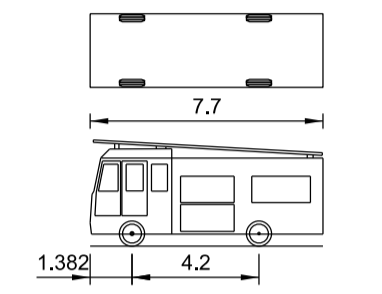


- Legend**
- Site Boundary
  - Fire Tender Route 1
  - Fire Tender Route 2
  - Fire Tender Route 3

- Notes**
1. Do not scale from this drawing.
  2. The topographic survey detail shown on this drawing is based on a survey carried out by 'hsp consulting' in May 2020. No responsibility can be taken for the accuracy of the survey.
  3. All levels are shown above ordnance datum (m AOD).
  4. Layouts are as received from Ares on 03.04.24 and are subject to ongoing coordination and further design development during subsequent stages.



Dennis Sabre Fire Tender (LWB)  
 Overall Length 7.700m  
 Overall Width 2.430m  
 Overall Body Height 3.512m  
 Min Body Ground Clearance 0.397m  
 Track Width 2.380m  
 Lock to Lock Time 5.00s  
 Kerb to Kerb Turning Radius 7.400m

P02	04/04/24	DS	JN	JS
Issued for Planning				
P01	01/12/23	AZ	JN	IA
Issued for RIBA Stage 3				
Issue	Date	By	Chkd	Appd

**ARUP**

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 www.arup.com

Client  
**WEPCo / Cardiff and Vale Colleges**

Project Title  
**Advanced Technology Centre.**

Drawing Title  
**Proposed Vehicle Swept Path Analysis - Fire Tender**

Scale at A1 1:500 Role Civils

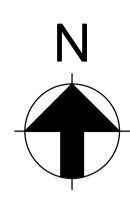
Suitability S3 - Suitable for Review and Comment

Job No **287277** Rev **P02**

Drawing No **VG0101-ARP-ZZ-00-DR-C-00061**

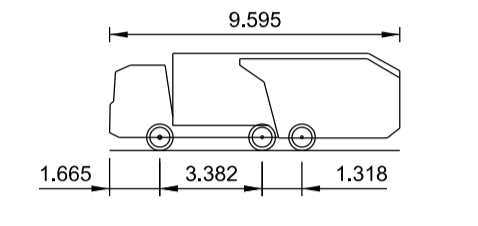
Vehicle overrun of alternative surfacing with flush kerbing. Paving build up to be locally thickened.





- Legend**
- Site Boundary
  - Large Refuse Vehicle
  - Vehicle Body Envelope
  - Vehicle Wheel Envelope

- Notes**
1. Do not scale from this drawing.
  2. The topographic survey detail shown on this drawing is based on a survey carried out by 'hsp consulting' in May 2020. No responsibility can be taken for the accuracy of the survey.
  3. All levels are shown above ordnance datum (m AOD).
  4. Layouts are as received from Ares on 09.11.23 and are subject to ongoing coordination and further design development during subsequent stages.



Phoenix 2-18W (with Elite 2 6x2MS chassis)  
 Overall Length 9.595m  
 Overall Width 3.382m  
 Overall Body Height 3.205m  
 Min Body Ground Clearance 0.410m  
 Track Width 2.500m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 8.950m

P01	01/12/23	AZ	JN	IA
Issued for RIBA Stage 3				
Issue	Date	By	Chkd	Appd

# ARUP

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 www.arup.com

Client  
**WEPCo / Cardiff and Vale Colleges**

Project Title  
**Advanced Technology Centre.**

Drawing Title  
**Proposed Vehicle Swept  
 Path Analysis - Refuse Vehicle**

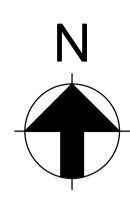
Scale at A1 1:500 Role **Civils**

Suitability **S3 - Suitable for Review and Comment**

Job No **287277** Rev **P01**

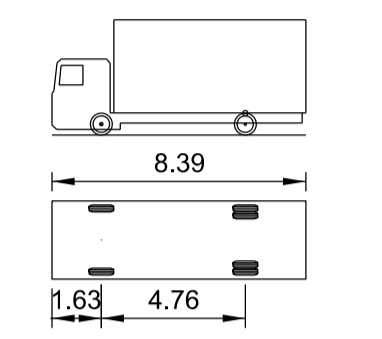
Drawing No **VG0101-ARP-ZZ-00-DR-C-00062**





- Legend**
- Site Boundary
  - Skip Vehicle
  - Vehicle Body Envelope
  - Vehicle Wheel Envelope

- Notes**
1. Do not scale from this drawing.
  2. The topographic survey detail shown on this drawing is based on a survey carried out by 'hsp consulting' in May 2020. No responsibility can be taken for the accuracy of the survey.
  3. All levels are shown above ordnance datum (m AOD).
  4. Layouts are as received from Ares on 09.11.23 and are subject to ongoing coordination and further design development during subsequent stages.



Mercedes Atego 1622L 16T GVW  
 4x2 Refrigerated  
 Overall Length 8.390m  
 Overall Width 2.587m  
 Overall Body Height 3.811m  
 Min Body Ground Clearance 0.188m  
 Track Width 2.321m  
 Lock to lock time 5.00s  
 Max Steering Angle (Virtual) 45.00°

P01	01/12/23	RL	JN	IA
Issued for RIBA Stage 3				
Issue	Date	By	Chkd	Appd

# ARUP

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 www.arup.com

Client  
**WEPCo / Cardiff and Vale Colleges**

Project Title  
**Advanced Technology Centre.**

Drawing Title  
**Proposed Vehicle Swept  
 Path Analysis - Skip Vehicle**

Scale at A1 1:500 Role Civils

Suitability S3 - Suitable for Review and Comment

Job No **287277** Rev **P01**

Drawing No **VG0101-ARP-ZZ-00-DR-C-00063**





# Appendix H TRICS Data

**CaVC Advanced Technology Centre, Vale of Glamorgan**

**Transport Assessment**

**WEPCo Limited**

SLR Project No.: 425.002058.00001

5 April 2024

Calculation Reference: AUDIT-529506-231207-1254

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	2 days
04	EAST ANGLIA	
	PB PETERBOROUGH	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	SW SWANSEA	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*



## Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	3 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes	1 days
No	4 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	5 days
-----------------	--------

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	ES-04-C-05 PENLAND ROAD BEXHILL ON SEA	COLLEGE		EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of students: 1500 <i>Survey date: THURSDAY 03/11/11</i>			
	<i>Survey Type: MANUAL</i>			
2	ES-04-C-07 PARKER ROAD HASTINGS ORE	COLLEGE		EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of students: 720 <i>Survey date: WEDNESDAY 30/05/12</i>			
	<i>Survey Type: MANUAL</i>			
3	PB-04-C-03 PARK CRESCENT PETERBOROUGH	COLLEGE		PETERBOROUGH
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of students: 15500 <i>Survey date: TUESDAY 18/10/16</i>			
	<i>Survey Type: MANUAL</i>			
4	SW-04-C-02 WALTER ROAD SWANSEA	COLLEGE		SWANSEA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of students: 879 <i>Survey date: MONDAY 21/10/13</i>			
	<i>Survey Type: MANUAL</i>			
5	TW-04-C-01 HAWKEY'S LANE NORTH SHIELDS CHIRTON	COLLEGE		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of students: 1495 <i>Survey date: THURSDAY 04/11/10</i>			
	<i>Survey Type: MANUAL</i>			

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CW-04-C-04	uni



TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.33

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.010	5	4019	0.002	5	4019	0.012
08:00 - 09:00	5	4019	0.056	5	4019	0.015	5	4019	0.071
09:00 - 10:00	5	4019	0.022	5	4019	0.012	5	4019	0.034
10:00 - 11:00	5	4019	0.010	5	4019	0.006	5	4019	0.016
11:00 - 12:00	5	4019	0.012	5	4019	0.012	5	4019	0.024
12:00 - 13:00	5	4019	0.012	5	4019	0.014	5	4019	0.026
13:00 - 14:00	5	4019	0.012	5	4019	0.013	5	4019	0.025
14:00 - 15:00	5	4019	0.009	5	4019	0.015	5	4019	0.024
15:00 - 16:00	5	4019	0.011	5	4019	0.018	5	4019	0.029
16:00 - 17:00	5	4019	0.014	5	4019	0.034	5	4019	0.048
17:00 - 18:00	5	4019	0.009	5	4019	0.024	5	4019	0.033
18:00 - 19:00	4	4844	0.007	4	4844	0.007	4	4844	0.014
19:00 - 20:00	3	5958	0.003	3	5958	0.006	3	5958	0.009
20:00 - 21:00	3	5958	0.003	3	5958	0.010	3	5958	0.013
21:00 - 22:00	3	5958	0.000	3	5958	0.003	3	5958	0.003
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			0.190			0.191			0.381

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

Trip rate parameter range selected: 720 - 15500 (units: )  
Survey date date range: 01/01/10 - 06/04/22  
Number of weekdays (Monday-Friday): 5  
Number of Saturdays: 0  
Number of Sundays: 0  
Surveys automatically removed from selection: 1  
Surveys manually removed from selection: 1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TAXIS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
08:00 - 09:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
09:00 - 10:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
10:00 - 11:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
11:00 - 12:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
12:00 - 13:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
13:00 - 14:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
14:00 - 15:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
15:00 - 16:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
16:00 - 17:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
17:00 - 18:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

*This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.*

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.*



TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL OGVS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
08:00 - 09:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
09:00 - 10:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
10:00 - 11:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
11:00 - 12:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
12:00 - 13:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
13:00 - 14:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
14:00 - 15:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
15:00 - 16:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
16:00 - 17:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
17:00 - 18:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

*This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.*

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL PSVS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
08:00 - 09:00	5	4019	0.001	5	4019	0.001	5	4019	0.002
09:00 - 10:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
10:00 - 11:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
11:00 - 12:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
12:00 - 13:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
13:00 - 14:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
14:00 - 15:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
15:00 - 16:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
16:00 - 17:00	5	4019	0.001	5	4019	0.000	5	4019	0.001
17:00 - 18:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.



TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL CYCLISTS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.002	5	4019	0.000	5	4019	0.002
08:00 - 09:00	5	4019	0.005	5	4019	0.000	5	4019	0.005
09:00 - 10:00	5	4019	0.002	5	4019	0.000	5	4019	0.002
10:00 - 11:00	5	4019	0.001	5	4019	0.000	5	4019	0.001
11:00 - 12:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
12:00 - 13:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
13:00 - 14:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
14:00 - 15:00	5	4019	0.000	5	4019	0.002	5	4019	0.002
15:00 - 16:00	5	4019	0.000	5	4019	0.003	5	4019	0.003
16:00 - 17:00	5	4019	0.000	5	4019	0.003	5	4019	0.003
17:00 - 18:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.011			0.021

*This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.*

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.015	5	4019	0.003	5	4019	0.018
08:00 - 09:00	5	4019	0.088	5	4019	0.018	5	4019	0.106
09:00 - 10:00	5	4019	0.032	5	4019	0.014	5	4019	0.046
10:00 - 11:00	5	4019	0.015	5	4019	0.008	5	4019	0.023
11:00 - 12:00	5	4019	0.016	5	4019	0.014	5	4019	0.030
12:00 - 13:00	5	4019	0.018	5	4019	0.021	5	4019	0.039
13:00 - 14:00	5	4019	0.018	5	4019	0.017	5	4019	0.035
14:00 - 15:00	5	4019	0.011	5	4019	0.021	5	4019	0.032
15:00 - 16:00	5	4019	0.014	5	4019	0.026	5	4019	0.040
16:00 - 17:00	5	4019	0.018	5	4019	0.050	5	4019	0.068
17:00 - 18:00	5	4019	0.015	5	4019	0.042	5	4019	0.057
18:00 - 19:00	4	4844	0.012	4	4844	0.011	4	4844	0.023
19:00 - 20:00	3	5958	0.005	3	5958	0.010	3	5958	0.015
20:00 - 21:00	3	5958	0.004	3	5958	0.017	3	5958	0.021
21:00 - 22:00	3	5958	0.001	3	5958	0.004	3	5958	0.005
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.282			0.276			0.558

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.



TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.003	5	4019	0.000	5	4019	0.003
08:00 - 09:00	5	4019	0.022	5	4019	0.003	5	4019	0.025
09:00 - 10:00	5	4019	0.011	5	4019	0.003	5	4019	0.014
10:00 - 11:00	5	4019	0.008	5	4019	0.007	5	4019	0.015
11:00 - 12:00	5	4019	0.010	5	4019	0.008	5	4019	0.018
12:00 - 13:00	5	4019	0.008	5	4019	0.010	5	4019	0.018
13:00 - 14:00	5	4019	0.010	5	4019	0.008	5	4019	0.018
14:00 - 15:00	5	4019	0.004	5	4019	0.011	5	4019	0.015
15:00 - 16:00	5	4019	0.005	5	4019	0.011	5	4019	0.016
16:00 - 17:00	5	4019	0.001	5	4019	0.015	5	4019	0.016
17:00 - 18:00	5	4019	0.001	5	4019	0.006	5	4019	0.007
18:00 - 19:00	4	4844	0.000	4	4844	0.004	4	4844	0.004
19:00 - 20:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
20:00 - 21:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.083			0.088			0.171

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.002	5	4019	0.000	5	4019	0.002
08:00 - 09:00	5	4019	0.011	5	4019	0.000	5	4019	0.011
09:00 - 10:00	5	4019	0.008	5	4019	0.001	5	4019	0.009
10:00 - 11:00	5	4019	0.008	5	4019	0.002	5	4019	0.010
11:00 - 12:00	5	4019	0.005	5	4019	0.004	5	4019	0.009
12:00 - 13:00	5	4019	0.003	5	4019	0.006	5	4019	0.009
13:00 - 14:00	5	4019	0.005	5	4019	0.004	5	4019	0.009
14:00 - 15:00	5	4019	0.003	5	4019	0.008	5	4019	0.011
15:00 - 16:00	5	4019	0.002	5	4019	0.007	5	4019	0.009
16:00 - 17:00	5	4019	0.001	5	4019	0.011	5	4019	0.012
17:00 - 18:00	5	4019	0.000	5	4019	0.005	5	4019	0.005
18:00 - 19:00	4	4844	0.000	4	4844	0.002	4	4844	0.002
19:00 - 20:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
20:00 - 21:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.052			0.100

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
08:00 - 09:00	5	4019	0.001	5	4019	0.000	5	4019	0.001
09:00 - 10:00	5	4019	0.001	5	4019	0.000	5	4019	0.001
10:00 - 11:00	5	4019	0.001	5	4019	0.000	5	4019	0.001
11:00 - 12:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
12:00 - 13:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
13:00 - 14:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
14:00 - 15:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
15:00 - 16:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
16:00 - 17:00	5	4019	0.000	5	4019	0.001	5	4019	0.001
17:00 - 18:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.005			0.008

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.



TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
08:00 - 09:00	5	4019	0.010	5	4019	0.000	5	4019	0.010
09:00 - 10:00	5	4019	0.002	5	4019	0.000	5	4019	0.002
10:00 - 11:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
11:00 - 12:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
12:00 - 13:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
13:00 - 14:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
14:00 - 15:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
15:00 - 16:00	5	4019	0.000	5	4019	0.002	5	4019	0.002
16:00 - 17:00	5	4019	0.000	5	4019	0.010	5	4019	0.010
17:00 - 18:00	5	4019	0.000	5	4019	0.000	5	4019	0.000
18:00 - 19:00	4	4844	0.000	4	4844	0.000	4	4844	0.000
19:00 - 20:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
20:00 - 21:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY  
MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.002	5	4019	0.000	5	4019	0.002
08:00 - 09:00	5	4019	0.022	5	4019	0.000	5	4019	0.022
09:00 - 10:00	5	4019	0.011	5	4019	0.001	5	4019	0.012
10:00 - 11:00	5	4019	0.009	5	4019	0.002	5	4019	0.011
11:00 - 12:00	5	4019	0.006	5	4019	0.005	5	4019	0.011
12:00 - 13:00	5	4019	0.004	5	4019	0.006	5	4019	0.010
13:00 - 14:00	5	4019	0.006	5	4019	0.004	5	4019	0.010
14:00 - 15:00	5	4019	0.003	5	4019	0.009	5	4019	0.012
15:00 - 16:00	5	4019	0.003	5	4019	0.010	5	4019	0.013
16:00 - 17:00	5	4019	0.001	5	4019	0.022	5	4019	0.023
17:00 - 18:00	5	4019	0.000	5	4019	0.005	5	4019	0.005
18:00 - 19:00	4	4844	0.000	4	4844	0.002	4	4844	0.002
19:00 - 20:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
20:00 - 21:00	3	5958	0.000	3	5958	0.001	3	5958	0.001
21:00 - 22:00	3	5958	0.000	3	5958	0.000	3	5958	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.067			0.068			0.135

*This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.*

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 STUDEN

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.33

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate	No. Days	Ave. STUDEN	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	4019	0.022	5	4019	0.003	5	4019	0.025
08:00 - 09:00	5	4019	0.138	5	4019	0.021	5	4019	0.159
09:00 - 10:00	5	4019	0.056	5	4019	0.018	5	4019	0.074
10:00 - 11:00	5	4019	0.033	5	4019	0.018	5	4019	0.051
11:00 - 12:00	5	4019	0.033	5	4019	0.028	5	4019	0.061
12:00 - 13:00	5	4019	0.030	5	4019	0.038	5	4019	0.068
13:00 - 14:00	5	4019	0.034	5	4019	0.030	5	4019	0.064
14:00 - 15:00	5	4019	0.019	5	4019	0.044	5	4019	0.063
15:00 - 16:00	5	4019	0.021	5	4019	0.049	5	4019	0.070
16:00 - 17:00	5	4019	0.020	5	4019	0.091	5	4019	0.111
17:00 - 18:00	5	4019	0.016	5	4019	0.054	5	4019	0.070
18:00 - 19:00	4	4844	0.013	4	4844	0.017	4	4844	0.030
19:00 - 20:00	3	5958	0.005	3	5958	0.013	3	5958	0.018
20:00 - 21:00	3	5958	0.004	3	5958	0.020	3	5958	0.024
21:00 - 22:00	3	5958	0.001	3	5958	0.004	3	5958	0.005
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.445			0.448			0.893

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP*FACT$ . Trip rates are then rounded to 3 decimal places.





# Appendix I Modelling Outputs

**CaVC Advanced Technology Centre, Vale of Glamorgan**

**Transport Assessment**

**WEPCo Limited**

SLR Project No.: 425.002058.00001

5 April 2024

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
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**Filename:** Port Road A4226 Roundabout V4.j9  
**Path:** H:\Projects\W230000\237449 - CAVC Advanced Technology Centre, Vale of Glamorgan\Technical\B - ATC Site\Modelling\Arcady  
**Report generation date:** 20/03/2024 11:54:52

- »2033 Future Year, AM
- »2033 Future Year, PM
- »2033 + Dev, AM
- »2033 + Dev, PM
- »2033 + Dev (Sens), AM
- »2033 + Dev (Sens), PM

**Summary of junction performance**

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2033 Future Year						
1 - Model Farm (Northern Site Access)	0.2	3.25	0.15	1.9	9.59	0.66
2 - Port Road	0.2	1.66	0.16	0.2	2.11	0.16
3 - A4226 (West)	0.3	2.91	0.25	0.3	2.63	0.21
4 - A4226 (East)	0.6	3.92	0.38	1.8	6.80	0.64
2033 + Dev						
1 - Model Farm (Northern Site Access)	0.2	3.70	0.17	2.0	10.02	0.67
2 - Port Road	0.2	1.69	0.17	0.3	2.22	0.21
3 - A4226 (West)	0.4	2.99	0.26	0.3	2.75	0.22
4 - A4226 (East)	1.1	5.02	0.52	1.9	7.17	0.66
2033 + Dev (Sens)						
1 - Model Farm (Northern Site Access)	0.2	3.80	0.17	2.0	10.11	0.67
2 - Port Road	0.2	1.70	0.17	0.3	2.23	0.21
3 - A4226 (West)	0.4	3.00	0.26	0.3	2.76	0.22
4 - A4226 (East)	1.2	5.35	0.55	2.0	7.26	0.67

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

## File summary

### File Description

Title	
Location	
Site number	
Date	17/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Tom.Monk
Description	

### Units

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

### Analysis Options

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

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2033 Future Year	AM	FLAT	07:45	08:45	60	15	✓
D4	2033 Future Year	PM	FLAT	16:45	17:45	60	15	✓
D5	2033 + Dev	AM	FLAT	07:45	08:45	60	15	✓
D6	2033 + Dev	PM	FLAT	16:45	17:45	60	15	✓
D7	2033 + Dev (Sens)	AM	FLAT	07:45	08:45	60	15	✓
D8	2033 + Dev (Sens)	PM	FLAT	16:45	17:45	60	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



# 2033 Future Year, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.01	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Model Farm (Northern Site Access)	
2	Port Road	
3	A4226 (West)	
4	A4226 (East)	

### Roundabout Geometry

Arm	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
1 - Model Farm (Northern Site Access)	3.50	9.00	7.0	30.0	60.0	15.0	
2 - Port Road	7.00	12.00	22.0	35.0	60.0	30.0	
3 - A4226 (West)	3.50	10.00	21.0	30.0	60.0	33.0	
4 - A4226 (East)	3.50	12.50	7.0	20.0	70.0	33.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Model Farm (Northern Site Access)	0.565	1640
2 - Port Road	0.798	3061
3 - A4226 (West)	0.621	2062
4 - A4226 (East)	0.484	1577

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2033 Future Year	AM	FLAT	07:45	08:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	196	100.000
2 - Port Road		FLAT	✓	398	100.000
3 - A4226 (West)		FLAT	✓	414	100.000
4 - A4226 (East)		FLAT	✓	561	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	158	38
	2 - Port Road	0	0	0	398
	3 - A4226 (West)	0	0	0	414
	4 - A4226 (East)	0	255	304	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	0	0
	2 - Port Road	0	0	0	3
	3 - A4226 (West)	0	0	0	8
	4 - A4226 (East)	0	4	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.15	3.25	0.2	A	196	196
2 - Port Road	0.16	1.66	0.2	A	398	398
3 - A4226 (West)	0.25	2.91	0.3	A	414	414
4 - A4226 (East)	0.38	3.92	0.6	A	561	561

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	559	1303	0.150	195	0	0.0	0.2	3.248	A
2 - Port Road	398	100	500	2563	0.155	397	254	0.0	0.2	1.661	A
3 - A4226 (West)	414	104	437	1651	0.251	413	460	0.0	0.3	2.905	A
4 - A4226 (East)	561	140	0	1478	0.380	559	850	0.0	0.6	3.904	A

**08:00 - 08:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	561	1302	0.151	196	0	0.2	0.2	3.255	A
2 - Port Road	398	100	502	2561	0.155	398	255	0.2	0.2	1.663	A
3 - A4226 (West)	414	104	438	1650	0.251	414	462	0.3	0.3	2.910	A
4 - A4226 (East)	561	140	0	1478	0.380	561	852	0.6	0.6	3.924	A

**08:15 - 08:30**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	561	1302	0.151	196	0	0.2	0.2	3.255	A
2 - Port Road	398	100	502	2561	0.155	398	255	0.2	0.2	1.663	A
3 - A4226 (West)	414	104	438	1650	0.251	414	462	0.3	0.3	2.910	A
4 - A4226 (East)	561	140	0	1478	0.380	561	852	0.6	0.6	3.924	A

**08:30 - 08:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	561	1302	0.151	196	0	0.2	0.2	3.255	A
2 - Port Road	398	100	502	2561	0.155	398	255	0.2	0.2	1.663	A
3 - A4226 (West)	414	104	438	1650	0.251	414	462	0.3	0.3	2.910	A
4 - A4226 (East)	561	140	0	1478	0.380	561	852	0.6	0.6	3.924	A

# 2033 Future Year, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.34	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2033 Future Year	PM	FLAT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	723	100.000
2 - Port Road		FLAT	✓	329	100.000
3 - A4226 (West)		FLAT	✓	370	100.000
4 - A4226 (East)		FLAT	✓	954	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	600	123
	2 - Port Road	141	1	0	187
	3 - A4226 (West)	0	0	1	369
	4 - A4226 (East)	30	446	476	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	1	1
	2 - Port Road	3	0	0	3
	3 - A4226 (West)	0	0	0	2
	4 - A4226 (East)	3	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.66	9.59	1.9	A	723	723
2 - Port Road	0.16	2.11	0.2	A	329	329
3 - A4226 (West)	0.21	2.63	0.3	A	370	370
4 - A4226 (East)	0.64	6.80	1.8	A	954	954

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	919	1102	0.656	716	170	0.0	1.9	9.150	A
2 - Port Road	329	82	1191	2040	0.161	328	444	0.0	0.2	2.102	A
3 - A4226 (West)	370	92	452	1740	0.213	369	1067	0.0	0.3	2.622	A
4 - A4226 (East)	954	239	143	1483	0.643	947	678	0.0	1.8	6.626	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	926	1098	0.658	723	171	1.9	1.9	9.581	A
2 - Port Road	329	82	1202	2031	0.162	329	447	0.2	0.2	2.114	A
3 - A4226 (West)	370	92	454	1738	0.213	370	1077	0.3	0.3	2.630	A
4 - A4226 (East)	954	239	143	1483	0.643	954	681	1.8	1.8	6.798	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	926	1098	0.658	723	171	1.9	1.9	9.589	A
2 - Port Road	329	82	1202	2031	0.162	329	447	0.2	0.2	2.114	A
3 - A4226 (West)	370	92	454	1738	0.213	370	1077	0.3	0.3	2.630	A
4 - A4226 (East)	954	239	143	1483	0.643	954	681	1.8	1.8	6.801	A

#### 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	926	1098	0.658	723	171	1.9	1.9	9.591	A
2 - Port Road	329	82	1202	2031	0.162	329	447	0.2	0.2	2.114	A
3 - A4226 (West)	370	92	454	1738	0.213	370	1077	0.3	0.3	2.630	A
4 - A4226 (East)	954	239	143	1483	0.643	954	681	1.8	1.8	6.801	A

# 2033 + Dev, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.63	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2033 + Dev	AM	FLAT	07:45	08:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	196	100.000
2 - Port Road		FLAT	✓	433	100.000
3 - A4226 (West)		FLAT	✓	424	100.000
4 - A4226 (East)		FLAT	✓	784	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	158	38
	2 - Port Road	0	0	1	432
	3 - A4226 (West)	0	10	0	414
	4 - A4226 (East)	0	478	304	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	0	0
	2 - Port Road	0	0	43	3
	3 - A4226 (West)	0	11	0	8
	4 - A4226 (East)	0	2	9	0

# Results

## Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.17	3.70	0.2	A	196	196
2 - Port Road	0.17	1.69	0.2	A	433	433
3 - A4226 (West)	0.26	2.99	0.4	A	424	424
4 - A4226 (East)	0.52	5.02	1.1	A	784	784

## Main Results for each time segment

### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	790	1172	0.167	195	0	0.0	0.2	3.680	A
2 - Port Road	433	108	500	2561	0.169	432	485	0.0	0.2	1.690	A
3 - A4226 (West)	424	106	471	1630	0.260	423	461	0.0	0.4	2.980	A
4 - A4226 (East)	784	196	10	1501	0.522	780	884	0.0	1.1	4.961	A

### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	794	1170	0.168	196	0	0.2	0.2	3.695	A
2 - Port Road	433	108	502	2559	0.169	433	488	0.2	0.2	1.692	A
3 - A4226 (West)	424	106	472	1629	0.260	424	463	0.4	0.4	2.986	A
4 - A4226 (East)	784	196	10	1501	0.522	784	886	1.1	1.1	5.019	A

### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	794	1170	0.168	196	0	0.2	0.2	3.695	A
2 - Port Road	433	108	502	2559	0.169	433	488	0.2	0.2	1.692	A
3 - A4226 (West)	424	106	472	1629	0.260	424	463	0.4	0.4	2.986	A
4 - A4226 (East)	784	196	10	1501	0.522	784	886	1.1	1.1	5.019	A

### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	794	1170	0.168	196	0	0.2	0.2	3.695	A
2 - Port Road	433	108	502	2559	0.169	433	488	0.2	0.2	1.692	A
3 - A4226 (West)	424	106	472	1629	0.260	424	463	0.4	0.4	2.986	A
4 - A4226 (East)	784	196	10	1501	0.522	784	886	1.1	1.1	5.019	A

# 2033 + Dev, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.49	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2033 + Dev	PM	FLAT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	723	100.000
2 - Port Road		FLAT	✓	419	100.000
3 - A4226 (West)		FLAT	✓	371	100.000
4 - A4226 (East)		FLAT	✓	980	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	600	123
	2 - Port Road	141	1	4	273
	3 - A4226 (West)	0	1	1	369
	4 - A4226 (East)	30	472	476	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	1	1
	2 - Port Road	3	0	6	2
	3 - A4226 (West)	0	100	0	2
	4 - A4226 (East)	3	2	1	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.67	10.02	2.0	B	723	723
2 - Port Road	0.21	2.22	0.3	A	419	419
3 - A4226 (West)	0.22	2.75	0.3	A	371	371
4 - A4226 (East)	0.66	7.17	1.9	A	980	980

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	946	1086	0.666	715	170	0.0	1.9	9.514	A
2 - Port Road	419	105	1191	2052	0.204	418	470	0.0	0.3	2.202	A
3 - A4226 (West)	371	93	538	1683	0.220	370	1071	0.0	0.3	2.738	A
4 - A4226 (East)	980	245	144	1482	0.661	972	764	0.0	1.9	6.962	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	953	1082	0.668	723	171	1.9	2.0	10.002	B
2 - Port Road	419	105	1202	2043	0.205	419	474	0.3	0.3	2.215	A
3 - A4226 (West)	371	93	540	1682	0.221	371	1081	0.3	0.3	2.745	A
4 - A4226 (East)	980	245	144	1482	0.661	980	767	1.9	1.9	7.166	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	953	1082	0.668	723	171	2.0	2.0	10.013	B
2 - Port Road	419	105	1202	2043	0.205	419	474	0.3	0.3	2.215	A
3 - A4226 (West)	371	93	540	1682	0.221	371	1081	0.3	0.3	2.745	A
4 - A4226 (East)	980	245	144	1482	0.661	980	767	1.9	1.9	7.169	A

#### 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	953	1082	0.668	723	171	2.0	2.0	10.017	B
2 - Port Road	419	105	1202	2043	0.205	419	474	0.3	0.3	2.215	A
3 - A4226 (West)	371	93	540	1682	0.221	371	1081	0.3	0.3	2.745	A
4 - A4226 (East)	980	245	144	1482	0.661	980	767	1.9	1.9	7.169	A

# 2033 + Dev (Sens), AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.81	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	2033 + Dev (Sens)	AM	FLAT	07:45	08:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	196	100.000
2 - Port Road		FLAT	✓	441	100.000
3 - A4226 (West)		FLAT	✓	426	100.000
4 - A4226 (East)		FLAT	✓	829	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	158	38
	2 - Port Road	0	0	2	439
	3 - A4226 (West)	0	12	0	414
	4 - A4226 (East)	0	523	304	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	0	0
	2 - Port Road	0	0	43	3
	3 - A4226 (West)	0	11	0	8
	4 - A4226 (East)	0	2	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.17	3.80	0.2	A	196	196
2 - Port Road	0.17	1.70	0.2	A	441	441
3 - A4226 (West)	0.26	3.00	0.4	A	426	426
4 - A4226 (East)	0.55	5.35	1.2	A	829	829

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	836	1146	0.171	195	0	0.0	0.2	3.784	A
2 - Port Road	441	110	499	2559	0.172	440	532	0.0	0.2	1.698	A
3 - A4226 (West)	426	106	478	1625	0.262	425	462	0.0	0.4	2.995	A
4 - A4226 (East)	829	207	12	1502	0.552	824	891	0.0	1.2	5.277	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	841	1143	0.172	196	0	0.2	0.2	3.801	A
2 - Port Road	441	110	502	2557	0.172	441	535	0.2	0.2	1.700	A
3 - A4226 (West)	426	106	479	1625	0.262	426	464	0.4	0.4	3.002	A
4 - A4226 (East)	829	207	12	1502	0.552	829	893	1.2	1.2	5.347	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	841	1143	0.172	196	0	0.2	0.2	3.801	A
2 - Port Road	441	110	502	2557	0.172	441	535	0.2	0.2	1.700	A
3 - A4226 (West)	426	106	479	1625	0.262	426	464	0.4	0.4	3.002	A
4 - A4226 (East)	829	207	12	1502	0.552	829	893	1.2	1.2	5.347	A

#### 08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	196	49	841	1143	0.172	196	0	0.2	0.2	3.801	A
2 - Port Road	441	110	502	2557	0.172	441	535	0.2	0.2	1.700	A
3 - A4226 (West)	426	106	479	1625	0.262	426	464	0.4	0.4	3.002	A
4 - A4226 (East)	829	207	12	1502	0.552	829	893	1.2	1.2	5.347	A

# 2033 + Dev (Sens), PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.54	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2033 + Dev (Sens)	PM	FLAT	16:45	17:45	60	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Model Farm (Northern Site Access)		FLAT	✓	723	100.000
2 - Port Road		FLAT	✓	431	100.000
3 - A4226 (West)		FLAT	✓	371	100.000
4 - A4226 (East)		FLAT	✓	986	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	600	123
	2 - Port Road	141	1	4	285
	3 - A4226 (West)	0	1	1	369
	4 - A4226 (East)	30	478	476	2

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1 - Model Farm (Northern Site Access)	2 - Port Road	3 - A4226 (West)	4 - A4226 (East)
From	1 - Model Farm (Northern Site Access)	0	0	1	1
	2 - Port Road	3	0	5	2
	3 - A4226 (West)	0	100	0	2
	4 - A4226 (East)	3	2	1	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Model Farm (Northern Site Access)	0.67	10.11	2.0	B	723	723
2 - Port Road	0.21	2.23	0.3	A	431	431
3 - A4226 (West)	0.22	2.76	0.3	A	371	371
4 - A4226 (East)	0.67	7.26	2.0	A	986	986

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	951	1083	0.668	715	170	0.0	1.9	9.594	A
2 - Port Road	431	108	1190	2053	0.210	430	476	0.0	0.3	2.217	A
3 - A4226 (West)	371	93	550	1676	0.221	370	1071	0.0	0.3	2.754	A
4 - A4226 (East)	986	246	144	1482	0.665	978	776	0.0	1.9	7.038	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	959	1079	0.670	723	171	1.9	2.0	10.098	B
2 - Port Road	431	108	1202	2044	0.211	431	480	0.3	0.3	2.231	A
3 - A4226 (West)	371	93	552	1674	0.222	371	1081	0.3	0.3	2.761	A
4 - A4226 (East)	986	246	144	1482	0.665	986	779	1.9	2.0	7.253	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	959	1079	0.670	723	171	2.0	2.0	10.109	B
2 - Port Road	431	108	1202	2044	0.211	431	480	0.3	0.3	2.231	A
3 - A4226 (West)	371	93	552	1674	0.222	371	1081	0.3	0.3	2.761	A
4 - A4226 (East)	986	246	144	1482	0.665	986	779	2.0	2.0	7.256	A

#### 17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Model Farm (Northern Site Access)	723	181	959	1079	0.670	723	171	2.0	2.0	10.113	B
2 - Port Road	431	108	1202	2044	0.211	431	480	0.3	0.3	2.231	A
3 - A4226 (West)	371	93	552	1674	0.222	371	1081	0.3	0.3	2.761	A
4 - A4226 (East)	986	246	144	1482	0.665	986	779	2.0	2.0	7.256	A



Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
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**Filename:** Port Road Holiday Inn Roundabout V4.j9  
**Path:** H:\Projects\W230000\237449 - CAVC Advanced Technology Centre, Vale of Glamorgan\Technical\B - ATC Site\Modelling\Arcady  
**Report generation date:** 20/03/2024 11:41:55

- »2023, AM
- »2023, PM
- »2023 Future Year, AM
- »2023 Future Year, PM
- »2023 + Dev, AM
- »2023 + Dev, PM
- »2023 + Dev (Sens), AM
- »2023 + Dev (Sens), PM

**Summary of junction performance**

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
<b>2023</b>						
1 - Holiday Inn/Model Farm	0.0	3.77	0.01	0.0	4.40	0.01
2 - Port Road (South)	0.3	2.70	0.24	0.1	2.24	0.11
3 - Unnamed Road (Airport Car Park)	0.0	2.83	0.02	0.0	2.57	0.03
4 - Port Road (North)	0.3	4.47	0.25	0.9	6.30	0.47
<b>2023 Future Year</b>						
1 - Holiday Inn/Model Farm	0.0	3.72	0.01	0.0	4.20	0.01
2 - Port Road (South)	0.3	2.66	0.22	0.1	2.20	0.08
3 - Unnamed Road (Airport Car Park)	0.0	2.78	0.02	0.0	2.53	0.03
4 - Port Road (North)	0.3	4.38	0.23	0.7	5.60	0.40
<b>2023 + Dev</b>						
1 - Holiday Inn/Model Farm	0.0	4.27	0.01	0.0	4.27	0.01
2 - Port Road (South)	0.3	3.01	0.24	0.1	2.23	0.08
3 - Unnamed Road (Airport Car Park)	0.0	2.81	0.05	0.1	2.65	0.09
4 - Port Road (North)	0.8	5.96	0.44	0.7	5.83	0.43
<b>2023 + Dev (Sens)</b>						
1 - Holiday Inn/Model Farm	0.0	4.40	0.01	0.0	4.29	0.01
2 - Port Road (South)	0.3	3.09	0.24	0.1	2.23	0.09
3 - Unnamed Road (Airport Car Park)	0.1	2.82	0.05	0.1	2.68	0.10
4 - Port Road (North)	0.9	6.46	0.49	0.8	5.90	0.43

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

## File summary

### File Description

Title	
Location	
Site number	
Date	17/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Tom.Monk
Description	

### Units

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

### Analysis Options

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

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	FLAT	07:45	09:15	90	15	✓
D2	2023	PM	FLAT	16:45	18:15	90	15	✓
D3	2033 Future Year	AM	FLAT	07:45	09:15	90	15	✓
D4	2033 Future Year	PM	FLAT	16:45	18:15	90	15	✓
D5	2033 + Dev	AM	FLAT	07:45	09:15	90	15	✓
D6	2033 + Dev	PM	FLAT	16:45	18:15	90	15	✓
D7	2033 + Dev (Sens)	AM	FLAT	07:45	09:15	90	15	✓
D8	2033 + Dev (Sens)	PM	FLAT	16:45	18:15	90	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2023, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.38	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Holiday Inn/Model Farm	
2	Port Road (South)	
3	Unnamed Road (Airport Car Park)	
4	Port Road (North)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Holiday Inn/Model Farm	3.60	3.60	0.0	20.9	39.0	25.9	
2 - Port Road (South)	3.74	7.20	22.3	26.2	39.0	28.1	
3 - Unnamed Road (Airport Car Park)	3.16	6.61	18.8	16.7	39.0	30.8	
4 - Port Road (North)	3.60	3.60	0.0	14.4	39.0	18.3	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Holiday Inn/Model Farm	0.531	1109
2 - Port Road (South)	0.683	1867
3 - Unnamed Road (Airport Car Park)	0.620	1596
4 - Port Road (North)	0.533	1114

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Holiday Inn/Model Farm		FLAT	✓	6	100.000
2 - Port Road (South)		FLAT	✓	418	100.000
3 - Unnamed Road (Airport Car Park)		FLAT	✓	26	100.000
4 - Port Road (North)		FLAT	✓	273	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
From				
1 - Holiday Inn/Model Farm	0	0	1	5
2 - Port Road (South)	0	1	25	392
3 - Unnamed Road (Airport Car Park)	1	6	0	19
4 - Port Road (North)	9	168	96	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
From				
1 - Holiday Inn/Model Farm	0	0	0	0
2 - Port Road (South)	0	0	8	2
3 - Unnamed Road (Airport Car Park)	0	0	0	5
4 - Port Road (North)	0	2	5	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Holiday Inn/Model Farm	0.01	3.77	0.0	A	6	9
2 - Port Road (South)	0.24	2.70	0.3	A	418	627
3 - Unnamed Road (Airport Car Park)	0.02	2.83	0.0	A	26	39
4 - Port Road (North)	0.25	4.47	0.3	A	273	410

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	270	961	0.006	6	10	0.0	0.0	3.767	A
2 - Port Road (South)	418	105	102	1753	0.238	417	174	0.0	0.3	2.691	A
3 - Unnamed Road (Airport Car Park)	26	6	397	1298	0.020	26	121	0.0	0.0	2.829	A
4 - Port Road (North)	273	68	8	1078	0.253	272	415	0.0	0.3	4.458	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	271	960	0.006	6	10	0.0	0.0	3.770	A
2 - Port Road (South)	418	105	102	1753	0.238	418	175	0.3	0.3	2.696	A
3 - Unnamed Road (Airport Car Park)	26	6	398	1297	0.020	26	122	0.0	0.0	2.831	A
4 - Port Road (North)	273	68	8	1078	0.253	273	416	0.3	0.3	4.472	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	271	960	0.006	6	10	0.0	0.0	3.770	A
2 - Port Road (South)	418	105	102	1753	0.238	418	175	0.3	0.3	2.696	A
3 - Unnamed Road (Airport Car Park)	26	6	398	1297	0.020	26	122	0.0	0.0	2.831	A
4 - Port Road (North)	273	68	8	1078	0.253	273	416	0.3	0.3	4.472	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	271	960	0.006	6	10	0.0	0.0	3.770	A
2 - Port Road (South)	418	105	102	1753	0.238	418	175	0.3	0.3	2.696	A
3 - Unnamed Road (Airport Car Park)	26	6	398	1297	0.020	26	122	0.0	0.0	2.831	A
4 - Port Road (North)	273	68	8	1078	0.253	273	416	0.3	0.3	4.472	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	271	960	0.006	6	10	0.0	0.0	3.770	A
2 - Port Road (South)	418	105	102	1753	0.238	418	175	0.3	0.3	2.696	A
3 - Unnamed Road (Airport Car Park)	26	6	398	1297	0.020	26	122	0.0	0.0	2.831	A
4 - Port Road (North)	273	68	8	1078	0.253	273	416	0.3	0.3	4.472	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	271	960	0.006	6	10	0.0	0.0	3.770	A
2 - Port Road (South)	418	105	102	1753	0.238	418	175	0.3	0.3	2.696	A
3 - Unnamed Road (Airport Car Park)	26	6	398	1297	0.020	26	122	0.0	0.0	2.831	A
4 - Port Road (North)	273	68	8	1078	0.253	273	416	0.3	0.3	4.472	A

# 2023, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.04	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2023	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Holiday Inn/Model Farm		FLAT	✓	9	100.000
2 - Port Road (South)		FLAT	✓	190	100.000
3 - Unnamed Road (Airport Car Park)		FLAT	✓	43	100.000
4 - Port Road (North)		FLAT	✓	509	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
1 - Holiday Inn/Model Farm	0	1	3	5
2 - Port Road (South)	0	0	13	177
3 - Unnamed Road (Airport Car Park)	0	20	1	22
4 - Port Road (North)	10	463	34	2

## Vehicle Mix



### Heavy Vehicle Percentages

		To			
From		1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
	1 - Holiday Inn/Model Farm	0	0	0	0
	2 - Port Road (South)	0	0	0	2
	3 - Unnamed Road (Airport Car Park)	0	0	0	5
	4 - Port Road (North)	0	1	18	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Holiday Inn/Model Farm	0.01	4.40	0.0	A	9	14
2 - Port Road (South)	0.11	2.24	0.1	A	190	285
3 - Unnamed Road (Airport Car Park)	0.03	2.57	0.0	A	43	65
4 - Port Road (North)	0.47	6.30	0.9	A	509	763

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	516	829	0.011	9	10	0.0	0.0	4.390	A
2 - Port Road (South)	190	48	45	1799	0.106	190	481	0.0	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.570	A
4 - Port Road (North)	509	127	21	1080	0.471	505	205	0.0	0.9	6.226	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	520	827	0.011	9	10	0.0	0.0	4.400	A
2 - Port Road (South)	190	48	45	1799	0.106	190	484	0.1	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.571	A
4 - Port Road (North)	509	127	21	1080	0.471	509	206	0.9	0.9	6.300	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	520	827	0.011	9	10	0.0	0.0	4.400	A
2 - Port Road (South)	190	48	45	1799	0.106	190	484	0.1	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.571	A
4 - Port Road (North)	509	127	21	1080	0.471	509	206	0.9	0.9	6.300	A

**17:30 - 17:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	520	827	0.011	9	10	0.0	0.0	4.400	A
2 - Port Road (South)	190	48	45	1799	0.106	190	484	0.1	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.571	A
4 - Port Road (North)	509	127	21	1080	0.471	509	206	0.9	0.9	6.300	A

**17:45 - 18:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	520	827	0.011	9	10	0.0	0.0	4.400	A
2 - Port Road (South)	190	48	45	1799	0.106	190	484	0.1	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.571	A
4 - Port Road (North)	509	127	21	1080	0.471	509	206	0.9	0.9	6.300	A

**18:00 - 18:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	9	2	520	827	0.011	9	10	0.0	0.0	4.400	A
2 - Port Road (South)	190	48	45	1799	0.106	190	484	0.1	0.1	2.237	A
3 - Unnamed Road (Airport Car Park)	43	11	184	1443	0.030	43	51	0.0	0.0	2.571	A
4 - Port Road (North)	509	127	21	1080	0.471	509	206	0.9	0.9	6.300	A

# 2033 Future Year, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.33	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2033 Future Year	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Holiday Inn/Model Farm		FLAT	✓	6	100.000
2 - Port Road (South)		FLAT	✓	376	100.000
3 - Unnamed Road (Airport Car Park)		FLAT	✓	29	100.000
4 - Port Road (North)		FLAT	✓	249	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
1 - Holiday Inn/Model Farm	0	0	1	5
2 - Port Road (South)	0	0	27	349
3 - Unnamed Road (Airport Car Park)	1	7	0	21
4 - Port Road (North)	10	134	105	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
From		1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
	1 - Holiday Inn/Model Farm	0	0	0	0
	2 - Port Road (South)	0	0	8	3
	3 - Unnamed Road (Airport Car Park)	0	0	0	5
	4 - Port Road (North)	0	3	5	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Holiday Inn/Model Farm	0.01	3.72	0.0	A	6	9
2 - Port Road (South)	0.22	2.66	0.3	A	376	564
3 - Unnamed Road (Airport Car Park)	0.02	2.78	0.0	A	29	43
4 - Port Road (North)	0.23	4.38	0.3	A	249	373

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	245	974	0.006	6	11	0.0	0.0	3.718	A
2 - Port Road (South)	376	94	110	1730	0.217	375	140	0.0	0.3	2.654	A
3 - Unnamed Road (Airport Car Park)	29	7	353	1323	0.022	29	132	0.0	0.0	2.781	A
4 - Port Road (North)	249	62	8	1070	0.233	248	374	0.0	0.3	4.371	A

#### 08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	246	973	0.006	6	11	0.0	0.0	3.721	A
2 - Port Road (South)	376	94	111	1730	0.217	376	141	0.3	0.3	2.659	A
3 - Unnamed Road (Airport Car Park)	29	7	354	1322	0.022	29	133	0.0	0.0	2.782	A
4 - Port Road (North)	249	62	8	1070	0.233	249	375	0.3	0.3	4.383	A

#### 08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	246	973	0.006	6	11	0.0	0.0	3.721	A
2 - Port Road (South)	376	94	111	1730	0.217	376	141	0.3	0.3	2.659	A
3 - Unnamed Road (Airport Car Park)	29	7	354	1322	0.022	29	133	0.0	0.0	2.783	A
4 - Port Road (North)	249	62	8	1070	0.233	249	375	0.3	0.3	4.383	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	246	973	0.006	6	11	0.0	0.0	3.721	A
2 - Port Road (South)	376	94	111	1730	0.217	376	141	0.3	0.3	2.659	A
3 - Unnamed Road (Airport Car Park)	29	7	354	1322	0.022	29	133	0.0	0.0	2.783	A
4 - Port Road (North)	249	62	8	1070	0.233	249	375	0.3	0.3	4.383	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	246	973	0.006	6	11	0.0	0.0	3.721	A
2 - Port Road (South)	376	94	111	1730	0.217	376	141	0.3	0.3	2.659	A
3 - Unnamed Road (Airport Car Park)	29	7	354	1322	0.022	29	133	0.0	0.0	2.783	A
4 - Port Road (North)	249	62	8	1070	0.233	249	375	0.3	0.3	4.383	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	6	2	246	973	0.006	6	11	0.0	0.0	3.721	A
2 - Port Road (South)	376	94	111	1730	0.217	376	141	0.3	0.3	2.659	A
3 - Unnamed Road (Airport Car Park)	29	7	354	1322	0.022	29	133	0.0	0.0	2.783	A
4 - Port Road (North)	249	62	8	1070	0.233	249	375	0.3	0.3	4.383	A

# 2033 Future Year, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.56	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2033 Future Year	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Holiday Inn/Model Farm		FLAT	✓	8	100.000
2 - Port Road (South)		FLAT	✓	150	100.000
3 - Unnamed Road (Airport Car Park)		FLAT	✓	47	100.000
4 - Port Road (North)		FLAT	✓	432	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
1 - Holiday Inn/Model Farm	0	0	3	5
2 - Port Road (South)	0	3	14	133
3 - Unnamed Road (Airport Car Park)	0	22	1	24
4 - Port Road (North)	11	382	37	2

## Vehicle Mix



### Heavy Vehicle Percentages

		To			
From		1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
	1 - Holiday Inn/Model Farm	0	0	0	0
	2 - Port Road (South)	0	0	8	2
	3 - Unnamed Road (Airport Car Park)	0	0	0	5
	4 - Port Road (North)	0	1	18	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Holiday Inn/Model Farm	0.01	4.20	0.0	A	8	12
2 - Port Road (South)	0.08	2.20	0.1	A	150	225
3 - Unnamed Road (Airport Car Park)	0.03	2.53	0.0	A	47	71
4 - Port Road (North)	0.40	5.60	0.7	A	432	648

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	444	867	0.009	8	11	0.0	0.0	4.189	A
2 - Port Road (South)	150	38	48	1785	0.084	150	405	0.0	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	429	164	0.0	0.7	5.559	A

#### 17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	447	866	0.009	8	11	0.0	0.0	4.196	A
2 - Port Road (South)	150	38	48	1785	0.084	150	407	0.1	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	432	164	0.7	0.7	5.603	A

#### 17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	447	866	0.009	8	11	0.0	0.0	4.196	A
2 - Port Road (South)	150	38	48	1785	0.084	150	407	0.1	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	432	164	0.7	0.7	5.603	A

**17:30 - 17:45**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	447	866	0.009	8	11	0.0	0.0	4.196	A
2 - Port Road (South)	150	38	48	1785	0.084	150	407	0.1	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	432	164	0.7	0.7	5.603	A

**17:45 - 18:00**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	447	866	0.009	8	11	0.0	0.0	4.196	A
2 - Port Road (South)	150	38	48	1785	0.084	150	407	0.1	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	432	164	0.7	0.7	5.603	A

**18:00 - 18:15**

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Holiday Inn/Model Farm	8	2	447	866	0.009	8	11	0.0	0.0	4.196	A
2 - Port Road (South)	150	38	48	1785	0.084	150	407	0.1	0.1	2.201	A
3 - Unnamed Road (Airport Car Park)	47	12	143	1468	0.032	47	55	0.0	0.0	2.532	A
4 - Port Road (North)	432	108	26	1074	0.402	432	164	0.7	0.7	5.603	A

# 2033 + Dev, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.52	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2033 + Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Holiday Inn/Model Farm		FLAT	✓	6	100.000
2 - Port Road (South)		FLAT	✓	378	100.000
3 - Unnamed Road (Airport Car Park)		FLAT	✓	64	100.000
4 - Port Road (North)		FLAT	✓	481	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To			
	1 - Holiday Inn/Model Farm	2 - Port Road (South)	3 - Unnamed Road (Airport Car Park)	4 - Port Road (North)
1 - Holiday Inn/Model Farm	0	0	1	5
2 - Port Road (South)	0	1	28	349
3 - Unnamed Road (Airport Car Park)	1	7	0	56
4 - Port Road (North)	10	134	337	0

## Vehicle Mix