

Entry Flows

General Flows Data

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6195 (South)	ONE HOUR	✓	1221.00	100.000
Site Access	ONE HOUR	✓	0.00	100.000
A6195 (North)	ONE HOUR	✓	991.00	100.000
Unnamed East	ONE HOUR	✓	1.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	1221.000	0.000
	2	0.000	0.000	0.000	0.000
	3	990.000	0.000	0.000	1.000
	4	1.000	0.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	1.00	0.00
	2	0.25	0.25	0.25	0.25
	3	1.00	0.00	0.00	0.00
	4	1.00	0.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (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 - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6195 (South)	0.54	3.20	1.19	A
Site Access	0.00	0.00	0.00	A
A6195 (North)	0.45	2.68	0.81	A
Unnamed East	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:15-16:30)

Name	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
A6195 (South)	919.23	916.87	0.00	0.00	2470.47	0.372	0.59	2.314	A
Site Access	0.00	0.00	916.87	0.00	1656.46	0.000	0.00	0.000	A
A6195 (North)	746.08	744.31	0.00	0.00	2431.64	0.307	0.44	2.132	A
Unnamed East	0.00	0.00	743.56	0.00	1242.24	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1097.65	1096.83	0.00	0.00	2470.47	0.444	0.80	2.619	A
Site Access	0.00	0.00	1096.83	0.00	1535.80	0.000	0.00	0.000	A
A6195 (North)	890.89	890.35	0.00	0.00	2431.64	0.366	0.58	2.336	A
Unnamed East	0.00	0.00	889.45	0.00	1159.42	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1344.35	1342.79	0.00	0.00	2470.47	0.544	1.18	3.188	A
Site Access	0.00	0.00	1342.79	0.00	1370.90	0.000	0.00	0.000	A
A6195 (North)	1091.11	1090.18	0.00	0.00	2431.64	0.449	0.81	2.682	A
Unnamed East	0.00	0.00	1089.08	0.00	1046.10	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1344.35	1344.33	0.00	0.00	2470.47	0.544	1.19	3.196	A
Site Access	0.00	0.00	1344.33	0.00	1369.87	0.000	0.00	0.000	A
A6195 (North)	1091.11	1091.10	0.00	0.00	2431.64	0.449	0.81	2.684	A
Unnamed East	0.00	0.00	1090.00	0.00	1045.58	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1097.65	1099.20	0.00	0.00	2470.47	0.444	0.80	2.627	A
Site Access	0.00	0.00	1099.20	0.00	1534.22	0.000	0.00	0.000	A
A6195 (North)	890.89	891.81	0.00	0.00	2431.64	0.366	0.58	2.340	A
Unnamed East	0.00	0.00	890.91	0.00	1158.59	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	919.23	920.07	0.00	0.00	2470.47	0.372	0.59	2.322	A
Site Access	0.00	0.00	920.07	0.00	1654.31	0.000	0.00	0.000	A
A6195 (North)	746.08	746.62	0.00	0.00	2431.64	0.307	0.44	2.138	A
Unnamed East	0.00	0.00	745.87	0.00	1240.93	0.000	0.00	0.000	A

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
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Filename: (new file)

Path:

Report generation date: 04/09/2014 09:32:29

- « (Default Analysis Set) - AM 2019 Count, AM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - AM 2019 Count				
A6195 (South)	1.22	3.24	0.55	A
Site Access	0.00	0.00	0.00	A
A6195 (North)	1.11	3.13	0.53	A
Unnamed East	0.00	0.00	0.00	A

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

- "D1 - AM 2014 Count, AM" model duration: 07:30 - 09:00
- "D2 - PM 2014 Count, PM" model duration: 16:15 - 17:45
- "D3 - AM 2014 Design, AM" model duration: 07:30 - 09:00
- "D4 - PM 2014 Design, PM" model duration: 16:15 - 17:45
- "D5 - AM 2019 Count, AM " model duration: 07:30 - 09:00
- "D6 - PM 2019 Count, PM" model duration: 16:15 - 17:45
- "D7 - AM 2019 Design, AM" model duration: 07:30 - 09:00
- "D8 - PM 2019 Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:32:29

File summary

File Description

Title	Rockingham Roundabout
Location	Barnsley
Site Number	
Date	15/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - AM 2019 Count, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Site Access - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	DemandSets	D1 - AM 2014 Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - PM 2014 Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - AM 2014 Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - PM 2014 Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - AM 2019 Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - PM 2019 Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - AM 2019 Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - PM 2019 Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
AM 2019 Count, AM	AM 2019 Count	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Rounabout	Roundabout	1,2,3,4			3.19	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6195 (South)	A6195 (South)	
Site Access	Site Access	
A6195 (North)	A6195 (North)	
Unnamed East	Unnamed East	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6195 (South)	7.43	8.05	3.14	24.70	60.00	20.00	
Site Access	4.75	7.60	43.40	23.00	60.00	16.00	
A6195 (North)	7.50	8.10	3.00	23.00	60.00	26.00	
Unnamed East	3.97	7.40	5.85	29.20	60.00	16.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6195 (South)	None
Site Access	None
A6195 (North)	None
Unnamed East	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6195 (South)		(calculated)	(calculated)	0.702	2470.470
Site Access		(calculated)	(calculated)	0.670	2271.163
A6195 (North)		(calculated)	(calculated)	0.689	2431.636
Unnamed East		(calculated)	(calculated)	0.568	1664.338

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6195 (South)	ONE HOUR	✓	1235.00	100.000
Site Access	ONE HOUR	✓	0.00	100.000
A6195 (North)	ONE HOUR	✓	1165.00	100.000
Unnamed East	ONE HOUR	✓	1.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	1235.000	0.000
	2	0.000	0.000	0.000	0.000
	3	1164.000	0.000	0.000	1.000
	4	1.000	0.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	1.00	0.00
	2	0.25	0.25	0.25	0.25
	3	1.00	0.00	0.00	0.00
	4	1.00	0.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (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 - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6195 (South)	0.55	3.24	1.22	A
Site Access	0.00	0.00	0.00	A
A6195 (North)	0.53	3.13	1.11	A
Unnamed East	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (07:30-07:45)

Name	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
A6195 (South)	929.77	927.37	0.00	0.00	2470.47	0.376	0.60	2.330	A
Site Access	0.00	0.00	927.37	0.00	1649.42	0.000	0.00	0.000	A
A6195 (North)	877.07	874.83	0.00	0.00	2431.64	0.361	0.56	2.309	A
Unnamed East	0.00	0.00	874.07	0.00	1168.15	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1110.24	1109.40	0.00	0.00	2470.47	0.449	0.81	2.644	A
Site Access	0.00	0.00	1109.40	0.00	1527.38	0.000	0.00	0.000	A
A6195 (North)	1047.31	1046.55	0.00	0.00	2431.64	0.431	0.75	2.598	A
Unnamed East	0.00	0.00	1045.65	0.00	1070.75	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1359.76	1358.15	0.00	0.00	2470.47	0.550	1.21	3.232	A
Site Access	0.00	0.00	1358.15	0.00	1360.61	0.000	0.00	0.000	A
A6195 (North)	1282.69	1281.27	0.00	0.00	2431.64	0.528	1.11	3.125	A
Unnamed East	0.00	0.00	1280.17	0.00	937.63	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1359.76	1359.74	0.00	0.00	2470.47	0.550	1.22	3.240	A
Site Access	0.00	0.00	1359.74	0.00	1359.54	0.000	0.00	0.000	A
A6195 (North)	1282.69	1282.67	0.00	0.00	2431.64	0.528	1.11	3.132	A
Unnamed East	0.00	0.00	1281.57	0.00	936.83	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1110.24	1111.84	0.00	0.00	2470.47	0.449	0.82	2.654	A
Site Access	0.00	0.00	1111.84	0.00	1525.74	0.000	0.00	0.000	A
A6195 (North)	1047.31	1048.72	0.00	0.00	2431.64	0.431	0.76	2.605	A
Unnamed East	0.00	0.00	1047.82	0.00	1069.52	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	929.77	930.63	0.00	0.00	2470.47	0.376	0.61	2.338	A
Site Access	0.00	0.00	930.63	0.00	1647.23	0.000	0.00	0.000	A
A6195 (North)	877.07	877.85	0.00	0.00	2431.64	0.361	0.57	2.319	A
Unnamed East	0.00	0.00	877.10	0.00	1166.44	0.000	0.00	0.000	A

Junctions 8
ARCADY 8 - Roundabout Module
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Filename: (new file)
 Path:
 Report generation date: 04/09/2014 09:33:19

- « (Default Analysis Set) - PM 2019 Count, PM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - PM 2019 Count				
A6195 (South)	1.41	3.52	0.59	A
Site Access	0.00	0.00	0.00	A
A6195 (North)	0.92	2.84	0.48	A
Unnamed East	0.00	0.00	0.00	A

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

- "D1 - AM 2014 Count, AM" model duration: 07:30 - 09:00
- "D2 - PM 2014 Count, PM" model duration: 16:15 - 17:45
- "D3 - AM 2014 Design, AM" model duration: 07:30 - 09:00
- "D4 - PM 2014 Design, PM" model duration: 16:15 - 17:45
- "D5 - AM 2019 Count, AM" model duration: 07:30 - 09:00
- "D6 - PM 2019 Count, PM" model duration: 16:15 - 17:45
- "D7 - AM 2019 Design, AM" model duration: 07:30 - 09:00
- "D8 - PM 2019 Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:33:19

File summary

File Description

Title	Rockingham Roundabout
Location	Barnsley
Site Number	
Date	15/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - PM 2019 Count, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Site Access - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	DemandSets	D1 - AM 2014 Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - PM 2014 Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - AM 2014 Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - PM 2014 Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - AM 2019 Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - PM 2019 Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - AM 2019 Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - PM 2019 Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
PM 2019 Count, PM	PM 2019 Count	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Rounabout	Roundabout	1,2,3,4			3.22	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6195 (South)	A6195 (South)	
Site Access	Site Access	
A6195 (North)	A6195 (North)	
Unnamed East	Unnamed East	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6195 (South)	7.43	8.05	3.14	24.70	60.00	20.00	
Site Access	4.75	7.60	43.40	23.00	60.00	16.00	
A6195 (North)	7.50	8.10	3.00	23.00	60.00	26.00	
Unnamed East	3.97	7.40	5.85	29.20	60.00	16.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6195 (South)	None
Site Access	None
A6195 (North)	None
Unnamed East	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6195 (South)		(calculated)	(calculated)	0.702	2470.470
Site Access		(calculated)	(calculated)	0.670	2271.163
A6195 (North)		(calculated)	(calculated)	0.689	2431.636
Unnamed East		(calculated)	(calculated)	0.568	1664.338

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6195 (South)	ONE HOUR	✓	1315.00	100.000
Site Access	ONE HOUR	✓	0.00	100.000
A6195 (North)	ONE HOUR	✓	1058.00	100.000
Unnamed East	ONE HOUR	✓	1.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	1315.000	0.000
	2	0.000	0.000	0.000	0.000
	3	1057.000	0.000	0.000	1.000
	4	1.000	0.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	1.00	0.00
	2	0.25	0.25	0.25	0.25
	3	1.00	0.00	0.00	0.00
	4	1.00	0.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (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 - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6195 (South)	0.59	3.52	1.41	A
Site Access	0.00	0.00	0.00	A
A6195 (North)	0.48	2.84	0.92	A
Unnamed East	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:15-16:30)

Name	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
A6195 (South)	990.00	987.34	0.00	0.00	2470.47	0.401	0.67	2.423	A
Site Access	0.00	0.00	987.34	0.00	1609.21	0.000	0.00	0.000	A
A6195 (North)	796.52	794.58	0.00	0.00	2431.64	0.328	0.49	2.196	A
Unnamed East	0.00	0.00	793.83	0.00	1213.71	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1182.16	1181.17	0.00	0.00	2470.47	0.479	0.91	2.791	A
Site Access	0.00	0.00	1181.17	0.00	1479.26	0.000	0.00	0.000	A
A6195 (North)	951.12	950.50	0.00	0.00	2431.64	0.391	0.64	2.429	A
Unnamed East	0.00	0.00	949.60	0.00	1125.28	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1447.84	1445.88	0.00	0.00	2470.47	0.586	1.40	3.508	A
Site Access	0.00	0.00	1445.88	0.00	1301.79	0.000	0.00	0.000	A
A6195 (North)	1164.88	1163.78	0.00	0.00	2431.64	0.479	0.91	2.836	A
Unnamed East	0.00	0.00	1162.68	0.00	1004.32	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1447.84	1447.82	0.00	0.00	2470.47	0.586	1.41	3.519	A
Site Access	0.00	0.00	1447.82	0.00	1300.49	0.000	0.00	0.000	A
A6195 (North)	1164.88	1164.87	0.00	0.00	2431.64	0.479	0.92	2.841	A
Unnamed East	0.00	0.00	1163.77	0.00	1003.70	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1182.16	1184.10	0.00	0.00	2470.47	0.479	0.92	2.804	A
Site Access	0.00	0.00	1184.10	0.00	1477.29	0.000	0.00	0.000	A
A6195 (North)	951.12	952.21	0.00	0.00	2431.64	0.391	0.65	2.434	A
Unnamed East	0.00	0.00	951.31	0.00	1124.31	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	990.00	991.01	0.00	0.00	2470.47	0.401	0.67	2.434	A
Site Access	0.00	0.00	991.01	0.00	1606.75	0.000	0.00	0.000	A
A6195 (North)	796.52	797.14	0.00	0.00	2431.64	0.328	0.49	2.204	A
Unnamed East	0.00	0.00	796.39	0.00	1212.25	0.000	0.00	0.000	A

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.1.305 [25 May 2012] © Copyright TRL Limited, 2014
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Filename: (new file)

Path:

Report generation date: 04/09/2014 09:34:00

« (Default Analysis Set) - AM 2019 Design, AM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - AM 2019 Design				
A6195 (South)	1.38	3.57	0.58	A
Site Access	0.14	2.91	0.12	A
A6195 (North)	1.23	3.39	0.55	A
Unnamed East	0.00	0.00	0.00	A

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

- "D1 - AM 2014 Count, AM" model duration: 07:30 - 09:00
- "D2 - PM 2014 Count, PM" model duration: 16:15 - 17:45
- "D3 - AM 2014 Design, AM" model duration: 07:30 - 09:00
- "D4 - PM 2014 Design, PM" model duration: 16:15 - 17:45
- "D5 - AM 2019 Count, AM" model duration: 07:30 - 09:00
- "D6 - PM 2019 Count, PM" model duration: 16:15 - 17:45
- "D7 - AM 2019 Design, AM" model duration: 07:30 - 09:00
- "D8 - PM 2019 Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:33:59

File summary

File Description

Title	Rockingham Roundabout
Location	Barnsley
Site Number	
Date	15/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - AM 2019 Design, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Site Access - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	DemandSets	D1 - AM 2014 Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - PM 2014 Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - AM 2014 Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - PM 2014 Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - AM 2019 Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - PM 2019 Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - AM 2019 Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - PM 2019 Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
AM 2019 Design, AM	AM 2019 Design	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Rounabout	Roundabout	1,2,3,4			3.45	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
A6195 (South)	A6195 (South)	
Site Access	Site Access	
A6195 (North)	A6195 (North)	
Unnamed East	Unnamed East	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6195 (South)	7.43	8.05	3.14	24.70	60.00	20.00	
Site Access	4.75	7.60	43.40	23.00	60.00	16.00	
A6195 (North)	7.50	8.10	3.00	23.00	60.00	26.00	
Unnamed East	3.97	7.40	5.85	29.20	60.00	16.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6195 (South)	None
Site Access	None
A6195 (North)	None
Unnamed East	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6195 (South)		(calculated)	(calculated)	0.702	2470.470
Site Access		(calculated)	(calculated)	0.670	2271.163
A6195 (North)		(calculated)	(calculated)	0.689	2431.636
Unnamed East		(calculated)	(calculated)	0.568	1664.338

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6195 (South)	ONE HOUR	✓	1270.00	100.000
Site Access	ONE HOUR	✓	155.00	100.000
A6195 (North)	ONE HOUR	✓	1189.00	100.000
Unnamed East	ONE HOUR	✓	1.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	98.000	1172.000	0.000
	2	80.000	0.000	75.000	0.000
	3	1104.000	84.000	0.000	1.000
	4	1.000	0.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.08	0.92	0.00
	2	0.52	0.00	0.48	0.00
	3	0.93	0.07	0.00	0.00
	4	1.00	0.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (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 - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6195 (South)	0.58	3.57	1.38	A
Site Access	0.12	2.91	0.14	A
A6195 (North)	0.55	3.39	1.23	A
Unnamed East	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (07:30-07:45)

Name	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
A6195 (South)	956.12	953.53	63.07	0.00	2426.19	0.394	0.65	2.440	A
Site Access	116.69	116.39	879.95	0.00	1681.21	0.069	0.07	2.300	A
A6195 (North)	895.14	892.76	60.07	0.00	2390.24	0.375	0.60	2.399	A
Unnamed East	0.00	0.00	952.08	0.00	1123.87	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1141.70	1140.74	75.45	0.00	2417.49	0.472	0.89	2.818	A
Site Access	139.34	139.25	1052.71	0.00	1565.38	0.089	0.10	2.523	A
A6195 (North)	1068.89	1068.03	71.87	0.00	2382.11	0.449	0.81	2.738	A
Unnamed East	0.00	0.00	1139.01	0.00	1017.76	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1398.30	1396.35	92.37	0.00	2405.62	0.581	1.38	3.561	A
Site Access	170.66	170.50	1288.60	0.00	1407.23	0.121	0.14	2.910	A
A6195 (North)	1309.11	1307.46	88.00	0.00	2370.99	0.552	1.22	3.374	A
Unnamed East	0.00	0.00	1394.36	0.00	872.80	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1398.30	1398.27	92.48	0.00	2405.54	0.581	1.38	3.573	A
Site Access	170.66	170.66	1290.37	0.00	1406.05	0.121	0.14	2.913	A
A6195 (North)	1309.11	1309.09	88.08	0.00	2370.94	0.552	1.23	3.389	A
Unnamed East	0.00	0.00	1396.07	0.00	871.83	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1141.70	1143.63	75.63	0.00	2417.37	0.472	0.90	2.832	A
Site Access	139.34	139.50	1055.38	0.00	1563.59	0.089	0.10	2.527	A
A6195 (North)	1068.89	1070.52	72.00	0.00	2382.02	0.449	0.82	2.749	A
Unnamed East	0.00	0.00	1141.62	0.00	1016.27	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	956.12	957.11	63.30	0.00	2426.03	0.394	0.65	2.451	A
Site Access	116.69	116.79	883.25	0.00	1678.99	0.070	0.07	2.305	A
A6195 (North)	895.14	896.01	60.28	0.00	2390.10	0.375	0.60	2.410	A
Unnamed East	0.00	0.00	955.53	0.00	1121.91	0.000	0.00	0.000	A

ARCADY 8
Version: 8.0.0.296 [27 Feb 2012] © Copyright Transport Research Laboratory 2014
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Filename: Rockingham Rbout.arc8
Path: O:\Rockingham\ANALYSIS\ARCADY\Rockingham Rbout
Report generation date: 04/09/2014 18:12:56

- « (Default Analysis Set) - PM 2019 Design, PM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - PM 2019 Design				
A6195 (South)	1.60	3.89	0.62	A
Site Access	0.17	3.14	0.14	A
A6195 (North)	0.97	3.02	0.49	A
Unnamed East	0.00	0.00	0.00	A

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

- "D1 - AM 2014 Count, AM" model duration: 07:30 - 09:00
- "D2 - PM 2014 Count, PM" model duration: 16:15 - 17:45
- "D3 - AM 2014 Design, AM" model duration: 07:30 - 09:00
- "D4 - PM 2014 Design, PM" model duration: 16:15 - 17:45
- "D5 - AM 2019 Count, AM" model duration: 07:30 - 09:00
- "D6 - PM 2019 Count, PM" model duration: 16:15 - 17:45
- "D7 - AM 2019 Design, AM" model duration: 07:30 - 09:00
- "D8 - PM 2019 Design, PM " model duration: 16:15 - 17:45

Run using ARCADY 8.0.0.296 at 04/09/2014 18:12:56

File summary

File Description

Title	Rockingham Roundabout
Location	Barnsley
Site Number	
Date	15/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	OPTIMA\tom.pritchard

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) - PM 2019 Design, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Site Access - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	DemandSets	D1 - AM 2014 Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - PM 2014 Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - AM 2014 Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - PM 2014 Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - AM 2019 Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - PM 2019 Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - AM 2019 Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - PM 2019 Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
PM 2019 Design, PM	PM 2019 Design	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
Rockingham Roundabout	Roundabout	1,2,3,4			3.48	A

Junction Network Options

--

Driving Side	Lighting	Road Surface
Left	Normal/unknown	(Mini-roundabouts only)

Arms

Arms

Name	Name	Description
A6195 (South)	A6195 (South)	
Site Access	Site Access	
A6195 (North)	A6195 (North)	
Unnamed East	Unnamed East	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A6195 (South)	7.43	8.05	3.14	24.70	60.00	20.00	
Site Access	4.75	7.60	43.40	23.00	60.00	16.00	
A6195 (North)	7.50	8.10	3.00	23.00	60.00	26.00	
Unnamed East	3.97	7.40	5.85	29.20	60.00	16.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
A6195 (South)	None
Site Access	None
A6195 (North)	None
Unnamed East	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A6195 (South)		(calculated)	(calculated)	0.702	2470.470
Site Access		(calculated)	(calculated)	0.670	2271.163
A6195 (North)		(calculated)	(calculated)	0.689	2431.636
Unnamed East		(calculated)	(calculated)	0.568	1664.338

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A6195 (South)	ONE HOUR	✓	1355.00	100.000
Site Access	ONE HOUR	✓	176.00	100.000
A6195 (North)	ONE HOUR	✓	1055.00	100.000
Unnamed East	ONE HOUR	✓	1.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	93.000	1262.000	0.000
	2	102.000	0.000	74.000	0.000
	3	985.000	69.000	0.000	1.000
	4	1.000	0.000	0.000	0.000

Turning Proportions (PCU) - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.07	0.93	0.00
	2	0.58	0.00	0.42	0.00
	3	0.93	0.07	0.00	0.00
	4	1.00	0.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Rockingham Roundabout (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 - Rockingham Roundabout (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
A6195 (South)	0.62	3.89	1.60	A
Site Access	0.14	3.14	0.17	A
A6195 (North)	0.49	3.02	0.97	A
Unnamed East	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:15-16:30)

Name	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
A6195 (South)	1020.12	1017.24	51.82	0.00	2434.09	0.419	0.72	2.535	A
Site Access	132.50	132.15	947.43	0.00	1635.97	0.081	0.09	2.394	A
A6195 (North)	794.26	792.26	76.59	0.00	2378.86	0.334	0.50	2.266	A
Unnamed East	0.00	0.00	868.10	0.00	1171.54	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1218.12	1216.98	61.99	0.00	2426.95	0.502	1.00	2.972	A
Site Access	158.22	158.11	1133.46	0.00	1511.25	0.105	0.12	2.660	A
A6195 (North)	948.42	947.76	91.63	0.00	2368.49	0.400	0.66	2.532	A
Unnamed East	0.00	0.00	1038.49	0.00	1074.82	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1491.88	1489.51	75.89	0.00	2417.19	0.617	1.59	3.870	A
Site Access	193.78	193.57	1387.28	0.00	1341.08	0.145	0.17	3.137	A
A6195 (North)	1161.58	1160.37	112.18	0.00	2354.33	0.493	0.97	3.012	A
Unnamed East	0.00	0.00	1271.45	0.00	942.57	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1491.88	1491.85	75.97	0.00	2417.13	0.617	1.60	3.890	A
Site Access	193.78	193.78	1389.46	0.00	1339.62	0.145	0.17	3.141	A
A6195 (North)	1161.58	1161.56	112.30	0.00	2354.24	0.493	0.97	3.017	A
Unnamed East	0.00	0.00	1272.77	0.00	941.83	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1218.12	1220.47	62.11	0.00	2426.86	0.502	1.01	2.991	A
Site Access	158.22	158.43	1136.71	0.00	1509.07	0.105	0.12	2.667	A
A6195 (North)	948.42	949.62	91.81	0.00	2368.36	0.400	0.67	2.541	A
Unnamed East	0.00	0.00	1040.54	0.00	1073.66	0.000	0.00	0.000	A

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

Name	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
A6195 (South)	1020.12	1021.27	51.99	0.00	2433.97	0.419	0.72	2.549	A
Site Access	132.50	132.62	951.18	0.00	1633.46	0.081	0.09	2.400	A
A6195 (North)	794.26	794.93	76.86	0.00	2378.67	0.334	0.50	2.275	A
Unnamed East	0.00	0.00	871.04	0.00	1169.88	0.000	0.00	0.000	A

Junctions 8
ARCADY 8 - Roundabout Module
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Filename: (new file)
 Path:
 Report generation date: 04/09/2014 09:36:08

- « (Default Analysis Set) - 2014 AM Count, AM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2014 AM Count				
Dearne Valley Pkway	2.29	6.94	0.70	A
Sheffield Road (E)	3.62	20.51	0.79	C
A61 (S)	1.31	2.66	0.57	A
A61/Sheffield Road (W)	37.40	110.09	1.04	F

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

- "D1 - 2014 AM Count, AM" model duration: 07:30 - 09:00
- "D2 - 2014 PM Count, PM" model duration: 16:15 - 17:45
- "D3 - 2014 AM Design, AM" model duration: 07:30 - 09:00
- "D4 - 2014 PM Design, PM" model duration: 16:15 - 17:45
- "D5 - 2019 AM Count, AM" model duration: 07:30 - 09:00
- "D6 - 2019 PM Count, PM" model duration: 16:15 - 17:45
- "D7 - 2019 AM Design, AM" model duration: 07:30 - 09:00
- "D8 - 2019 PM Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:36:07

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	23/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - 2014 AM Count, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	DemandSets	D1 - 2014 AM Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - 2014 PM Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - 2014 AM Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - 2014 PM Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - 2019 AM Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - 2019 PM Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - 2019 AM Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - 2019 PM Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
2014 AM Count, AM	2014 AM Count	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			31.83	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Dearne Valley Pkway	Dearne Valley Pkway	
Sheffield Road (E)	Sheffield Road (E)	
A61 (S)	A61 (S)	
A61/Sheffield Road (W)	A61/Sheffield Road (W)	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Dearne Valley Pkway	7.60	9.10	6.36	22.00	64.20	34.00	
Sheffield Road (E)	3.70	7.83	14.70	62.70	64.20	27.00	
A61 (S)	10.80	11.10	3.30	37.80	64.20	26.00	
A61/Sheffield Road (W)	4.20	7.80	12.31	24.00	64.20	26.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Dearne Valley Pkway	None
Sheffield Road (E)	None
A61 (S)	None
A61/Sheffield Road (W)	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Dearne Valley Pkway		(calculated)	(calculated)	0.671	2537.647
Sheffield Road (E)		(calculated)	(calculated)	0.571	1857.866
A61 (S)		(calculated)	(calculated)	0.837	3466.189
A61/Sheffield Road (W)		(calculated)	(calculated)	0.569	1876.530

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Dearne Valley Pkway	ONE HOUR	✓	1095.00	100.000
Sheffield Road (E)	ONE HOUR	✓	603.00	100.000
A61 (S)	ONE HOUR	✓	1618.00	100.000
A61/Sheffield Road (W)	ONE HOUR	✓	1039.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	26.000	988.000	81.000
	2	27.000	0.000	325.000	251.000
	3	971.000	244.000	0.000	403.000
	4	136.000	318.000	585.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.02	0.90	0.07
	2	0.04	0.00	0.54	0.42
	3	0.60	0.15	0.00	0.25
	4	0.13	0.31	0.56	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (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 - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Dearne Valley Pkway	0.70	6.94	2.29	A
Sheffield Road (E)	0.79	20.51	3.62	C

A61 (S)	0.57	2.66	1.31	A
A61/Sheffield Road (W)	1.04	110.09	37.40	F

Main Results for each time segment

Main results: (07:30-07:45)

Name	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
Dearne Valley Pkway	824.37	821.49	858.41	0.00	1961.87	0.420	0.72	3.149	A
Sheffield Road (E)	453.97	451.39	1239.33	0.00	1149.94	0.395	0.65	5.135	A
A61 (S)	1218.12	1215.71	268.87	0.00	3241.24	0.376	0.60	1.775	A
A61/Sheffield Road (W)	782.21	776.75	933.12	0.00	1345.71	0.581	1.37	6.270	A

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

Name	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
Dearne Valley Pkway	984.38	982.76	1025.68	0.00	1849.67	0.532	1.13	4.145	A
Sheffield Road (E)	542.08	540.13	1481.89	0.00	1011.38	0.536	1.13	7.607	A
A61 (S)	1454.55	1453.62	321.71	0.00	3197.03	0.455	0.83	2.064	A
A61/Sheffield Road (W)	934.04	927.93	1115.75	0.00	1241.82	0.752	2.89	11.252	B

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

Name	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
Dearne Valley Pkway	1205.62	1201.28	1191.92	0.00	1738.17	0.694	2.21	6.650	A
Sheffield Road (E)	663.92	655.13	1771.07	0.00	846.19	0.785	3.33	18.073	C
A61 (S)	1781.45	1779.56	390.89	0.00	3139.15	0.567	1.30	2.644	A
A61/Sheffield Road (W)	1143.96	1062.65	1365.66	0.00	1099.66	1.040	23.22	56.808	F

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

Name	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
Dearne Valley Pkway	1205.62	1205.31	1213.56	0.00	1723.65	0.699	2.29	6.937	A
Sheffield Road (E)	663.92	662.76	1788.85	0.00	836.04	0.794	3.62	20.505	C
A61 (S)	1781.45	1781.42	394.71	0.00	3135.96	0.568	1.31	2.657	A
A61/Sheffield Road (W)	1143.96	1087.23	1367.40	0.00	1098.67	1.041	37.40	110.087	F

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

Name	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
Dearne Valley Pkway	984.38	988.44	1149.95	0.00	1766.32	0.557	1.27	4.653	A
Sheffield Road (E)	542.08	551.29	1567.67	0.00	962.38	0.563	1.32	8.944	A
A61 (S)	1454.55	1456.43	327.28	0.00	3192.37	0.456	0.84	2.075	A
A61/Sheffield Road (W)	934.04	1070.43	1118.36	0.00	1240.34	0.753	3.30	36.306	E

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

Name	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
Dearne Valley Pkway	824.37	826.53	870.23	0.00	1953.94	0.422	0.73	3.200	A
Sheffield Road (E)	453.97	456.58	1251.58	0.00	1142.94	0.397	0.67	5.266	A
A61 (S)	1218.12	1219.06	271.64	0.00	3238.93	0.376	0.60	1.782	A
A61/Sheffield Road (W)	782.21	789.77	935.87	0.00	1344.15	0.582	1.42	6.578	A

<h1>Junctions 8</h1>
<h2>ARCADY 8 - Roundabout Module</h2>
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Filename: (new file)

Path:

Report generation date: 04/09/2014 09:36:36

« (Default Analysis Set) - 2014 PM Count, PM

- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2014 PM Count			
Dearne Valley Pkway	1.79	5.94	0.64	A
Sheffield Road (E)	1.72	10.30	0.64	B
A61 (S)	3.82	5.81	0.80	A
A61/Sheffield Road (W)	38.85	131.33	1.06	F

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

- "D1 - 2014 AM Count, AM" model duration: 07:30 - 09:00
- "D2 - 2014 PM Count, PM" model duration: 16:15 - 17:45
- "D3 - 2014 AM Design, AM" model duration: 07:30 - 09:00
- "D4 - 2014 PM Design, PM" model duration: 16:15 - 17:45
- "D5 - 2019 AM Count, AM" model duration: 07:30 - 09:00
- "D6 - 2019 PM Count, PM" model duration: 16:15 - 17:45
- "D7 - 2019 AM Design, AM" model duration: 07:30 - 09:00
- "D8 - 2019 PM Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:36:36

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	23/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - 2014 PM Count, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	DemandSets	D1 - 2014 AM Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - 2014 PM Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - 2014 AM Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - 2014 PM Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - 2019 AM Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - 2019 PM Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - 2019 AM Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - 2019 PM Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
2014 PM Count, PM	2014 PM Count	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			30.57	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Dearne Valley Pkway	Dearne Valley Pkway	
Sheffield Road (E)	Sheffield Road (E)	
A61 (S)	A61 (S)	
A61/Sheffield Road (W)	A61/Sheffield Road (W)	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Dearne Valley Pkway	7.60	9.10	6.36	22.00	64.20	34.00	
Sheffield Road (E)	3.70	7.83	14.70	62.70	64.20	27.00	
A61 (S)	10.80	11.10	3.30	37.80	64.20	26.00	
A61/Sheffield Road (W)	4.20	7.80	12.31	24.00	64.20	26.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Dearne Valley Pkway	None
Sheffield Road (E)	None
A61 (S)	None
A61/Sheffield Road (W)	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Dearne Valley Pkway		(calculated)	(calculated)	0.671	2537.647
Sheffield Road (E)		(calculated)	(calculated)	0.571	1857.866
A61 (S)		(calculated)	(calculated)	0.837	3466.189
A61/Sheffield Road (W)		(calculated)	(calculated)	0.569	1876.530

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Dearne Valley Pkwy	ONE HOUR	✓	994.00	100.000
Sheffield Road (E)	ONE HOUR	✓	555.00	100.000
A61 (S)	ONE HOUR	✓	2182.00	100.000
A61/Sheffield Road (W)	ONE HOUR	✓	891.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	34.000	824.000	136.000
	2	33.000	0.000	208.000	314.000
	3	1080.000	404.000	0.000	698.000
	4	110.000	281.000	500.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.03	0.83	0.14
	2	0.06	0.00	0.37	0.57
	3	0.49	0.19	0.00	0.32
	4	0.12	0.32	0.56	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (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 - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Dearne Valley Pkwy	0.64	5.94	1.79	A
Sheffield Road (E)	0.64	10.30	1.72	B

A61 (S)	0.80	5.81	3.82	A
A61/Sheffield Road (W)	1.06	131.33	38.85	F

Main Results for each time segment

Main results: (16:15-16:30)

Name	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
Dearne Valley Pkway	748.34	745.84	887.18	0.00	1942.57	0.385	0.62	3.002	A
Sheffield Road (E)	417.83	415.80	1094.10	0.00	1232.90	0.339	0.51	4.395	A
A61 (S)	1642.72	1638.43	362.01	0.00	3163.31	0.519	1.07	2.354	A
A61/Sheffield Road (W)	670.79	666.06	1139.03	0.00	1228.58	0.546	1.18	6.347	A

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

Name	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
Dearne Valley Pkway	893.59	892.28	1060.05	0.00	1826.62	0.489	0.95	3.847	A
Sheffield Road (E)	498.93	497.74	1308.19	0.00	1110.60	0.449	0.81	5.865	A
A61 (S)	1961.57	1959.06	433.28	0.00	3103.69	0.632	1.70	3.139	A
A61/Sheffield Road (W)	800.99	795.54	1361.98	0.00	1101.76	0.727	2.55	11.554	B

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

Name	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
Dearne Valley Pkway	1094.41	1091.25	1230.86	0.00	1712.05	0.639	1.74	5.768	A
Sheffield Road (E)	611.07	607.64	1558.13	0.00	967.83	0.631	1.66	9.900	A
A61 (S)	2402.43	2394.21	529.21	0.00	3023.43	0.795	3.76	5.649	A
A61/Sheffield Road (W)	981.01	898.50	1664.46	0.00	929.69	1.055	23.17	65.286	F

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

Name	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
Dearne Valley Pkway	1094.41	1094.23	1249.70	0.00	1699.41	0.644	1.79	5.945	A
Sheffield Road (E)	611.07	610.85	1572.13	0.00	959.84	0.637	1.72	10.303	B
A61 (S)	2402.43	2402.17	531.63	0.00	3021.40	0.795	3.82	5.808	A
A61/Sheffield Road (W)	981.01	918.30	1670.06	0.00	926.50	1.059	38.85	131.328	F

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

Name	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
Dearne Valley Pkway	893.59	896.46	1192.77	0.00	1737.60	0.514	1.07	4.295	A
Sheffield Road (E)	498.93	502.21	1395.91	0.00	1060.50	0.470	0.90	6.487	A
A61 (S)	1961.57	1969.90	436.65	0.00	3100.87	0.633	1.74	3.207	A
A61/Sheffield Road (W)	800.99	944.66	1369.61	0.00	1097.41	0.730	2.93	43.284	E

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

Name	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
Dearne Valley Pkway	748.34	750.07	898.59	0.00	1934.92	0.387	0.63	3.044	A
Sheffield Road (E)	417.83	419.35	1104.67	0.00	1226.86	0.341	0.52	4.467	A
A61 (S)	1642.72	1645.32	364.82	0.00	3160.97	0.520	1.09	2.378	A
A61/Sheffield Road (W)	670.79	677.61	1143.94	0.00	1225.79	0.547	1.23	6.645	A

Junctions 8
ARCADY 8 - Roundabout Module
Version: 8.0.1.305 [25 May 2012] © Copyright TRL Limited, 2014
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Filename: (new file)
 Path:
 Report generation date: 04/09/2014 09:37:34

- « (Default Analysis Set) - 2019 AM Count, AM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2019 AM Count			
Dearne Valley Pkway	2.87	8.11	0.75	A
Sheffield Road (E)	6.82	36.81	0.89	E
A61 (S)	1.59	3.00	0.61	A
A61/Sheffield Road (W)	101.08	268.93	1.18	F

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

- "D1 - 2014 AM Count, AM" model duration: 07:30 - 09:00
- "D2 - 2014 PM Count, PM" model duration: 16:15 - 17:45
- "D3 - 2014 AM Design, AM" model duration: 07:30 - 09:00
- "D4 - 2014 PM Design, PM" model duration: 16:15 - 17:45
- "D5 - 2019 AM Count, AM " model duration: 07:30 - 09:00
- "D6 - 2019 PM Count, PM" model duration: 16:15 - 17:45
- "D7 - 2019 AM Design, AM" model duration: 07:30 - 09:00
- "D8 - 2019 PM Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:37:34

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	23/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - 2019 AM Count, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	DemandSets	D1 - 2014 AM Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - 2014 PM Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - 2014 AM Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - 2014 PM Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - 2019 AM Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - 2019 PM Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - 2019 AM Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - 2019 PM Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
2019 AM Count, AM	2019 AM Count	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			72.41	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Dearne Valley Pkway	Dearne Valley Pkway	
Sheffield Road (E)	Sheffield Road (E)	
A61 (S)	A61 (S)	
A61/Sheffield Road (W)	A61/Sheffield Road (W)	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Dearne Valley Pkway	7.60	9.10	6.36	22.00	64.20	34.00	
Sheffield Road (E)	3.70	7.83	14.70	62.70	64.20	27.00	
A61 (S)	10.80	11.10	3.30	37.80	64.20	26.00	
A61/Sheffield Road (W)	4.20	7.80	12.31	24.00	64.20	26.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Dearne Valley Pkway	None
Sheffield Road (E)	None
A61 (S)	None
A61/Sheffield Road (W)	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Dearne Valley Pkway		(calculated)	(calculated)	0.671	2537.647
Sheffield Road (E)		(calculated)	(calculated)	0.571	1857.866
A61 (S)		(calculated)	(calculated)	0.837	3466.189
A61/Sheffield Road (W)		(calculated)	(calculated)	0.569	1876.530

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Dearne Valley Pkwy	ONE HOUR	✓	1176.00	100.000
Sheffield Road (E)	ONE HOUR	✓	648.00	100.000
A61 (S)	ONE HOUR	✓	1738.00	100.000
A61/Sheffield Road (W)	ONE HOUR	✓	1116.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	28.000	1061.000	87.000
	2	29.000	0.000	349.000	270.000
	3	1043.000	262.000	0.000	433.000
	4	146.000	341.000	629.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.02	0.90	0.07
	2	0.04	0.00	0.54	0.42
	3	0.60	0.15	0.00	0.25
	4	0.13	0.31	0.56	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (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 - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Dearne Valley Pkwy	0.75	8.11	2.87	A
Sheffield Road (E)	0.89	36.81	6.82	E

A61 (S)	0.61	3.00	1.59	A
A61/Sheffield Road (W)	1.18	268.93	101.08	F

Main Results for each time segment

Main results: (07:30-07:45)

Name	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
Dearne Valley Pkway	885.35	881.96	920.98	0.00	1919.90	0.461	0.85	3.457	A
Sheffield Road (E)	487.85	484.69	1330.53	0.00	1097.84	0.444	0.79	5.844	A
A61 (S)	1308.46	1305.74	288.89	0.00	3224.49	0.406	0.68	1.874	A
A61/Sheffield Road (W)	840.18	833.14	1002.12	0.00	1306.46	0.643	1.76	7.500	A

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

Name	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
Dearne Valley Pkway	1057.20	1054.99	1097.17	0.00	1801.72	0.587	1.40	4.806	A
Sheffield Road (E)	582.54	579.53	1588.72	0.00	950.36	0.613	1.54	9.630	A
A61 (S)	1562.43	1561.30	345.46	0.00	3177.17	0.492	0.96	2.227	A
A61/Sheffield Road (W)	1003.26	991.53	1198.26	0.00	1194.89	0.840	4.69	16.808	C

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

Name	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
Dearne Valley Pkway	1294.80	1289.22	1184.97	0.00	1742.83	0.743	2.80	7.840	A
Sheffield Road (E)	713.46	695.90	1840.10	0.00	806.76	0.884	5.93	28.866	D
A61 (S)	1913.57	1911.12	416.48	0.00	3117.75	0.614	1.58	2.977	A
A61/Sheffield Road (W)	1228.74	1031.86	1466.14	0.00	1042.50	1.179	53.91	113.739	F

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

Name	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
Dearne Valley Pkway	1294.80	1294.52	1192.46	0.00	1737.80	0.745	2.87	8.110	A
Sheffield Road (E)	713.46	709.90	1849.91	0.00	801.16	0.891	6.82	36.814	E
A61 (S)	1913.57	1913.52	423.33	0.00	3112.01	0.615	1.59	3.003	A
A61/Sheffield Road (W)	1228.74	1040.07	1468.56	0.00	1041.12	1.180	101.08	268.927	F

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

Name	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
Dearne Valley Pkway	1057.20	1061.88	1262.49	0.00	1690.83	0.625	1.70	5.765	A
Sheffield Road (E)	582.54	601.83	1702.30	0.00	885.48	0.658	2.00	13.489	B
A61 (S)	1562.43	1564.87	356.26	0.00	3168.13	0.493	0.98	2.248	A
A61/Sheffield Road (W)	1003.26	1181.11	1201.94	0.00	1192.80	0.841	56.62	240.497	F

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

Name	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
Dearne Valley Pkway	885.35	888.18	1117.97	0.00	1787.77	0.495	0.99	4.015	A
Sheffield Road (E)	487.85	492.13	1463.96	0.00	1021.62	0.478	0.93	6.851	A
A61 (S)	1308.46	1309.62	292.79	0.00	3221.23	0.406	0.69	1.886	A
A61/Sheffield Road (W)	840.18	1059.11	1005.37	0.00	1304.61	0.644	1.89	34.643	D

Junctions 8
ARCADY 8 - Roundabout Module
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Filename: (new file)
 Path:
 Report generation date: 04/09/2014 09:38:33

- « (Default Analysis Set) - 2019 PM Count, PM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2019 PM Count			
Dearne Valley Pkway	2.18	6.73	0.69	A
Sheffield Road (E)	2.32	12.99	0.70	B
A61 (S)	6.23	8.93	0.87	A
A61/Sheffield Road (W)	105.96	332.93	1.24	F

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

- "D1 - 2014 AM Count, AM" model duration: 07:30 - 09:00
- "D2 - 2014 PM Count, PM" model duration: 16:15 - 17:45
- "D3 - 2014 AM Design, AM" model duration: 07:30 - 09:00
- "D4 - 2014 PM Design, PM" model duration: 16:15 - 17:45
- "D5 - 2019 AM Count, AM" model duration: 07:30 - 09:00
- "D6 - 2019 PM Count, PM" model duration: 16:15 - 17:45
- "D7 - 2019 AM Design, AM" model duration: 07:30 - 09:00
- "D8 - 2019 PM Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:38:33

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	23/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - 2019 PM Count, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	DemandSets	D1 - 2014 AM Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - 2014 PM Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - 2014 AM Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - 2014 PM Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - 2019 AM Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - 2019 PM Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - 2019 AM Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - 2019 PM Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
2019 PM Count, PM	2019 PM Count	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			71.36	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Dearne Valley Pkway	Dearne Valley Pkway	
Sheffield Road (E)	Sheffield Road (E)	
A61 (S)	A61 (S)	
A61/Sheffield Road (W)	A61/Sheffield Road (W)	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Dearne Valley Pkway	7.60	9.10	6.36	22.00	64.20	34.00	
Sheffield Road (E)	3.70	7.83	14.70	62.70	64.20	27.00	
A61 (S)	10.80	11.10	3.30	37.80	64.20	26.00	
A61/Sheffield Road (W)	4.20	7.80	12.31	24.00	64.20	26.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Dearne Valley Pkway	None
Sheffield Road (E)	None
A61 (S)	None
A61/Sheffield Road (W)	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Dearne Valley Pkway		(calculated)	(calculated)	0.671	2537.647
Sheffield Road (E)		(calculated)	(calculated)	0.571	1857.866
A61 (S)		(calculated)	(calculated)	0.837	3466.189
A61/Sheffield Road (W)		(calculated)	(calculated)	0.569	1876.530

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Dearne Valley Pkwy	ONE HOUR	✓	1072.00	100.000
Sheffield Road (E)	ONE HOUR	✓	597.00	100.000
A61 (S)	ONE HOUR	✓	2350.00	100.000
A61/Sheffield Road (W)	ONE HOUR	✓	959.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	37.000	888.000	147.000
	2	35.000	0.000	224.000	338.000
	3	1163.000	435.000	0.000	752.000
	4	118.000	303.000	538.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.03	0.83	0.14
	2	0.06	0.00	0.38	0.57
	3	0.49	0.19	0.00	0.32
	4	0.12	0.32	0.56	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (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 - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Dearne Valley Pkwy	0.69	6.73	2.18	A
Sheffield Road (E)	0.70	12.99	2.32	B

A61 (S)	0.87	8.93	6.23	A
A61/Sheffield Road (W)	1.24	332.93	105.96	F

Main Results for each time segment

Main results: (16:15-16:30)

Name	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
Dearne Valley Pkway	807.06	804.12	954.27	0.00	1897.57	0.425	0.74	3.284	A
Sheffield Road (E)	449.45	447.03	1177.93	0.00	1185.01	0.379	0.61	4.863	A
A61 (S)	1769.20	1764.08	389.57	0.00	3140.26	0.563	1.28	2.606	A
A61/Sheffield Road (W)	721.99	715.81	1225.78	0.00	1179.23	0.612	1.54	7.673	A

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

Name	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
Dearne Valley Pkway	963.71	961.95	1136.84	0.00	1775.11	0.543	1.18	4.417	A
Sheffield Road (E)	536.69	535.03	1406.25	0.00	1054.59	0.509	1.02	6.906	A
A61 (S)	2112.60	2109.07	466.19	0.00	3076.15	0.687	2.16	3.708	A
A61/Sheffield Road (W)	862.12	851.17	1465.54	0.00	1042.85	0.827	4.28	17.845	C

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

Name	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
Dearne Valley Pkway	1180.29	1176.40	1222.94	0.00	1717.36	0.687	2.15	6.608	A
Sheffield Road (E)	657.31	652.37	1613.57	0.00	936.16	0.702	2.25	12.472	B
A61 (S)	2587.40	2572.01	568.91	0.00	2990.21	0.865	6.01	8.318	A
A61/Sheffield Road (W)	1055.88	851.64	1787.21	0.00	859.86	1.228	55.34	138.502	F

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

Name	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
Dearne Valley Pkway	1180.29	1180.16	1227.20	0.00	1714.51	0.688	2.18	6.732	A
Sheffield Road (E)	657.31	657.05	1618.20	0.00	933.52	0.704	2.32	12.992	B
A61 (S)	2587.40	2586.51	572.35	0.00	2987.34	0.866	6.23	8.930	A
A61/Sheffield Road (W)	1055.88	853.43	1797.34	0.00	854.09	1.236	105.96	332.933	F

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

Name	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
Dearne Valley Pkway	963.71	966.90	1293.25	0.00	1670.20	0.577	1.38	5.143	A
Sheffield Road (E)	536.69	541.21	1508.78	0.00	996.02	0.539	1.19	7.993	A
A61 (S)	2112.60	2128.62	470.73	0.00	3072.36	0.688	2.23	3.879	A
A61/Sheffield Road (W)	862.12	1025.40	1479.19	0.00	1035.08	0.833	65.14	297.817	F

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

Name	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
Dearne Valley Pkway	807.06	809.11	1183.96	0.00	1743.51	0.463	0.87	3.860	A
Sheffield Road (E)	449.45	451.42	1328.64	0.00	1098.92	0.409	0.70	5.578	A
A61 (S)	1769.20	1772.92	392.99	0.00	3137.40	0.564	1.30	2.644	A
A61/Sheffield Road (W)	721.99	975.85	1232.05	0.00	1175.67	0.614	1.67	54.259	F

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Filename: (new file)
 Path:
 Report generation date: 04/09/2014 09:39:25

- « (Default Analysis Set) - 2019 AM Design, AM
- » Junction Network
- » Arms
- » Traffic Flows
- » Entry Flows
- » Turning Proportions
- » Vehicle Mix
- » Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2019 AM Design			
Dearne Valley Pkway	3.05	8.44	0.76	A
Sheffield Road (E)	7.67	41.23	0.91	E
A61 (S)	1.66	3.09	0.63	A
A61/Sheffield Road (W)	111.94	300.02	1.21	F

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

- "D1 - 2014 AM Count, AM" model duration: 07:30 - 09:00
- "D2 - 2014 PM Count, PM" model duration: 16:15 - 17:45
- "D3 - 2014 AM Design, AM" model duration: 07:30 - 09:00
- "D4 - 2014 PM Design, PM" model duration: 16:15 - 17:45
- "D5 - 2019 AM Count, AM" model duration: 07:30 - 09:00
- "D6 - 2019 PM Count, PM" model duration: 16:15 - 17:45
- "D7 - 2019 AM Design, AM" model duration: 07:30 - 09:00
- "D8 - 2019 PM Design, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.1.305 at 04/09/2014 09:39:24

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	23/07/2014
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	OPTIMA\tom.pritchard
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) - 2019 AM Design, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	DemandSets	D1 - 2014 AM Count, AM	Demand Set 1: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D2 - 2014 PM Count, PM	Demand Set 2: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D3 - 2014 AM Design, AM	Demand Set 3: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D4 - 2014 PM Design, PM	Demand Set 4: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D5 - 2019 AM Count, AM	Demand Set 5: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D6 - 2019 PM Count, PM	Demand Set 6: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	DemandSets	D7 - 2019 AM Design, AM	Demand Set 7: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	DemandSets	D8 - 2019 PM Design, PM	Demand Set 8: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)			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
2019 AM Design, AM	2019 AM Design	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
(untitled)	Roundabout	1,2,3,4			79.83	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Name	Name	Description
Dearne Valley Pkway	Dearne Valley Pkway	
Sheffield Road (E)	Sheffield Road (E)	
A61 (S)	A61 (S)	
A61/Sheffield Road (W)	A61/Sheffield Road (W)	

Roundabout Geometry

Name	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Dearne Valley Pkway	7.60	9.10	6.36	22.00	64.20	34.00	
Sheffield Road (E)	3.70	7.83	14.70	62.70	64.20	27.00	
A61 (S)	10.80	11.10	3.30	37.80	64.20	26.00	
A61/Sheffield Road (W)	4.20	7.80	12.31	24.00	64.20	26.00	

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Pedestrian Crossings

Name	Crossing Type
Dearne Valley Pkway	None
Sheffield Road (E)	None
A61 (S)	None
A61/Sheffield Road (W)	None

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Name	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Dearne Valley Pkway		(calculated)	(calculated)	0.671	2537.647
Sheffield Road (E)		(calculated)	(calculated)	0.571	1857.866
A61 (S)		(calculated)	(calculated)	0.837	3466.189
A61/Sheffield Road (W)		(calculated)	(calculated)	0.569	1876.530

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

Name	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Dearne Valley Pkway	ONE HOUR	✓	1203.00	100.000
Sheffield Road (E)	ONE HOUR	✓	652.00	100.000
A61 (S)	ONE HOUR	✓	1764.00	100.000
A61/Sheffield Road (W)	ONE HOUR	✓	1119.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	31.000	1081.000	91.000
	2	33.000	0.000	349.000	270.000
	3	1069.000	262.000	0.000	433.000
	4	149.000	341.000	629.000	0.000

Turning Proportions (PCU) - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.03	0.90	0.08
	2	0.05	0.00	0.54	0.41
	3	0.61	0.15	0.00	0.25
	4	0.13	0.30	0.56	0.00

Vehicle Mix

Average PCU Per Vehicle - (untitled) (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 - (untitled) (for whole period)

		To			
		1	2	3	4
From	1	0.000	0.000	0.000	0.000
	2	0.000	0.000	0.000	0.000
	3	0.000	0.000	0.000	0.000
	4	0.000	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Name	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Dearne Valley Pkway	0.76	8.44	3.05	A
Sheffield Road (E)	0.91	41.23	7.67	E

A61 (S)	0.63	3.09	1.66	A
A61/Sheffield Road (W)	1.21	300.02	111.94	F

Main Results for each time segment

Main results: (07:30-07:45)

Name	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
Dearne Valley Pkway	905.68	902.14	920.78	0.00	1920.03	0.472	0.89	3.526	A
Sheffield Road (E)	490.86	487.61	1348.34	0.00	1087.67	0.451	0.81	5.967	A
A61 (S)	1328.03	1325.23	294.85	0.00	3219.51	0.413	0.70	1.899	A
A61/Sheffield Road (W)	842.44	835.16	1024.61	0.00	1293.67	0.651	1.82	7.734	A

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

Name	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
Dearne Valley Pkway	1081.47	1079.10	1096.01	0.00	1802.50	0.600	1.48	4.961	A
Sheffield Road (E)	586.13	582.92	1609.38	0.00	938.56	0.625	1.62	10.033	B
A61 (S)	1585.80	1584.62	352.52	0.00	3171.25	0.500	1.00	2.268	A
A61/Sheffield Road (W)	1005.96	992.85	1225.15	0.00	1179.59	0.853	5.10	18.129	C

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

Name	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
Dearne Valley Pkway	1324.53	1318.55	1168.03	0.00	1754.19	0.755	2.97	8.152	A
Sheffield Road (E)	717.87	698.14	1855.18	0.00	798.15	0.899	6.55	31.325	D
A61 (S)	1942.20	1939.60	424.18	0.00	3111.30	0.624	1.65	3.066	A
A61/Sheffield Road (W)	1232.04	1015.12	1498.83	0.00	1023.91	1.203	59.33	125.553	F

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

Name	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
Dearne Valley Pkway	1324.53	1324.24	1174.02	0.00	1750.17	0.757	3.05	8.437	A
Sheffield Road (E)	717.87	713.37	1864.36	0.00	792.91	0.905	7.67	41.232	E
A61 (S)	1942.20	1942.14	431.69	0.00	3105.02	0.626	1.66	3.095	A
A61/Sheffield Road (W)	1232.04	1021.59	1501.52	0.00	1022.37	1.205	111.94	300.021	F

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

Name	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
Dearne Valley Pkway	1081.47	1086.56	1247.36	0.00	1700.98	0.636	1.78	5.908	A
Sheffield Road (E)	586.13	608.47	1714.43	0.00	878.55	0.667	2.09	14.342	B
A61 (S)	1585.80	1588.40	364.96	0.00	3160.85	0.502	1.01	2.294	A
A61/Sheffield Road (W)	1005.96	1166.81	1229.30	0.00	1177.23	0.855	71.73	281.930	F

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

Name	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
Dearne Valley Pkway	905.68	908.47	1169.50	0.00	1753.20	0.517	1.08	4.275	A
Sheffield Road (E)	490.86	495.23	1515.40	0.00	992.24	0.495	0.99	7.307	A
A61 (S)	1328.03	1329.26	298.87	0.00	3216.14	0.413	0.71	1.911	A
A61/Sheffield Road (W)	842.44	1121.39	1028.04	0.00	1291.72	0.652	1.99	65.366	F