

**TRAFFINOMICS LIMITED**

**LIFFEY VALLEY TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**SEPTEMBER 2021  
TRA/21/148**

SITE: 05

DATE: 9th September 2021

LOCATION: Liffey Valley Office Campus

DAY: Thursday

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>			
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4			
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7			
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4			
08:45	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	3			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>18</b>	<b>18</b>			
09:00	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	3	0	0	0	4	3	3			
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	3			
09:30	0	0	1	0	0	0	1	1	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	1			
09:45	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>8</b>	<b>8</b>			
<b>P/TOT</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>29</b>	<b>29</b>			

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1	1		
16:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0		
16:30	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0	0		
16:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>		
17:00	0	0	2	0	0	0	2	2	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1	1		
17:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1	1		
17:30	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0		
17:45	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>		
18:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0		
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
18:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>3</b>		

**TRAFFINOMICS LIMITED**

**LIFFEY VALLEY TRAFFIC COUNTS  
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**SEPTEMBER 2021  
TRA/21/148**

SITE: 05 DATE: 9th September 2021

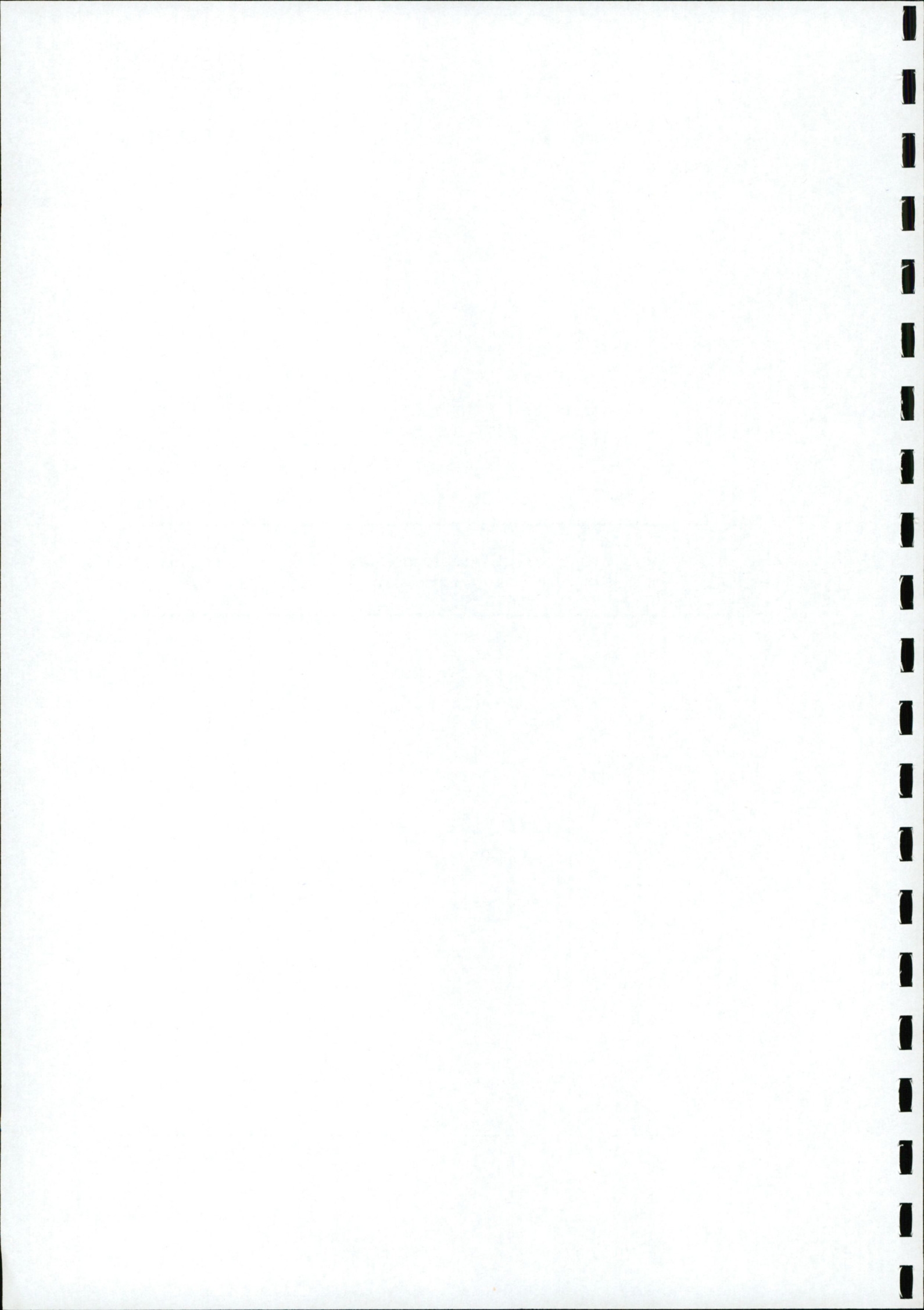
LOCATION: Liffey Valley Office Campus DAY: Thursday

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:00	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0			
07:15	0	0	1	0	0	0	1	1	0	0	5	0	0	0	5	5	0	0	0	0	0	0	0	0			
07:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2				
07:45	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0				
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>			
08:00	1	0	11	0	0	0	12	11	0	0	6	0	0	0	6	6	0	0	1	0	0	0	1	1			
08:15	0	0	5	0	0	0	5	5	0	0	8	0	0	0	8	8	0	0	1	0	0	0	1	1			
08:30	0	0	12	0	0	0	12	12	0	0	7	1	0	0	8	8	0	0	0	0	0	0	0	0			
08:45	0	0	8	0	1	0	9	10	1	0	5	0	0	0	6	5	0	0	1	0	0	0	1	1			
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>38</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>26</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>			
09:00	0	0	11	3	0	0	14	14	0	0	3	1	0	0	4	4	0	0	0	0	0	0	0	0			
09:15	0	0	2	1	0	0	3	3	0	0	1	0	0	0	1	1	0	0	2	2	0	0	4	4			
09:30	0	0	5	0	0	0	5	5	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1			
09:45	0	0	10	0	0	0	10	10	0	0	5	1	0	0	6	6	0	0	0	0	0	0	0	0			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>			
<b>P/TOT</b>	<b>1</b>	<b>0</b>	<b>72</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>79</b>	<b>79</b>	<b>1</b>	<b>0</b>	<b>44</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>10</b>			

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	11	0	0	0	11	11	0	0	18	0	0	0	18	18	0	0	0	0	0	0	0	0			
16:15	0	0	11	1	0	0	12	12	0	0	16	1	0	1	18	19	0	0	1	0	0	0	1	1			
16:30	0	0	9	0	0	0	9	9	0	0	6	0	0	0	6	6	0	0	0	0	0	0	0	0			
16:45	0	1	9	0	0	0	10	9	0	0	8	0	0	0	8	8	0	0	0	0	0	0	0	0			
<b>H/TOT</b>	<b>0</b>	<b>1</b>	<b>40</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>50</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>			
17:00	0	0	17	1	0	0	18	18	0	0	16	1	0	0	17	17	0	0	0	0	0	0	0	0			
17:15	0	0	11	0	0	0	11	11	0	0	11	0	0	0	11	11	0	0	0	0	0	0	0	0			
17:30	0	0	8	1	0	0	9	9	0	0	19	1	0	0	20	20	0	0	0	0	0	0	0	0			
17:45	0	0	9	0	0	0	9	9	0	0	24	3	0	0	27	27	0	0	0	0	0	0	0	0			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
18:00	0	0	9	0	0	0	9	9	0	0	22	2	0	0	24	24	0	0	0	0	0	0	0	0			
18:15	0	0	8	0	0	0	8	8	0	0	10	0	0	0	10	10	0	0	0	0	0	0	0	0			
18:30	0	0	6	1	0	0	7	7	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0			
18:45	0	0	4	0	0	0	4	4	0	0	9	1	0	0	10	10	0	0	0	0	0	0	0	0			
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>			
<b>P/TOT</b>	<b>0</b>	<b>1</b>	<b>112</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>117</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>161</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>171</b>	<b>172</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>			

**APPENDIX C**

**TRICS Output Data  
(Typical Hotels)**



TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS

**TOTAL VEHICLES**

**Calculation factor: 1 BEDRMS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. BEDRMS	Trip Rate	No. Days	Ave. BEDRMS	Trip Rate	No. Days	Ave. BEDRMS	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	1	154	0.019	1	154	0.013	1	154	0.032
07:00 - 08:00	31	100	0.066	31	100	0.146	31	100	0.212
08:00 - 09:00	32	97	0.124	<b>32</b>	<b>97</b>	<b>0.177</b>	32	97	0.301
09:00 - 10:00	32	97	0.155	32	97	0.153	<b>32</b>	<b>97</b>	<b>0.308</b>
10:00 - 11:00	32	97	0.116	32	97	0.128	32	97	0.244
11:00 - 12:00	32	97	0.085	32	97	0.122	32	97	0.207
12:00 - 13:00	32	97	0.096	32	97	0.098	32	97	0.194
13:00 - 14:00	32	97	0.119	32	97	0.097	32	97	0.216
14:00 - 15:00	32	97	0.132	32	97	0.113	32	97	0.245
15:00 - 16:00	32	97	0.124	32	97	0.106	32	97	0.230
16:00 - 17:00	32	97	0.127	32	97	0.115	32	97	0.242
17:00 - 18:00	32	97	0.151	32	97	0.122	32	97	0.273
18:00 - 19:00	<b>32</b>	<b>97</b>	<b>0.163</b>	32	97	0.115	32	97	0.278
19:00 - 20:00	32	97	0.108	32	97	0.096	32	97	0.204
20:00 - 21:00	32	97	0.092	32	97	0.068	32	97	0.160
21:00 - 22:00	32	97	0.074	32	97	0.062	32	97	0.136
22:00 - 23:00	3	90	0.011	3	90	0.015	3	90	0.026
23:00 - 24:00	1	157	0.006	1	157	0.000	1	157	0.006
<b>Total Rates:</b>			<b>1.768</b>			<b>1.746</b>			<b>3.514</b>

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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The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

**Parameter summary**

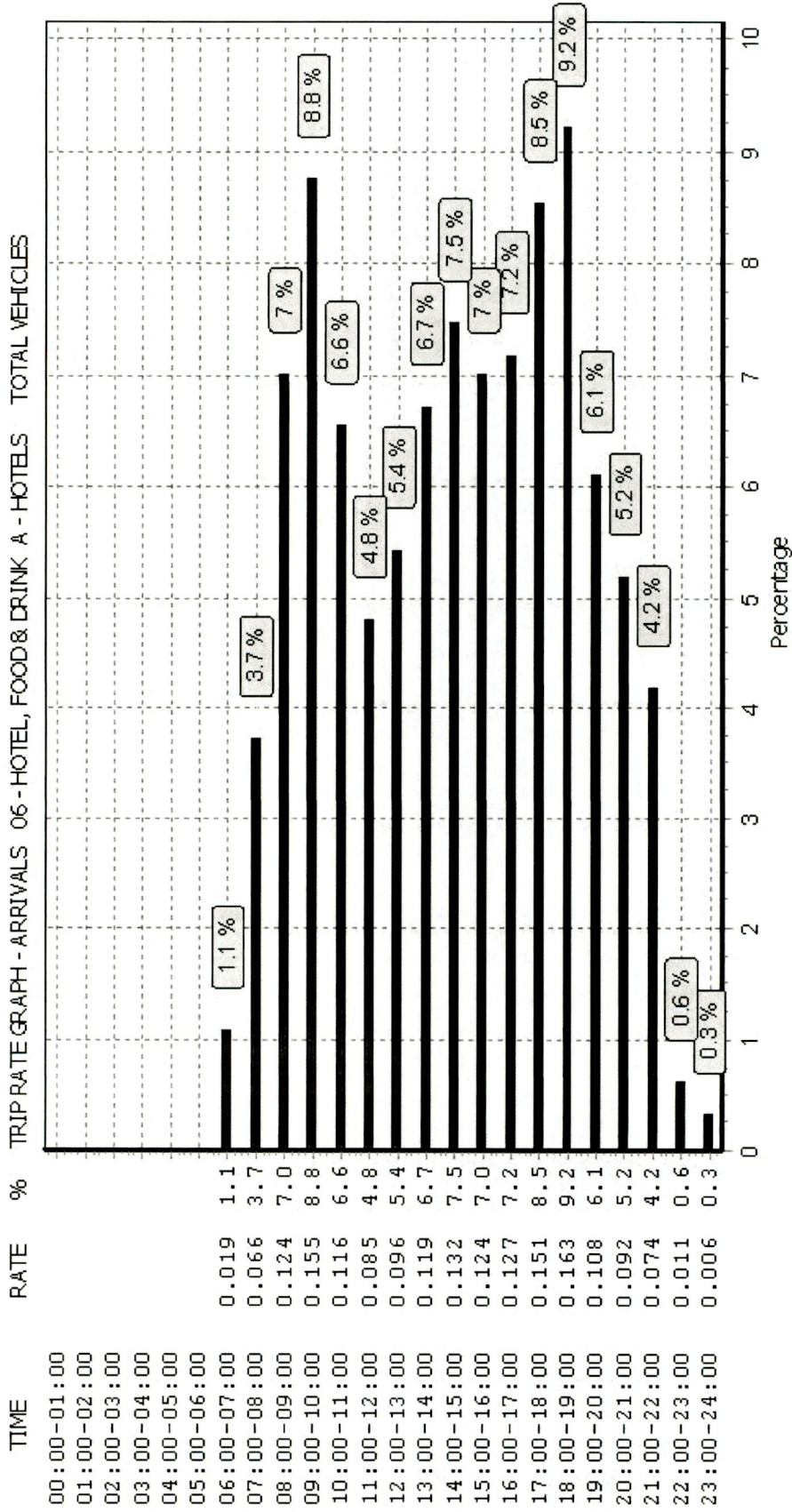
Trip rate parameter range selected: 7 - 227 (units: )  
 Survey date range: 01/01/14 - 12/11/21  
 Number of weekdays (Monday-Friday): 32  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 0  
 Surveys manually removed from selection: 0

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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Licence No: 160301

Dublin 18

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue

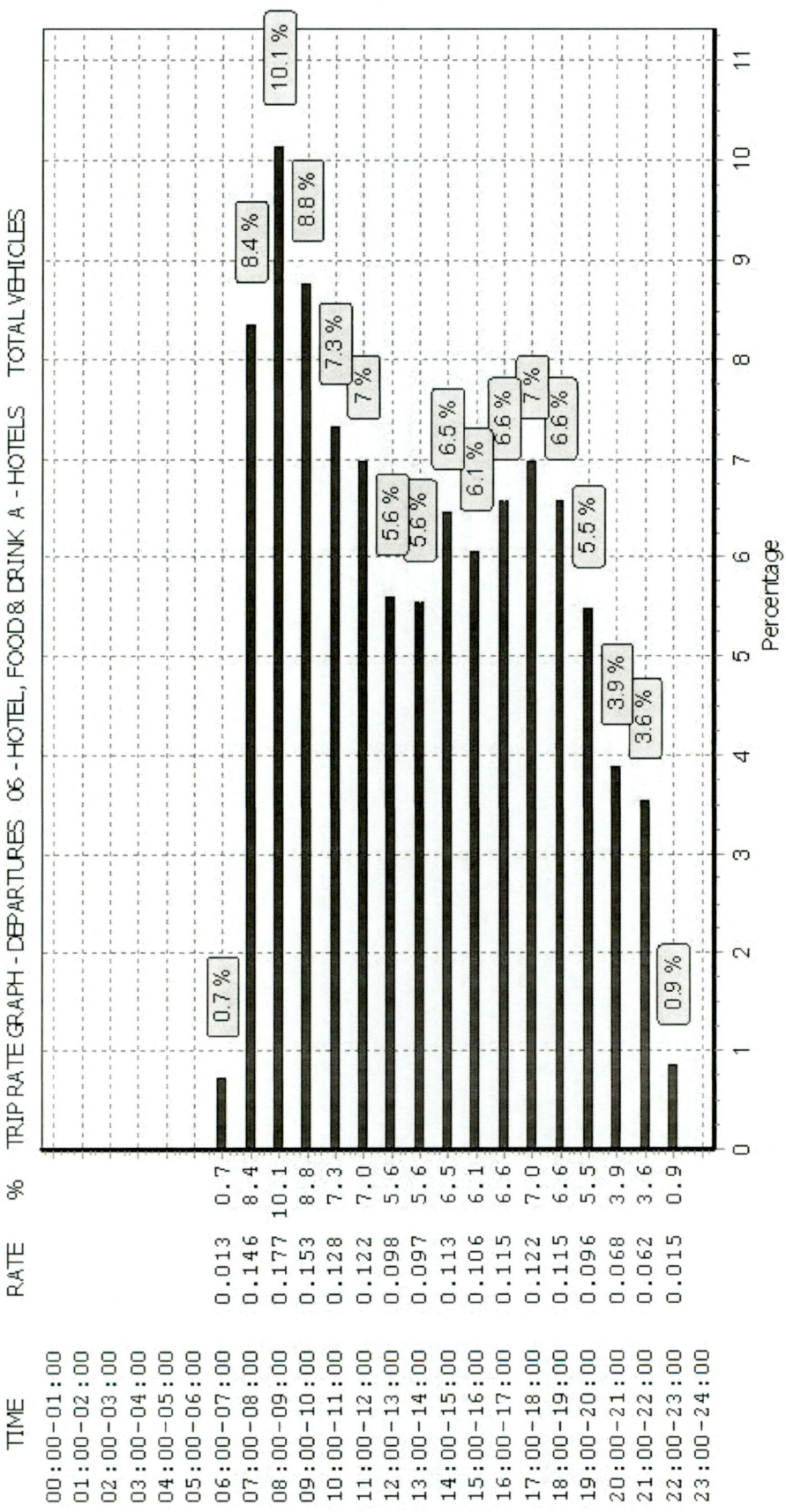


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Licence No: 160301

Dublin 18

8 Leopardstown Business Centre, Ballyogan Avenue



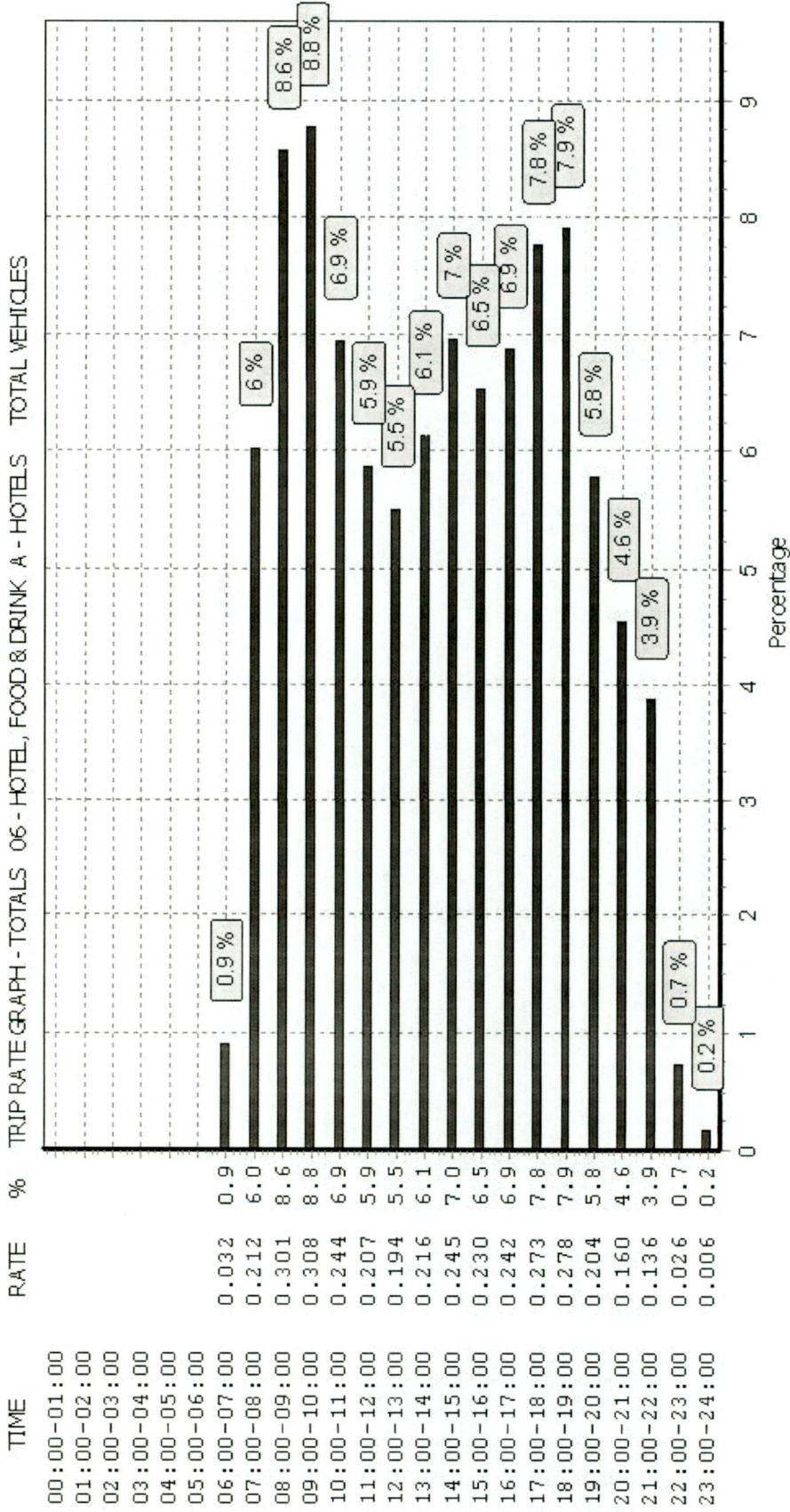
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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TRIP RATE GRAPH - TOTALS 06 - HOTEL, FOOD & DRINK A - HOTELS TOTAL VEHICLES

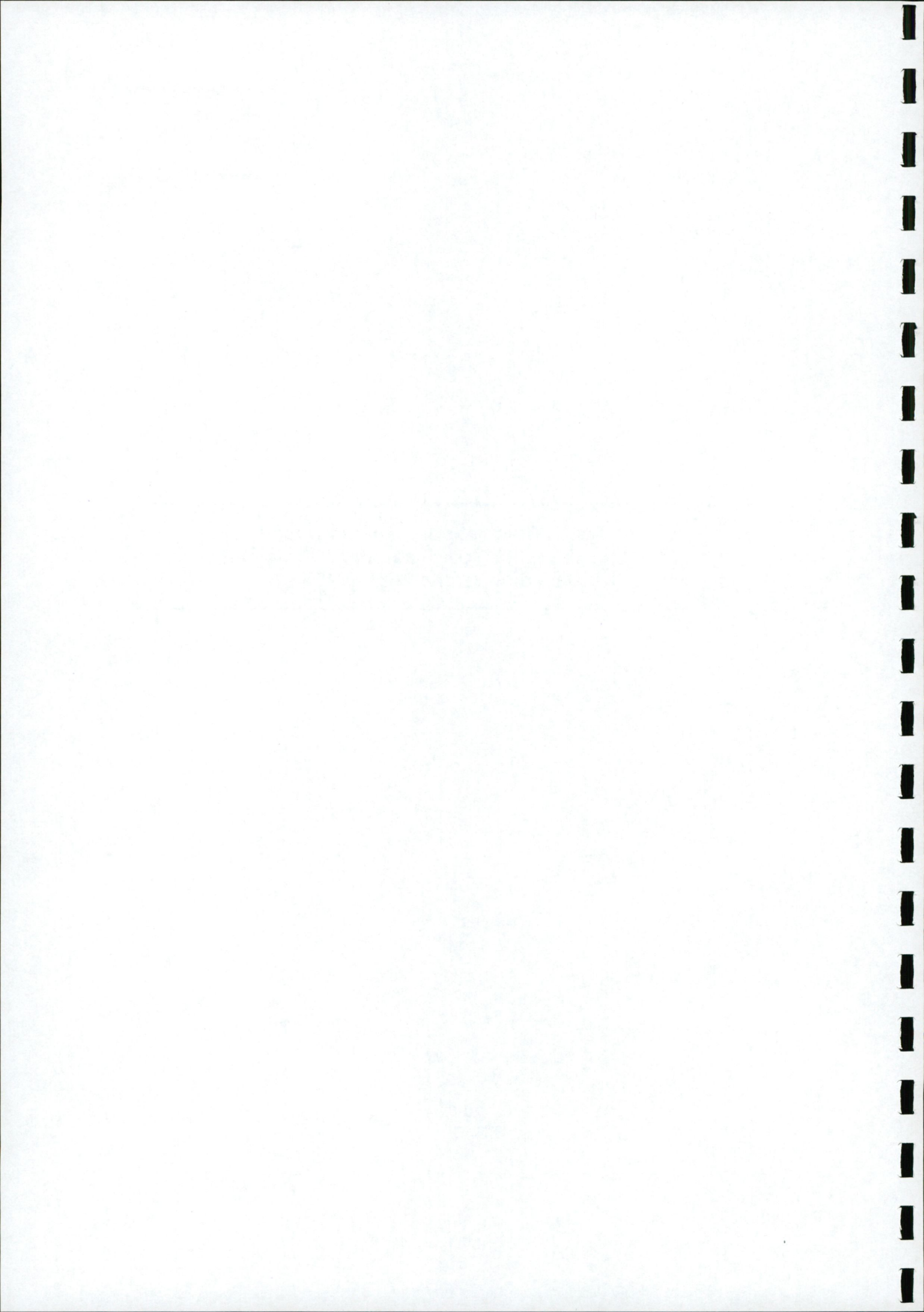


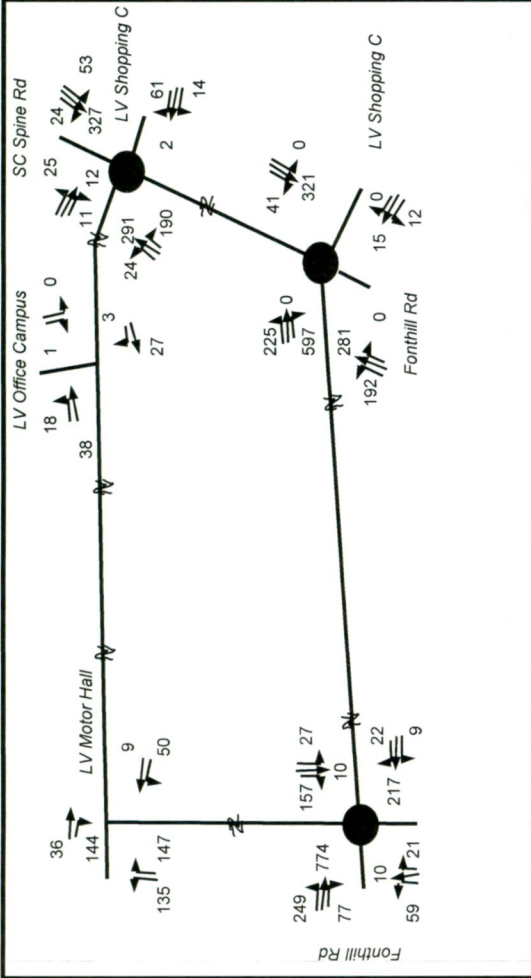
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



**APPENDIX D**

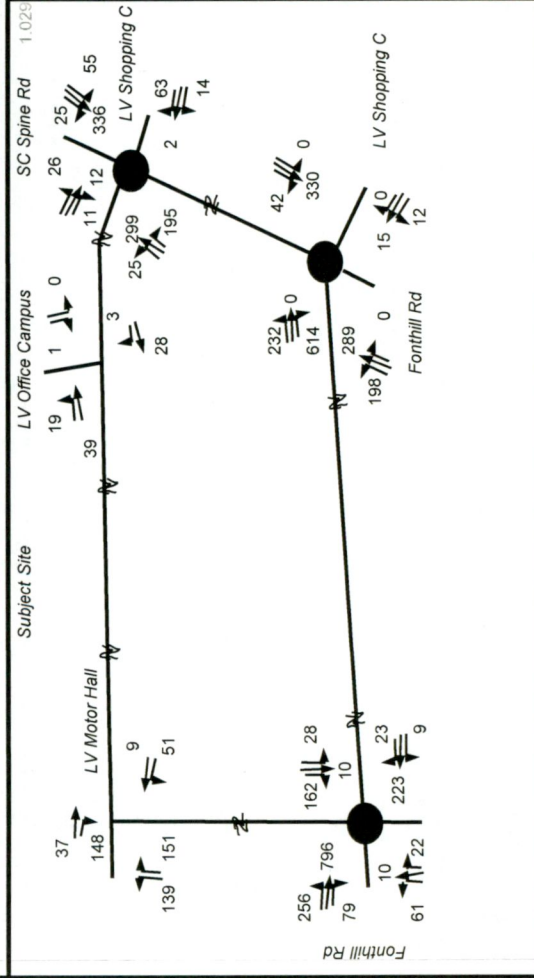
**Traffic Calculations, Trip Distribution,  
Network Traffic Flow Diagrams & Projections  
Based on Traffic Surveys/TRICS**



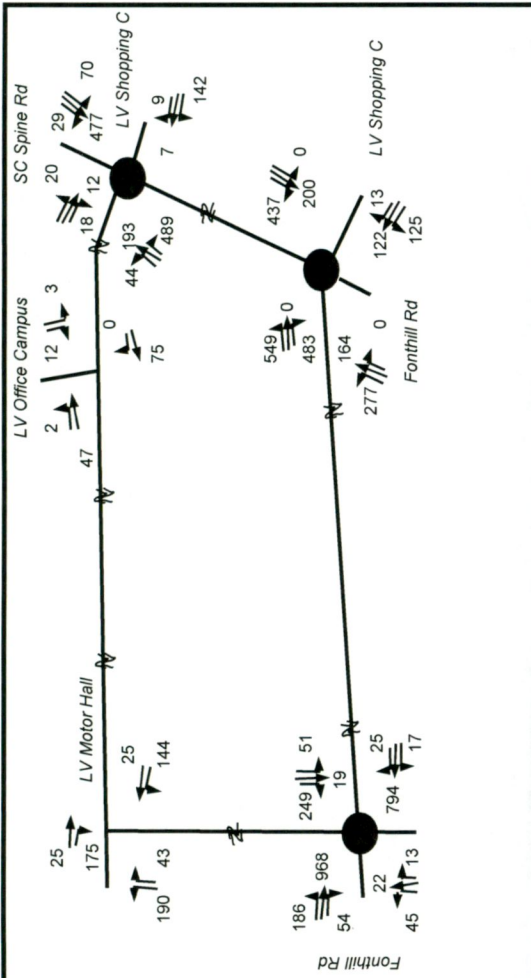


AM PEAK HR 8-9am  
Existing As Surveyed 2021 Traffic (PCUs) - WITHOUT NEW DEVELOPMENT (Refer Appendix B).

N4 TII Counter Junc #1/#2 - 9/9/2021, AM 8088, PM 8129, gives equiv AADT = 81085  
N4 TII Counter Junc #1/#2 - 12/9/2019, AM 8217, PM 8469, gives equiv AADT = 83430

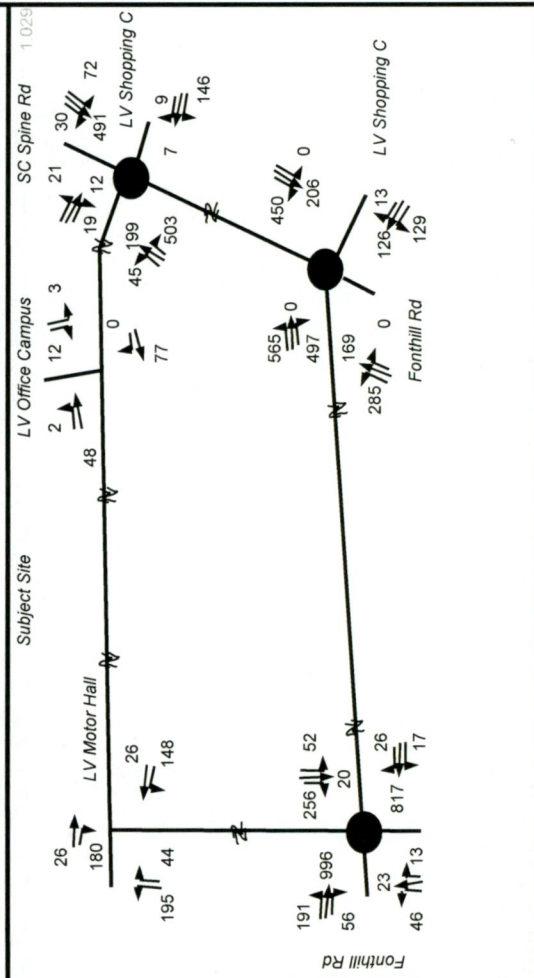


AM PEAK HR 8-9am  
Corrected 2021 Weekday Peak Hour Traffic Volumes - Industry Standard Summer/Covid Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT



PM PEAK HR 5-6pm  
Existing As Surveyed 2021 Traffic (PCUs) - WITHOUT NEW DEVELOPMENT (Refer Appendix B).

N4 TII Counter Junc #1/#2 - 12/9/2019, AM 8217, PM 8469, gives equiv AADT = 83430



PM PEAK HR 5-6pm  
Corrected 2021 Weekday Peak Hour Traffic Volumes - Industry Standard Summer/Covid Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT

TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3  
(Travel Demand Projections 2021, Table 6.1: Central Growth Rates: Annual Growth Factors Metropolitan Dublin)

2021 to 2024 = 1.049  
2024 to 2039 = 1.152

