

# Delay Due to Level Crossing

*A Brief Report*



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## Introduction

Over the next eight years, the State Government will deliver a coordinated program to remove 50 of the worst level crossings in Melbourne, improving safety, reducing congestion and enabling more frequent train services.

Information Access (IA) has been engaged by the Level Crossing Removal Authority (LXRA) to measure the efficiency gains on the road segments directly impacted by the level crossing removal. The study focused on estimating the delays due to the level crossings. The sample included the 4-17 May 2015 travel time, traffic volume and level crossing boom gate data of the road segments directly impacted by the 50 level crossing removal.

Base on the data, the average weekday traffic volume for these level crossings when combined is 1 million vehicles daily. This is equivalent to the average daily traffic volume of most of Melbourne's major freeways combined.

In general, a boom gate is active for a total 4.5 hours on a given weekday. The boom gate, on the average, is active for 30% of the time during peak period on a weekday. The peak periods are 7-9 AM and 4-6 PM. With 95% confidence, when a boom gate is active, it stays active for at least 1.5 minutes.

## Objectives

The aim of the study was to estimate the travel time and the travel time delay due to the level crossing. The estimations have been conducted and the estimated travel time delay and other descriptive statistics have been reported to LXRA. The remaining task is to document the methodology and to determine whether removing level crossings significantly improve travel times. These are the objectives addressed in this document.

## Data Sources

The sample included the 4-17 May 2015 travel time, traffic volume and level crossing boom gate data of the road segments directly impacted by the 50 level crossing removal. VicRoads have a wealth of assessed and estimated traffic and transport data managed and collected from various sources including external travel time data providers such as SUNA Traffic. This was the source of travel time, traffic volume and boom gate 'down time' data for this study.

## Methods

### Estimating the Travel Time and Travel Time Delay Due to the Level Crossing

The estimation method was based on standard queuing delay method. Austroads Guides (Guide to Traffic Management) and RTA's guide to level crossing treatments (i.e. focusing on queue clearance/dissipation) were some of the technical references that have helped form the final methodology.

The analysis was conducted by travel direction of road segments directly impacted by the level crossing. Data were by road segment and travel direction and 15 minute interval was the most granular time interval that the datasets can all be integrated. Each 15 minute interval travel time represents the average travel time a vehicle would travel over a section of the road network, incorporating both driving speed and delay at intersections. Analysis was also limited to all vehicles (no separate analysis for cars and trucks).

Since data was not recorded for individual vehicles and lanes, the study assumes that traffic volume spread is uniform throughout the most granular period. Any queuing mixture of cars and commercial vehicles, traffic

interactions and other factors (e.g. weather, etc.) that can influence traffic were beyond the scope of this study. Indirectly, these factors were captured as they influence travel time.

At the most granular period (e.g. 15 minute), the traffic volume impacted was assumed to be proportional to the duration of the time that the boom gate was active. For example, if the boom gate is active for 5 minutes out of a 15 minutes interval, then, on the average, 33% of the traffic volume was delayed by the boom gate. If the boom gate was active the whole 15 minutes, 100% of the traffic volume was delayed.

Holding all other factors constant, for a given day, level crossing, road and travel direction, the following describes how the traffic volume that have been delayed by the active boom gate, is estimated:

$$DV_i = V_i \times \%B_i$$

Where  $DV_i$  = estimated traffic volume delayed by the active boom gate for 15minute interval i

$V_i$  = all vehicle traffic volume for 15 minute interval i

$\%B_i$  = is the duration of time the boom gate was active as a proportion of the 15 minute interval

$$\%B_i = \frac{\sum_{j=1}^n B_j}{k}$$

where  $n$  = count of times the boom gate was active for the give 15 minute interval i

$B_j$  = the duration of each time the boom gate is active (j = 1 to n)

$k$  = length of the interval (e.g. 15 minutes)

$i$  = 15 minute interval for a given day (e.g. 8:00, 8:15...etc.)

Holding all other factors constant, for a given day, level crossing, road and travel direction, the following describes how the average travel time with level crossing removed, is estimated:

$$Ta_i = \frac{Tb_i \times V_i - DV_i \times \bar{B}_i}{V_i}$$

Where  $Ta_i$  = estimated average travel time, with level crossing removed, for 15 minute interval i

$Tb_i$  = average travel time with level crossing for 15 minute interval i

$V_i$  = all vehicle traffic volume for 15 minute interval i

$DV_i$  = estimated traffic volume delayed by the active boom gate for 15minute interval i

$$\bar{B}_i = \frac{\sum_{j=1}^n B_j}{n}$$

where  $j$  = the duration of each time the boom gate was active (j = 1 to n)

$n$  = count of times the boom gate is active for a given 15 minute interval i

$i$  = 15 minute interval for a given day (e.g. 8:00, 8:15...etc.)

$\bar{B}_i$  is the average duration the boom gate is active for a given interval i

Holding all other factors constant, for a given day, level crossing, road and travel direction, the following describes how travel time delay is estimated:

$$DT_i = Tb_i - Ta_i$$

Where  $DT_i$  = estimated average travel time delay for 15 minute interval i

$Tb_i$  = average travel time with level crossing for 15 minute interval i

$Ta_i$  = estimated average travel time, with level crossing removed, for 15 minute interval i

The analysis aggregates the data by road and travel direction, by level crossing and for all 50 level crossings. In terms of time, the aggregation was done by peak periods, day and weekday or weekend. The peak periods were from 7AM to 9AM for the AM Peak, 4PM to 6PM for the PM Peak and 10AM to 3PM for the Off Peak.

## Hypothesis Testing and Limitations

This research hypothesized that travel time improves when level crossings are removed. Improve travel time means that the estimated travel time delay due to the level crossing exceeds 0 minutes. To test this hypothesis, one-tailed one-sample t-tests were conducted on the estimated average travel time delay by peak and weekday or weekend periods.

It was also hypothesized that if there are delays due to the level crossing, the delays would be greater on the weekdays compared to the weekends. A paired samples t-test was employed to compare the average daily weekday and weekend. A factorial analysis of variance (Anova) was also conducted to compare the periods. The comparison was done on the estimated 15-minute interval average travel time delays to mitigate the inequality in the duration of the peak periods.

Testing was conducted recognising that there were limitations in the data and the sampling method. These limitations may have implications associated with interpreting the findings. The following are some of the limitations:

- Not all level crossings have actual observations. Missing data were replaced with estimations.
- Samples were chosen based on data availability not random sampling. Other measures (e.g. assessment) were undertaken to ensure data values were independent of one another.
- The sample was focused on the 50 level crossings earmarked for removal. The sample may represent level crossings in the urban area but may not be representative of all level crossings in the State of Victoria. No rural level crossings were in the sample.

The tests were based on estimation (e.g. estimated travel time delays) and not actual observations. They should be considered as estimation. Investigation of the proof should be part of a before and after study that include actual observations.

## Findings

### Estimated Delay Due to Level Crossing

The following analysis aggregates the data by road and travel direction, by level crossing and for all 50 level crossings. In terms of time, the aggregation was done by peak periods, day and weekday or weekend. The peak periods were from 7AM to 9AM for the AM Peak, 4PM to 6PM for the PM Peak and 10AM to 3PM for the Off Peak<sup>1</sup>.

Based on the data, a boom gate is active for a total 4.5 hours on a given weekday. As shown in Table 1, during weekday peak periods, the boom gate is active for 30% of the time and when it is active, it stays active for 1.9 minutes on average. Table 1 show that level crossings are active for a substantial portion of the day and likely delays traffic.

**Table 1 Weekday and Weekend Boom Gate 'down time' Statistics by Periods**

Weekday or Weekend	Peak Period	Count of Boom Gate 'down time'	Average Boom Gate 'down time' (Min)	Total Boom Gate 'down time' (Min)	Total Boom Gate 'down time' (%)
Weekday	24 HOUR	160	1.7	264	18%
Weekday	AM PEAK	21	1.9	39	33%
Weekday	OFF PEAK	39	1.6	62	21%
Weekday	PM PEAK	19	1.9	36	30%
Weekend	24 HOUR	110	1.6	173	12%
Weekend	AM PEAK	8	1.6	13	11%
Weekend	OFF PEAK	36	1.6	57	19%
Weekend	PM PEAK	14	1.7	24	20%

- Weekday N = 50, Weekend N = 29, where N is the number level crossings. Not all level crossings have weekend data.
- AM Peak = 7-9 AM, PM Peak = 4-6 PM and Off Peak = 10AM – 3PM
- Count of Boom Gate 'down time' – is the average number of times the boom gate was active for all the road segments in the sample for a given period.
- Average Boom Gate 'down time' (Min) – is the average of the duration of each time that the boom gate was active for all the road segments in the sample for a given period.
- Total Boom Gate 'down time' (Min) – is the accumulated duration of each time that the boom gate was active. It is averaged for all the road segments in the sample for a given period.

Table 2 shows the travel time, travel time delay and the traffic volume delayed as estimated by this study. On the average, the study estimates that there is travel time delay due to level crossing and that a substantial portion of the traffic is impacted as shown in Table 2. For example, holding all other factors constant, the average travel time is estimated to improve from approximately 2.2 minutes to 1.6 minutes ( 28% faster) when there are no level crossings during Weekday AM Peak. This is estimated to directly delay 27% of the AM Peak traffic volume. Cumulatively, the 0.61 minutes of delay translates to approximately a total of 27.8 hours of delay, on the average, for the whole AM Peak traffic volume combined.

<sup>1</sup> The estimation for each individual level crossing is shown in the appendix.



**Table 2 Weekday and Weekend Traffic Volume, Travel Time and Delay Statistics by Periods**

Weekday or Weekend	Peak Period	Average Two-Way Traffic Volume	Average Travel Time (Min)	Estimated Average Travel Time (Min) - Level Crossing Removed	Average Travel Speed (kph)	Estimated Average Travel Speed (kph) - Level Crossing Removed	Average Travel Time Delay (Min)	Estimated Average Traffic Volume Delayed	Vehicle Hours Delay	Average Travel Time Delay (%)	Estimated Average Traffic Volume Delayed (%)
Weekday	24 HOUR	20,460	1.79	1.46	31.0	38.1	0.33	4,276	114.1	19%	21%
Weekday	AM PEAK	2,731	2.18	1.57	25.5	35.4	0.61	746	27.8	28%	27%
Weekday	OFF PEAK	5,931	1.97	1.57	28.2	35.4	0.40	1,102	39.9	20%	19%
Weekday	PM PEAK	3,208	2.35	1.76	23.7	31.6	0.58	838	31.2	25%	26%
Weekend	24 HOUR	18,227	2.19	1.91	43.7	50.2	0.28	2,700	86.4	13%	15%
Weekend	AM PEAK	1,101	2.03	1.80	47.3	53.4	0.23	111	4.2	11%	10%
Weekend	OFF PEAK	6,778	2.62	2.15	36.5	44.6	0.47	1,177	53.5	18%	17%
Weekend	PM PEAK	2,604	2.48	2.02	38.6	47.4	0.46	474	20.1	19%	18%

- Weekday N = 50, Weekend N = 29, where N is the number level crossings. Not all level crossings have weekend data.
- AM Peak = 7-9 AM, PM Peak = 4-6 PM and Off Peak = 10AM – 3PM
- Average Two-Way Traffic Volume – is the estimated all vehicle average traffic volume of all the road segments in the sample for a given period.
- Average Travel Time (Min) – is the average travel time (min) of all the road segments in the sample for a given period.
- Estimated Average Travel Time (Min) - Level Crossing Removed – is the estimated average travel time of all the road segments in the sample for a given period with the level crossing removed.
- Average Travel Speed (kph) - is the average travel speed (kph) of all the road segments in the sample for a given period.
- Estimated Average Travel Speed (kph) - Level Crossing Removed - is the estimated average travel speed of all the road segments in the sample for a given period with the level crossing removed.
- Average Travel Time Delay (Min) – is the difference in travel time with the level crossing and with the level crossing removed. It is aggregated for all the road segments in the sample for a given period.
- Estimated Average Traffic Volume Delayed – is the estimated average traffic volume delayed by the active boom gate of all the road segments in the sample for a given period.
- Vehicle Hours Delay – is the product of the average delay per vehicle and traffic volume. It is averaged for all the road segments in the sample for a given period.
- Average Travel Time Delay (%) – is average travel time delay as a proportion of the average travel time (with Level Crossing).
- Estimated Average Traffic Volume Delayed (%) – is the estimated average traffic volume delayed as a proportion of the average two-way traffic volume for a given period.

## Will Travel Time Improve?

The estimated travel time delays for various peak periods were not normally distributed. The majority were statistically strongly positively skewed. Data was transformed (using logarithm base 10 + 1) to change the underlying distribution from skewed to normal and remove influential outliers to satisfy normality assumptions.

As shown in Table 3, the test finds as expected, the estimated average travel time delays were all significantly greater than 0. Based on Table 3, for example, the estimated average travel time delay in the weekday AM Peak shows that it was greater than 0 and was statistically significant,  $t(49)=10.62$ ,  $p<.001$ , one-tailed. We estimate with 95% confidence<sup>2</sup> that the estimated average travel time delay in the weekday AM Peak is at least 2.17 minutes or higher.

<sup>2</sup> Lower end-point of the 95% confidence interval (CI) is equivalent to the lower bound of the 90% CI.



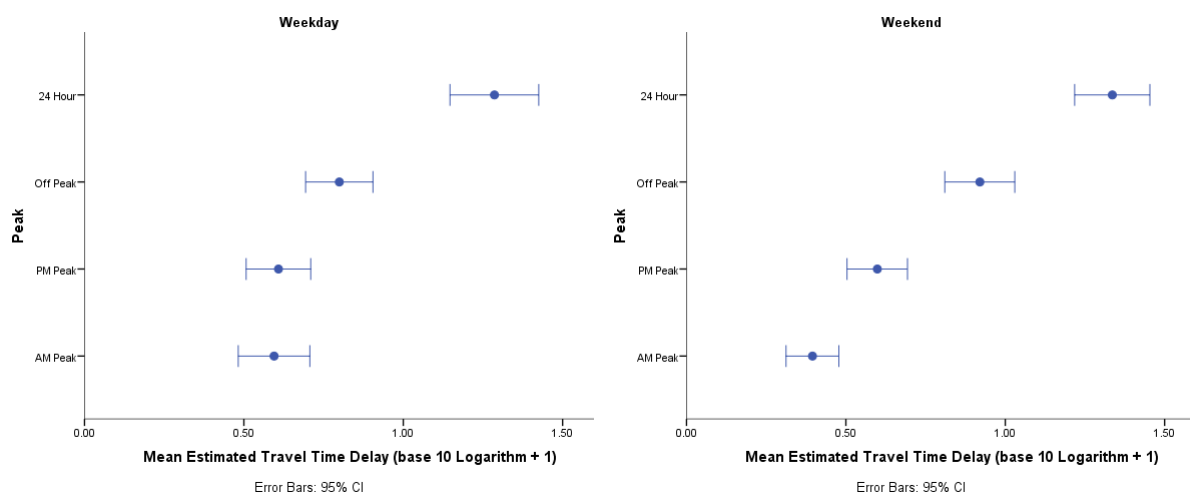
**Table 3 Summary of One Sample T-Test, One-Tailed, On the Estimated Average Travel Time Delay (in Minutes)**

Period		t	Base 10 Logarithm + 1			Converted back to Minutes	
			Std. Deviation	Mean	95% Confidence Interval Lower End-point	Mean	95% Confidence Interval Lower End-point
Weekday	AM Peak	10.62*	.40	.59	.50	2.93	2.17
	PM Peak	12.07*	.36	.61	.52	3.06	2.34
	Off Peak	15.19*	.37	.80	.71	5.30	4.14
	24 Hour	18.55*	.49	1.29	1.17	18.32	13.78
Weekend	AM Peak	9.76**	.22	.40	.33	1.48	1.12
	PM Peak	12.93**	.25	.60	.52	2.97	2.31
	Off Peak	17.17**	.29	.92	.83	7.32	5.75
	24 Hour	23.17**	.31	1.34	1.24	20.67	16.29

\*  $p < .001$ ,  $N=50$ ,  $df=49$ , effect sizes (Cohen's  $d$ ) are all large

\*\*  $p < .001$ ,  $N=29$ ,  $df=28$ , effect sizes (Cohen's  $d$ ) are all large

Figure 1 also illustrates how the estimated average travel time delays were significantly greater than 0. The test result supports the hypothesis. In general, removing the level crossing will significantly improve the travel times on the roads directly impacted by the level crossing.



**Figure 1 Confidence Interval of the Estimated Average Travel Time Delay (Base 10 Logarithm + 1) By Period for All 50 Level Crossings**

## Comparing Weekday, Weekend and Peak Periods

A paired samples t-test was conducted to compare the weekday and weekend 24 hour period estimated average travel time delays. Only level crossings with weekday and weekend data were included in the analysis to form a pair. The distribution for these dataset was positively skewed. Data was transformed (using logarithm base 10) to remove influential outliers and to approximate normality.

Table 4 shows the mean and standard deviation of the weekday and weekend estimated daily average travel time delay. The result of the paired samples t-test shows that estimated daily travel time delay was greater for the weekday compared to the weekend. This difference was statistically significant,  $t(28) = 7.13$ ,  $p < .001$ ,  $d =$

1.32 (two-tailed). We estimate with 95% confidence that the estimated average daily travel time delay is at least 1.41 minutes higher for the weekday than the weekends.

**Table 4 Weekday and Weekend Estimated Daily Average Travel Time Delay (In Minutes)**

Period	Base 10 Logarithm + 1		Converted back to Minutes
	Std. Deviation	Mean	Mean
Weekday	.33	1.53	32.97
Weekend	.31	1.34	20.67

N = 29

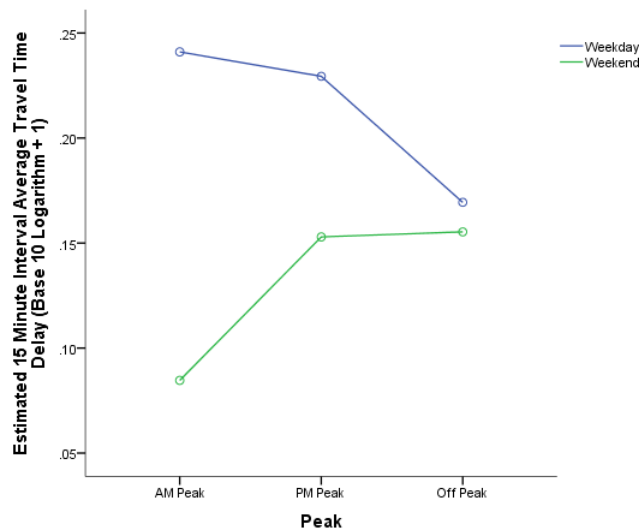
A 2 (weekday or weekend) by 3 (AM, PM and Off Peak) analysis of variance was conducted to analyse the differences in the estimated average travel time delay by peak periods. The estimated 15 minute interval average travel time delay data was used to mitigate the inequality in duration of the peak periods. The distribution for these dataset was positively skewed. Data was transformed (using logarithm base 10 + 1) to remove influential outliers to satisfy normality assumptions. Only level crossings with weekday and weekend data were included in the analysis. Equal sample size mitigates the effect of the inequality of variances. The weekday and weekend estimated 15 minute interval average travel time delays by peak periods are shown in Table 5.

**Table 5 Weekday and Weekend Estimated 15 Minute Interval Average Travel Time Delay (in Minutes) by Peak Period**

Period		Base 10 Logarithm + 1		Converted back to Minutes
		Std. Deviation	Mean	Mean
Weekday	AM Peak	.15	.24	.74
	PM Peak	.14	.23	.70
	Off Peak	.11	.17	.48
Weekend	AM Peak	.07	.08	.22
	PM Peak	.10	.15	.42
	Off Peak	.10	.16	.43

N = 29

As can be seen in Figure 2, the estimated 15 minute interval average travel time delay by peak period was greater for a weekday than for a weekend. This difference was significant,  $F(2,168) = 5.50$ ,  $p = .005$ ,  $\eta^2 = .06$ .



**Figure 2 Estimated 15 Minute Interval Average Travel Time Delay (Base 10 Logarithm + 1) for the AM, PM and Off Peak for All 50 Level Crossings, Weekday vs. Weekend**

A separate one-way analysis of variance was conducted for the weekday and weekend periods. For the weekday peak periods, there was no significant difference in the estimated 15 minute interval average travel time delays,  $F(2,84) = 2.36$ ,  $p = .101$ ,  $\eta^2 = .05$ . There was insufficient evidence to suggest a difference in the estimated average travel time delays of the weekday AM, PM and Off Peak periods. With  $df_A = 2$  and  $df_{RESID} = 84$ , the post hoc power analysis showed that the study had a 93% chance of detecting an effect size of  $\eta^2 = .14$  (large effect size). The study had sufficient power to detect large effect size. If there were differences in the estimated 15-minute interval average travel time delays of weekday peak periods, these differences were small to moderate.

For the weekend peak periods, a one-way analysis of variance showed a significant difference in the estimated 15 minute interval average travel time delays,  $F(2,84) = 5.39$ ,  $p = .006$ ,  $\eta^2 = .11$ . There was sufficient evidence to suggest that there was a significant difference in the estimated average travel time delays of the weekend AM, PM and Off Peak periods. A post hoc SNK ( $\alpha = .05$ ) revealed that there was no significant difference in the estimated 15 minute-interval average travel time delays of the weekend PM Peak and the weekend Off Peak periods. On the other hand, the 15 minute interval estimated average travel time delays for the weekend AM Peak is significantly lower than those of the weekend PM and Off Peak periods. In general, the weekend AM Peak travel time is faster when compared to the busier Weekend PM Peak and Off Peak periods. And since the average boom gate 'down times' for all peak periods in the weekend are no different, it only follows that most delays are experienced in the PM and Off Peak during weekends.

## Individual Level Crossing

Conducting the test on individual level crossings was also explored. A one sample t-test was conducted. Apart for the weekend AM Peak period of the Hallam Road, Thompson Road and South Gippsland Highway level crossings, all individual crossings by periods, for weekday and weekends, demonstrated an estimated travel time delays significantly greater than 0. Weekend AM Peak have the lowest estimated travel time delays as shown previously.

## Summary and Conclusion

This study demonstrates the potential travel time improvements that a level crossing removal can bring. Based on the study's estimation, removing the level crossing in urban Melbourne, will improve the travel on the roads directly impacted by the level crossing. The improvement in travel time will be greater in the weekday when compared to the weekend. For a weekday, it is estimated that travel time improvements gained in AM, PM or Off Peak, when compared, will be no different. For the weekend, travel time will improve more in the PM Peak and Off Peak rather than in the AM Peak.

## Appendix

### Level Crossings to Remove

**Table 6 List of 50 Level Crossings to Remove**

No	Line	Road Name	Suburb	Road Type
1	Cranbourne - Pakenham	Grange Road	Caulfield East	Arterial
2		Koornang Road	Carnegie	Local
3		Murrumbeena Road	Murrumbeena	Arterial
4		Poath Road	Hughesdale	Local
5		Clayton Road	Clayton	Arterial
6		Centre Road	Clayton	Arterial
7		Corrigan Road	Noble Park	Local
8		Heatherton Road	Noble Park	Arterial
9		Chandler Road	Noble Park	Arterial
10	Cranbourne	Abbotts Road	Lyndhurst	Local
11		Thompsons Road	Cranbourne West	Arterial
12	Pakenham	South Gippsland Highway	Dandenong South	Arterial
13		Hallam South Road	Hallam	Arterial
14		Clyde Road	Berwick	Arterial
15	Frankston	North Road	Ormond	Arterial
16		McKinnon Road	McKinnon	Local
17		Centre Road	Bentleigh	Arterial
18		Charman Road	Cheltenham	Local
19		Balcombe Road	Mentone	Arterial
20		Edithvale Road	Edithvale	Arterial
21		Station Street	Bonbeach	Local
22		Station Street	Carrum	Arterial
23		Eel Race Road	Carrum	Local
24		Seaford Road	Seaford	Arterial
25		Overton Road (Skye Road)	Seaford	Local
26	Glen Waverley	Toorak Road	Kooyong	Arterial
27		Burke Road	Glen Iris	Arterial
28	Belgrave	Blackburn Road	Blacburn	Arterial
29		Heatherdale Road	Ringwood	Local
30		Mountain Highway	Bayswater	Arterial
31		Scoresby Road	Bayswater	Arterial
32	Craigieburn	Buckley Street	Essendon	Arterial
33		Glenroy Road	Glenroy	Arterial
34	Upfield	Moreland Road	Brunswick	Arterial

No	Line	Road Name	Suburb	Road Type
35		Bell Street	Coburg	Arterial
36		Camp Road	Campbellfield	Arterial
37	Hurstbridge	Grange Road Fairfield	Fairfield/Alphington	Arterial
38		Lower Plenty Road	Rosanna	Arterial
39	South Morang	Bell Street	Preston	Arterial
40		High Street	Reservoir	Arterial
41	Sunbury	Furlong Road	St Albans	Local
42		Main Road	St Albans	Arterial
43		Melton Highway	Taylors Lake	Arterial
44	Werribee	Aviation Road	Laverton	Local
45		Cherry Street	Werribee	Local
46		Werribee Street	Werribee	Arterial
47	Lilydale	Manchester Road	Mooroolbark	Local
48		Maroondah Highway	Lilydale	Arterial
49	Altona Loop	Kororoit Creek Road	Altona	Arterial
50	Williamstown	Ferguson Street	Williamstown	Arterial

## Transformation

The data was transformed to remove influential outliers and to approximate a normal distribution. Figure 3 visualises the transformation of the distribution, from positively skewed, with extreme outliers, to one that approximates a more normal distribution with no influential outliers.

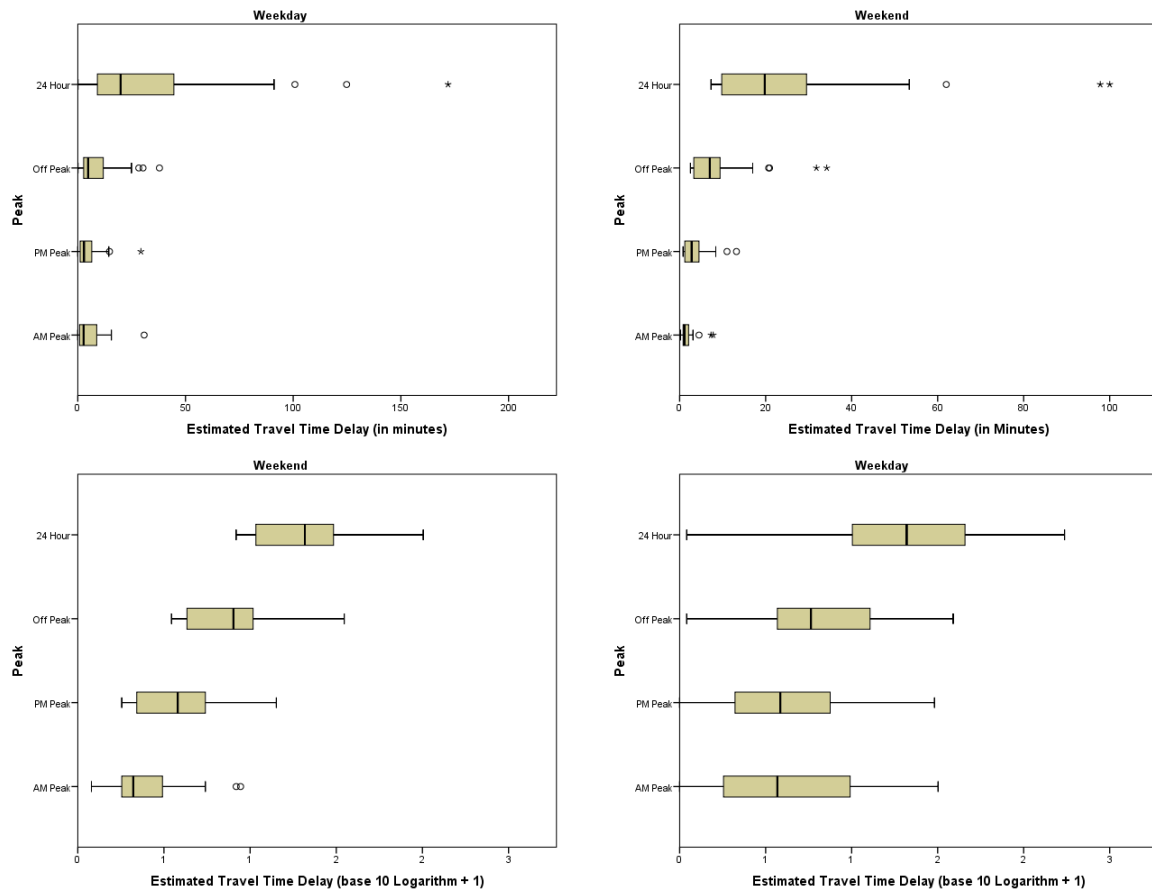


Figure 3 Distribution of the Estimated Average Travel Time Delay, in Minutes and in Base 10 Logarithm by Periods



## Statistics by Level Crossing

**Table 7 Weekday and Weekend Boom Gate 'down time' Statistics by Level Crossing and Period**

List No	Rail Line	Level Crossing	Weekday or Weekend	Peak Period	Count of Boom Gate 'down time'	Average Boom Gate 'down time' (Min)	Total Boom Gate 'down time' (Min)	Total Boom Gate 'down time' (%)
1	Cranbourne - Pakenham	GRANGE ROAD	Weekday	24 HOUR	237	1.1	264	18%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekday	AM PEAK	35	1.4	50	42%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekday	OFF PEAK	57	1.0	58	19%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekday	PM PEAK	33	1.4	45	38%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekend	24 HOUR	148	0.9	140	10%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekend	AM PEAK	10	0.8	8	7%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekend	OFF PEAK	50	1.0	50	17%
1	Cranbourne - Pakenham	GRANGE ROAD	Weekend	PM PEAK	22	1.0	22	18%
2	Cranbourne - Pakenham	KOORNANG ROAD	Weekday	24 HOUR	210	2.3	483	34%
2	Cranbourne - Pakenham	KOORNANG ROAD	Weekday	AM PEAK	29	2.6	74	62%
2	Cranbourne - Pakenham	KOORNANG ROAD	Weekday	OFF PEAK	56	2.1	118	39%
2	Cranbourne - Pakenham	KOORNANG ROAD	Weekday	PM PEAK	26	3.0	77	64%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekday	24 HOUR	210	2.1	446	31%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekday	AM PEAK	30	2.4	73	61%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekday	OFF PEAK	56	1.9	107	36%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekday	PM PEAK	26	2.9	76	63%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekend	24 HOUR	146	1.7	253	18%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekend	AM PEAK	9	1.7	15	13%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekend	OFF PEAK	52	1.8	92	31%
3	Cranbourne - Pakenham	MURRUMBEENA ROAD	Weekend	PM PEAK	21	1.9	40	33%
4	Cranbourne - Pakenham	POATH ROAD	Weekday	24 HOUR	214	1.8	393	27%
4	Cranbourne - Pakenham	POATH ROAD	Weekday	AM PEAK	31	2.1	65	54%
4	Cranbourne - Pakenham	POATH ROAD	Weekday	OFF PEAK	50	1.7	87	29%
4	Cranbourne - Pakenham	POATH ROAD	Weekday	PM PEAK	31	2.1	64	53%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekday	24 HOUR	223	2.1	465	32%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekday	AM PEAK	29	2.6	76	63%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekday	OFF PEAK	59	2.0	117	39%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekday	PM PEAK	30	2.1	64	53%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekend	24 HOUR	153	1.7	257	18%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekend	AM PEAK	10	1.7	17	14%

5	Cranbourne - Pakenham	CLAYTON ROAD	Weekend	OFF PEAK	54	1.8	95	32%
5	Cranbourne - Pakenham	CLAYTON ROAD	Weekend	PM PEAK	23	1.6	38	32%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekday	24 HOUR	228	2.0	466	32%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekday	AM PEAK	33	2.2	71	59%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekday	OFF PEAK	58	2.0	117	39%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekday	PM PEAK	31	2.1	67	56%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekend	24 HOUR	149	1.8	262	18%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekend	AM PEAK	10	1.8	18	15%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekend	OFF PEAK	54	1.7	92	31%
6	Cranbourne - Pakenham	CENTRE ROAD	Weekend	PM PEAK	21	1.9	40	33%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekday	24 HOUR	218	2.0	440	31%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekday	AM PEAK	27	2.1	58	48%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekday	OFF PEAK	56	1.9	106	35%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekday	PM PEAK	26	2.3	59	49%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekend	24 HOUR	143	1.9	269	19%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekend	AM PEAK	11	1.7	19	16%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekend	OFF PEAK	49	1.8	89	30%
7	Cranbourne - Pakenham	CORRIGAN ROAD	Weekend	PM PEAK	20	2.0	40	33%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekday	24 HOUR	216	2.1	460	32%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekday	AM PEAK	27	2.2	61	51%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekday	OFF PEAK	57	2.1	117	39%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekday	PM PEAK	25	2.4	60	50%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekend	24 HOUR	146	2.0	286	20%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekend	AM PEAK	11	1.8	19	16%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekend	OFF PEAK	50	2.0	98	33%
8	Cranbourne - Pakenham	HEATHERTON ROAD	Weekend	PM PEAK	21	2.1	44	37%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekday	24 HOUR	212	2.1	454	32%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekday	AM PEAK	28	2.1	58	48%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekday	OFF PEAK	53	2.1	112	37%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekday	PM PEAK	24	2.7	64	53%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekend	24 HOUR	147	2.0	288	20%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekend	AM PEAK	11	1.8	20	17%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekend	OFF PEAK	52	1.9	97	32%
9	Cranbourne - Pakenham	CHANDLER ROAD	Weekend	PM PEAK	19	2.3	43	36%
10	Cranbourne - Pakenham	ABBOTTS ROAD	Weekday	24 HOUR	152	0.9	136	9%
10	Cranbourne - Pakenham	ABBOTTS ROAD	Weekday	AM PEAK	19	0.9	16	13%
10	Cranbourne - Pakenham	ABBOTTS ROAD	Weekday	OFF PEAK	35	0.9	30	10%
10	Cranbourne - Pakenham	ABBOTTS ROAD	Weekday	PM PEAK	15	1.0	15	13%
11	Cranbourne	THOMPSON ROAD	Weekday	24 HOUR	150	1.1	168	12%

11	Cranbourne	THOMPSON ROAD	Weekday	AM PEAK	18	1.1	19	16%
11	Cranbourne	THOMPSON ROAD	Weekday	OFF PEAK	34	1.1	37	12%
11	Cranbourne	THOMPSON ROAD	Weekday	PM PEAK	14	1.3	18	15%
11	Cranbourne	THOMPSON ROAD	Weekend	24 HOUR	56	1.1	60	4%
11	Cranbourne	THOMPSON ROAD	Weekend	AM PEAK	8	0.7	6	5%
11	Cranbourne	THOMPSON ROAD	Weekend	OFF PEAK	16	1.2	19	6%
11	Cranbourne	THOMPSON ROAD	Weekend	PM PEAK	9	1.1	10	8%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekday	24 HOUR	150	1.1	168	12%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekday	AM PEAK	18	1.1	19	16%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekday	OFF PEAK	34	1.1	37	12%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekday	PM PEAK	14	1.3	18	15%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekend	24 HOUR	56	1.1	60	4%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekend	AM PEAK	8	0.7	6	5%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekend	OFF PEAK	16	1.2	19	6%
12	Pakenham	SOUTH GIPPSLAND HIGHWAY	Weekend	PM PEAK	9	1.1	10	8%
13	Pakenham	HALLAM ROAD	Weekday	24 HOUR	150	2.2	323	22%
13	Pakenham	HALLAM ROAD	Weekday	AM PEAK	18	2.2	39	33%
13	Pakenham	HALLAM ROAD	Weekday	OFF PEAK	34	2.1	72	24%
13	Pakenham	HALLAM ROAD	Weekday	PM PEAK	15	2.3	34	28%
13	Pakenham	HALLAM ROAD	Weekend	24 HOUR	56	2.1	116	8%
13	Pakenham	HALLAM ROAD	Weekend	AM PEAK	8	1.7	13	11%
13	Pakenham	HALLAM ROAD	Weekend	OFF PEAK	15	2.3	34	11%
13	Pakenham	HALLAM ROAD	Weekend	PM PEAK	6	2.3	14	12%
14	Pakenham	CLYDE ROAD	Weekday	24 HOUR	149	1.9	278	19%
14	Pakenham	CLYDE ROAD	Weekday	AM PEAK	17	2.0	34	28%
14	Pakenham	CLYDE ROAD	Weekday	OFF PEAK	35	1.9	65	22%
14	Pakenham	CLYDE ROAD	Weekday	PM PEAK	15	1.9	28	23%
14	Pakenham	CLYDE ROAD	Weekend	24 HOUR	69	1.7	117	8%
14	Pakenham	CLYDE ROAD	Weekend	AM PEAK	8	1.7	14	12%
14	Pakenham	CLYDE ROAD	Weekend	OFF PEAK	23	1.7	38	13%
14	Pakenham	CLYDE ROAD	Weekend	PM PEAK	7	1.9	13	11%
15	Frankston	NORTH ROAD	Weekday	24 HOUR	185	1.0	179	12%
15	Frankston	NORTH ROAD	Weekday	AM PEAK	17	1.6	28	23%
15	Frankston	NORTH ROAD	Weekday	OFF PEAK	55	0.7	40	13%
15	Frankston	NORTH ROAD	Weekday	PM PEAK	22	1.3	28	23%
16	Frankston	MCKINNON ROAD	Weekday	24 HOUR	196	1.3	245	17%
16	Frankston	MCKINNON ROAD	Weekday	AM PEAK	23	1.9	43	36%
16	Frankston	MCKINNON ROAD	Weekday	OFF PEAK	57	1.1	60	20%
16	Frankston	MCKINNON ROAD	Weekday	PM PEAK	26	1.3	35	29%

17	Frankston	CENTRE ROAD	Weekday	24 HOUR	194	1.3	246	17%
17	Frankston	CENTRE ROAD	Weekday	AM PEAK	23	1.9	43	36%
17	Frankston	CENTRE ROAD	Weekday	OFF PEAK	54	1.1	59	20%
17	Frankston	CENTRE ROAD	Weekday	PM PEAK	26	1.4	36	30%
17	Frankston	CENTRE ROAD	Weekend	24 HOUR	126	1.2	149	10%
17	Frankston	CENTRE ROAD	Weekend	AM PEAK	7	1.1	8	7%
17	Frankston	CENTRE ROAD	Weekend	OFF PEAK	45	1.1	51	17%
17	Frankston	CENTRE ROAD	Weekend	PM PEAK	18	1.3	24	20%
18	Frankston	CHARMAN ROAD	Weekday	24 HOUR	194	1.3	246	17%
18	Frankston	CHARMAN ROAD	Weekday	AM PEAK	23	1.9	43	36%
18	Frankston	CHARMAN ROAD	Weekday	OFF PEAK	54	1.1	59	20%
18	Frankston	CHARMAN ROAD	Weekday	PM PEAK	26	1.4	36	30%
18	Frankston	CHARMAN ROAD	Weekend	24 HOUR	126	1.2	149	10%
18	Frankston	CHARMAN ROAD	Weekend	AM PEAK	7	1.1	8	7%
18	Frankston	CHARMAN ROAD	Weekend	OFF PEAK	45	1.1	51	17%
18	Frankston	CHARMAN ROAD	Weekend	PM PEAK	18	1.3	24	20%
19	Frankston	BALCOMBE ROAD	Weekday	24 HOUR	194	1.3	246	17%
19	Frankston	BALCOMBE ROAD	Weekday	AM PEAK	23	1.9	43	36%
19	Frankston	BALCOMBE ROAD	Weekday	OFF PEAK	54	1.1	59	20%
19	Frankston	BALCOMBE ROAD	Weekday	PM PEAK	26	1.4	36	30%
19	Frankston	BALCOMBE ROAD	Weekend	24 HOUR	126	1.2	149	10%
19	Frankston	BALCOMBE ROAD	Weekend	AM PEAK	7	1.1	8	7%
19	Frankston	BALCOMBE ROAD	Weekend	OFF PEAK	45	1.1	51	17%
19	Frankston	BALCOMBE ROAD	Weekend	PM PEAK	18	1.3	24	20%
20	Frankston	EDITHVALE ROAD	Weekday	24 HOUR	177	1.8	312	22%
20	Frankston	EDITHVALE ROAD	Weekday	AM PEAK	24	1.7	41	34%
20	Frankston	EDITHVALE ROAD	Weekday	OFF PEAK	53	1.7	89	30%
20	Frankston	EDITHVALE ROAD	Weekday	PM PEAK	19	2.0	37	31%
20	Frankston	EDITHVALE ROAD	Weekend	24 HOUR	147	1.7	246	17%
20	Frankston	EDITHVALE ROAD	Weekend	AM PEAK	8	1.5	12	10%
20	Frankston	EDITHVALE ROAD	Weekend	OFF PEAK	53	1.7	89	30%
20	Frankston	EDITHVALE ROAD	Weekend	PM PEAK	21	1.7	35	29%
21	Frankston	STATION STREET BONBEACH	Weekday	24 HOUR	172	1.8	315	22%
21	Frankston	STATION STREET BONBEACH	Weekday	AM PEAK	24	1.8	43	36%
21	Frankston	STATION STREET BONBEACH	Weekday	OFF PEAK	42	1.9	81	27%
21	Frankston	STATION STREET BONBEACH	Weekday	PM PEAK	19	1.9	37	31%
22	Frankston	STATION STREET CARRUM	Weekday	24 HOUR	197	0.8	156	11%
22	Frankston	STATION STREET CARRUM	Weekday	AM PEAK	22	0.9	21	18%
22	Frankston	STATION STREET CARRUM	Weekday	OFF PEAK	56	0.7	41	14%

22	Frankston	STATION STREET CARRUM	Weekday	PM PEAK	23	0.8	19	16%
23	Frankston	EEL RACE ROAD	Weekday	24 HOUR	197	0.8	156	11%
23	Frankston	EEL RACE ROAD	Weekday	AM PEAK	22	0.9	21	18%
23	Frankston	EEL RACE ROAD	Weekday	OFF PEAK	56	0.7	41	14%
23	Frankston	EEL RACE ROAD	Weekday	PM PEAK	23	0.8	19	16%
24	Frankston	SEAFORD ROAD	Weekday	24 HOUR	196	1.4	284	20%
24	Frankston	SEAFORD ROAD	Weekday	AM PEAK	23	1.4	31	26%
24	Frankston	SEAFORD ROAD	Weekday	OFF PEAK	57	1.4	80	27%
24	Frankston	SEAFORD ROAD	Weekday	PM PEAK	22	1.6	35	29%
24	Frankston	SEAFORD ROAD	Weekend	24 HOUR	155	1.4	221	15%
24	Frankston	SEAFORD ROAD	Weekend	AM PEAK	9	1.2	11	9%
24	Frankston	SEAFORD ROAD	Weekend	OFF PEAK	53	1.4	75	25%
24	Frankston	SEAFORD ROAD	Weekend	PM PEAK	22	1.5	32	27%
25	Frankston	OVERTON ROAD	Weekday	24 HOUR	167	1.8	302	21%
25	Frankston	OVERTON ROAD	Weekday	AM PEAK	18	1.8	32	27%
25	Frankston	OVERTON ROAD	Weekday	OFF PEAK	40	2.0	80	27%
25	Frankston	OVERTON ROAD	Weekday	PM PEAK	19	1.9	37	31%
26	Glen Waverley	TOORAK ROAD	Weekday	24 HOUR	145	1.6	239	17%
26	Glen Waverley	TOORAK ROAD	Weekday	AM PEAK	22	1.9	42	35%
26	Glen Waverley	TOORAK ROAD	Weekday	OFF PEAK	40	1.5	61	20%
26	Glen Waverley	TOORAK ROAD	Weekday	PM PEAK	20	1.8	36	30%
26	Glen Waverley	TOORAK ROAD	Weekend	24 HOUR	97	1.6	153	11%
26	Glen Waverley	TOORAK ROAD	Weekend	AM PEAK	7	1.7	12	10%
26	Glen Waverley	TOORAK ROAD	Weekend	OFF PEAK	29	1.6	46	15%
26	Glen Waverley	TOORAK ROAD	Weekend	PM PEAK	11	1.7	19	16%
27	Glen Waverley	BURKE ROAD	Weekday	24 HOUR	135	1.7	232	16%
27	Glen Waverley	BURKE ROAD	Weekday	AM PEAK	22	1.7	38	32%
27	Glen Waverley	BURKE ROAD	Weekday	OFF PEAK	29	1.9	55	18%
27	Glen Waverley	BURKE ROAD	Weekday	PM PEAK	20	1.7	33	28%
28	Belgrave	BLACKBURN ROAD	Weekday	24 HOUR	180	1.7	310	22%
28	Belgrave	BLACKBURN ROAD	Weekday	AM PEAK	30	1.9	57	48%
28	Belgrave	BLACKBURN ROAD	Weekday	OFF PEAK	33	1.8	59	20%
28	Belgrave	BLACKBURN ROAD	Weekday	PM PEAK	26	1.8	47	39%
28	Belgrave	BLACKBURN ROAD	Weekend	24 HOUR	124	1.7	209	15%
28	Belgrave	BLACKBURN ROAD	Weekend	AM PEAK	8	1.5	12	10%
28	Belgrave	BLACKBURN ROAD	Weekend	OFF PEAK	44	1.7	76	25%
28	Belgrave	BLACKBURN ROAD	Weekend	PM PEAK	18	1.8	32	27%
29	Belgrave	HEATHERDALE ROAD	Weekday	24 HOUR	174	2.1	371	26%
29	Belgrave	HEATHERDALE ROAD	Weekday	AM PEAK	29	2.1	62	52%

29	Belgrave	HEATHERDALE ROAD	Weekday	OFF PEAK	32	2.2	70	23%
29	Belgrave	HEATHERDALE ROAD	Weekday	PM PEAK	25	2.3	57	48%
30	Belgrave	MOUNTAIN HIGHWAY	Weekday	24 HOUR	103	1.7	170	12%
30	Belgrave	MOUNTAIN HIGHWAY	Weekday	AM PEAK	14	1.8	26	22%
30	Belgrave	MOUNTAIN HIGHWAY	Weekday	OFF PEAK	18	1.7	31	10%
30	Belgrave	MOUNTAIN HIGHWAY	Weekday	PM PEAK	13	1.9	24	20%
30	Belgrave	MOUNTAIN HIGHWAY	Weekend	24 HOUR	101	1.5	151	10%
30	Belgrave	MOUNTAIN HIGHWAY	Weekend	AM PEAK	8	2.0	16	13%
30	Belgrave	MOUNTAIN HIGHWAY	Weekend	OFF PEAK	30	1.4	42	14%
30	Belgrave	MOUNTAIN HIGHWAY	Weekend	PM PEAK	11	1.4	16	13%
31	Belgrave	SCORESBY ROAD	Weekday	24 HOUR	107	1.3	135	9%
31	Belgrave	SCORESBY ROAD	Weekday	AM PEAK	14	1.3	18	15%
31	Belgrave	SCORESBY ROAD	Weekday	OFF PEAK	20	1.3	25	8%
31	Belgrave	SCORESBY ROAD	Weekday	PM PEAK	13	1.5	19	16%
31	Belgrave	SCORESBY ROAD	Weekend	24 HOUR	99	1.2	120	8%
31	Belgrave	SCORESBY ROAD	Weekend	AM PEAK	8	1.3	10	8%
31	Belgrave	SCORESBY ROAD	Weekend	OFF PEAK	30	1.2	36	12%
31	Belgrave	SCORESBY ROAD	Weekend	PM PEAK	11	1.2	14	12%
32	Craigieburn	BUCKLEY STREET	Weekday	24 HOUR	162	2.4	392	27%
32	Craigieburn	BUCKLEY STREET	Weekday	AM PEAK	23	3.0	70	58%
32	Craigieburn	BUCKLEY STREET	Weekday	OFF PEAK	38	2.2	83	28%
32	Craigieburn	BUCKLEY STREET	Weekday	PM PEAK	23	2.7	62	52%
32	Craigieburn	BUCKLEY STREET	Weekend	24 HOUR	88	2.4	210	15%
32	Craigieburn	BUCKLEY STREET	Weekend	AM PEAK	6	2.5	15	13%
32	Craigieburn	BUCKLEY STREET	Weekend	OFF PEAK	24	2.6	63	21%
32	Craigieburn	BUCKLEY STREET	Weekend	PM PEAK	10	2.5	25	21%
33	Craigieburn	GLENROY ROAD GLENROY	Weekday	24 HOUR	157	1.7	263	18%
33	Craigieburn	GLENROY ROAD GLENROY	Weekday	AM PEAK	23	2.0	45	38%
33	Craigieburn	GLENROY ROAD GLENROY	Weekday	OFF PEAK	39	1.4	54	18%
33	Craigieburn	GLENROY ROAD GLENROY	Weekday	PM PEAK	19	2.4	45	38%
34	Upfield	MORELAND ROAD	Weekday	24 HOUR	105	1.9	197	14%
34	Upfield	MORELAND ROAD	Weekday	AM PEAK	12	2.1	25	21%
34	Upfield	MORELAND ROAD	Weekday	OFF PEAK	28	1.8	52	17%
34	Upfield	MORELAND ROAD	Weekday	PM PEAK	12	2.0	24	20%
34	Upfield	MORELAND ROAD	Weekend	24 HOUR	92	1.9	171	12%
34	Upfield	MORELAND ROAD	Weekend	AM PEAK	7	2.0	14	12%
34	Upfield	MORELAND ROAD	Weekend	OFF PEAK	29	1.8	52	17%
34	Upfield	MORELAND ROAD	Weekend	PM PEAK	11	2.0	22	18%
35	Upfield	BELL STREET	Weekday	24 HOUR	107	2.1	230	16%

35	Upfield	BELL STREET	Weekday	AM PEAK	13	2.2	29	24%
35	Upfield	BELL STREET	Weekday	OFF PEAK	29	2.1	61	20%
35	Upfield	BELL STREET	Weekday	PM PEAK	11	2.4	26	22%
36	Upfield	CAMP ROAD	Weekday	24 HOUR	108	0.9	95	7%
36	Upfield	CAMP ROAD	Weekday	AM PEAK	13	1.0	13	11%
36	Upfield	CAMP ROAD	Weekday	OFF PEAK	29	0.9	25	8%
36	Upfield	CAMP ROAD	Weekday	PM PEAK	12	0.9	11	9%
36	Upfield	CAMP ROAD	Weekend	24 HOUR	93	0.9	79	5%
36	Upfield	CAMP ROAD	Weekend	AM PEAK	8	0.9	7	6%
36	Upfield	CAMP ROAD	Weekend	OFF PEAK	29	0.9	25	8%
36	Upfield	CAMP ROAD	Weekend	PM PEAK	11	0.9	10	8%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekday	24 HOUR	133	1.6	215	15%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekday	AM PEAK	22	1.8	39	33%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekday	OFF PEAK	26	1.7	44	15%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekday	PM PEAK	21	1.5	32	27%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekend	24 HOUR	92	1.5	139	10%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekend	AM PEAK	8	1.3	11	9%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekend	OFF PEAK	29	1.5	44	15%
37	Hurstbridge	GRANGE ROAD FAIRFIELD	Weekend	PM PEAK	12	1.5	18	15%
38	Hurstbridge	LOWER PLENTY ROAD	Weekday	24 HOUR	129	0.7	94	7%
38	Hurstbridge	LOWER PLENTY ROAD	Weekday	AM PEAK	23	0.7	16	13%
38	Hurstbridge	LOWER PLENTY ROAD	Weekday	OFF PEAK	22	1.0	22	7%
38	Hurstbridge	LOWER PLENTY ROAD	Weekday	PM PEAK	21	0.7	15	13%
39	South Morang	BELL STREET	Weekday	24 HOUR	105	1.9	197	14%
39	South Morang	BELL STREET	Weekday	AM PEAK	12	2.1	25	21%
39	South Morang	BELL STREET	Weekday	OFF PEAK	28	1.8	52	17%
39	South Morang	BELL STREET	Weekday	PM PEAK	12	2.0	24	20%
39	South Morang	BELL STREET	Weekend	24 HOUR	92	1.9	171	12%
39	South Morang	BELL STREET	Weekend	AM PEAK	7	2.0	14	12%
39	South Morang	BELL STREET	Weekend	OFF PEAK	29	1.8	52	17%
39	South Morang	BELL STREET	Weekend	PM PEAK	11	2.0	22	18%
40	South Morang	HIGH STREET	Weekday	24 HOUR	105	1.9	197	14%
40	South Morang	HIGH STREET	Weekday	AM PEAK	12	2.1	25	21%
40	South Morang	HIGH STREET	Weekday	OFF PEAK	28	1.8	52	17%
40	South Morang	HIGH STREET	Weekday	PM PEAK	12	2.0	24	20%
40	South Morang	HIGH STREET	Weekend	24 HOUR	92	1.9	171	12%
40	South Morang	HIGH STREET	Weekend	AM PEAK	7	2.0	14	12%
40	South Morang	HIGH STREET	Weekend	OFF PEAK	29	1.8	52	17%
40	South Morang	HIGH STREET	Weekend	PM PEAK	11	2.0	22	18%



41	Sunbury	FURLONG ROAD	Weekday	24 HOUR	126	2.2	271	19%
41	Sunbury	FURLONG ROAD	Weekday	AM PEAK	14	2.3	32	27%
41	Sunbury	FURLONG ROAD	Weekday	OFF PEAK	32	2.4	76	25%
41	Sunbury	FURLONG ROAD	Weekday	PM PEAK	13	2.2	29	24%
42	Sunbury	MAIN ROAD	Weekday	24 HOUR	187	1.9	362	25%
42	Sunbury	MAIN ROAD	Weekday	AM PEAK	27	2.3	62	52%
42	Sunbury	MAIN ROAD	Weekday	OFF PEAK	38	2.1	80	27%
42	Sunbury	MAIN ROAD	Weekday	PM PEAK	28	1.9	54	45%
43	Sunbury	MELTON HIGHWAY	Weekday	24 HOUR	127	1.0	123	9%
43	Sunbury	MELTON HIGHWAY	Weekday	AM PEAK	17	1.0	18	15%
43	Sunbury	MELTON HIGHWAY	Weekday	OFF PEAK	25	1.0	24	8%
43	Sunbury	MELTON HIGHWAY	Weekday	PM PEAK	17	1.0	17	14%
44	Werribee	AVIATION ROAD	Weekday	24 HOUR	188	2.1	399	28%
44	Werribee	AVIATION ROAD	Weekday	AM PEAK	26	2.1	56	47%
44	Werribee	AVIATION ROAD	Weekday	OFF PEAK	40	2.1	84	28%
44	Werribee	AVIATION ROAD	Weekday	PM PEAK	21	2.1	44	37%
45	Werribee	CHERRY STREET	Weekday	24 HOUR	188	1.2	226	16%
45	Werribee	CHERRY STREET	Weekday	AM PEAK	26	1.2	31	26%
45	Werribee	CHERRY STREET	Weekday	OFF PEAK	40	1.2	47	16%
45	Werribee	CHERRY STREET	Weekday	PM PEAK	21	1.2	24	20%
46	Werribee	WERRIBEE STREET	Weekday	24 HOUR	81	2.4	190	13%
46	Werribee	WERRIBEE STREET	Weekday	AM PEAK	11	2.5	28	23%
46	Werribee	WERRIBEE STREET	Weekday	OFF PEAK	16	2.3	37	12%
46	Werribee	WERRIBEE STREET	Weekday	PM PEAK	10	2.3	23	19%
47	Lilydale	MANCHESTER ROAD	Weekday	24 HOUR	101	1.9	187	13%
47	Lilydale	MANCHESTER ROAD	Weekday	AM PEAK	15	2.0	31	26%
47	Lilydale	MANCHESTER ROAD	Weekday	OFF PEAK	20	1.8	35	12%
47	Lilydale	MANCHESTER ROAD	Weekday	PM PEAK	11	2.2	25	21%
48	Lilydale	MAROONDAH HIGHWAY	Weekday	24 HOUR	100	1.2	119	8%
48	Lilydale	MAROONDAH HIGHWAY	Weekday	AM PEAK	15	1.3	20	17%
48	Lilydale	MAROONDAH HIGHWAY	Weekday	OFF PEAK	20	1.1	21	7%
48	Lilydale	MAROONDAH HIGHWAY	Weekday	PM PEAK	11	1.5	17	14%
48	Lilydale	MAROONDAH HIGHWAY	Weekend	24 HOUR	85	1.3	110	8%
48	Lilydale	MAROONDAH HIGHWAY	Weekend	AM PEAK	8	1.1	9	8%
48	Lilydale	MAROONDAH HIGHWAY	Weekend	OFF PEAK	20	1.7	34	11%
48	Lilydale	MAROONDAH HIGHWAY	Weekend	PM PEAK	10	1.5	15	13%
49	Laverton	KOROROIT CREEK ROAD	Weekday	24 HOUR	94	1.2	111	8%
49	Laverton	KOROROIT CREEK ROAD	Weekday	AM PEAK	10	1.3	13	11%
49	Laverton	KOROROIT CREEK ROAD	Weekday	OFF PEAK	17	1.2	20	7%

49	Laverton	KOROROIT CREEK ROAD	Weekday	PM PEAK	9	1.3	11	9%
49	Laverton	KOROROIT CREEK ROAD	Weekend	24 HOUR	95	1.2	112	8%
49	Laverton	KOROROIT CREEK ROAD	Weekend	AM PEAK	8	1.2	9	8%
49	Laverton	KOROROIT CREEK ROAD	Weekend	OFF PEAK	29	1.2	34	11%
49	Laverton	KOROROIT CREEK ROAD	Weekend	PM PEAK	12	1.2	14	12%
50	Williamstown	FERGUSON STREET	Weekday	24 HOUR	105	2.5	265	18%
50	Williamstown	FERGUSON STREET	Weekday	AM PEAK	11	2.5	28	23%
50	Williamstown	FERGUSON STREET	Weekday	OFF PEAK	22	2.9	64	21%
50	Williamstown	FERGUSON STREET	Weekday	PM PEAK	10	2.7	27	23%
50	Williamstown	FERGUSON STREET	Weekend	24 HOUR	95	2.2	211	15%
50	Williamstown	FERGUSON STREET	Weekend	AM PEAK	8	2.2	18	15%
50	Williamstown	FERGUSON STREET	Weekend	OFF PEAK	29	2.2	64	21%
50	Williamstown	FERGUSON STREET	Weekend	PM PEAK	12	2.2	26	22%

- *AM Peak = 7-9 AM, PM Peak = 4-6 PM and Off Peak = 10Am – 3PM*
- *Count of Boom Gate 'down time' – is the average number of times the boom gate was active for a given level crossing and period.*
- *Average Boom Gate 'down time' (Min) – is the average of the duration of each time that the boom gate was active for a given level crossing and period.*
- *Total Boom Gate 'down time' (Min) – is the accumulated duration of each time that the boom gate was active. It is averaged for a given level crossing and period.*

**Table 8 Weekday and Weekend Traffic Volume, Travel Time and Delay Statistics by Level Crossing and Periods**

List No	Level Crossing	Weekday or Weekend	Peak Period	Average Two-Way Traffic Volume	Average Travel Time (Min)	Estimated Average Travel Time (Min) - Level Crossing Removed	Average Travel Speed (kph)	Estimated Average Travel Speed (kph) - Level Crossing Removed	Average Travel Time Delay (Min)	Estimated Average Traffic Volume Delayed	Vehicle Hours Delay	Travel Time Delay (%)	Estimated Traffic Volume Delayed (%)
1	GRANGE ROAD	Weekday	24 HOUR	17,072	3.07	2.64	31.1	36.1	0.42	4,359	120.3	14%	26%
1	GRANGE ROAD	Weekday	AM PEAK	2,206	4.19	3.01	22.8	31.7	1.18	939	43.2	28%	43%
1	GRANGE ROAD	Weekday	OFF PEAK	4,823	3.05	2.65	31.4	36.1	0.40	922	32.2	13%	19%
1	GRANGE ROAD	Weekday	PM PEAK	2,627	3.83	2.84	25.0	33.7	0.99	995	43.2	26%	38%
1	GRANGE ROAD	Weekend	24 HOUR	16,239	2.69	2.51	35.5	38.1	0.19	2,184	50.2	7%	13%
1	GRANGE ROAD	Weekend	AM PEAK	966	2.38	2.28	40.2	42.0	0.10	72	1.6	4%	7%
1	GRANGE ROAD	Weekend	OFF PEAK	5,913	3.08	2.73	31.1	35.1	0.35	987	34.5	11%	17%
1	GRANGE ROAD	Weekend	PM PEAK	2,363	3.23	2.83	29.6	33.8	0.40	433	15.8	12%	18%

2	KOORNANG ROAD	Weekday	24 HOUR	14,920	0.41	0.32	22.7	29.5	0.09	6,258	23.6	23%	42%
2	KOORNANG ROAD	Weekday	AM PEAK	1,786	0.43	0.34	22.0	27.7	0.09	1,112	2.6	21%	62%
2	KOORNANG ROAD	Weekday	OFF PEAK	4,835	0.51	0.34	18.5	27.5	0.17	1,878	13.3	33%	39%
2	KOORNANG ROAD	Weekday	PM PEAK	1,716	0.48	0.34	19.7	27.7	0.14	1,068	3.9	29%	62%
3	MURRUMBEENA ROAD	Weekday	24 HOUR	16,014	0.48	0.27	25.2	45.5	0.21	6,880	57.0	44%	43%
3	MURRUMBEENA ROAD	Weekday	AM PEAK	2,033	0.59	0.25	20.6	48.5	0.34	1,248	11.4	57%	61%
3	MURRUMBEENA ROAD	Weekday	OFF PEAK	4,591	0.56	0.26	21.8	47.5	0.30	1,632	23.0	54%	36%
3	MURRUMBEENA ROAD	Weekday	PM PEAK	2,674	0.56	0.25	21.5	48.5	0.31	1,681	13.9	56%	63%
3	MURRUMBEENA ROAD	Weekend	24 HOUR	14,425	0.45	0.29	26.9	41.9	0.16	3,572	38.8	36%	25%
3	MURRUMBEENA ROAD	Weekend	AM PEAK	804	0.41	0.26	29.4	46.2	0.15	99	2.0	36%	12%
3	MURRUMBEENA ROAD	Weekend	OFF PEAK	5,611	0.55	0.27	22.2	45.7	0.28	1,715	26.2	51%	31%
3	MURRUMBEENA ROAD	Weekend	PM PEAK	2,237	0.51	0.25	23.6	48.5	0.26	736	9.8	51%	33%
4	POATH ROAD	Weekday	24 HOUR	11,199	0.44	0.33	26.0	34.3	0.11	4,057	19.8	24%	36%
4	POATH ROAD	Weekday	AM PEAK	1,392	0.46	0.35	24.6	32.6	0.11	746	2.6	24%	54%
4	POATH ROAD	Weekday	OFF PEAK	3,749	0.51	0.35	22.6	32.6	0.16	1,070	9.7	31%	29%
4	POATH ROAD	Weekday	PM PEAK	1,674	0.55	0.35	20.7	32.6	0.20	866	5.6	36%	52%
5	CLAYTON ROAD	Weekday	24 HOUR	21,172	3.13	2.08	18.6	28.0	1.05	8,992	370.5	34%	42%
5	CLAYTON ROAD	Weekday	AM PEAK	2,248	3.59	1.64	16.3	35.6	1.95	1,423	73.1	54%	63%
5	CLAYTON ROAD	Weekday	OFF PEAK	6,926	3.85	2.44	15.2	24.0	1.41	2,701	162.8	37%	39%
5	CLAYTON ROAD	Weekday	PM PEAK	2,997	4.20	2.40	13.9	24.3	1.80	1,600	89.9	43%	53%
5	CLAYTON ROAD	Weekend	24 HOUR	16,753	2.65	2.10	22.0	27.8	0.56	4,146	155.3	21%	25%
5	CLAYTON ROAD	Weekend	AM PEAK	939	2.01	1.63	29.0	35.9	0.39	140	6.1	19%	15%
5	CLAYTON ROAD	Weekend	OFF PEAK	6,015	3.36	2.32	17.4	25.1	1.04	1,921	103.8	31%	32%
5	CLAYTON ROAD	Weekend	PM PEAK	2,354	3.69	2.66	15.8	21.9	1.03	738	40.2	28%	31%
6	CENTRE ROAD	Weekday	24 HOUR	19,975	0.92	0.46	24.5	49.4	0.46	8,738	154.7	50%	44%
6	CENTRE ROAD	Weekday	AM PEAK	2,604	1.16	0.44	19.4	51.6	0.73	1,551	31.5	62%	60%
6	CENTRE ROAD	Weekday	OFF PEAK	6,647	1.04	0.42	21.7	53.7	0.62	2,579	68.7	60%	39%
6	CENTRE ROAD	Weekday	PM PEAK	3,020	1.20	0.46	18.8	48.8	0.74	1,676	37.1	61%	56%
6	CENTRE ROAD	Weekend	24 HOUR	14,619	0.76	0.48	29.5	47.0	0.28	3,766	69.0	37%	26%

6	CENTRE ROAD	Weekend	AM PEAK	784	0.68	0.48	33.4	47.5	0.20	127	2.6	30%	16%
6	CENTRE ROAD	Weekend	OFF PEAK	5,727	0.92	0.45	24.5	50.1	0.47	1,763	44.9	51%	31%
6	CENTRE ROAD	Weekend	PM PEAK	2,191	0.88	0.43	25.8	53.1	0.45	725	16.4	51%	33%
7	CORRIGAN ROAD	Weekday	24 HOUR	11,556	2.63	1.94	36.0	48.9	0.69	4,430	133.0	26%	38%
7	CORRIGAN ROAD	Weekday	AM PEAK	1,494	2.90	1.79	32.7	53.0	1.11	665	27.7	38%	45%
7	CORRIGAN ROAD	Weekday	OFF PEAK	3,406	2.58	1.82	36.8	52.1	0.76	1,164	42.9	29%	34%
7	CORRIGAN ROAD	Weekday	PM PEAK	1,715	2.94	1.80	32.3	52.7	1.14	816	32.5	39%	48%
7	CORRIGAN ROAD	Weekend	24 HOUR	11,517	2.42	1.96	39.2	48.3	0.46	2,847	88.0	19%	25%
7	CORRIGAN ROAD	Weekend	AM PEAK	601	2.61	2.25	36.3	42.1	0.36	99	3.6	14%	16%
7	CORRIGAN ROAD	Weekend	OFF PEAK	4,498	2.89	2.04	32.8	46.5	0.85	1,247	63.7	29%	28%
7	CORRIGAN ROAD	Weekend	PM PEAK	1,647	2.68	1.93	35.4	49.2	0.75	541	20.6	28%	33%
8	HEATHERTON ROAD	Weekday	24 HOUR	22,280	1.79	1.23	31.5	45.8	0.56	9,403	208.1	31%	42%
8	HEATHERTON ROAD	Weekday	AM PEAK	3,453	2.29	1.36	24.6	41.3	0.93	1,707	53.2	40%	49%
8	HEATHERTON ROAD	Weekday	OFF PEAK	6,038	1.93	1.26	29.2	44.7	0.67	2,314	66.9	35%	38%
8	HEATHERTON ROAD	Weekday	PM PEAK	3,513	2.45	1.31	23.0	42.9	1.14	1,750	66.6	46%	50%
8	HEATHERTON ROAD	Weekend	24 HOUR	17,295	1.58	1.23	35.5	45.9	0.36	4,570	103.6	23%	26%
8	HEATHERTON ROAD	Weekend	AM PEAK	1,081	1.45	1.23	38.8	45.9	0.23	179	4.1	16%	17%
8	HEATHERTON ROAD	Weekend	OFF PEAK	6,448	1.95	1.28	28.9	44.1	0.67	2,034	72.0	34%	32%
8	HEATHERTON ROAD	Weekend	PM PEAK	2,448	1.83	1.18	30.8	47.9	0.65	874	26.5	36%	36%
9	CHANDLER ROAD	Weekday	24 HOUR	16,044	0.25	0.14	25.4	43.4	0.10	6,174	27.3	42%	38%
9	CHANDLER ROAD	Weekday	AM PEAK	1,786	0.25	0.14	25.0	45.4	0.11	788	3.3	45%	44%
9	CHANDLER ROAD	Weekday	OFF PEAK	5,013	0.28	0.14	22.7	44.6	0.14	1,715	11.3	49%	34%
9	CHANDLER ROAD	Weekday	PM PEAK	2,455	0.30	0.14	20.8	45.4	0.16	1,233	6.6	54%	50%
9	CHANDLER ROAD	Weekend	24 HOUR	14,518	0.23	0.14	26.6	43.1	0.09	3,544	21.7	38%	24%
9	CHANDLER ROAD	Weekend	AM PEAK	724	0.23	0.14	27.7	45.4	0.09	116	1.1	39%	16%
9	CHANDLER ROAD	Weekend	OFF PEAK	5,638	0.26	0.14	24.0	46.2	0.13	1,560	11.7	48%	28%
9	CHANDLER ROAD	Weekend	PM PEAK	2,156	0.29	0.14	21.7	45.4	0.15	653	5.4	52%	30%
10	ABBOTTS ROAD	Weekday	24 HOUR	22,493	1.11	1.06	47.9	50.1	0.05	2,394	18.4	4%	11%
10	ABBOTTS ROAD	Weekday	AM PEAK	3,817	1.33	1.15	40.1	46.2	0.18	516	11.1	13%	14%

10	ABBOTTS ROAD	Weekday	OFF PEAK	6,536	1.19	1.12	44.7	47.5	0.07	664	7.6	6%	10%
10	ABBOTTS ROAD	Weekday	PM PEAK	3,508	1.14	1.11	46.7	47.8	0.02	437	1.5	2%	12%
11	THOMPSON ROAD	Weekday	24 HOUR	19,168	2.12	1.89	49.1	55.2	0.24	2,670	75.5	11%	14%
11	THOMPSON ROAD	Weekday	AM PEAK	2,214	2.28	1.96	45.8	53.1	0.31	347	11.5	14%	16%
11	THOMPSON ROAD	Weekday	OFF PEAK	5,218	2.14	1.89	48.7	55.3	0.25	636	22.2	12%	12%
11	THOMPSON ROAD	Weekday	PM PEAK	2,882	3.01	2.61	34.6	39.9	0.40	440	19.2	13%	15%
11	THOMPSON ROAD	Weekend	24 HOUR	18,217	1.90	1.82	55.0	57.4	0.08	920	24.7	4%	5%
11	THOMPSON ROAD	Weekend	AM PEAK	1,288	1.84	1.81	56.8	57.5	0.02	32	0.5	1%	2%
11	THOMPSON ROAD	Weekend	OFF PEAK	6,507	2.15	2.01	48.6	52.0	0.14	402	15.2	7%	6%
11	THOMPSON ROAD	Weekend	PM PEAK	2,610	2.16	2.03	48.2	51.5	0.14	151	6.0	6%	6%
12	SOUTH GIPPSLAND HIGHWAY	Weekday	24 HOUR	34,040	2.50	2.23	31.6	35.5	0.27	4,719	153.7	11%	14%
12	SOUTH GIPPSLAND HIGHWAY	Weekday	AM PEAK	4,649	3.20	2.86	24.7	27.6	0.34	709	26.2	11%	15%
12	SOUTH GIPPSLAND HIGHWAY	Weekday	OFF PEAK	10,565	2.50	2.21	31.6	35.8	0.29	1,283	51.1	12%	12%
12	SOUTH GIPPSLAND HIGHWAY	Weekday	PM PEAK	5,015	3.53	3.11	22.4	25.4	0.41	759	34.5	12%	15%
12	SOUTH GIPPSLAND HIGHWAY	Weekend	24 HOUR	23,498	2.10	2.00	37.6	39.4	0.09	1,211	37.1	5%	5%
12	SOUTH GIPPSLAND HIGHWAY	Weekend	AM PEAK	1,449	2.03	1.99	39.0	39.8	0.04	39	0.9	2%	3%
12	SOUTH GIPPSLAND HIGHWAY	Weekend	OFF PEAK	9,412	2.35	2.19	33.6	36.1	0.16	588	25.1	7%	6%
12	SOUTH GIPPSLAND HIGHWAY	Weekend	PM PEAK	3,014	2.10	1.96	37.6	40.3	0.14	167	6.9	7%	6%
13	HALLAM ROAD	Weekday	24 HOUR	19,672	3.45	3.07	49.8	56.0	0.38	3,147	125.0	11%	16%
13	HALLAM ROAD	Weekday	AM PEAK	2,622	4.36	3.46	39.4	49.7	0.90	578	39.3	21%	22%
13	HALLAM ROAD	Weekday	OFF PEAK	5,820	3.69	3.17	46.6	54.2	0.52	841	50.4	14%	14%
13	HALLAM ROAD	Weekday	PM PEAK	3,167	3.99	3.20	43.1	53.7	0.79	623	41.6	20%	20%
13	HALLAM ROAD	Weekend	24 HOUR	15,234	3.13	3.06	54.9	56.3	0.08	626	19.3	2%	4%
13	HALLAM ROAD	Weekend	AM PEAK	825	3.08	3.05	55.9	56.4	0.03	16	0.3	1%	2%
13	HALLAM ROAD	Weekend	OFF PEAK	5,875	3.23	3.09	53.2	55.7	0.15	307	14.2	4%	5%
13	HALLAM ROAD	Weekend	PM PEAK	2,195	3.20	3.08	53.7	55.9	0.13	114	4.6	4%	5%
14	CLYDE ROAD	Weekday	24 HOUR	22,404	4.99	4.29	25.1	29.2	0.71	5,302	263.3	14%	24%

14	CLYDE ROAD	Weekday	AM PEAK	2,936	5.75	4.60	21.8	27.2	1.15	820	56.3	20%	28%
14	CLYDE ROAD	Weekday	OFF PEAK	6,443	5.72	4.94	21.9	25.4	0.78	1,380	83.2	14%	21%
14	CLYDE ROAD	Weekday	PM PEAK	3,844	6.68	5.86	18.8	21.4	0.81	885	52.1	12%	23%
14	CLYDE ROAD	Weekend	24 HOUR	19,911	4.04	3.77	31.0	33.3	0.27	2,062	88.8	7%	10%
14	CLYDE ROAD	Weekend	AM PEAK	1,348	3.86	3.60	32.4	34.8	0.26	110	5.9	7%	8%
14	CLYDE ROAD	Weekend	OFF PEAK	7,845	4.80	4.36	26.1	28.7	0.44	978	56.9	9%	12%
14	CLYDE ROAD	Weekend	PM PEAK	2,928	4.24	3.90	29.6	32.1	0.34	302	16.5	8%	10%
15	NORTH ROAD	Weekday	24 HOUR	37,812	1.72	1.48	30.3	35.3	0.24	6,535	153.0	14%	17%
15	NORTH ROAD	Weekday	AM PEAK	5,622	2.13	1.55	24.6	33.7	0.58	1,330	53.9	27%	24%
15	NORTH ROAD	Weekday	OFF PEAK	10,519	1.89	1.68	27.7	31.2	0.21	1,409	36.8	11%	13%
15	NORTH ROAD	Weekday	PM PEAK	5,949	2.74	2.15	19.1	24.3	0.59	1,407	58.3	21%	24%
16	MCKINNON ROAD	Weekday	24 HOUR	10,203	0.59	0.46	26.5	33.7	0.13	2,198	21.4	21%	22%
16	MCKINNON ROAD	Weekday	AM PEAK	1,411	0.54	0.48	29.0	32.8	0.06	331	1.5	12%	23%
16	MCKINNON ROAD	Weekday	OFF PEAK	3,204	0.75	0.49	20.8	31.8	0.26	638	13.9	35%	20%
16	MCKINNON ROAD	Weekday	PM PEAK	1,679	0.66	0.48	23.5	32.8	0.19	472	5.2	28%	28%
17	CENTRE ROAD	Weekday	24 HOUR	13,694	4.26	3.81	18.5	20.7	0.45	3,193	103.2	11%	23%
17	CENTRE ROAD	Weekday	AM PEAK	1,822	4.24	3.01	18.6	26.2	1.23	674	37.2	29%	37%
17	CENTRE ROAD	Weekday	OFF PEAK	4,279	6.19	5.73	12.8	13.8	0.46	847	32.8	7%	20%
17	CENTRE ROAD	Weekday	PM PEAK	2,072	6.40	5.55	12.3	14.2	0.85	622	29.4	13%	30%
17	CENTRE ROAD	Weekend	24 HOUR	11,354	3.89	3.63	20.3	21.7	0.26	1,656	48.7	7%	15%
17	CENTRE ROAD	Weekend	AM PEAK	689	3.68	3.51	21.5	22.5	0.16	48	1.9	4%	7%
17	CENTRE ROAD	Weekend	OFF PEAK	4,214	6.19	5.79	12.8	13.6	0.40	717	28.4	7%	17%
17	CENTRE ROAD	Weekend	PM PEAK	1,628	4.71	4.15	16.8	19.0	0.56	322	15.3	12%	20%
18	CHARMAN ROAD	Weekday	24 HOUR	12,267	2.83	2.41	26.2	30.7	0.41	2,857	84.8	15%	23%
18	CHARMAN ROAD	Weekday	AM PEAK	1,572	3.54	2.40	20.9	30.8	1.14	585	29.8	32%	37%
18	CHARMAN ROAD	Weekday	OFF PEAK	4,043	3.44	3.00	21.5	24.6	0.44	796	29.3	13%	20%
18	CHARMAN ROAD	Weekday	PM PEAK	1,674	3.06	2.33	24.1	31.8	0.74	501	20.6	24%	30%
18	CHARMAN ROAD	Weekend	24 HOUR	12,158	2.35	2.13	31.4	34.8	0.23	1,824	45.8	10%	15%
18	CHARMAN ROAD	Weekend	AM PEAK	901	2.30	2.16	32.1	34.2	0.14	65	2.1	6%	7%

18	CHARMAN ROAD	Weekend	OFF PEAK	4,786	3.22	2.85	23.0	25.9	0.37	804	29.5	11%	17%
18	CHARMAN ROAD	Weekend	PM PEAK	1,804	2.49	2.01	29.7	36.7	0.48	361	14.3	19%	20%
19	BALCOMBE ROAD	Weekday	24 HOUR	16,220	0.69	0.41	19.1	32.3	0.28	3,844	76.6	41%	24%
19	BALCOMBE ROAD	Weekday	AM PEAK	2,143	0.91	0.35	14.4	37.5	0.56	807	20.1	62%	38%
19	BALCOMBE ROAD	Weekday	OFF PEAK	5,148	0.76	0.43	17.4	30.9	0.33	1,020	28.3	44%	20%
19	BALCOMBE ROAD	Weekday	PM PEAK	2,386	0.93	0.40	14.2	32.9	0.53	716	20.9	57%	30%
19	BALCOMBE ROAD	Weekend	24 HOUR	13,955	0.56	0.38	23.4	34.4	0.18	2,078	41.4	32%	15%
19	BALCOMBE ROAD	Weekend	AM PEAK	893	0.49	0.38	27.0	35.0	0.11	64	1.7	23%	7%
19	BALCOMBE ROAD	Weekend	OFF PEAK	5,538	0.74	0.42	17.8	31.3	0.32	936	29.5	43%	17%
19	BALCOMBE ROAD	Weekend	PM PEAK	2,017	0.70	0.38	18.8	35.0	0.33	392	10.9	46%	19%
20	EDITHVALE ROAD	Weekday	24 HOUR	13,401	0.19	0.09	16.3	35.1	0.10	3,583	23.3	53%	27%
20	EDITHVALE ROAD	Weekday	AM PEAK	2,190	0.21	0.06	15.0	50.9	0.15	729	5.5	71%	33%
20	EDITHVALE ROAD	Weekday	OFF PEAK	3,537	0.21	0.07	15.1	45.4	0.14	941	8.3	67%	27%
20	EDITHVALE ROAD	Weekday	PM PEAK	2,027	0.24	0.09	13.4	36.3	0.15	599	5.1	63%	30%
20	EDITHVALE ROAD	Weekend	24 HOUR	12,554	0.19	0.09	17.0	35.1	0.10	2,822	20.3	52%	22%
20	EDITHVALE ROAD	Weekend	AM PEAK	833	0.20	0.11	15.9	28.3	0.09	91	1.2	44%	11%
20	EDITHVALE ROAD	Weekend	OFF PEAK	4,682	0.21	0.07	15.1	48.9	0.15	1,295	11.3	69%	28%
20	EDITHVALE ROAD	Weekend	PM PEAK	1,806	0.20	0.06	15.9	50.9	0.14	506	4.1	69%	28%
21	STATION STREET BONBEACH	Weekday	24 HOUR	4,372	0.22	0.18	22.4	27.1	0.04	1,003	2.8	18%	23%
21	STATION STREET BONBEACH	Weekday	AM PEAK	637	0.19	0.18	26.2	28.1	0.01	109	0.1	7%	17%
21	STATION STREET BONBEACH	Weekday	OFF PEAK	1,271	0.29	0.21	17.0	24.0	0.09	329	1.8	29%	26%
21	STATION STREET BONBEACH	Weekday	PM PEAK	740	0.29	0.20	17.1	24.6	0.09	214	1.1	30%	29%
22	STATION STREET CARRUM	Weekday	24 HOUR	11,825	0.19	0.16	23.3	27.6	0.03	1,398	5.7	16%	12%
22	STATION STREET CARRUM	Weekday	AM PEAK	1,706	0.19	0.16	23.0	26.6	0.03	119	0.7	13%	7%
22	STATION STREET CARRUM	Weekday	OFF PEAK	3,243	0.22	0.17	20.1	26.2	0.05	441	2.7	23%	14%
22	STATION STREET CARRUM	Weekday	PM PEAK	1,836	0.21	0.16	20.3	26.6	0.05	283	1.5	24%	15%
23	EEL RACE ROAD	Weekday	24 HOUR	5,466	0.29	0.26	37.2	40.8	0.03	624	2.4	9%	11%
23	EEL RACE ROAD	Weekday	AM PEAK	859	0.30	0.28	36.0	39.3	0.03	59	0.4	8%	7%
23	EEL RACE ROAD	Weekday	OFF PEAK	1,464	0.34	0.28	32.2	38.6	0.06	199	1.3	16%	14%



23	EEL RACE ROAD	Weekday	PM PEAK	867	0.34	0.28	32.0	39.3	0.06	134	0.9	19%	15%
24	SEAFORD ROAD	Weekday	24 HOUR	17,398	0.26	0.17	31.4	48.5	0.09	4,491	26.3	35%	26%
24	SEAFORD ROAD	Weekday	AM PEAK	2,544	0.28	0.18	29.2	45.9	0.10	629	4.2	36%	25%
24	SEAFORD ROAD	Weekday	OFF PEAK	4,945	0.29	0.16	27.7	51.9	0.14	1,287	11.1	47%	26%
24	SEAFORD ROAD	Weekday	PM PEAK	2,836	0.26	0.15	30.6	53.6	0.11	788	5.3	43%	28%
24	SEAFORD ROAD	Weekend	24 HOUR	13,121	0.26	0.18	31.2	45.9	0.08	2,766	18.0	32%	21%
24	SEAFORD ROAD	Weekend	AM PEAK	862	0.24	0.18	33.9	45.9	0.06	90	0.9	26%	10%
24	SEAFORD ROAD	Weekend	OFF PEAK	5,094	0.28	0.16	28.7	51.9	0.13	1,230	10.6	45%	24%
24	SEAFORD ROAD	Weekend	PM PEAK	1,911	0.25	0.15	32.2	53.6	0.10	499	3.2	40%	26%
25	OVERTON ROAD	Weekday	24 HOUR	9,769	0.07	0.07	30.8	31.3	0.00	1,129	0.2	1%	12%
25	OVERTON ROAD	Weekday	AM PEAK	1,053	0.08	0.08	30.4	30.4	0.00	0	0.0	0%	0%
25	OVERTON ROAD	Weekday	OFF PEAK	3,458	0.09	0.08	26.8	28.5	0.00	456	0.3	6%	13%
25	OVERTON ROAD	Weekday	PM PEAK	1,614	0.09	0.09	26.1	26.1	0.00	0	0.0	0%	0%
26	TOORAK ROAD	Weekday	24 HOUR	38,510	3.81	3.30	22.9	26.4	0.51	8,083	327.6	13%	21%
26	TOORAK ROAD	Weekday	AM PEAK	4,694	5.98	4.74	14.6	18.4	1.24	1,663	96.8	21%	35%
26	TOORAK ROAD	Weekday	OFF PEAK	9,927	3.75	3.16	23.3	27.6	0.59	2,025	97.6	16%	20%
26	TOORAK ROAD	Weekday	PM PEAK	4,798	6.50	5.49	13.4	15.9	1.01	1,450	81.0	16%	30%
26	TOORAK ROAD	Weekend	24 HOUR	36,792	3.07	2.78	28.4	31.4	0.29	4,548	175.0	9%	12%
26	TOORAK ROAD	Weekend	AM PEAK	2,208	2.61	2.36	33.4	36.9	0.25	233	9.2	10%	11%
26	TOORAK ROAD	Weekend	OFF PEAK	10,275	3.77	3.32	23.1	26.3	0.46	1,573	77.9	12%	15%
26	TOORAK ROAD	Weekend	PM PEAK	4,403	4.16	3.71	20.9	23.5	0.45	692	33.0	11%	16%
27	BURKE ROAD	Weekday	24 HOUR	22,224	2.32	1.56	15.1	22.5	0.76	4,755	282.0	33%	21%
27	BURKE ROAD	Weekday	AM PEAK	2,998	3.16	1.74	11.1	20.2	1.43	966	71.2	45%	32%
27	BURKE ROAD	Weekday	OFF PEAK	6,159	2.42	1.42	14.5	24.7	1.00	1,133	102.6	41%	18%
27	BURKE ROAD	Weekday	PM PEAK	3,195	3.35	2.03	10.5	17.3	1.33	891	70.6	40%	28%
28	BLACKBURN ROAD	Weekday	24 HOUR	15,569	0.38	0.18	17.8	37.9	0.20	4,580	51.9	53%	29%
28	BLACKBURN ROAD	Weekday	AM PEAK	2,130	0.56	0.18	11.9	38.4	0.39	995	13.8	69%	47%
28	BLACKBURN ROAD	Weekday	OFF PEAK	4,849	0.42	0.18	16.0	37.3	0.24	946	19.4	57%	20%
28	BLACKBURN ROAD	Weekday	PM PEAK	2,555	0.48	0.15	14.1	44.8	0.33	996	13.8	68%	39%

28	BLACKBURN ROAD	Weekend	24 HOUR	12,174	0.30	0.17	22.1	39.8	0.14	2,522	27.5	45%	21%
28	BLACKBURN ROAD	Weekend	AM PEAK	664	0.29	0.19	23.4	35.8	0.10	75	1.1	35%	11%
28	BLACKBURN ROAD	Weekend	OFF PEAK	5,046	0.41	0.16	16.6	42.0	0.25	1,263	20.6	60%	25%
28	BLACKBURN ROAD	Weekend	PM PEAK	1,850	0.39	0.15	17.3	44.8	0.24	453	7.3	61%	24%
29	HEATHERDALE ROAD	Weekday	24 HOUR	9,698	0.39	0.34	32.8	38.4	0.06	3,212	9.3	15%	33%
29	HEATHERDALE ROAD	Weekday	AM PEAK	1,119	0.41	0.34	31.4	38.4	0.08	561	1.4	18%	50%
29	HEATHERDALE ROAD	Weekday	OFF PEAK	3,082	0.44	0.36	29.8	36.5	0.08	731	4.1	18%	24%
29	HEATHERDALE ROAD	Weekday	PM PEAK	1,576	0.48	0.35	27.3	37.0	0.13	746	3.3	26%	47%
30	MOUNTAIN HIGHWAY	Weekday	24 HOUR	39,580	1.85	1.47	33.2	41.8	0.38	5,767	251.5	21%	15%
30	MOUNTAIN HIGHWAY	Weekday	AM PEAK	5,857	2.13	1.44	28.9	42.7	0.69	1,200	67.1	32%	20%
30	MOUNTAIN HIGHWAY	Weekday	OFF PEAK	11,389	1.95	1.58	31.5	38.8	0.37	1,133	69.3	19%	10%
30	MOUNTAIN HIGHWAY	Weekday	PM PEAK	6,716	2.36	1.55	26.0	39.6	0.81	1,342	90.9	34%	20%
30	MOUNTAIN HIGHWAY	Weekend	24 HOUR	25,805	1.69	1.38	36.4	44.4	0.31	3,244	131.7	18%	13%
30	MOUNTAIN HIGHWAY	Weekend	AM PEAK	1,614	1.55	1.25	39.6	49.1	0.30	208	8.1	19%	13%
30	MOUNTAIN HIGHWAY	Weekend	OFF PEAK	10,207	1.85	1.39	33.1	44.3	0.47	1,399	79.1	25%	14%
30	MOUNTAIN HIGHWAY	Weekend	PM PEAK	3,837	1.86	1.43	32.9	43.0	0.44	492	28.0	23%	13%
31	SCORESBY ROAD	Weekday	24 HOUR	21,711	0.63	0.46	25.8	34.9	0.16	2,500	58.8	26%	12%
31	SCORESBY ROAD	Weekday	AM PEAK	3,213	0.71	0.46	22.7	35.0	0.25	463	13.4	35%	14%
31	SCORESBY ROAD	Weekday	OFF PEAK	6,480	0.60	0.48	27.2	34.1	0.12	522	13.0	20%	8%
31	SCORESBY ROAD	Weekday	PM PEAK	3,589	0.85	0.51	19.1	31.6	0.34	571	20.2	40%	16%
31	SCORESBY ROAD	Weekend	24 HOUR	15,040	0.54	0.41	30.1	39.2	0.12	1,567	31.1	23%	10%
31	SCORESBY ROAD	Weekend	AM PEAK	932	0.60	0.49	27.0	33.2	0.11	80	1.7	19%	9%
31	SCORESBY ROAD	Weekend	OFF PEAK	6,155	0.57	0.38	28.4	42.6	0.19	724	19.5	33%	12%
31	SCORESBY ROAD	Weekend	PM PEAK	2,104	0.50	0.34	32.4	48.0	0.16	239	5.7	33%	11%
32	BUCKLEY STREET	Weekday	24 HOUR	14,987	4.98	3.19	25.0	39.1	1.79	5,634	447.3	36%	38%
32	BUCKLEY STREET	Weekday	AM PEAK	2,038	6.84	2.99	18.2	41.8	3.85	1,222	130.8	56%	60%
32	BUCKLEY STREET	Weekday	OFF PEAK	4,186	5.42	3.52	23.0	35.4	1.90	1,161	132.2	35%	28%
32	BUCKLEY STREET	Weekday	PM PEAK	2,445	7.01	3.36	17.8	37.1	3.65	1,277	148.7	52%	52%
32	BUCKLEY STREET	Weekend	24 HOUR	12,692	4.42	3.38	28.2	36.9	1.04	2,400	220.6	24%	19%

32	BUCKLEY STREET	Weekend	AM PEAK	710	4.04	3.13	30.9	39.9	0.91	103	10.8	23%	14%
32	BUCKLEY STREET	Weekend	OFF PEAK	4,848	5.60	3.89	22.3	32.1	1.71	1,002	138.2	31%	21%
32	BUCKLEY STREET	Weekend	PM PEAK	1,793	5.34	3.69	23.4	33.8	1.65	373	49.3	31%	21%
33	GLENROY ROAD GLENROY	Weekday	24 HOUR	19,458	0.09	0.08	27.5	33.6	0.02	4,194	5.4	18%	22%
33	GLENROY ROAD GLENROY	Weekday	AM PEAK	2,145	0.09	0.08	28.8	33.6	0.01	674	0.4	14%	31%
33	GLENROY ROAD GLENROY	Weekday	OFF PEAK	6,001	0.12	0.09	21.9	29.6	0.03	1,075	3.0	26%	18%
33	GLENROY ROAD GLENROY	Weekday	PM PEAK	2,759	0.10	0.08	25.2	33.6	0.03	1,021	1.1	25%	37%
34	MORELAND ROAD	Weekday	24 HOUR	15,801	4.20	3.34	25.4	32.0	0.86	2,735	225.8	20%	17%
34	MORELAND ROAD	Weekday	AM PEAK	1,955	4.48	3.19	23.9	33.5	1.29	399	41.9	29%	20%
34	MORELAND ROAD	Weekday	OFF PEAK	4,604	5.51	4.36	19.4	24.5	1.15	794	88.2	21%	17%
34	MORELAND ROAD	Weekday	PM PEAK	2,289	5.43	4.13	19.7	25.9	1.30	451	49.6	24%	20%
34	MORELAND ROAD	Weekend	24 HOUR	13,630	3.49	2.84	30.6	37.5	0.65	2,053	146.7	19%	15%
34	MORELAND ROAD	Weekend	AM PEAK	742	2.96	2.40	36.1	44.5	0.56	96	7.0	19%	13%
34	MORELAND ROAD	Weekend	OFF PEAK	4,584	4.42	3.37	24.2	31.7	1.05	798	79.8	24%	17%
34	MORELAND ROAD	Weekend	PM PEAK	1,859	3.80	2.75	28.1	38.8	1.05	333	32.5	28%	18%
35	BELL STREET	Weekday	24 HOUR	40,578	1.14	0.70	25.6	42.1	0.45	8,170	301.5	39%	20%
35	BELL STREET	Weekday	AM PEAK	5,548	1.29	0.65	22.7	45.0	0.64	1,317	58.9	50%	24%
35	BELL STREET	Weekday	OFF PEAK	10,801	1.43	0.77	20.5	38.3	0.67	2,202	119.7	47%	20%
35	BELL STREET	Weekday	PM PEAK	6,075	1.61	0.85	18.2	34.4	0.76	1,331	77.2	47%	22%
36	CAMP ROAD	Weekday	24 HOUR	20,104	1.95	1.84	31.9	33.9	0.11	1,678	37.3	6%	8%
36	CAMP ROAD	Weekday	AM PEAK	2,578	2.00	1.81	31.1	34.3	0.19	268	8.1	9%	10%
36	CAMP ROAD	Weekday	OFF PEAK	6,066	2.12	1.97	29.4	31.6	0.15	504	14.7	7%	8%
36	CAMP ROAD	Weekday	PM PEAK	3,135	2.88	2.71	21.6	22.9	0.16	283	8.5	6%	9%
36	CAMP ROAD	Weekend	24 HOUR	15,628	1.68	1.60	36.9	38.9	0.09	1,081	22.2	5%	7%
36	CAMP ROAD	Weekend	AM PEAK	841	1.63	1.53	38.3	40.8	0.10	56	1.4	6%	7%
36	CAMP ROAD	Weekend	OFF PEAK	5,865	1.95	1.81	32.0	34.4	0.14	469	13.2	7%	8%
36	CAMP ROAD	Weekend	PM PEAK	2,237	1.66	1.54	37.4	40.5	0.13	175	4.7	8%	8%
37	GRANGE ROAD FAIRFIELD	Weekday	24 HOUR	25,366	4.49	4.02	27.2	30.4	0.46	5,132	196.4	10%	20%
37	GRANGE ROAD FAIRFIELD	Weekday	AM PEAK	3,402	8.98	7.88	13.6	15.5	1.10	1,109	62.4	12%	33%

37	GRANGE ROAD FAIRFIELD	Weekday	OFF PEAK	7,698	4.37	3.84	28.0	31.8	0.53	1,133	67.4	12%	15%
37	GRANGE ROAD FAIRFIELD	Weekday	PM PEAK	4,022	6.95	6.14	17.6	19.9	0.81	1,070	54.5	12%	27%
37	GRANGE ROAD FAIRFIELD	Weekend	24 HOUR	18,602	3.63	3.35	33.7	36.4	0.28	2,360	86.2	8%	13%
37	GRANGE ROAD FAIRFIELD	Weekend	AM PEAK	1,160	3.13	2.91	39.1	41.9	0.21	114	4.1	7%	10%
37	GRANGE ROAD FAIRFIELD	Weekend	OFF PEAK	6,786	4.53	4.08	27.0	29.9	0.45	981	50.3	10%	14%
37	GRANGE ROAD FAIRFIELD	Weekend	PM PEAK	2,731	4.41	3.95	27.7	30.9	0.46	418	21.1	10%	15%
38	LOWER PLENTY ROAD	Weekday	24 HOUR	16,555	0.30	0.23	26.1	33.7	0.07	1,480	18.7	23%	9%
38	LOWER PLENTY ROAD	Weekday	AM PEAK	1,257	0.43	0.29	18.4	27.1	0.14	169	2.9	32%	13%
38	LOWER PLENTY ROAD	Weekday	OFF PEAK	4,337	0.31	0.22	25.2	35.5	0.09	307	6.5	29%	7%
38	LOWER PLENTY ROAD	Weekday	PM PEAK	3,916	0.36	0.24	21.5	32.8	0.13	499	8.2	34%	13%
39	BELL STREET	Weekday	24 HOUR	52,115	2.18	1.71	25.7	32.9	0.47	9,137	411.7	22%	18%
39	BELL STREET	Weekday	AM PEAK	7,525	2.96	2.18	18.9	25.8	0.79	1,547	98.8	27%	21%
39	BELL STREET	Weekday	OFF PEAK	13,866	2.30	1.70	24.4	33.0	0.60	2,389	137.5	26%	17%
39	BELL STREET	Weekday	PM PEAK	8,109	3.36	2.65	16.7	21.2	0.71	1,599	96.3	21%	20%
39	BELL STREET	Weekend	24 HOUR	43,868	1.99	1.61	28.1	34.9	0.39	6,663	283.3	19%	15%
39	BELL STREET	Weekend	AM PEAK	2,568	1.55	1.23	36.2	45.8	0.33	349	13.9	21%	14%
39	BELL STREET	Weekend	OFF PEAK	14,509	2.45	1.86	22.9	30.2	0.60	2,541	143.9	24%	18%
39	BELL STREET	Weekend	PM PEAK	6,257	2.68	2.05	21.0	27.4	0.63	1,126	65.2	23%	18%
40	HIGH STREET	Weekday	24 HOUR	35,644	0.30	0.18	27.9	47.2	0.12	5,923	73.0	41%	17%
40	HIGH STREET	Weekday	AM PEAK	4,688	0.40	0.20	21.0	42.0	0.20	925	15.6	50%	20%
40	HIGH STREET	Weekday	OFF PEAK	10,046	0.33	0.17	25.5	50.9	0.17	1,663	27.6	50%	17%
40	HIGH STREET	Weekday	PM PEAK	5,394	0.33	0.16	25.8	51.7	0.16	1,039	14.6	50%	19%
40	HIGH STREET	Weekend	24 HOUR	29,672	0.30	0.20	27.7	41.8	0.10	4,217	50.5	34%	14%
40	HIGH STREET	Weekend	AM PEAK	1,760	0.26	0.19	32.0	44.8	0.08	182	2.2	29%	10%
40	HIGH STREET	Weekend	OFF PEAK	10,226	0.33	0.17	25.8	49.4	0.16	1,690	26.4	48%	17%
40	HIGH STREET	Weekend	PM PEAK	4,112	0.30	0.15	28.0	56.0	0.15	701	10.3	50%	17%
41	FURLONG ROAD	Weekday	24 HOUR	14,380	0.32	0.30	30.5	33.0	0.03	3,125	6.0	8%	22%
41	FURLONG ROAD	Weekday	AM PEAK	1,498	0.34	0.31	29.2	31.5	0.03	299	0.6	7%	20%
41	FURLONG ROAD	Weekday	OFF PEAK	4,451	0.37	0.32	27.0	30.8	0.05	1,139	3.3	12%	26%

41	FURLONG ROAD	Weekday	PM PEAK	2,022	0.36	0.33	27.1	30.3	0.04	492	1.3	10%	24%
42	MAIN ROAD	Weekday	24 HOUR	17,107	4.59	3.64	32.5	40.9	0.95	5,221	270.6	21%	31%
42	MAIN ROAD	Weekday	AM PEAK	1,780	4.95	3.23	30.1	46.2	1.73	900	51.2	35%	51%
42	MAIN ROAD	Weekday	OFF PEAK	5,046	5.23	3.98	28.5	37.4	1.25	1,342	104.7	24%	27%
42	MAIN ROAD	Weekday	PM PEAK	2,406	5.51	3.83	27.0	39.0	1.69	1,073	67.7	31%	45%
43	MELTON HIGHWAY	Weekday	24 HOUR	38,066	1.09	0.94	56.6	65.3	0.15	4,051	93.2	13%	11%
43	MELTON HIGHWAY	Weekday	AM PEAK	4,184	1.28	1.01	48.4	61.0	0.26	606	18.3	21%	14%
43	MELTON HIGHWAY	Weekday	OFF PEAK	9,421	1.09	0.95	56.6	65.3	0.15	760	22.8	13%	8%
43	MELTON HIGHWAY	Weekday	PM PEAK	7,146	1.71	1.45	36.1	42.6	0.26	1,005	31.3	15%	14%
44	AVIATION ROAD	Weekday	24 HOUR	6,821	0.93	0.90	38.4	39.6	0.03	1,747	3.1	3%	26%
44	AVIATION ROAD	Weekday	AM PEAK	1,025	0.94	0.93	38.0	38.5	0.01	250	0.2	1%	24%
44	AVIATION ROAD	Weekday	OFF PEAK	1,832	1.03	0.97	34.6	36.7	0.06	513	1.8	6%	28%
44	AVIATION ROAD	Weekday	PM PEAK	1,112	1.01	0.96	35.2	37.0	0.05	407	0.9	5%	37%
45	CHERRY STREET	Weekday	24 HOUR	20,211	0.52	0.41	24.0	30.1	0.11	3,289	35.4	20%	16%
45	CHERRY STREET	Weekday	AM PEAK	2,296	0.49	0.43	25.4	29.1	0.06	469	2.4	13%	20%
45	CHERRY STREET	Weekday	OFF PEAK	6,560	0.66	0.46	18.7	26.9	0.20	1,019	21.9	30%	16%
45	CHERRY STREET	Weekday	PM PEAK	3,232	0.61	0.44	20.2	28.3	0.18	657	9.4	29%	20%
46	WERRIBEE STREET	Weekday	24 HOUR	19,753	0.37	0.25	20.3	30.4	0.12	2,095	40.5	33%	11%
46	WERRIBEE STREET	Weekday	AM PEAK	2,999	0.40	0.20	18.8	37.5	0.20	422	10.0	50%	14%
46	WERRIBEE STREET	Weekday	OFF PEAK	4,805	0.45	0.28	16.9	26.8	0.17	420	13.2	37%	9%
46	WERRIBEE STREET	Weekday	PM PEAK	2,940	0.44	0.21	17.1	35.3	0.23	421	11.0	51%	14%
47	MANCHESTER ROAD	Weekday	24 HOUR	24,677	0.26	0.21	30.7	37.4	0.05	3,349	18.9	18%	14%
47	MANCHESTER ROAD	Weekday	AM PEAK	3,483	0.24	0.21	33.1	37.0	0.03	508	1.5	11%	15%
47	MANCHESTER ROAD	Weekday	OFF PEAK	6,887	0.31	0.22	25.8	35.7	0.09	623	9.8	28%	9%
47	MANCHESTER ROAD	Weekday	PM PEAK	4,445	0.31	0.23	25.2	34.9	0.09	910	6.5	28%	20%
48	MAROONDAH HIGHWAY	Weekday	24 HOUR	29,009	1.67	1.49	32.9	36.9	0.18	3,020	85.6	11%	10%
48	MAROONDAH HIGHWAY	Weekday	AM PEAK	4,127	1.78	1.44	30.9	38.2	0.34	653	23.2	19%	16%
48	MAROONDAH HIGHWAY	Weekday	OFF PEAK	8,822	1.79	1.65	30.7	33.4	0.15	612	21.3	8%	7%
48	MAROONDAH HIGHWAY	Weekday	PM PEAK	4,635	2.10	1.69	26.1	32.5	0.41	642	31.9	20%	14%

48	MAROONDAH HIGHWAY	Weekend	24 HOUR	28,462	1.64	1.46	33.6	37.7	0.18	2,797	84.5	11%	10%
48	MAROONDAH HIGHWAY	Weekend	AM PEAK	1,879	1.33	1.20	41.4	45.8	0.13	131	3.9	9%	7%
48	MAROONDAH HIGHWAY	Weekend	OFF PEAK	11,399	1.91	1.57	28.7	35.0	0.34	1,255	64.6	18%	11%
48	MAROONDAH HIGHWAY	Weekend	PM PEAK	4,601	1.79	1.46	30.7	37.5	0.33	543	24.9	18%	12%
49	KOROROIT CREEK ROAD	Weekday	24 HOUR	22,319	4.89	4.63	50.3	53.1	0.26	1,750	95.7	5%	8%
49	KOROROIT CREEK ROAD	Weekday	AM PEAK	3,616	5.05	4.61	48.7	53.4	0.44	355	26.4	9%	10%
49	KOROROIT CREEK ROAD	Weekday	OFF PEAK	6,753	5.03	4.79	49.0	51.4	0.24	386	26.5	5%	6%
49	KOROROIT CREEK ROAD	Weekday	PM PEAK	3,713	5.05	4.68	48.7	52.6	0.38	337	23.2	7%	9%
49	KOROROIT CREEK ROAD	Weekend	24 HOUR	15,426	4.49	4.29	54.8	57.4	0.21	1,288	53.3	5%	8%
49	KOROROIT CREEK ROAD	Weekend	AM PEAK	937	4.45	4.24	55.3	58.1	0.21	63	3.3	5%	7%
49	KOROROIT CREEK ROAD	Weekend	OFF PEAK	6,431	4.69	4.35	52.5	56.6	0.34	609	37.0	7%	9%
49	KOROROIT CREEK ROAD	Weekend	PM PEAK	2,221	4.65	4.30	52.9	57.2	0.35	222	13.0	8%	10%
50	FERGUSON STREET	Weekday	24 HOUR	22,319	7.46	6.16	38.7	46.8	1.30	4,807	483.2	17%	22%
50	FERGUSON STREET	Weekday	AM PEAK	3,616	7.95	6.09	36.3	47.4	1.86	824	112.2	23%	23%
50	FERGUSON STREET	Weekday	OFF PEAK	6,753	7.36	5.85	39.2	49.3	1.51	1,406	170.0	21%	21%
50	FERGUSON STREET	Weekday	PM PEAK	3,713	8.05	6.21	35.8	46.4	1.84	816	113.7	23%	22%
50	FERGUSON STREET	Weekend	24 HOUR	15,426	7.13	6.12	40.4	47.2	1.02	2,956	261.7	14%	19%
50	FERGUSON STREET	Weekend	AM PEAK	937	6.94	5.95	41.6	48.5	0.99	152	15.4	14%	16%
50	FERGUSON STREET	Weekend	OFF PEAK	6,431	7.51	5.92	38.4	48.8	1.60	1,343	170.9	21%	21%
50	FERGUSON STREET	Weekend	PM PEAK	2,221	7.36	5.99	39.2	48.2	1.38	465	50.9	19%	21%

- AM Peak = 7-9 AM, PM Peak = 4-6 PM and Off Peak = 10AM – 3PM
- Average Two-Way Traffic Volume – is the estimated all vehicle average two-way traffic volume of the road segment for a given level crossing and period.
- Average Travel Time (Min) – is the average travel time (min) of the road segment for a given level crossing and period. It includes the travel time of each travel direction of the road segment (two-way).
- Estimated Average Travel Time (Min) - Level Crossing Removed – is the estimated average two-way travel time of the road segments in the sample for a given level crossing and period.
- Average Travel Speed (kph) - is the average two-way travel speed (kph) of the road segment for a given level crossing and period.
- Estimated Average Travel Speed (kph) - Level Crossing Removed - is the estimated average two-way travel speed of the road segment for a given level crossing and period.
- Average Travel Time Delay (Min) – is the difference in travel time with the level crossing and with the level crossing removed. It is aggregated for the road segment for a given level crossing and period.
- Estimated Average Traffic Volume Delayed – is the estimated average traffic volume delayed by the active boom gate of the road segment for a given level crossing and period.
- Vehicle Hours Delay – is the product of the average delay per vehicle and traffic volume. It is averaged for all the road segments in the sample for a given level crossing and period.
- Average Travel Time Delay (%) – is average travel time delay as a proportion of the average travel time (with Level Crossing).
- Estimated Average Traffic Volume Delayed (%) – is the estimated average traffic volume delayed as a proportion of the average two-way traffic volume for a given period.

**Table 9 List of the Road Segments included in the Study**

No	Line	Road Name	Road Segment
1	Cranbourne - Pakenham	Grange Road	Dandenong Road to Neerim Road
2	Cranbourne - Pakenham	Koorang Road	Rosstown Road to Woorayl Street
3	Cranbourne - Pakenham	Murrumbeena Road	Neerim Road to Railway Parade
4	Cranbourne - Pakenham	Poath Road	Rosella Street to Euston Road
5	Cranbourne - Pakenham	Clayton Road	Centre Road to Railroad Crossing
6	Cranbourne - Pakenham	Centre Road	Haughton Road to Rayhur Street
7	Cranbourne - Pakenham	Corrigan Road	Kelvinside Road to Lightwood Road
8	Cranbourne - Pakenham	Heatherton Road	Douglas Street to Kelvinside Road
9	Cranbourne - Pakenham	Chandler Road	Douglas Street to Railway Parade
10	Cranbourne - Pakenham	Abbotts Road	Gaine Road to Ausco Place
11	Cranbourne	Thompson Road	Evans Road to Lonsdale Crescent
12	Pakenham	South Gippsland Highway	Dandenong Southern Bypass to Princes Highway
13	Pakenham	Hallam Road	Keppel Drive to Pound Road
14	Pakenham	Clyde Road	Kangan Drive to Lyall Road
15	Frankston	North Road	Booran Road to Katandra Road
16	Frankston	Mckinnon Road	Glen Orme Avenue to Station Avenue
17	Frankston	Centre Road	Jasper Road to Mavho Street
18	Frankston	Charman Road	Station Road to Weatherall Road
19	Frankston	Balcombe Road	Como Parade West to Swanston Street
20	Frankston	Edithvale Road	Nepean Highway to Station Street
21	Frankston	Station Street Bonbeach	Nepean Highway to Station Street
22	Frankston	Station Street Carrum	Nepean Highway to Station Street
23	Frankston	Eel Race Road	Nepean Highway to Chevron Court
24	Frankston	Seaford Road	Fortescue Avenue to Railway Parade
25	Frankston	Overton Road	Wells Road to Dandenong Road East
26	Glen Waverley	Toorak Road	Glenferrie Road to Monash Freeway
27	Glen Waverley	Burke Road	Monash Freeway to Malvern Road
28	Belgrave	Blackburn Road	Central Road to Solwood Lane
29	Belgrave	Heatherdale Road	Forster Street to Maroondah Highway
30	Belgrave	Mountain Highway	Scoresby Road to Station Street
31	Belgrave	Scoresby Road	Power Road to Station Street
32	Craigieburn	Buckley Street	Mt Alexander Road to Waverley Street
33	Craigieburn	Glenroy Road Glenroy	Station Road to Waterloo Road
34	Upfield	Moreland Road	Sydney Road to Garnet Street
35	Upfield	Bell Street	Hudson Street to Waterfield Street
36	Upfield	Camp Road	Hume Highway to Northcorp Boulevard
37	Hurstbridge	Grange Road Fairfield	Heidelberg Road to Separation Street



38	Hurstbridge	Lower Plenty Road	Ellesmere Parade to Turnham Avenue
39	South Morang	Bell Street	High Street to St Georges Road
40	South Morang	High Street	Cheddar Road to Spring Road
41	Sunbury	Furlong Road	Willaton Street to St Albans Road
42	Sunbury	Main Road	Jamieson Street to St Albans Road
43	Sunbury	Melton Highway	Mccubbin Drive to Sydenham Road
44	Werribee	Aviation Road	Railway Avenue to Maher Road
45	Werribee	Cherry Street	Watton Street to Railway Avenue
46	Werribee	Werribee Street	Ballan Road to Princess Highway
47	Lilydale	Manchester Road	Brice Avenue to Winyard Drive
48	Lilydale	Maroondah Highway	Cave Hill Road to Hutchinson Street
49	Laverton	Kororoit Creek Road	Millers Road to Maddox Road
50	Williamstown	Ferguson Street	Maddox Road to Melbourne Road