Junctions 11

ARCADY 11 - Roundabout Module

Version: 11.1.0.2307

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Filename: Import of J15_Rochester Rd_Forstal Rd_High St.j11
Path: \\?\UNC\uk-lon-fas02\projects\UNIF\Projects\BESP0016 Kent Countywide Model\KCC Model Custodian Framework\Call-off Tasks\Tonbridge & Malling and Sevenoaks LP\15 Local Modelling\July 2025 Modelling\J15_Rochester Rd_Forstal Rd_High St
Report generation date: 24.07.2025 15:05:10

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	Existing Layout - 2019 - Base											
1 - Rochester Rd	D1	3,0	22,83	0,75	C	10 %	D2	1,2	11,73	0,55	B	35 %
2 - Forstal Rd		0,8	6,62	0,43	A	[1 - Rochester Rd]		1,7	9,86	0,63	A	[2 - Forstal Rd]
3 - High St		0,3	5,84	0,20	A			0,1	5,64	0,12	A	
	Existing Layout - 2040 - Future Base											
1 - Rochester Rd	D3	4,0	28,71	0,81	D	4 %	D4	1,5	13,31	0,60	B	24 %
2 - Forstal Rd		1,0	7,36	0,49	A	[1 - Rochester Rd]		2,1	11,55	0,68	B	[2 - Forstal Rd]
3 - High St		0,3	6,19	0,21	A			0,2	6,02	0,14	A	
	Existing Layout - 2040 - LP test 2											
1 - Rochester Rd	D5	2,4	25,84	0,71	D	11 %	D6	1,1	13,29	0,52	B	-19 %
2 - Forstal Rd		3,1	15,36	0,76	C	[2 - Forstal Rd]		35,7	119,62	1,04	F	[2 - Forstal Rd]
3 - High St		2,3	18,63	0,71	C			0,7	8,52	0,40	A	
	Existing Layout - 2040 - T&M LP_High											
1 - Rochester Rd	D7	3,5	34,83	0,78	D	-21 %	D8	1,7	17,11	0,63	C	-5 %
2 - Forstal Rd		1,7	10,12	0,63	B	[3 - High St]		7,1	31,05	0,89	D	[2 - Forstal Rd]
3 - High St		63,5	263,08	1,15	F			2,7	19,69	0,73	C	
	Existing Layout - 2042 - Forecast Baseline											
1 - Rochester Rd	D9	9,2	65,20	0,93	F	-7 %	D10	1,7	15,23	0,63	C	20 %
2 - Forstal Rd		0,9	7,20	0,47	A	[1 - Rochester Rd]		2,3	12,46	0,70	B	[2 - Forstal Rd]
3 - High St		1,8	14,18	0,65	B			0,7	9,24	0,39	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. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Rochester Rd
Location	
Site number	
Date	09.07.2024
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	JEGINTL\skonig
Description	

Units

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

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 9	5,75					✓	RFC/DOS	0,85	36,00	20,00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019	Base	AM	ONE HOUR	07:30	09:00	15	✓
D2	2019	Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2040	Future Base	AM	ONE HOUR	07:30	09:00	15	✓
D4	2040	Future Base	PM	ONE HOUR	16:30	18:00	15	✓
D5	2040	LP test 2	AM	ONE HOUR	07:30	09:00	15	✓
D6	2040	LP test 2	PM	ONE HOUR	16:30	18:00	15	✓
D7	2040	T&M LP_High	AM	ONE HOUR	07:30	09:00	15	✓
D8	2040	T&M LP_High	PM	ONE HOUR	16:30	18:00	15	✓
D9	2042	Forecast Baseline	AM	ONE HOUR	07:30	09:00	15	✓
D10	2042	Forecast Baseline	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100,000	100,000

Existing Layout - D1 - 2019 | Base | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 85% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	13,94	B

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		10	1 - Rochester Rd	13,94	B

Arms

Arms

Arm	Name	Description
1	Rochester Rd	
2	Forstal Rd	
3	High St	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Rochester Rd	3,35	3,35	4,59	0,4	12,94	8,88	0,0	
2 - Forstal Rd	2,60	2,60	3,20	5,7	18,74	17,70	0,0	
3 - High St	3,85	3,85	4,30	1,3	13,84	12,15	0,0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Rochester Rd	0,609	744
2 - Forstal Rd	0,688	983
3 - High St	0,636	967

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019	Base	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	445	100,000
2 - Forstal Rd		ONE HOUR	✓	384	100,000
3 - High St		ONE HOUR	✓	141	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	445	0
	2 - Forstal Rd	279	0	105
	3 - High St	0	141	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	2	0
	2 - Forstal Rd	4	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,75	22,83	3,0	C	408	613
2 - Forstal Rd	0,43	6,62	0,8	A	352	529
3 - High St	0,20	5,84	0,3	A	129	194

Main Results for each time segment

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
1 - Rochester Rd	335	84	106	679	0,493	331	209	0,0	1,0	10,436	B
2 - Forstal Rd	289	72	0	983	0,294	287	437	0,0	0,4	5,315	A
3 - High St	106	27	209	834	0,127	106	79	0,0	0,1	4,932	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
1 - Rochester Rd	400	100	127	666	0,600	398	250	1,0	1,5	13,568	B
2 - Forstal Rd	345	86	0	983	0,351	345	525	0,4	0,6	5,801	A
3 - High St	127	32	250	808	0,157	127	94	0,1	0,2	5,282	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
1 - Rochester Rd	490	122	155	649	0,755	484	307	1,5	2,9	21,556	C
2 - Forstal Rd	423	106	0	983	0,430	422	639	0,6	0,8	6,586	A
3 - High St	155	39	307	772	0,201	155	115	0,2	0,2	5,830	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
1 - Rochester Rd	490	122	155	649	0,755	489	307	2,9	3,0	22,826	C
2 - Forstal Rd	423	106	0	983	0,430	423	645	0,8	0,8	6,615	A
3 - High St	155	39	307	772	0,201	155	116	0,2	0,3	5,838	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
1 - Rochester Rd	400	100	127	666	0,600	406	251	3,0	1,6	14,378	B
2 - Forstal Rd	345	86	0	983	0,351	346	533	0,8	0,6	5,828	A
3 - High St	127	32	251	807	0,157	127	95	0,3	0,2	5,293	A

08:45 - 09:00

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
1 - Rochester Rd	335	84	106	679	0,494	337	210	1,6	1,0	10,824	B
2 - Forstal Rd	289	72	0	983	0,294	290	444	0,6	0,4	5,350	A
3 - High St	106	27	210	833	0,127	106	79	0,2	0,1	4,952	A

Existing Layout - D2 - 2019 | Base | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 91% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	10,18	B

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		35	2 - Forstal Rd	10,18	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2019	Base	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	346	100,000
2 - Forstal Rd		ONE HOUR	✓	559	100,000
3 - High St		ONE HOUR	✓	79	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	346	0
	2 - Forstal Rd	345	0	214
	3 - High St	0	79	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	1	0
	2 - Forstal Rd	1	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,55	11,73	1,2	B	317	476
2 - Forstal Rd	0,63	9,86	1,7	A	513	769
3 - High St	0,12	5,64	0,1	A	72	109

Main Results for each time segment

16:30 - 16:45

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
1 - Rochester Rd	260	65	59	708	0,368	258	258	0,0	0,6	8,051	A
2 - Forstal Rd	421	105	0	983	0,428	418	317	0,0	0,7	6,382	A
3 - High St	59	15	258	803	0,074	59	160	0,0	0,1	4,836	A

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
1 - Rochester Rd	311	78	71	700	0,444	310	309	0,6	0,8	9,298	A
2 - Forstal Rd	503	126	0	983	0,511	501	381	0,7	1,0	7,509	A
3 - High St	71	18	309	770	0,092	71	192	0,1	0,1	5,147	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
1 - Rochester Rd	381	95	87	691	0,552	379	378	0,8	1,2	11,612	B
2 - Forstal Rd	615	154	0	983	0,626	613	466	1,0	1,6	9,738	A
3 - High St	87	22	378	726	0,120	87	235	0,1	0,1	5,626	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
1 - Rochester Rd	381	95	87	691	0,552	381	380	1,2	1,2	11,732	B
2 - Forstal Rd	615	154	0	983	0,626	615	468	1,6	1,7	9,860	A
3 - High St	87	22	380	726	0,120	87	236	0,1	0,1	5,637	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
1 - Rochester Rd	311	78	71	700	0,444	313	312	1,2	0,8	9,421	A
2 - Forstal Rd	503	126	0	983	0,511	505	384	1,7	1,1	7,623	A
3 - High St	71	18	312	769	0,092	71	193	0,1	0,1	5,159	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
1 - Rochester Rd	260	65	60	707	0,368	261	260	0,8	0,6	8,171	A
2 - Forstal Rd	421	105	0	983	0,428	422	321	1,1	0,8	6,479	A
3 - High St	59	15	260	801	0,074	60	162	0,1	0,1	4,852	A

Existing Layout - D3 - 2040 | Future Base | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 87% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	16,92	C

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		4	1 - Rochester Rd	16,92	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2040	Future Base	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	480	100,000
2 - Forstal Rd		ONE HOUR	✓	438	100,000
3 - High St		ONE HOUR	✓	137	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	480	0
	2 - Forstal Rd	335	0	103
	3 - High St	2	135	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	2	0
	2 - Forstal Rd	3	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,81	28,71	4,0	D	440	661
2 - Forstal Rd	0,49	7,36	1,0	A	402	603
3 - High St	0,21	6,19	0,3	A	126	189

Main Results for each time segment

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
1 - Rochester Rd	361	90	101	682	0,530	357	252	0,0	1,1	11,148	B
2 - Forstal Rd	330	82	0	983	0,336	328	458	0,0	0,5	5,606	A
3 - High St	103	26	251	808	0,128	103	77	0,0	0,1	5,100	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
1 - Rochester Rd	432	108	121	670	0,644	429	302	1,1	1,8	15,075	C
2 - Forstal Rd	394	98	0	983	0,401	393	550	0,5	0,7	6,240	A
3 - High St	123	31	301	776	0,159	123	92	0,1	0,2	5,512	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
1 - Rochester Rd	528	132	148	653	0,809	520	370	1,8	3,8	26,157	D
2 - Forstal Rd	482	121	0	983	0,491	481	669	0,7	1,0	7,324	A
3 - High St	151	38	368	733	0,206	151	113	0,2	0,3	6,177	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
1 - Rochester Rd	528	132	149	653	0,809	528	371	3,8	4,0	28,713	D
2 - Forstal Rd	482	121	0	983	0,491	482	676	1,0	1,0	7,359	A
3 - High St	151	38	369	733	0,206	151	113	0,3	0,3	6,188	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
1 - Rochester Rd	432	108	122	670	0,645	440	304	4,0	1,9	16,518	C
2 - Forstal Rd	394	98	0	983	0,401	395	561	1,0	0,7	6,277	A
3 - High St	123	31	302	775	0,159	123	93	0,3	0,2	5,528	A

08:45 - 09:00

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
1 - Rochester Rd	361	90	102	682	0,530	364	254	1,9	1,2	11,683	B
2 - Forstal Rd	330	82	0	983	0,336	330	466	0,7	0,5	5,654	A
3 - High St	103	26	253	806	0,128	103	78	0,2	0,1	5,120	A

Existing Layout - D4 - 2040 | Future Base | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 91% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	11,71	B

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		24	2 - Forstal Rd	11,71	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2040	Future Base	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	374	100,000
2 - Forstal Rd		ONE HOUR	✓	608	100,000
3 - High St		ONE HOUR	✓	89	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	374	0
	2 - Forstal Rd	388	0	220
	3 - High St	1	88	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	1	0
	2 - Forstal Rd	1	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,60	13,31	1,5	B	343	515
2 - Forstal Rd	0,68	11,55	2,1	B	558	837
3 - High St	0,14	6,02	0,2	A	82	123

Main Results for each time segment

16:30 - 16:45

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
1 - Rochester Rd	282	70	66	703	0,400	279	291	0,0	0,7	8,513	A
2 - Forstal Rd	458	114	0	983	0,466	454	345	0,0	0,9	6,816	A
3 - High St	67	17	290	783	0,086	67	164	0,0	0,1	5,025	A

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
1 - Rochester Rd	336	84	79	695	0,483	335	349	0,7	0,9	10,061	B
2 - Forstal Rd	547	137	0	983	0,556	545	414	0,9	1,2	8,253	A
3 - High St	80	20	348	746	0,107	80	197	0,1	0,1	5,405	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
1 - Rochester Rd	412	103	97	685	0,601	410	426	0,9	1,5	13,109	B
2 - Forstal Rd	669	167	0	983	0,681	666	506	1,2	2,1	11,326	B
3 - High St	98	24	425	697	0,141	98	241	0,1	0,2	6,009	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
1 - Rochester Rd	412	103	97	685	0,602	412	428	1,5	1,5	13,309	B
2 - Forstal Rd	669	167	0	983	0,681	669	509	2,1	2,1	11,550	B
3 - High St	98	24	427	695	0,141	98	242	0,2	0,2	6,024	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
1 - Rochester Rd	336	84	79	695	0,484	338	352	1,5	1,0	10,248	B
2 - Forstal Rd	547	137	0	983	0,556	550	418	2,1	1,3	8,437	A
3 - High St	80	20	351	744	0,108	80	199	0,2	0,1	5,426	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
1 - Rochester Rd	282	70	66	703	0,400	283	294	1,0	0,7	8,670	A
2 - Forstal Rd	458	114	0	983	0,466	459	349	1,3	0,9	6,947	A
3 - High St	67	17	293	781	0,086	67	166	0,1	0,1	5,045	A

Existing Layout - D5 - 2040 | LP test 2 | 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
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	18,66	C

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		11	2 - Forstal Rd	18,66	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2040	LP test 2	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	314	100,000
2 - Forstal Rd		ONE HOUR	✓	678	100,000
3 - High St		ONE HOUR	✓	421	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	314	0
	2 - Forstal Rd	445	0	233
	3 - High St	39	382	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	3	0
	2 - Forstal Rd	2	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,71	25,84	2,4	D	288	432
2 - Forstal Rd	0,76	15,36	3,1	C	622	933
3 - High St	0,71	18,63	2,3	C	386	579

Main Results for each time segment

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
1 - Rochester Rd	236	59	285	570	0,415	234	361	0,0	0,7	10,931	B
2 - Forstal Rd	510	128	0	983	0,520	506	519	0,0	1,1	7,589	A
3 - High St	317	79	332	756	0,419	314	174	0,0	0,7	8,099	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
1 - Rochester Rd	282	71	342	535	0,527	281	434	0,7	1,1	14,470	B
2 - Forstal Rd	610	152	0	983	0,620	607	623	1,1	1,6	9,663	A
3 - High St	378	95	399	714	0,530	377	209	0,7	1,1	10,642	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
1 - Rochester Rd	346	86	416	490	0,706	341	529	1,1	2,3	24,169	C
2 - Forstal Rd	746	187	0	983	0,760	741	758	1,6	3,0	14,751	B
3 - High St	464	116	486	658	0,705	459	255	1,1	2,2	17,707	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
1 - Rochester Rd	346	86	420	488	0,709	345	533	2,3	2,4	25,839	D
2 - Forstal Rd	746	187	0	983	0,760	746	766	3,0	3,1	15,362	C
3 - High St	464	116	490	656	0,707	463	256	2,2	2,3	18,627	C

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
1 - Rochester Rd	282	71	348	532	0,531	287	439	2,4	1,2	15,419	C
2 - Forstal Rd	610	152	0	983	0,620	615	635	3,1	1,7	10,070	B
3 - High St	378	95	404	710	0,533	383	211	2,3	1,2	11,150	B

08:45 - 09:00

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
1 - Rochester Rd	236	59	289	567	0,417	238	366	1,2	0,8	11,323	B
2 - Forstal Rd	510	128	0	983	0,520	513	527	1,7	1,1	7,802	A
3 - High St	317	79	337	753	0,421	319	176	1,2	0,7	8,321	A

Existing Layout - D6 - 2040 | LP test 2 | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	79,99	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-19	2 - Forstal Rd	79,99	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2040	LP test 2	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	273	100,000
2 - Forstal Rd		ONE HOUR	✓	930	100,000
3 - High St		ONE HOUR	✓	261	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	273	0
	2 - Forstal Rd	387	0	543
	3 - High St	8	253	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	1	0
	2 - Forstal Rd	0	0	0
	3 - High St	0	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)
1 - Rochester Rd	0,52	13,29	1,1	B	251	376
2 - Forstal Rd	1,04	119,62	35,7	F	853	1280
3 - High St	0,40	8,52	0,7	A	239	359

Main Results for each time segment

16:30 - 16:45

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
1 - Rochester Rd	206	51	189	628	0,327	204	293	0,0	0,5	8,523	A
2 - Forstal Rd	700	175	0	983	0,713	691	393	0,0	2,4	11,979	B
3 - High St	196	49	287	784	0,251	195	403	0,0	0,3	6,097	A

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
1 - Rochester Rd	245	61	227	605	0,405	245	351	0,5	0,7	10,058	B
2 - Forstal Rd	836	209	0	983	0,851	826	472	2,4	5,0	21,597	C
3 - High St	235	59	344	749	0,313	234	482	0,3	0,5	6,992	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
1 - Rochester Rd	301	75	278	574	0,523	299	405	0,7	1,1	13,120	B
2 - Forstal Rd	1024	256	0	983	1,042	953	577	5,0	22,7	65,831	F
3 - High St	287	72	397	715	0,402	287	556	0,5	0,7	8,387	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
1 - Rochester Rd	301	75	279	574	0,524	301	413	1,1	1,1	13,288	B
2 - Forstal Rd	1024	256	0	983	1,042	972	579	22,7	35,7	119,622	F
3 - High St	287	72	404	710	0,405	287	567	0,7	0,7	8,518	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
1 - Rochester Rd	245	61	228	605	0,406	247	401	1,1	0,7	10,209	B
2 - Forstal Rd	836	209	0	983	0,851	947	475	35,7	8,0	86,541	F
3 - High St	235	59	394	716	0,328	235	553	0,7	0,5	7,493	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
1 - Rochester Rd	206	51	191	627	0,328	206	306	0,7	0,5	8,655	A
2 - Forstal Rd	700	175	0	983	0,713	722	397	8,0	2,6	14,810	B
3 - High St	196	49	300	776	0,253	197	421	0,5	0,3	6,222	A

Existing Layout - D7 - 2040 | T&M LP_High | 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
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	129,06	F

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-21	3 - High St	129,06	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2040	T&M LP_High	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	351	100,000
2 - Forstal Rd		ONE HOUR	✓	558	100,000
3 - High St		ONE HOUR	✓	742	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	351	0
	2 - Forstal Rd	371	0	187
	3 - High St	314	428	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	9	0
	2 - Forstal Rd	5	0	1
	3 - High St	1	2	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)
1 - Rochester Rd	0,78	34,83	3,5	D	322	483
2 - Forstal Rd	0,63	10,12	1,7	B	512	768
3 - High St	1,15	263,08	63,5	F	681	1021

Main Results for each time segment

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
1 - Rochester Rd	264	66	317	551	0,480	260	510	0,0	1,0	13,349	B
2 - Forstal Rd	420	105	0	983	0,428	417	577	0,0	0,8	6,562	A
3 - High St	559	140	277	791	0,706	549	140	0,0	2,3	14,640	B

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
1 - Rochester Rd	316	79	376	514	0,614	313	609	1,0	1,6	19,216	C
2 - Forstal Rd	502	125	0	983	0,511	500	689	0,8	1,1	7,719	A
3 - High St	667	167	333	756	0,883	653	168	2,3	5,9	31,754	D

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
1 - Rochester Rd	386	97	403	498	0,775	380	702	1,6	3,3	31,433	D
2 - Forstal Rd	614	154	0	983	0,625	612	783	1,1	1,7	9,996	A
3 - High St	817	204	407	708	1,153	698	205	5,9	35,6	123,134	F

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
1 - Rochester Rd	386	97	407	496	0,780	385	707	3,3	3,5	34,834	D
2 - Forstal Rd	614	154	0	983	0,625	614	792	1,7	1,7	10,122	B
3 - High St	817	204	408	707	1,155	706	206	35,6	63,5	261,704	F

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
1 - Rochester Rd	316	79	428	483	0,653	321	649	3,5	2,2	24,977	C
2 - Forstal Rd	502	125	0	983	0,511	504	749	1,7	1,1	7,837	A
3 - High St	667	167	335	754	0,885	742	169	63,5	44,7	263,079	F

08:45 - 09:00

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
1 - Rochester Rd	264	66	419	489	0,541	268	587	2,2	1,3	18,029	C
2 - Forstal Rd	420	105	0	983	0,428	421	686	1,1	0,8	6,662	A
3 - High St	559	140	280	789	0,708	726	141	44,7	2,9	98,503	F

Existing Layout - D8 - 2040 | T&M LP_High | 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
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	24,86	C

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-5	2 - Forstal Rd	24,86	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2040	T&M LP_High	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	326	100,000
2 - Forstal Rd		ONE HOUR	✓	794	100,000
3 - High St		ONE HOUR	✓	461	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	326	0
	2 - Forstal Rd	395	0	399
	3 - High St	203	258	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	1	0
	2 - Forstal Rd	1	0	0
	3 - High St	2	1	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)
1 - Rochester Rd	0,63	17,11	1,7	C	299	449
2 - Forstal Rd	0,89	31,05	7,1	D	729	1093
3 - High St	0,73	19,69	2,7	C	423	635

Main Results for each time segment

16:30 - 16:45

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
1 - Rochester Rd	245	61	192	626	0,392	243	446	0,0	0,6	9,421	A
2 - Forstal Rd	598	149	0	983	0,608	592	435	0,0	1,5	9,121	A
3 - High St	347	87	294	780	0,445	344	297	0,0	0,8	8,315	A

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
1 - Rochester Rd	293	73	231	603	0,486	292	535	0,6	0,9	11,643	B
2 - Forstal Rd	714	178	0	983	0,726	710	523	1,5	2,5	13,059	B
3 - High St	414	104	353	743	0,558	413	357	0,8	1,2	11,006	B

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
1 - Rochester Rd	359	90	281	572	0,627	356	648	0,9	1,6	16,602	C
2 - Forstal Rd	874	219	0	983	0,890	859	637	2,5	6,4	26,327	D
3 - High St	508	127	427	695	0,730	502	431	1,2	2,6	18,424	C

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
1 - Rochester Rd	359	90	284	571	0,629	359	657	1,6	1,7	17,112	C
2 - Forstal Rd	874	219	0	983	0,890	872	643	6,4	7,1	31,046	D
3 - High St	508	127	434	691	0,734	507	438	2,6	2,7	19,693	C

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
1 - Rochester Rd	293	73	235	601	0,488	296	548	1,7	1,0	12,035	B
2 - Forstal Rd	714	178	0	983	0,726	731	531	7,1	2,8	15,244	C
3 - High St	414	104	364	736	0,563	420	367	2,7	1,3	11,739	B

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
1 - Rochester Rd	245	61	195	625	0,393	247	454	1,0	0,7	9,654	A
2 - Forstal Rd	598	149	0	983	0,608	603	442	2,8	1,6	9,639	A
3 - High St	347	87	300	776	0,447	349	303	1,3	0,8	8,584	A

Existing Layout - D9 - 2042 | Forecast Baseline | 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
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	30,83	D

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		-7	1 - Rochester Rd	30,83	D

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2042	Forecast Baseline	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	496	100,000
2 - Forstal Rd		ONE HOUR	✓	415	100,000
3 - High St		ONE HOUR	✓	435	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	496	0
	2 - Forstal Rd	328	0	87
	3 - High St	205	230	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	7	0
	2 - Forstal Rd	6	0	2
	3 - High St	1	3	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)
1 - Rochester Rd	0,93	65,20	9,2	F	455	683
2 - Forstal Rd	0,47	7,20	0,9	A	381	571
3 - High St	0,65	14,18	1,8	B	399	599

Main Results for each time segment

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
1 - Rochester Rd	373	93	172	639	0,584	368	398	0,0	1,4	13,916	B
2 - Forstal Rd	312	78	0	983	0,318	310	539	0,0	0,5	5,616	A
3 - High St	327	82	245	811	0,404	325	65	0,0	0,7	7,512	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
1 - Rochester Rd	446	111	206	618	0,721	441	478	1,4	2,6	21,256	C
2 - Forstal Rd	373	93	0	983	0,380	372	648	0,5	0,6	6,197	A
3 - High St	391	98	294	780	0,501	390	78	0,7	1,0	9,384	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
1 - Rochester Rd	546	137	252	590	0,925	526	584	2,6	7,6	48,703	E
2 - Forstal Rd	457	114	0	983	0,465	456	777	0,6	0,9	7,172	A
3 - High St	479	120	360	738	0,649	476	96	1,0	1,8	13,839	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
1 - Rochester Rd	546	137	253	589	0,927	540	587	7,6	9,2	65,201	F
2 - Forstal Rd	457	114	0	983	0,465	457	793	0,9	0,9	7,200	A
3 - High St	479	120	361	737	0,649	479	96	1,8	1,8	14,180	B

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
1 - Rochester Rd	446	111	208	617	0,723	471	481	9,2	3,0	29,798	D
2 - Forstal Rd	373	93	0	983	0,380	374	679	0,9	0,7	6,233	A
3 - High St	391	98	296	779	0,502	394	78	1,8	1,0	9,623	A

08:45 - 09:00

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
1 - Rochester Rd	373	93	174	638	0,586	379	402	3,0	1,6	15,231	C
2 - Forstal Rd	312	78	0	983	0,318	313	553	0,7	0,5	5,660	A
3 - High St	327	82	247	810	0,404	329	66	1,0	0,7	7,660	A

Existing Layout - D10 - 2042 | Forecast Baseline | 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
1	Rochester Rd_Forstal Rd	Mini-roundabout		1, 2, 3	12,69	B

Junction Network

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		20	2 - Forstal Rd	12,69	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2042	Forecast Baseline	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Rochester Rd		ONE HOUR	✓	374	100,000
2 - Forstal Rd		ONE HOUR	✓	628	100,000
3 - High St		ONE HOUR	✓	235	100,000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	374	0
	2 - Forstal Rd	442	0	186
	3 - High St	99	136	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2,00

Heavy Vehicle %

		To		
		1 - Rochester Rd	2 - Forstal Rd	3 - High St
From	1 - Rochester Rd	0	2	0
	2 - Forstal Rd	1	0	1
	3 - High St	3	2	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)
1 - Rochester Rd	0,63	15,23	1,7	C	343	515
2 - Forstal Rd	0,70	12,46	2,3	B	576	864
3 - High St	0,39	9,24	0,7	A	216	323

Main Results for each time segment

16:30 - 16:45

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
1 - Rochester Rd	282	70	102	682	0,413	279	404	0,0	0,7	9,051	A
2 - Forstal Rd	473	118	0	983	0,481	469	380	0,0	0,9	7,027	A
3 - High St	177	44	330	757	0,234	176	139	0,0	0,3	6,329	A

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
1 - Rochester Rd	336	84	122	669	0,502	335	485	0,7	1,0	10,944	B
2 - Forstal Rd	565	141	0	983	0,575	563	457	0,9	1,3	8,629	A
3 - High St	211	53	396	715	0,295	211	167	0,3	0,4	7,305	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
1 - Rochester Rd	412	103	149	653	0,631	409	593	1,0	1,7	14,906	B
2 - Forstal Rd	691	173	0	983	0,704	688	558	1,3	2,3	12,166	B
3 - High St	259	65	484	659	0,392	258	204	0,4	0,7	9,163	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
1 - Rochester Rd	412	103	150	652	0,631	412	596	1,7	1,7	15,226	C
2 - Forstal Rd	691	173	0	983	0,704	691	561	2,3	2,3	12,461	B
3 - High St	259	65	487	658	0,393	259	205	0,7	0,7	9,241	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
1 - Rochester Rd	336	84	123	669	0,503	339	489	1,7	1,1	11,215	B
2 - Forstal Rd	565	141	0	983	0,575	568	462	2,3	1,4	8,858	A
3 - High St	211	53	400	713	0,296	212	168	0,7	0,4	7,378	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
1 - Rochester Rd	282	70	103	681	0,413	283	409	1,1	0,7	9,251	A
2 - Forstal Rd	473	118	0	983	0,481	475	386	1,4	1,0	7,182	A
3 - High St	177	44	334	755	0,234	177	141	0,4	0,3	6,391	A