

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.0.4211 []
© Copyright TRL Limited, 2015

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Hambledon Road_Milton Road_Elettra Av_AM Peak_Mitigation.j9
Path: P:\17000's\17144\Technical\Junction Modelling\E Block
Report generation date: 15/09/2015 15:53:25

- »(Default Analysis Set) - 2015 Base, AM
- »(Default Analysis Set) - 2020 Base, AM
- »(Default Analysis Set) - 2020 Base + Dev (E Block Proposals), AM
- »(Default Analysis Set) - 2020 Base + Dev (E Block + East Dev), AM
- »(Default Analysis Set) - 2020 Base + Dev (E Block + East + West Dev), AM

Summary of junction performance

	AM			
	Q (PCU)	Delay (s)	RFC	LOS
A1 - 2015 Base				
1 - Milton road	1.8	10.52	0.65	B
2 - Hambledon Road (south)	0.7	2.03	0.40	A
3 - Elettra Avenue	0.2	2.77	0.19	A
4 - Hambledon Road (north)	1.1	4.34	0.52	A
A1 - 2020 Base				
1 - Milton road	2.7	14.08	0.73	B
2 - Hambledon Road (south)	0.7	2.07	0.41	A
3 - Elettra Avenue	0.2	2.82	0.19	A
4 - Hambledon Road (north)	1.2	4.64	0.55	A
A1 - 2020 Base + Dev (E Block Proposals)				
1 - Milton road	2.6	13.67	0.73	B
2 - Hambledon Road (south)	0.6	2.00	0.39	A
3 - Elettra Avenue	0.2	2.80	0.18	A
4 - Hambledon Road (north)	1.2	4.58	0.55	A
A1 - 2020 Base + Dev (E Block + East Dev)				
1 - Milton road	3.1	15.71	0.76	C
2 - Hambledon Road (south)	0.7	2.05	0.40	A
3 - Elettra Avenue	0.3	2.87	0.20	A
4 - Hambledon Road (north)	1.3	4.72	0.56	A
A1 - 2020 Base + Dev (E Block + East + West Dev)				
1 - Milton road	3.9	18.84	0.80	C
2 - Hambledon Road (south)	0.7	2.19	0.42	A
3 - Elettra Avenue	0.2	2.85	0.20	A
4 - Hambledon Road (north)	1.3	4.78	0.57	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 Av. delay per arriving vehicle.

File summary

File Description

Title	Hambledon Road/ Milton Road/ Elettra Avenue
Location	Waterlooville
Site number	
Date	07/05/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	17144
Enumerator	DTA*arcady
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
2015 Base	AM	FLAT	08:00	09:00	60	15	✓
2020 Base	AM	FLAT	08:00	09:00	60	15	✓
2020 Base + Dev (E Block Proposals)	AM	FLAT	08:00	09:00	60	15	✓
2020 Base + Dev (E Block + East Dev)	AM	FLAT	08:00	09:00	60	15	✓
2020 Base + Dev (E Block + East + West Dev)	AM	FLAT	08:00	09:00	60	15	✓

(Default Analysis Set) - 2015 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	4.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Milton road	
2	Hambledon Road (south)	
3	Elettra Avenue	
4	Hambledon Road (north)	

Capacity Options

Arm	Min Cap (PCU/hr)	Max Cap (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1 - Milton road	0.00	99999.00		0.00
2 - Hambledon Road (south)	0.00	99999.00		0.00
3 - Elettra Avenue	0.00	99999.00		0.00
4 - Hambledon Road (north)	0.00	99999.00		0.00

Roundabout Geometry

Arm	V (m)	E (m)	F (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Milton road	3.40	4.20	24.9	21.0	54.0	22.5	
2 - Hambledon Road (south)	7.20	8.20	55.8	54.6	54.0	25.0	
3 - Elettra Avenue	3.30	9.30	60.0	6.0	54.0	22.0	
4 - Hambledon Road (north)	3.60	7.70	127.6	6.0	54.0	22.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Milton road	0.521	1285.444
2 - Hambledon Road (south)	0.766	2587.472
3 - Elettra Avenue	0.652	2171.928
4 - Hambledon Road (north)	0.625	2025.835

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - Milton road	Percentage		135.00
2 - Hambledon Road (south)	Percentage		125.00

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D1	2015 Base	AM	FLAT	08:00	09:00	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	636.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1182.00	100.000
3 - Elettra Avenue		FLAT	✓	299.00	100.000
4 - Hambledon Road (north)		FLAT	✓	906.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	447.000	103.000	86.000
	2 - Hambledon Road (south)	214.000	27.000	386.000	555.000
	3 - Elettra Avenue	49.000	175.000	0.000	75.000
	4 - Hambledon Road (north)	32.000	768.000	106.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.70	0.16	0.14
	2 - Hambledon Road (south)	0.18	0.02	0.33	0.47
	3 - Elettra Avenue	0.16	0.59	0.00	0.25
	4 - Hambledon Road (north)	0.04	0.85	0.12	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.65	10.52	1.8	B	636.00	636.00
2 - Hambledon Road (south)	0.40	2.03	0.7	A	1182.00	1182.00
3 - Elettra Avenue	0.19	2.77	0.2	A	299.00	299.00
4 - Hambledon Road (north)	0.52	4.34	1.1	A	906.00	906.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	636.00	159.00	1071.23	981.36	0.648	628.86	294.22	0.0	1.8	10.022	B
2 - Hambledon Road (south)	1182.00	295.50	292.37	2954.51	0.400	1179.34	1407.72	0.0	0.7	2.025	A
3 - Elettra Avenue	299.00	74.75	879.25	1598.61	0.187	298.08	592.47	0.0	0.2	2.767	A
4 - Hambledon Road (north)	906.00	226.50	463.77	1735.85	0.522	901.68	713.56	0.0	1.1	4.293	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	636.00	159.00	1075.97	978.03	0.650	635.83	295.00	1.8	1.8	10.508	B
2 - Hambledon Road (south)	1182.00	295.50	294.95	2952.05	0.400	1181.99	1416.86	0.7	0.7	2.033	A
3 - Elettra Avenue	299.00	74.75	881.97	1596.83	0.187	299.00	594.97	0.2	0.2	2.773	A
4 - Hambledon Road (north)	906.00	226.50	465.00	1735.09	0.522	905.98	715.97	1.1	1.1	4.341	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	636.00	159.00	1075.99	978.01	0.650	635.95	295.00	1.8	1.8	10.519	B
2 - Hambledon Road (south)	1182.00	295.50	294.98	2952.01	0.400	1182.00	1416.96	0.7	0.7	2.033	A
3 - Elettra Avenue	299.00	74.75	881.99	1596.82	0.187	299.00	594.99	0.2	0.2	2.773	A
4 - Hambledon Road (north)	906.00	226.50	465.00	1735.09	0.522	905.99	715.99	1.1	1.1	4.341	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	636.00	159.00	1076.00	978.01	0.650	635.98	295.00	1.8	1.8	10.521	B
2 - Hambledon Road (south)	1182.00	295.50	294.99	2952.01	0.400	1182.00	1416.98	0.7	0.7	2.033	A
3 - Elettra Avenue	299.00	74.75	882.00	1596.81	0.187	299.00	595.00	0.2	0.2	2.773	A
4 - Hambledon Road (north)	906.00	226.50	465.00	1735.08	0.522	906.00	716.00	1.1	1.1	4.341	A

(Default Analysis Set) - 2020 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	5.57	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D3	2020 Base	AM	FLAT	08:00	09:00	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	696.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1206.00	100.000
3 - Bettra Avenue		FLAT	✓	299.00	100.000
4 - Hambledon Road (north)		FLAT	✓	952.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	495.000	103.000	98.000
	2 - Hambledon Road (south)	225.000	27.000	386.000	568.000
	3 - Elettra Avenue	49.000	175.000	0.000	75.000
	4 - Hambledon Road (north)	40.000	806.000	106.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.71	0.15	0.14
	2 - Hambledon Road (south)	0.19	0.02	0.32	0.47
	3 - Elettra Avenue	0.16	0.59	0.00	0.25
	4 - Hambledon Road (north)	0.04	0.85	0.11	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.73	14.08	2.7	B	696.00	696.00
2 - Hambledon Road (south)	0.41	2.07	0.7	A	1206.00	1206.00
3 - Elettra Avenue	0.19	2.82	0.2	A	299.00	299.00
4 - Hambledon Road (north)	0.55	4.64	1.2	A	952.00	952.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	696.00	174.00	1108.75	954.96	0.729	685.81	313.13	0.0	2.5	12.931	B
2 - Hambledon Road (south)	1206.00	301.50	303.52	2943.85	0.410	1203.23	1491.04	0.0	0.7	2.064	A
3 - Elettra Avenue	299.00	74.75	914.68	1575.50	0.190	298.07	592.07	0.0	0.2	2.817	A
4 - Hambledon Road (north)	952.00	238.00	474.72	1729.00	0.551	947.15	738.03	0.0	1.2	4.576	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	696.00	174.00	1113.97	951.28	0.732	695.62	314.00	2.5	2.6	14.032	B
2 - Hambledon Road (south)	1206.00	301.50	306.89	2940.62	0.410	1205.99	1502.70	0.7	0.7	2.075	A
3 - Elettra Avenue	299.00	74.75	917.94	1573.38	0.190	299.00	594.94	0.2	0.2	2.824	A
4 - Hambledon Road (north)	952.00	238.00	476.00	1728.21	0.551	951.97	740.94	1.2	1.2	4.637	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	696.00	174.00	1113.99	951.27	0.732	695.88	314.00	2.6	2.7	14.068	B
2 - Hambledon Road (south)	1206.00	301.50	306.97	2940.55	0.410	1206.00	1502.91	0.7	0.7	2.075	A
3 - Elettra Avenue	299.00	74.75	917.98	1573.35	0.190	299.00	594.98	0.2	0.2	2.824	A
4 - Hambledon Road (north)	952.00	238.00	476.00	1728.21	0.551	951.99	740.98	1.2	1.2	4.637	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	696.00	174.00	1114.00	951.26	0.732	695.94	314.00	2.7	2.7	14.082	B
2 - Hambledon Road (south)	1206.00	301.50	306.98	2940.53	0.410	1206.00	1502.96	0.7	0.7	2.075	A
3 - Elettra Avenue	299.00	74.75	917.99	1573.34	0.190	299.00	594.99	0.2	0.2	2.824	A
4 - Hambledon Road (north)	952.00	238.00	476.00	1728.21	0.551	952.00	740.99	1.2	1.2	4.637	A

(Default Analysis Set) - 2020 Base + Dev (E Block Proposals), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	5.53	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D5	2020 Base + Dev (E Block Proposals)	AM	FLAT	08:00	09:00	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	701.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1137.00	100.000
3 - Bettra Avenue		FLAT	✓	290.00	100.000
4 - Hambledon Road (north)		FLAT	✓	956.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	495.000	108.000	98.000
	2 - Hambledon Road (south)	225.000	27.000	317.000	568.000
	3 - Elettra Avenue	50.000	153.000	0.000	87.000
	4 - Hambledon Road (north)	40.000	806.000	110.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.71	0.15	0.14
	2 - Hambledon Road (south)	0.20	0.02	0.28	0.50
	3 - Elettra Avenue	0.17	0.53	0.00	0.30
	4 - Hambledon Road (north)	0.04	0.84	0.12	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.73	13.67	2.6	B	701.00	701.00
2 - Hambledon Road (south)	0.39	2.00	0.6	A	1137.00	1137.00
3 - Elettra Avenue	0.18	2.80	0.2	A	290.00	290.00
4 - Hambledon Road (north)	0.55	4.58	1.2	A	956.00	956.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	701.00	175.25	1090.86	967.55	0.725	691.01	314.15	0.0	2.5	12.602	B
2 - Hambledon Road (south)	1137.00	284.25	312.51	2935.24	0.387	1134.48	1469.35	0.0	0.6	1.996	A
3 - Elettra Avenue	290.00	72.50	914.79	1575.43	0.184	289.10	532.20	0.0	0.2	2.797	A
4 - Hambledon Road (north)	956.00	239.00	453.81	1742.08	0.549	951.19	750.07	0.0	1.2	4.525	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	701.00	175.25	1095.97	963.95	0.727	700.65	315.00	2.5	2.6	13.628	B
2 - Hambledon Road (south)	1137.00	284.25	315.89	2932.00	0.388	1136.99	1480.72	0.6	0.6	2.005	A
3 - Elettra Avenue	290.00	72.50	917.94	1573.37	0.184	290.00	534.94	0.2	0.2	2.804	A
4 - Hambledon Road (north)	956.00	239.00	455.00	1741.34	0.549	955.97	752.95	1.2	1.2	4.583	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	701.00	175.25	1095.99	963.94	0.727	700.89	315.00	2.6	2.6	13.661	B
2 - Hambledon Road (south)	1137.00	284.25	315.97	2931.93	0.388	1137.00	1480.91	0.6	0.6	2.005	A
3 - Elettra Avenue	290.00	72.50	917.98	1573.35	0.184	290.00	534.98	0.2	0.2	2.804	A
4 - Hambledon Road (north)	956.00	239.00	455.00	1741.34	0.549	955.99	752.98	1.2	1.2	4.583	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	701.00	175.25	1096.00	963.93	0.727	700.95	315.00	2.6	2.6	13.672	B
2 - Hambledon Road (south)	1137.00	284.25	315.98	2931.92	0.388	1137.00	1480.96	0.6	0.6	2.005	A
3 - Elettra Avenue	290.00	72.50	917.99	1573.34	0.184	290.00	534.99	0.2	0.2	2.804	A
4 - Hambledon Road (north)	956.00	239.00	455.00	1741.34	0.549	956.00	752.99	1.2	1.2	4.583	A

(Default Analysis Set) - 2020 Base + Dev (E Block + East Dev), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	6.06	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D7	2020 Base + Dev (E Block + East Dev)	AM	FLAT	08:00	09:00	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	717.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1152.00	100.000
3 - Bettra Avenue		FLAT	✓	314.00	100.000
4 - Hambledon Road (north)		FLAT	✓	965.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	495.000	124.000	98.000
	2 - Hambledon Road (south)	227.000	32.000	322.000	571.000
	3 - Elettra Avenue	54.000	165.000	0.000	95.000
	4 - Hambledon Road (north)	40.000	806.000	119.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.69	0.17	0.14
	2 - Hambledon Road (south)	0.20	0.03	0.28	0.50
	3 - Elettra Avenue	0.17	0.53	0.00	0.30
	4 - Hambledon Road (north)	0.04	0.84	0.12	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.76	15.71	3.1	C	717.00	717.00
2 - Hambledon Road (south)	0.40	2.05	0.7	A	1152.00	1152.00
3 - Elettra Avenue	0.20	2.87	0.3	A	314.00	314.00
4 - Hambledon Road (north)	0.56	4.72	1.3	A	965.00	965.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	717.00	179.25	1116.61	949.42	0.755	705.43	320.11	0.0	2.9	14.157	B
2 - Hambledon Road (south)	1152.00	288.00	336.80	2911.99	0.396	1149.39	1485.24	0.0	0.7	2.040	A
3 - Elettra Avenue	314.00	78.50	924.54	1569.07	0.200	313.00	561.65	0.0	0.2	2.862	A
4 - Hambledon Road (north)	965.00	241.25	476.72	1727.76	0.559	960.00	760.82	0.0	1.3	4.660	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	717.00	179.25	1121.97	945.65	0.758	716.49	321.00	2.9	3.0	15.624	C
2 - Hambledon Road (south)	1152.00	288.00	340.84	2908.13	0.396	1151.99	1497.62	0.7	0.7	2.049	A
3 - Elettra Avenue	314.00	78.50	927.92	1566.87	0.200	314.00	564.91	0.2	0.3	2.872	A
4 - Hambledon Road (north)	965.00	241.25	478.00	1726.96	0.559	964.97	763.92	1.3	1.3	4.724	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	717.00	179.25	1121.99	945.64	0.758	716.84	321.00	3.0	3.1	15.689	C
2 - Hambledon Road (south)	1152.00	288.00	340.95	2908.02	0.396	1152.00	1497.88	0.7	0.7	2.049	A
3 - Elettra Avenue	314.00	78.50	927.98	1566.83	0.200	314.00	564.97	0.3	0.3	2.872	A
4 - Hambledon Road (north)	965.00	241.25	478.00	1726.96	0.559	964.99	763.98	1.3	1.3	4.724	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	717.00	179.25	1121.99	945.63	0.758	716.92	321.00	3.1	3.1	15.708	C
2 - Hambledon Road (south)	1152.00	288.00	340.97	2908.00	0.396	1152.00	1497.94	0.7	0.7	2.049	A
3 - Elettra Avenue	314.00	78.50	927.99	1566.82	0.200	314.00	564.99	0.3	0.3	2.872	A
4 - Hambledon Road (north)	965.00	241.25	478.00	1726.96	0.559	964.99	763.99	1.3	1.3	4.724	A

(Default Analysis Set) - 2020 Base + Dev (E Block + East + West Dev), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	6.89	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D9	2020 Base + Dev (E Block + East + West Dev)	AM	FLAT	08:00	09:00	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	754.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1207.00	100.000
3 - Bettra Avenue		FLAT	✓	306.00	100.000
4 - Hambledon Road (north)		FLAT	✓	985.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	495.000	161.000	98.000
	2 - Hambledon Road (south)	227.000	32.000	377.000	571.000
	3 - Elettra Avenue	54.000	147.000	0.000	105.000
	4 - Hambledon Road (north)	40.000	806.000	139.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.66	0.21	0.13
	2 - Hambledon Road (south)	0.19	0.03	0.31	0.47
	3 - Elettra Avenue	0.18	0.48	0.00	0.34
	4 - Hambledon Road (north)	0.04	0.82	0.14	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.80	18.84	3.9	C	754.00	754.00
2 - Hambledon Road (south)	0.42	2.19	0.7	A	1207.00	1207.00
3 - Elettra Avenue	0.20	2.85	0.2	A	306.00	306.00
4 - Hambledon Road (north)	0.57	4.78	1.3	A	985.00	985.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	754.00	188.50	1118.51	948.09	0.795	739.79	320.07	0.0	3.6	16.327	C
2 - Hambledon Road (south)	1207.00	301.75	392.39	2858.79	0.422	1204.09	1465.91	0.0	0.7	2.172	A
3 - Elettra Avenue	306.00	76.50	924.15	1569.33	0.195	305.03	672.33	0.0	0.2	2.846	A
4 - Hambledon Road (north)	985.00	246.25	458.74	1739.00	0.566	979.84	770.45	0.0	1.3	4.710	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	754.00	188.50	1123.96	944.25	0.799	753.18	321.00	3.6	3.8	18.656	C
2 - Hambledon Road (south)	1207.00	301.75	397.71	2853.69	0.423	1206.99	1479.43	0.7	0.7	2.185	A
3 - Elettra Avenue	306.00	76.50	927.88	1566.89	0.195	306.00	676.82	0.2	0.2	2.854	A
4 - Hambledon Road (north)	985.00	246.25	459.99	1738.21	0.567	984.96	773.89	1.3	1.3	4.779	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	754.00	188.50	1123.99	944.23	0.799	753.73	321.00	3.8	3.8	18.789	C
2 - Hambledon Road (south)	1207.00	301.75	397.90	2853.51	0.423	1207.00	1479.81	0.7	0.7	2.186	A
3 - Elettra Avenue	306.00	76.50	927.96	1566.84	0.195	306.00	676.94	0.2	0.2	2.854	A
4 - Hambledon Road (north)	985.00	246.25	460.00	1738.21	0.567	984.99	773.96	1.3	1.3	4.779	A

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	754.00	188.50	1123.99	944.23	0.799	753.86	321.00	3.8	3.9	18.835	C
2 - Hambledon Road (south)	1207.00	301.75	397.95	2853.47	0.423	1207.00	1479.90	0.7	0.7	2.186	A
3 - Elettra Avenue	306.00	76.50	927.98	1566.83	0.195	306.00	676.97	0.2	0.2	2.854	A
4 - Hambledon Road (north)	985.00	246.25	460.00	1738.21	0.567	984.99	773.98	1.3	1.3	4.779	A

Junctions 9				
ARCADY 9 - Roundabout Module				
Version: 9.0.0.4211 []				
© Copyright TRL Limited, 2015				
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk				
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: Hambledon Road_Milton Road_Elettra Av_PM Peak_Mitigation.j9

Path: P:\17000's\17144\Technical\Junction Modelling\E Block

Report generation date: 15/09/2015 15:51:11

- »(Default Analysis Set) - 2015 Base, PM
- »(Default Analysis Set) - 2020 Base, PM
- »(Default Analysis Set) - 2020 Base + Dev (E Block Proposals), PM
- »(Default Analysis Set) - 2020 Base + Dev (E Block + East Dev), PM
- »(Default Analysis Set) - 2020 Base + Dev (E Block + East + West Dev), PM

Summary of junction performance

	PM			
	Q (PCU)	Delay (s)	RFC	LOS
A1 - 2015 Base				
1 - Milton road	0.7	5.86	0.42	A
2 - Hambledon Road (south)	1.6	3.87	0.62	A
3 - Elettra Avenue	2.1	11.62	0.68	B
4 - Hambledon Road (north)	2.1	12.06	0.68	B
A1 - 2020 Base				
1 - Milton road	0.9	6.92	0.48	A
2 - Hambledon Road (south)	1.7	4.02	0.63	A
3 - Elettra Avenue	2.2	12.44	0.69	B
4 - Hambledon Road (north)	3.4	17.10	0.77	C
A1 - 2020 Base + Dev (E Block Proposals)				
1 - Milton road	1.1	7.51	0.52	A
2 - Hambledon Road (south)	1.8	4.22	0.64	A
3 - Elettra Avenue	2.4	13.12	0.71	B
4 - Hambledon Road (north)	3.7	18.54	0.79	C
A1 - 2020 Base + Dev (E Block + East Dev)				
1 - Milton road	1.3	8.21	0.56	A
2 - Hambledon Road (south)	1.9	4.48	0.65	A
3 - Elettra Avenue	1.7	10.66	0.64	B
4 - Hambledon Road (north)	4.0	19.42	0.81	C
A1 - 2020 Base + Dev (E Block + East + West Dev)				
1 - Milton road	1.7	10.47	0.63	B
2 - Hambledon Road (south)	2.2	4.95	0.69	A
3 - Elettra Avenue	8.6	38.86	0.91	E
4 - Hambledon Road (north)	6.6	32.39	0.88	D

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 Av. delay per arriving vehicle.

File summary

File Description

Title	Hambledon Road/ Milton Road/ Elettra Avenue
Location	Waterlooville
Site number	
Date	07/05/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	17144
Enumerator	DTA*arcady
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
2015 Base	PM	FLAT	16:45	17:45	60	15	✓
2020 Base	PM	FLAT	16:45	17:45	60	15	✓
2020 Base + Dev (E Block Proposals)	PM	FLAT	16:45	17:45	60	15	✓
2020 Base + Dev (E Block + East Dev)	PM	FLAT	16:45	17:45	60	15	✓
2020 Base + Dev (E Block + East + West Dev)	PM	FLAT	16:45	17:45	60	15	✓

(Default Analysis Set) - 2015 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	7.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Milton road	
2	Hambledon Road (south)	
3	Elettra Avenue	
4	Hambledon Road (north)	

Capacity Options

Arm	Min Cap (PCU/hr)	Max Cap (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1 - Milton road	0.00	99999.00		0.00
2 - Hambledon Road (south)	0.00	99999.00		0.00
3 - Elettra Avenue	0.00	99999.00		0.00
4 - Hambledon Road (north)	0.00	99999.00		0.00

Roundabout Geometry

Arm	V (m)	E (m)	F (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Milton road	3.40	4.20	24.9	21.0	54.0	22.5	
2 - Hambledon Road (south)	7.20	8.20	55.8	54.6	54.0	25.0	
3 - Elettra Avenue	3.30	9.30	60.0	6.0	54.0	22.0	
4 - Hambledon Road (north)	3.60	7.70	127.6	6.0	54.0	22.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - Milton road	None		
2 - Hambledon Road (south)	Direct		-416.00
3 - Elettra Avenue	None		
4 - Hambledon Road (north)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Milton road	0.521	1285.444
2 - Hambledon Road (south)	0.766	2171.472
3 - Elettra Avenue	0.652	2171.928
4 - Hambledon Road (north)	0.625	2025.835

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - Milton road	Percentage		135.00
2 - Hambledon Road (south)	Percentage		120.00
3 - Elettra Avenue	Percentage		80.00
4 - Hambledon Road (north)	Percentage		70.00

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D2	2015 Base	RM	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	452.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1528.00	100.000
3 - Elettra Avenue		FLAT	✓	656.00	100.000
4 - Hambledon Road (north)		FLAT	✓	630.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	337.000	63.000	52.000
	2 - Hambledon Road (south)	585.000	39.000	100.000	804.000
	3 - Elettra Avenue	154.000	341.000	0.000	161.000
	4 - Hambledon Road (north)	59.000	526.000	45.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledo Road (north)
From	1 - Milton road	0.00	0.75	0.14	0.12
	2 - Hambledon Road (south)	0.38	0.03	0.07	0.53
	3 - Elettra Avenue	0.23	0.52	0.00	0.25
	4 - Hambledon Road (north)	0.09	0.83	0.07	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.42	5.86	0.7	A	452.00	452.00
2 - Hambledon Road (south)	0.62	3.87	1.6	A	1528.00	1528.00
3 - Elettra Avenue	0.68	11.62	2.1	B	656.00	656.00
4 - Hambledon Road (north)	0.68	12.06	2.1	B	630.00	630.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	452.00	113.00	939.37	1074.18	0.421	449.13	792.87	0.0	0.7	5.733	A
2 - Hambledon Road (south)	1528.00	382.00	158.70	2459.96	0.621	1521.51	1229.80	0.0	1.6	3.811	A
3 - Elettra Avenue	656.00	164.00	1473.61	968.84	0.677	647.92	206.60	0.0	2.0	10.960	B
4 - Hambledon Road (north)	630.00	157.50	1110.26	932.14	0.676	621.98	1011.27	0.0	2.0	11.335	B

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	452.00	113.00	950.68	1066.22	0.424	451.95	797.91	0.7	0.7	5.860	A
2 - Hambledon Road (south)	1528.00	382.00	159.97	2458.78	0.621	1527.96	1242.66	1.6	1.6	3.867	A
3 - Elettra Avenue	656.00	164.00	1479.96	965.53	0.679	655.78	207.97	2.0	2.1	11.602	B
4 - Hambledon Road (north)	630.00	157.50	1118.82	928.39	0.679	629.77	1016.92	2.0	2.1	12.033	B

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	452.00	113.00	950.90	1066.06	0.424	451.99	797.97	0.7	0.7	5.862	A
2 - Hambledon Road (south)	1528.00	382.00	159.99	2458.76	0.621	1527.99	1242.90	1.6	1.6	3.867	A
3 - Elettra Avenue	656.00	164.00	1479.99	965.51	0.679	655.94	207.99	2.1	2.1	11.619	B
4 - Hambledon Road (north)	630.00	157.50	1118.95	928.33	0.679	629.93	1016.98	2.1	2.1	12.052	B

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	452.00	113.00	950.95	1066.02	0.424	452.00	797.99	0.7	0.7	5.862	A
2 - Hambledon Road (south)	1528.00	382.00	160.00	2458.76	0.621	1527.99	1242.95	1.6	1.6	3.867	A
3 - Elettra Avenue	656.00	164.00	1479.99	965.51	0.679	655.97	208.00	2.1	2.1	11.623	B
4 - Hambledon Road (north)	630.00	157.50	1118.97	928.32	0.679	629.97	1016.99	2.1	2.1	12.063	B

(Default Analysis Set) - 2020 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	8.84	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D4	2020 Base	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	490.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1535.00	100.000
3 - Bettra Avenue		FLAT	✓	656.00	100.000
4 - Hambledon Road (north)		FLAT	✓	722.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	343.000	63.000	84.000
	2 - Hambledon Road (south)	577.000	39.000	100.000	819.000
	3 - Elettra Avenue	154.000	341.000	0.000	161.000
	4 - Hambledon Road (north)	72.000	605.000	45.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.70	0.13	0.17
	2 - Hambledon Road (south)	0.38	0.03	0.07	0.53
	3 - Elettra Avenue	0.23	0.52	0.00	0.25
	4 - Hambledon Road (north)	0.10	0.84	0.06	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.48	6.92	0.9	A	490.00	490.00
2 - Hambledon Road (south)	0.63	4.02	1.7	A	1535.00	1535.00
3 - Elettra Avenue	0.69	12.44	2.2	B	656.00	656.00
4 - Hambledon Road (north)	0.77	17.10	3.4	C	722.00	722.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	490.00	122.50	1014.08	1021.59	0.480	486.37	797.19	0.0	0.9	6.681	A
2 - Hambledon Road (south)	1535.00	383.75	190.13	2431.08	0.631	1528.23	1310.31	0.0	1.7	3.959	A
3 - Elettra Avenue	656.00	164.00	1512.05	948.79	0.691	647.41	206.31	0.0	2.1	11.639	B
4 - Hambledon Road (north)	722.00	180.50	1101.80	935.84	0.772	709.46	1057.66	0.0	3.1	15.166	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	490.00	122.50	1029.30	1010.88	0.485	489.91	802.86	0.9	0.9	6.907	A
2 - Hambledon Road (south)	1535.00	383.75	191.93	2429.42	0.632	1534.95	1327.28	1.7	1.7	4.024	A
3 - Elettra Avenue	656.00	164.00	1518.94	945.19	0.694	655.74	207.95	2.1	2.2	12.411	B
4 - Hambledon Road (north)	722.00	180.50	1110.78	931.91	0.775	721.37	1063.89	3.1	3.3	16.980	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	490.00	122.50	1029.78	1010.54	0.485	489.98	802.96	0.9	0.9	6.915	A
2 - Hambledon Road (south)	1535.00	383.75	191.98	2429.37	0.632	1534.98	1327.78	1.7	1.7	4.024	A
3 - Elettra Avenue	656.00	164.00	1518.98	945.17	0.694	655.92	207.98	2.2	2.2	12.431	B
4 - Hambledon Road (north)	722.00	180.50	1110.93	931.84	0.775	721.80	1063.97	3.3	3.3	17.073	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	490.00	122.50	1029.89	1010.46	0.485	489.99	802.98	0.9	0.9	6.916	A
2 - Hambledon Road (south)	1535.00	383.75	191.99	2429.36	0.632	1534.99	1327.89	1.7	1.7	4.024	A
3 - Elettra Avenue	656.00	164.00	1518.99	945.16	0.694	655.96	207.99	2.2	2.2	12.439	B
4 - Hambledon Road (north)	722.00	180.50	1110.97	931.83	0.775	721.90	1063.99	3.3	3.4	17.101	C

(Default Analysis Set) - 2020 Base + Dev (E Block Proposals), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	9.51	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D6	2020 Base + Dev (E Block Proposals)	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	527.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1524.00	100.000
3 - Bettra Avenue		FLAT	✓	671.00	100.000
4 - Hambledon Road (north)		FLAT	✓	742.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	343.000	100.000	84.000
	2 - Hambledon Road (south)	577.000	39.000	89.000	819.000
	3 - Elettra Avenue	160.000	327.000	0.000	184.000
	4 - Hambledon Road (north)	72.000	605.000	65.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.65	0.19	0.16
	2 - Hambledon Road (south)	0.38	0.03	0.06	0.54
	3 - Elettra Avenue	0.24	0.49	0.00	0.27
	4 - Hambledon Road (north)	0.10	0.82	0.09	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.52	7.51	1.1	A	527.00	527.00
2 - Hambledon Road (south)	0.64	4.22	1.8	A	1524.00	1524.00
3 - Elettra Avenue	0.71	13.12	2.4	B	671.00	671.00
4 - Hambledon Road (north)	0.79	18.54	3.7	C	742.00	742.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	527.00	131.75	1018.88	1018.21	0.518	522.78	802.80	0.0	1.1	7.207	A
2 - Hambledon Road (south)	1524.00	381.00	246.32	2379.45	0.640	1516.96	1295.34	0.0	1.8	4.142	A
3 - Elettra Avenue	671.00	167.75	1511.70	948.97	0.707	661.78	251.58	0.0	2.3	12.176	B
4 - Hambledon Road (north)	742.00	185.50	1093.47	939.49	0.790	728.21	1080.02	0.0	3.4	16.131	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	527.00	131.75	1035.14	1006.77	0.523	526.88	808.83	1.1	1.1	7.499	A
2 - Hambledon Road (south)	1524.00	381.00	248.89	2377.09	0.641	1523.94	1313.13	1.8	1.8	4.219	A
3 - Elettra Avenue	671.00	167.75	1518.92	945.20	0.710	670.69	253.90	2.3	2.4	13.079	B
4 - Hambledon Road (north)	742.00	185.50	1102.75	935.42	0.793	741.21	1086.86	3.4	3.6	18.366	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	527.00	131.75	1035.72	1006.36	0.524	526.98	808.95	1.1	1.1	7.509	A
2 - Hambledon Road (south)	1524.00	381.00	248.97	2377.01	0.641	1523.98	1313.73	1.8	1.8	4.220	A
3 - Elettra Avenue	671.00	167.75	1518.98	945.17	0.710	670.91	253.97	2.4	2.4	13.109	B
4 - Hambledon Road (north)	742.00	185.50	1102.93	935.35	0.793	741.74	1086.96	3.6	3.7	18.495	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	527.00	131.75	1035.86	1006.26	0.524	526.99	808.97	1.1	1.1	7.510	A
2 - Hambledon Road (south)	1524.00	381.00	248.99	2377.00	0.641	1523.99	1313.87	1.8	1.8	4.220	A
3 - Elettra Avenue	671.00	167.75	1518.99	945.16	0.710	670.96	253.99	2.4	2.4	13.117	B
4 - Hambledon Road (north)	742.00	185.50	1102.96	935.33	0.793	741.87	1086.98	3.7	3.7	18.538	C

(Default Analysis Set) - 2020 Base + Dev (E Block + East Dev), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	9.48	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D8	2020 Base + Dev (E Block + East Dev)	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	568.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1515.00	100.000
3 - Bettra Avenue		FLAT	✓	590.00	100.000
4 - Hambledon Road (north)		FLAT	✓	765.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	343.000	141.000	84.000
	2 - Hambledon Road (south)	583.000	56.000	46.000	830.000
	3 - Elettra Avenue	145.000	287.000	0.000	158.000
	4 - Hambledon Road (north)	72.000	605.000	88.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.60	0.25	0.15
	2 - Hambledon Road (south)	0.38	0.04	0.03	0.55
	3 - Elettra Avenue	0.25	0.49	0.00	0.27
	4 - Hambledon Road (north)	0.09	0.79	0.12	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.56	8.21	1.3	A	568.00	568.00
2 - Hambledon Road (south)	0.65	4.48	1.9	A	1515.00	1515.00
3 - Elettra Avenue	0.64	10.66	1.7	B	590.00	590.00
4 - Hambledon Road (north)	0.81	19.42	4.0	C	765.00	765.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	568.00	142.00	1019.05	1018.09	0.558	563.05	794.11	0.0	1.2	7.829	A
2 - Hambledon Road (south)	1515.00	378.75	309.34	2321.55	0.653	1507.59	1272.77	0.0	1.9	4.384	A
3 - Elettra Avenue	590.00	147.50	1545.08	931.55	0.633	583.30	271.84	0.0	1.7	10.157	B
4 - Hambledon Road (north)	765.00	191.25	1062.97	952.83	0.803	750.19	1065.41	0.0	3.7	16.724	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	568.00	142.00	1035.12	1006.78	0.564	567.84	799.85	1.2	1.3	8.196	A
2 - Hambledon Road (south)	1515.00	378.75	312.84	2318.33	0.653	1514.93	1290.13	1.9	1.9	4.480	A
3 - Elettra Avenue	590.00	147.50	1552.90	927.47	0.636	589.83	274.86	1.7	1.7	10.650	B
4 - Hambledon Road (north)	765.00	191.25	1070.85	949.39	0.806	764.12	1071.89	3.7	3.9	19.218	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	568.00	142.00	1035.70	1006.37	0.564	567.97	799.95	1.3	1.3	8.210	A
2 - Hambledon Road (south)	1515.00	378.75	312.95	2318.22	0.654	1514.98	1290.72	1.9	1.9	4.481	A
3 - Elettra Avenue	590.00	147.50	1552.97	927.44	0.636	589.95	274.96	1.7	1.7	10.661	B
4 - Hambledon Road (north)	765.00	191.25	1070.96	949.34	0.806	764.70	1071.97	3.9	4.0	19.372	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	568.00	142.00	1035.85	1006.27	0.564	567.99	799.98	1.3	1.3	8.212	A
2 - Hambledon Road (south)	1515.00	378.75	312.98	2318.20	0.654	1514.99	1290.86	1.9	1.9	4.481	A
3 - Elettra Avenue	590.00	147.50	1552.99	927.43	0.636	589.98	274.98	1.7	1.7	10.664	B
4 - Hambledon Road (north)	765.00	191.25	1070.98	949.33	0.806	764.85	1071.99	4.0	4.0	19.425	C

(Default Analysis Set) - 2020 Base + Dev (E Block + East + West Dev), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Hambledon Road (south) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Elettra Avenue - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - Hambledon Road (north) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - (untitled)	(untitled)	Standard Roundabout	1,2,3,4	18.95	C

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Model time period length (min)	Time segment length (min)	Run automatically
D10	2020 Base + Dev (E Block + East + West Dev)	RM	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Milton road		FLAT	✓	574.00	100.000
2 - Hambledon Road (south)		FLAT	✓	1583.00	100.000
3 - Bettra Avenue		FLAT	✓	840.00	100.000
4 - Hambledon Road (north)		FLAT	✓	768.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.000	343.000	147.000	84.000
	2 - Hambledon Road (south)	583.000	56.000	114.000	830.000
	3 - Elettra Avenue	190.000	411.000	0.000	239.000
	4 - Hambledon Road (north)	72.000	605.000	91.000	0.000

Proportions

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0.00	0.60	0.26	0.15
	2 - Hambledon Road (south)	0.37	0.04	0.07	0.52
	3 - Elettra Avenue	0.23	0.49	0.00	0.28
	4 - Hambledon Road (north)	0.09	0.79	0.12	0.00

Vehicle Mix

Heavy Vehicle proportion

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	0	0	0	0
	2 - Hambledon Road (south)	0	0	0	0
	3 - Elettra Avenue	0	0	0	0
	4 - Hambledon Road (north)	0	0	0	0

Av. PCU Per Veh

		To			
		1 - Milton road	2 - Hambledon Road (south)	3 - Elettra Avenue	4 - Hambledon Road (north)
From	1 - Milton road	1.000	1.000	1.000	1.000
	2 - Hambledon Road (south)	1.000	1.000	1.000	1.000
	3 - Elettra Avenue	1.000	1.000	1.000	1.000
	4 - Hambledon Road (north)	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Milton road	0.63	10.47	1.7	B	574.00	574.00
2 - Hambledon Road (south)	0.69	4.95	2.2	A	1583.00	1583.00
3 - Elettra Avenue	0.91	38.86	8.6	E	840.00	840.00
4 - Hambledon Road (north)	0.88	32.39	6.6	D	768.00	768.00

Main Results for each time segment

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	574.00	143.50	1129.88	940.08	0.611	567.90	833.68	0.0	1.5	9.524	A
2 - Hambledon Road (south)	1583.00	395.75	317.00	2314.51	0.684	1574.49	1380.78	0.0	2.1	4.811	A
3 - Elettra Avenue	840.00	210.00	1544.21	932.01	0.901	812.74	347.28	0.0	6.8	26.081	D
4 - Hambledon Road (north)	768.00	192.00	1217.06	885.39	0.867	746.50	1139.89	0.0	5.4	23.214	C

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	574.00	143.50	1158.12	920.21	0.624	573.62	843.70	1.5	1.6	10.369	B
2 - Hambledon Road (south)	1583.00	395.75	321.48	2310.39	0.685	1582.89	1410.25	2.1	2.2	4.946	A
3 - Elettra Avenue	840.00	210.00	1552.84	927.50	0.906	835.70	351.53	6.8	7.9	36.168	E
4 - Hambledon Road (north)	768.00	192.00	1236.88	876.72	0.876	764.94	1151.66	5.4	6.1	30.654	D

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	574.00	143.50	1160.97	918.20	0.625	573.91	844.45	1.6	1.6	10.448	B
2 - Hambledon Road (south)	1583.00	395.75	321.82	2310.08	0.685	1582.97	1413.06	2.2	2.2	4.950	A
3 - Elettra Avenue	840.00	210.00	1552.96	927.45	0.906	838.12	351.83	7.9	8.4	38.020	E
4 - Hambledon Road (north)	768.00	192.00	1238.64	875.94	0.877	766.77	1152.44	6.1	6.4	31.889	D

Main results: (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) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Milton road	574.00	143.50	1161.88	917.56	0.626	573.96	844.69	1.6	1.7	10.471	B
2 - Hambledon Road (south)	1583.00	395.75	321.91	2310.00	0.685	1582.98	1413.93	2.2	2.2	4.951	A
3 - Elettra Avenue	840.00	210.00	1552.98	927.43	0.906	838.93	351.91	8.4	8.6	38.857	E
4 - Hambledon Road (north)	768.00	192.00	1239.23	875.69	0.877	767.34	1152.68	6.4	6.6	32.391	D