Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]

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

Filename: Pendle Rd Highmoor Park Mini Rbt.arc8
Path: G:\My Drive\SLS\Projects\A P351 Alan Davies\P 351_369 High Moor\Analysis\Jnts
Report generation date: 12/12/2019 12:34:16

Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC
	A1 - 2020 Background Flows			
Arm 1	3.82	0.80	5.89	0.87
Arm 2	0.37	0.27	0.16	0.14
Arm 3	2.77	0.74	1.92	0.66
	A1 - 2020 Background Plus Development Flows			
Arm 1	4.18	0.82	8.02	0.91
Arm 2	0.60	0.38	0.26	0.21
Arm 3	3.15	0.77	2.25	0.70
	A1 - 2030 Background Flows			
Arm 1	11.46	0.95	5.15	0.85
Arm 2	0.19	0.16	0.46	0.32
Arm 3	2.46	0.72	3.68	0.79
	A1 - 2030 Background Plus Development Flows			
Arm 1	13.77	0.96	6.79	0.89
Arm 2	0.38	0.28	0.60	0.38
Arm 3	2.76	0.74	4.59	0.83

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

"D1 - 2020 Background Flows, AM " model duration: 08:00 - 09:30
"D2 - 2020 Background Flows, PM" model duration: 16:45 - 18:15
"D3 - 2030 Background Flows, AM" model duration: 08:00 - 09:30
"D4 - 2030 Background Flows, PM" model duration: 16:45 - 18:15
"D5 - 2020 Background Plus Development Flows, AM" model duration: 08:00 - 09:30
"D6 - 2020 Background Plus Development Flows, PM" model duration: 16:45 - 18:15
"D7 - 2030 Background Plus Development Flows, AM" model duration: 08:00 - 09:30
"D8 - 2030 Background Plus Development Flows, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 12/12/2019 12:34:08

File summary

Title	(untitled)
Location	
Site Number	
Date	11/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Tony
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - 2020 Background Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Background Flows, AM	2020 Background Flows	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	17.96	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	614.00	100.000
2	ONE HOUR	✓	104.00	100.000
3	ONE HOUR	✓	594.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	1	462.25	462.25		
08:00-08:15	2	78.30	78.30		
08:00-08:15	3	447.19	447.19		
08:15-08:30	1	551.97	551.97		
08:15-08:30	2	93.49	93.49		
08:15-08:30	3	533.99	533.99		
08:30-08:45	1	676.03	676.03		
08:30-08:45	2	114.51	114.51		
08:30-08:45	3	654.01	654.01		
08:45-09:00	1	676.03	676.03		
08:45-09:00	2	114.51	114.51		
08:45-09:00	3	654.01	654.01		
09:00-09:15	1	551.97	551.97		
09:00-09:15	2	93.49	93.49		
09:00-09:15	3	533.99	533.99		
09:15-09:30	1	462.25	462.25		
09:15-09:30	2	78.30	78.30		
09:15-09:30	3	447.19	447.19		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	41.000	573.000
	2	54.000	0.000	50.000
	3	568.000	26.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.07	0.93
	2	0.52	0.00	0.48
	3	0.96	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.80	21.18	3.82	C
2	0.27	11.89	0.37	B
3	0.74	15.69	2.77	C

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	462.25	457.58	19.40	0.00	849.23	0.544	1.17	9.087	A
2	78.30	77.63	427.02	0.00	541.52	0.145	0.17	7.750	A
3	447.19	443.28	40.31	0.00	896.00	0.499	0.98	7.886	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	551.97	549.42	23.29	0.00	846.80	0.652	1.81	11.997	B
2	93.49	93.23	512.73	0.00	489.04	0.191	0.23	9.090	A
3	533.99	532.07	48.41	0.00	890.18	0.600	1.46	9.989	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	676.03	668.65	28.41	0.00	843.59	0.801	3.65	19.763	C
2	114.51	113.97	624.00	0.00	420.91	0.272	0.37	11.705	B
3	654.01	649.06	59.18	0.00	882.45	0.741	2.70	15.102	C

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	676.03	675.34	28.61	0.00	843.46	0.801	3.82	21.184	C
2	114.51	114.48	630.24	0.00	417.09	0.275	0.37	11.894	B
3	654.01	653.69	59.44	0.00	882.26	0.741	2.77	15.689	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	551.97	559.49	23.59	0.00	846.61	0.652	1.94	12.845	B
2	93.49	94.02	522.13	0.00	483.28	0.193	0.24	9.262	A
3	533.99	538.93	48.82	0.00	889.89	0.600	1.54	10.396	B

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	462.25	465.14	19.67	0.00	849.07	0.544	1.22	9.445	A
2	78.30	78.58	434.08	0.00	537.20	0.146	0.17	7.855	A
3	447.19	449.30	40.80	0.00	895.64	0.499	1.01	8.103	A

(Default Analysis Set) - 2020 Background Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Background Flows, PM	2020 Background Flows	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	22.00	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	652.00	100.000
2	ONE HOUR	✓	52.00	100.000
3	ONE HOUR	✓	540.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	490.86	490.86		
16:45-17:00	2	39.15	39.15		
16:45-17:00	3	406.54	406.54		
17:00-17:15	1	586.13	586.13		
17:00-17:15	2	46.75	46.75		
17:00-17:15	3	485.45	485.45		
17:15-17:30	1	717.87	717.87		
17:15-17:30	2	57.25	57.25		
17:15-17:30	3	594.55	594.55		
17:30-17:45	1	717.87	717.87		
17:30-17:45	2	57.25	57.25		
17:30-17:45	3	594.55	594.55		
17:45-18:00	1	586.13	586.13		
17:45-18:00	2	46.75	46.75		
17:45-18:00	3	485.45	485.45		
18:00-18:15	1	490.86	490.86		
18:00-18:15	2	39.15	39.15		
18:00-18:15	3	406.54	406.54		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	70.000	582.000
	2	33.000	0.000	19.000
	3	489.000	51.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.11	0.89
	2	0.63	0.00	0.37
	3	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.87	31.39	5.89	D
2	0.14	10.16	0.16	B
3	0.66	11.81	1.92	B

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	490.86	485.35	38.09	0.00	837.53	0.586	1.38	10.073	B
2	39.15	38.84	433.24	0.00	537.71	0.073	0.08	7.211	A
3	406.54	403.34	24.65	0.00	907.24	0.448	0.80	7.102	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	586.13	582.60	45.72	0.00	832.75	0.704	2.26	14.183	B
2	46.75	46.64	520.05	0.00	484.56	0.096	0.11	8.219	A
3	485.45	484.10	29.60	0.00	903.68	0.537	1.14	8.551	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	717.87	705.27	55.87	0.00	826.39	0.869	5.41	27.197	D
2	57.25	57.05	629.55	0.00	417.52	0.137	0.16	9.982	A
3	594.55	591.57	36.20	0.00	898.94	0.661	1.88	11.597	B

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	717.87	715.93	56.14	0.00	826.22	0.869	5.89	31.388	D
2	57.25	57.24	639.07	0.00	411.69	0.139	0.16	10.156	B
3	594.55	594.42	36.33	0.00	898.85	0.661	1.92	11.811	B

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	586.13	599.70	46.13	0.00	832.50	0.704	2.50	16.267	C
2	46.75	46.95	535.32	0.00	475.21	0.098	0.11	8.411	A
3	485.45	488.38	29.79	0.00	903.54	0.537	1.18	8.733	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	490.86	495.05	38.53	0.00	837.25	0.586	1.45	10.644	B
2	39.15	39.27	441.90	0.00	532.41	0.074	0.08	7.301	A
3	406.54	407.98	24.92	0.00	907.04	0.448	0.82	7.236	A

(Default Analysis Set) - 2030 Background Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Background Flows, AM	2030 Background Flows	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	36.18	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	708.00	100.000
2	ONE HOUR	✓	57.00	100.000
3	ONE HOUR	✓	583.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	1	533.02	533.02		
08:00-08:15	2	42.91	42.91		
08:00-08:15	3	438.91	438.91		
08:15-08:30	1	636.48	636.48		
08:15-08:30	2	51.24	51.24		
08:15-08:30	3	524.11	524.11		
08:30-08:45	1	779.52	779.52		
08:30-08:45	2	62.76	62.76		
08:30-08:45	3	641.89	641.89		
08:45-09:00	1	779.52	779.52		
08:45-09:00	2	62.76	62.76		
08:45-09:00	3	641.89	641.89		
09:00-09:15	1	636.48	636.48		
09:00-09:15	2	51.24	51.24		
09:00-09:15	3	524.11	524.11		
09:15-09:30	1	533.02	533.02		
09:15-09:30	2	42.91	42.91		
09:15-09:30	3	438.91	438.91		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	76.000	632.000
	2	36.000	0.000	21.000
	3	528.000	55.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.11	0.89
	2	0.63	0.00	0.37
	3	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.95	56.38	11.46	F
2	0.16	11.29	0.19	B
3	0.72	14.09	2.46	B

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	533.02	526.22	41.06	0.00	835.67	0.638	1.70	11.399	B
2	42.91	42.55	469.73	0.00	515.37	0.083	0.09	7.609	A
3	438.91	435.21	26.88	0.00	905.64	0.485	0.93	7.595	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	636.48	631.12	49.28	0.00	830.52	0.766	3.04	17.572	C
2	51.24	51.10	563.37	0.00	458.04	0.112	0.12	8.844	A
3	524.11	522.38	32.28	0.00	901.76	0.581	1.36	9.444	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	779.52	754.06	60.16	0.00	823.70	0.946	9.41	41.227	E
2	62.76	62.50	673.11	0.00	390.85	0.161	0.19	10.947	B
3	641.89	637.73	39.48	0.00	896.59	0.716	2.40	13.683	B

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	779.52	771.32	60.53	0.00	823.47	0.947	11.46	56.376	F
2	62.76	62.73	688.52	0.00	381.41	0.165	0.19	11.294	B
3	641.89	641.66	39.62	0.00	896.49	0.716	2.46	14.092	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	636.48	668.00	49.83	0.00	830.17	0.767	3.58	25.516	D
2	51.24	51.48	596.30	0.00	437.88	0.117	0.13	9.322	A
3	524.11	528.24	32.52	0.00	901.59	0.581	1.42	9.747	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	533.02	540.03	41.58	0.00	835.34	0.638	1.82	12.465	B
2	42.91	43.08	482.06	0.00	507.82	0.085	0.09	7.748	A
3	438.91	440.78	27.21	0.00	905.40	0.485	0.96	7.779	A

(Default Analysis Set) - 2030 Background Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Background Flows, PM	2030 Background Flows	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	22.74	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	649.00	100.000
2	ONE HOUR	✓	114.00	100.000
3	ONE HOUR	✓	634.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	488.60	488.60		
16:45-17:00	2	85.83	85.83		
16:45-17:00	3	477.31	477.31		
17:00-17:15	1	583.44	583.44		
17:00-17:15	2	102.48	102.48		
17:00-17:15	3	569.95	569.95		
17:15-17:30	1	714.56	714.56		
17:15-17:30	2	125.52	125.52		
17:15-17:30	3	698.05	698.05		
17:30-17:45	1	714.56	714.56		
17:30-17:45	2	125.52	125.52		
17:30-17:45	3	698.05	698.05		
17:45-18:00	1	583.44	583.44		
17:45-18:00	2	102.48	102.48		
17:45-18:00	3	569.95	569.95		
18:00-18:15	1	488.60	488.60		
18:00-18:15	2	85.83	85.83		
18:00-18:15	3	477.31	477.31		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	44.000	605.000
	2	59.000	0.000	55.000
	3	605.000	29.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.07	0.93
	2	0.52	0.00	0.48
	3	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.85	27.35	5.15	D
2	0.32	13.31	0.46	B
3	0.79	19.72	3.68	C

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	488.60	483.30	21.63	0.00	847.84	0.576	1.33	9.740	A
2	85.83	85.06	450.53	0.00	527.12	0.163	0.19	8.130	A
3	477.31	472.81	44.02	0.00	893.33	0.534	1.12	8.473	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	583.44	580.21	25.96	0.00	845.13	0.690	2.13	13.420	B
2	102.48	102.16	540.87	0.00	471.81	0.217	0.27	9.729	A
3	569.95	567.49	52.87	0.00	886.98	0.643	1.74	11.177	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	714.56	703.90	31.60	0.00	841.59	0.849	4.80	24.392	C
2	125.52	124.83	656.18	0.00	401.22	0.313	0.45	12.993	B
3	698.05	690.89	64.60	0.00	878.56	0.795	3.53	18.492	C

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	714.56	713.17	31.90	0.00	841.40	0.849	5.15	27.355	D
2	125.52	125.47	664.82	0.00	395.92	0.317	0.46	13.307	B
3	698.05	697.43	64.94	0.00	878.32	0.795	3.68	19.723	C

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	583.44	594.68	26.40	0.00	844.85	0.691	2.34	14.979	B
2	102.48	103.16	554.36	0.00	463.55	0.221	0.29	10.007	B
3	569.95	577.25	53.39	0.00	886.60	0.643	1.86	11.897	B

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	488.60	492.37	21.96	0.00	847.63	0.576	1.40	10.239	B
2	85.83	86.18	458.98	0.00	521.95	0.164	0.20	8.267	A
3	477.31	480.06	44.60	0.00	892.91	0.535	1.17	8.778	A

(Default Analysis Set) - 2020 Background Plus Development Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Background Plus Development Flows, AM	2020 Background Plus Development Flows	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	19.65	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	620.00	100.000
2	ONE HOUR	✓	144.00	100.000
3	ONE HOUR	✓	605.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	1	466.77	466.77		
08:00-08:15	2	108.41	108.41		
08:00-08:15	3	455.48	455.48		
08:15-08:30	1	557.37	557.37		
08:15-08:30	2	129.45	129.45		
08:15-08:30	3	543.88	543.88		
08:30-08:45	1	682.63	682.63		
08:30-08:45	2	158.55	158.55		
08:30-08:45	3	666.12	666.12		
08:45-09:00	1	682.63	682.63		
08:45-09:00	2	158.55	158.55		
08:45-09:00	3	666.12	666.12		
09:00-09:15	1	557.37	557.37		
09:00-09:15	2	129.45	129.45		
09:00-09:15	3	543.88	543.88		
09:15-09:30	1	466.77	466.77		
09:15-09:30	2	108.41	108.41		
09:15-09:30	3	455.48	455.48		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	47.000	573.000
	2	70.000	0.000	74.000
	3	568.000	37.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.08	0.92
	2	0.49	0.00	0.51
	3	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.82	23.03	4.18	C
2	0.38	13.91	0.60	B
3	0.77	17.55	3.15	C

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	466.77	461.93	27.60	0.00	844.10	0.553	1.21	9.307	A
2	108.41	107.42	426.92	0.00	541.58	0.200	0.25	8.273	A
3	455.48	451.34	52.22	0.00	887.45	0.513	1.03	8.180	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	557.37	554.63	33.13	0.00	840.63	0.663	1.89	12.462	B
2	129.45	129.02	512.58	0.00	489.13	0.265	0.35	9.985	A
3	543.88	541.73	62.72	0.00	879.91	0.618	1.57	10.574	B

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	682.63	674.36	40.38	0.00	836.10	0.816	3.96	21.212	C
2	158.55	157.61	623.24	0.00	421.38	0.376	0.59	13.599	B
3	666.12	660.25	76.62	0.00	869.94	0.766	3.04	16.703	C

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	682.63	681.77	40.71	0.00	835.89	0.817	4.18	23.028	C
2	158.55	158.49	630.09	0.00	417.19	0.380	0.60	13.909	B
3	666.12	665.68	77.04	0.00	869.63	0.766	3.15	17.550	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	557.37	565.89	33.62	0.00	840.33	0.663	2.05	13.495	B
2	129.45	130.38	522.99	0.00	482.76	0.268	0.37	10.242	B
3	543.88	549.79	63.38	0.00	879.44	0.618	1.67	11.109	B

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	466.77	469.90	28.00	0.00	843.85	0.553	1.27	9.705	A
2	108.41	108.88	434.27	0.00	537.08	0.202	0.26	8.416	A
3	455.48	457.85	52.93	0.00	886.94	0.514	1.08	8.437	A

(Default Analysis Set) - 2020 Background Plus Development Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2020 Background Plus Development Flows, PM	2020 Background Plus Development Flows	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	27.84	D

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	668.00	100.000
2	ONE HOUR	✓	77.00	100.000
3	ONE HOUR	✓	564.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	502.91	502.91		
16:45-17:00	2	57.97	57.97		
16:45-17:00	3	424.61	424.61		
17:00-17:15	1	600.52	600.52		
17:00-17:15	2	69.22	69.22		
17:00-17:15	3	507.02	507.02		
17:15-17:30	1	735.48	735.48		
17:15-17:30	2	84.78	84.78		
17:15-17:30	3	620.98	620.98		
17:30-17:45	1	735.48	735.48		
17:30-17:45	2	84.78	84.78		
17:30-17:45	3	620.98	620.98		
17:45-18:00	1	600.52	600.52		
17:45-18:00	2	69.22	69.22		
17:45-18:00	3	507.02	507.02		
18:00-18:15	1	502.91	502.91		
18:00-18:15	2	57.97	57.97		
18:00-18:15	3	424.61	424.61		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	86.000	582.000
	2	43.000	0.000	34.000
	3	489.000	75.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.13	0.87
	2	0.56	0.00	0.44
	3	0.87	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.91	42.05	8.02	E
2	0.21	10.97	0.26	B
3	0.70	13.30	2.25	B

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	502.91	496.87	56.00	0.00	826.31	0.609	1.51	10.741	B
2	57.97	57.49	432.90	0.00	537.91	0.108	0.12	7.485	A
3	424.61	421.11	32.11	0.00	901.88	0.471	0.88	7.435	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	600.52	596.21	67.21	0.00	819.29	0.733	2.58	15.823	C
2	69.22	69.04	519.46	0.00	484.92	0.143	0.16	8.652	A
3	507.02	505.44	38.56	0.00	897.25	0.565	1.27	9.149	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	735.48	717.69	82.08	0.00	809.97	0.908	7.03	33.771	D
2	84.78	84.44	625.29	0.00	420.13	0.202	0.25	10.713	B
3	620.98	617.26	47.16	0.00	891.08	0.697	2.20	12.968	B

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	735.48	731.54	82.55	0.00	809.68	0.908	8.02	42.054	E
2	84.78	84.75	637.36	0.00	412.74	0.205	0.26	10.974	B
3	620.98	620.78	47.33	0.00	890.96	0.697	2.25	13.299	B

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	600.52	620.86	67.91	0.00	818.85	0.733	2.93	19.765	C
2	69.22	69.55	540.93	0.00	471.78	0.147	0.17	8.957	A
3	507.02	510.69	38.84	0.00	897.05	0.565	1.33	9.405	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	502.91	508.22	56.69	0.00	825.88	0.609	1.60	11.516	B
2	57.97	58.17	442.79	0.00	531.86	0.109	0.12	7.605	A
3	424.61	426.31	32.49	0.00	901.61	0.471	0.90	7.603	A

(Default Analysis Set) - 2030 Background Plus Development Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Background Plus Development Flows, AM	2030 Background Plus Development Flows	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	41.18	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	715.00	100.000
2	ONE HOUR	✓	97.00	100.000
3	ONE HOUR	✓	594.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
08:00-08:15	1	538.29	538.29		
08:00-08:15	2	73.03	73.03		
08:00-08:15	3	447.19	447.19		
08:15-08:30	1	642.77	642.77		
08:15-08:30	2	87.20	87.20		
08:15-08:30	3	533.99	533.99		
08:30-08:45	1	787.23	787.23		
08:30-08:45	2	106.80	106.80		
08:30-08:45	3	654.01	654.01		
08:45-09:00	1	787.23	787.23		
08:45-09:00	2	106.80	106.80		
08:45-09:00	3	654.01	654.01		
09:00-09:15	1	642.77	642.77		
09:00-09:15	2	87.20	87.20		
09:00-09:15	3	533.99	533.99		
09:15-09:30	1	538.29	538.29		
09:15-09:30	2	73.03	73.03		
09:15-09:30	3	447.19	447.19		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	83.000	632.000
	2	52.000	0.000	45.000
	3	528.000	66.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.12	0.88
	2	0.54	0.00	0.46
	3	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.96	66.27	13.77	F
2	0.28	13.01	0.38	B
3	0.74	15.58	2.76	C

Main Results for each time segment

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	538.29	531.19	49.25	0.00	830.54	0.648	1.77	11.766	B
2	73.03	72.37	469.53	0.00	515.49	0.142	0.16	8.113	A
3	447.19	443.29	38.80	0.00	897.08	0.499	0.98	7.869	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	642.77	636.86	59.12	0.00	824.36	0.780	3.25	18.606	C
2	87.20	86.93	562.93	0.00	458.31	0.190	0.23	9.687	A
3	533.99	532.08	46.60	0.00	891.48	0.599	1.46	9.961	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	787.23	756.96	72.12	0.00	816.21	0.964	10.82	45.961	E
2	106.80	106.26	669.09	0.00	393.31	0.272	0.37	12.517	B
3	654.01	649.11	56.97	0.00	884.04	0.740	2.68	15.007	C

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	787.23	775.43	72.63	0.00	815.89	0.965	13.77	66.267	F
2	106.80	106.74	685.42	0.00	383.31	0.279	0.38	13.013	B
3	654.01	653.70	57.22	0.00	883.86	0.740	2.76	15.580	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	642.77	682.16	59.88	0.00	823.88	0.780	3.92	30.367	D
2	87.20	87.70	602.97	0.00	433.79	0.201	0.26	10.416	B
3	533.99	538.88	47.02	0.00	891.18	0.599	1.53	10.357	B

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	538.29	546.32	49.92	0.00	830.12	0.648	1.91	13.020	B
2	73.03	73.37	482.90	0.00	507.30	0.144	0.17	8.304	A
3	447.19	449.29	39.33	0.00	896.70	0.499	1.01	8.085	A

(Default Analysis Set) - 2030 Background Plus Development Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2030 Background Plus Development Flows, PM	2030 Background Plus Development Flows	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	28.38	D

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
1	1	Pendle Road north	
2	2	Highmoor Park	
3	3	Pendle Road south	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	0.00	99999.00
2	0.00	99999.00
3	0.00	99999.00

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	4.90	4.90	4.90	0.00	17.90	13.90	0.00	
2	3.40	3.40	4.30	6.00	18.00	15.40	0.00	
3	3.80	3.80	4.50	2.00	18.90	17.40	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.626	861.386
2		(calculated)	(calculated)	0.612	802.960
3		(calculated)	(calculated)	0.718	924.927

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	665.00	100.000
2	ONE HOUR	✓	137.00	100.000
3	ONE HOUR	✓	658.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	500.65	500.65		
16:45-17:00	2	103.14	103.14		
16:45-17:00	3	495.38	495.38		
17:00-17:15	1	597.82	597.82		
17:00-17:15	2	123.16	123.16		
17:00-17:15	3	591.53	591.53		
17:15-17:30	1	732.18	732.18		
17:15-17:30	2	150.84	150.84		
17:15-17:30	3	724.47	724.47		
17:30-17:45	1	732.18	732.18		
17:30-17:45	2	150.84	150.84		
17:30-17:45	3	724.47	724.47		
17:45-18:00	1	597.82	597.82		
17:45-18:00	2	123.16	123.16		
17:45-18:00	3	591.53	591.53		
18:00-18:15	1	500.65	500.65		
18:00-18:15	2	103.14	103.14		
18:00-18:15	3	495.38	495.38		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.000	60.000	605.000
	2	68.000	0.000	69.000
	3	605.000	53.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.09	0.91
	2	0.50	0.00	0.50
	3	0.92	0.08	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		1	2	3
From	1	1.000	1.000	1.000
	2	1.000	1.000	1.000
	3	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		1	2	3
From	1	0.0	0.0	0.0
	2	0.0	0.0	0.0
	3	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.89	35.61	6.79	E
2	0.38	14.63	0.60	B
3	0.83	23.93	4.59	C

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	500.65	494.86	39.50	0.00	836.64	0.598	1.45	10.366	B
2	103.14	102.18	450.21	0.00	527.32	0.196	0.24	8.450	A
3	495.38	490.45	50.72	0.00	888.52	0.558	1.23	8.938	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	597.82	593.93	47.41	0.00	831.69	0.719	2.42	14.900	B
2	123.16	122.73	540.34	0.00	472.14	0.261	0.35	10.291	B
3	591.53	588.60	60.92	0.00	881.20	0.671	1.97	12.177	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	732.18	717.43	57.59	0.00	825.31	0.887	6.11	29.867	D
2	150.84	149.90	652.70	0.00	403.35	0.374	0.58	14.150	B
3	724.47	715.01	74.40	0.00	871.52	0.831	4.33	21.757	C

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	732.18	729.48	58.27	0.00	824.89	0.888	6.79	35.608	E
2	150.84	150.76	663.66	0.00	396.63	0.380	0.60	14.634	B
3	724.47	723.42	74.83	0.00	871.22	0.832	4.59	23.932	C

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	597.82	614.11	48.44	0.00	831.05	0.719	2.71	17.683	C
2	123.16	124.09	558.70	0.00	460.89	0.267	0.37	10.717	B
3	591.53	601.39	61.59	0.00	880.72	0.672	2.13	13.308	B

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	500.65	505.36	40.17	0.00	836.23	0.599	1.53	11.031	B
2	103.14	103.62	459.76	0.00	521.47	0.198	0.25	8.626	A
3	495.38	498.73	51.43	0.00	888.01	0.558	1.29	9.325	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]

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

Filename: A59 Pendle Rd Clitheroe Rd Rbt.arc8
Path: G:\My Drive\SLS\Projects\A P351 Alan Davies\P 351_369 High Moor\Analysis\Jnts
Report generation date: 12/12/2019 11:52:03

Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC
	A1 - 2020 Background Flows			
Arm 1	0.98	0.50	0.83	0.45
Arm 2	0.64	0.39	0.79	0.44
Arm 3	1.48	0.60	1.39	0.58
Arm 4	46.57	1.09	5.68	0.86
	A1 - 2020 Background Plus Development Flows			
Arm 1	0.99	0.50	0.84	0.46
Arm 2	0.65	0.40	0.81	0.45
Arm 3	1.51	0.60	1.46	0.59
Arm 4	58.70	1.13	6.53	0.88
	A1 - 2030 Background Flows			
Arm 1	1.03	0.51	1.13	0.53
Arm 2	1.11	0.53	0.78	0.44
Arm 3	1.59	0.62	2.00	0.67
Arm 4	32.05	1.05	55.44	1.12
	A1 - 2030 Background Plus Development Flows			
Arm 1	1.04	0.51	1.14	0.53
Arm 2	1.13	0.54	0.79	0.45
Arm 3	1.62	0.62	2.11	0.68
Arm 4	43.27	1.09	63.30	1.15

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

"D1 - 2020 Background Flows, AM " model duration: 07:45 - 09:15
"D2 - 2020 Background Flows, PM" model duration: 16:30 - 18:00
"D3 - 2030 Background Flows, AM" model duration: 07:45 - 09:15
"D4 - 2030 Background Flows, PM" model duration: 16:30 - 18:00
"D5 - 2020 Background Plus Development Flows, AM" model duration: 07:45 - 09:15
"D6 - 2020 Background Plus Development Flows, PM" model duration: 16:30 - 18:00
"D7 - 2030 Background Plus Development Flows, AM" model duration: 07:45 - 09:15
"D8 - 2030 Background Plus Development Flows, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 12/12/2019 11:51:52

File summary

Title	(untitled)
Location	
Site Number	
Date	06/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Tony
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - 2020 Background Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2020 Background Flows, AM	2020 Background Flows	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				53.86	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	PCU Factors	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	735.00	100.000
2	ONE HOUR	✓	210.00	100.000
3	ONE HOUR	✓	1063.00	100.000
4	ONE HOUR	✓	790.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	553.35	553.35		
07:45-08:00	2	158.10	158.10		
07:45-08:00	3	800.28	800.28		
07:45-08:00	4	594.75	594.75		
08:00-08:15	1	660.75	660.75		
08:00-08:15	2	188.79	188.79		
08:00-08:15	3	955.62	955.62		
08:00-08:15	4	710.19	710.19		
08:15-08:30	1	809.25	809.25		
08:15-08:30	2	231.21	231.21		
08:15-08:30	3	1170.38	1170.38		
08:15-08:30	4	869.81	869.81		
08:30-08:45	1	809.25	809.25		
08:30-08:45	2	231.21	231.21		
08:30-08:45	3	1170.38	1170.38		
08:30-08:45	4	869.81	869.81		
08:45-09:00	1	660.75	660.75		
08:45-09:00	2	188.79	188.79		
08:45-09:00	3	955.62	955.62		
08:45-09:00	4	710.19	710.19		
09:00-09:15	1	553.35	553.35		
09:00-09:15	2	158.10	158.10		
09:00-09:15	3	800.28	800.28		
09:00-09:15	4	594.75	594.75		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	68.000	606.000	61.000
	2	73.000	0.000	10.000	127.000
	3	614.000	10.000	0.000	439.000
	4	72.000	204.000	514.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.09	0.82	0.08
	2	0.35	0.00	0.05	0.60
	3	0.58	0.01	0.00	0.41
	4	0.09	0.26	0.65	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.50	4.40	0.98	A	674.45	1011.67	63.27	3.75	0.70	63.27	3.75
2	0.39	10.06	0.64	B	192.70	289.05	38.49	7.99	0.43	38.50	7.99
3	0.60	4.58	1.48	A	975.43	1463.14	90.91	3.73	1.01	90.92	3.73
4	1.09	177.85	46.57	F	724.92	1087.38	1367.64	75.46	15.20	1367.76	75.47

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	553.35	138.34	551.51	568.89	541.53	0.00	1749.58	1743.39	0.316	0.00	0.46	3.001	A
2	158.10	39.52	157.07	210.26	882.78	0.00	769.62	237.32	0.205	0.00	0.26	5.867	A
3	800.28	200.07	797.67	844.48	195.36	0.00	2016.97	1902.65	0.397	0.00	0.65	2.946	A
4	594.75	148.69	587.57	470.18	522.85	0.00	914.90	586.66	0.650	0.00	1.80	10.776	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	660.75	165.19	660.02	680.72	646.15	0.00	1681.95	1743.39	0.393	0.46	0.64	3.521	A
2	188.79	47.20	188.31	251.08	1055.09	0.00	684.77	237.32	0.276	0.26	0.38	7.243	A
3	955.62	238.90	954.57	1009.28	234.12	0.00	1991.71	1902.65	0.480	0.65	0.92	3.468	A
4	710.19	177.55	701.06	562.88	625.81	0.00	864.95	586.66	0.821	1.80	4.08	20.870	C

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	809.25	202.31	807.94	825.66	717.89	0.00	1635.57	1743.39	0.495	0.64	0.97	4.342	A
2	231.21	57.80	230.22	286.58	1239.25	0.00	594.09	237.32	0.389	0.38	0.63	9.865	A
3	1170.38	292.60	1168.17	1183.16	286.31	0.00	1957.68	1902.65	0.598	0.92	1.47	4.547	A
4	869.81	217.45	777.79	688.71	765.77	0.00	797.04	586.66	1.091	4.08	27.08	87.307	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	809.25	202.31	809.20	828.53	730.71	0.00	1627.29	1743.39	0.497	0.97	0.98	4.400	A
2	231.21	57.80	231.16	290.36	1249.55	0.00	589.02	237.32	0.393	0.63	0.64	10.056	B
3	1170.38	292.60	1170.35	1193.40	287.31	0.00	1957.02	1902.65	0.598	1.47	1.48	4.576	A
4	869.81	217.45	791.87	690.29	767.37	0.00	796.27	586.66	1.092	27.08	46.57	177.851	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	660.75	165.19	661.84	696.23	777.58	0.00	1596.99	1743.39	0.414	0.98	0.71	3.853	A
2	188.79	47.20	189.64	288.61	1150.81	0.00	637.64	237.32	0.296	0.64	0.43	8.050	A
3	955.62	238.90	957.81	1104.91	235.54	0.00	1990.78	1902.65	0.480	1.48	0.93	3.494	A
4	710.19	177.55	845.64	565.17	628.17	0.00	863.80	586.66	0.822	46.57	12.70	132.238	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	553.35	138.34	554.28	576.18	587.22	0.00	1720.04	1743.39	0.322	0.71	0.48	3.089	A
2	158.10	39.52	158.73	223.52	917.98	0.00	752.29	237.32	0.210	0.43	0.27	6.070	A
3	800.28	200.07	801.35	879.54	197.17	0.00	2015.79	1902.65	0.397	0.93	0.66	2.968	A
4	594.75	148.69	637.81	472.94	525.59	0.00	913.57	586.66	0.651	12.70	1.94	15.018	C

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.76	0.45	3.001	A	A
2	3.73	0.25	5.867	A	A
3	9.60	0.64	2.946	A	A
4	24.82	1.65	10.776	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.47	0.63	3.521	A	A
2	5.49	0.37	7.243	A	A
3	13.46	0.90	3.468	A	A
4	53.41	3.56	20.870	C	C

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.19	0.95	4.342	A	A
2	9.02	0.60	9.865	A	A
3	21.34	1.42	4.547	A	A
4	246.89	16.46	87.307	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.68	0.98	4.400	A	A
2	9.52	0.63	10.056	B	B
3	22.12	1.47	4.576	A	A
4	553.53	36.90	177.851	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.89	0.73	3.853	A	A
2	6.60	0.44	8.050	A	A
3	14.29	0.95	3.494	A	A
4	444.52	29.63	132.238	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.28	0.49	3.089	A	A
2	4.14	0.28	6.070	A	A
3	10.11	0.67	2.968	A	A
4	44.47	2.96	15.018	C	B

(Default Analysis Set) - 2020 Background Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2020 Background Flows, PM	2020 Background Flows	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				11.41	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	693.00	100.000
2	ONE HOUR	✓	245.00	100.000
3	ONE HOUR	✓	1019.00	100.000
4	ONE HOUR	✓	638.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	1	521.73	521.73		
16:30-16:45	2	184.45	184.45		
16:30-16:45	3	767.16	767.16		
16:30-16:45	4	480.32	480.32		
16:45-17:00	1	622.99	622.99		
16:45-17:00	2	220.25	220.25		
16:45-17:00	3	916.06	916.06		
16:45-17:00	4	573.55	573.55		
17:00-17:15	1	763.01	763.01		
17:00-17:15	2	269.75	269.75		
17:00-17:15	3	1121.94	1121.94		
17:00-17:15	4	702.45	702.45		
17:15-17:30	1	763.01	763.01		
17:15-17:30	2	269.75	269.75		
17:15-17:30	3	1121.94	1121.94		
17:15-17:30	4	702.45	702.45		
17:30-17:45	1	622.99	622.99		
17:30-17:45	2	220.25	220.25		
17:30-17:45	3	916.06	916.06		
17:30-17:45	4	573.55	573.55		
17:45-18:00	1	521.73	521.73		
17:45-18:00	2	184.45	184.45		
17:45-18:00	3	767.16	767.16		
17:45-18:00	4	480.32	480.32		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	46.000	574.000	73.000
	2	58.000	0.000	15.000	172.000
	3	597.000	11.000	0.000	411.000
	4	58.000	124.000	456.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.07	0.83	0.11
	2	0.24	0.00	0.06	0.70
	3	0.59	0.01	0.00	0.40
	4	0.09	0.19	0.71	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.45	3.92	0.83	A	635.91	953.86	53.07	3.34	0.59	53.08	3.34
2	0.44	10.67	0.79	B	224.82	337.22	45.32	8.06	0.50	45.32	8.06
3	0.58	4.47	1.39	A	935.05	1402.58	85.68	3.67	0.95	85.68	3.67
4	0.86	30.89	5.68	D	585.44	878.16	238.69	16.31	2.65	238.73	16.31

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	521.73	130.43	520.12	534.66	441.06	0.00	1814.52	1736.92	0.288	0.00	0.40	2.777	A
2	184.45	46.11	183.26	135.31	825.87	0.00	797.64	196.54	0.231	0.00	0.30	5.849	A
3	767.16	191.79	764.67	782.30	226.82	0.00	1996.46	1904.76	0.384	0.00	0.62	2.916	A
4	480.32	120.08	476.09	491.86	499.64	0.00	926.16	594.60	0.519	0.00	1.06	7.927	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	622.99	155.75	622.42	639.99	528.53	0.00	1757.98	1736.92	0.354	0.40	0.55	3.168	A
2	220.25	55.06	219.69	162.08	988.87	0.00	717.38	196.54	0.307	0.30	0.44	7.226	A
3	916.06	229.02	915.08	936.75	271.81	0.00	1967.13	1904.76	0.466	0.62	0.87	3.418	A
4	573.55	143.39	570.51	588.88	598.00	0.00	878.44	594.60	0.653	1.06	1.82	11.576	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	763.01	190.75	761.91	782.28	638.36	0.00	1686.98	1736.92	0.452	0.55	0.82	3.886	A
2	269.75	67.44	268.41	196.56	1203.72	0.00	611.59	196.54	0.441	0.44	0.77	10.448	B
3	1121.94	280.48	1119.90	1139.89	332.23	0.00	1927.74	1904.76	0.582	0.87	1.38	4.444	A
4	702.45	175.61	688.89	720.39	731.74	0.00	813.55	594.60	0.863	1.82	5.21	26.409	D

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	763.01	190.75	762.97	784.82	648.98	0.00	1680.12	1736.92	0.454	0.82	0.83	3.925	A
2	269.75	67.44	269.69	198.91	1213.04	0.00	607.00	196.54	0.444	0.77	0.79	10.667	B
3	1121.94	280.48	1121.90	1149.18	333.55	0.00	1926.88	1904.76	0.582	1.38	1.39	4.472	A
4	702.45	175.61	700.55	722.21	733.24	0.00	812.82	594.60	0.864	5.21	5.68	30.893	D

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	622.99	155.75	624.07	643.83	544.85	0.00	1747.43	1736.92	0.357	0.83	0.56	3.207	A
2	220.25	55.06	221.59	165.70	1003.23	0.00	710.31	196.54	0.310	0.79	0.45	7.387	A
3	916.06	229.02	918.09	951.05	273.76	0.00	1965.86	1904.76	0.466	1.39	0.88	3.441	A
4	573.55	143.39	588.44	591.60	600.25	0.00	877.35	594.60	0.654	5.68	1.96	13.054	B

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	521.73	130.43	522.33	537.83	448.07	0.00	1809.99	1736.92	0.288	0.56	0.41	2.798	A
2	184.45	46.11	185.05	136.98	833.41	0.00	793.93	196.54	0.232	0.45	0.31	5.917	A
3	767.16	191.79	768.16	789.72	228.74	0.00	1995.21	1904.76	0.385	0.88	0.63	2.935	A
4	480.32	120.08	483.75	494.76	502.14	0.00	924.95	594.60	0.519	1.96	1.10	8.223	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.91	0.39	2.777	A	A
2	4.33	0.29	5.849	A	A
3	9.11	0.61	2.916	A	A
4	15.03	1.00	7.927	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.06	0.54	3.168	A	A
2	6.39	0.43	7.226	A	A
3	12.73	0.85	3.418	A	A
4	25.57	1.70	11.576	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.02	0.80	3.886	A	A
2	11.08	0.74	10.448	B	B
3	20.03	1.34	4.444	A	A
4	65.12	4.34	26.409	D	C

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.37	0.82	3.925	A	A
2	11.76	0.78	10.667	B	B
3	20.73	1.38	4.472	A	A
4	82.27	5.48	30.893	D	C

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.52	0.57	3.207	A	A
2	7.07	0.47	7.387	A	A
3	13.49	0.90	3.441	A	A
4	33.39	2.23	13.054	B	B

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.19	0.41	2.798	A	A
2	4.70	0.31	5.917	A	A
3	9.58	0.64	2.935	A	A
4	17.30	1.15	8.223	A	A

(Default Analysis Set) - 2030 Background Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2030 Background Flows, AM	2030 Background Flows	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				39.44	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	758.00	100.000
2	ONE HOUR	✓	263.00	100.000
3	ONE HOUR	✓	1066.00	100.000
4	ONE HOUR	✓	745.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	570.66	570.66		
07:45-08:00	2	198.00	198.00		
07:45-08:00	3	802.54	802.54		
07:45-08:00	4	560.88	560.88		
08:00-08:15	1	681.43	681.43		
08:00-08:15	2	236.43	236.43		
08:00-08:15	3	958.31	958.31		
08:00-08:15	4	669.74	669.74		
08:15-08:30	1	834.57	834.57		
08:15-08:30	2	289.57	289.57		
08:15-08:30	3	1173.69	1173.69		
08:15-08:30	4	820.26	820.26		
08:30-08:45	1	834.57	834.57		
08:30-08:45	2	289.57	289.57		
08:30-08:45	3	1173.69	1173.69		
08:30-08:45	4	820.26	820.26		
08:45-09:00	1	681.43	681.43		
08:45-09:00	2	236.43	236.43		
08:45-09:00	3	958.31	958.31		
08:45-09:00	4	669.74	669.74		
09:00-09:15	1	570.66	570.66		
09:00-09:15	2	198.00	198.00		
09:00-09:15	3	802.54	802.54		
09:00-09:15	4	560.88	560.88		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	50.000	624.000	84.000
	2	63.000	0.000	17.000	183.000
	3	650.000	12.000	0.000	404.000
	4	66.000	138.000	541.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.07	0.82	0.11
	2	0.24	0.00	0.06	0.70
	3	0.61	0.01	0.00	0.38
	4	0.09	0.19	0.73	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.51	4.49	1.03	A	695.55	1043.33	65.47	3.76	0.73	65.47	3.77
2	0.53	14.10	1.11	B	241.33	362.00	60.68	10.06	0.67	60.69	10.06
3	0.62	4.90	1.59	A	978.18	1467.27	95.98	3.92	1.07	95.99	3.93
4	1.05	133.38	32.05	F	683.63	1025.44	892.44	52.22	9.92	892.53	52.22

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	570.66	142.67	568.76	583.92	514.42	0.00	1767.10	1747.80	0.323	0.00	0.47	2.998	A
2	198.00	49.50	196.57	149.24	933.94	0.00	744.43	195.30	0.266	0.00	0.36	6.553	A
3	802.54	200.64	799.84	883.62	246.89	0.00	1983.38	1898.97	0.405	0.00	0.68	3.036	A
4	560.88	140.22	554.54	502.93	543.80	0.00	904.74	573.72	0.620	0.00	1.58	10.106	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	681.43	170.36	680.67	698.80	614.73	0.00	1702.26	1747.80	0.400	0.47	0.66	3.522	A
2	236.43	59.11	235.64	178.42	1116.98	0.00	654.30	195.30	0.361	0.36	0.56	8.582	A
3	958.31	239.58	957.19	1056.78	295.84	0.00	1951.47	1898.97	0.491	0.68	0.96	3.618	A
4	669.74	167.43	662.66	602.15	650.87	0.00	852.79	573.72	0.785	1.58	3.35	18.274	C

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	834.57	208.64	833.16	849.80	700.17	0.00	1647.03	1747.80	0.507	0.66	1.02	4.416	A
2	289.57	72.39	287.51	207.76	1325.56	0.00	551.59	195.30	0.525	0.56	1.07	13.526	B
3	1173.69	293.42	1171.22	1251.81	361.26	0.00	1908.81	1898.97	0.615	0.96	1.57	4.864	A
4	820.26	205.07	753.76	736.26	796.21	0.00	782.27	573.72	1.049	3.35	19.98	71.044	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	834.57	208.64	834.51	853.35	716.78	0.00	1636.29	1747.80	0.510	1.02	1.03	4.489	A
2	289.57	72.39	289.41	211.25	1340.04	0.00	544.46	195.30	0.532	1.07	1.11	14.097	B
3	1173.69	293.42	1173.64	1266.27	363.18	0.00	1907.56	1898.97	0.615	1.57	1.59	4.905	A
4	820.26	205.07	771.96	738.65	798.17	0.00	781.32	573.72	1.050	19.98	32.05	133.377	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	681.43	170.36	682.68	712.05	722.05	0.00	1632.89	1747.80	0.417	1.03	0.72	3.792	A
2	236.43	59.11	238.31	200.40	1204.33	0.00	611.29	195.30	0.387	1.11	0.64	9.699	A
3	958.31	239.58	960.77	1144.08	298.56	0.00	1949.69	1898.97	0.492	1.59	0.97	3.648	A
4	669.74	167.43	780.37	605.59	653.73	0.00	851.40	573.72	0.787	32.05	4.40	70.674	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	570.66	142.67	571.61	588.40	530.11	0.00	1756.95	1747.80	0.325	0.72	0.48	3.041	A
2	198.00	49.50	199.08	152.65	949.07	0.00	736.98	195.30	0.269	0.64	0.37	6.707	A
3	802.54	200.64	803.70	898.60	249.56	0.00	1981.64	1898.97	0.405	0.97	0.68	3.058	A
4	560.88	140.22	571.72	506.46	546.80	0.00	903.28	573.72	0.621	4.40	1.69	11.192	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.97	0.46	2.998	A	A
2	5.19	0.35	6.553	A	A
3	9.91	0.66	3.036	A	A
4	22.05	1.47	10.106	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.76	0.65	3.522	A	A
2	8.08	0.54	8.582	A	A
3	14.06	0.94	3.618	A	A
4	44.87	2.99	18.274	C	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.86	0.99	4.416	A	A
2	15.12	1.01	13.526	B	B
3	22.82	1.52	4.864	A	A
4	190.79	12.72	71.044	F	E

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.43	1.03	4.489	A	A
2	16.48	1.10	14.097	B	B
3	23.74	1.58	4.905	A	A
4	392.12	26.14	133.377	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.06	0.74	3.792	A	A
2	10.07	0.67	9.699	A	A
3	15.00	1.00	3.648	A	A
4	214.78	14.32	70.674	F	E

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.38	0.49	3.041	A	A
2	5.75	0.38	6.707	A	A
3	10.46	0.70	3.058	A	A
4	27.83	1.86	11.192	B	B

(Default Analysis Set) - 2030 Background Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2030 Background Flows, PM	2030 Background Flows	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				60.17	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	796.00	100.000
2	ONE HOUR	✓	233.00	100.000
3	ONE HOUR	✓	1180.00	100.000
4	ONE HOUR	✓	776.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	1	599.27	599.27		
16:30-16:45	2	175.41	175.41		
16:30-16:45	3	888.37	888.37		
16:30-16:45	4	584.21	584.21		
16:45-17:00	1	715.59	715.59		
16:45-17:00	2	209.46	209.46		
16:45-17:00	3	1060.80	1060.80		
16:45-17:00	4	697.61	697.61		
17:00-17:15	1	876.41	876.41		
17:00-17:15	2	256.54	256.54		
17:00-17:15	3	1299.20	1299.20		
17:00-17:15	4	854.39	854.39		
17:15-17:30	1	876.41	876.41		
17:15-17:30	2	256.54	256.54		
17:15-17:30	3	1299.20	1299.20		
17:15-17:30	4	854.39	854.39		
17:30-17:45	1	715.59	715.59		
17:30-17:45	2	209.46	209.46		
17:30-17:45	3	1060.80	1060.80		
17:30-17:45	4	697.61	697.61		
17:45-18:00	1	599.27	599.27		
17:45-18:00	2	175.41	175.41		
17:45-18:00	3	888.37	888.37		
17:45-18:00	4	584.21	584.21		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	75.000	664.000	57.000
	2	80.000	0.000	11.000	142.000
	3	673.000	11.000	0.000	496.000
	4	71.000	219.000	486.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.09	0.83	0.07
	2	0.34	0.00	0.05	0.61
	3	0.57	0.01	0.00	0.42
	4	0.09	0.28	0.63	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.53	4.67	1.13	A	730.42	1095.64	72.19	3.95	0.80	72.20	3.95
2	0.44	11.13	0.78	B	213.80	320.71	46.23	8.65	0.51	46.24	8.65
3	0.67	5.58	2.00	A	1082.79	1624.18	116.72	4.31	1.30	116.73	4.31
4	1.12	214.83	55.44	F	712.07	1068.11	1705.44	95.80	18.95	1705.58	95.81

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	599.27	149.82	597.21	617.47	532.33	0.00	1755.52	1741.41	0.341	0.00	0.52	3.103	A
2	175.41	43.85	174.23	227.32	902.22	0.00	760.05	245.55	0.231	0.00	0.30	6.132	A
3	888.37	222.09	885.21	867.68	208.76	0.00	2008.24	1910.51	0.442	0.00	0.79	3.196	A
4	584.21	146.05	576.86	521.03	572.94	0.00	890.60	590.37	0.656	0.00	1.84	11.228	B

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	715.59	178.90	714.73	738.81	634.38	0.00	1689.56	1741.41	0.424	0.52	0.73	3.689	A
2	209.46	52.37	208.87	271.21	1077.90	0.00	673.54	245.55	0.311	0.30	0.45	7.737	A
3	1060.80	265.20	1059.38	1036.58	250.19	0.00	1981.23	1910.51	0.535	0.79	1.14	3.900	A
4	697.61	174.40	687.39	623.77	685.80	0.00	835.84	590.37	0.835	1.84	4.39	22.801	C

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	876.41	219.10	874.87	895.06	690.59	0.00	1653.22	1741.41	0.530	0.73	1.12	4.615	A
2	256.54	64.13	255.25	305.28	1260.18	0.00	583.79	245.55	0.439	0.45	0.77	10.914	B
3	1299.20	324.80	1295.87	1209.58	305.85	0.00	1944.94	1910.51	0.668	1.14	1.98	5.517	A
4	854.39	213.60	746.85	762.91	838.80	0.00	761.61	590.37	1.122	4.39	31.28	101.325	F

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	876.41	219.10	876.36	898.33	700.53	0.00	1646.79	1741.41	0.532	1.12	1.13	4.672	A
2	256.54	64.13	256.48	308.53	1268.36	0.00	579.76	245.55	0.442	0.77	0.78	11.130	B
3	1299.20	324.80	1299.13	1217.71	307.12	0.00	1944.11	1910.51	0.668	1.98	2.00	5.579	A
4	854.39	213.60	757.75	765.14	841.11	0.00	760.49	590.37	1.123	31.28	55.44	214.832	F

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	715.59	178.90	716.89	754.19	754.39	0.00	1611.98	1741.41	0.444	1.13	0.80	4.027	A
2	209.46	52.37	210.58	308.73	1162.55	0.00	631.86	245.55	0.332	0.78	0.50	8.569	A
3	1060.80	265.20	1064.12	1121.16	251.98	0.00	1980.06	1910.51	0.536	2.00	1.16	3.944	A
4	697.61	174.40	819.44	626.96	689.13	0.00	834.22	590.37	0.836	55.44	24.98	180.089	F

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	599.27	149.82	600.29	629.84	622.51	0.00	1697.23	1741.41	0.353	0.80	0.55	3.286	A
2	175.41	43.85	176.14	255.65	967.15	0.00	728.08	245.55	0.241	0.50	0.32	6.530	A
3	888.37	222.09	889.83	932.48	210.81	0.00	2006.90	1910.51	0.443	1.16	0.80	3.226	A
4	584.21	146.05	676.07	524.36	576.28	0.00	888.98	590.37	0.657	24.98	2.01	24.702	C

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.57	0.50	3.103	A	A
2	4.32	0.29	6.132	A	A
3	11.53	0.77	3.196	A	A
4	25.34	1.69	11.228	B	B

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.73	0.72	3.689	A	A
2	6.49	0.43	7.737	A	A
3	16.72	1.11	3.900	A	A
4	56.79	3.79	22.801	C	C

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.28	1.09	4.615	A	A
2	10.99	0.73	10.914	B	B
3	28.42	1.89	5.517	A	A
4	278.75	18.58	101.325	F	F

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.88	1.13	4.672	A	A
2	11.67	0.78	11.130	B	B
3	29.82	1.99	5.579	A	A
4	651.19	43.41	214.832	F	F

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.35	0.82	4.027	A	A
2	7.83	0.52	8.569	A	A
3	18.00	1.20	3.944	A	A
4	603.13	40.21	180.089	F	F

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.39	0.56	3.286	A	A
2	4.95	0.33	6.530	A	A
3	12.24	0.82	3.226	A	A
4	90.24	6.02	24.702	C	C

(Default Analysis Set) - 2020 Background Plus Development Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2020 Background Plus Development Flows, AM	2020 Background Plus Development Flows	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				65.97	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	736.00	100.000
2	ONE HOUR	✓	210.00	100.000
3	ONE HOUR	✓	1072.00	100.000
4	ONE HOUR	✓	814.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	554.10	554.10		
07:45-08:00	2	158.10	158.10		
07:45-08:00	3	807.06	807.06		
07:45-08:00	4	612.82	612.82		
08:00-08:15	1	661.65	661.65		
08:00-08:15	2	188.79	188.79		
08:00-08:15	3	963.71	963.71		
08:00-08:15	4	731.77	731.77		
08:15-08:30	1	810.35	810.35		
08:15-08:30	2	231.21	231.21		
08:15-08:30	3	1180.29	1180.29		
08:15-08:30	4	896.23	896.23		
08:30-08:45	1	810.35	810.35		
08:30-08:45	2	231.21	231.21		
08:30-08:45	3	1180.29	1180.29		
08:30-08:45	4	896.23	896.23		
08:45-09:00	1	661.65	661.65		
08:45-09:00	2	188.79	188.79		
08:45-09:00	3	963.71	963.71		
08:45-09:00	4	731.77	731.77		
09:00-09:15	1	554.10	554.10		
09:00-09:15	2	158.10	158.10		
09:00-09:15	3	807.06	807.06		
09:00-09:15	4	612.82	612.82		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	68.000	606.000	62.000
	2	73.000	0.000	10.000	127.000
	3	614.000	10.000	0.000	448.000
	4	75.000	204.000	535.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.09	0.82	0.08
	2	0.35	0.00	0.05	0.60
	3	0.57	0.01	0.00	0.42
	4	0.09	0.25	0.66	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.50	4.41	0.99	A	675.37	1013.05	63.98	3.79	0.71	63.99	3.79
2	0.40	10.16	0.65	B	192.70	289.05	39.15	8.13	0.43	39.15	8.13
3	0.60	4.64	1.51	A	983.69	1475.53	92.61	3.77	1.03	92.62	3.77
4	1.13	216.81	58.70	F	746.94	1120.41	1846.73	98.90	20.52	1846.88	98.90

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	554.10	138.52	552.24	571.07	556.77	0.00	1739.72	1740.99	0.319	0.00	0.47	3.032	A
2	158.10	39.52	157.06	210.15	898.86	0.00	761.70	234.79	0.208	0.00	0.26	5.944	A
3	807.06	201.76	804.40	859.82	196.10	0.00	2016.49	1902.94	0.400	0.00	0.66	2.964	A
4	612.82	153.21	605.01	477.67	522.83	0.00	914.91	591.56	0.670	0.00	1.95	11.350	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	661.65	165.41	660.90	683.22	663.27	0.00	1670.88	1740.99	0.396	0.47	0.65	3.563	A
2	188.79	47.20	188.29	250.66	1073.52	0.00	675.70	234.79	0.279	0.26	0.38	7.378	A
3	963.71	240.93	962.64	1026.81	235.00	0.00	1991.13	1902.94	0.484	0.66	0.93	3.497	A
4	731.77	182.94	720.69	571.84	625.79	0.00	864.95	591.56	0.846	1.95	4.72	23.317	C

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	810.35	202.59	809.05	826.88	721.70	0.00	1633.11	1740.99	0.496	0.65	0.98	4.361	A
2	231.21	57.80	230.21	281.93	1248.83	0.00	589.38	234.79	0.392	0.38	0.63	9.995	A
3	1180.29	295.07	1178.02	1191.63	287.40	0.00	1956.97	1902.94	0.603	0.93	1.50	4.607	A
4	896.23	224.06	782.84	699.68	765.74	0.00	797.06	591.56	1.124	4.72	33.07	101.810	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	810.35	202.59	810.31	829.49	731.57	0.00	1626.73	1740.99	0.498	0.98	0.99	4.409	A
2	231.21	57.80	231.17	284.79	1257.09	0.00	585.31	234.79	0.395	0.63	0.65	10.162	B
3	1180.29	295.07	1180.25	1199.84	288.42	0.00	1956.30	1902.94	0.603	1.50	1.51	4.638	A
4	896.23	224.06	793.69	701.30	767.37	0.00	796.26	591.56	1.126	33.07	58.70	216.813	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	661.65	165.41	662.74	697.45	780.07	0.00	1595.38	1740.99	0.415	0.99	0.71	3.865	A
2	188.79	47.20	189.65	283.09	1159.72	0.00	633.25	234.79	0.298	0.65	0.43	8.132	A
3	963.71	240.93	965.97	1112.92	236.45	0.00	1990.19	1902.94	0.484	1.51	0.95	3.524	A
4	731.77	182.94	849.32	574.21	628.20	0.00	863.78	591.56	0.847	58.70	29.32	189.357	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	554.10	138.52	554.96	584.52	662.53	0.00	1671.36	1740.99	0.332	0.71	0.50	3.226	A
2	158.10	39.52	158.69	239.62	977.87	0.00	722.80	234.79	0.219	0.43	0.28	6.390	A
3	807.06	201.76	808.15	938.67	197.88	0.00	2015.33	1902.94	0.400	0.95	0.67	2.986	A
4	612.82	153.21	721.46	480.45	525.58	0.00	913.57	591.56	0.671	29.32	2.16	30.147	D

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.83	0.46	3.032	A	A
2	3.77	0.25	5.944	A	A
3	9.73	0.65	2.964	A	A
4	26.83	1.79	11.350	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.59	0.64	3.563	A	A
2	5.59	0.37	7.378	A	A
3	13.68	0.91	3.497	A	A
4	60.65	4.04	23.317	C	C

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.27	0.95	4.361	A	A
2	9.13	0.61	9.995	A	A
3	21.79	1.45	4.607	A	A
4	294.33	19.62	101.810	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.74	0.98	4.409	A	A
2	9.62	0.64	10.162	B	B
3	22.61	1.51	4.638	A	A
4	689.07	45.94	216.813	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.94	0.73	3.865	A	A
2	6.67	0.44	8.132	A	A
3	14.54	0.97	3.524	A	A
4	660.15	44.01	189.357	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.61	0.51	3.226	A	A
2	4.35	0.29	6.390	A	A
3	10.26	0.68	2.986	A	A
4	115.69	7.71	30.147	D	C

(Default Analysis Set) - 2020 Background Plus Development Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2020 Background Plus Development Flows, PM	2020 Background Plus Development Flows	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				12.54	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	695.00	100.000
2	ONE HOUR	✓	245.00	100.000
3	ONE HOUR	✓	1040.00	100.000
4	ONE HOUR	✓	652.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	1	523.23	523.23		
16:30-16:45	2	184.45	184.45		
16:30-16:45	3	782.97	782.97		
16:30-16:45	4	490.86	490.86		
16:45-17:00	1	624.79	624.79		
16:45-17:00	2	220.25	220.25		
16:45-17:00	3	934.94	934.94		
16:45-17:00	4	586.13	586.13		
17:00-17:15	1	765.21	765.21		
17:00-17:15	2	269.75	269.75		
17:00-17:15	3	1145.06	1145.06		
17:00-17:15	4	717.87	717.87		
17:15-17:30	1	765.21	765.21		
17:15-17:30	2	269.75	269.75		
17:15-17:30	3	1145.06	1145.06		
17:15-17:30	4	717.87	717.87		
17:30-17:45	1	624.79	624.79		
17:30-17:45	2	220.25	220.25		
17:30-17:45	3	934.94	934.94		
17:30-17:45	4	586.13	586.13		
17:45-18:00	1	523.23	523.23		
17:45-18:00	2	184.45	184.45		
17:45-18:00	3	782.97	782.97		
17:45-18:00	4	490.86	490.86		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	46.000	574.000	75.000
	2	58.000	0.000	15.000	172.000
	3	597.000	11.000	0.000	432.000
	4	60.000	124.000	468.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.07	0.83	0.11
	2	0.24	0.00	0.06	0.70
	3	0.57	0.01	0.00	0.42
	4	0.09	0.19	0.72	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.46	3.97	0.84	A	637.74	956.62	53.69	3.37	0.60	53.70	3.37
2	0.45	10.90	0.81	B	224.82	337.22	46.04	8.19	0.51	46.04	8.19
3	0.59	4.61	1.46	A	954.32	1431.48	89.48	3.75	0.99	89.49	3.75
4	0.88	34.94	6.53	D	598.29	897.43	263.48	17.62	2.93	263.53	17.62

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	523.23	130.81	521.61	536.12	449.93	0.00	1808.79	1730.76	0.289	0.00	0.41	2.793	A
2	184.45	46.11	183.25	135.29	836.25	0.00	792.54	194.18	0.233	0.00	0.30	5.895	A
3	782.97	195.74	780.40	791.18	228.32	0.00	1995.49	1903.72	0.392	0.00	0.64	2.956	A
4	490.86	122.71	486.44	509.10	499.61	0.00	926.17	606.30	0.530	0.00	1.11	8.108	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	624.79	156.20	624.20	641.74	539.08	0.00	1751.16	1730.76	0.357	0.41	0.55	3.192	A
2	220.25	55.06	219.68	162.04	1001.25	0.00	711.29	194.18	0.310	0.30	0.44	7.311	A
3	934.94	233.73	933.91	947.34	273.59	0.00	1965.97	1903.72	0.476	0.64	0.90	3.485	A
4	586.13	146.53	582.84	609.51	597.98	0.00	878.45	606.30	0.667	1.11	1.93	12.044	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	765.21	191.30	764.10	784.19	649.55	0.00	1679.75	1730.76	0.456	0.55	0.83	3.926	A
2	269.75	67.44	268.37	196.18	1217.46	0.00	604.82	194.18	0.446	0.44	0.79	10.654	B
3	1145.06	286.27	1142.87	1151.44	334.40	0.00	1926.33	1903.72	0.594	0.90	1.45	4.582	A
4	717.87	179.47	702.07	745.59	731.67	0.00	813.58	606.30	0.882	1.93	5.88	28.906	D

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	765.21	191.30	765.17	786.95	661.55	0.00	1671.99	1730.76	0.458	0.83	0.84	3.969	A
2	269.75	67.44	269.68	198.79	1227.93	0.00	599.66	194.18	0.450	0.79	0.81	10.904	B
3	1145.06	286.27	1145.02	1161.87	335.74	0.00	1925.45	1903.72	0.595	1.45	1.46	4.612	A
4	717.87	179.47	715.26	747.52	733.24	0.00	812.82	606.30	0.883	5.88	6.53	34.939	D

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	624.79	156.20	625.89	645.98	558.22	0.00	1738.79	1730.76	0.359	0.84	0.56	3.237	A
2	220.25	55.06	221.63	166.19	1017.92	0.00	703.08	194.18	0.313	0.81	0.46	7.500	A
3	934.94	233.73	937.11	963.95	275.60	0.00	1964.66	1903.72	0.476	1.46	0.91	3.512	A
4	586.13	146.53	603.88	612.40	600.32	0.00	877.31	606.30	0.668	6.53	2.10	13.945	B

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	523.23	130.81	523.85	539.39	457.41	0.00	1803.95	1730.76	0.290	0.56	0.41	2.815	A
2	184.45	46.11	185.06	137.04	844.22	0.00	788.61	194.18	0.234	0.46	0.31	5.972	A
3	782.97	195.74	784.03	799.02	230.26	0.00	1994.22	1903.72	0.393	0.91	0.65	2.979	A
4	490.86	122.71	494.63	512.12	502.16	0.00	924.94	606.30	0.531	2.10	1.15	8.437	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.96	0.40	2.793	A	A
2	4.37	0.29	5.895	A	A
3	9.42	0.63	2.956	A	A
4	15.69	1.05	8.108	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.14	0.54	3.192	A	A
2	6.46	0.43	7.311	A	A
3	13.23	0.88	3.485	A	A
4	27.08	1.81	12.044	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.17	0.81	3.926	A	A
2	11.28	0.75	10.654	B	B
3	21.04	1.40	4.582	A	A
4	72.08	4.81	28.906	D	C

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.55	0.84	3.969	A	A
2	12.00	0.80	10.904	B	B
3	21.81	1.45	4.612	A	A
4	93.89	6.26	34.939	D	C

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.62	0.57	3.237	A	A
2	7.18	0.48	7.500	A	A
3	14.06	0.94	3.512	A	A
4	36.58	2.44	13.945	B	B

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.25	0.42	2.815	A	A
2	4.74	0.32	5.972	A	A
3	9.92	0.66	2.979	A	A
4	18.16	1.21	8.437	A	A

(Default Analysis Set) - 2030 Background Plus Development Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2030 Background Plus Development Flows, AM	2030 Background Plus Development Flows	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				50.05	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	759.00	100.000
2	ONE HOUR	✓	263.00	100.000
3	ONE HOUR	✓	1075.00	100.000
4	ONE HOUR	✓	770.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	571.41	571.41		
07:45-08:00	2	198.00	198.00		
07:45-08:00	3	809.32	809.32		
07:45-08:00	4	579.70	579.70		
08:00-08:15	1	682.33	682.33		
08:00-08:15	2	236.43	236.43		
08:00-08:15	3	966.40	966.40		
08:00-08:15	4	692.21	692.21		
08:15-08:30	1	835.67	835.67		
08:15-08:30	2	289.57	289.57		
08:15-08:30	3	1183.60	1183.60		
08:15-08:30	4	847.79	847.79		
08:30-08:45	1	835.67	835.67		
08:30-08:45	2	289.57	289.57		
08:30-08:45	3	1183.60	1183.60		
08:30-08:45	4	847.79	847.79		
08:45-09:00	1	682.33	682.33		
08:45-09:00	2	236.43	236.43		
08:45-09:00	3	966.40	966.40		
08:45-09:00	4	692.21	692.21		
09:00-09:15	1	571.41	571.41		
09:00-09:15	2	198.00	198.00		
09:00-09:15	3	809.32	809.32		
09:00-09:15	4	579.70	579.70		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	50.000	624.000	85.000
	2	63.000	0.000	17.000	183.000
	3	650.000	12.000	0.000	413.000
	4	69.000	138.000	563.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.07	0.82	0.11
	2	0.24	0.00	0.06	0.70
	3	0.60	0.01	0.00	0.38
	4	0.09	0.18	0.73	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.51	4.51	1.04	A	696.47	1044.71	66.42	3.81	0.74	66.42	3.81
2	0.54	14.32	1.13	B	241.33	362.00	62.29	10.32	0.69	62.30	10.33
3	0.62	4.98	1.62	A	986.44	1479.66	97.83	3.97	1.09	97.84	3.97
4	1.09	170.09	43.27	F	706.57	1059.85	1245.17	70.49	13.84	1245.29	70.50

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	571.41	142.85	569.50	586.10	530.47	0.00	1756.72	1745.36	0.325	0.00	0.48	3.027	A
2	198.00	49.50	196.54	149.18	950.79	0.00	736.13	193.14	0.269	0.00	0.36	6.655	A
3	809.32	202.33	806.57	899.72	247.62	0.00	1982.91	1899.13	0.408	0.00	0.69	3.054	A
4	579.70	144.92	572.79	510.41	543.78	0.00	904.74	578.71	0.641	0.00	1.73	10.637	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	682.33	170.58	681.55	701.34	633.18	0.00	1690.33	1745.36	0.404	0.48	0.67	3.567	A
2	236.43	59.11	235.61	178.20	1136.53	0.00	644.67	193.14	0.367	0.36	0.57	8.783	A
3	966.40	241.60	965.25	1075.43	296.70	0.00	1950.90	1899.13	0.495	0.69	0.97	3.647	A
4	692.21	173.05	683.66	611.10	650.85	0.00	852.80	578.71	0.812	1.73	3.86	20.309	C

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	835.67	208.92	834.26	851.24	706.56	0.00	1642.90	1745.36	0.509	0.67	1.03	4.445	A
2	289.57	72.39	287.48	204.64	1336.18	0.00	546.36	193.14	0.530	0.57	1.09	13.793	B
3	1183.60	295.90	1181.05	1261.33	362.33	0.00	1908.12	1899.13	0.620	0.97	1.61	4.936	A
4	847.79	211.95	761.62	747.20	796.17	0.00	782.29	578.71	1.084	3.86	25.40	84.556	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	835.67	208.92	835.62	854.52	719.95	0.00	1634.24	1745.36	0.511	1.03	1.04	4.507	A
2	289.57	72.39	289.42	207.39	1348.18	0.00	540.45	193.14	0.536	1.09	1.13	14.323	B
3	1183.60	295.90	1183.54	1273.31	364.29	0.00	1906.84	1899.13	0.621	1.61	1.62	4.977	A
4	847.79	211.95	776.31	749.66	798.17	0.00	781.32	578.71	1.085	25.40	43.27	170.089	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	682.33	170.58	683.49	717.67	770.08	0.00	1601.84	1745.36	0.426	1.04	0.75	3.924	A
2	236.43	59.11	238.23	205.31	1248.26	0.00	589.66	193.14	0.401	1.13	0.68	10.296	B
3	966.40	241.60	968.93	1187.11	299.37	0.00	1949.16	1899.13	0.496	1.62	0.99	3.683	A
4	692.21	173.05	834.00	614.56	653.75	0.00	851.39	578.71	0.813	43.27	7.83	118.967	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	571.41	142.85	572.44	591.88	558.55	0.00	1738.57	1745.36	0.329	0.75	0.49	3.089	A
2	198.00	49.50	199.20	154.93	976.05	0.00	723.69	193.14	0.274	0.68	0.38	6.878	A
3	809.32	202.33	810.50	924.82	250.44	0.00	1981.07	1899.13	0.409	0.99	0.69	3.077	A
4	579.70	144.92	603.59	514.10	546.84	0.00	903.26	578.71	0.642	7.83	1.85	12.911	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.05	0.47	3.027	A	A
2	5.27	0.35	6.655	A	A
3	10.05	0.67	3.054	A	A
4	23.90	1.59	10.637	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.90	0.66	3.567	A	A
2	8.26	0.55	8.783	A	A
3	14.29	0.95	3.647	A	A
4	50.87	3.39	20.309	C	C

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	14.97	1.00	4.445	A	A
2	15.40	1.03	13.793	B	B
3	23.32	1.55	4.936	A	A
4	233.21	15.55	84.556	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.52	1.03	4.507	A	A
2	16.76	1.12	14.323	B	B
3	24.29	1.62	4.977	A	A
4	516.36	34.42	170.089	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	11.46	0.76	3.924	A	A
2	10.71	0.71	10.296	B	B
3	15.26	1.02	3.683	A	A
4	386.64	25.78	118.967	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.52	0.50	3.089	A	A
2	5.90	0.39	6.878	A	A
3	10.62	0.71	3.077	A	A
4	34.18	2.28	12.911	B	B

(Default Analysis Set) - 2030 Background Plus Development Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2030 Background Plus Development Flows, PM	2030 Background Plus Development Flows	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				67.51	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	A59 north	
2	2	Clitheroe Road	
3	3	159 south	
4	4	Pendle Road	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	6.10	7.00	7.00	28.50	58.00	26.00	
2	3.50	4.10	2.00	19.00	58.00	16.50	
3	6.00	7.00	50.00	30.00	58.00	29.00	
4	3.50	4.10	1.00	19.00	58.00	17.50	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.646	2099.618
2		(calculated)	(calculated)	0.492	1204.311
3		(calculated)	(calculated)	0.652	2144.346
4		(calculated)	(calculated)	0.485	1168.570

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	799.00	100.000
2	ONE HOUR	✓	233.00	100.000
3	ONE HOUR	✓	1201.00	100.000
4	ONE HOUR	✓	791.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	1	601.53	601.53		
16:30-16:45	2	175.41	175.41		
16:30-16:45	3	904.18	904.18		
16:30-16:45	4	595.51	595.51		
16:45-17:00	1	718.28	718.28		
16:45-17:00	2	209.46	209.46		
16:45-17:00	3	1079.67	1079.67		
16:45-17:00	4	711.09	711.09		
17:00-17:15	1	879.72	879.72		
17:00-17:15	2	256.54	256.54		
17:00-17:15	3	1322.33	1322.33		
17:00-17:15	4	870.91	870.91		
17:15-17:30	1	879.72	879.72		
17:15-17:30	2	256.54	256.54		
17:15-17:30	3	1322.33	1322.33		
17:15-17:30	4	870.91	870.91		
17:30-17:45	1	718.28	718.28		
17:30-17:45	2	209.46	209.46		
17:30-17:45	3	1079.67	1079.67		
17:30-17:45	4	711.09	711.09		
17:45-18:00	1	601.53	601.53		
17:45-18:00	2	175.41	175.41		
17:45-18:00	3	904.18	904.18		
17:45-18:00	4	595.51	595.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	75.000	664.000	60.000
	2	80.000	0.000	11.000	142.000
	3	673.000	11.000	0.000	517.000
	4	73.000	219.000	499.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.09	0.83	0.08
	2	0.34	0.00	0.05	0.61
	3	0.56	0.01	0.00	0.43
	4	0.09	0.28	0.63	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.000	1.000	1.000	1.000
	2	1.000	1.000	1.000	1.000
	3	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.0	0.0	0.0	0.0
	2	0.0	0.0	0.0	0.0
	3	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	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)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.53	4.69	1.14	A	733.18	1099.76	73.11	3.99	0.81	73.11	3.99
2	0.45	11.25	0.79	B	213.80	320.71	46.89	8.77	0.52	46.89	8.77
3	0.68	5.81	2.11	A	1102.06	1653.09	122.26	4.44	1.36	122.27	4.44
4	1.15	241.22	63.30	F	725.84	1088.75	2040.66	112.46	22.67	2040.82	112.47

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	601.53	150.38	599.44	618.90	541.75	0.00	1749.43	1735.82	0.344	0.00	0.52	3.125	A
2	175.41	43.85	174.21	227.25	913.95	0.00	754.27	243.19	0.233	0.00	0.30	6.194	A
3	904.18	226.04	900.92	877.16	211.00	0.00	2006.78	1908.29	0.451	0.00	0.81	3.246	A
4	595.51	148.88	587.74	539.01	572.91	0.00	890.61	600.77	0.669	0.00	1.94	11.609	B

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	718.28	179.57	717.41	740.44	644.83	0.00	1682.80	1735.82	0.427	0.52	0.74	3.725	A
2	209.46	52.37	208.85	270.89	1091.35	0.00	666.92	243.19	0.314	0.30	0.45	7.849	A
3	1079.67	269.92	1078.18	1047.34	252.87	0.00	1979.48	1908.29	0.545	0.81	1.19	3.988	A
4	711.09	177.77	699.51	645.29	685.76	0.00	835.86	600.77	0.851	1.94	4.84	24.524	C

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	879.72	219.93	878.17	895.77	692.37	0.00	1652.07	1735.82	0.532	0.74	1.13	4.642	A
2	256.54	64.13	255.24	302.01	1268.53	0.00	579.67	243.19	0.443	0.45	0.78	11.050	B
3	1322.33	330.58	1318.72	1214.63	309.13	0.00	1942.80	1908.29	0.681	1.19	2.09	5.735	A
4	870.91	217.73	749.46	789.17	838.68	0.00	761.67	600.77	1.143	4.84	35.20	111.267	F

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	879.72	219.93	879.67	899.00	700.61	0.00	1646.75	1735.82	0.534	1.13	1.14	4.693	A
2	256.54	64.13	256.48	304.68	1275.59	0.00	576.20	243.19	0.445	0.78	0.79	11.254	B
3	1322.33	330.58	1322.24	1221.64	310.43	0.00	1941.95	1908.29	0.681	2.09	2.11	5.807	A
4	870.91	217.73	758.50	791.56	841.11	0.00	760.49	600.77	1.145	35.20	63.30	241.218	F

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	718.28	179.57	719.60	755.12	755.32	0.00	1611.38	1735.82	0.446	1.14	0.81	4.042	A
2	209.46	52.37	210.60	304.83	1170.10	0.00	628.14	243.19	0.333	0.79	0.51	8.646	A
3	1079.67	269.92	1083.27	1126.00	254.70	0.00	1978.29	1908.29	0.546	2.11	1.21	4.037	A
4	711.09	177.77	821.19	648.71	689.26	0.00	834.16	600.77	0.852	63.30	35.78	218.945	F

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	601.53	150.38	602.50	635.37	670.86	0.00	1665.97	1735.82	0.361	0.81	0.57	3.390	A
2	175.41	43.85	176.12	266.94	1006.42	0.00	708.74	243.19	0.248	0.51	0.33	6.767	A
3	904.18	226.04	905.72	969.49	213.04	0.00	2005.45	1908.29	0.451	1.21	0.83	3.277	A
4	595.51	148.88	729.93	542.47	576.30	0.00	888.97	600.77	0.670	35.78	2.17	42.879	E

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.65	0.51	3.125	A	A
2	4.36	0.29	6.194	A	A
3	11.91	0.79	3.246	A	A
4	26.64	1.78	11.609	B	B

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.87	0.72	3.725	A	A
2	6.58	0.44	7.849	A	A
3	17.38	1.16	3.988	A	A
4	61.69	4.11	24.524	C	C

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.43	1.10	4.642	A	A
2	11.12	0.74	11.050	B	B
3	29.99	2.00	5.735	A	A
4	310.09	20.67	111.267	F	F

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.02	1.13	4.693	A	A
2	11.80	0.79	11.254	B	B
3	31.56	2.10	5.807	A	A
4	739.37	49.29	241.218	F	F

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	12.45	0.83	4.042	A	A
2	7.90	0.53	8.646	A	A
3	18.77	1.25	4.037	A	A
4	743.08	49.54	218.945	F	F

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.69	0.58	3.390	A	A
2	5.13	0.34	6.767	A	A
3	12.66	0.84	3.277	A	A
4	159.79	10.65	42.879	E	D