Port Road Wenvoe

Residential Development

Supplementary Transport Statement

on behalf of

Redrow Homes (South Wales)

December 012

Traffic and Transport Planning

ron@trafficandtransportplanning.co.uk
02920 763 358
07866 489 578

Contents

Appendix

1 Introduction

1.1 Following a meeting with Highway Officers this Supplementary Transport Statement:

- details the agreed junction layout plan
- outlines relevant UDP transport policies
- summarises the South Wales Parking Guidelines 1993
- re-calculates junction capacities

1.2 In the original TA the assumption made was that the development would consist of 150 houses. Since the TA was submitted Redrow Homes has reviewed the land availability and concluded that 140 houses will be the maximum number. Trip input has been re-calculated to reflect this change:

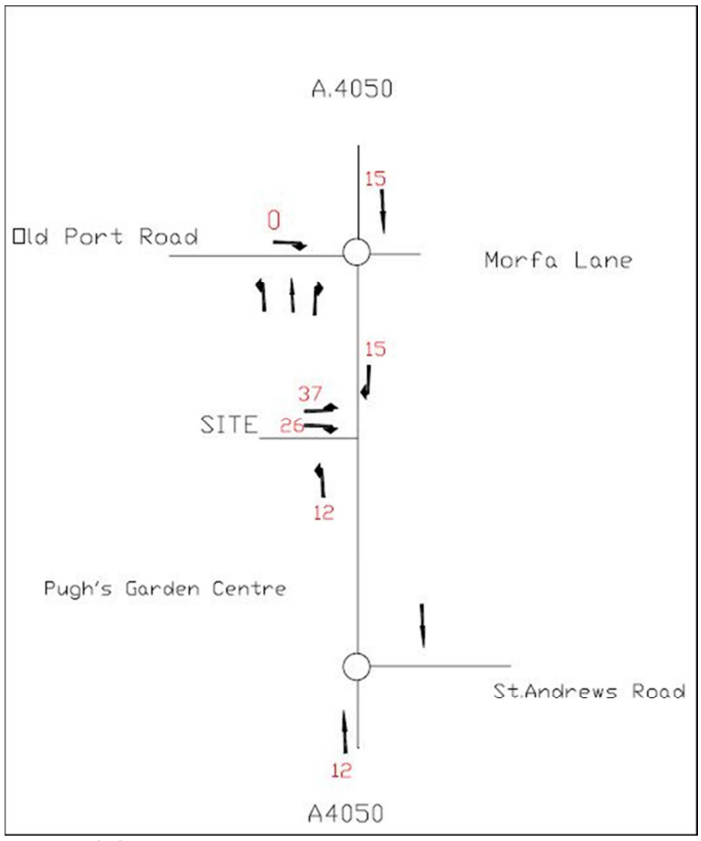
Table 1 Weekday vehicle trips for average trip rates

	Private			Affordable			Total		
	in	out	2-way	in	out	2-way	in	out	2-way
AM peak hr	15	42	57	5	8	13	20	50	70
PM peak hr	42	23	65	9	7	15	49	30	79

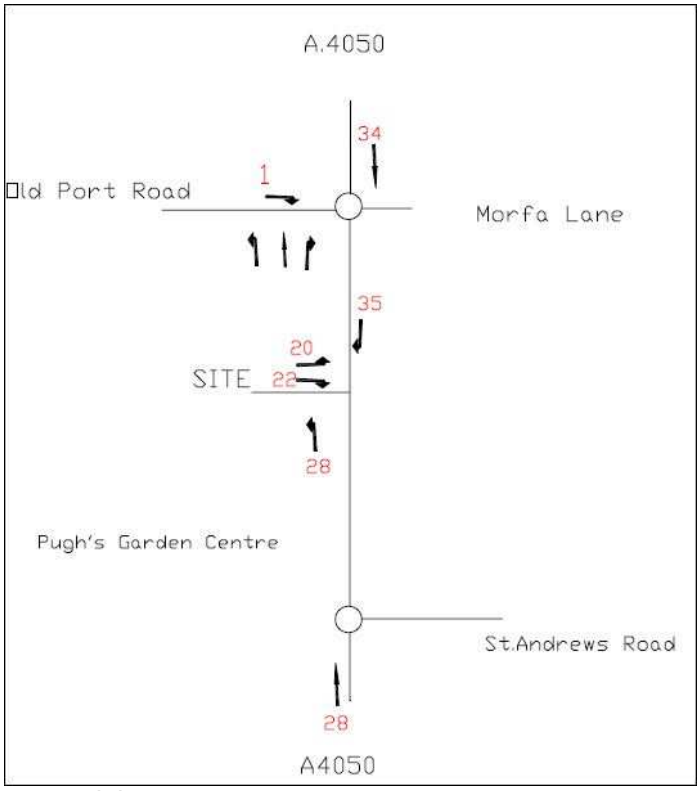
Table 2 Weekday vehicle trips for 85% trip rates

	Private			Affordable			Total		
	in	out	2-way	in	out	2-way	in	out	2-way
AM peak hr	20	53	73	7	10	17	27	63	90
PM peak hr	46	29	75	18	13	31	64	42	106

1.3 Using 85% trip rates the distribution of vehicular trips generated by the proposed development will be:



AM peak hour



PM peak hour

2 Agreed Junction Layout

2.1 The layout of the junction has been revised to enable vehicles to make all turning movements. Lane and corner widths have been amended as discussed with VoG, a 3.5m footway/cycleway will be located on the west side of Port Road, a flared lane added to the access road and an uncontrolled pedestrian crossing provided on Port Road north of the junction. The junction layout is shown in Appendix A.

2.2 The junction will be designed in accordance with TD432/95 – Geometric Design of Major/Minor Priority junctions

2.3 The cycleway/footway is shown fronting the length of the proposed development site and will be designed to LTN 1/12 and LTN 2/08 standards.

2.4 All works within the public highway will be agreed under Section 278 of the Highways Act 1980.

3 Relevant UDP Policies

3.1 It is understood that the Draft Deposit Local Plan has been withdrawn and the current UDP policies apply. The UDP transport policies relevant to this proposed development are:

- *Policy 8: Development will be favoured in locations which:*
  (i) are highly accessible by means of travel other than the private car; and
  (ii) minimise traffic levels and associated unacceptable environmental effects

- *Policy Tran 9 – Cycling Development*
  Land will be protected and provision made for cycle routes including:
  (i) safe and convenient links within and between the Vale of Glamorgan and Cardiff

- *Policy Tran 10 – Parking*
  The provision of parking facilities will be in accordance with the approved parking guidelines, and will be related to the type of land use, its density and location; accessibility to existing and potential public transport facilities; and the capacity of the highway network

3.2 A section of the Vale of Glamorgan to Cardiff cycle route has been constructed in Port Road adjacent to Cardiff and Glamorgan Memorial Park and Crematorium. The next stage of the route will be to Culverhouse Cross and this will include the section adjacent to the proposed development site.

4 Parking Standards

4.1 The Wales Parking Standards 2008 have not been adopted by the VoG so South Wales Parking Guidelines Revised 1993 will be used to determine the number of parking spaces:

A.1 RESIDENTIAL: NEW BUILD
1. General Purpose Houses and Flats
(a) One bedroom — *1 space per unit*
(b) Two bedrooms — *1.5 spaces per unit*
(where gross per unit floor area is75m^2 or less)
(c) Two bedrooms — *2 spaces per unit*
(where gross unit floor area is more than 75m^2 but less than 120m2)
(d) Three bedrooms — *2 spaces per unit*
(where gross unit floor area is less than 120m^2)
(e) Three and four — *minimum of 3 spaces*
(where gross floor area is120m^2 or more)
For all residential developments there is 1 visitor space per 3 to 5 dwellings.

5 Junction Capacity

5.1 The original TA capacity tests for the Morfa Lane and St. Andrews Roundabouts have shown that both have suitable capacities to cater for trips generated by the proposed development. The revised access junction serving the proposed development will remove U-turns from the two roundabouts which will improve capacity. For this reason Officers have agreed that further roundabout capacity tests will not be required.

5.2 Capacity tests have been carried out on the new access junction using PICADY 8. PICADY is a priority intersection module developed by TRL for analysing delays and queues at an uncontrolled junction. The junction movements tested for 2015 are:

Table 3 Access junction turning movements 2015 – 85% trip rates AM peak hour

	Port Road South	Access Road	Port Road North
Port Road South	0	12	1521
Access Road	26	0	37
Port Road North	1166	15	0

Table 4 Access junction turning movements 2015 – 85% trip rates PM peak hour

	Port Road South	Access Road	Port Road North
Port Road South	0	28	1146
Access Road	22	0	20
Port Road North	1450	35	0

5.3 The capacity tests have been carried for the 'worst case' scenario. A single lane approach road with no flare is used and a one hour (ODTAB) assignment. This assumes a synthesised demand profile which peaks within the hour.

5.4 The junction capacity tests are detailed in Appendix B and summarised below:

Table 5 Summary of junction performance with single lane access

	AM		PM	
	Queues	RFC	Queues	RFC
B-AC	3.37	0.85	0.51	0.35
C-A	-	-	-	-
C-B	0.05	0.05	0.1	0.01

A – Port Road south of site; B- Site access road; C – Port Road north of site

5.5 The RFC (ratio of flow to capacity) value on each arm for the 'worst-case' scenario does not exceed the recommended maximum level of 0.85. The junction will work within capacity and there will be no queuing of vehicles on the right-turn holding lane.

5.6 The proposed junction layout detailed in Appendix A will have a flared approach and the traffic data on Port Road north of St. Andrews roundabout supplied by the Vale of Glamorgan shows a flat profile during peak periods. Under these conditions the calculated RFC values will be significantly lower than 0.85:

Table 6 Summary of junction performance with flared access

	AM		PM	
	Queues	RFC	Queues	RFC
B-A	0.44	0.31	0.21	0.18
B-C	0.12	0.11	0.05	0.05
C-A	-	-	-	-
C-B	0.04	0.04	0.08	0.08

A –Port Road south of site; B- Site access road; C – Port Road north of site

6 Conclusion

6.1 This Supplementary Transport Statement:

- details the agreed junction layout plan
- outlines relevant UDP transport policies
- summarises the South Wales Parking Guidelines 1993
- re-calculates junction capacities

6.2 The agreed junction layout revises the lane widths and corner radii, provides uncontrolled pedestrian crossing facilities on Port Road and the access road, a 3.5m footway cycleway on the west side of Port Road and a flared approach on the access road. The revised junction will be constructed within public adopted highway and development land.

6.3 The proposed development will contribute to the cycle route from the Vale of Glamorgan to Cardiff referred to in UDP Policy Tran 9.

6.4 Parking spaces will be provided in accordance with UDP Policy Tran 10 – Parking and the South Wales Parking Guidelines Revised 1993.

6.5 PICADY8 confirms that the junction capacity is satisfactory for the traffic that will be generated by the proposed 140 homes

Appendix A Proposed junction

Appendix B Junction Capacity Tests

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 13/12/2012 12:06:14

» (Default Analysis Set) - Scenario 1, AM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Scenario 1			
Stream B-AC	3.37	183.26	0.85	F
Stream C-A	-	-	-	-
Stream C-B	0.05	11.15	0.05	B
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

'D1 - Scenario 1, AM " model duration: 07:45 - 09:15

Run using Junctions 8.0.1.305 at 13/12/2012 12:06:12

File summary

File Description

Title	Port Road Wenvoe
Location	
Site Number	
Date	12/12/2012
Version	
Status	AM Peak 2015
Identifier	
Client	Redrow
Jobnumber	
Enumerator	ron-PC\ron
Description	

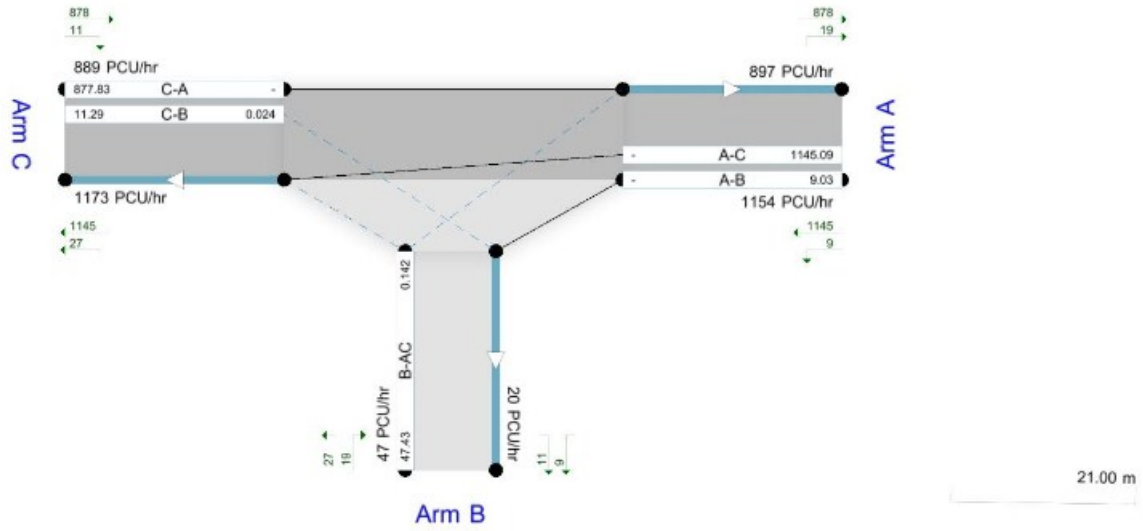
Analysis Options

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



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()
Time Segment: (07:45-08:00)
Showing Analysis Set "A1 "; Demand Set "D1 - Scenario 1, AM "

The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, AM

Data Errors and Warnings

No errors or warnings

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)	N/A	AM peak 2015	✓				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	Relation
Scenario 1, AM	Scenario 1	AM	85% trip rate 2015	ONE HOUR	07:45	09:15	90	15				✓		

2015

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Port Road Wenvoe	T-Junction	Two-way	A,B,C		150.17	F

Junction Network Options

Driving Side	Lighting
Left	Daylight

Arms

Arms

Arm	Name	Description	Arm Type
A	Port Road south)		Major
B	Access Road		Minor
C	Port Road north		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.30		0.00	✓	3.00	160.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										160	160

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	644.256	0.095	0.241	0.152	0.344
1	B-C	760.937	0.095	0.240	-	-
1	C-B	724.662	0.228	0.228	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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 (%)
A	ONE HOUR	✓	1533.00	100.000
B	ONE HOUR	✓	63.00	100.000
C	ONE HOUR	✓	1181.00	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	A	1154.12	1154.12	N/A	N/A
08:00-08:15	A	1378.14	1378.14	N/A	N/A
08:15-08:30	A	1687.86	1687.86	N/A	N/A
08:30-08:45	A	1687.86	1687.86	N/A	N/A
08:45-09:00	A	1378.14	1378.14	N/A	N/A
09:00-09:15	A	1154.12	1154.12	N/A	N/A
07:45-08:00	B	47.43	47.43	N/A	N/A
08:00-08:15	B	56.64	56.64	N/A	N/A
08:15-08:30	B	69.36	69.36	N/A	N/A
08:30-08:45	B	69.36	69.36	N/A	N/A
08:45-09:00	B	56.64	56.64	N/A	N/A
09:00-09:15	B	47.43	47.43	N/A	N/A
07:45-08:00	C	889.12	889.12	N/A	N/A
08:00-08:15	C	1061.69	1061.69	N/A	N/A
08:15-08:30	C	1300.31	1300.31	N/A	N/A
08:30-08:45	C	1300.31	1300.31	N/A	N/A
08:45-					

09:00	C	1061.69	1061.69	N/A	N/A
09:00-09:15	C	889.12	889.12	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	12.000	1521.000
	B	26.000	0.000	37.000
	C	1166.000	15.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.41	0.00	0.59
	C	0.99	0.01	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.025
	B	1.000	1.000	1.000
	C	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.500
	B	0.000	0.000	0.000
	C	2.500	0.000	0.000

Results

Results Summary for whole modelled period

Stream	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)
B-AC	0.85	183.26	3.37	F	57.81	86.71	89.76	62.11	1.00	89.76	62.11
C-A	-	-	-	-	1069.94	1604.91	-	-	-	-	-
C-B	0.05	11.15	0.05	B	13.76	20.65	3.27	9.50	0.04	3.27	9.50
A-B	-	-	-	-	11.01	16.52	-	-	-	-	-
A-C	-	-	-	-	1395.70	2093.54	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.43	11.86	46.78	0.00	333.15	0.142	0.00	0.16	12.545	B
C-A	877.83	219.46	877.83	0.00	-	-	-	-	-	-
C-B	11.29	2.82	11.19	0.00	461.24	0.024	0.00	0.02	7.997	A
A-B	9.03	2.26	9.03	0.00	-	-	-	-	-	-
A-C	1145.09	286.27	1145.09	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	56.64	14.16	56.11	0.00	243.15	0.233	0.16	0.30	19.190	C
C-A	1048.21	262.05	1048.21	0.00	-	-	-	-	-	-
C-B	13.48	3.37	13.45	0.00	410.11	0.033	0.02	0.03	9.076	A
A-B	10.79	2.70	10.79	0.00	-	-	-	-	-	-
A-C	1367.35	341.84	1367.35	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	69.36	17.34	59.98	0.00	81.37	0.852	0.30	2.64	136.636	F
C-A	1283.79	320.95	1283.79	0.00	-	-	-	-	-	-
C-B	16.52	4.13	16.45	0.00	339.41	0.049	0.03	0.05	11.144	B
A-B	13.21	3.30	13.21	0.00	-	-	-	-	-	-
A-C	1674.65	418.66	1674.65	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	69.36	17.34	66.47	0.00	81.33	0.853	2.64	3.37	183.265	F
C-A	1283.79	320.95	1283.79	0.00	-	-	-	-	-	-
C-B	16.52	4.13	16.51	0.00	339.41	0.049	0.05	0.05	11.148	B
A-B	13.21	3.30	13.21	0.00	-	-	-	-	-	-
A-C	1674.65	418.66	1674.65	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	56.64	14.16	68.85	0.00	243.11	0.233	3.37	0.31	22.026	C
C-A	1048.21	262.05	1048.21	0.00	-	-	-	-	-	-
C-B	13.48	3.37	13.55	0.00	410.11	0.033	0.05	0.03	9.079	A
A-B	10.79	2.70	10.79	0.00	-	-	-	-	-	-
A-C	1367.35	341.84	1367.35	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	47.43	11.86	48.01	0.00	333.10	0.142	0.31	0.17	12.651	B
C-A	877.83	219.46	877.83	0.00	-	-	-	-	-	-
C-B	11.29	2.82	11.33	0.00	461.24	0.024	0.03	0.03	8.003	A
A-B	9.03	2.26	9.03	0.00	-	-	-	-	-	-

A-C	1145.09	286.27	1145.09	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	2.32	0.15	12.545	B	B
C-A	-	-	-	-	-
C-B	0.36	0.02	7.997	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	4.19	0.28	19.190	C	B
C-A	-	-	-	-	-
C-B	0.49	0.03	9.076	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	27.82	1.85	136.636	F	F
C-A	-	-	-	-	-
C-B	0.73	0.05	11.144	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	45.65	3.04	183.265	F	F
C-A	-	-	-	-	-
C-B	0.76	0.05	11.148	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.12	0.47	22.026	C	C
C-A	-	-	-	-	-
C-B	0.53	0.04	9.079	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	2.65	0.18	12.651	B	B
C-A	-	-	-	-	-
C-B	0.39	0.03	8.003	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.16	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.02	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.30	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.03	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.64	0.00	0.00	6.00	9.00			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	3.37	0.00	0.00	8.00	11.00			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.31	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-

C-B	0.03	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.17	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.03	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Brief results for arms

Arm Results

Time Segment	Arm	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
07:45-08:00	A	1154.12	-	-	0.00	-	-	-	-	-
08:00-08:15	A	1378.14	-	-	0.00	-	-	-	-	-
08:15-08:30	A	1687.86	-	-	0.00	-	-	-	-	-
08:30-08:45	A	1687.86	-	-	0.00	-	-	-	-	-
08:45-09:00	A	1378.14	-	-	0.00	-	-	-	-	-
09:00-09:15	A	1154.12	-	-	0.00	-	-	-	-	-
07:45-08:00	B	47.43	-	-	0.00	-	-	-	-	-
08:00-08:15	B	56.64	-	-	0.00	-	-	-	-	-
08:15-08:30	B	69.36	-	-	0.00	-	-	-	-	-
08:30-08:45	B	69.36	-	-	0.00	-	-	-	-	-
08:45-09:00	B	56.64	-	-	0.00	-	-	-	-	-
09:00-09:15	B	47.43	-	-	0.00	-	-	-	-	-
07:45-08:00	C	889.12	-	-	0.00	-	-	-	-	-
08:00-08:15	C	1061.69	-	-	0.00	-	-	-	-	-
08:15-08:30	C	1300.31	-	-	0.00	-	-	-	-	-
08:30-08:45	C	1300.31	-	-	0.00	-	-	-	-	-
08:45-09:00	C	1061.69	-	-	0.00	-	-	-	-	-

09:00-09:15	C	889.12	-	-	0.00	-	-	-	-	-

Brief results for Priority Intersection streams

Stream Results

Time Segment	Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
07:45-08:00	B-AC	47.43	333.15	0.142	0.00	0.00	0.16	2.32	-	12.545
08:00-08:15	B-AC	56.64	243.15	0.233	0.00	0.16	0.30	4.19	-	19.190
08:15-08:30	B-AC	69.36	81.37	0.852	0.00	0.30	2.64	27.82	-	136.636
08:30-08:45	B-AC	69.36	81.33	0.853	0.00	2.64	3.37	45.65	-	183.265
08:45-09:00	B-AC	56.64	243.11	0.233	0.00	3.37	0.31	7.12	-	22.026
09:00-09:15	B-AC	47.43	333.10	0.142	0.00	0.31	0.17	2.65	-	12.651
07:45-08:00	C-A	877.83	-	-	0.00	-	-	-	-	-
08:00-08:15	C-A	1048.21	-	-	0.00	-	-	-	-	-
08:15-08:30	C-A	1283.79	-	-	0.00	-	-	-	-	-
08:30-08:45	C-A	1283.79	-	-	0.00	-	-	-	-	-
08:45-09:00	C-A	1048.21	-	-	0.00	-	-	-	-	-
09:00-09:15	C-A	877.83	-	-	0.00	-	-	-	-	-
07:45-08:00	C-B	11.29	461.24	0.024	0.00	0.00	0.02	0.36	-	7.997
08:00-08:15	C-B	13.48	410.11	0.033	0.00	0.02	0.03	0.49	-	9.076
08:15-08:30	C-B	16.52	339.41	0.049	0.00	0.03	0.05	0.73	-	11.144
08:30-08:45	C-B	16.52	339.41	0.049	0.00	0.05	0.05	0.76	-	11.148
08:45-09:00	C-B	13.48	410.11	0.033	0.00	0.05	0.03	0.53	-	9.079
09:00-09:15	C-B	11.29	461.24	0.024	0.00	0.03	0.03	0.39	-	8.003
07:45-08:00	A-B	9.03	-	-	0.00	-	-	-	-	-
08:00-08:15	A-B	10.79	-	-	0.00	-	-	-	-	-
08:15-08:30	A-B	13.21	-	-	0.00	-	-	-	-	-
08:30-08:45	A-B	13.21	-	-	0.00	-	-	-	-	-
08:45-09:00	A-B	10.79	-	-	0.00	-	-	-	-	-
09:00-09:15	A-B	9.03	-	-	0.00	-	-	-	-	-
07:45-	A-C	1145.09			0.00					

08:00	A-C	1145.09	-	-	0.00	-	-	-	-	-
08:00-08:15	A-C	1367.35	-	-	0.00	-	-	-	-	-
08:15-08:30	A-C	1674.65	-	-	0.00	-	-	-	-	-
08:30-08:45	A-C	1674.65	-	-	0.00	-	-	-	-	-
08:45-09:00	A-C	1367.35	-	-	0.00	-	-	-	-	-
09:00-09:15	A-C	1145.09	-	-	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 13/12/2012 12:05:13

» (Default Analysis Set) - Scenario 1, PM

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Scenario 1			
Stream B-AC	0.51	40.98	0.35	E
Stream C-A	-	-	-	-
Stream C-B	0.10	9.20	0.09	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

'D1 - Scenario 1, PM " model duration: 16:45 - 18:15

Run using Junctions 8.0.1.305 at 13/12/2012 12:05:11

File summary

File Description

Title	Port Road Wenvoe
Location	
Site Number	
Date	12/12/2012
Version	
Status	PM Peak 2015
Identifier	
Client	Redrow
Jobnumber	
Enumerator	TTP
Description	

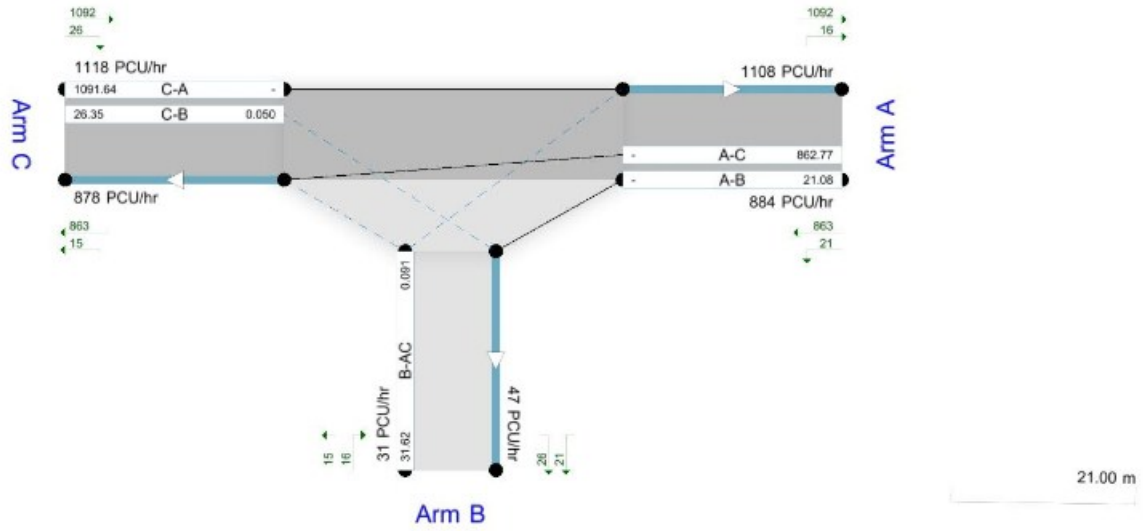
Analysis Options

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



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()
Time Segment: (16:45-17:00)
Showing Analysis Set "A1 "; Demand Set "D1 - Scenario 1, PM "

The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Scenario 1, PM

Data Errors and Warnings

No errors or warnings

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)	N/A	2015 PM Peak	✓				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	Relation
Scenario 1, PM	Scenario 1	PM	85% trip rate 2015	ONE HOUR	16:45	18:15	90	15				✓		

2015

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Port Road Wenvoe	T-Junction	Two-way	A,B,C		26.54	D

Junction Network Options

Driving Side	Lighting
Left	Daylight

Arms

Arms

Arm	Name	Description	Arm Type
A	Port Road south)		Major
B	Access Road		Minor
C	Port Road north		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.30		0.00	✓	3.00	160.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										160	160

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	644.256	0.095	0.241	0.152	0.344
1	B-C	760.937	0.095	0.240	-	-
1	C-B	724.662	0.228	0.228	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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 (%)
A	ONE HOUR	✓	1174.00	100.000
B	ONE HOUR	✓	42.00	100.000
C	ONE HOUR	✓	1485.00	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	A	883.85	883.85	N/A	N/A
17:00-17:15	A	1055.40	1055.40	N/A	N/A
17:15-17:30	A	1292.60	1292.60	N/A	N/A
17:30-17:45	A	1292.60	1292.60	N/A	N/A
17:45-18:00	A	1055.40	1055.40	N/A	N/A
18:00-18:15	A	883.85	883.85	N/A	N/A
16:45-17:00	B	31.62	31.62	N/A	N/A
17:00-17:15	B	37.76	37.76	N/A	N/A
17:15-17:30	B	46.24	46.24	N/A	N/A
17:30-17:45	B	46.24	46.24	N/A	N/A
17:45-18:00	B	37.76	37.76	N/A	N/A
18:00-18:15	B	31.62	31.62	N/A	N/A
16:45-17:00	C	1117.99	1117.99	N/A	N/A
17:00-17:15	C	1334.98	1334.98	N/A	N/A
17:15-17:30	C	1635.02	1635.02	N/A	N/A
17:30-17:45	C	1635.02	1635.02	N/A	N/A
17:45-					

18:00	C	1334.98	1334.98	N/A	N/A
18:00-18:15	C	1117.99	1117.99	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	28.000	1146.000
	B	22.000	0.000	20.000
	C	1450.000	35.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.52	0.00	0.48
	C	0.98	0.02	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.025
	B	1.000	1.000	1.000
	C	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.500
	B	0.000	0.000	0.000
	C	2.500	0.000	0.000

Results

Results Summary for whole modelled period

Stream	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)
B-AC	0.35	40.98	0.51	E	38.54	57.81	22.26	23.10	0.25	22.26	23.10
C-A	-	-	-	-	1330.55	1995.82	-	-	-	-	-
C-B	0.09	9.20	0.10	A	32.12	48.17	6.57	8.18	0.07	6.57	8.18
A-B	-	-	-	-	25.69	38.54	-	-	-	-	-
A-C	-	-	-	-	1051.59	1577.38	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	31.62	7.90	31.22	0.00	347.16	0.091	0.00	0.10	11.381	B
C-A	1091.64	272.91	1091.64	0.00	-	-	-	-	-	-
C-B	26.35	6.59	26.14	0.00	522.93	0.050	0.00	0.05	7.243	A
A-B	21.08	5.27	21.08	0.00	-	-	-	-	-	-
A-C	862.77	215.69	862.77	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	37.76	9.44	37.50	0.00	265.61	0.142	0.10	0.16	15.763	C
C-A	1303.52	325.88	1303.52	0.00	-	-	-	-	-	-
C-B	31.46	7.87	31.40	0.00	483.77	0.065	0.05	0.07	7.957	A
A-B	25.17	6.29	25.17	0.00	-	-	-	-	-	-
A-C	1030.23	257.56	1030.23	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.24	11.56	44.91	0.00	133.90	0.345	0.16	0.49	39.897	E
C-A	1596.48	399.12	1596.48	0.00	-	-	-	-	-	-
C-B	38.54	9.63	38.42	0.00	429.63	0.090	0.07	0.10	9.199	A
A-B	30.83	7.71	30.83	0.00	-	-	-	-	-	-
A-C	1261.77	315.44	1261.77	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	46.24	11.56	46.18	0.00	133.85	0.345	0.49	0.51	40.984	E
C-A	1596.48	399.12	1596.48	0.00	-	-	-	-	-	-
C-B	38.54	9.63	38.53	0.00	429.63	0.090	0.10	0.10	9.204	A
A-B	30.83	7.71	30.83	0.00	-	-	-	-	-	-
A-C	1261.77	315.44	1261.77	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	37.76	9.44	39.12	0.00	265.54	0.142	0.51	0.17	15.989	C
C-A	1303.52	325.88	1303.52	0.00	-	-	-	-	-	-
C-B	31.46	7.87	31.58	0.00	483.77	0.065	0.10	0.07	7.964	A
A-B	25.17	6.29	25.17	0.00	-	-	-	-	-	-
A-C	1030.23	257.56	1030.23	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	31.62	7.90	31.89	0.00	347.07	0.091	0.17	0.10	11.433	B
C-A	1091.64	272.91	1091.64	0.00	-	-	-	-	-	-
C-B	26.35	6.59	26.42	0.00	522.93	0.050	0.07	0.05	7.253	A
A-B	21.08	5.27	21.08	0.00	-	-	-	-	-	-

A-C	862.77	215.69	862.77	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-AC	1.41	0.09	11.381	B	B
C-A	-	-	-	-	-
C-B	0.76	0.05	7.243	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	2.33	0.16	15.763	C	B
C-A	-	-	-	-	-
C-B	1.01	0.07	7.957	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	6.63	0.44	39.897	E	D
C-A	-	-	-	-	-
C-B	1.42	0.09	9.199	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	7.56	0.50	40.984	E	D
C-A	-	-	-	-	-
C-B	1.47	0.10	9.204	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-AC	2.73	0.18	15.989	C	B
C-A	-	-	-	-	-
C-B	1.08	0.07	7.964	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	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
B-AC	1.59	0.11	11.433	B	B
C-A	-	-	-	-	-
C-B	0.82	0.05	7.253	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.10	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.16	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.49	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.10	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.51	0.00	0.00	0.00	1.00			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.10	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.17	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

						is very small or very big.			
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (18:00-18:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.10	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	N/A	N/A	N/A	N/A	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Brief results for arms

Arm Results

Time Segment	Arm	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
16:45-17:00	A	883.85	-	-	0.00	-	-	-	-	-
17:00-17:15	A	1055.40	-	-	0.00	-	-	-	-	-
17:15-17:30	A	1292.60	-	-	0.00	-	-	-	-	-
17:30-17:45	A	1292.60	-	-	0.00	-	-	-	-	-
17:45-18:00	A	1055.40	-	-	0.00	-	-	-	-	-
18:00-18:15	A	883.85	-	-	0.00	-	-	-	-	-
16:45-17:00	B	31.62	-	-	0.00	-	-	-	-	-
17:00-17:15	B	37.76	-	-	0.00	-	-	-	-	-
17:15-17:30	B	46.24	-	-	0.00	-	-	-	-	-
17:30-17:45	B	46.24	-	-	0.00	-	-	-	-	-
17:45-18:00	B	37.76	-	-	0.00	-	-	-	-	-
18:00-18:15	B	31.62	-	-	0.00	-	-	-	-	-
16:45-17:00	C	1117.99	-	-	0.00	-	-	-	-	-
17:00-17:15	C	1334.98	-	-	0.00	-	-	-	-	-
17:15-17:30	C	1635.02	-	-	0.00	-	-	-	-	-
17:30-17:45	C	1635.02	-	-	0.00	-	-	-	-	-
17:45										

17:45-18:00	C	1334.98	-	-	0.00	-	-	-	-	-
18:00-18:15	C	1117.99	-	-	0.00	-	-	-	-	-

Brief results for Priority Intersection streams

Stream Results

Time Segment	Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
16:45-17:00	B-AC	31.62	347.16	0.091	0.00	0.00	0.10	1.41	-	11.381
17:00-17:15	B-AC	37.76	265.61	0.142	0.00	0.10	0.16	2.33	-	15.763
17:15-17:30	B-AC	46.24	133.90	0.345	0.00	0.16	0.49	6.63	-	39.897
17:30-17:45	B-AC	46.24	133.85	0.345	0.00	0.49	0.51	7.56	-	40.984
17:45-18:00	B-AC	37.76	265.54	0.142	0.00	0.51	0.17	2.73	-	15.989
18:00-18:15	B-AC	31.62	347.07	0.091	0.00	0.17	0.10	1.59	-	11.433
16:45-17:00	C-A	1091.64	-	-	0.00	-	-	-	-	-
17:00-17:15	C-A	1303.52	-	-	0.00	-	-	-	-	-
17:15-17:30	C-A	1596.48	-	-	0.00	-	-	-	-	-
17:30-17:45	C-A	1596.48	-	-	0.00	-	-	-	-	-
17:45-18:00	C-A	1303.52	-	-	0.00	-	-	-	-	-
18:00-18:15	C-A	1091.64	-	-	0.00	-	-	-	-	-
16:45-17:00	C-B	26.35	522.93	0.050	0.00	0.00	0.05	0.76	-	7.243
17:00-17:15	C-B	31.46	483.77	0.065	0.00	0.05	0.07	1.01	-	7.957
17:15-17:30	C-B	38.54	429.63	0.090	0.00	0.07	0.10	1.42	-	9.199
17:30-17:45	C-B	38.54	429.63	0.090	0.00	0.10	0.10	1.47	-	9.204
17:45-18:00	C-B	31.46	483.77	0.065	0.00	0.10	0.07	1.08	-	7.964
18:00-18:15	C-B	26.35	522.93	0.050	0.00	0.07	0.05	0.82	-	7.253
16:45-17:00	A-B	21.08	-	-	0.00	-	-	-	-	-
17:00-17:15	A-B	25.17	-	-	0.00	-	-	-	-	-
17:15-17:30	A-B	30.83	-	-	0.00	-	-	-	-	-
17:30-17:45	A-B	30.83	-	-	0.00	-	-	-	-	-
17:45-18:00	A-B	25.17	-	-	0.00	-	-	-	-	-
18:00-	A-B	21.08	-	-	0.00	-	-	-	-	-

18:15										
16:45-17:00	A-C	862.77	-	-	0.00	-	-	-	-	-
17:00-17:15	A-C	1030.23	-	-	0.00	-	-	-	-	-
17:15-17:30	A-C	1261.77	-	-	0.00	-	-	-	-	-
17:30-17:45	A-C	1261.77	-	-	0.00	-	-	-	-	-
17:45-18:00	A-C	1030.23	-	-	0.00	-	-	-	-	-
18:00-18:15	A-C	862.77	-	-	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 13/12/2012 12:09:59

» Port Road - Scenario 1, AM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Port Road - Scenario 1			
Stream B-C	0.12	11.90	0.11	B
Stream B-A	0.44	62.45	0.31	F
Stream C-A	-	-	-	-
Stream C-B	0.04	10.01	0.04	B
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

'D1 - Scenario 1, AM '' model duration: 07:45 - 09:15

Run using Junctions 8.0.1.305 at 13/12/2012 12:09:57

File summary

File Description

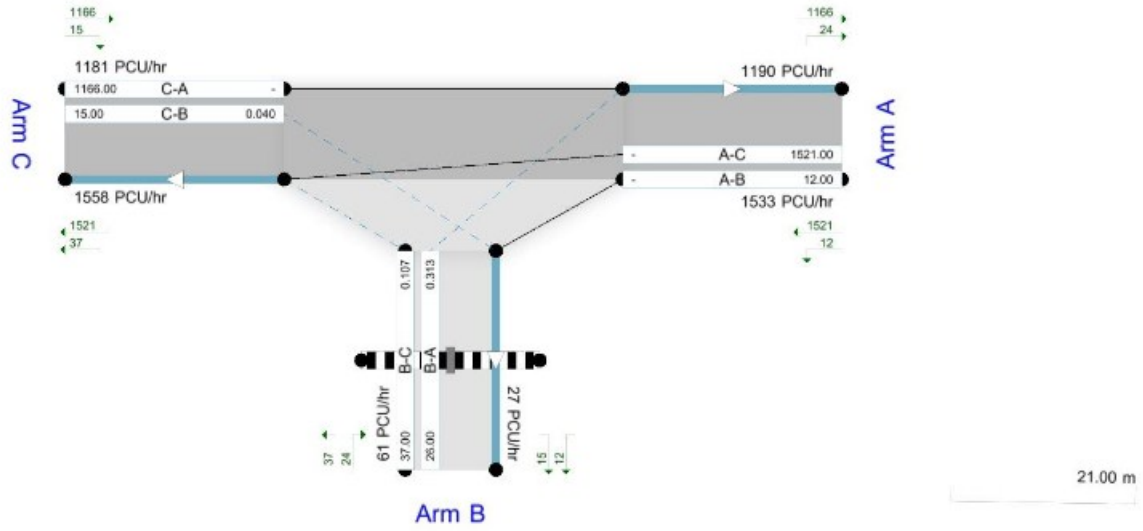
Title	Port Road Wenvoe
Location	
Site Number	
Date	12/12/2012
Version	
Status	2015 Flared approach anbd flat flows
Identifier	
Client	Redrow
Jobnumber	
Enumerator	TTP
Description	

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



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (07:45-08:00)
Showing Analysis Set "A1 - Port Road "; Demand Set "D1 - Scenario 1, AM "

The junction diagram reflects the last run of ARCADY.

Port Road - Scenario 1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Flow Arm A	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.
Warning	Flow Arm B	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.
Warning	Flow Arm C	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.

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
Port Road	N/A	2015 flat flows and flared approach	✓				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	Relationsl
Scenario 1, AM	Scenario 1	AM		FLAT	07:45	09:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Port Road Wenvoe	T-Junction	Two-way	A,B,C		28.38	D

Junction Network Options

Driving Side	Lighting
Left	Daylight

Arms

Arms

Arm	Name	Description	Arm Type
A	Port Road south)		Major
B	Access Road		Minor
C	Port Road north		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.30		0.00	✓	3.00	160.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				6.00	5.00	4.00	3.00	3.00	✓	1.00	160	160

Pedestrian Crossings

Arm	Crossing Type
A	None
B	Zebra
C	None

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Space between crossing and junction entry (Right) (PCU)	Vehicles queueing on exit (PCU)	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
B	3.00	3.00	3.00	✓	Distance			6.00	4.29	6.00	4.29

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	568.692	0.084	0.213	0.134	0.304
1	B-C	741.360	0.092	0.234	-	-
1	C-B	724.662	0.228	0.228	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

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 (%)
A	FLAT	✓	1533.00	100.000
B	FLAT	✓	63.00	100.000
C	FLAT	✓	1181.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
A	-	-
B	FLAT	20.00
C	-	-

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	A	1533.00	1533.00	N/A	N/A
08:00-08:15	A	1533.00	1533.00	N/A	N/A
08:15-08:30	A	1533.00	1533.00	N/A	N/A
08:30-					

08:45	A	1533.00	1533.00	N/A	N/A
08:45-09:00	A	1533.00	1533.00	N/A	N/A
09:00-09:15	A	1533.00	1533.00	N/A	N/A
07:45-08:00	B	63.00	63.00	N/A	20.00
08:00-08:15	B	63.00	63.00	N/A	20.00
08:15-08:30	B	63.00	63.00	N/A	20.00
08:30-08:45	B	63.00	63.00	N/A	20.00
08:45-09:00	B	63.00	63.00	N/A	20.00
09:00-09:15	B	63.00	63.00	N/A	20.00
07:45-08:00	C	1181.00	1181.00	N/A	N/A
08:00-08:15	C	1181.00	1181.00	N/A	N/A
08:15-08:30	C	1181.00	1181.00	N/A	N/A
08:30-08:45	C	1181.00	1181.00	N/A	N/A
08:45-09:00	C	1181.00	1181.00	N/A	N/A
09:00-09:15	C	1181.00	1181.00	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	12.000	1521.000
	B	26.000	0.000	37.000
	C	1166.000	15.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.41	0.00	0.59
	C	0.99	0.01	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.025
	B	1.000	1.000	1.000
	C	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.500
	B	0.000	0.000	0.000
	C	2.500	0.000	0.000

Results

Results Summary for whole modelled period

Stream	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)
B-C	0.11	11.90	0.12	B	37.00	55.50	10.79	11.66	0.12	10.79	11.66
B-A	0.31	62.45	0.44	F	26.00	39.00	38.03	58.52	0.42	38.11	58.62
C-A	-	-	-	-	1166.00	1749.00	-	-	-	-	-
C-B	0.04	10.01	0.04	B	15.00	22.50	3.71	9.89	0.04	3.71	9.89
A-B	-	-	-	-	12.00	18.00	-	-	-	-	-
A-C	-	-	-	-	1521.00	2281.50	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	36.53	20.00	345.52	0.107	0.00	0.12	11.633	B
B-A	26.00	6.50	24.34	20.00	83.03	0.313	0.00	0.41	59.911	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	14.84	0.00	374.76	0.040	0.00	0.04	9.998	A
A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	36.99	20.00	339.95	0.109	0.12	0.12	11.882	B
B-A	26.00	6.50	25.93	20.00	83.55	0.311	0.41	0.43	62.291	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	15.00	0.00	374.76	0.040	0.04	0.04	10.006	B
A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	37.00	20.00	339.72	0.109	0.12	0.12	11.891	B
B-A	26.00	6.50	25.98	20.00	83.57	0.311	0.43	0.44	62.410	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	15.00	0.00	374.76	0.040	0.04	0.04	10.006	B

A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	37.00	20.00	339.63	0.109	0.12	0.12	11.894	B
B-A	26.00	6.50	25.99	20.00	83.58	0.311	0.44	0.44	62.423	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	15.00	0.00	374.76	0.040	0.04	0.04	10.006	B
A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	37.00	20.00	339.59	0.109	0.12	0.12	11.896	B
B-A	26.00	6.50	25.99	20.00	83.58	0.311	0.44	0.44	62.439	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	15.00	0.00	374.76	0.040	0.04	0.04	10.006	B
A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.00	9.25	37.00	20.00	339.56	0.109	0.12	0.12	11.897	B
B-A	26.00	6.50	25.99	20.00	83.59	0.311	0.44	0.44	62.451	F
C-A	1166.00	291.50	1166.00	0.00	-	-	-	-	-	-
C-B	15.00	3.75	15.00	0.00	374.76	0.040	0.04	0.04	10.006	B
A-B	12.00	3.00	12.00	0.00	-	-	-	-	-	-
A-C	1521.00	380.25	1521.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-C	1.69	0.11	11.633	B	B
B-A	5.27	0.35	59.911	F	E
C-A	-	-	-	-	-
C-B	0.59	0.04	9.998	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	1.80	0.12	11.882	B	B
B-A	6.37	0.42	62.291	F	E
C-A	-	-	-	-	-
C-B	0.62	0.04	10.006	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving	Unsignalised Level Of	Signalised Level Of

Stream	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
B-C	1.82	0.12	11.891	B	B
B-A	6.52	0.43	62.410	F	E
C-A	-	-	-	-	-
C-B	0.62	0.04	10.006	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	1.82	0.12	11.894	B	B
B-A	6.59	0.44	62.423	F	E
C-A	-	-	-	-	-
C-B	0.62	0.04	10.006	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	1.83	0.12	11.896	B	B
B-A	6.63	0.44	62.439	F	E
C-A	-	-	-	-	-
C-B	0.62	0.04	10.006	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	1.83	0.12	11.897	B	B
B-A	6.65	0.44	62.451	F	E
C-A	-	-	-	-	-
C-B	0.63	0.04	10.006	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.41	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.43	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A

A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.44	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.44	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.44	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.44	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Brief results for arms

Arm Results

Time Segment	Arm	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
07:45-08:00	A	1533.00	-	-	0.00	-	-	-	-	-
08:00-08:15	A	1533.00	-	-	0.00	-	-	-	-	-
08:15-08:30	A	1533.00	-	-	0.00	-	-	-	-	-
08:30-08:45	A	1533.00	-	-	0.00	-	-	-	-	-

08:45-09:00	A	1533.00	-	-	0.00	-	-	-	-	-
09:00-09:15	A	1533.00	-	-	0.00	-	-	-	-	-
07:45-08:00	B	63.00	-	-	0.00	-	-	-	-	-
08:00-08:15	B	63.00	-	-	0.00	-	-	-	-	-
08:15-08:30	B	63.00	-	-	0.00	-	-	-	-	-
08:30-08:45	B	63.00	-	-	0.00	-	-	-	-	-
08:45-09:00	B	63.00	-	-	0.00	-	-	-	-	-
09:00-09:15	B	63.00	-	-	0.00	-	-	-	-	-
07:45-08:00	C	1181.00	-	-	0.00	-	-	-	-	-
08:00-08:15	C	1181.00	-	-	0.00	-	-	-	-	-
08:15-08:30	C	1181.00	-	-	0.00	-	-	-	-	-
08:30-08:45	C	1181.00	-	-	0.00	-	-	-	-	-
08:45-09:00	C	1181.00	-	-	0.00	-	-	-	-	-
09:00-09:15	C	1181.00	-	-	0.00	-	-	-	-	-

Brief results for Priority Intersection streams

Stream Results

Time Segment	Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
07:45-08:00	B-C	37.00	345.52	0.107	20.00	0.00	0.12	1.69	-	11.633
08:00-08:15	B-C	37.00	339.95	0.109	20.00	0.12	0.12	1.80	-	11.882
08:15-08:30	B-C	37.00	339.72	0.109	20.00	0.12	0.12	1.82	-	11.891
08:30-08:45	B-C	37.00	339.63	0.109	20.00	0.12	0.12	1.82	-	11.894
08:45-09:00	B-C	37.00	339.59	0.109	20.00	0.12	0.12	1.83	-	11.896
09:00-09:15	B-C	37.00	339.56	0.109	20.00	0.12	0.12	1.83	-	11.897
07:45-08:00	B-A	26.00	83.03	0.313	20.00	0.00	0.41	5.27	-	59.911
08:00-08:15	B-A	26.00	83.55	0.311	20.00	0.41	0.43	6.37	-	62.291
08:15-08:30	B-A	26.00	83.57	0.311	20.00	0.43	0.44	6.52	-	62.410
08:30-08:45	B-A	26.00	83.58	0.311	20.00	0.44	0.44	6.59	-	62.423
08:45-09:00	B-A	26.00	83.58	0.311	20.00	0.44	0.44	6.63	-	62.439

09:00-09:15	B-A	26.00	83.59	0.311	20.00	0.44	0.44	6.65	-	62.451
07:45-08:00	C-A	1166.00	-	-	0.00	-	-	-	-	-
08:00-08:15	C-A	1166.00	-	-	0.00	-	-	-	-	-
08:15-08:30	C-A	1166.00	-	-	0.00	-	-	-	-	-
08:30-08:45	C-A	1166.00	-	-	0.00	-	-	-	-	-
08:45-09:00	C-A	1166.00	-	-	0.00	-	-	-	-	-
09:00-09:15	C-A	1166.00	-	-	0.00	-	-	-	-	-
07:45-08:00	C-B	15.00	374.76	0.040	0.00	0.00	0.04	0.59	-	9.998
08:00-08:15	C-B	15.00	374.76	0.040	0.00	0.04	0.04	0.62	-	10.006
08:15-08:30	C-B	15.00	374.76	0.040	0.00	0.04	0.04	0.62	-	10.006
08:30-08:45	C-B	15.00	374.76	0.040	0.00	0.04	0.04	0.62	-	10.006
08:45-09:00	C-B	15.00	374.76	0.040	0.00	0.04	0.04	0.62	-	10.006
09:00-09:15	C-B	15.00	374.76	0.040	0.00	0.04	0.04	0.63	-	10.006
07:45-08:00	A-B	12.00	-	-	0.00	-	-	-	-	-
08:00-08:15	A-B	12.00	-	-	0.00	-	-	-	-	-
08:15-08:30	A-B	12.00	-	-	0.00	-	-	-	-	-
08:30-08:45	A-B	12.00	-	-	0.00	-	-	-	-	-
08:45-09:00	A-B	12.00	-	-	0.00	-	-	-	-	-
09:00-09:15	A-B	12.00	-	-	0.00	-	-	-	-	-
07:45-08:00	A-C	1521.00	-	-	0.00	-	-	-	-	-
08:00-08:15	A-C	1521.00	-	-	0.00	-	-	-	-	-
08:15-08:30	A-C	1521.00	-	-	0.00	-	-	-	-	-
08:30-08:45	A-C	1521.00	-	-	0.00	-	-	-	-	-
08:45-09:00	A-C	1521.00	-	-	0.00	-	-	-	-	-
09:00-09:15	A-C	1521.00	-	-	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.1.305 [25 May 2012]

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

Filename: (new file)
Path:
Report generation date: 13/12/2012 11:59:24

» Port Road - Scenario 1, PM

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	Port Road - Scenario 1			
Stream B-C	0.05	9.02	0.05	A
Stream B-A	0.21	34.70	0.18	D
Stream C-A	-	-	-	-
Stream C-B	0.08	8.54	0.08	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

'D1 - Scenario 1, PM '' model duration: 16:45 - 18:15

Run using Junctions 8.0.1.305 at 13/12/2012 11:59:22

File summary

File Description

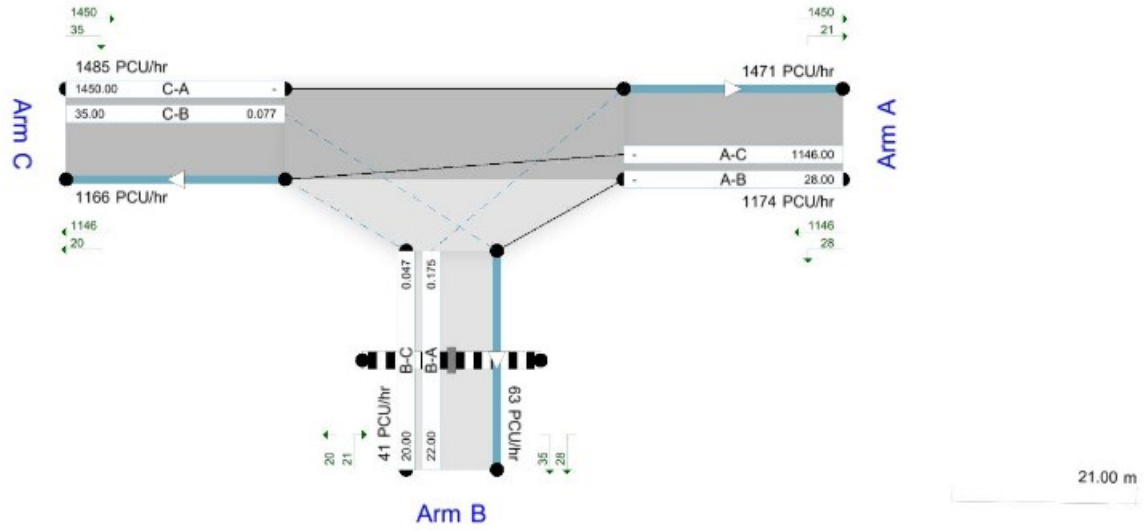
Title	Port Road Wenvoe
Location	
Site Number	
Date	12/12/2012
Version	
Status	2015 Flared approach anbd flat flows
Identifier	
Client	Redrow
Jobnumber	
Enumerator	TTP
Description	

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



Time Segment: (16:45-17:00)
Showing Analysis Set "A1 - Port Road "; Demand Set "D1 - Scenario 1, PM "

The junction diagram reflects the last run of ARCADY.

Port Road - Scenario 1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Flow Arm A	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.
Warning	Flow Arm B	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.
Warning	Flow Arm C	Analysis Options	Queue Variations cannot be calculated for the selected traffic profile type.

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
Port Road	N/A	2015 flat flows and flared approach	✓				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	Relationsl
Scenario 1, PM	Scenario 1	PM		FLAT	16:45	18:15	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
Port Road Wenvoe	T-Junction	Two-way	A,B,C		16.14	C

Junction Network Options

Driving Side	Lighting
Left	Daylight

Arms

Arms

Arm	Name	Description	Arm Type
A	Port Road south)		Major
B	Access Road		Minor
C	Port Road north		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	10.30		0.00	✓	3.00	160.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				6.00	5.00	4.00	3.00	3.00	✓	1.00	160	160

Pedestrian Crossings

Arm	Crossing Type
A	None
B	Zebra
C	None

Zebra Crossings

Arm	Space between crossing and junction entry (Left) (PCU)	Space between crossing and junction entry (Right) (PCU)	Vehicles queueing on exit (PCU)	Central Refuge	Crossing Data Type	Crossing length (m)	Crossing time (s)	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
B	3.00	3.00	3.00	✓	Distance			6.00	4.29	6.00	4.29

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	606.230	0.090	0.227	0.143	0.324
1	B-C	697.023	0.087	0.220	-	-
1	C-B	724.662	0.228	0.228	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

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 (%)
A	FLAT	✓	1174.00	100.000
B	FLAT	✓	42.00	100.000
C	FLAT	✓	1485.00	100.000

Pedestrian Flows

General Flows Data

Arm	Profile Type	Average Pedestrian Flow (Ped/hr)
A	-	-
B	FLAT	20.00
C	-	-

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	A	1174.00	1174.00	N/A	N/A
17:00-17:15	A	1174.00	1174.00	N/A	N/A
17:15-17:30	A	1174.00	1174.00	N/A	N/A
17:30-					

17:45	A	1174.00	1174.00	N/A	N/A
17:45-18:00	A	1174.00	1174.00	N/A	N/A
18:00-18:15	A	1174.00	1174.00	N/A	N/A
16:45-17:00	B	42.00	42.00	N/A	20.00
17:00-17:15	B	42.00	42.00	N/A	20.00
17:15-17:30	B	42.00	42.00	N/A	20.00
17:30-17:45	B	42.00	42.00	N/A	20.00
17:45-18:00	B	42.00	42.00	N/A	20.00
18:00-18:15	B	42.00	42.00	N/A	20.00
16:45-17:00	C	1485.00	1485.00	N/A	N/A
17:00-17:15	C	1485.00	1485.00	N/A	N/A
17:15-17:30	C	1485.00	1485.00	N/A	N/A
17:30-17:45	C	1485.00	1485.00	N/A	N/A
17:45-18:00	C	1485.00	1485.00	N/A	N/A
18:00-18:15	C	1485.00	1485.00	N/A	N/A

Turning Proportions

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

		To		
		A	B	C
From	A	0.000	28.000	1146.000
	B	22.000	0.000	20.000
	C	1450.000	35.000	0.000

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

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.52	0.00	0.48
	C	0.98	0.02	0.00

Vehicle Mix

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

		To		
		A	B	C
From	A	1.000	1.000	1.025
	B	1.000	1.000	1.000
	C	1.025	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	2.500
	B	0.000	0.000	0.000
	C	2.500	0.000	0.000

Results

Results Summary for whole modelled period

Stream	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)
B-C	0.05	9.02	0.05	A	20.00	30.00	4.45	8.91	0.05	4.45	8.91
B-A	0.18	34.70	0.21	D	22.00	33.00	18.40	33.45	0.20	18.41	33.47
C-A	-	-	-	-	1450.00	2175.00	-	-	-	-	-
C-B	0.08	8.54	0.08	A	35.00	52.50	7.39	8.44	0.08	7.39	8.44
A-B	-	-	-	-	28.00	42.00	-	-	-	-	-
A-C	-	-	-	-	1146.00	1719.00	-	-	-	-	-

Main Results for each time segment

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	19.80	20.00	421.55	0.047	0.00	0.05	8.957	A
B-A	22.00	5.50	21.19	20.00	125.36	0.175	0.00	0.20	34.299	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	34.67	0.00	456.70	0.077	0.00	0.08	8.524	A
A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	20.00	20.00	419.09	0.048	0.05	0.05	9.020	A
B-A	22.00	5.50	21.98	20.00	125.71	0.175	0.20	0.21	34.690	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	35.00	0.00	456.70	0.077	0.08	0.08	8.536	A
A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	20.00	20.00	419.04	0.048	0.05	0.05	9.021	A
B-A	22.00	5.50	21.99	20.00	125.72	0.175	0.21	0.21	34.697	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	35.00	0.00	456.70	0.077	0.08	0.08	8.536	A

A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	20.00	20.00	419.02	0.048	0.05	0.05	9.021	A
B-A	22.00	5.50	22.00	20.00	125.73	0.175	0.21	0.21	34.699	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	35.00	0.00	456.70	0.077	0.08	0.08	8.536	A
A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	20.00	20.00	419.01	0.048	0.05	0.05	9.022	A
B-A	22.00	5.50	22.00	20.00	125.73	0.175	0.21	0.21	34.700	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	35.00	0.00	456.70	0.077	0.08	0.08	8.536	A
A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

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

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.00	5.00	20.00	20.00	419.00	0.048	0.05	0.05	9.022	A
B-A	22.00	5.50	22.00	20.00	125.73	0.175	0.21	0.21	34.701	D
C-A	1450.00	362.50	1450.00	0.00	-	-	-	-	-	-
C-B	35.00	8.75	35.00	0.00	456.70	0.077	0.08	0.08	8.536	A
A-B	28.00	7.00	28.00	0.00	-	-	-	-	-	-
A-C	1146.00	286.50	1146.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

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

Stream	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
B-C	0.71	0.05	8.957	A	A
B-A	2.74	0.18	34.299	D	C
C-A	-	-	-	-	-
C-B	1.19	0.08	8.524	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	0.74	0.05	9.020	A	A
B-A	3.09	0.21	34.690	D	C
C-A	-	-	-	-	-
C-B	1.24	0.08	8.536	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving	Unsignalised Level Of	Signalised Level Of

Stream	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
B-C	0.75	0.05	9.021	A	A
B-A	3.12	0.21	34.697	D	C
C-A	-	-	-	-	-
C-B	1.24	0.08	8.536	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	0.75	0.05	9.021	A	A
B-A	3.14	0.21	34.699	D	C
C-A	-	-	-	-	-
C-B	1.24	0.08	8.536	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

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

Stream	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
B-C	0.75	0.05	9.022	A	A
B-A	3.15	0.21	34.700	D	C
C-A	-	-	-	-	-
C-B	1.24	0.08	8.536	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	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
B-C	0.75	0.05	9.022	A	A
B-A	3.16	0.21	34.701	D	C
C-A	-	-	-	-	-
C-B	1.24	0.08	8.536	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.20	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.21	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A

A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.21	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.21	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.21	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (18:00-18:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	N/A	N/A	N/A	N/A			N/A	N/A
B-A	0.21	N/A	N/A	N/A	N/A			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	N/A	N/A	N/A	N/A			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Brief results for arms

Arm Results

Time Segment	Arm	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
16:45-17:00	A	1174.00	-	-	0.00	-	-	-	-	-
17:00-17:15	A	1174.00	-	-	0.00	-	-	-	-	-
17:15-17:30	A	1174.00	-	-	0.00	-	-	-	-	-
17:30-17:45	A	1174.00	-	-	0.00	-	-	-	-	-

17:45-18:00	A	1174.00	-	-	0.00	-	-	-	-	-
18:00-18:15	A	1174.00	-	-	0.00	-	-	-	-	-
16:45-17:00	B	42.00	-	-	0.00	-	-	-	-	-
17:00-17:15	B	42.00	-	-	0.00	-	-	-	-	-
17:15-17:30	B	42.00	-	-	0.00	-	-	-	-	-
17:30-17:45	B	42.00	-	-	0.00	-	-	-	-	-
17:45-18:00	B	42.00	-	-	0.00	-	-	-	-	-
18:00-18:15	B	42.00	-	-	0.00	-	-	-	-	-
16:45-17:00	C	1485.00	-	-	0.00	-	-	-	-	-
17:00-17:15	C	1485.00	-	-	0.00	-	-	-	-	-
17:15-17:30	C	1485.00	-	-	0.00	-	-	-	-	-
17:30-17:45	C	1485.00	-	-	0.00	-	-	-	-	-
17:45-18:00	C	1485.00	-	-	0.00	-	-	-	-	-
18:00-18:15	C	1485.00	-	-	0.00	-	-	-	-	-

Brief results for Priority Intersection streams

Stream Results

Time Segment	Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (s)
16:45-17:00	B-C	20.00	421.55	0.047	20.00	0.00	0.05	0.71	-	8.957
17:00-17:15	B-C	20.00	419.09	0.048	20.00	0.05	0.05	0.74	-	9.020
17:15-17:30	B-C	20.00	419.04	0.048	20.00	0.05	0.05	0.75	-	9.021
17:30-17:45	B-C	20.00	419.02	0.048	20.00	0.05	0.05	0.75	-	9.021
17:45-18:00	B-C	20.00	419.01	0.048	20.00	0.05	0.05	0.75	-	9.022
18:00-18:15	B-C	20.00	419.00	0.048	20.00	0.05	0.05	0.75	-	9.022
16:45-17:00	B-A	22.00	125.36	0.175	20.00	0.00	0.20	2.74	-	34.299
17:00-17:15	B-A	22.00	125.71	0.175	20.00	0.20	0.21	3.09	-	34.690
17:15-17:30	B-A	22.00	125.72	0.175	20.00	0.21	0.21	3.12	-	34.697
17:30-17:45	B-A	22.00	125.73	0.175	20.00	0.21	0.21	3.14	-	34.699
17:45-18:00	B-A	22.00	125.73	0.175	20.00	0.21	0.21	3.15	-	34.700

18:00-18:15	B-A	22.00	125.73	0.175	20.00	0.21	0.21	3.16	-	34.701
16:45-17:00	C-A	1450.00	-	-	0.00	-	-	-	-	-
17:00-17:15	C-A	1450.00	-	-	0.00	-	-	-	-	-
17:15-17:30	C-A	1450.00	-	-	0.00	-	-	-	-	-
17:30-17:45	C-A	1450.00	-	-	0.00	-	-	-	-	-
17:45-18:00	C-A	1450.00	-	-	0.00	-	-	-	-	-
18:00-18:15	C-A	1450.00	-	-	0.00	-	-	-	-	-
16:45-17:00	C-B	35.00	456.70	0.077	0.00	0.00	0.08	1.19	-	8.524
17:00-17:15	C-B	35.00	456.70	0.077	0.00	0.08	0.08	1.24	-	8.536
17:15-17:30	C-B	35.00	456.70	0.077	0.00	0.08	0.08	1.24	-	8.536
17:30-17:45	C-B	35.00	456.70	0.077	0.00	0.08	0.08	1.24	-	8.536
17:45-18:00	C-B	35.00	456.70	0.077	0.00	0.08	0.08	1.24	-	8.536
18:00-18:15	C-B	35.00	456.70	0.077	0.00	0.08	0.08	1.24	-	8.536
16:45-17:00	A-B	28.00	-	-	0.00	-	-	-	-	-
17:00-17:15	A-B	28.00	-	-	0.00	-	-	-	-	-
17:15-17:30	A-B	28.00	-	-	0.00	-	-	-	-	-
17:30-17:45	A-B	28.00	-	-	0.00	-	-	-	-	-
17:45-18:00	A-B	28.00	-	-	0.00	-	-	-	-	-
18:00-18:15	A-B	28.00	-	-	0.00	-	-	-	-	-
16:45-17:00	A-C	1146.00	-	-	0.00	-	-	-	-	-
17:00-17:15	A-C	1146.00	-	-	0.00	-	-	-	-	-
17:15-17:30	A-C	1146.00	-	-	0.00	-	-	-	-	-
17:30-17:45	A-C	1146.00	-	-	0.00	-	-	-	-	-
17:45-18:00	A-C	1146.00	-	-	0.00	-	-	-	-	-
18:00-18:15	A-C	1146.00	-	-	0.00	-	-	-	-	-