

BAW BAW SHIRE COUNCIL

# ROAD SAFETY STRATEGY

2018-2022

Towards zero trauma.

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## From the Mayor

**As Baw Baw continues to thrive, our population is growing and more people are choosing to join our community. This means that there will be more vehicles on our roads and more people using our road network than ever before.**

While we are thrilled to welcome new members to our community, we must tailor our road safety efforts to address the ongoing and the new conditions and challenges we face.

Our community should be a place for people to enjoy and a place where people are safe, yet road trauma continues to claim or permanently change the lives of our friends and families, affecting the individuals involved as well as the people around them. In the previous ten years, a total of 1667 crashes were reported within our shire that resulted in 55 deaths and 617 life changing injuries. We cannot accept such trauma on our roads. Zero is the only acceptable number for deaths or life changing injury crashes.

To go from where we are now to where we want to be will require time, a structured approach to guide our efforts, and the commitment of everyone involved. This Road Safety Strategy has been developed to assist us on our way to achieving our target of zero road trauma. Delivering this strategy will require hard work and an unwavering commitment from our council and our community. Improving road safety is a joint effort from all those involved in road design, road maintenance and road usage. I am pleased that many members from our community have already shown their eagerness to be involved and have provided valuable input in the creation of this strategy.

This strategy builds on the road safety work already undertaken by council. It also uses data on past trauma as well as concerns raised by the community to streamline our road safety efforts and enable us to focus on solving our most pressing road safety issues. The strategy relies on strong partnerships between council, government departments, industries, and the community and requires us to work together to combat our road trauma.

By adopting the principles set out in this strategy, by delivering the action plan to improve road safety, and by creating a united community of people who refuse to accept trauma on our roads, we will work together to remove trauma from our roads and make Baw Baw a safer place for everyone.

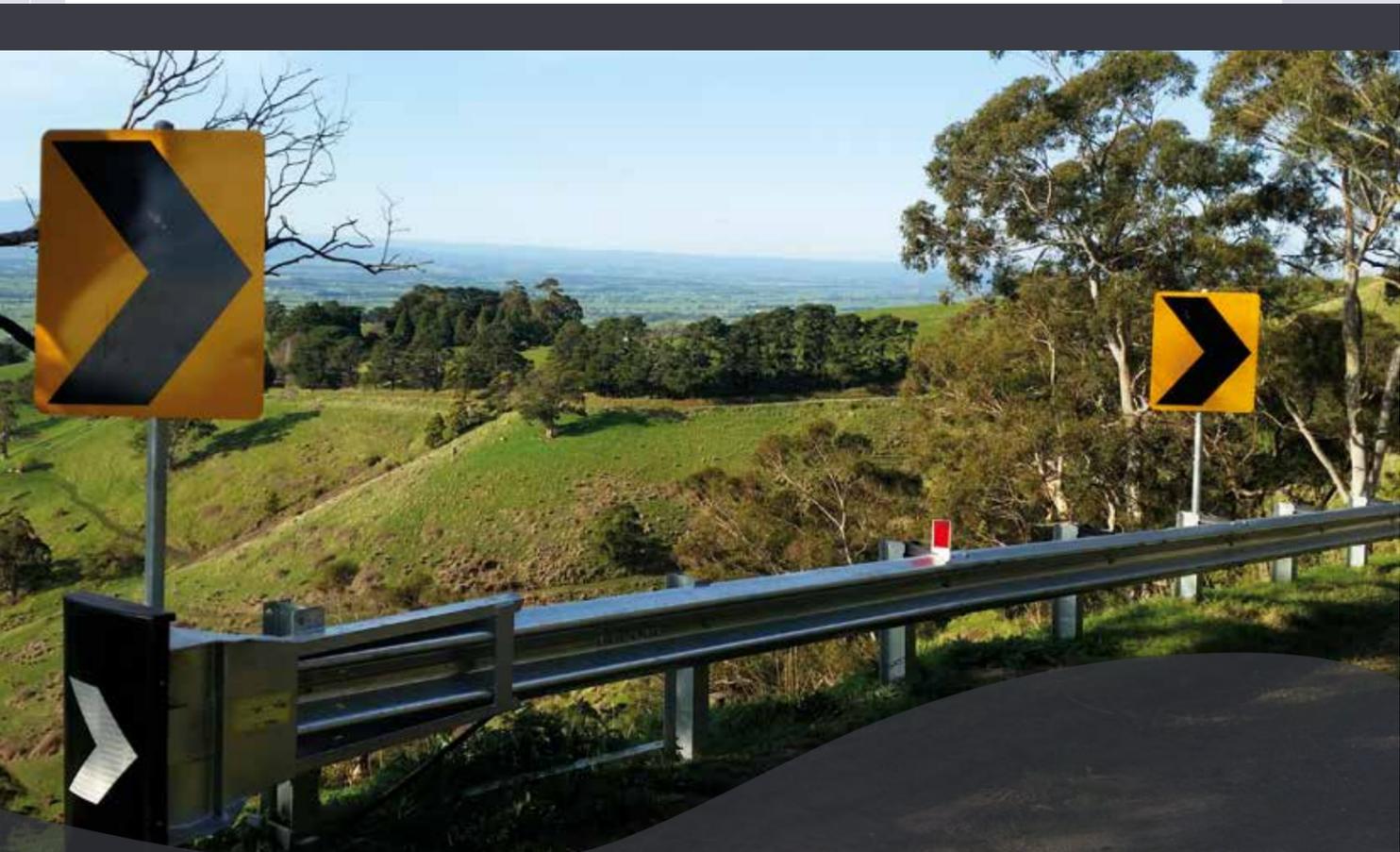
**Mayor of Baw Baw Shire**

**OUR COMMUNITY SHOULD BE A PLACE FOR PEOPLE TO ENJOY, WHERE PEOPLE ARE SAFE. YET ROAD TRAUMA CONTINUES TO CLAIM THE LIVES OF OUR FRIENDS AND FAMILIES.**

# Table of Contents

From the Mayor	1
Table of Contents	2
Executive Summary	3
About Baw Baw Shire	6
Our Vision	7
Federal and State Context	8
The Safe System	9
What's Happening on Our Roads?	13
Road Risk Rating	45
What Works and What Doesn't?	46
Moving Towards Zero	49
Targets	52
What You Can Do	53
Action Plan	54

**WE WILL WORK  
TOGETHER  
AND MAKE  
BAW BAW A  
SAFER PLACE  
FOR EVERYONE.**



# Executive Summary

**The formation of this strategy relies on crash data from the previous 10 years of crashes within the Baw Baw Shire, the results of surveys undertaken by members of the community, and consultation with stakeholders and road safety experts.**

Some notable findings which have contributed to the development of the principles set out in this strategy, and the initiatives set out in the action plan are presented below. The complete set of crash data is available in the Baw Baw Shire Road Safety Strategy 2018-2022 Technical Report.

### All Injury Crashes

- 40% of all crashes in Baw Baw Shire are Fatal and Serious Injury (FSI) crashes. 60% of crashes are non-FSI crashes.
- The total number of crashes shows an increasing trend over the last ten years.
- 36% of all casualties are either fatalities or serious injuries. 64% of casualties are other injuries.
- The highest number of crashes occur on weekends.

### All FSI Crashes

- Both fatal crashes and serious injury crashes individually show a decreasing trend over the last ten years.
- There are a high number of 'lane departure' and 'out of control' type crashes.
- Road users aged from 18 to 24 showed the highest involvement in FSI crashes.
- The dominant speed zone for FSI crashes in Baw Baw Shire is 100 km/hr.
- The raw number of FSI crashes is highest for passenger vehicle crashes followed by motorcycle crashes.
- 74% of crashes occurred during day time in well-lit conditions.

### Pedestrian FSI Crashes

- The highest concentration of pedestrian crashes occurs in Drouin and Warragul.
- Pedestrian FSI crashes show a decreasing trend over the last ten years.
- It was notable that young road users from 16 to 25 years of age showed the highest involvement in FSI pedestrian crashes.
- Of the pedestrians involved in pedestrian FSI crashes, 28% were aged 65 and over.
- Pedestrian FSI crashes were most common in 50 km/hr and 60 km/hr speed zones. This indicates that these crashes are likely to be occurring in built-up areas.

# Executive Summary

## Bicycle FSI Crashes

- A high concentration of bicycle crashes occurs around Warragul and Trafalgar.
- Bicycle FSI crashes show a decreasing trend over the last ten years.
- Bicycle FSI crashes were most common in 100 km/hr speed zones.

## Motorcycle FSI Crashes

- A high concentration of motorcycle crashes was observed in outer town areas.
- The motorcycle crash trend shows a high number of crashes on Saturdays and Sundays and in 100 km/hr and unknown speed zones.
- The above two points indicates a high likelihood of crashes occurring during recreational motorcycling.
- Motorcycle FSI crashes show an increasing trend over the last ten years.

## Heavy vehicle FSI Crashes

- A high concentration of heavy vehicle crashes occurs around Trafalgar.
- Heavy vehicle crashes show a decreasing trend over the last ten years.
- Heavy vehicle FSI crashes were most common on Mondays and Tuesdays and in 100 km/hr zones.
- Many people who were involved were between the age of 30 and 60.

## Alcohol Related Crashes

- Alcohol related crashes show a decreasing trend over the analysed crash period.
- These crashes were most common in 100 km/hr speed zones and between the times of 17:00 and 04:00.

## Heat Maps

### Vehicle owners

- Although the location of the owners of vehicles involved in FSI crashes in the shire can be observed all around Australia, the highest concentration of owners is in South Eastern Victoria.
- The highest concentration of owners of vehicles involved in FSI crashes in the shire is in Warragul.

### FSI crashes

- A high concentration of crashes occurs along the freeway connecting Longwarry, Drouin and Warragul.
- The highest concentration of crashes in the dark and without streetlights occurs around Warragul.
- The highest concentration of crashes in Drouin occurs near Calway Street.
- The highest concentration of crashes in Warragul occurs at the Queen Street and Victoria Street intersection.
- The highest concentration of crashes in Trafalgar occurs at the Princes Highway and Mirboo – North Trafalgar Road intersection.
- A high concentration of crashes in Longwarry occurs at the Sand Road and Princes Highway intersection.
- A high concentration of crashes in Rawson occurs both on and off roads.

# Executive Summary

## FSI crashes - Freeway and Arterial Roads

- A high concentration of crashes within the shire occurs along Princes Highway.
- The highest concentration of crashes in Drouin occurs at the Princes Way and Main South Road intersection.
- A high concentration of crashes within Warragul occurs along Princes Highway. The highest concentrations occur near the Queen Street and Victoria Street intersection.
- A high concentration of crashes within Trafalgar occurs along Princes Highway and Mirboo North – Trafalgar Road. The highest concentration occurs at the intersection of these two roads.
- The highest concentration of crashes within Longwarry occurs at the Princes Highway and Sand Road intersection.
- A small number of crashes occurs within Rawson in comparison to other towns.

## FSI crashes – Non arterial and local roads

- The highest concentration of FSI crashes occurs in the Warragul area.
- The highest concentration of FSI crashes in Drouin occurs on Calway Street and Lardners Track.
- The highest concentration of FSI crashes in Warragul occurs near the Normanby Place and Normanby Street intersection.
- A relatively small proportion of crashes occur in Trafalgar. Crashes in Trafalgar predominantly occur on freeways and arterial roads.
- A relatively small proportion of crashes occur in Longwarry, predominantly on freeways and arterial roads.
- Crashes in Rawson are spread around the town and also on tracks out of the town.

Section 6 provides further insight into the crash trends identified and user groups involved. The complete set of data for this strategy can be found in the Baw Baw Shire Council Road Safety Strategy Technical Report available on the council website.

The action plan has been developed to specifically address vulnerable road user groups identified through crash data analysis such as off road and on road motorcyclists.

Specific concerns raised by the community will be addressed through road safety investigations, with proactive and strategic steps in risk rating all council roads to be undertaken to support and prioritise community concerns.

**DRIVER BEHAVIOUR IS TARGETED THROUGH VARIOUS EDUCATIONAL INITIATIVES TO BE UNDERTAKEN BY COUNCIL AS OUTLINED IN THE ACTION PLAN.**

# About Baw Baw Shire

**Baw Baw Shire is the largest peri-urban municipality in Victoria covering approximately 4,000 square kilometres and is home to many diverse and successful industries.**

Located approximately 100 kilometres east of the Melbourne CBD, the shire's western gateway is just a one hour drive from Melbourne and is connected by quality road freeway networks and express rail services. It is within commuting distance of the expanding metropolitan area, and attracts new residents looking to take advantage of the availability of affordable housing while experiencing a rural town lifestyle. Baw Baw Shire has an estimated population of 45,205 (as at June 2013) and is expected to reach 60,452 by 2026.

The shire is set in a beautiful location bordered by Mt Baw Baw and the Strzelecki Ranges. It is biologically diverse, rich in agricultural and natural resources, and is one of Australia's premier locations for food production. The shire is home to large industries including logging, quarrying, and cattle and dairy farming.

Baw Baw Shire includes the townships of Longwarry to the west, Trafalgar to the east, Rawson, Walhalla and Aberfeldy in the north and Poowong East and Allambee in the south. The regional centre is Warragul with growth towns along the main transport corridor including Longwarry, Drouin, Yarragon and Trafalgar. A large number of dispersed dwellings are also spread throughout our rural localities.

**BAW BAW SHIRE EXPERIENCED A POPULATION GROWTH RATE OF 20.6%; SIGNIFICANTLY HIGHER THAN THE STATE AVERAGE OF 15.2%.**

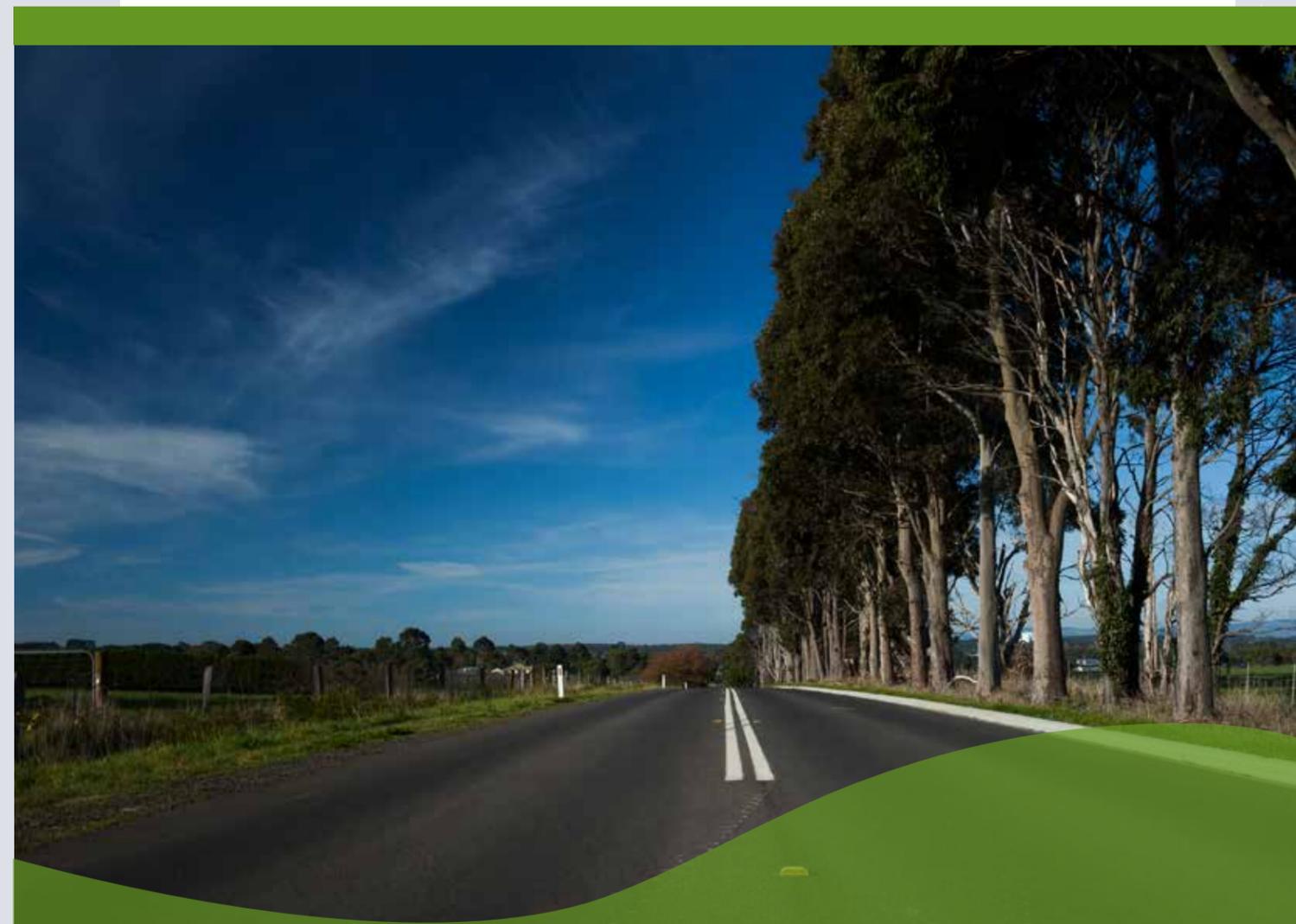
Between 2001 and 2011, Baw Baw Shire experienced a population growth rate of 20.6%; significantly higher than the state average of 15.2% (ABS 2001, 2006, 2011). Additionally, the recent Plan Melbourne has identified that a "State of Cities" should be created to accommodate major population and employment growth across Victoria. These peri-urban towns, which include Warragul-Drouin, have been identified in the Plan Melbourne Strategy as having potential for growth to accommodate a portion of Melbourne's future population and developments.

As we begin to cater for the upcoming challenges of a growing population and changing demographic, we have developed Precinct Structure Plans to guide our growth of both Drouin and Warragul. The addition of our Road Safety Strategy will assist us in maintaining and further developing a safer environment for our current and future communities, both within major townships and on our country roads.

# Our Vision

**Our vision is to ensure safe travel within the Baw Baw Shire road network for our local community and our visitors.**

The objective of this Strategy is to set the framework for reducing fatality and serious injury crashes on our roads in a fast and efficient manner over the coming years.



**THE OBJECTIVE OF THIS STRATEGY IS TO REDUCE FATALITY AND SERIOUS INJURY CRASHES ON OUR ROADS.**

# Federal and State Context

## The Baw Baw Shire Road Safety Strategy was created in alignment with the National Road Safety Strategy 2011-2020, and Towards Zero 2016-2020-Victoria's Road Safety Strategy and Action Plan.

The road safety targets set out by the National strategy aim for a reduction in Fatal and Serious Injury (FSI) crashes of 30% over a period of 10 years. The Victorian Strategy aims for a 20% reduction in fatalities and a 15% reduction in serious injuries over a 5 year period. We intend to exceed these road safety expectations and will endeavour for a 30% reduction in both fatalities and serious injuries within our shire by the end of 2022.

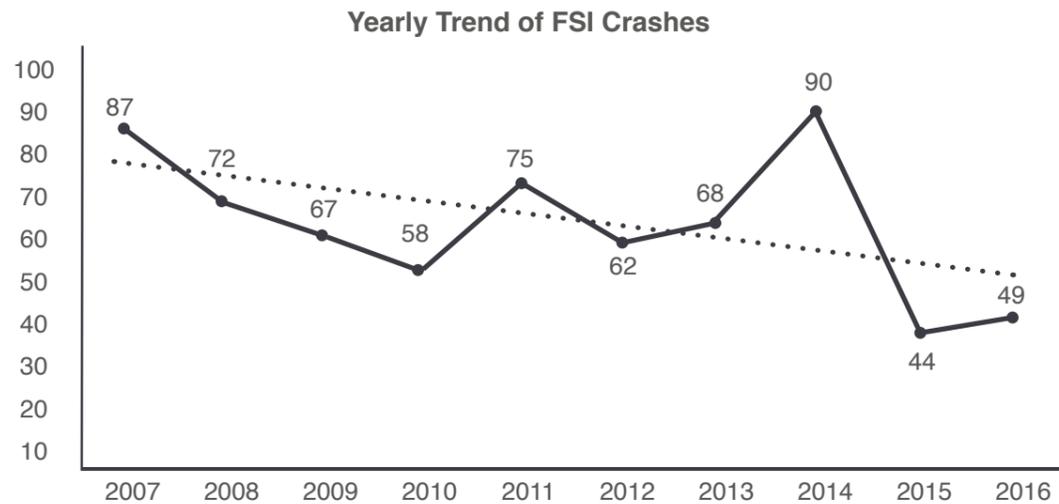


Figure 1: Yearly Trend of FSI Crashes

Due to the current road safety efforts that we are undertaking in Baw Baw, FSI crashes are reducing at an average rate of 15% every 5 years. If the intended rate of reduction is achieved through the successful application and effect of this strategy, a forecasted 43 FSI crashes can be avoided over the five year period in which it will be used.

At the Baw Baw Shire Council, we commit to aligning with the National and State Strategies by setting an ultimate goal of zero FSI crashes on roads within our region. We also commit to implementing the Safe System through current and future road safety projects and initiatives.

Our Road Safety Strategy considers not only the road safety improvements possible within its five year lifetime, but also plans for an ability to continue road safety efforts into the future. The strategy will innovate by implementing Post-Crash Care as an element of road safety in combination with the Safe System framework. This will ensure that future works maximise the ability for emergency services to reach road trauma victims in a timely manner.

# The Safe System

## The Safe System is internationally regarded as the most appropriate framework with which to dramatically reduce road trauma.

By adopting this framework, Sweden has reduced fatalities and serious injuries by almost 40 per cent over the past ten years.

At the Baw Baw Shire Council, we commit to implementing the Safe System through our current and future road safety projects and initiatives to achieve road trauma reductions within the shire.

The Safe System is summarised in the diagram below.



Figure 2: The Safe System

# The Safe System continued

## Principles of the Safe System

**The Safe System framework is based upon the following four principles.**

We will apply these principles to current and future projects in the Baw Baw Shire:

**1. The only acceptable fatality or serious injury toll on our roads is zero (zero tolerance).**

There is no one someone won't miss! Road safety needs to focus on the reduction of fatalities and serious injuries.

**2. People are vulnerable**

If the vehicles we use on our roads every day crash at high-speed, then our bodies are subject to forces that they cannot withstand. The approximate tolerances for the human body under different crash conditions are:

- Head-on crash 70 km/h
- Side impact crash with another vehicle 50 km/h
- Side impact crash with a tree 30 km/h
- Pedestrian crash 30 km/h

Natural tolerances to physical forces are outside of our control, but there is a lot that we can do to control the safety elements that are within our influence. We can reduce or avoid physical impacts greater than those that can be withstood by the human body by addressing the elements of the Safe System.

While it may not be possible to prevent all impacts, the energy levels of crashes should be contained to levels that are low enough to prevent fatalities or serious injuries.

**3. People make mistakes**

To err is human, and while we continue to control our vehicles manually, our errors will continue to result in crashes. However, such crashes should not result in a fatality or serious injury.

The Safe System recognises the unavoidable nature of human error, and rather than placing the blame on the road user, it recognises the need for those involved in road design, road maintenance, and road use to share responsibility for the large variety of factors that contribute to a crash. This approach addresses a broader range of road safety issues without diminishing the responsibilities of road users.

We all make mistakes, but no one should have to pay for them with their life or a life changing injury.

**4. Shared responsibility**

Creating a safe road network is everyone's responsibility. Businesses, organisations, individuals, and the Baw Baw Shire Council all have a role to play in order for us to move Towards Zero.

# The Safe System continued

## Elements of the Safe System

**The Safe System is composed of four interacting elements. These elements encompass all the factors that contribute to a crash.**

Understanding our local road environment and where these elements can be better applied allows us to determine the measures that will best contribute to improving road safety.

The Safe System elements are:

**1. Safer Roads**

Road infrastructure plays a vital role in helping to reduce crashes and minimising the severity of injuries if there is an accident. Our roads should be designed and maintained in a manner in which risk is avoided or minimised for the road users, and the severity of potential crashes is reduced. Our roads should be forgiving towards errors from road users and provide the safest possible outcome in adverse circumstances.

**2. Safer Speeds**

When a crash occurs, the vehicle's speed at the moment of impact and the weight of the vehicle determines how much force is transferred to the people involved. For our fragile bodies, even a small difference in speed can mean the difference between life and death. The 'Safe Speeds' element is concerned with ensuring that appropriate speed limits are applied and road users travel at safe speeds that are right for the road conditions.

**3. Safer people**

Crashes often have an element of human error involved. We must all therefore be careful to ensure that we are aware of the rules, aware of other road users, and are using the road network in a manner where we are able to dedicate the attention and reasoning required for our chosen mode of transport.

**4. Safer vehicles**

Newer and better safety features are continually being implemented in vehicles. These safety features can assist in preventing crashes by automatically detecting dangerous situations and reacting appropriately, or by reducing the impact on occupants once a crash has occurred. Increasingly safe vehicles play an important role in increasing personal safety and reducing road trauma.

# The Safe System continued

## Post-Crash Care

**Our ultimate goal of zero fatalities and serious injuries will require time to achieve. While we strive to apply the Safe System to our extensive road network, crashes will continue to occur.**

When a serious crash occurs, emergency services are required to attend the scene. The time required for emergency response personnel to reach individuals injured in a crash can be a critical factor in determining the severity of the injury. As such, it is essential that emergency response times, accessibility for emergency vehicles, and communication to emergency services are considered in our road safety planning. Projects need to consider cell phone coverage in remote areas or alternative means to contact emergency services, methods to ensure that individuals can adequately identify their location, and the accessibility and response times of emergency vehicles to remote locations. All road safety projects undertaken by council will incorporate consideration for post-crash care.



# What's Happening on Our Roads?

**Baw Baw Shire has a unique set of roads and a unique set of causes leading to our road trauma.**

To effectively address road safety in our region, we must understand the particular set of safety issues that applies to our roads. This is accomplished by combining the following analyses:

### 1. What road safety concerns are highlighted by crash data trends?

Data from previous crashes in the region provide us with valuable insight into the problem locations and reveal crash trends. This is critical to helping us understand the locations where crashes occur, and the issues for which road safety improvements are most critical.

### 2. What road safety concerns are highlighted by the road users?

Information obtained from the local community can identify high stress driving locations, areas with many near misses or nuisance crashes, and areas where particular groups of road users do not feel safe on our roads. This information, which is often missing from the recorded data, can help us to solve road safety issues before any incidents occur.

The analysis and combination of these elements allow us to create a strategy and action plan tailored to address the most pressing road safety concerns in Baw Baw. The relevant results from the crash data analysis and the community responses are presented below.

### What does the data show?

The information presented in this section is based on crash data from the ten year period from 2007 to 2016. Due to the data available, heat maps presented represent crash data for the latest five years from 2012 to 2016 unless otherwise noted.

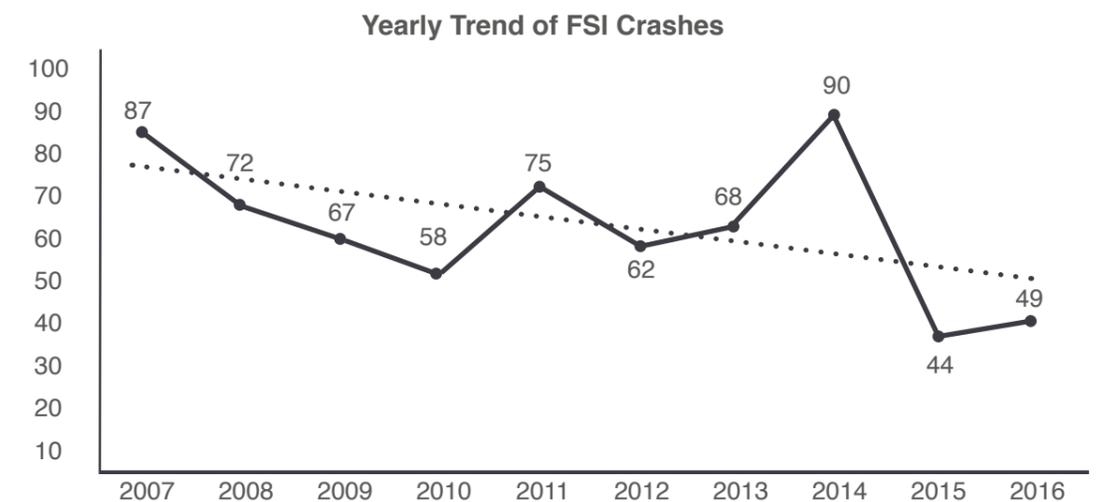


Figure 3: Yearly Trend of FSI Crashes

# What's Happening on Our Roads?

The dotted line in Figure 3 shows the yearly trend of all Fatal and Serious Injury (FSI) crashes over the ten year period from the start of 2007 to the end of 2016. Although the graph does not follow a simple trend, on average the number of crashes is decreasing as seen by the downward slope of the trend line. FSI crashes reduced by 15% over the past 10 years.

**Through the implementation of this strategy, we are aiming for a 30% reduction in FSI crashes over the five year period up to 2022.**

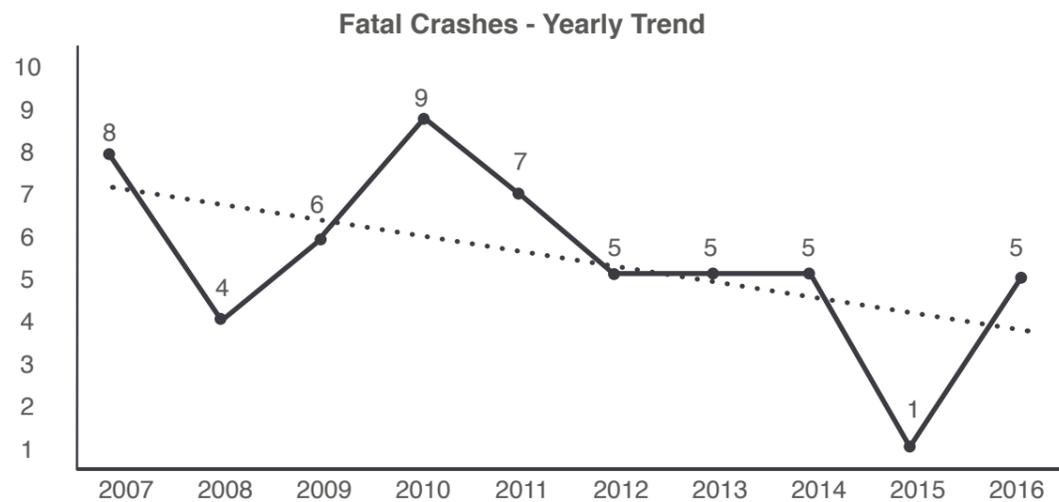


Figure 4: Fatality Crashes - Yearly Trend

Figure 4 shows the yearly trend of fatal crashes over the ten year period from the start of 2007 to the end of 2016. Although the graph also does not follow a simple trend, on average the number of fatal crashes is decreasing as seen by the downward slope of the trend line.

Homing in on fatal crashes reveals much smaller numbers and more significant variation from year to year. In 2015 one fatality occurred on our roads, and we believe that within the lifetime of this strategy, we can achieve our first fatality-free year.

# What's Happening on Our Roads?

FSI Crashes < 70 km/h vs > 80 km/h

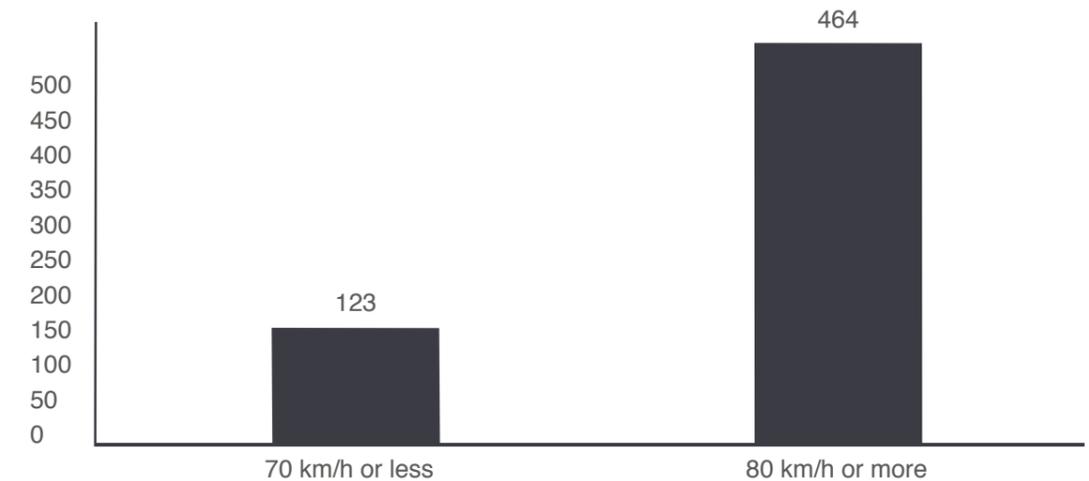


Figure 5: Urban and Rural FSI Crashes

Figure 5 shows the division of all FSI crashes by speed in order to distinguish between rural and urban crashes. Crashes which have occurred in unknown speed zones have not been included in this graph. The majority of FSI crashes occurred in speed zones of 80km/h or above, which generally occur outside of urban areas.

FSI Crashes - Road User Types

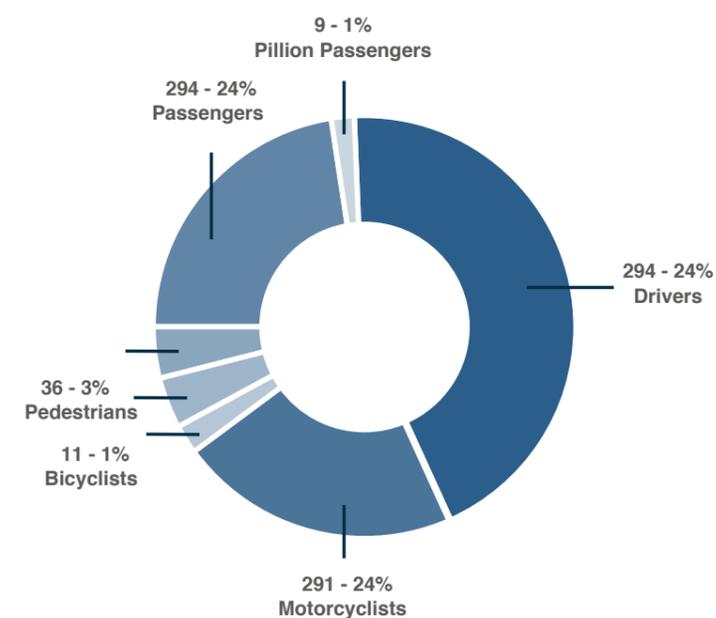


Figure 6: FSI Crash Numbers and Percentages by Road User Type

Figure 6 shows the comparative amounts of FSI crashes for different road users. The involvement of different road user groups varies considerably. This graph shows all road users involved in all FSI crashes, including passengers of vehicles involved in crashes. In attempting to reduce the road trauma in Baw Baw as much and as fast as possible, we need to consider initiatives targeting road user groups largely based on their representation in the crash statistics.

# What's Happening on Our Roads?

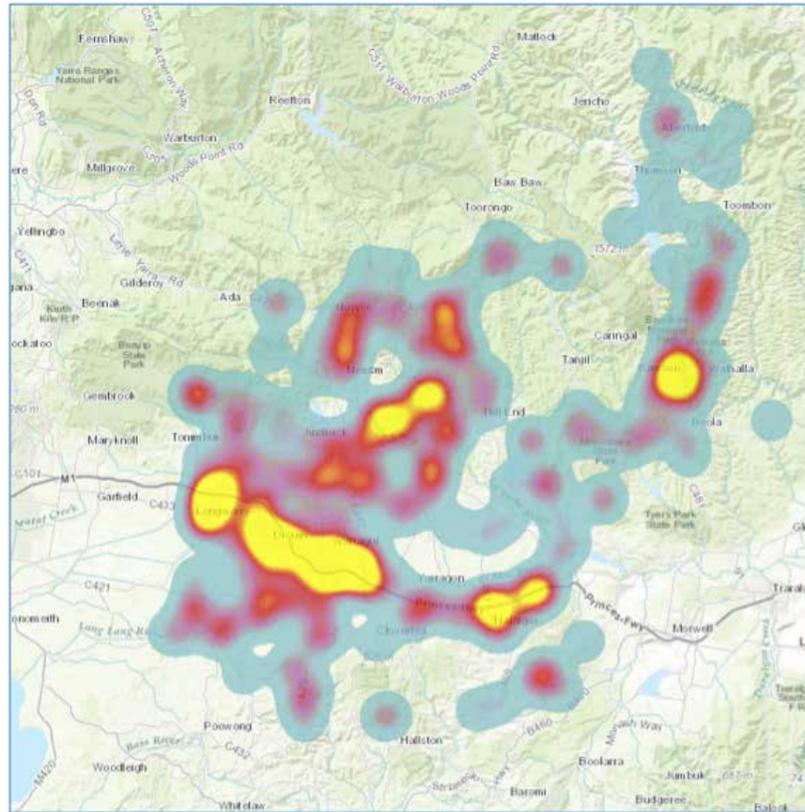


Figure 7: Heat Map of all FSI Crashes

Figure 7 shows all FSI crashes for the previous five years throughout the shire. A number of hotspots can be seen including around Warragul, Drouin, Neerim East, and Rawson. This heat map shows us the locations where the greatest number of FSI crashes have occurred and the general locations where road safety concerns need to be addressed.

The roads with the most FSI crashes have been identified as follows:

ROAD NAME	NUMBER OF FSI CRASHES
Princes Freeway	50
Princes Highway	28
Mt Baw Baw Tourist Road	24
Main Neerim Road	24
Willow Grove Road	19
Main South Road	19

In order to address locations with the most severe crash problems, council has continually participated in the Federal Blackspot Programme by developing road safety projects to address crash concerns at locations with multiple crashes. Due to our efforts and success in this space along with our advocacy and leadership in road safety within the shire, council has been awarded with the Local Government Initiative Award by the Australian Road Safety Foundation in 2017.

# What's Happening on Our Roads?

Over the last ten years, council has developed and delivered blackspot projects at the following locations:

LOCATION	YEAR
Jindivick-Neerim South Road	2008 - 2009
Lardner Road / Lardners Track	2008 - 2009
Sunny Creek Road	2008 - 2009
Wild Dog Valley Road	2008 - 2009
Bona Vista Road	2009 - 2010
Coopers Creek Road	2009 - 2010
Depot Road	2009 - 2010
Fisher Road	2009 - 2010
Jacksons Track	2009 - 2010
Jindivick-Neerim South Road	2009 - 2010
Labertouche Road	2009 - 2010
Longwarry Road (Longwarry-Drouin Road)	2009 - 2010
Stolls Road	2009 - 2010
Darnum-Allambee Road	2009 - 2010
Forest Road	2009 - 2010
Gunn Road	2009 - 2010
Labertouche North Road	2009 - 2010
Latrobe River Rd	2009 - 2010
Burke Street	2010 - 2011
Palmerston Street	2010 - 2011
Toorong Valley Road	2010 - 2011
Old Drouin Road	2010 - 2011
Warragul - Lardner Road	2010 - 2011
Princes Way	2012 - 2013
Main South Road	2012 - 2013
Neerim East Road	2012 - 2013
Hazeldean Road	2013 - 2014
Burke Street / Lardners Track	2014 - 2015
Burnt Store Road	2014 - 2015
McDougal Road	2014 - 2015
O'Briens Road	2014 - 2015
Rogers Road	2014 - 2015
Albert Road / Street	2015 - 2016
Darnum Allambee Road	2015 - 2016
Jindivick-Neerim South Road	2015 - 2016
Lardners Track	2015 - 2016
Lillico Road	2015 - 2016
Nayook Powelltown Road	2015 - 2016
Old Sale Road	2015 - 2016
Waterloo Road	2015 - 2016
Forest Rd	2016 - 2017
Stolls Road	2016 - 2017
Beards Track	2016 - 2017
Cervi Road	2016 - 2017

# What's Happening on Our Roads?

Council will continue to develop and submit blackspot projects in order to obtain continued funding for the treatment of high crash density locations throughout the shire.

Details of actions that will be undertaken by council in order to address FSI crashes can be found in the Action Plan at the back of this strategy.

## Pedestrians

Over the last 10 years, 26 Fatal and Serious Injury (FSI) pedestrian crashes have taken place within Baw Baw. Crash localities include Rawson, Trafalgar, Warragul, and Drouin. The majority of these crashes have occurred within Warragul and Drouin.



Figure 8: Pedestrian Crash Locations, Warragul

The locations of the most recent five years of FSI pedestrian crashes in Warragul are shown in Figure 8. A crash cluster can be seen along Smith Street.

Following these crashes, council has undertaken works on Smith Street to address the pedestrian safety concerns along the road. Works undertaken include the banning of dangerous turn movements for vehicles and the addition of raised pedestrian crossings.

# What's Happening on Our Roads?

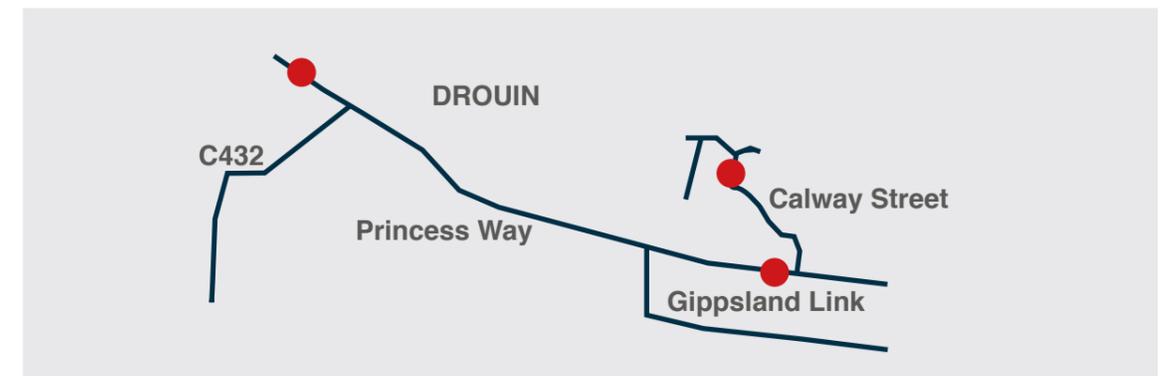


Figure 9: Pedestrian Crash Locations, Drouin

The locations of the most recent five years of FSI pedestrian crashes in Drouin are shown in Figure 9. No hotspots for pedestrian crashes in Drouin were noted.

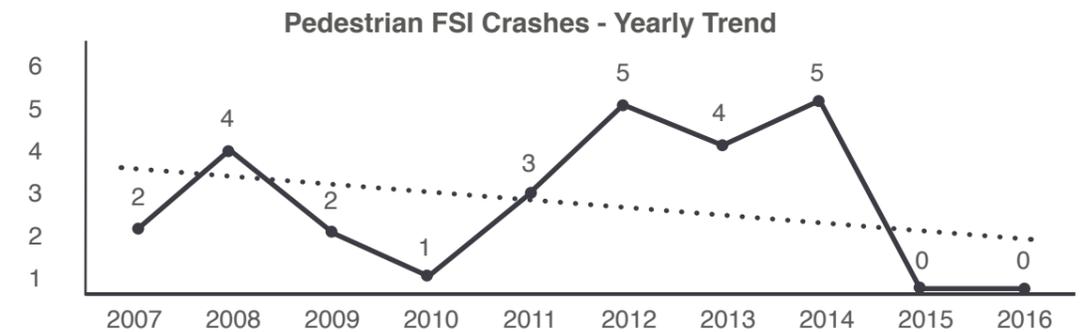


Figure 10: Yearly Trend of Pedestrian FSI Crashes

Figure 10 shows that while there is significant variability, the rate of FSI crashes of pedestrians is reducing overall. In the previous two years, there have been no pedestrians involved in any FSI crashes. However, pedestrians are some of our most vulnerable road users, and we will continue to deliver pedestrian safety projects in order to maintain our zero road trauma record for pedestrians.

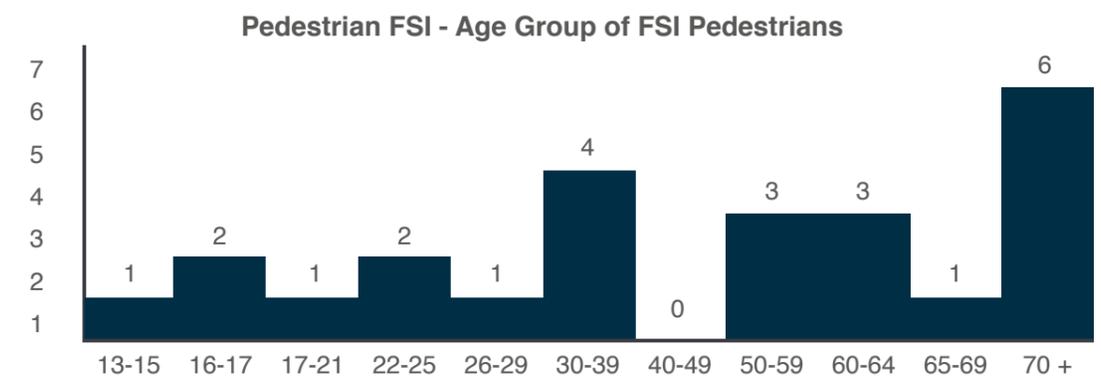


Figure 11: All Pedestrians with FSI injuries by Age Group

# What's Happening on Our Roads?

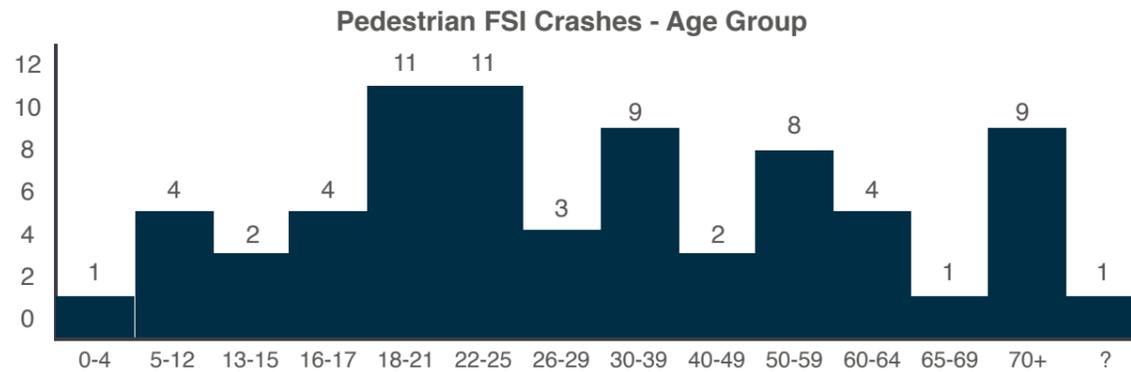


Figure 12: All Individuals Involved in Pedestrian FSI Crashes by Age Group

Figure 11 shows the age groups of all pedestrians that have received an FSI injury. Figure 12 shows the age groups of all individuals involved in pedestrian related FSI crashes. Figure 12 shows that a large number of younger road users are involved in these crashes, however, only a small number of them are pedestrians. This indicates the need for measures to increase awareness of pedestrian safety to younger drivers.

Figure 11 shows that older pedestrians are overrepresented in pedestrian FSI casualties. It should be noted that younger and older pedestrians are especially vulnerable to injury and may sustain greater severities of injuries than other pedestrians from any particular crash.

Similar to most of regional Victoria, Baw Baw has an aging population, with a forecast increase from 18% to 30% over the next 30 years. In order to cater for the aging population, it is important that safety needs for elderly pedestrians are acknowledged and delivered.

The roads with the most pedestrian crashes have been identified as follows:

ROAD NAME	NUMBER OF CRASHES
Princes Freeway	5
Smith Street	4
Albert Street	2
Queen Street	2

Our Ten Year Infrastructure Plan includes over \$7,500,000 of work in our Footpaths Program which includes over \$850,000 for footpath renewal and over \$2,000,000 for the construction of new footpaths within the lifetime of this strategy. These projects increase accessibility for pedestrians and increase safety by removing conflict between pedestrians and vehicles and providing safer movements for pedestrian traffic. Our Footpath Program also includes projects that will deliver better ramps for pedestrians at crossing points, increasing pedestrian safety at these intersections.

Further details of funding for the Footpaths Program can be found in the Ten Year Infrastructure Plan.

# What's Happening on Our Roads?

Additional heat maps of pedestrian crash locations can be found in the Road Safety Strategy Technical Report. Details of actions that will be undertaken by council in order to address pedestrian safety can be found in the Action Plan at the back of this strategy.

## Cyclists

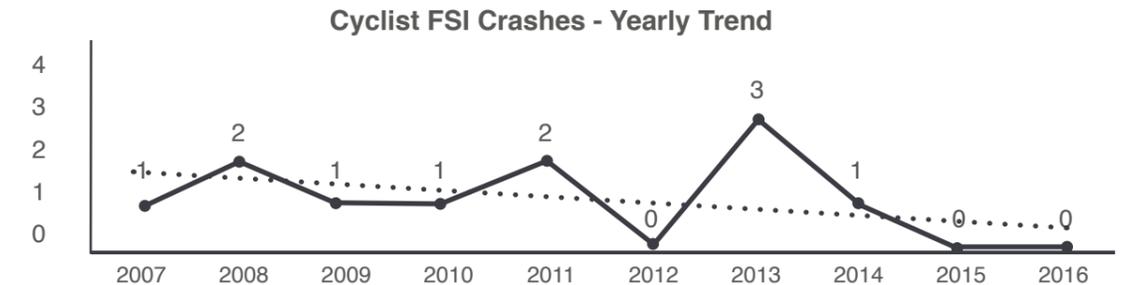


Figure 13: Yearly Trend of Cyclist FSI Crashes

A total of 11 Fatal and Serious Injury (FSI) crashes have occurred over the past ten years in which cyclists were involved. The trend line in Figure 13 shows that on average, the number of crashes involving cyclists is decreasing. There have been no cyclists involved in FSI crashes over the previous two years.

## Cyclists FSI Crashes - Light Conditions

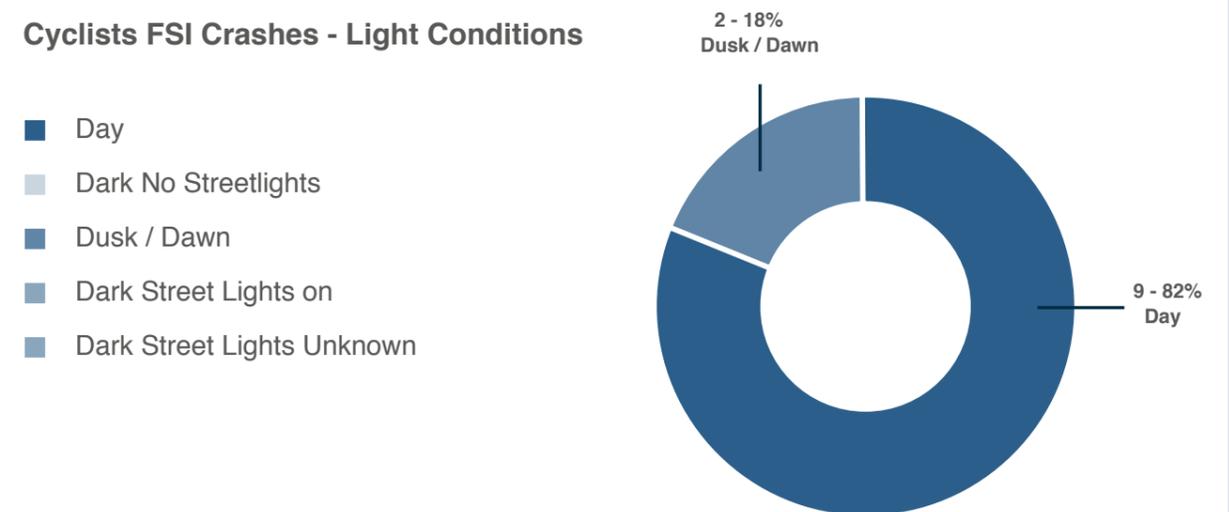


Figure 14: Light Conditions for Cyclists FSI Crashes

Figure 14 shows us the light conditions within which FSI crashes involving cyclists have occurred. The majority of the crashes occurred during the day, with two crashes occurring in low light conditions. No crashes occurred at night. For cyclists riding at night or in low light conditions, visibility is always a priority, however, the crash data suggests that poor lighting conditions generally did not contribute to cyclist FSI crashes in Baw Baw.

# What's Happening on Our Roads?

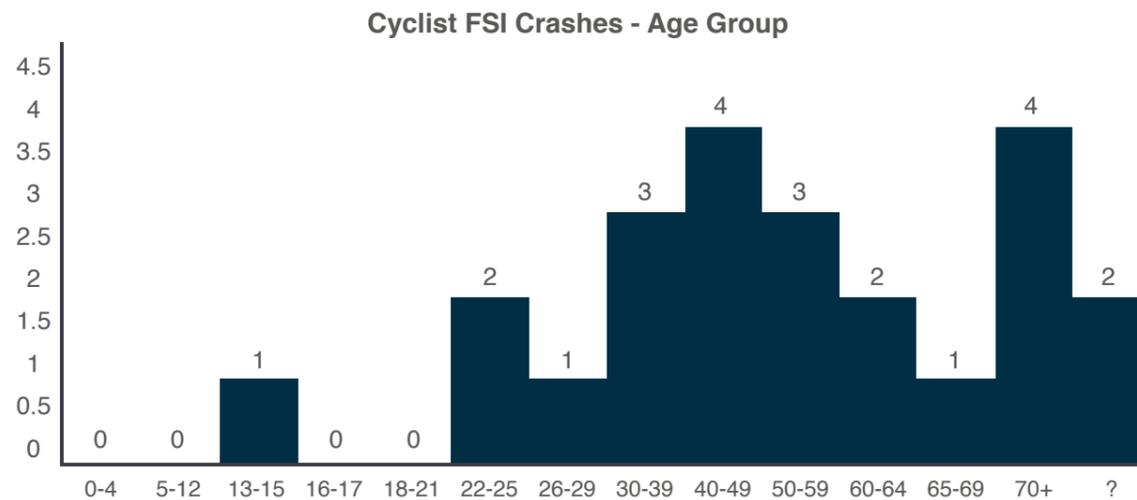


Figure 15: Cyclist FSI Crashes, Involvement by Age Group

Figure 15 shows the ages of all road users involved in cyclist FSI crashes. In contrast to crash rates for other road user groups, younger road users are not over-represented in bicycle related FSI crashes. In recognition of this, it is essential that any non-infrastructure safety improvements for cyclists (such as those achieved through education) are also made available in an appropriate format to older cyclists.

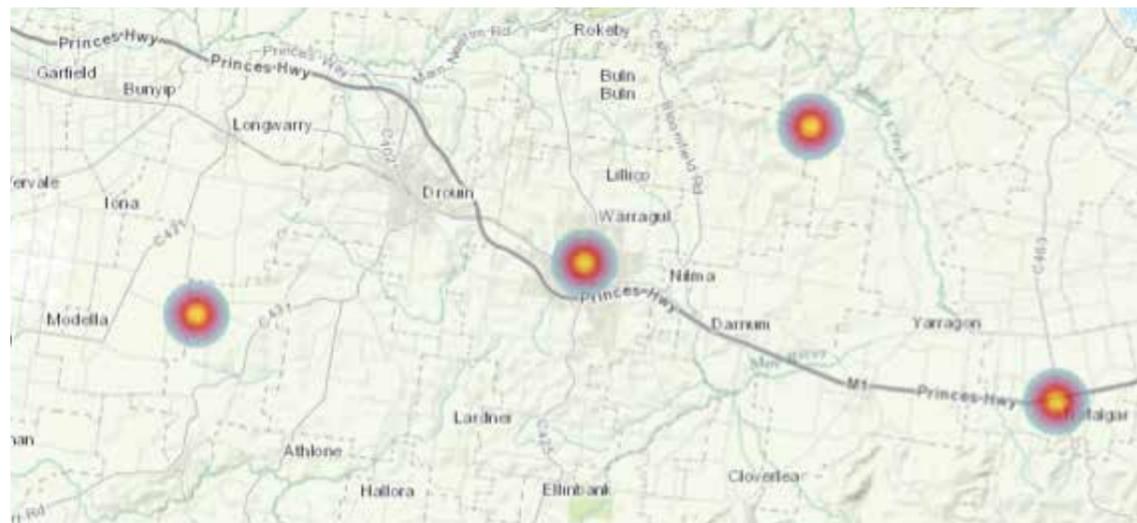


Figure 16: Cyclist FSI Crashes Heat Map

Figure 16 shows the locations at which cyclist crashes have occurred in the previous five years. No crash clusters or areas of high density cyclist crashes were noted. While maps of cyclist crash locations in Warragul and Trafalgar have been included in the Technical Report, no roads with multiple bicycle crashes were identified. As such, a list of roads with the most bicycle crashes has not been included.

# What's Happening on Our Roads?

While the overall numbers of cyclists involved in FSI crashes are relatively low and no cyclists have been involved in FSI crashes over the previous two years, concern regarding cyclist safety is still significant. The growing population of Baw Baw means that there will be more cyclists on our roads and they will be exposed to higher volumes of traffic. Our push towards active transport will also encourage a greater number of cyclists to take to our roads. Cyclists are a vulnerable road user group, and in order to ensure that we are able to maintain a record of zero bicycle related FSI crashes, we must ensure that we continue to provide cyclists with ongoing solutions to maximise their safety.

Details of actions which will be undertaken by council in order to address cyclist safety can be found in the Action Plan at the back of this strategy.

## Motorcycles and Trail Bikes

The following data accounts for both motorcyclists and trail bike riders. Where specific divisions between motorcyclists and trail bike riders have been drawn, these have been indicated.

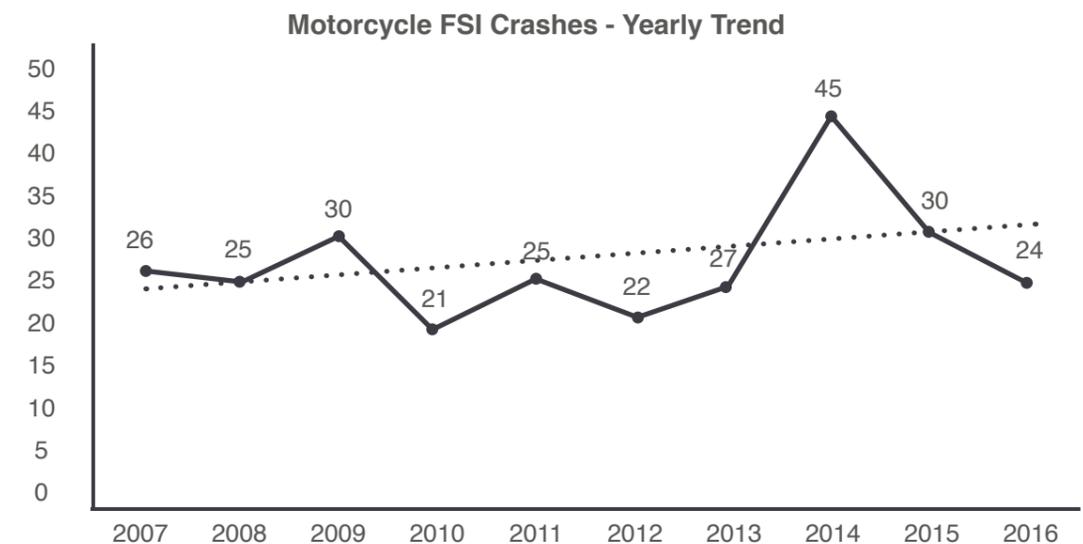


Figure 17: Yearly Trend of Motorcycle FSI Crashes

Figure 17 shows that the trend line for Fatal and Serious Injury (FSI) crashes that involve motorcycles is increasing. This is the only road user group in Baw Baw for which the trend of FSI crashes is increasing, and thus the rate of motorcycle crashes in Baw Baw is of concern. Noting that the number of crashes in 2014 is an outlier in the data, a decreasing crash trend is still not obtained after the removal of this data point. As such, there is a large focus on safety improvements related to motorcycles during the lifetime of this strategy.

A total of 32% of all FSI crashes within our shire are attributable to motorcycle crashes. The lack of protection provided by the motorcycle to the riders makes motorcyclists especially vulnerable.

# What's Happening on Our Roads?

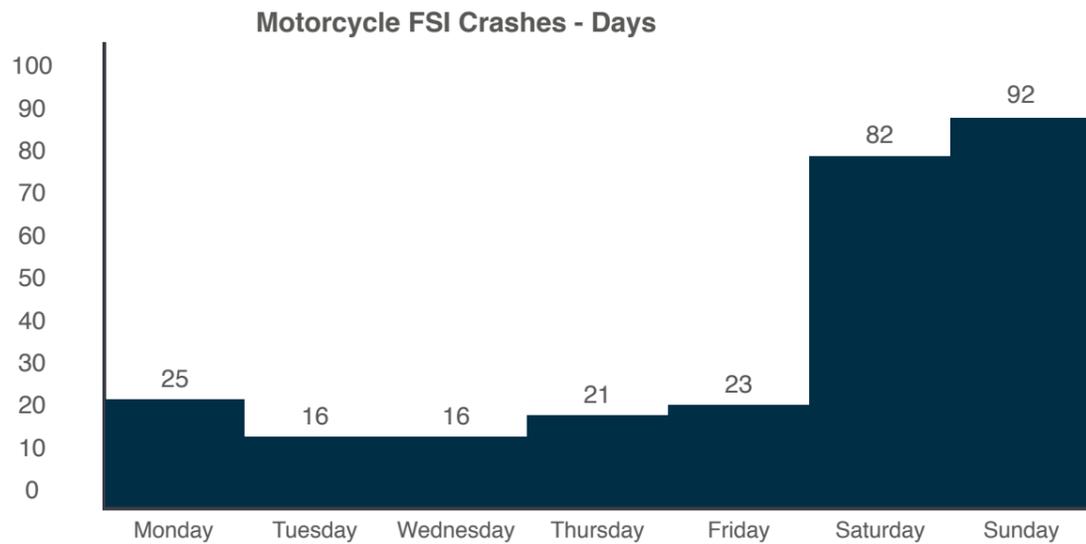


Figure 18: Motorcycle Crashes by Day

Figure 18 shows the number of motorcycle crashes occurring on each day of the week. The number of FSI crashes involving this road user group rises dramatically on weekends. This has been attributed to Baw Baw's windy routes which are popular with recreational motorcyclists, and the unsealed tracks which attract trail bike riders.

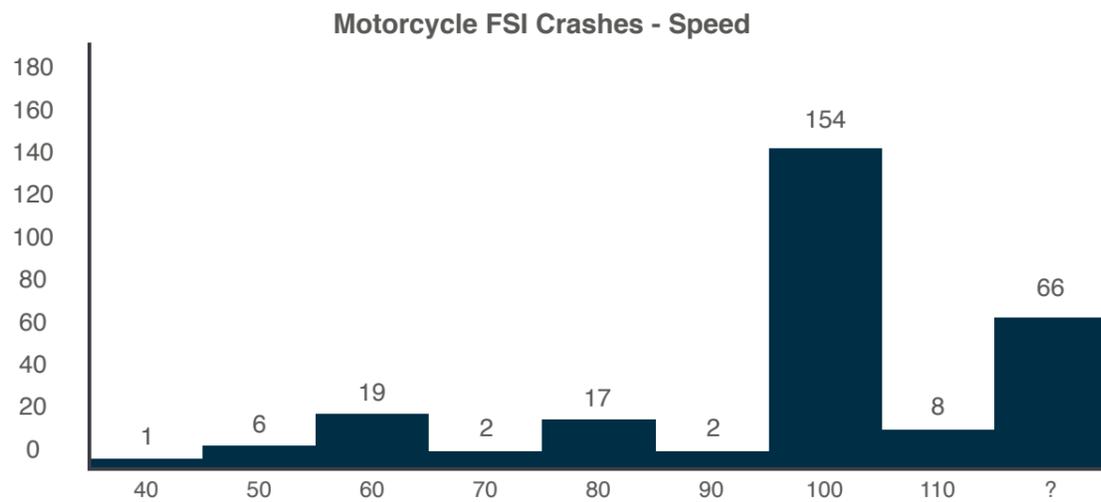


Figure 19: Motorcycle FSI Crashes by Speed Zone

Figure 19 shows the speed zones in which FSI crashes involving motorcycles occurred. As the speed zones in which crashes occurred are generally over 70km/h, it is assumed that the vast majority of motorcycle crashes are occurring outside of major towns. The large number of unknown speed zone crashes generally reflects crashes involving trail bike riders in camping grounds and other off road areas.

# What's Happening on Our Roads?

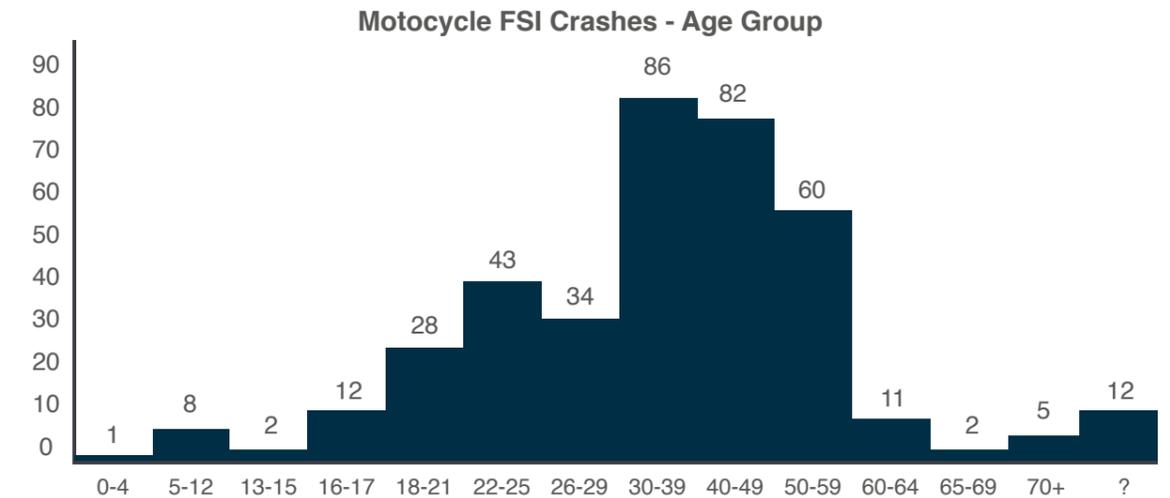


Figure 20: Motorcycle Crashes by Age Group

Figure 20 shows the ages of all road users in crashes involving a motorcycle. It can be seen that unlike the overall crash statistics, younger riders are not overrepresented.

## FSI Motorcycle Crashes - Solo vs Multiple

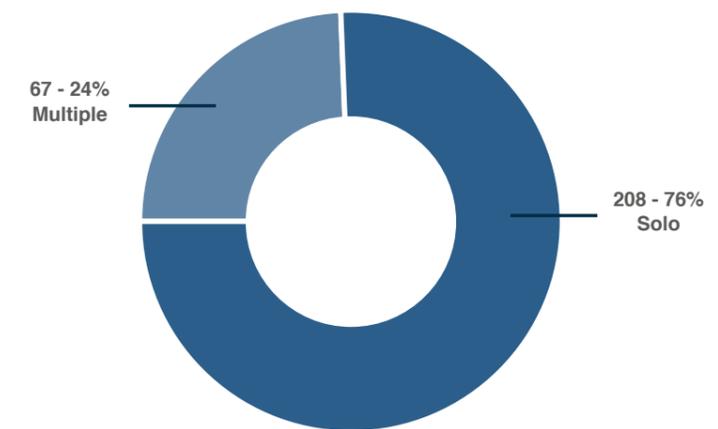


Figure 21: Proportion of Single Vehicle and Multiple Vehicle FSI Crashes Involving Motorcycles

Figure 21 shows the division of FSI motorcycle crashes into those that did or did not also involve other vehicles. It can be seen that the vast majority of crashes concerning motorcycles did not involve multiple vehicles. The majority of motorcycle crashes are therefore unlikely to have resulted from interactions with other road users.

# What's Happening on Our Roads?

FSI motorcycle Crashes by Road Management Authority

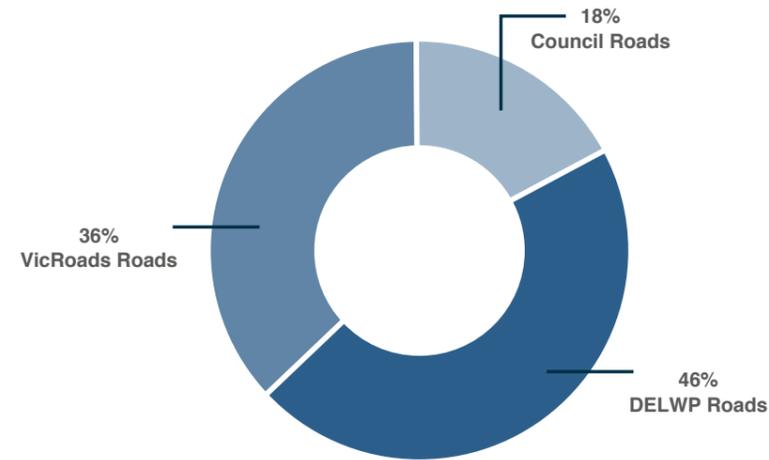


Figure 22: Proportion of Motorcycle related FSI crashes on roads for Road Management Authorities

Figure 22 shows the proportion of FSI crashes involving motorcycles on roads governed by different road management authorities. Although council roads contribute to a significant portion of motorcycle trauma, addressing FSI crashes for motorcycles involves engaging with other road authorities who govern roads within the Baw Baw Shire.

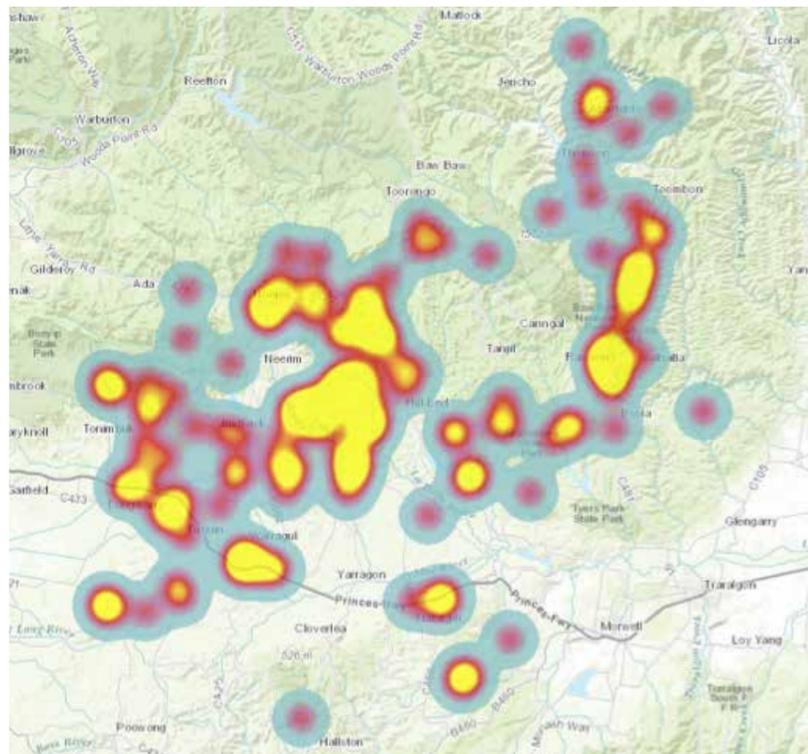


Figure 23: Heat Map of All Motorcycle FSI Crashes

# What's Happening on Our Roads?

Figure 23 shows the location of all FSI crashes in which a motorcycle was involved. It can be seen that in comparison to the heat map of all FSI crashes in the shire (shown in Figure 7), the hot spots for motorcycle FSI crashes occur in different areas. The areas in which motorcycle crash hotspots occur are the Neerim East and Rawson areas. The locations highlighted in this heat map support the earlier supposition that crashes from recreational motorcycling and trail bike riding are large contributors to the motorcycle crash statistics. By locating crashes which have occurred in unknown speed zones and camping areas, we can filter the data in Figure 23 to create an approximation of trail bikes specific crash locations.

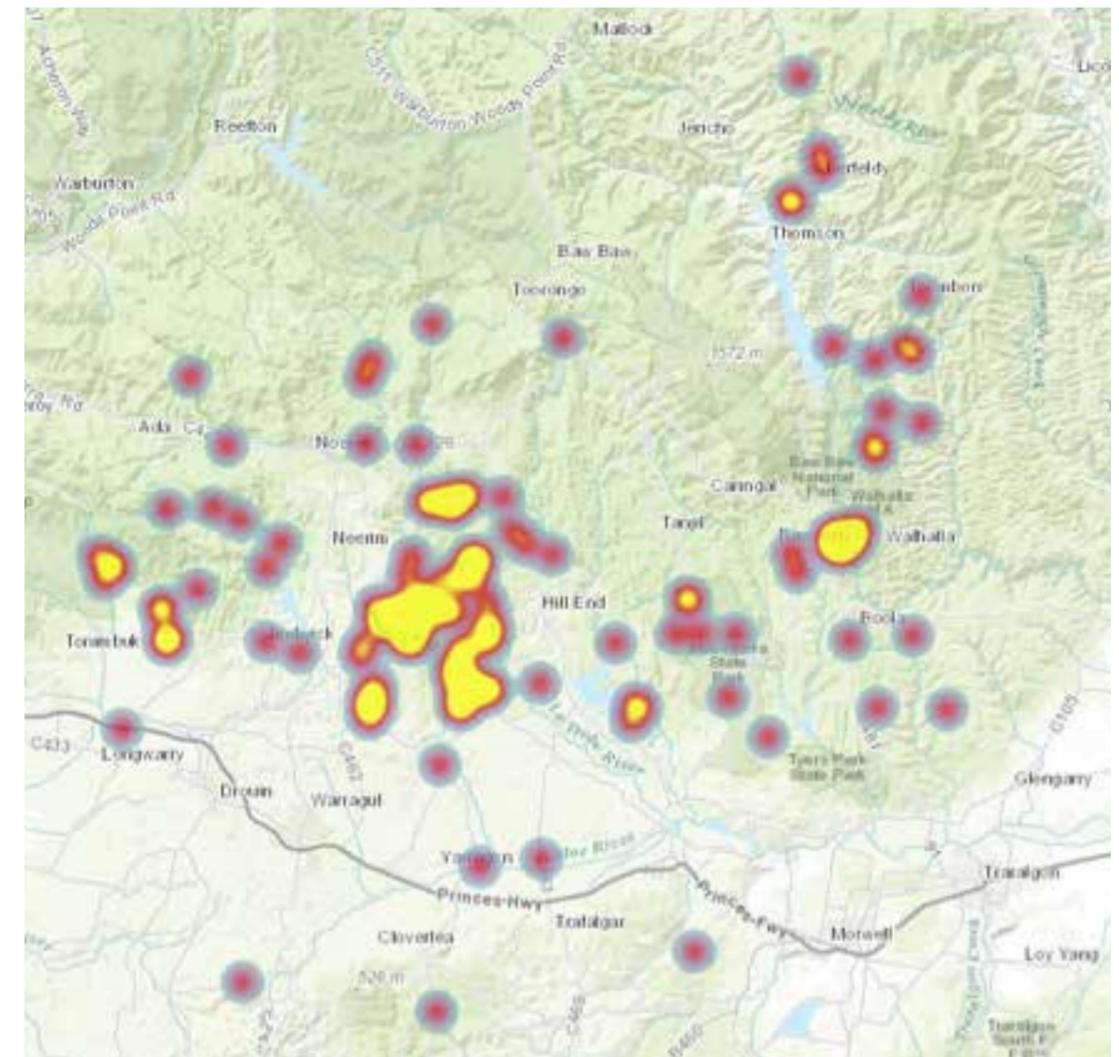


Figure 24: Motorcycle FSI Crashes in Non-Speed Regulated Areas

Figure 24 shows the distribution of motorcycle related crashes in Baw Baw that occurred in camping grounds and areas recorded as unknown speed limits. Though this does not necessarily cover all trail bike crashes, this crash distribution can be used to identify many of the hotspot locations for trail bike crashes throughout the shire.

# What's Happening on Our Roads?

It can be seen that there is a high concentration of trail bike crashes generally southeast of Neerim and in Rawson. This is consistent with areas of higher trail bike activity throughout the shire.

By analysing the hotspots from Figure 23 and Figure 24, we can differentiate the areas of concern in relation to trail bike riders and on-road motorcyclists, allowing us to target road safety treatments to the appropriate user groups in the appropriate areas.

**FSI Crashes - Road User Types**

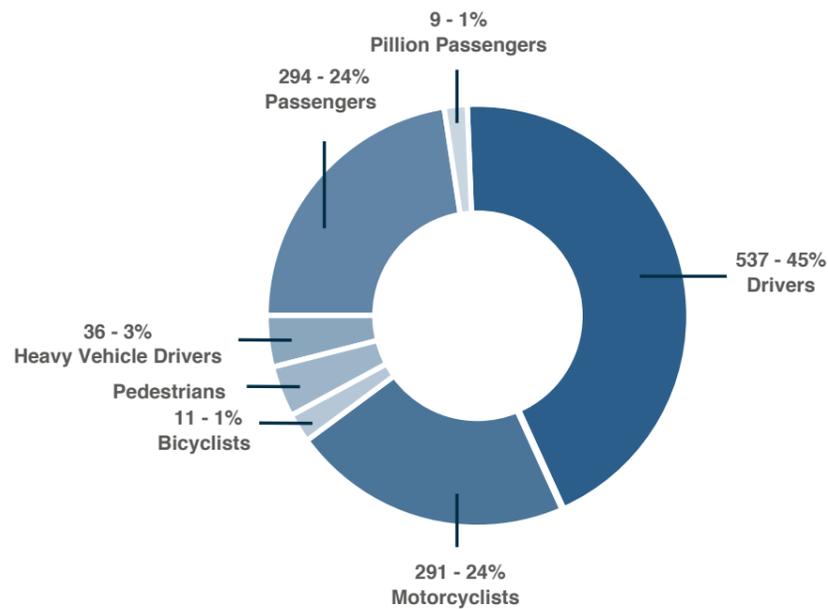


Figure 25: FSI Crash Numbers and Percentages by Road User Type

Figure 25 shows the proportion of road user types that were involved in FSI crashes including passengers of vehicles. 9 pillion passengers were involved in FSI crashes. This is similar to the number of cyclists involved in FSI crashes over the same time period. In order to address the involvement of pillion riders in motorcycle related FSI crashes, this road user type should be accounted for in motorcycle related education initiatives undertaken.

The roads with the most motorcycle crashes have been identified as follows:

ROAD NAME	NUMBER OF CRASHES
Mt Baw Baw Tourist Road	15
LaTrobe River Road	11
Willow Grove Road	11
Princes Freeway	11
Walhalla Road	10

# What's Happening on Our Roads?

## Council is already engaged in activities to reduce the high crash numbers for motorcycles and trail bikes.

We are currently participating in piloting a safety project for trail bike riders in the Neerim East Area. This project is being undertaken in conjunction with VicRoads, the Department of Environment, Land, Water, and Planning, TAC, Victoria Police, Ambulance Victoria, Motorcycling Victoria, and various user groups such as the Warragul Motorcycle Club. A safety review of the tracks in this area is being undertaken. The result of this review will determine the treatments to be implemented, including the possibility of a number of innovative safety treatments. The results of this program will inform future trail bike safety projects in other areas within Baw Baw and throughout the state.

A series of motorcycle safety advertisements are also being created by council. These will be aired throughout Baw Baw and across the state. The timing of the airing of these advertisements will coincide with times of high recreational motorcycle activity.

Due to the high proportion of motorcycle and trail bike crashes throughout the shire, and due to the lack of decline of FSI crashes involving motorcycles and trail bikes, a large emphasis has been placed on safety for these user groups. Details of actions that will be undertaken by council in order to address motorcycle and trail bike safety can be found in the Action Plan at the back of this strategy.

## Heavy Vehicles

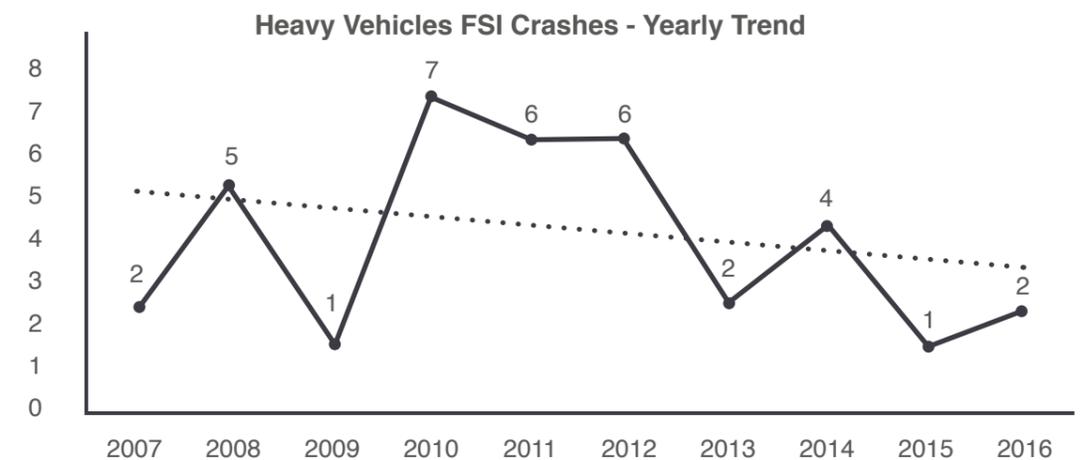


Figure 26: Yearly Trend of Heavy Vehicles FSI Crashes

Figure 26 shows the number of Fatal and Serious Injury (FSI) crashes involving heavy vehicles that have occurred in the past ten years. Heavy vehicle crashes show a decreasing trend, and in two of these years, a single FSI crash involving heavy vehicles was recorded.

# What's Happening on Our Roads?

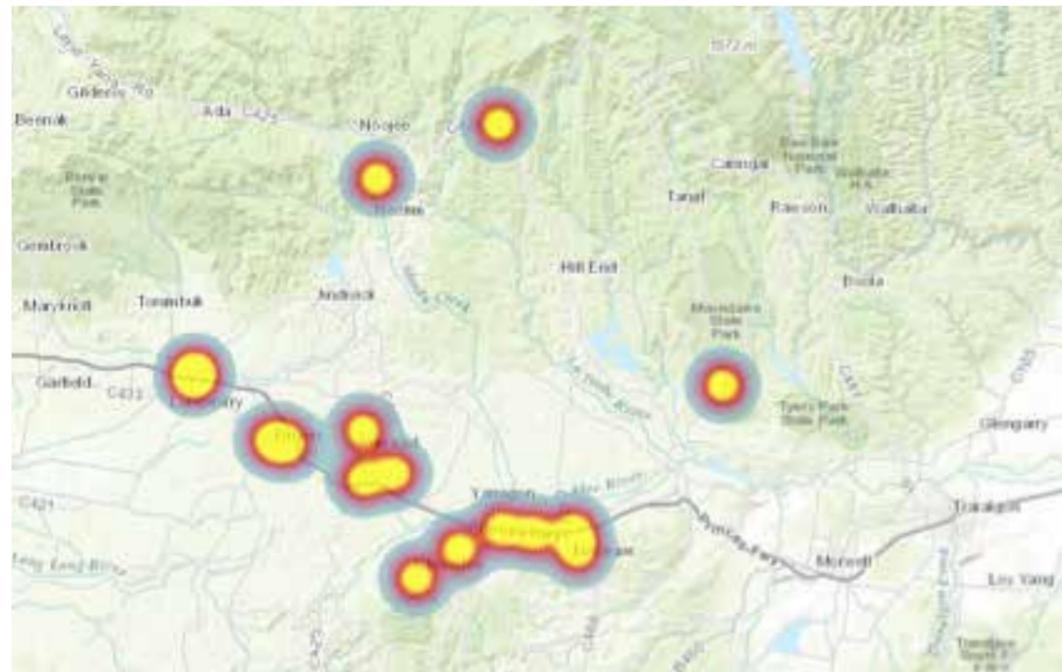


Figure 27: Heat Map of FSI Crashes Involving Heavy Vehicles

Figure 27 shows the locations where heavy vehicle crashes have occurred in the previous five years. The majority of these crashes occurred on freeways and arterial roads.

## FSI Crashes - Road User Types

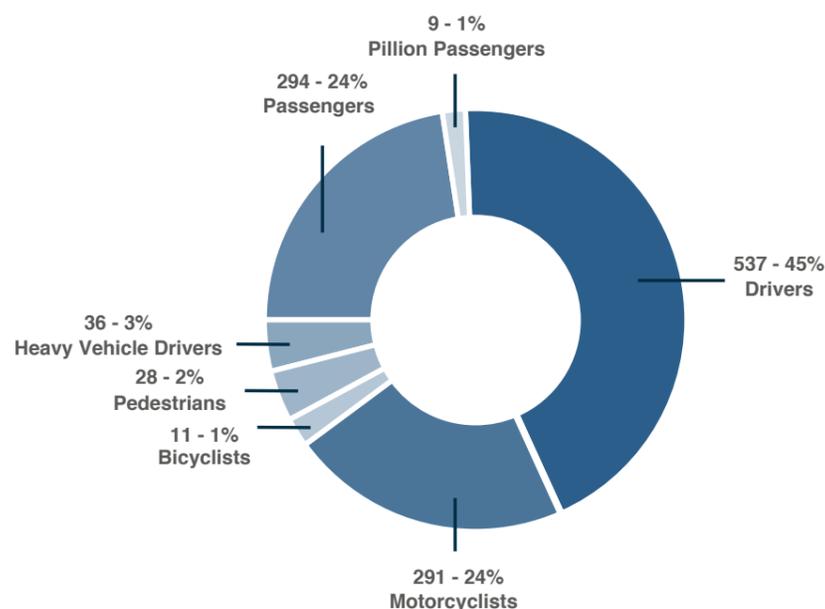


Figure 28: FSI Crash Proportions by Road User Type

# What's Happening on Our Roads?

Figure 28 shows the breakdown of all road users involved in FSI crashes. It can be seen that heavy vehicles do not comprise a significant proportion of vehicles involved in FSI crashes relative to other vehicles.

Community consultation for the creation of this strategy included public surveys in which respondents were asked to identify the major road safety concerns and risks in Baw Baw. Of the respondents, 13% identified heavy vehicles as a leading road safety concern in Baw Baw. However, as demonstrated in Figure 28, heavy vehicle involvement in FSI crashes is 3%. It can be seen that there is a large disconnect between the actual number of FSI crashes involving heavy vehicles and the degree of concern regarding the involvement of heavy vehicles in reducing road safety. It should also be noted that the actual crashes involving heavy vehicles (3%) does not mean that the heavy vehicle driver was at fault, but merely that a heavy vehicle was involved. This further increases the discrepancy between the perceived and actual risk relating to heavy vehicles.

In order to maximise the rate of reduction of FSI crashes, this strategy needs to focus primarily on user groups that are over-represented in these crashes. As heavy vehicles do not have significant involvement in FSI crashes, they are not emphasised in the strategy as much as road user groups that were involved in significant portions of FSI crashes, and those that are expected to require future-proofing due to expected increases in road safety risk resulting from the growing population and changing social and economic environment of Baw Baw.

This doesn't mean however that trucks are not considered within the strategy. Both the safety of our heavy vehicle drivers and the safety of other road users from heavy vehicles have been addressed.

The roads with the most heavy vehicle FSI crashes have been identified as follows:

ROAD NAME	NUMBER OF CRASHES
Princes Freeway	5
Princes Highway	3
Hazeldean Road	2
Willow Grove Road	2
Mt Baw Baw Tourist Road	2
Main South Road	2

In order to reduce stress when driving near heavy vehicles, council has been proactively removing heavy vehicles from local roads by providing them with alternative designated routes. This addresses concerns for road users who are intimidated by these heavy vehicles and can also increase efficiencies for heavy vehicle drivers.

Based on previous council discussions with the timber logging industry, and safety concerns related to residents on timber truck routes, council will investigate the potential safety benefits obtained through the distribution of UHF radios to residents along specific routes of concern.

Details of actions that will be undertaken by council in order to address road safety relating to heavy vehicles can be found in the Action Plan at the back of this strategy.

# What's Happening on Our Roads?

## Sealed and Unsealed Roads

Of the 1,765km of road managed by the Baw Baw Shire Council, 1,072kms are sealed and 693kms of road are unsealed. Our road sealing program creates an avenue for us to continue sealing the unsealed sections of our road network.

**FSI Crashes - Sealed vs Unsealed**

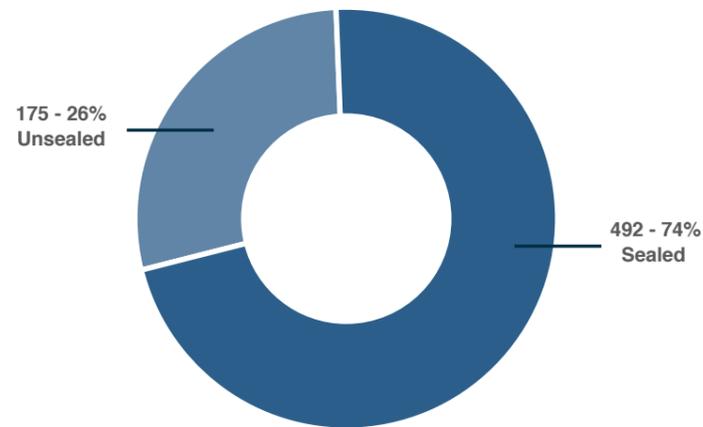


Figure 29: Division of FSI Crashes on Sealed and Unsealed Roads

Figure 29 shows the division of Fatal and Serious Injury (FSI) crashes between sealed and unsealed roads. Note that crashes where the seal condition was unknown have been omitted from this graph. Nearly three quarters of crashes occurred on sealed roads. However, when interpreting the data, we need to keep in mind that council has significantly more sealed roads than unsealed roads.

**FSI Crashes - Sealed vs Unsealed (Crashes per Km)**



Figure 30: FSI Crashes per Kilometre of Sealed and Unsealed Road

# What's Happening on Our Roads?

Figure 30 shows the rate of crashes on sealed and unsealed roads in the shire when taking the differences in the amount of sealed and unsealed road into account. When considering the difference in the amount of sealed and unsealed road, the rate of crashes for the two surface types are slightly closer. Per kilometre of each type of road in the shire, there are approximately twice as many crashes on sealed roads than unsealed roads.

Furthermore, a multitude of other factors affect the statistics. These include the amount of traffic on each type of road or the effect of trail bike crashes on unsealed roads that should remain unsealed. Both of these examples skew the current data, likely in favour of showing a higher rate of crashes on unsealed roads. Though the information presented above provides us with some direction, it does not conclusively demonstrate that unsealed roads are less dangerous than sealed roads.

In light of the above information, it can neither be stated that unsealed roads are safer than sealed roads, nor that sealed roads are safer than unsealed roads. This creates some difficulty in determining the safety benefit of sealing a road. While this does not mean that council should or will abandon road sealing, it does call into question the idea that the sealing of roads will make them safer. It has often been found for example that sealing a road can lead motorists to drive at higher speeds, which results in a greater number of crashes.

The inconclusive nature of the above data means that the selection of roads to be sealed requires careful review to ensure that road sealing will lead to a safety benefit and not an increase in the number of crashes.

## Schools

Baw Baw Shire contains more than 40 primary and secondary schools distributed throughout the region. Schools generate significant traffic in the mornings and afternoons. A large portion of traffic generated by the school consists of children travelling by foot or on a bicycle.

Safety for children and younger road users who are some of our most vulnerable road users continues to be of concern to parents, schools, and the community at large. This concern was illustrated in the responses to the public survey, letters received from the community regarding high risk locations, and in representation at the community consultation.

It should be noted that our crash data analysis does not show any particular concerns regarding school aged pedestrians and bicyclists. However, the support demonstrated that to continue to provide exceptional safety for these vulnerable road users is commendable.

In order to sustain road safety for our younger road users, it is essential that road safety is promoted at and in our schools, local road use changes are accounted for when assessing road safety around schools, and that road safety is maintained to the latest standard. Educational initiatives should both consider students leaving school who are entering the statistically more dangerous years for road trauma, and younger students who may be less aware of circumstances occurring on the road and are more vulnerable in the event of a crash.

# What's Happening on Our Roads?

In order to provide adequate safety for our younger road users, council will be active in encouraging road safety programs to be implemented in schools and will undertake road safety investigations in the vicinity of schools in Baw Baw for potential road safety concerns for school children.

Details of actions which will be undertaken by council in order to address road safety relating to younger road users can be found in the Action Plan at the back of this strategy.

## Tourists

Baw Baw attracts large amounts of tourism for its motorcycle routes, trail bike tracks, and natural beauty. This results in a large number of people that reside outside of our shire using our roads. As we continue to welcome tourists to our shire, we must take into consideration their safety, acknowledging that they will be less familiar with our roads.

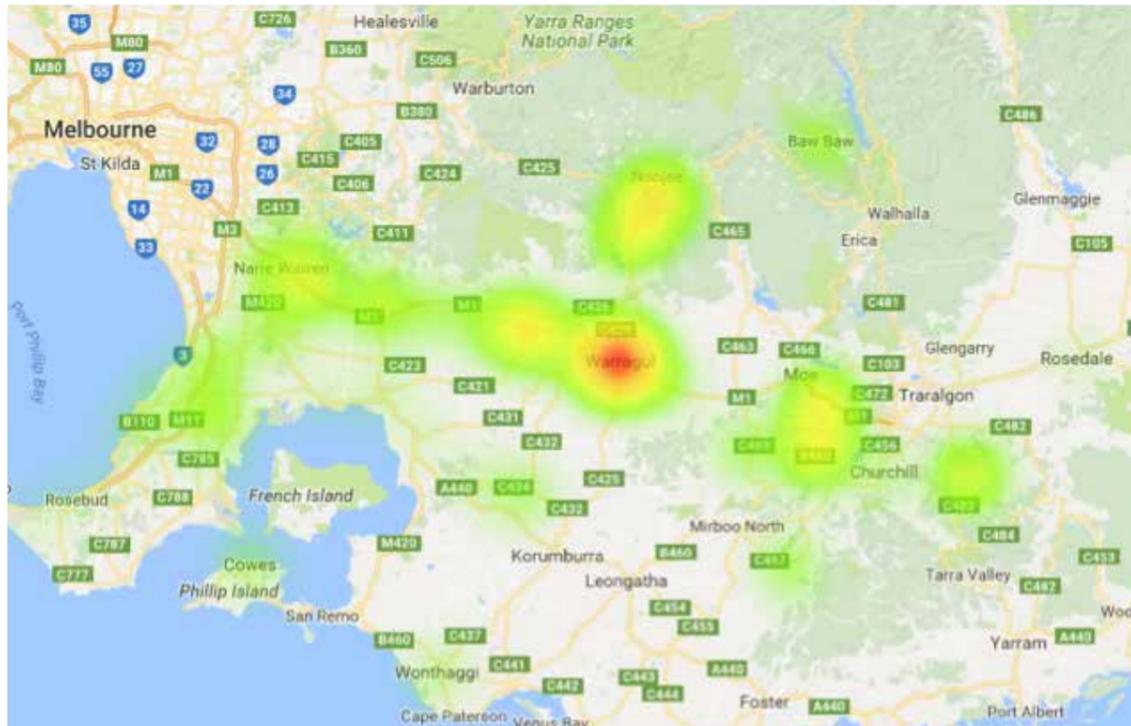


Figure 31: Heat Map of Home Postcodes of Vehicle Owners Involved in Crashes

Figure 31 shows the spread of home addresses of road users involved in crashes within Baw Baw Shire. Significant portions of road users involved in crashes live outside of the Baw Baw Shire area. Ensuring that our road safety messages are passed on to our visitors is important to ensuring safety on our roads.

The community survey contained feedback on the best approaches to increase road safety awareness to visitors to the shire.

# What's Happening on Our Roads?

## What are the best ways of publicising these road safety messages to visitors to our shire? (Select as many options as applicable)

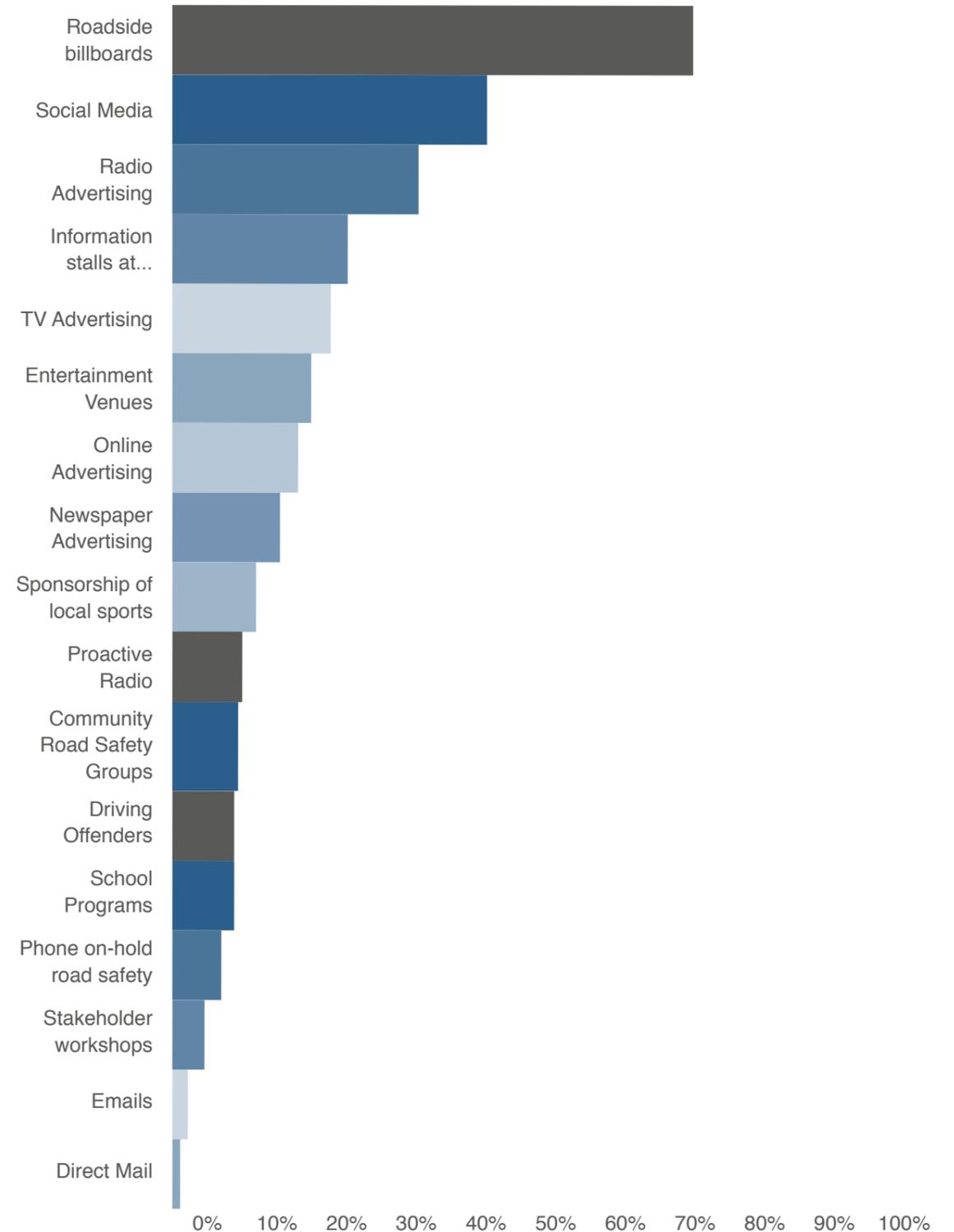


Figure 32: Survey Results for Methods to Publicise Road Safety Messages to Visitors to the Shire

# What's Happening on Our Roads?

Figure 32 shows the responses to one of the questions in the survey. Respondents felt that effective ways to communicate our road safety messages to tourists are through roadside billboards, social media, and radio advertising.

Council has been engaged in a number of initiatives promoting road safety both locally and beyond the shire.

One such council involvement is in distributing 'Check your Mates' trail bike safety information in targeted areas throughout the shire and promoting the program to other councils. The material that is distributed provides trail bike riders with essential information for trail bike safety, rules, and regulations, and alerts riders to some common issues and errors that occur with trail bikes. More information about this program can be found on the Motorcycling Victoria website at <http://www.motorcyclingvic.com.au/check-your-mates/>

We are also currently involved in motorcycle safety for visitors to the shire and are producing a series of motorcycle safety television advertisements to be broadcast both within Baw Baw and throughout the state. This wider information that is targeting motorcyclists is expected to have some impact on riders using roads within Baw Baw for leisure riding.

In addition to the initiatives above, we recognise the top priorities for communicating road safety messages as put forward by the community. As a result, a number of actions within this strategy utilise road side billboards (and variable message signs) to convey targeted road safety messages to visitors to our shire.

While we would like to protect our visitors and ensure their safety in our shire, we must acknowledge that even though Figure 31 shows considerable involvement in crashes from visitors to the shire, the majority of the people involved in crashes in Baw Baw are from the local area. It is essential that as we look to provide road safety assistance and information to our visitors, we do not lose focus of our own need for increased local road safety initiatives and education, and our local involvement in local crashes.

## Drink Driving

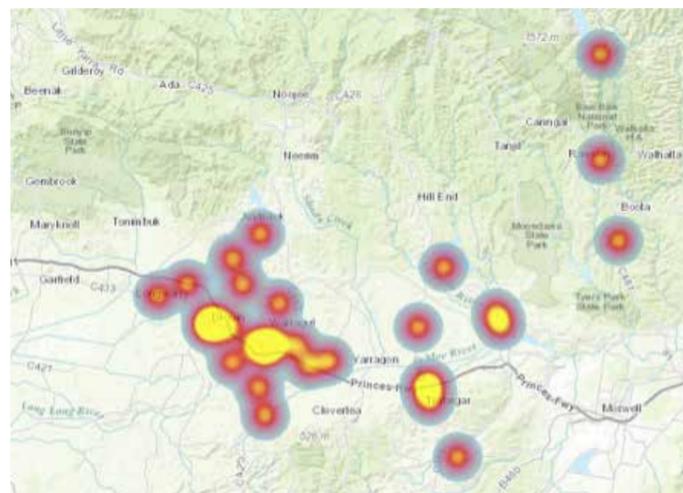


Figure 33 shows the location of crashes where alcohol was involved. It can be seen that crash clusters generally align with population density.

Figure 33: Heat Map of Alcohol Related Crash Locations

# What's Happening on Our Roads?

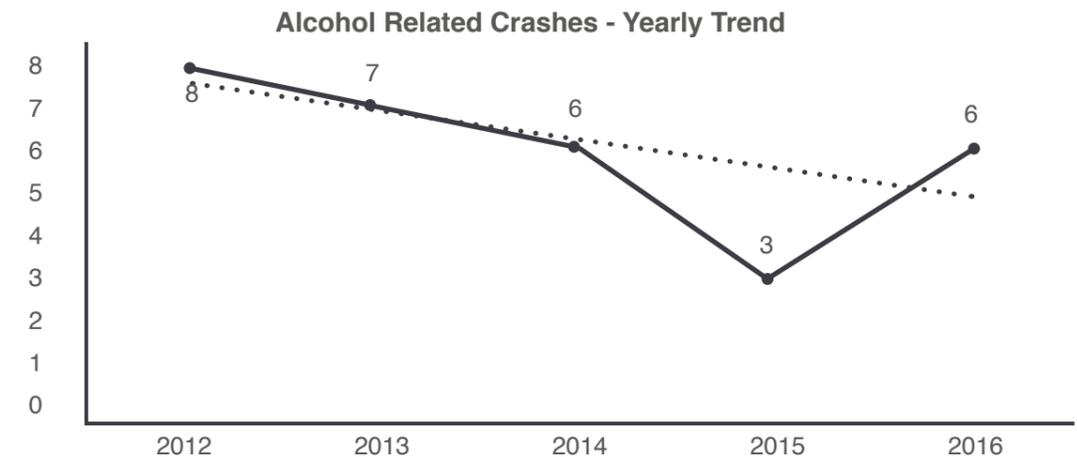


Figure 34: Yearly trend of alcohol related crashes

Figure 34 shows the number of crashes involving alcohol each year. Overall, there is a downward trend of alcohol related crashes.

In order to reduce the amount of crashes in which alcohol was involved, council has been in contact with all pubs in Baw Baw regarding the installation of breathalysers to provide additional avenues for their patrons to avoid drink driving. Council will continue to support establishments to discourage drink driving and implement solutions to prevent alcohol related crashes.

Details of actions to be undertaken by council in order to address drink driving can be found in the Action Plan at the back of this strategy.

## Heat Maps

A number of heat maps have been produced to identify locations with high crash densities. Some of these heat maps have been presented throughout this strategy. Areas with high crash densities may warrant more detailed, site specific road safety investigations.

The heat maps that have been produced identify the spread of crashes involving particular user groups or particular locations.

Heat maps for all Fatal and Serious Injury (FSI) crashes in Drouin and Warragul are presented below. Additional heat maps are included in the Road Safety Strategy Technical Report available on the council website.

# What's Happening on Our Roads?

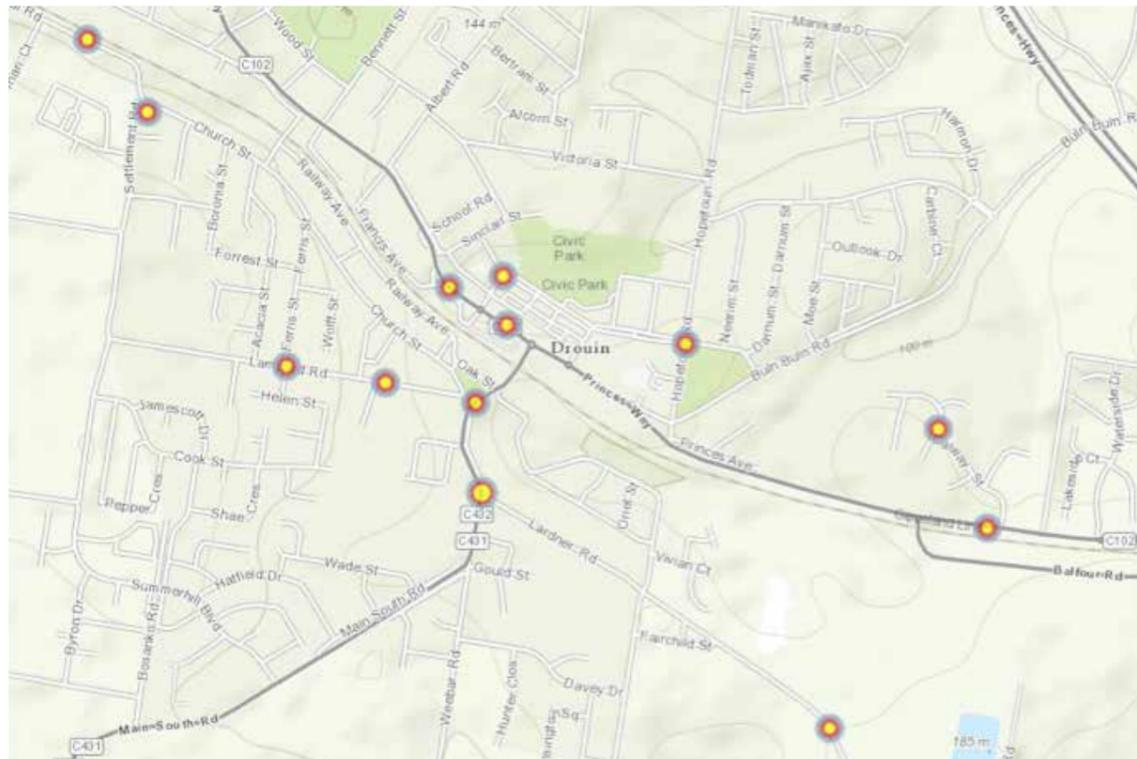


Figure 35: Locations of All FSI Crashes in Drouin

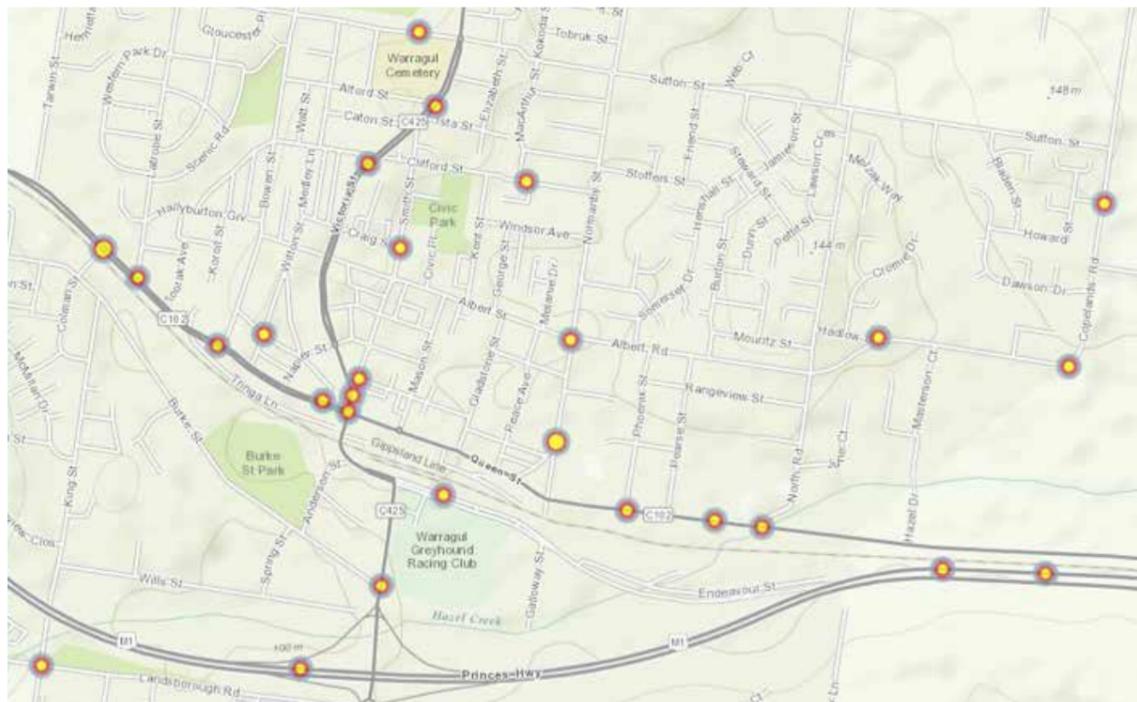


Figure 36: Locations of All FSI Crashes in Warragul

# What's Happening on Our Roads?

## 6.2 What did you tell us?

Data alone does not tell us everything. High risk locations and issues can be identified by the community and resolved before an incident occurs. In order to identify this additional information, the community as well as a select group of stakeholders were engaged.

The stakeholder consultation session was attended by the following organisations:

- |  |                             |
|--|-----------------------------|
| Baw Baw Shire Council                                | Victoria Police             |
| Corrections Victoria                                 | Vision Australia            |
| Department of Environment, Land, Water, and Planning | Warragul Bus Lines          |
| Gippsland Safe Freight                               | Warragul Cycling Club       |
| Public Transport Victoria                            | West Gippsland Health Group |
| VicRoads   |                             |

Through online surveys, letters from the community, consultation sessions, and the community's eagerness to be involved in this discussion, the community consultation process obtained feedback from approximately 300 community members.

Common issues noted by community members include poor road conditions, speeding and driver behaviour. Solutions suggested by community members involve driver education, speed reductions, better enforcement, and better road maintenance. For community members with disabilities, providing better footpaths and more disabled parking were mentioned as means to increase road safety.

The following information was obtained from the online survey. The complete set of data is available in the Baw Baw Shire Road Safety Strategy 2018-2022 Technical Report.

### Which mode of transport that you use within Baw Baw makes you feel the least safe?

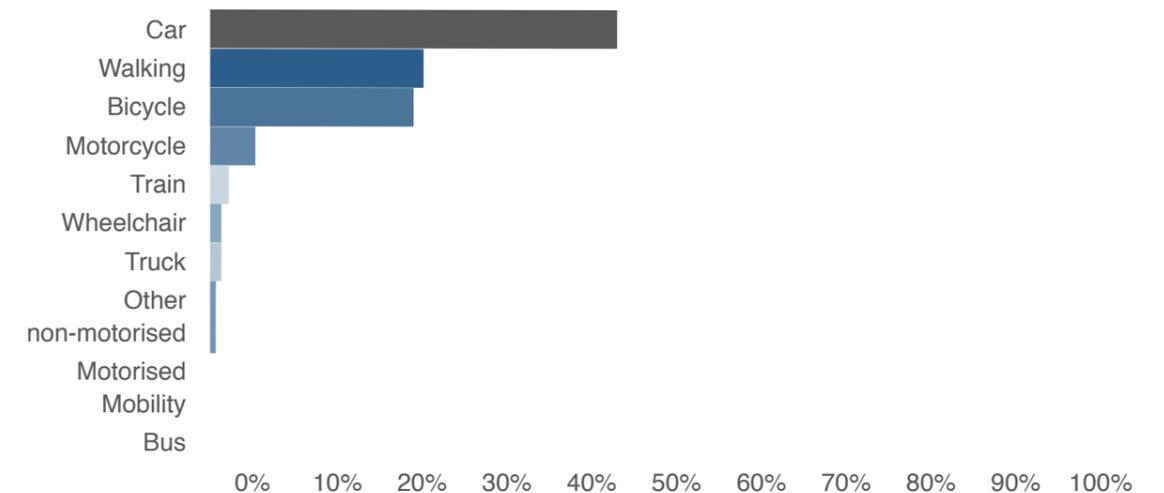


Figure 37: Survey Responses to Question 4

# What's Happening on Our Roads?

## Cars were felt to be the most unsafe mode of transport by the majority of respondents.

Significant concern was also raised regarding pedestrian and cyclist safety. However, when we consider that the number of respondents who drive cars and the number of respondents who ride bicycles are significantly different, we can break this information down by the type of road user responding to the survey.

When assessed in this way, we find that:

23% of respondents who walk within the shire thought it to be the most dangerous mode of transport they used.

39% of respondents who ride motorcycles within the shire thought it to be the most dangerous mode of transport they used.

49% of respondents who drive within the shire thought it to be the most dangerous mode of transport they used.

55% of respondents who ride bicycles within the shire thought it to be the most dangerous mode of transport they used.



# What's Happening on Our Roads?

Of the following road safety issues that could be addressed, which three (3) do you believe are the highest priority?

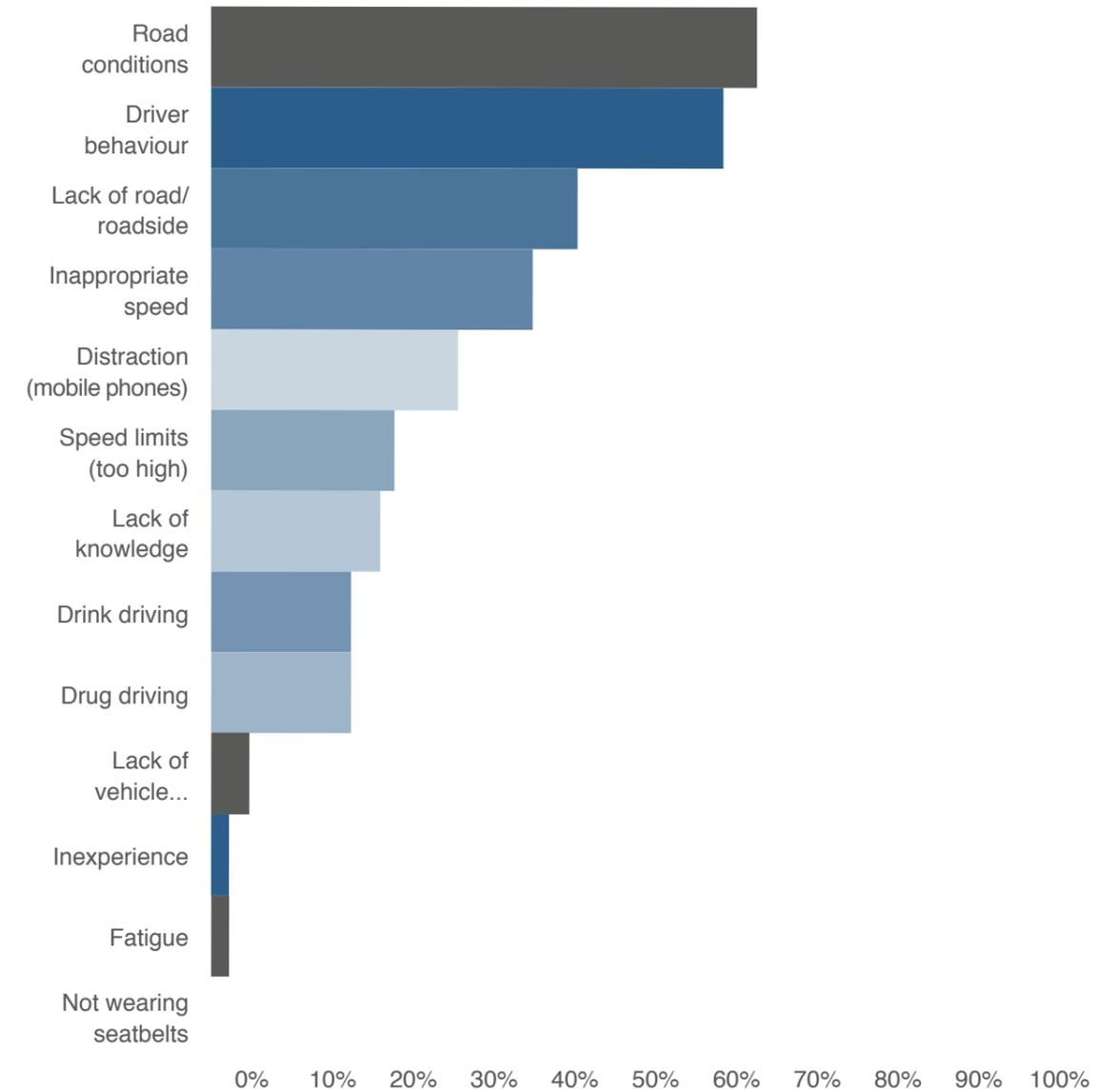


Figure 38: Survey Responses to Question 8

The top road safety concerns were identified by the community as being:

- Road conditions (63%)
- Driver behaviour (60%)
- Lack of road/roadside infrastructure (40%)
- Inappropriate speeds (37%)
- Distractions (26%)

These results show issues that are prevalent throughout Baw Baw which causes the most stress to road users and create both real and perceived unsafe driving environments.

# What's Happening on Our Roads?

Based on the feedback obtained, a number of solutions have been identified. These include infrastructure improvements and maintenance, education, and better regulation and enforcement of speeds. Each of these solutions have been incorporated in the action plan at the end of this document, which focuses on addressing community concerns while targeting road user groups and locations arising from the crash data analysis.

## What are the best ways of publicising these road safety messages to the local community of Baw Baw? (Select as many options as applicable)

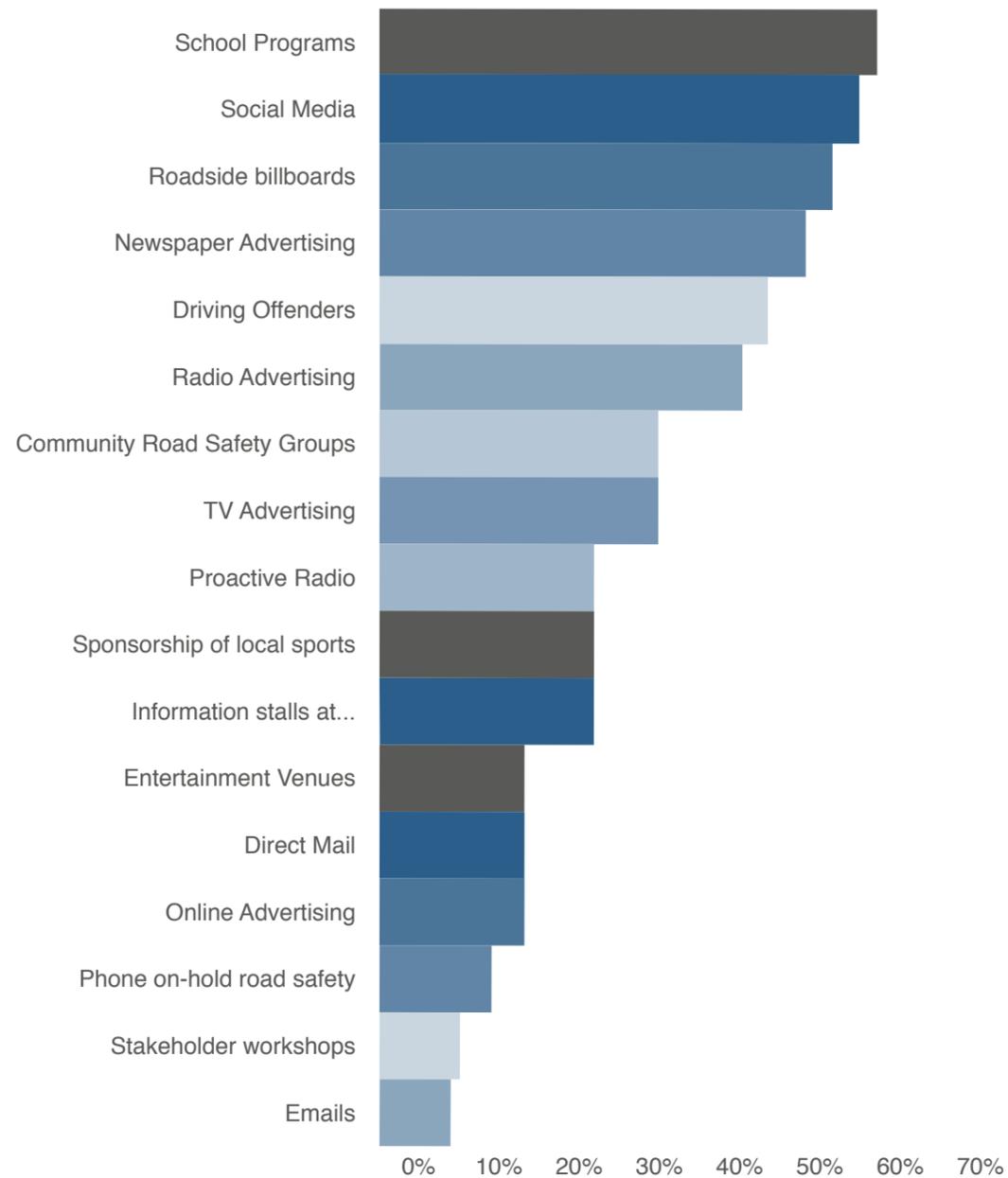


Figure 39: Survey Responses to Question 15

# What's Happening on Our Roads?

While social media, roadside billboards, and radio advertising were identified to be effective methods of spreading road safety information to both the Baw Baw community and our visitors, the implementation of school programs was identified as a key component in communicating road safety messages locally within our community.

## What are the best ways of publicising these road safety messages to visitors to our shire? (Select as many options as applicable)

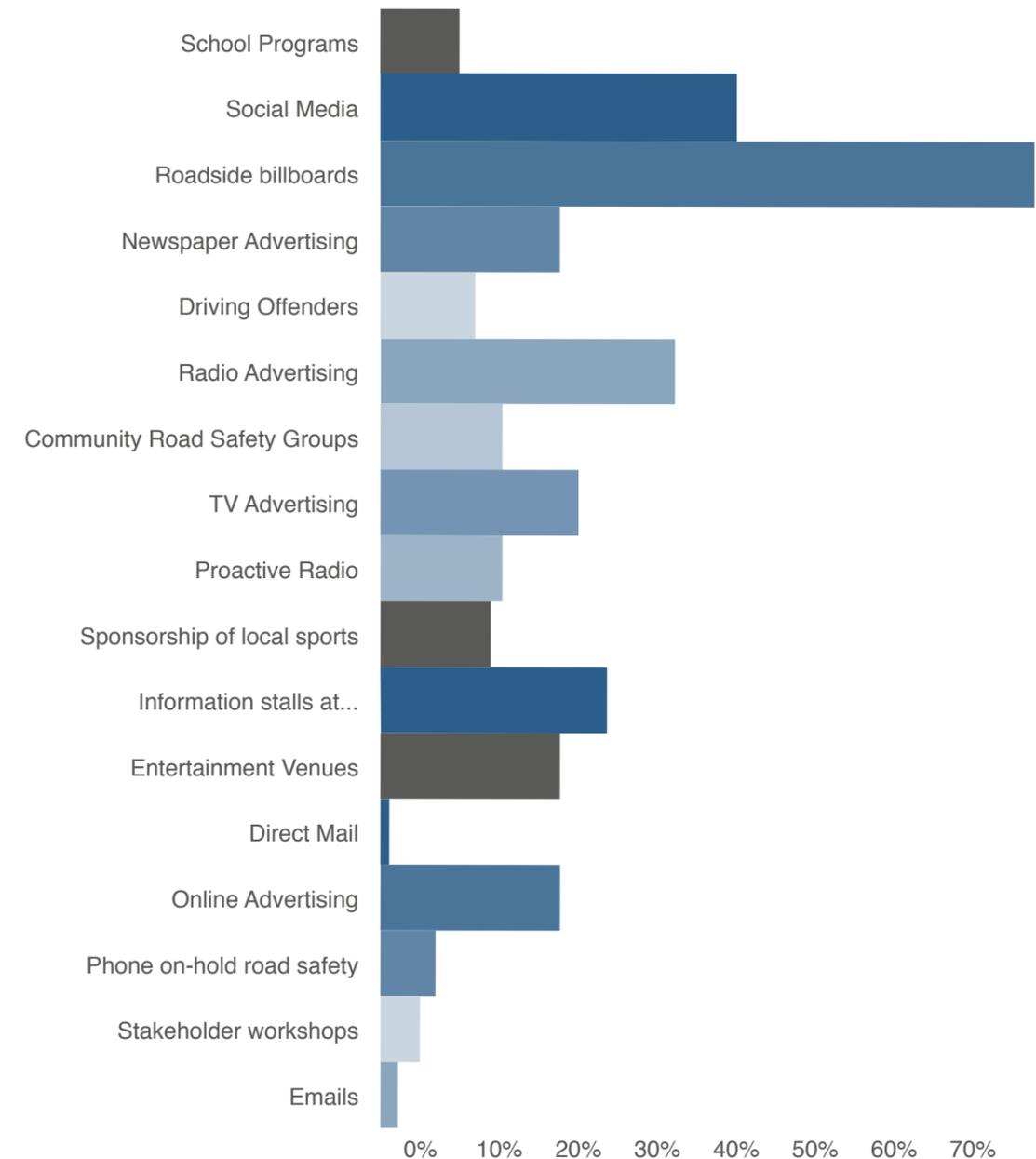


Figure 40: Survey Responses to Question 16

# What's Happening on Our Roads?

The top initiatives to improve speed management were identified to be:

- Communicating the vulnerability of the human body, and its relation to speed (54%)
- Reducing the speed limit on roads with high crash rates (43%)
- Provide more messages to the community about how speed limits are set (37%)
- Create lower speed environments on local streets (35%)

## Safer Speeds

Choose up to three initiatives you believe Baw Baw Shire Council could implement to improve speed management (speed limits, compliance, speed in dangerous areas, etc.) of our community from the options below (provide at least one answer)

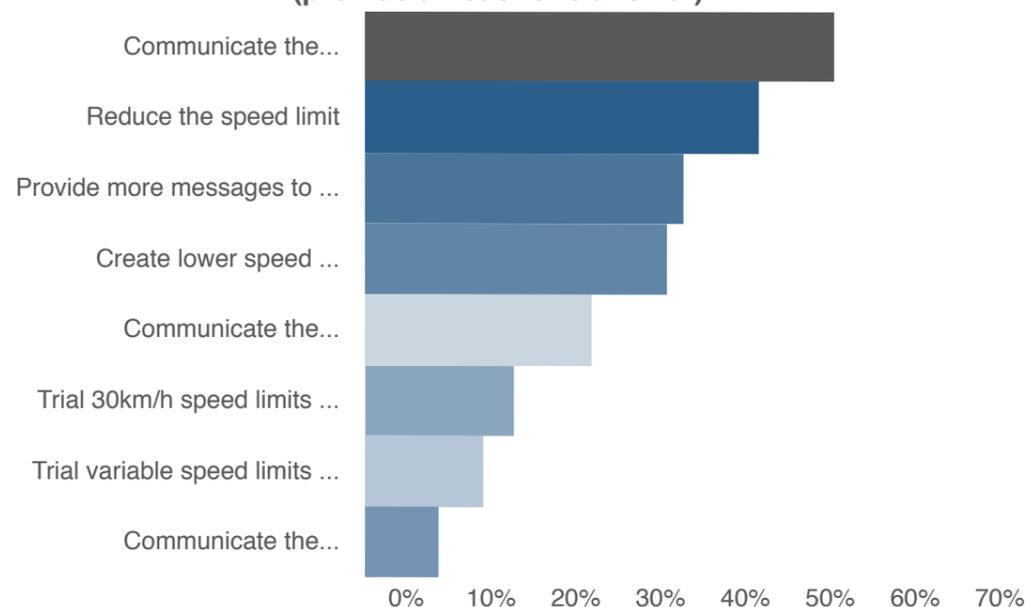


Figure 41: Survey Responses to Question 17

Due to confidentiality regarding free text responses in the survey, the responses to a number of survey questions will not be shown. All free text survey responses and letters obtained in response to the public consultation for the development of this strategy are held internally by council.

More generally, a number of themes which frequently appeared in surveys responses were:

- An eagerness to improve safety for pedestrians and cyclists.
- Support for speed control and compliance measures at high risk locations.
- Reduced tolerance for hoon activities and increased reporting and monitoring of hooning behaviour.
- Support for continued investment into existing and new infrastructure to support road safety outcomes.
- Support for education around road rules and positive road use habits.
- Support for shared responsibility and an encompassing approach to road safety issues.

# Road Risk Rating

**In addition to information obtained from the community, risk rating our roads allows us to supplement the data obtained from crashes.**

Crashes can occur for a variety of reasons, some of which are outside council's influence or otherwise cannot be reasonably addressed within the scope of our strategy such as the scatter of crashes in which an animal has been struck.

Risk rating our roads provides us with a snapshot of the risk along all roads based on characteristics such as speed, road geometry, roadside furniture, and current guidance and safety provided to road users. This can further help identify locations where high risks exist but are not reflected in the crash history, and locations where crashes may have occurred but are unlikely to reoccur due to low risks at the crash location.

For the reasons mentioned above, road risk rating adds immense value to understanding our road safety needs. As such, we will risk rate all council roads and use these rating along with crash data to determine the priority of road safety works within the shire.



# What Works and What Doesn't?

## There is a lot of information available on road safety and the effects of different safety measures.

This provides us with an excellent starting point when deciding what methods and initiatives we should implement in order to achieve the results we want.

Research<sup>1</sup> has shown that road trauma can be reduced when:

- ✓ We see a commitment from leaders.
- ✓ We commit to a methodical approach.
- ✓ The community is involved in planning and delivering road safety outcomes.
- ✓ We adopt safety measures that have been shown to be effective in the past.

The following approaches and initiatives have proven to be effective in addressing some of the most common problems on our roads:

### Education and experience

- ✓ Road safety programs for all ages that are not delivered as one-off sessions.
- ✓ Promoting a safer driving culture in local communities.
- ✓ Engaging the youth, their parents, and other partners who can deliver road safety messages to young drivers.
- ✓ Involving schools in road safety education and programs.
- ✓ Ensuring that educators on road safety are properly trained.
- ✓ Ensuring that programs are interactive, age appropriate and engaging.
- ✓ Delivering programs, especially for teenagers, that focus on the social competence of students to help them develop resilience, coping strategies, refusal skills and self-efficacy to behave in a safe manner.
- ✓ Utilising resources available from VicRoads, the TAC and other road safety agencies.
- ✓ Ensuring that adequate driving experience (120 hours or more) with a supervising driver is achieved for learner drivers.
- ✓ Targeted campaigns addressing road safety issues and identifying actions for road user groups.

1 Fylan, F., Hempel, S., Grunfeld, B., Conner, M., Lawton, R. (2006), *Effective Interventions for Speeding Motorists. Road Safety Research Report No. 66*. London: Department for Transport.  
Darnton, A. (2008) *Lessons from theory to practice: Summary of Findings from GSR Behaviour Change Knowledge Review*. London: University of Westminster.  
Health Communication Unit (2004). *Changing Behaviours: A Practical Framework*. Toronto: Centre for Health Promotion, University of Toronto  
RACV (2007) *The Effectiveness of Driver Training as a Road Safety Measure*. Monograph.  
VicRoads (2014) *Youth Road Safety – Effective Practice*, [www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au)

# What Works and What Doesn't?

## Speed Management

- ✓ Reducing speeds where the crash risk is high.
- ✓ Reducing specific location travel speeds to below 30km/h where there is a risk of a crash between a pedestrian/cyclist and a car/truck.
- ✓ Supporting new speed limits with road infrastructure such as traffic calming measures, road surface changes or visual cues to drivers.
- ✓ Supporting speed limits with enforcement.
- ✓ Reducing the number and frequency of speed limit changes.

## Enforcement

- ✓ Enforcement at locations with high risk of crashes.
- ✓ Providing information to the community about relevant road safety laws, the level of enforcement, and legal consequences.
- ✓ Aligning enforcement activities with education and media campaigns.
- ✓ Having a visual enforcement presence.

## Infrastructure improvements

- ✓ Identifying and addressing high risk locations with infrastructure to reduce the likelihood and consequence of crashes.
- ✓ Installing proven safety measures such as pedestrian and cycle friendly roundabouts, separated cycling facilities, pedestrian crossings and roadside barriers.
- ✓ Gateway treatments on the approach to lower speed areas.

## Vehicle safety features

- ✓ The promotion of Five Star safety rated vehicles.
- ✓ Intelligent Speed Assist devices that inform drivers of the speed limit.
- ✓ Company policies that promote the safest vehicles and safe driving practices.

**ROAD TRAUMA CAN BE REDUCED WHEN WE SEE A COMMITMENT FROM LEADERS AND WHEN THE COMMUNITY IS INVOLVED IN PLANNING AND DELIVERING ROAD SAFETY OUTCOMES.**

# What Works and What Doesn't?

## Knowing what doesn't work is just as important as knowing what does.

Investing in an approach that yields poor results can cost our community a lot of money, resources and time and, in some cases, result in declining road safety outcomes.

Based on statistics from previous implementation, here are some of the things that we know are **not** effective in reducing road trauma:

- ✘ A culture of blame instead of looking at what can be done to improve the system as a whole.
- ✘ Training that involves off-road driver training and especially any driving skill based programs such as 'advanced driver training'. This increases risk taking behaviour by drivers.<sup>2</sup>
- ✘ Stand-alone one day or one off events, forums and expo's.
- ✘ Fear appeals such as trauma ward visits, or testimonials from crash victims or offenders.
- ✘ Relying on driver simulators.
- ✘ Encouraging participation or membership of racing car clubs or go-karting.
- ✘ Unnecessarily restricting the movement of pedestrians or cyclists.
- ✘ Increasing speed limits in any form.
- ✘ Isolated works without support from relevant council officers and management, or State Government authorities such as VicRoads and Public Transport Victoria.

**WE KNOW THAT A CULTURE OF BLAME INSTEAD OF LOOKING AT WHAT CAN BE DONE TO IMPROVE THE SYSTEM AS A WHOLE IS NOT EFFECTIVE IN REDUCING ROAD TRAUMA.**

<sup>2</sup> RACV (2007) *The Effectiveness of Driver Training as a Road Safety Measure*. Monograph. VicRoads (2014) *Youth Road Safety – Effective Practice*, [www.vicroads.vic.gov.au](http://www.vicroads.vic.gov.au)

# Moving Towards Zero

## Achieving our ultimate goal of zero fatal and serious injury crashes will take time and effort and will be achieved through a set of coordinated and carefully planned steps.

It is not an ambition that can be reached solely by council, road designers, or road users, but rather, it is a joint effort that requires the prioritization of road safety from everyone involved.

Council will be a road safety leader for the local community by creating opportunities for members of the community to get involved in the push for greater road safety. Council will also be a road safety leader to local businesses by demonstrating safer driving policies and systems that can be duplicated and modified by local businesses.

To become a road safety leader for our community, the Baw Baw Shire Council will adopt these principles:

### Principle: Embrace the Safe System approach as the model for road safety

The Safe System (as explained above) is the basis of this Strategy, and also the Federal and State Government road safety strategies. Baw Baw will embrace the Safe System by building capabilities, encouraging people to operate in manners consistent with the Safe System, and ensure that Safe System solutions are developed and delivered. This provides a holistic approach to road safety and is a demonstrated method to increase road safety.

### Principle: Build on our success

At Baw Baw Shire, we have been recognised as a national road safety leader in the development and implementation of road safety infrastructure. We have also had great success in obtaining State Government grants to implement evidence based road safety initiatives.

Our road toll is dropping, however we're not going to rest on our laurels. We're going to build on our success and fill any gaps to continue to eliminate trauma on our roads.

Our road safety efforts so far have assisted in reducing the road toll to its current state, and maintaining these efforts will assist us in continuing to bring it down.

### Principle: Address the most severe risk locations and risk factors

Though Baw Baw has addressed many of our Black Spots over the past ten years there are still locations of high risk on our road network. These are areas with a crash history or areas with potential for crashes to happen in the future. These can be identified by crash analysis, risk assessments, Road Safety Audits or by talking to community members who drive, ride and walk the road every day.

One reliable method to identify risk locations is to risk rate our roads. Risk rating takes into account the various characteristics of a road that can pose a safety risk and provides a risk

# Moving Towards Zero

score for different segments of roads. This allows us to compare the relative risk of all roads in the shire to identify and improve dangerous roads before any crashes occur. This also allows us to compare country roads and urban roads fairly on the basis of their risk and thus ensure that funding between the two is equitably distributed.

By first addressing the most severe risk locations and risk factors, we can maximise the road safety benefit obtained through our efforts.

## **Principle: Engage community and businesses to participate in road safety activities and projects**

The Baw Baw community is passionate about reducing road trauma. Every week, many people volunteer their time to help protect our community. Over 300 community members have been involved in the development of this strategy and reconfirmed their commitment to helping eradicate road trauma in our community. Council will continue to engage with the community and businesses to make it easier for these groups and individuals to make a positive change.

Our people are the heart of the shire and the source through which change occurs. By ensuring that our community members and businesses are on board with our road safety efforts, we can maximise the benefits obtained by everyone.

## **Principle: Engage State and Federal governments for participation and funding for road safety activities and projects**

Because it isn't possible for us to fund all our road safety activities, the state and federal governments can often provide a helping hand. By working with the state and federal governments, and by aligning our road safety strategy with theirs, a strong channel of leadership is formed, and guidance and support for road safety initiatives within our shire are made more accessible.

We will work in partnership with State and Federal Governments to make sure that Baw Baw receives our fair share of road safety investment. We will also look at what we can do to help the State and Nation, from volunteering in pilot programs to standing up and supporting evidence based State-wide and National initiatives.

Our community has spoken strongly about the need for improved driver behaviour. Baw Baw will facilitate improvements where possible through education, encouragement, and support for enforcement activities utilising the existing programs and resources available from the State Government. The Baw Baw Shire Council will also be a model in the community for road safety practices.

## **Principle: Only accept safe developments, projects, designs and construction**

Baw Baw Shire is developing rapidly. This means that there are many changes taking place throughout the shire. If careful consideration for current and future conditions are not made,

# Moving Towards Zero

new road safety hazards could be introduced. We must make sure that we keep people safe on the roads as we grow. We have good checks and balances in place to make sure new projects and developments are safe, and we will formalise these processes to help our ethically responsible developers provide safe and efficient developments.

## **Principle: Reduce risk for active transport users**

Baw Baw Shire has a commitment to increasing active transport and public transport. This includes the addition of four new bus routes in Warragul and two in Drouin with an additional 108 bus stops, and as the shire grows, we will have more pedestrians and more cyclists moving from more origins to more destinations! As movements become more frequent and complex, we must ensure that safety is maintained if we are to maintain our trend towards zero pedestrian and cyclist crashes. We want all ages of our community to be and feel safe as they improve their health by walking and riding their bike. We will work with both those inside and outside the vehicle to improve behaviour, we will improve the road and roadside environment, and promote good practice in the community.

## **Principle: Partner with VicRoads and DELWP to improve motorcycle safety on all roads and trails within the municipality**

While only a small portion of motorcycle trauma occurs on local government managed roads, motorcyclists represent nearly a third of all the road trauma in our shire. We acknowledge that even though we don't manage tracks, trails, and arterial roads, we have a responsibility to help reduce this trauma to our community.

We will work with the Department of Environment, Land, Water and Planning (DELWP), VicRoads, Parks Victoria and Victoria Police to understand the issues associated with trail bike riding trauma and recreational/touring motorcycle riding. We have been heavily involved in motorcycle and trail bike safety initiatives that target safety for riders outside of council managed roads such as tracks and highways, and will continue to be involved in safety projects for riders throughout Baw Baw.

## **Principle: Manage road safety risks of roads awaiting maintenance and renewal activities**

Road conditions were identified as an issue through the online survey. Roads, just like a house, require constant maintenance to keep them safe, efficient and in proper working order. Council works with contractors to distribute road maintenance funds in a strategic manner that takes into account the safety, strategic function and condition of roads. Not all roads can be fixed immediately, but we can do things to manage the risk of these roads until maintenance/ renewal activities are undertaken. Council will update its policies and processes to ensure that they reflect the community's needs.

# Targets

## Our long-term goal is to achieve zero fatalities and serious injuries on our roads.

Setting targets for ourselves along the way motivates and engages us, and creates a standard for us to monitor our progress against. By monitoring our progress, we can identify initiatives that are successful, and ones we need to review.

Our target by the end of this strategy is to achieve a 30% reduction in fatalities and serious injury crashes throughout the Baw Baw Shire. We have developed an action plan to guide us in achieving this goal.

Progress on delivering the strategy will be continually monitored by council with public reporting after 18 months and after 3 years. Yearly updates on the progress of the strategy will be documented and reviewed. These reviews will be provided to councillors along with police reported crashes within the life of the strategy. These reviews will also provide an opportunity to update and adjust the strategy for future conditions.

More frequent monitoring may be introduced if the targets are not being achieved.



# What You Can Do

## Council is delighted by the support and enthusiasm shown by the community towards increasing road safety.

Here are some of the ways that we can all contribute towards safer road in Baw Baw Shire:

### Safer people

- Role model the travel behaviour you want your community to undertake, via your speed, mobile phone use or parking.
- Always wear full safety gear if you travel on a motorbike or scooter.
- Watch out for cyclists when entering and exiting parking and opening your car door.
- Always wear a bicycle helmet and “be bright at night” by fitting lights to your bike.
- Report hoon behaviour to the Hoon Hotline on 1800 333 000.
- Share the road by being mindful of all other road users.
- Identify a safe route to school for your children and teach them to use that route.
- Encourage your sporting club to undertake a Looking After Our Mates education session.
- Assist a young driver to get 120 hours supervised driving practice, making them safer when they become a probationary driver.
- Consider becoming an L2P mentor to help a young driver without access to a supervisor get vital driving practice.
- Direct young drivers to SaferPplaters.com.au to reduce their risks in their first years of driving.
- Download road safety apps, including the VicRoads Road Mode Android App to silence incoming text messages and calls while you’re driving or the BikeBell App to warn you of cyclists in the area.

### Safer vehicles

- Make sure that your next car is ANCAP 5 Star Safety rated.
- Consider purchasing an Intelligent Speed Assist device to make sure you don’t exceed the speed limit.
- Ensure your car is always in roadworthy condition and is regularly maintained.
- Lobby your employer to provide the safest car in its class as your work vehicle; this will help filter safer cars into the second hand car market.

### Safer roads and streets

- Report all road faults and hazards on local roads to Baw Baw Shire Council (5624 2411), and on arterial roads to VicRoads (13 11 71).
- Report any crashes or incidents to Victoria Police so that they can be added to the State Government database of crashes.

### Safer Speeds

- Never exceed the speed limit, remember that it’s a limit, not a target, and always drive to conditions.
- Allow plenty of time for your journey so you don’t feel the need to rush.
- If you have concerns regarding speeding vehicles in your residential street then request that the speed advisory trailer be placed in your street.

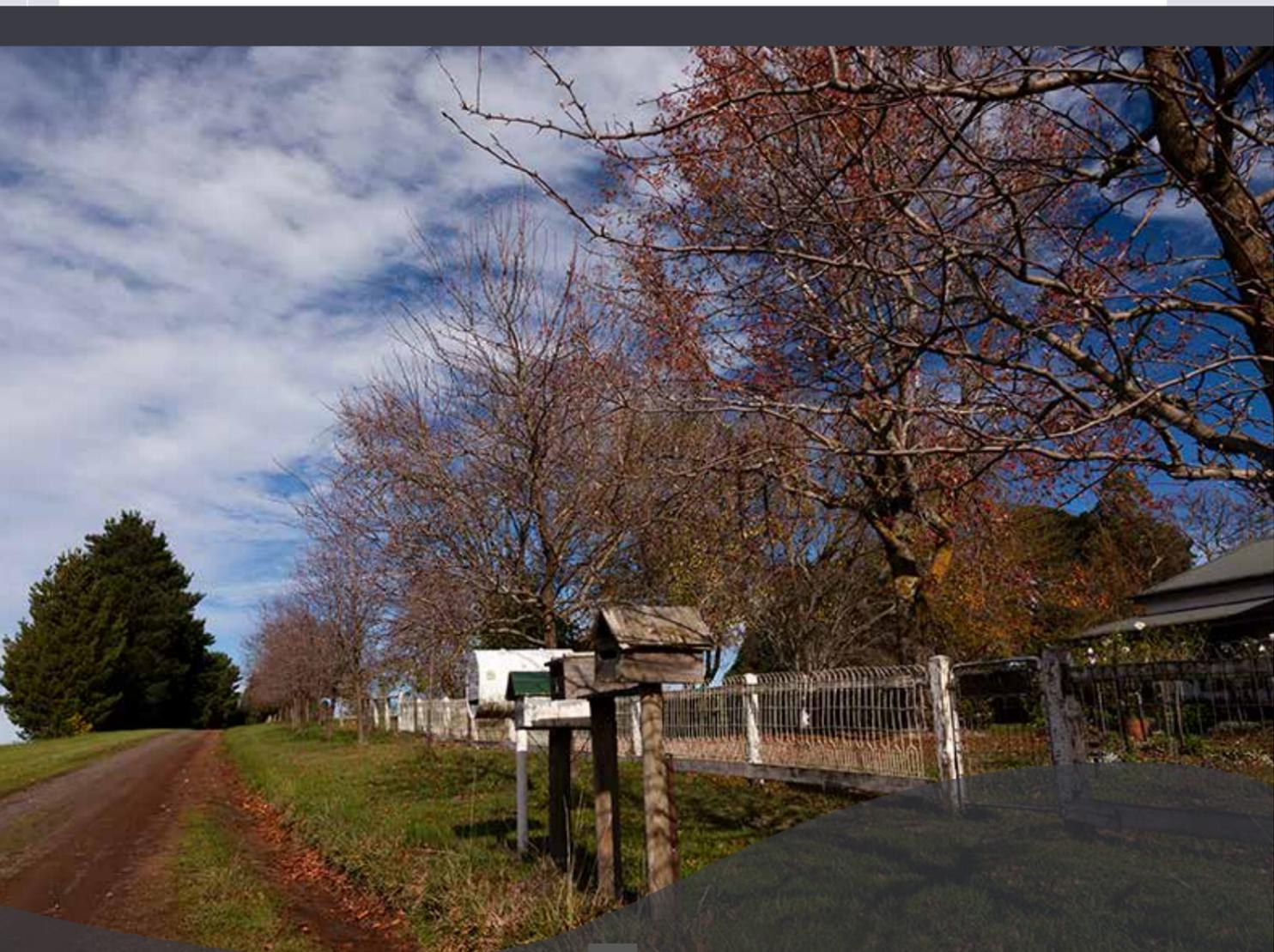
# Action Plan

## Baw Baw Shire Council commits itself to delivering on the action plan below.

The purpose of the action plan is to ensure that critical locations and risk factors for road safety are identified and remedial measures are undertaken.

The action plan links our principles to measurable, actionable items, and allows us to track our progress in delivering this strategy. Along with each action, the road user groups that will benefit from the action have been identified.

Actions which are contingent on external funding (including the recruitment of a road safety officer) have been identified with an asterisk (\*). This includes actions identified for Years 1-2 that are not within Council's 2017/18 Long Term Infrastructure Plan.



# Action Plan

## 1. Principle: Embrace the Safe System approach as the model for road safety

- 1.1 Dedicate council resources to road safety co-ordination by developing a part time (0.5 full time) road safety officer role to coordinate road safety efforts and activities including community road safety, school based road safety education, road safety marketing, internal road safety initiatives, and road safety coordination. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Road Safety Coordinator appointed.	\$60,000 per year	Year 1

## 1.2 Become an accredited Towards Zero partner with the State Government

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Accreditation as a Towards Zero partner.	-	Year 1

## 1.3 Be a model for best-practice road safety in the Baw Baw community

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Extend the council fleet's requirements of 5 star ANCAP safety rated vehicles to include utility vehicles and vans.	-	Year 1
<input type="checkbox"/> Ensure all new and existing staff are trained on safe driving practices in a classroom style safe driving training session.	\$5,000 per year	Ongoing
<input type="checkbox"/> Update our Safe Driving Policy to ensure it captures emerging technologies and other changes to the driving task.	\$10,000	Year 3
<input type="checkbox"/> Implement a 0.00 driving BAC for all council staff in any council vehicle, including driving to and from work.	-	Year 1
<input type="checkbox"/> Make our Safe Driving Policy available to local business and others operating a fleet.	-	Year 3
<input type="checkbox"/> All council staff to undertake TAC Towards Zero e-learning.	-	Year 1-2

# Action Plan

## 2. Principle: Build on Our Success

### 2.1. Build on our award winning success by growing the development of Federal Black Spot projects, and pursue proactive safety projects.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Multiple Federal Black Spot Projects developed and submitted for funding each year including proactive projects (started pre-2018).	\$20,000 per year	Yearly

### 2.2. Continue to submit funding applications to the TAC and VicRoads for local road safety grants for local road safety issues as identified in crash data and risk assessments.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Develop a list of possible funding sources, including the TAC Grants Program, VicRoads Community Road Safety Grants, Federal Government Grants and others (started pre-2018).	-	Year 1
<input type="checkbox"/> Prepare and submit a minimum of one funding application each year that targets a high risk location, user group or activity (started pre-2018). *	\$5,000 per year	Yearly

### 2.3. Continue delivering road safety projects and road safety educational material for motorcyclists and trail bike riders.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Continue working with Victoria Police and sponsors on the 'Check Your Mates' safety campaign and distributing trail bike safety brochures in towns, shops, and organisations throughout Baw Baw and to other councils.	-	Ongoing
<input type="checkbox"/> Continue working with the Department of Environment, Water, Land, and Planning to map trail bike tracks in Baw Baw.	-	Ongoing
<input type="checkbox"/> Continue developing motorcycle advertisements for use in Baw Baw and across the state.	-	Ongoing
<input type="checkbox"/> Continue airing motorcycle safety advertisements on local media stations. *	\$10,000 per year	Ongoing

### 2.4. Upskill the Baw Baw Shire Traffic Team by providing Road Safety Auditor Training.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Staff members have undertaken a certified Road Safety Auditor Training Course.	\$2,000 per year	Yearly

# Action Plan

## 3. Principle: Address the most severe risk locations and risk factors

### 3.1. Investigate potential road safety risks on council managed roads identified by the community. Where remedial works are required, schedule these as appropriate.

Starting with the following sites:

- Albert Street, Warragul
- Anderson Street, Warragul
- Hopetoun Road, Drouin
- Jackson Drive, Drouin
- Mason Street, Warragul
- Rogers Road, Trafalgar South
- Sinclair Street, Drouin
- Smith Street, Warragul
- Sutton Street, Warragul
- Weirs Road, Narracan

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Two investigations undertaken (started pre-2018).	\$8,000	Yearly

### 3.2. Identify high risk locations and lengths by risk rating all council roads. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Risk ratings produced for all roads in Baw Baw.	\$60,000	Year 2-3

### 3.3. Undertake Existing Conditions Road Safety Audits for road segments identified to pose a high risk. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Two existing conditions Road Safety Audits undertaken.	\$12,000	Year 1
<input type="checkbox"/> Three existing conditions Road Safety Audits undertaken per year.	\$18,000	Yearly from Year 2

### 3.4. Develop and deliver road safety infrastructure solutions addressing the highest risk road segments.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Five projects developed and delivered per year.	Federal government funding	Yearly

# Action Plan

## 3.5. Promote methods that allow the community to identify road safety hazards to council.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Promotion methods identified and material prepared.	\$7,500	Year 1
<input type="checkbox"/> Promotion undertaken.	-	Yearly

## 3.6. Create a program to manage the roll out of line marking improvements.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Annual line marking program developed.	\$7,500	Year 1
<input type="checkbox"/> Line marking program delivered.	\$100,000	Years 2 - 4

## 3.7. Undertake traffic speed surveys in areas of low speed compliance as identified by the community or police.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Speed surveys undertaken.	\$10,000	Ongoing

## 4. Principle: Engage community and businesses to participate in road safety activities and projects

### 4.1. Work with schools and delivery agencies in a support and coordination role to ensure that existing road safety education programs are available to all students and include pedestrian awareness. This includes the 'Starting Out Safely', 'VicRoads Bike Ed', 'Keys Please', 'Fit to Drive', and 'Looking After our Mates' programs.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> School road safety education program gap analysis undertaken.	\$2,500	Year 1
<input type="checkbox"/> Increase the number of Baw Baw students actively participating in road safety education programs.	-	Year 3
<input type="checkbox"/> Increase the number of Baw Baw students actively participating in road safety education programs.	-	Year 5

# Action Plan

## 4.2. Work with VicRoads, TAC and Victoria Police to promote education about the importance of safer speeds.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> TAC approached for marketing material.	-	Year 1
<input type="checkbox"/> TAC's 'Graham' to visit Baw Baw.	-	Year 2
<input type="checkbox"/> Deploy a Variable Message Sign speed trailer to encourage speed compliance and display seasonal road safety messages (started pre-2018).	\$7,500 per year	Year 1 - 5

## 4.3. Encourage older road users to engage in road safety education. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Pilot course for older road users undertaken.	\$5,000	Year 1
<input type="checkbox"/> If successful, undertake further courses.	TBD	Ongoing
<input type="checkbox"/> Provide safety information and advice for older cyclists to cycling groups and online.	-	Year 2

## 4.4. Promote VicRoads' Heavy Vehicle Roll Over Program to local business and key industry in Baw Baw. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Promotion activities undertaken.	-	Ongoing

## 4.5. Engage with the timber industry to undertake a study of the safety benefit of distributing UHF radios to residents along heavy vehicles routes.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Report produced documenting findings.	\$10,000	Year 5

# Action Plan

## 4.6. Be an active member of 'RoadSafe Gippsland'. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Attend 80 per cent of RoadSafe Gippsland meetings.	-	Yearly
<input type="checkbox"/> Lead one RoadSafe program or initiative per year.	TBD	Yearly

## 4.7. Identify and repair/improve areas of risk for mobility impaired community members.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Work with local advocacy groups to identify risk areas for mobility impaired community members.	\$10,000	Year 2
<input type="checkbox"/> Repair/improve issues identified.	TBD	Yearly

## 4.8. Encourage community members to become involved in discouraging inappropriate speeds\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Create online avenue for community members to request Variable Message Sign to be installed on their street/specified locations.	-	Year 1
<input type="checkbox"/> Promote and supply "50 in my street" or similar rubbish bin stickers.	\$5,000	Year 2

## 4.9. Encourage licenced venues to install breathalysers and promote safer behaviour.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Communicate availability of TAC funding for breathalysers to all relevant establishments.	-	Ongoing
<input type="checkbox"/> Communicate additional methods and initiatives which can be undertaken by the relative establishments to promote safer behaviours.	-	Ongoing

# Action Plan

## 5. Principle: Engage State and Federal Government for participation and funding for road safety activities and projects

### 5.1. Work with the State Government to encourage more investment in 40km/h electronic school speed zone signage, starting with Drouin Secondary College.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> State Government funding secured.	-	Ongoing

### 5.2. Collaborate with the TAC and VicRoads to create targeted road safety messages along the Princes Highway East. Messages are to target high risk time periods and associated road users; e.g. fatigue and drink driving messaging during school holiday periods, motorcycle safety messages on weekends, towing messages during summer holiday season. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Baw Baw road safety calendar developed that identifies seasons and the target messages.	\$5,000	Year 1
<input type="checkbox"/> Target messages displayed on Princes Highway East.	-	In accordance with calendar

### 5.3. Engage with TAC and State Government to involve local schools in piloting/ testing the State Road Safety Education Complex. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Willing local schools identified.	-	Year 1
<input type="checkbox"/> Letter written to TAC offering schools as pilot groups.	-	Year 1
<input type="checkbox"/> Willing local schools submitted for the Regional Outreach Program.	-	1 Year post opening of the Road Safety Education Complex

### 5.4. Work with the RACV or other organisations to pilot a vehicle inspection day.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Run Pilot Session.	\$8,000	Year 2
<input type="checkbox"/> If successful, undertake further sessions.	TBD	Ongoing

# Action Plan

## 5.5. Assist local police to obtain extra resources for enforcement activities.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Work with local police to identify specific needs for increased enforcement (started pre-2018).	-	Year 1
<input type="checkbox"/> Write a letter of support for local police to obtain the extra resources required.	-	Ongoing

## 5.6. Work with VicRoads to review and manage arterial roads risk areas within the shire including areas identified by our local community.

Starting with the following sites:

- Main Neerim Road, Neerim South
- Howitt Street, Warragul
- Walhalla Road
- Mount Baw Baw Tourist Road, Baw Baw
- Main Road, Walhalla
- Bloomfield Road, Nilma
- Princes Way, Various locations

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Work with VicRoads to identify high risk locations on arterial roads within Baw Baw	-	Year 1
<input type="checkbox"/> Undertake two meetings per year with VicRoads to discuss areas of high risk on arterial roads in Baw Baw	-	Twice per year
<input type="checkbox"/> Activities undertaken to encourage and help VicRoads to manage risks on the arterial roads	-	Ongoing

## 5.7. Work with VicRoads to develop and document a Speed Management Policy to review roads/areas believed to have an inappropriate speed limit. Proactively pursue speed limit changes at locations of changing land use or increased risk.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Speed Management Policy including a speed limit review process documented.	\$10,000	Year 1
<input type="checkbox"/> Proactive speed changes undertaken for town centres, new residential estates, and other areas of changing land use.	TBD	Ongoing
<input type="checkbox"/> Speed reviews undertaken at high risk locations.	TBD	Ongoing

# Action Plan

## 5.8. Work with Victoria Police to promote available technology to reduce mobile phone usage while driving.\*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Promotion methods identified and material prepared.	\$7,500	Year 1
<input type="checkbox"/> Promotion undertaken.	\$2,500 per year	Years 2 - 5

## 6. Principle: Only accept safe developments, projects, designs and construction

### 6.1. Ensure that pedestrian and cyclist safety are considered in the all future planning programs.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Undertake reviews of all future planning programs and ensure that the implications for pedestrian and cyclist safety are explicitly stated and that pedestrian and cyclist safety is not diminished by the program.	-	Ongoing

### 6.2. Undertake heavy vehicle route assessments for the Drouin South Bypass and other locations in collaboration with VicRoads.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Undertaken heavy vehicles route assessments for the Drouin South bypass to relocate trucks away from the Drouin South town centre.	-	Year 2
<input type="checkbox"/> Undertaken heavy vehicles route assessments and designate heavy vehicles routes away from local traffic where possible.	-	Ongoing

# Action Plan

## 7. Principle: Reduce risk for active transport users

### 7.1. Establish and implement methods to encourage good practice road use among motorists, cyclists, and pedestrians.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Develop evidence based methods, campaigns and/or activities.	\$15,000	Year 2
<input type="checkbox"/> Identify high risk areas for road user behaviour issues.	-	Year 2
<input type="checkbox"/> Implement established methods at high risk locations.	TBD	Ongoing
<input type="checkbox"/> Monitor, review, and amend methods and locations based on effectiveness.	TBD	Ongoing

### 7.2. Undertake safety reviews around schools and encourage safe active transport for children.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Identify schools in high risk locations.	-	Year 1
<input type="checkbox"/> Investigate two schools identified as high risk.	\$10,000	Year 2
<input type="checkbox"/> Implement safety measures.	TBD	Ongoing
<input type="checkbox"/> Encourage the school to undertake education for students and parents.	TBD	Ongoing

### 7.3. Encourage schools to deliver Bike-Ed programs. \*

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Identify schools not involved in Bike-Ed programs.	-	Year 1
<input type="checkbox"/> Send information to schools regarding the program.	-	Year 1

# Action Plan

## 8. Principle: Partner with VicRoads and DELWP to improve motorcycle safety on all roads and trails within the municipality.

### 8.1. Understand the needs and behaviours of trail bike riders in the municipality.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Work with VicRoads to survey trail bike riders regarding safety issues.	-	Year 1

### 8.2. Work with VicRoads and DELWP (Department of Environment, Land, Water, and Planning) to implement and pilot a program to reduce trail bike trauma.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Be involved in a world first safety study of trail bike areas (started pre-2018).	-	Year 1
<input type="checkbox"/> Assist in implementing required safety measures.	-	Year 2

### 8.3. Undertake motorcycle-specific Road Safety Audits for popular motorcycle routes.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Identify motorcycle high risk locations.	-	Year 1
<input type="checkbox"/> Undertake motorcycle-specific Road Safety Audit for 2 high risk locations. *	\$7,500	Year 1
<input type="checkbox"/> Undertake motorcycle-specific Road Safety Audits.	TBD	Ongoing

### 8.4. Improve safety for recreational motorcycle riders on roads and trails.

General Pedestrians Cyclists Motor cyclists Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Implement safety measures identified in motorcycle safety audits, trail bike studies and surveys.	TBD	Ongoing
<input type="checkbox"/> Provide motorcycle safety messages at peak motorcycle times.	TBD	Ongoing

# Action Plan

## 8.5. Work with VicRoads to ensure that motorcycle safety on arterial roads within the municipality are addressed.

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Identify high risk locations in conjunction with VicRoads.	-	Year 1
<input type="checkbox"/> Lobby for motorcycle safety improvements at these locations.	-	Ongoing
<input type="checkbox"/> Lobby for motorcycle safety measures at strategic locations at strategic times.	-	Ongoing

## 8.6. Upskill Baw Baw Shire Council staff and contractors on the needs of motorcyclists by undertaking specialist Making Roads Motorcycle Friendly training for engineering and maintenance staff. \*

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Undertake training session.	\$5,000	Year 1 - 2

## 8.7. Provide educational material to motorcyclists including material on safety while riding with pillion passengers. \*

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Educational information made publicly available.	\$5,000	Year 1 - 2

# Action Plan

## 9. Principle: Manage road safety risks of roads awaiting maintenance and renewal activities.

### 9.1. Integrate best practice road safety principles into the Baw Baw Shire Road Management Plan to ensure that maintenance and renewal priorities account for prioritisation on the basis of the identified risks on roads that have been flagged for maintenance.

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Undertake review of Road Management Plan and identify required changes.	\$2,000	Year 2
<input type="checkbox"/> Develop, document, and implement a process to manage risk on roads awaiting maintenance and renewal.	\$5,000	Year 2
<input type="checkbox"/> Monitor and amend as required.	-	Ongoing

### 9.2. As motorcyclists are most affected by road surface issues, all asset management and maintenance staff will be trained on motorcycle specific needs.

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Undertake Making Roads Motorcycle Friendly training session.	As indicated in action 8.6	Ongoing

### 9.3. Develop method to integrate road safety upgrades with renewal and maintenance projects to increase efficiency of the delivery of road safety works.

General Pedestrians Cyclists **Motor cyclists** Trail Bike Riders Heavy Vehicles Mobility Impaired Youth Elderly Unsealed Tourists Alcohol

PERFORMANCE MEASURE	COST	TIMEFRAME
<input type="checkbox"/> Method developed and documented.	-	Year 2

