	0.17	0.77	0.00
	D - Broadland Northway (W)	0.00	0.94	0.06

Vehicle Mix

Heavy Vehicle Percentages

From		To			
		A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
From	A - Fir Covert Road (N)	0	0	0	0
	B - Broadland Northway (E)	2	0	0	3
	C - Fir Covert Road (S)	1	0	0	0
	D - Broadland Northway (W)	0	4	0	0

Average PCU Per Veh

From		To		
		A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
From	A - Fir Covert Road (N)	1.000	1.000	1.000
	B - Broadland Northway (E)	1.021	1.000	1.004
	C - Fir Covert Road (S)	1.012	1.002	1.000
	D - Broadland Northway (W)	1.000	1.036	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	231	231
	07:30-07:45	231	231
	07:45-08:00	231	231
	08:00-08:15	231	231
B - Broadland Northway (E)	07:15-07:30	741	758
	07:30-07:45	741	758
	07:45-08:00	741	758
	08:00-08:15	741	758
C - Fir Covert Road (S)	07:15-07:30	555	557
	07:30-07:45	555	557
	07:45-08:00	555	557
	08:00-08:15	555	557
D - Broadland Northway (W)	07:15-07:30	636	658
	07:30-07:45	636	658
	07:45-08:00	636	658
	08:00-08:15	636	658

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 - Fir Covert Road (N)	0.24	4.80	0.3	A	231	231
B - Broadland Northway (E)	0.27	1.82	0.4	A	758	758
C - Fir Covert Road (S)	0.43	4.85	0.7	A	557	557
D - Broadland Northway (W)	0.26	2.01	0.4	A	658	658

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 - Fir Covert Road (N)	231	58	1082	983	0.235	230	145	0.0	0.3	4.776	A
B - Broadland Northway (E)	758	189	221	2779	0.273	758	1092	0.0	0.4	1.821	A
C - Fir Covert Road (S)	557	139	514	1303	0.428	554	463	0.0	0.7	4.807	A
D - Broadland Northway (W)	658	164	572	2510	0.262	658	497	0.0	0.4	2.004	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 - Fir Covert Road (N)	231	58	1086	981	0.236	231	146	0.3	0.3	4.800	A
B - Broadland Northway (E)	758	189	222	2779	0.273	758	1096	0.4	0.4	1.821	A
C - Fir Covert Road (S)	557	139	515	1303	0.428	557	465	0.7	0.7	4.848	A
D - Broadland Northway (W)	658	164	575	2509	0.262	658	498	0.4	0.4	2.009	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 - Fir Covert Road (N)	231	58	1086	981	0.236	231	146	0.3	0.3	4.800	A
B - Broadland Northway (E)	758	189	222	2779	0.273	758	1096	0.4	0.4	1.821	A
C - Fir Covert Road (S)	557	139	515	1303	0.428	557	465	0.7	0.7	4.848	A
D - Broadland Northway (W)	658	164	575	2508	0.262	658	498	0.4	0.4	2.009	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 - Fir Covert Road (N)	231	58	1086	981	0.236	231	146	0.3	0.3	4.800	A
B - Broadland Northway (E)	758	189	222	2779	0.273	758	1096	0.4	0.4	1.821	A
C - Fir Covert Road (S)	557	139	515	1303	0.428	557	465	0.7	0.7	4.848	A
D - Broadland Northway (W)	658	164	575	2508	0.262	658	498	0.4	0.4	2.009	A

2029DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	2.90	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.90	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2029DM	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	120	100.000
B - Broadland Northway (E)		FLAT	✓	1061	100.000
C - Fir Covert Road (S)		FLAT	✓	560	100.000
D - Broadland Northway (W)		FLAT	✓	496	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	33	83	4
B - Broadland Northway (E)	31	0	418	612
C - Fir Covert Road (S)	121	397	0	42
D - Broadland Northway (W)	2	450	44	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.28	0.69
B - Broadland Northway (E)	0.03	0.00	0.39
C - Fir Covert Road (S)	0.22	0.71	0.00
D - Broadland Northway (W)	0.00	0.91	0.09

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	0
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	0	1	0	0

Average PCU Per Veh

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	1.000	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.002	1.000
C - Fir Covert Road (S)	1.000	1.003	1.000	1.000
D - Broadland Northway (W)	1.000	1.009	1.000	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	120	120
	17:00-17:15	120	120
	17:15-17:30	120	120
	17:30-17:45	120	120
B - Broadland Northway (E)	16:45-17:00	1061	1072
	17:00-17:15	1061	1072
	17:15-17:30	1061	1072
	17:30-17:45	1061	1072
C - Fir Covert Road (S)	16:45-17:00	560	561
	17:00-17:15	560	561
	17:15-17:30	560	561
	17:30-17:45	560	561
D - Broadland Northway (W)	16:45-17:00	496	500
	17:00-17:15	496	500
	17:15-17:30	496	500
	17:30-17:45	496	500

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 - Fir Covert Road (N)	0.11	3.83	0.1	A	120	120
B - Broadland Northway (E)	0.38	2.06	0.6	A	1072	1072
C - Fir Covert Road (S)	0.45	5.29	0.8	A	561	561
D - Broadland Northway (W)	0.20	1.79	0.2	A	500	500

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 - Fir Covert Road (N)	120	30	893	1060	0.113	119	153	0.0	0.1	3.823	A
B - Broadland Northway (E)	1072	268	131	2836	0.378	1070	882	0.0	0.6	2.056	A
C - Fir Covert Road (S)	561	140	655	1244	0.451	558	545	0.0	0.8	5.235	A
D - Broadland Northway (W)	500	125	547	2525	0.198	499	666	0.0	0.2	1.790	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 - Fir Covert Road (N)	120	30	896	1059	0.113	120	154	0.1	0.1	3.832	A
B - Broadland Northway (E)	1072	268	131	2836	0.378	1072	885	0.6	0.6	2.062	A
C - Fir Covert Road (S)	561	140	657	1243	0.451	561	546	0.8	0.8	5.288	A
D - Broadland Northway (W)	500	125	550	2524	0.198	500	668	0.2	0.2	1.792	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 - Fir Covert Road (N)	120	30	896	1059	0.113	120	154	0.1	0.1	3.832	A
B - Broadland Northway (E)	1072	268	131	2836	0.378	1072	885	0.6	0.6	2.062	A
C - Fir Covert Road (S)	561	140	657	1243	0.451	561	546	0.8	0.8	5.288	A
D - Broadland Northway (W)	500	125	550	2524	0.198	500	668	0.2	0.2	1.792	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 - Fir Covert Road (N)	120	30	896	1059	0.113	120	154	0.1	0.1	3.832	A
B - Broadland Northway (E)	1072	268	131	2836	0.378	1072	885	0.6	0.6	2.062	A
C - Fir Covert Road (S)	561	140	657	1243	0.451	561	546	0.8	0.8	5.288	A
D - Broadland Northway (W)	500	125	550	2524	0.198	500	668	0.2	0.2	1.792	A

2029DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	4.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.53	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2029DS	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	448	100.000
B - Broadland Northway (E)		FLAT	✓	1047	100.000
C - Fir Covert Road (S)		FLAT	✓	561	100.000
D - Broadland Northway (W)		FLAT	✓	1297	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	43	114	291
B - Broadland Northway (E)	48	0	241	758
C - Fir Covert Road (S)	68	316	0	177
D - Broadland Northway (W)	134	993	169	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.10	0.25
B - Broadland Northway (E)	0.05	0.00	0.23
C - Fir Covert Road (S)	0.12	0.56	0.00
D - Broadland Northway (W)	0.10	0.77	0.13

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	1
B - Broadland Northway (E)	2	0	0	4
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	2	5	1	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.022	1.000	1.004
C - Fir Covert Road (S)	1.000	1.003	1.000
D - Broadland Northway (W)	1.016	1.045	1.006

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	448	450
	07:30-07:45	448	450
	07:45-08:00	448	450
	08:00-08:15	448	450
B - Broadland Northway (E)	07:15-07:30	1047	1080
	07:30-07:45	1047	1080
	07:45-08:00	1047	1080
	08:00-08:15	1047	1080
C - Fir Covert Road (S)	07:15-07:30	561	562
	07:30-07:45	561	562
	07:45-08:00	561	562
	08:00-08:15	561	562
D - Broadland Northway (W)	07:15-07:30	1297	1345
	07:30-07:45	1297	1345
	07:45-08:00	1297	1345
	08:00-08:15	1297	1345

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 - Fir Covert Road (N)	0.56	10.30	1.3	B	450	450
B - Broadland Northway (E)	0.42	2.52	0.8	A	1080	1080
C - Fir Covert Road (S)	0.54	7.49	1.2	A	562	562
D - Broadland Northway (W)	0.52	2.99	1.1	A	1345	1345

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 - Fir Covert Road (N)	450	112	1519	804	0.560	445	253	0.0	1.2	9.950	A
B - Broadland Northway (E)	1080	270	573	2558	0.422	1077	1391	0.0	0.8	2.502	A
C - Fir Covert Road (S)	562	140	1125	1046	0.537	557	524	0.0	1.1	7.318	A
D - Broadland Northway (W)	1345	336	431	2597	0.518	1341	1252	0.0	1.1	2.963	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 - Fir Covert Road (N)	450	112	1525	801	0.562	450	254	1.2	1.3	10.293	B
B - Broadland Northway (E)	1080	270	578	2554	0.423	1080	1397	0.8	0.8	2.517	A
C - Fir Covert Road (S)	562	140	1131	1043	0.538	562	527	1.1	1.2	7.485	A
D - Broadland Northway (W)	1345	336	434	2595	0.518	1345	1259	1.1	1.1	2.986	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 - Fir Covert Road (N)	450	112	1525	801	0.562	450	254	1.3	1.3	10.298	B
B - Broadland Northway (E)	1080	270	578	2554	0.423	1080	1397	0.8	0.8	2.517	A
C - Fir Covert Road (S)	562	140	1131	1043	0.538	562	527	1.2	1.2	7.489	A
D - Broadland Northway (W)	1345	336	434	2595	0.518	1345	1259	1.1	1.1	2.986	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 - Fir Covert Road (N)	450	112	1525	801	0.562	450	254	1.3	1.3	10.300	B
B - Broadland Northway (E)	1080	270	578	2554	0.423	1080	1397	0.8	0.8	2.517	A
C - Fir Covert Road (S)	562	140	1131	1043	0.538	562	527	1.2	1.2	7.489	A
D - Broadland Northway (W)	1345	336	434	2595	0.518	1345	1259	1.1	1.1	2.986	A

2029DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	3.67	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.67	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2029DS	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	248	100.000
B - Broadland Northway (E)		FLAT	✓	1025	100.000
C - Fir Covert Road (S)		FLAT	✓	595	100.000
D - Broadland Northway (W)		FLAT	✓	1336	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	32	72	144
B - Broadland Northway (E)	26	0	348	651
C - Fir Covert Road (S)	107	361	0	127
D - Broadland Northway (W)	264	765	307	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.13	0.29
B - Broadland Northway (E)	0.03	0.00	0.34
C - Fir Covert Road (S)	0.18	0.61	0.00
D - Broadland Northway (W)	0.20	0.57	0.23

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	3
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	1	1	0	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.003
C - Fir Covert Road (S)	1.000	1.003	1.000
D - Broadland Northway (W)	1.008	1.012	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	248	253
	17:00-17:15	248	253
	17:15-17:30	248	253
	17:30-17:45	248	253
B - Broadland Northway (E)	16:45-17:00	1025	1042
	17:00-17:15	1025	1042
	17:15-17:30	1025	1042
	17:30-17:45	1025	1042
C - Fir Covert Road (S)	16:45-17:00	595	596
	17:00-17:15	595	596
	17:15-17:30	595	596
	17:30-17:45	595	596
D - Broadland Northway (W)	16:45-17:00	1336	1347
	17:00-17:15	1336	1347
	17:15-17:30	1336	1347
	17:30-17:45	1336	1347

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 - Fir Covert Road (N)	0.30	6.31	0.4	A	253	253
B - Broadland Northway (E)	0.40	2.37	0.7	A	1042	1042
C - Fir Covert Road (S)	0.51	6.34	1.0	A	596	596
D - Broadland Northway (W)	0.53	3.00	1.1	A	1347	1347

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 - Fir Covert Road (N)	253	63	1437	837	0.302	251	397	0.0	0.4	6.249	A
B - Broadland Northway (E)	1042	261	525	2587	0.403	1039	1163	0.0	0.7	2.380	A
C - Fir Covert Road (S)	596	149	839	1166	0.511	592	726	0.0	1.0	6.234	A
D - Broadland Northway (W)	1347	337	492	2559	0.526	1343	939	0.0	1.1	2.972	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 - Fir Covert Road (N)	253	63	1443	835	0.303	253	399	0.4	0.4	6.313	A
B - Broadland Northway (E)	1042	261	528	2586	0.403	1042	1168	0.7	0.7	2.370	A
C - Fir Covert Road (S)	596	149	842	1165	0.512	596	728	1.0	1.0	6.336	A
D - Broadland Northway (W)	1347	337	495	2557	0.527	1347	943	1.1	1.1	2.998	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 - Fir Covert Road (N)	253	63	1443	835	0.303	253	399	0.4	0.4	6.313	A
B - Broadland Northway (E)	1042	261	528	2586	0.403	1042	1168	0.7	0.7	2.370	A
C - Fir Covert Road (S)	596	149	842	1165	0.512	596	728	1.0	1.0	6.337	A
D - Broadland Northway (W)	1347	337	495	2557	0.527	1347	943	1.1	1.1	2.998	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 - Fir Covert Road (N)	253	63	1443	835	0.303	253	399	0.4	0.4	6.313	A
B - Broadland Northway (E)	1042	261	528	2586	0.403	1042	1168	0.7	0.7	2.370	A
C - Fir Covert Road (S)	596	149	842	1165	0.512	596	728	1.0	1.0	6.337	A
D - Broadland Northway (W)	1347	337	495	2557	0.527	1347	943	1.1	1.1	2.998	A

2029DS_Mitigation, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	4.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.21	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2029DS_Mitigation	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	333	100.000
B - Broadland Northway (E)		FLAT	✓	1167	100.000
C - Fir Covert Road (S)		FLAT	✓	573	100.000
D - Broadland Northway (W)		FLAT	✓	1311	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	44	85	204
B - Broadland Northway (E)	48	0	270	850
C - Fir Covert Road (S)	45	350	0	179
D - Broadland Northway (W)	72	1089	169	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.13	0.26
B - Broadland Northway (E)	0.04	0.00	0.23
C - Fir Covert Road (S)	0.08	0.61	0.00
D - Broadland Northway (W)	0.06	0.82	0.13

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	2
B - Broadland Northway (E)	2	0	0	4
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	1	4	1	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.022	1.000	1.004
C - Fir Covert Road (S)	1.000	1.003	1.000
D - Broadland Northway (W)	1.015	1.044	1.008

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	333	338
	07:30-07:45	333	338
	07:45-08:00	333	338
	08:00-08:15	333	338
B - Broadland Northway (E)	07:15-07:30	1167	1200
	07:30-07:45	1167	1200
	07:45-08:00	1167	1200
	08:00-08:15	1167	1200
C - Fir Covert Road (S)	07:15-07:30	573	575
	07:30-07:45	573	575
	07:45-08:00	573	575
	08:00-08:15	573	575
D - Broadland Northway (W)	07:15-07:30	1311	1380
	07:30-07:45	1311	1380
	07:45-08:00	1311	1380
	08:00-08:15	1311	1380

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 - Fir Covert Road (N)	0.44	8.67	0.8	A	338	338
B - Broadland Northway (E)	0.46	2.59	0.9	A	1200	1200
C - Fir Covert Road (S)	0.55	7.73	1.2	A	575	575
D - Broadland Northway (W)	0.53	3.04	1.1	A	1380	1380

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 - Fir Covert Road (N)	338	84	1630	758	0.443	333	167	0.0	0.8	8.484	A
B - Broadland Northway (E)	1200	300	459	2629	0.457	1197	1503	0.0	0.9	2.578	A
C - Fir Covert Road (S)	575	144	1132	1043	0.551	570	524	0.0	1.2	7.547	A
D - Broadland Northway (W)	1380	340	441	2590	0.525	1358	1280	0.0	1.1	3.013	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 - Fir Covert Road (N)	336	84	1637	755	0.445	336	167	0.8	0.8	8.667	A
B - Broadland Northway (E)	1200	300	463	2627	0.457	1200	1510	0.9	0.9	2.594	A
C - Fir Covert Road (S)	575	144	1136	1041	0.552	574	527	1.2	1.2	7.727	A
D - Broadland Northway (W)	1360	340	444	2588	0.525	1360	1266	1.1	1.1	3.039	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 - Fir Covert Road (N)	336	84	1637	755	0.445	336	167	0.8	0.8	8.669	A
B - Broadland Northway (E)	1200	300	463	2627	0.457	1200	1510	0.9	0.9	2.594	A
C - Fir Covert Road (S)	575	144	1136	1041	0.552	575	527	1.2	1.2	7.729	A
D - Broadland Northway (W)	1360	340	444	2588	0.525	1360	1266	1.1	1.1	3.039	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 - Fir Covert Road (N)	336	84	1637	755	0.445	336	167	0.8	0.8	8.669	A
B - Broadland Northway (E)	1200	300	463	2627	0.457	1200	1510	0.9	0.9	2.594	A
C - Fir Covert Road (S)	575	144	1136	1041	0.552	575	527	1.2	1.2	7.730	A
D - Broadland Northway (W)	1360	340	444	2588	0.525	1360	1266	1.1	1.1	3.039	A

2029DS_Mitigation, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	3.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2029DS_Mitigation	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	176	100.000
B - Broadland Northway (E)		FLAT	✓	1102	100.000
C - Fir Covert Road (S)		FLAT	✓	606	100.000
D - Broadland Northway (W)		FLAT	✓	1379	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	37	61	78
B - Broadland Northway (E)	26	0	361	715
C - Fir Covert Road (S)	70	407	0	129
D - Broadland Northway (W)	180	891	308	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.21	0.35
B - Broadland Northway (E)	0.02	0.00	0.33
C - Fir Covert Road (S)	0.12	0.67	0.00
D - Broadland Northway (W)	0.13	0.65	0.22

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	1
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	0	1	0	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.003
C - Fir Covert Road (S)	1.000	1.002	1.000
D - Broadland Northway (W)	1.000	1.012	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	176	177
	17:00-17:15	176	177
	17:15-17:30	176	177
	17:30-17:45	176	177
B - Broadland Northway (E)	16:45-17:00	1102	1119
	17:00-17:15	1102	1119
	17:15-17:30	1102	1119
	17:30-17:45	1102	1119
C - Fir Covert Road (S)	16:45-17:00	606	607
	17:00-17:15	606	607
	17:15-17:30	606	607
	17:30-17:45	606	607
D - Broadland Northway (W)	16:45-17:00	1379	1390
	17:00-17:15	1379	1390
	17:15-17:30	1379	1390
	17:30-17:45	1379	1390

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 - Fir Covert Road (N)	0.23	6.18	0.3	A	177	177
B - Broadland Northway (E)	0.42	2.41	0.7	A	1119	1119
C - Fir Covert Road (S)	0.52	6.43	1.1	A	607	607
D - Broadland Northway (W)	0.54	3.12	1.2	A	1390	1390

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 - Fir Covert Road (N)	177	44	1611	766	0.231	176	274	0.0	0.3	6.124	A
B - Broadland Northway (E)	1119	280	446	2637	0.424	1116	1341	0.0	0.7	2.399	A
C - Fir Covert Road (S)	607	152	833	1169	0.519	603	729	0.0	1.1	6.325	A
D - Broadland Northway (W)	1390	348	500	2554	0.544	1385	936	0.0	1.2	3.092	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 - Fir Covert Road (N)	177	44	1618	763	0.232	177	276	0.3	0.3	6.178	A
B - Broadland Northway (E)	1119	280	448	2636	0.424	1119	1347	0.7	0.7	2.408	A
C - Fir Covert Road (S)	607	152	836	1168	0.520	607	731	1.1	1.1	6.430	A
D - Broadland Northway (W)	1390	348	504	2552	0.545	1390	939	1.2	1.2	3.122	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 - Fir Covert Road (N)	177	44	1618	763	0.232	177	276	0.3	0.3	6.179	A
B - Broadland Northway (E)	1119	280	448	2636	0.424	1119	1347	0.7	0.7	2.408	A
C - Fir Covert Road (S)	607	152	836	1168	0.520	607	731	1.1	1.1	6.431	A
D - Broadland Northway (W)	1390	348	504	2552	0.545	1390	939	1.2	1.2	3.122	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 - Fir Covert Road (N)	177	44	1618	763	0.232	177	276	0.3	0.3	6.179	A
B - Broadland Northway (E)	1119	280	448	2636	0.424	1119	1347	0.7	0.7	2.408	A
C - Fir Covert Road (S)	607	152	836	1168	0.520	607	731	1.1	1.1	6.431	A
D - Broadland Northway (W)	1390	348	504	2552	0.545	1390	939	1.2	1.2	3.122	A

2039DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	3.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.29	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2039DM	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	270	100.000
B - Broadland Northway (E)		FLAT	✓	813	100.000
C - Fir Covert Road (S)		FLAT	✓	611	100.000
D - Broadland Northway (W)		FLAT	✓	781	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	44	209	17
B - Broadland Northway (E)	49	0	263	501
C - Fir Covert Road (S)	110	457	0	44
D - Broadland Northway (W)	1	723	56	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.16	0.77
B - Broadland Northway (E)	0.06	0.00	0.32
C - Fir Covert Road (S)	0.18	0.75	0.00
D - Broadland Northway (W)	0.00	0.93	0.07

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	0
B - Broadland Northway (E)	1	0	0	3
C - Fir Covert Road (S)	2	0	0	0
D - Broadland Northway (W)	0	4	1	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.007	1.000	1.001
C - Fir Covert Road (S)	1.016	1.004	1.000
D - Broadland Northway (W)	1.000	1.035	1.013

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	270	270
	07:30-07:45	270	270
	07:45-08:00	270	270
	08:00-08:15	270	270
B - Broadland Northway (E)	07:15-07:30	813	828
	07:30-07:45	813	828
	07:45-08:00	813	828
	08:00-08:15	813	828
C - Fir Covert Road (S)	07:15-07:30	611	615
	07:30-07:45	611	615
	07:45-08:00	611	615
	08:00-08:15	611	615
D - Broadland Northway (W)	07:15-07:30	781	807
	07:30-07:45	781	807
	07:45-08:00	781	807
	08:00-08:15	781	807

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 - Fir Covert Road (N)	0.30	5.64	0.4	A	270	270
B - Broadland Northway (E)	0.30	1.92	0.4	A	828	828
C - Fir Covert Road (S)	0.48	5.49	0.9	A	615	615
D - Broadland Northway (W)	0.33	2.22	0.5	A	807	807

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 - Fir Covert Road (N)	270	67	1280	910	0.296	268	161	0.0	0.4	5.598	A
B - Broadland Northway (E)	828	207	281	2741	0.302	828	1247	0.0	0.4	1.914	A
C - Fir Covert Road (S)	615	154	581	1275	0.482	611	527	0.0	0.9	5.426	A
D - Broadland Northway (W)	807	202	616	2483	0.325	805	576	0.0	0.5	2.215	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 - Fir Covert Road (N)	270	67	1265	908	0.297	270	162	0.4	0.4	5.642	A
B - Broadland Northway (E)	828	207	283	2740	0.302	828	1252	0.4	0.4	1.918	A
C - Fir Covert Road (S)	615	154	582	1274	0.483	615	529	0.9	0.9	5.491	A
D - Broadland Northway (W)	807	202	620	2481	0.325	807	577	0.5	0.5	2.223	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 - Fir Covert Road (N)	270	67	1265	908	0.297	270	162	0.4	0.4	5.642	A
B - Broadland Northway (E)	828	207	283	2740	0.302	828	1252	0.4	0.4	1.918	A
C - Fir Covert Road (S)	615	154	582	1274	0.483	615	529	0.9	0.9	5.491	A
D - Broadland Northway (W)	807	202	620	2481	0.325	807	577	0.5	0.5	2.223	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 - Fir Covert Road (N)	270	67	1265	908	0.297	270	162	0.4	0.4	5.642	A
B - Broadland Northway (E)	828	207	283	2740	0.302	828	1252	0.4	0.4	1.918	A
C - Fir Covert Road (S)	615	154	582	1274	0.483	615	529	0.9	0.9	5.491	A
D - Broadland Northway (W)	807	202	620	2481	0.325	807	577	0.5	0.5	2.223	A

2039DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	3.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2039DM	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	151	100.000
B - Broadland Northway (E)		FLAT	✓	1161	100.000
C - Fir Covert Road (S)		FLAT	✓	588	100.000
D - Broadland Northway (W)		FLAT	✓	583	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	34	105	11
B - Broadland Northway (E)	31	0	456	674
C - Fir Covert Road (S)	130	410	0	48
D - Broadland Northway (W)	2	497	63	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.23	0.70
B - Broadland Northway (E)	0.03	0.00	0.39
C - Fir Covert Road (S)	0.22	0.70	0.00
D - Broadland Northway (W)	0.00	0.88	0.11

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	0
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	0	1	0	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.002
C - Fir Covert Road (S)	1.000	1.002	1.000
D - Broadland Northway (W)	1.000	1.008	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	151	151
	17:00-17:15	151	151
	17:15-17:30	151	151
	17:30-17:45	151	151
B - Broadland Northway (E)	16:45-17:00	1161	1175
	17:00-17:15	1161	1175
	17:15-17:30	1161	1175
	17:30-17:45	1161	1175
C - Fir Covert Road (S)	16:45-17:00	588	589
	17:00-17:15	588	589
	17:15-17:30	588	589
	17:30-17:45	588	589
D - Broadland Northway (W)	16:45-17:00	563	567
	17:00-17:15	563	567
	17:15-17:30	563	567
	17:30-17:45	563	567

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 - Fir Covert Road (N)	0.15	4.11	0.2	A	151	151
B - Broadland Northway (E)	0.42	2.24	0.7	A	1175	1175
C - Fir Covert Road (S)	0.49	5.78	0.9	A	589	589
D - Broadland Northway (W)	0.23	1.86	0.3	A	567	567

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 - Fir Covert Road (N)	151	38	972	1028	0.147	150	162	0.0	0.2	4.100	A
B - Broadland Northway (E)	1175	294	179	2805	0.419	1172	943	0.0	0.7	2.228	A
C - Fir Covert Road (S)	589	147	728	1213	0.486	585	624	0.0	0.9	5.712	A
D - Broadland Northway (W)	567	142	568	2512	0.226	565	745	0.0	0.3	1.862	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 - Fir Covert Road (N)	151	38	975	1027	0.147	151	163	0.2	0.2	4.109	A
B - Broadland Northway (E)	1175	294	180	2805	0.419	1175	946	0.7	0.7	2.235	A
C - Fir Covert Road (S)	589	147	730	1212	0.486	589	625	0.9	0.9	5.784	A
D - Broadland Northway (W)	567	142	572	2510	0.226	567	747	0.3	0.3	1.864	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 - Fir Covert Road (N)	151	38	975	1027	0.147	151	163	0.2	0.2	4.109	A
B - Broadland Northway (E)	1175	294	180	2805	0.419	1175	946	0.7	0.7	2.235	A
C - Fir Covert Road (S)	589	147	730	1212	0.486	589	625	0.9	0.9	5.784	A
D - Broadland Northway (W)	567	142	572	2510	0.226	567	747	0.3	0.3	1.864	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 - Fir Covert Road (N)	151	38	975	1027	0.147	151	163	0.2	0.2	4.109	A
B - Broadland Northway (E)	1175	294	180	2805	0.419	1175	946	0.7	0.7	2.235	A
C - Fir Covert Road (S)	589	147	730	1212	0.486	589	625	0.9	0.9	5.784	A
D - Broadland Northway (W)	567	142	572	2510	0.226	567	747	0.3	0.3	1.864	A

2039DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	6.41	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.41	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2039DS	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	487	100.000
B - Broadland Northway (E)		FLAT	✓	1101	100.000
C - Fir Covert Road (S)		FLAT	✓	610	100.000
D - Broadland Northway (W)		FLAT	✓	1638	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	40	125	322
B - Broadland Northway (E)	47	0	244	810
C - Fir Covert Road (S)	68	308	0	234
D - Broadland Northway (W)	150	1261	227	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.08	0.26
B - Broadland Northway (E)	0.04	0.00	0.22
C - Fir Covert Road (S)	0.11	0.51	0.00
D - Broadland Northway (W)	0.09	0.77	0.14

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	1
B - Broadland Northway (E)	1	0	0	4
C - Fir Covert Road (S)	0	1	0	0
D - Broadland Northway (W)	2	3	2	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.008	1.000	1.001
C - Fir Covert Road (S)	1.000	1.008	1.000
D - Broadland Northway (W)	1.019	1.028	1.017

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	487	490
	07:30-07:45	487	490
	07:45-08:00	487	490
	08:00-08:15	487	490
B - Broadland Northway (E)	07:15-07:30	1101	1132
	07:30-07:45	1101	1132
	07:45-08:00	1101	1132
	08:00-08:15	1101	1132
C - Fir Covert Road (S)	07:15-07:30	610	612
	07:30-07:45	610	612
	07:45-08:00	610	612
	08:00-08:15	610	612
D - Broadland Northway (W)	07:15-07:30	1638	1680
	07:30-07:45	1638	1680
	07:45-08:00	1638	1680
	08:00-08:15	1638	1680

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 - Fir Covert Road (N)	0.73	19.78	2.6	C	490	490
B - Broadland Northway (E)	0.45	2.73	0.9	A	1132	1132
C - Fir Covert Road (S)	0.61	9.10	1.5	A	612	612
D - Broadland Northway (W)	0.65	4.01	1.9	A	1680	1680

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 - Fir Covert Road (N)	490	123	1828	677	0.724	480	287	0.0	2.5	17.657	C
B - Broadland Northway (E)	1132	283	671	2495	0.454	1129	1637	0.0	0.8	2.701	A
C - Fir Covert Road (S)	612	153	1203	1013	0.604	606	597	0.0	1.5	8.758	A
D - Broadland Northway (W)	1680	420	422	2602	0.646	1672	1387	0.0	1.8	3.943	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 - Fir Covert Road (N)	490	123	1837	673	0.729	490	269	2.5	2.6	19.652	C
B - Broadland Northway (E)	1132	283	681	2489	0.455	1132	1646	0.8	0.9	2.726	A
C - Fir Covert Road (S)	612	153	1212	1009	0.607	612	601	1.5	1.5	9.089	A
D - Broadland Northway (W)	1680	420	426	2600	0.646	1680	1398	1.8	1.9	4.014	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 - Fir Covert Road (N)	490	123	1837	673	0.729	490	269	2.6	2.6	19.746	C
B - Broadland Northway (E)	1132	283	681	2489	0.455	1132	1646	0.9	0.9	2.727	A
C - Fir Covert Road (S)	612	153	1213	1009	0.607	612	601	1.5	1.5	9.096	A
D - Broadland Northway (W)	1680	420	426	2600	0.646	1680	1399	1.9	1.9	4.014	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 - Fir Covert Road (N)	490	123	1837	673	0.729	490	269	2.6	2.6	19.776	C
B - Broadland Northway (E)	1132	283	681	2489	0.455	1132	1646	0.9	0.9	2.727	A
C - Fir Covert Road (S)	612	153	1213	1009	0.607	612	601	1.5	1.5	9.099	A
D - Broadland Northway (W)	1680	420	426	2600	0.646	1680	1399	1.9	1.9	4.014	A

2039DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	4.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.61	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2039DS	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	283	100.000
B - Broadland Northway (E)		FLAT	✓	1234	100.000
C - Fir Covert Road (S)		FLAT	✓	628	100.000
D - Broadland Northway (W)		FLAT	✓	1595	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	35	85	163
B - Broadland Northway (E)	25	0	339	870
C - Fir Covert Road (S)	105	364	0	180
D - Broadland Northway (W)	295	917	384	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.12	0.30
B - Broadland Northway (E)	0.02	0.00	0.27
C - Fir Covert Road (S)	0.17	0.58	0.00
D - Broadland Northway (W)	0.18	0.57	0.24

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	3
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	1	1	0	0

Average PCU Per Veh

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	1.000	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.003	1.000
C - Fir Covert Road (S)	1.000	1.003	1.000	1.000
D - Broadland Northway (W)	1.011	1.015	1.000	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	283	288
	17:00-17:15	283	288
	17:15-17:30	283	288
	17:30-17:45	283	288
B - Broadland Northway (E)	16:45-17:00	1234	1257
	17:00-17:15	1234	1257
	17:15-17:30	1234	1257
	17:30-17:45	1234	1257
C - Fir Covert Road (S)	16:45-17:00	628	629
	17:00-17:15	628	629
	17:15-17:30	628	629
	17:30-17:45	628	629
D - Broadland Northway (W)	16:45-17:00	1595	1612
	17:00-17:15	1595	1612
	17:15-17:30	1595	1612
	17:30-17:45	1595	1612

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 - Fir Covert Road (N)	0.39	8.15	0.7	A	288	288
B - Broadland Northway (E)	0.50	2.91	1.0	A	1257	1257
C - Fir Covert Road (S)	0.59	8.32	1.4	A	629	629
D - Broadland Northway (W)	0.63	3.85	1.7	A	1612	1612

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 - Fir Covert Road (N)	288	72	1670	741	0.389	288	426	0.0	0.6	7.998	A
B - Broadland Northway (E)	1257	314	633	2519	0.499	1253	1322	0.0	1.0	2.883	A
C - Fir Covert Road (S)	629	157	1081	1084	0.591	624	805	0.0	1.4	8.082	A
D - Broadland Northway (W)	1612	403	491	2580	0.630	1606	1214	0.0	1.7	3.787	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 - Fir Covert Road (N)	288	72	1679	738	0.391	288	428	0.6	0.6	8.147	A
B - Broadland Northway (E)	1257	314	637	2517	0.499	1257	1330	1.0	1.0	2.907	A
C - Fir Covert Road (S)	629	157	1085	1062	0.592	629	809	1.4	1.4	8.319	A
D - Broadland Northway (W)	1612	403	495	2557	0.630	1612	1220	1.7	1.7	3.849	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 - Fir Covert Road (N)	288	72	1679	738	0.391	288	428	0.6	0.6	8.150	A
B - Broadland Northway (E)	1257	314	637	2517	0.499	1257	1330	1.0	1.0	2.907	A
C - Fir Covert Road (S)	629	157	1085	1062	0.592	629	809	1.4	1.4	8.322	A
D - Broadland Northway (W)	1612	403	495	2557	0.630	1612	1220	1.7	1.7	3.849	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 - Fir Covert Road (N)	288	72	1679	738	0.391	288	428	0.6	0.7	8.150	A
B - Broadland Northway (E)	1257	314	637	2517	0.499	1257	1330	1.0	1.0	2.907	A
C - Fir Covert Road (S)	629	157	1085	1062	0.592	629	809	1.4	1.4	8.322	A
D - Broadland Northway (W)	1612	403	495	2557	0.630	1612	1220	1.7	1.7	3.849	A

2039DS_Mitigation, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	7.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.26	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D11	2039DS_Mitigation	AM	FLAT	07:15	08:15	60	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 - Fir Covert Road (N)		FLAT	✓	463	100.000
B - Broadland Northway (E)		FLAT	✓	1184	100.000
C - Fir Covert Road (S)		FLAT	✓	628	100.000
D - Broadland Northway (W)		FLAT	✓	1686	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	42	109	312
B - Broadland Northway (E)	49	0	256	879
C - Fir Covert Road (S)	52	341	0	235
D - Broadland Northway (W)	69	1371	226	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.09	0.24
B - Broadland Northway (E)	0.04	0.00	0.22
C - Fir Covert Road (S)	0.08	0.54	0.00
D - Broadland Northway (W)	0.04	0.82	0.14

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	1
B - Broadland Northway (E)	1	0	0	4
C - Fir Covert Road (S)	0	1	0	0
D - Broadland Northway (W)	3	4	2	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.007	1.000	1.001
C - Fir Covert Road (S)	1.000	1.005	1.000
D - Broadland Northway (W)	1.026	1.035	1.017

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	07:15-07:30	483	488
	07:30-07:45	483	488
	07:45-08:00	483	488
	08:00-08:15	483	488
B - Broadland Northway (E)	07:15-07:30	1184	1216
	07:30-07:45	1184	1216
	07:45-08:00	1184	1216
	08:00-08:15	1184	1216
C - Fir Covert Road (S)	07:15-07:30	628	630
	07:30-07:45	628	630
	07:45-08:00	628	630
	08:00-08:15	628	630
D - Broadland Northway (W)	07:15-07:30	1666	1720
	07:30-07:45	1666	1720
	07:45-08:00	1666	1720
	08:00-08:15	1666	1720

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 - Fir Covert Road (N)	0.77	25.58	3.2	D	488	488
B - Broadland Northway (E)	0.49	2.87	1.0	A	1216	1216
C - Fir Covert Road (S)	0.64	10.25	1.8	B	630	630
D - Broadland Northway (W)	0.66	4.28	2.0	A	1720	1720

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 - Fir Covert Road (N)	488	117	1981	614	0.762	456	171	0.0	2.9	21.711	C
B - Broadland Northway (E)	1216	304	645	2512	0.484	1212	1792	0.0	1.0	2.835	A
C - Fir Covert Road (S)	630	157	1265	967	0.638	623	592	0.0	1.7	9.756	A
D - Broadland Northway (W)	1720	430	439	2591	0.664	1712	1449	0.0	2.0	4.191	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 - Fir Covert Road (N)	468	117	1992	609	0.768	467	172	2.9	3.1	25.247	D
B - Broadland Northway (E)	1216	304	656	2505	0.485	1216	1804	1.0	1.0	2.865	A
C - Fir Covert Road (S)	630	157	1276	982	0.641	630	596	1.7	1.8	10.228	B
D - Broadland Northway (W)	1720	430	444	2589	0.665	1720	1462	2.0	2.0	4.279	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 - Fir Covert Road (N)	468	117	1992	609	0.768	468	172	3.1	3.2	25.497	D
B - Broadland Northway (E)	1216	304	656	2505	0.485	1216	1804	1.0	1.0	2.866	A
C - Fir Covert Road (S)	630	157	1276	982	0.641	630	596	1.8	1.8	10.243	B
D - Broadland Northway (W)	1720	430	444	2589	0.665	1720	1462	2.0	2.0	4.279	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 - Fir Covert Road (N)	468	117	1992	609	0.768	468	172	3.2	3.2	25.579	D
B - Broadland Northway (E)	1216	304	656	2505	0.485	1216	1804	1.0	1.0	2.866	A
C - Fir Covert Road (S)	630	157	1276	982	0.641	630	596	1.8	1.8	10.247	B
D - Broadland Northway (W)	1720	430	444	2589	0.665	1720	1462	2.0	2.0	4.279	A

2039DS_Mitigation, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J17	Broadland Northway/ Fir Covert Road	Standard Roundabout		A, B, C, D	4.60	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	2039DS_Mitigation	PM	FLAT	16:45	17:45	60	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 - Fir Covert Road (N)		FLAT	✓	197	100.000
B - Broadland Northway (E)		FLAT	✓	1319	100.000
C - Fir Covert Road (S)		FLAT	✓	633	100.000
D - Broadland Northway (W)		FLAT	✓	1639	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	36	63	97
B - Broadland Northway (E)	25	0	354	940
C - Fir Covert Road (S)	69	404	0	180
D - Broadland Northway (W)	194	1080	385	0

Proportions

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	0.00	0.18	0.32
B - Broadland Northway (E)	0.02	0.00	0.27
C - Fir Covert Road (S)	0.11	0.64	0.00
D - Broadland Northway (W)	0.12	0.65	0.23

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)	D - Broadland Northway (W)
A - Fir Covert Road (N)	0	0	0	4
B - Broadland Northway (E)	0	0	0	2
C - Fir Covert Road (S)	0	0	0	0
D - Broadland Northway (W)	1	1	0	0

Average PCU Per Veh

From	To		
	A - Fir Covert Road (N)	B - Broadland Northway (E)	C - Fir Covert Road (S)
A - Fir Covert Road (N)	1.000	1.000	1.000
B - Broadland Northway (E)	1.000	1.000	1.003
C - Fir Covert Road (S)	1.000	1.002	1.000
D - Broadland Northway (W)	1.007	1.015	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Fir Covert Road (N)	16:45-17:00	197	200
	17:00-17:15	197	200
	17:15-17:30	197	200
	17:30-17:45	197	200
B - Broadland Northway (E)	16:45-17:00	1319	1342
	17:00-17:15	1319	1342
	17:15-17:30	1319	1342
	17:30-17:45	1319	1342
C - Fir Covert Road (S)	16:45-17:00	633	634
	17:00-17:15	633	634
	17:15-17:30	633	634
	17:30-17:45	633	634
D - Broadland Northway (W)	16:45-17:00	1639	1656
	17:00-17:15	1639	1656
	17:15-17:30	1639	1656
	17:30-17:45	1639	1656

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 - Fir Covert Road (N)	0.30	7.96	0.4	A	200	200
B - Broadland Northway (E)	0.52	2.97	1.1	A	1342	1342
C - Fir Covert Road (S)	0.60	8.44	1.5	A	634	634
D - Broadland Northway (W)	0.65	4.05	1.9	A	1656	1656

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 - Fir Covert Road (N)	200	50	1856	665	0.301	199	289	0.0	0.4	7.830	A
B - Broadland Northway (E)	1342	335	546	2575	0.521	1337	1509	0.0	1.1	2.947	A
C - Fir Covert Road (S)	634	159	1084	1063	0.597	629	799	0.0	1.4	8.198	A
D - Broadland Northway (W)	1656	414	496	2557	0.648	1649	1217	0.0	1.8	3.975	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 - Fir Covert Road (N)	200	50	1888	881	0.303	200	290	0.4	0.4	7.957	A
B - Broadland Northway (E)	1342	335	549	2573	0.521	1342	1518	1.1	1.1	2.973	A
C - Fir Covert Road (S)	834	159	1088	1081	0.598	834	802	1.4	1.5	8.438	A
D - Broadland Northway (W)	1656	414	500	2554	0.648	1656	1222	1.8	1.9	4.050	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 - Fir Covert Road (N)	200	50	1888	881	0.303	200	290	0.4	0.4	7.958	A
B - Broadland Northway (E)	1342	335	549	2573	0.522	1342	1518	1.1	1.1	2.973	A
C - Fir Covert Road (S)	834	159	1088	1081	0.598	834	802	1.5	1.5	8.441	A
D - Broadland Northway (W)	1656	414	500	2554	0.648	1656	1222	1.9	1.9	4.050	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 - Fir Covert Road (N)	200	50	1888	881	0.303	200	290	0.4	0.4	7.958	A
B - Broadland Northway (E)	1342	335	549	2573	0.522	1342	1518	1.1	1.1	2.973	A
C - Fir Covert Road (S)	834	159	1088	1081	0.598	834	802	1.5	1.5	8.441	A
D - Broadland Northway (W)	1656	414	500	2554	0.648	1656	1222	1.9	1.9	4.050	A

