**MOORABOOL
SHIRE COUNCIL**

Community Road
Safety Strategy

2025–2029

Moorabool
Shire Council

Acknowledgement of Country

Council respectfully acknowledges the Traditional Owners of the land which includes the Wurundjeri Woi Wurrung, Wadawurrung and Dja Dja Wurrung people. We pay our respects to the Elders past, present and emerging.

LIST OF ABBREVIATIONS

ABS – Australian Bureau of Statistics

CBD – Central Business District

CFA – Country Fire Authority

DTP – Department of Transport and Planning (Victoria)

FSI – Fatal and Serious Injury

MSC – Moorabool Shire Council

SES – State Emergency Service

Contents

Moorabool is growing faster than any of us expected. By 2046, our population is set to top 74,000 meaning more cars, more heavy vehicles, more cyclists, more pedestrians... and more pressure on our road network.

From the Mayor

We want everyone to be able to move around easily and safely and be protected from serious crashes. That's why we're committed to the *Safe System* approach, a globally recognised way of making our roads safer by tackling every factor that can lead to a crash.

The Safe System focuses on four key areas:

Safe Roads – Well-designed, well-built, and well-maintained roads that reduce risks and soften the impact if a crash does occur.

Safe Speeds – Speed limits that match road conditions, and drivers travelling at speeds that give them time to react.

Safe People – Staying alert, looking out for others, and travelling responsibly for everyone's safety.

Safe Vehicles – Modern safety features that prevent accidents or lessen the harm if they happen.

The Moorabool Community Road Safety Strategy is built on these principles, aligning with Victoria's *Towards Zero* vision of eliminating road deaths. We've studied crash data, listened to community feedback, and used local knowledge to shape our four-year Action Plan.

Road safety is everyone's responsibility. Council will deliver on its commitments, working closely with government, industry, and the community. By managing growth responsibly (including environmentally, socially, and financially), we can keep Moorabool moving, protect our most vulnerable road users, and reduce trauma on our roads.

Together, we can make every journey in Moorabool a safe one.

Cr Steve Venditti-Taylor
Mayor, Moorabool Shire Council

Our Vision

Mooraboool Shire Council (MSC) has a long-term vision of achieving the Towards Zero target of zero deaths and serious injury crashes on our roads.

In order to accomplish this goal, we recognise that traditional road safety engineering activities will not be enough, and we will have to do more. This means we will:

1. Embrace the Safe System approach, acting as an exemplar and encouraging others to do the same. We will:

- Make the roads, paths, tracks, and other transport infrastructure as safe as possible.
- Encourage people to travel at safe speeds.
- Encourage safe travel behaviour to minimise personal risks and risks to others.
- Promote the use of vehicles that are safer for drivers, passengers, and other people.

2. Support active transport such as walking and cycling which is extremely important for a healthy and sustainable community, recognising that pedestrians and cyclists are particularly vulnerable road users.
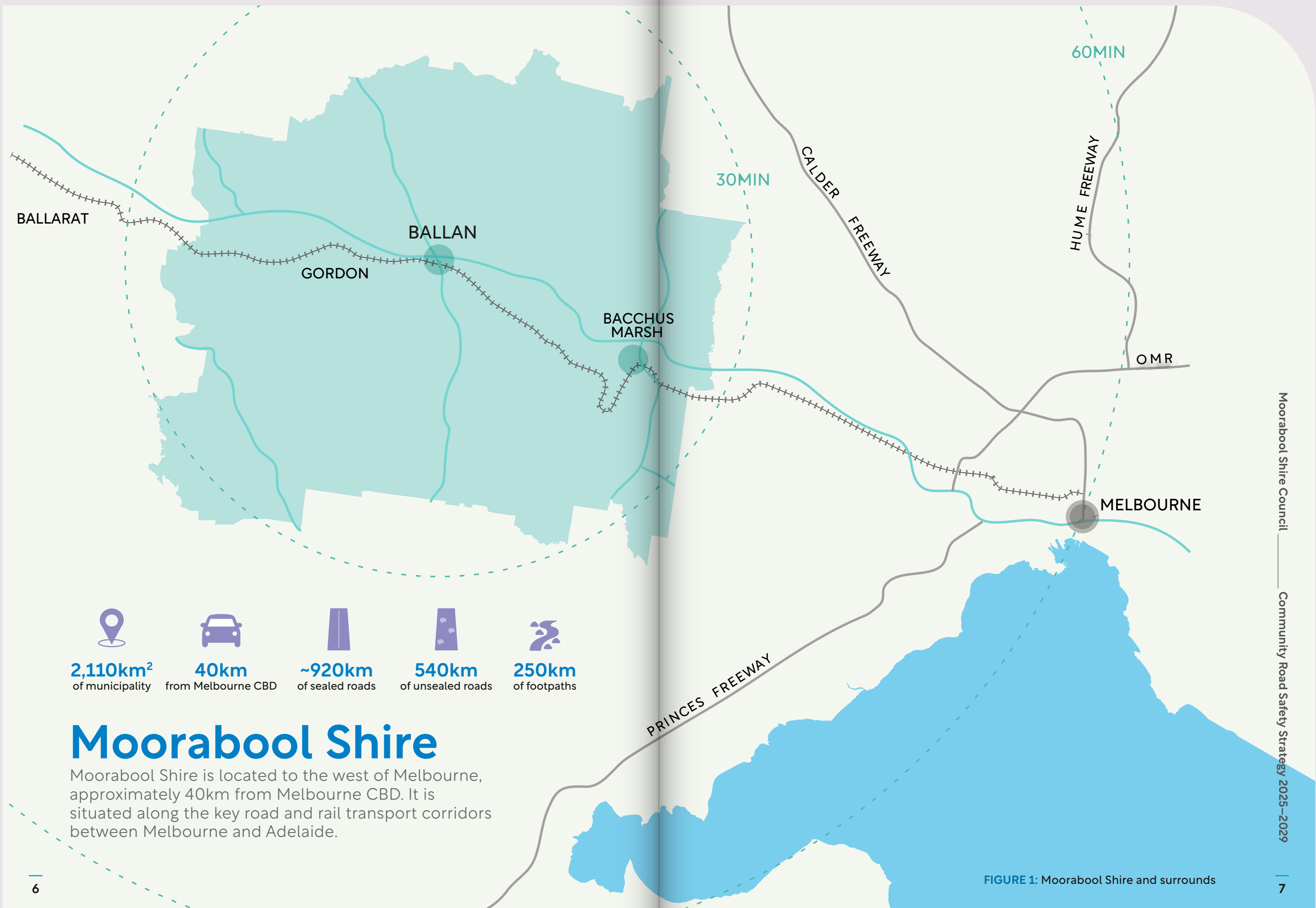
3. Collaborate with road safety partners, so that together we can achieve more than if we act in isolation.

4. Listen to, inform, and engage with our community so that they can influence and contribute to road safety initiatives in the Shire.

We will continue to improve road safety within our Shire for all road users by working together with our road safety partners and the community in general. This strategy sets out a framework for improvement and an Action Plan for the next four years.

BALLARAT

BALLAN

GORDON

BACCHUS MARSH

60MIN

30MIN

CALDER FREEWAY

HUME FREEWAY

OMR

MELBOURNE

PRINCES FREEWAY

2,110km²
of municipality

40km
from Melbourne CBD

~920km
of sealed roads

540km
of unsealed roads

250km
of footpaths

Moorabool Shire

Moorabool Shire is located to the west of Melbourne, approximately 40km from Melbourne CBD. It is situated along the key road and rail transport corridors between Melbourne and Adelaide.

FIGURE 1: Moorabool Shire and surrounds

Moorabool Shire is located to the west of Melbourne, approximately 40km from Melbourne CBD. It is situated along the key road and rail transport corridors between Melbourne and Adelaide.

Covering an area of approximately 2,110 square kilometres, the Shire encompasses several townships including Bacchus Marsh, Ballan, Gordon, Wallace, Mount Egerton, and Blackwood. The region is known for its areas of natural significance including various state parks, forests, and reservoirs.

Moorabool is a large and diverse municipality with people of all ages, abilities, incomes, lifestyles and experiences, having varying needs and priorities. The Shire is predicted to see significant change in the near future as the approximate population in 2025 of 40,000 is forecast to increase by 83% to 74,000 as of 2046 (forecast.id) as shown by Figure 2. Recent trends have identified that the most significant increase in population has occurred in the eastern side of the Shire (e.g. Bacchus Marsh, Maddingley) from both residents and those from outside of the Shire, particularly Melbourne's Western suburbs due to the abundance of land and being in relatively close proximity to Melbourne (forecast.id). With rapid population growth and increased development, the demand on the road and path network is rising significantly, leading to higher traffic volumes and greater demand for further infrastructure.

Moorabool Shire Council is responsible for the management and maintenance of approximately 920km of sealed roads, 540km of unsealed roads (1,460 km in total) and 250km of footpaths. The freeway and arterial roads, which are roads connecting urban centres or connecting local roads to freeways, are managed by the Department of Transport and Planning (DTP).

There are a wide variety of roads and road environments throughout the Shire ranging from arterial highways, rural areas, townships and high pedestrian/cyclist activity areas as well as various twisting routes in State forests. Moorabool's key industries such as construction, real estate and agriculture (Moorabool Community Vision for 2030) and the fact that the Western Freeway is a key part of the Principal Freight Network results in a significant number of heavy vehicles which run through the Shire. The Shire also caters for varying traffic volumes and modes depending on the time of year including tourism peaks and harvest seasons for agricultural production.

These factors present unique challenges to address with regards to road safety and will require a multi-faceted approach which this Road Safety Strategy will provide a framework for.

FORECAST POPULATION
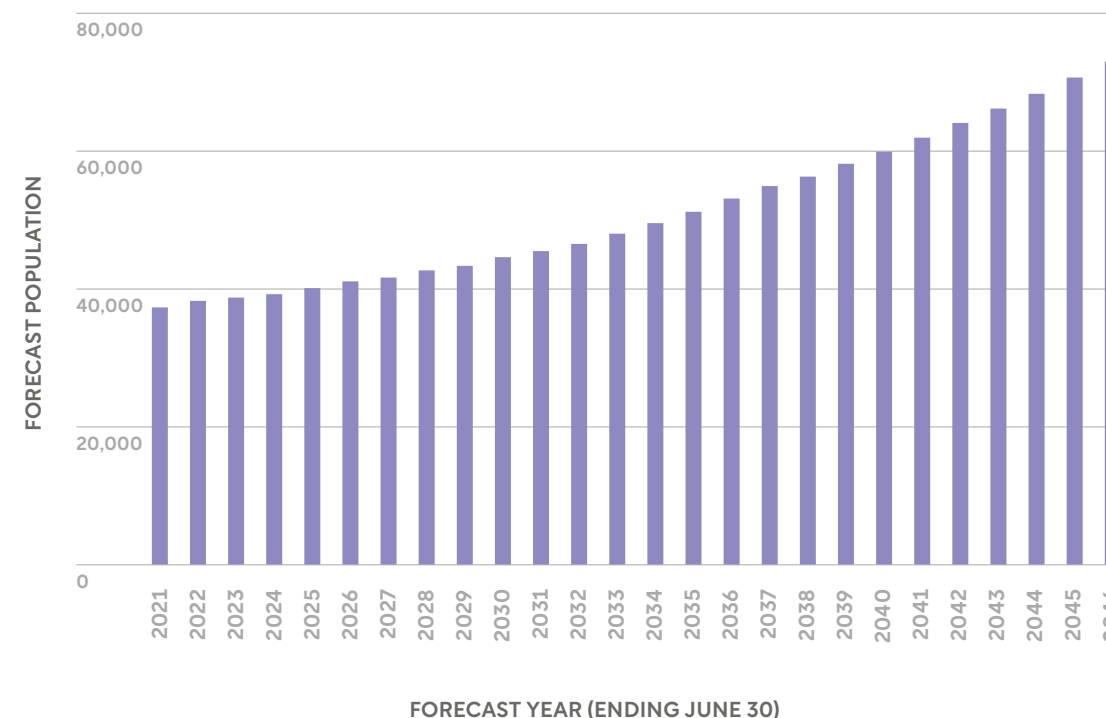### MOORABOOL SHIRE

FIGURE 2: Population forecast of Moorabool Council (Source: forecast.id)

Federal and State context

Our goal of *no one seriously injured or killed on our roads* aligns with State and National road safety objectives. To do this, we must have a safe transport system in place, one that protects us from our own mistakes and the mistakes of others.

Towards Zero 2021 – 2030 Road Safety Strategy (also known as Vision Zero) is a collection of road safety principles in place across most Australian states and territories. It aims to eliminate fatalities and serious injuries on our roads by 2050, with an interim goal of halving fatalities and reducing serious injuries by 30% before 2030. The National Road Safety Strategy 2021 – 2030 is also aligned closely with the path to Vision Zero.

The aims and priority areas identified by the National Road Safety Strategy have a clear trickle-down effect for State and Local Governments, as shown by Figure 3. Based on identified crash trends, The Victorian government identified the following additional strategic focus areas.

This strategy recognises the importance of these Strategies and is committed to aspiring to reach zero fatalities and serious injuries within the Shire, with the following crash statistics for the past 5-years indicating areas for improvement. The action plan for this strategy is also aligned with the State's strategic focus areas to ensure the key aspects of road safety are being addressed.

Victorian Government Strategic Focus Areas

Supporting and enforcing safer driving behaviour	Vulnerable and unprotected road users	Increasing safety for those using the road for work or at work
Removing unsafe vehicles from our roads	Improving safety on high-speed roads and at intersections and reducing the underlying risk	Recognising the importance of post-crash care

'Levers of change'

Policy development	Safer vehicles	Safer travel speeds
Infrastructure improvements	Enforcement	Innovation and technology
Public information campaigns	Data and research	Education programs

State and Territory Governments

- Funding and investment for roads and road safety initiatives
- Road rules and law enforcement
- Licensing and vehicle registration
- Work health and safety laws
- Crash data gathering. monitoring and reporting
- Education and awareness

Local Governments

- Local road infrastructure maintenance and improvement
- Advocacy to state, teritory and federal govement
- Local road safety education and outreach programs

National Road Safety Strategy 2021-30

Australian Governments

- Funding and investment programs for roads and road safety initiatives
- Australian Design Rules
- Heavy vehicle regulation
- Model Australian Road Rules
- National crash data reporting

Road Safety Stakeholders

- Advocacy and independent advice for road safety
- Independent safety standard setting such as ANCAP ratings
- Local road safety education and outreach programs

FIGURE 3: Visual breakdown of Australia's National Road Safety Strategy 2021 – 2030

Key Input

To ensure this strategy is tailored to address the key concerns for Moorabool Shire, this strategy has taken input across a wide variety of data from the following sources:

Crash Data – this strategy has taken crash data from over a 5-year period to give some context on the characteristics of crashes occurring within the Council and identifying any trends to inform proposed actions

Public consultation – significant public consultation was conducted via a public survey as well as two open community workshop sessions to collect commuting data as well as local observations and road safety concerns to inform the strategy

Expert Advice – this strategy was developed with input from a Working Group, to which various key stakeholders were invited, including the Department of Transport and Planning, Regional Roads Victoria, Victoria Police, State Emergency Service, and Country Fire Authority

What's happening on our roads?

To understand where the risks are on our roads and paths, we carried out an extensive analysis of road safety data for the past five years (2020–2024). This provided insights into the types of crashes that were occurring, when and where they were happening, the conditions at the time and what road users were involved.

Over this period there have been 214 serious injury crashes and 13 fatal crashes (see Figure 4) resulting in 273 serious injuries and 13 fatalities (see Figure 5). Fatalities have remained relatively constant throughout this period, although serious injuries have shown a slight upward trend, particularly due to a significant spike in 2022 which is hypothesised to be a result of significant increases in vehicular traffic post-COVID. Figures 6-9 show both fatal and serious crashes per annum as well as fatalities and serious injuries by road classification. Figure 10 shows the distribution of fatal and serious crashes, with the vast majority occurring in rural areas followed by those occurring in small towns.
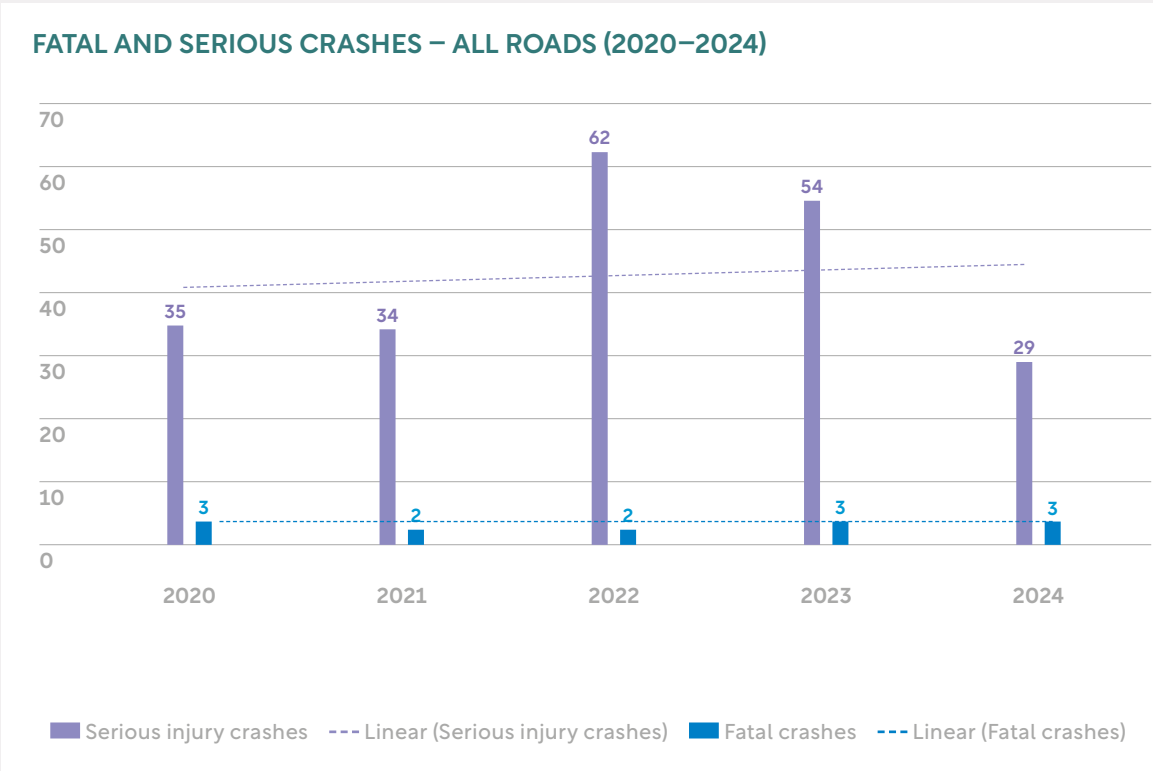
FATAL AND SERIOUS CRASHES – ALL ROADS (2020–2024)

Legend: Serious injury crashes · - - Linear (Serious injury crashes) · Fatal crashes · - - Linear (Fatal crashes)

FIGURE 4: FSI crashes in Moorabool Shire Council per annum (Local, Arterial, Forest Roads)

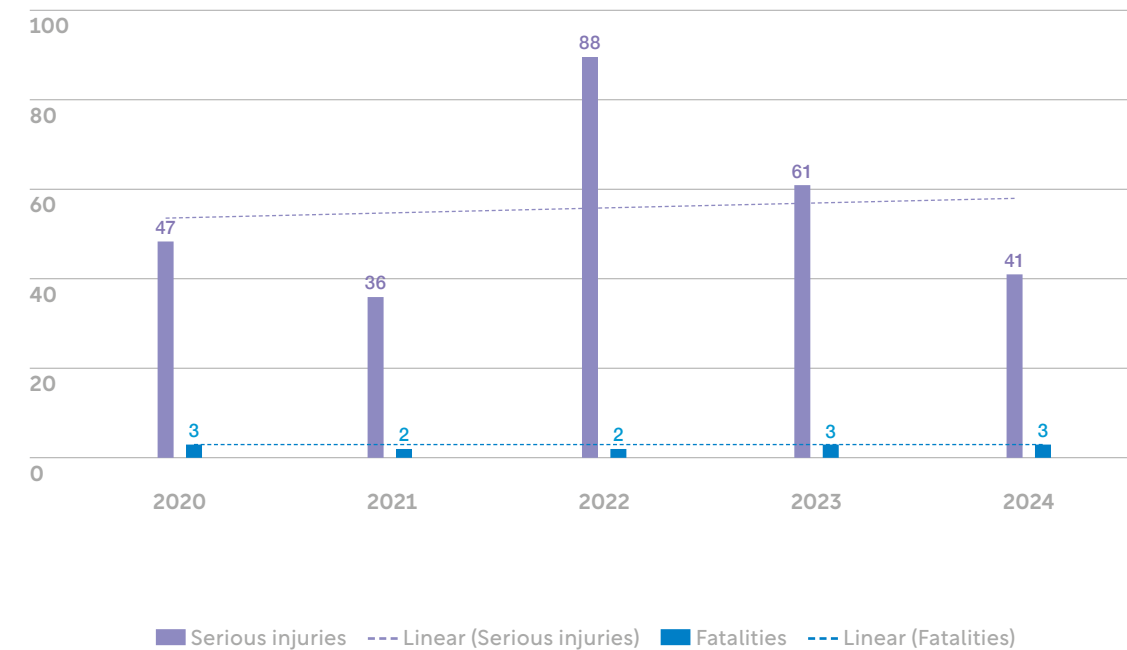## FATAL AND SERIOUS INJURIES (2020–2024)

FIGURE 5: FSI injuries in Moorabool Shire Council per annum (Local, Arterial, Forest Roads)
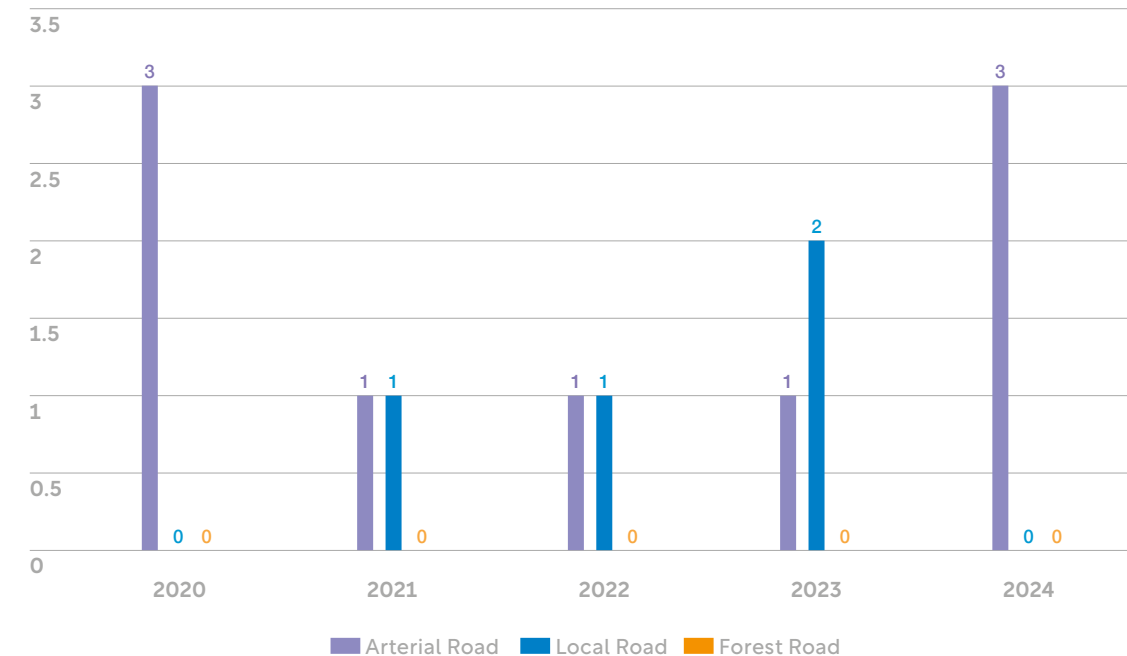
FATAL CRASHES BY ROAD CLASSIFICATION (2020–2024)

FIGURE 6: Fatal crashes in Moorabool Shire Council per annum (by Road Classification) – Local Road graphs include Forest Roads
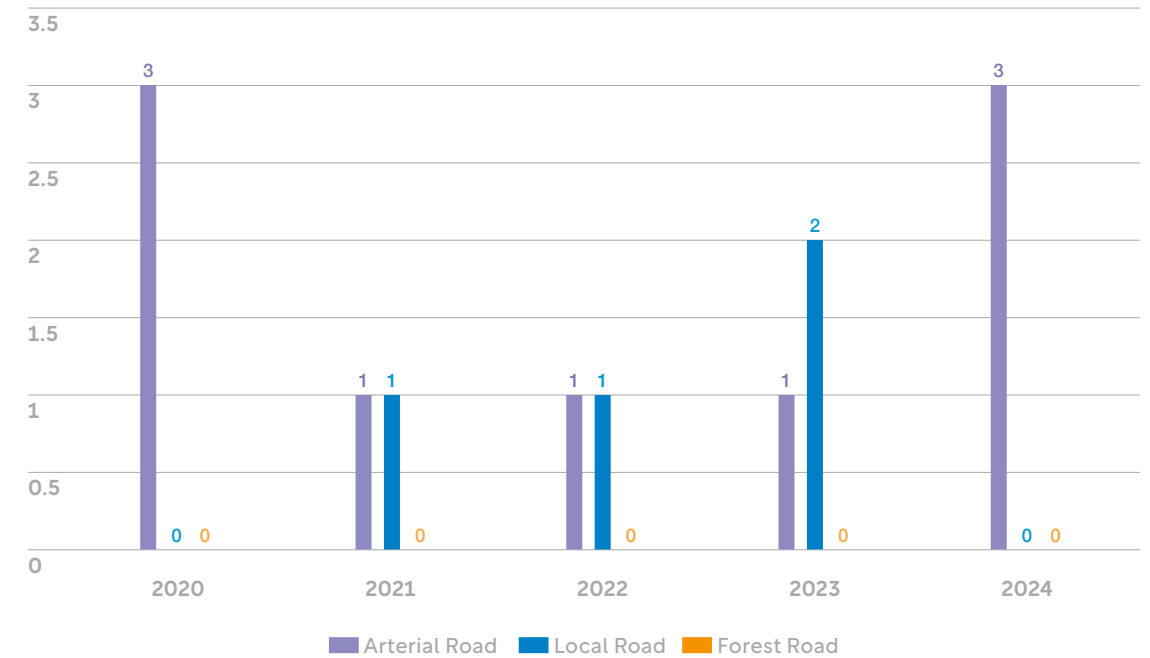
FATALITIES BY ROAD CLASSIFICATION (2020–2024)

FIGURE 7: Fatalities in Moorabool Shire Council per annum (by Road Classification) – Local Road graphs include Forest Roads

SERIOUS INJURY CRASHES BY ROAD CLASSIFICATION (2020–2024)

FIGURE 8: Serious Injury crashes in Moorabool Shire Council per annum (by Road Classification) – Local Road graphs include Forest Roads

SERIOUS INJURIES BY ROAD CLASSIFICATION (2020–2024)

FIGURE 9: Serious Injuries in Moorabool Shire Council per annum (by Road Classification) – Local Road graphs include Forest Roads

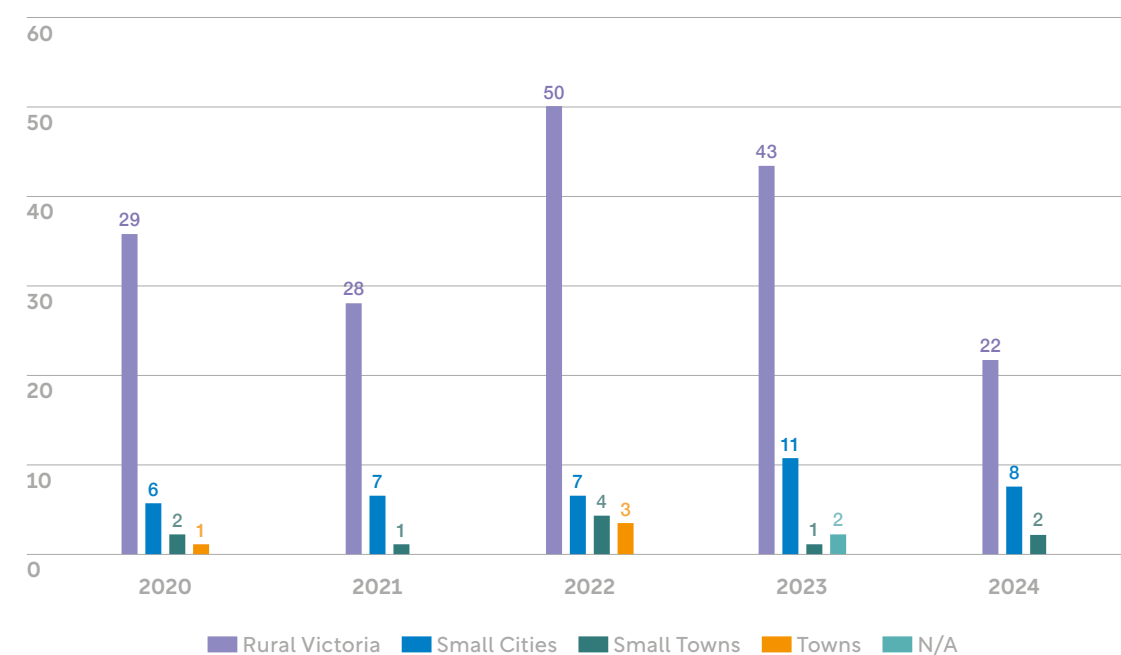## FATAL AND SERIOUS CRASHES BY DEGREE OF URBANISATION (2020–2024)

FIGURE 10: Fatal and Serious Crashes in Moorabool Shire Council per annum (by Degree of Urbanisation) – Local Road graphs include Forest Roads

Moorabool Shire Comparison

In developing this strategy, we have analysed crash data from the Victorian Government's open data source, DataVic, (**data.vic.gov.au**) to understand what is happening on Moorabool's roads and what the trends are. We have compared ourselves with State averages and an adjacent municipality as shown in Figure 11 and Figure 12 which includes crashes on both local and arterial roads. Furthermore, note that these figures have been normalised by the population of their respective areas to allow for a fair comparison. Generally, our roads have a higher risk indicating opportunities for improvements to bring it in line towards the state average.

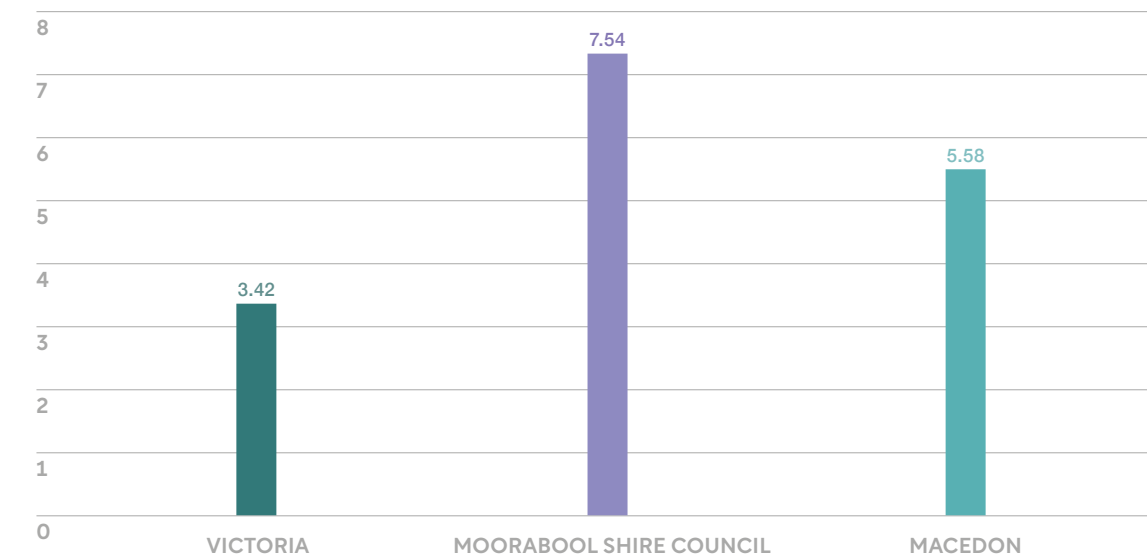## RATE OF ANNUAL ROAD FATALITIES PER 100,000 POPULATION (2024)

FIGURE 11: Rate of annual fatalities per 100,000 population (2024), Source (for population data): forecast.id – Local Road graphs include Forest Roads

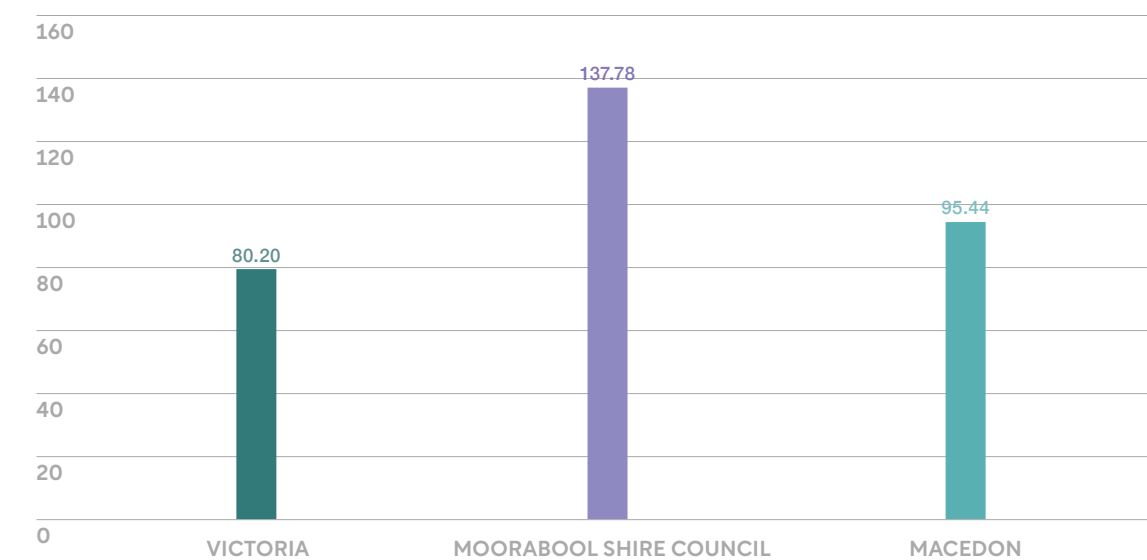## RATE OF ANNUAL ROAD SERIOUS INJURIES PER 100,000 POPULATION (2024)

FIGURE 12: Rate of annual serious injuries per 100,000 population (2024), Source (for population data): forecast.id – Local Road graphs include Forest Roads

What does the crash data show?

56%

Roughly equal split of FSI crashes between DTP and Council managed roads **(52% vs 42%)**, with forest roads representing a small portion **(6%)**

~50%

High proportion of FSI crashes occurring on high speeds roads, **~50%** on 100-110km/h roads

~50%

Most common types of FSI crashes are run-off-road crashes **(~50%)**

70%

Most common road users involved in FSI crashes are drivers **(70%)** followed by motorcyclists **(15%)**

30-59

Age groups most represented in FSI crashes were aged **30-59 years old**

Sat

FSI crashes equally spread across the **entire week**, except for increased values on Saturday

~75%

Most FSI crashes occurred on clear and dry conditions **(~75-80%)**

Where are the crashes happening?

Fatal and serious injury crashes are most likely to happen in two types of location:

1. Where high volumes of traffic are moving at high speed and vehicles can cross paths – for example, on an arterial road and at major intersections; and

2. Where there are significant movements of motor vehicles in close proximity to pedestrians and cyclists – for example, higher speed local roads.

Figure 13 and Figure 14 show maps of Moorabool's crash hotspots for all crashes and fatal and serious injury crashes, respectively with the following observations:

- Significant number of crashes occurring throughout the length of the Western Freeway in the Council.

- Significant number of crashes occurring around and in the township of Bacchus Marsh.
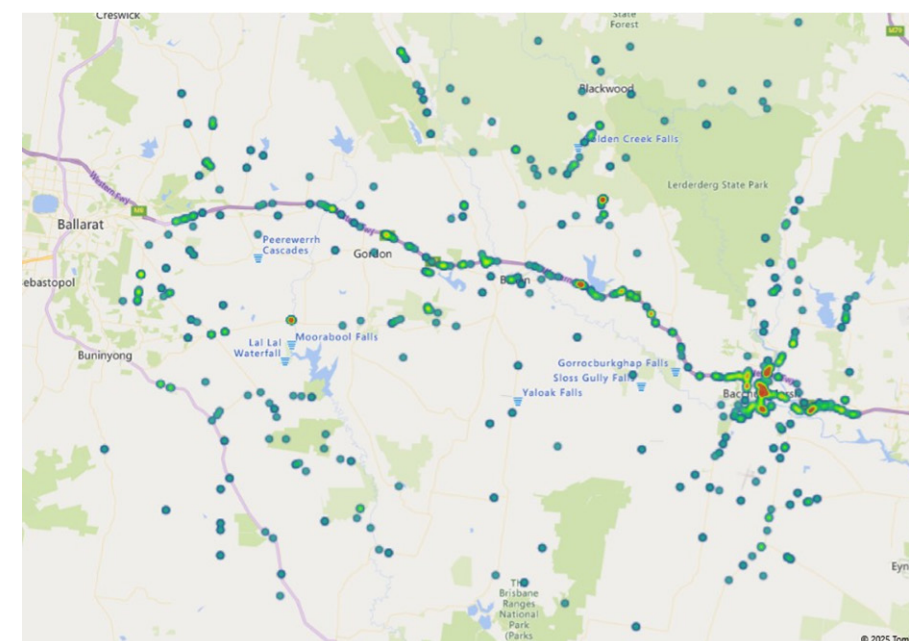

FIGURE 13: Heat map showing all crashes in Moorabool Shire Council (2020-2024) – Local, Arterial, and Forest Roads
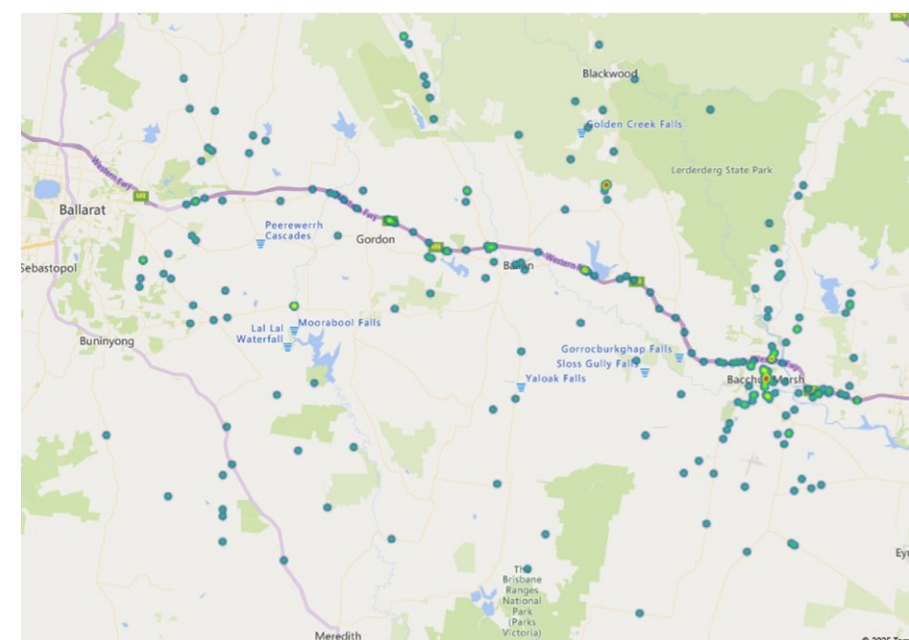

FIGURE 14: Heat map showing FSI crashes in Moorabool Shire Council (2020-2024) – Local, Arterial, and Forest Roads

From an analysis of the type of roads on which crashes occur we have found that 52% of all fatal and serious injury crashes occur on DTP roads whilst 42% are on Council roads and 6% were on Forest roads as shown in Figure 15.
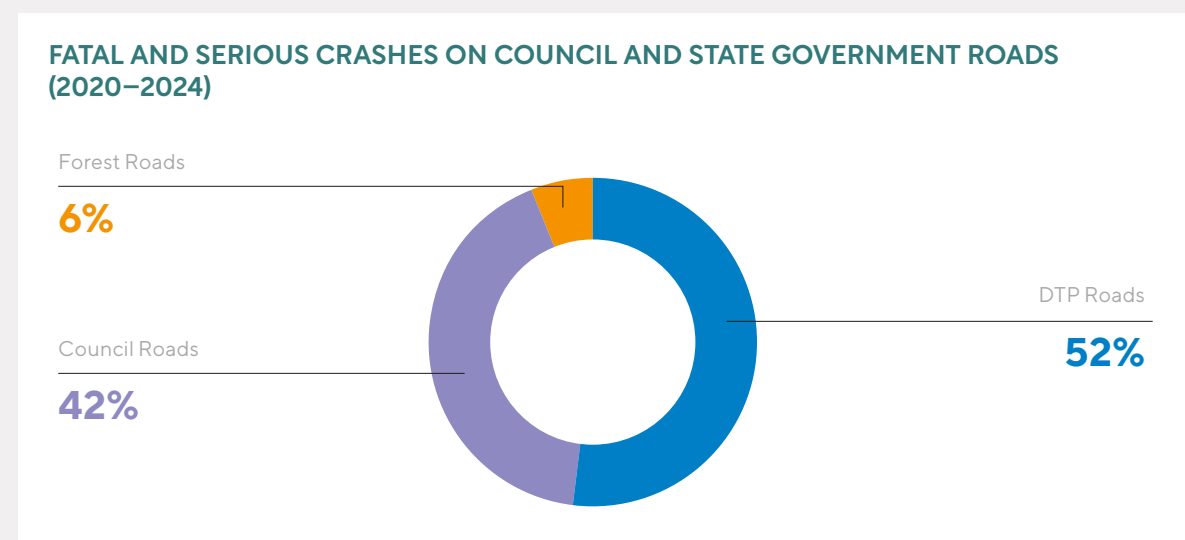
FATAL AND SERIOUS CRASHES ON COUNCIL AND STATE GOVERNMENT ROADS (2020–2024)

Forest Roads
6%

Council Roads
42%

DTP Roads
52%

FIGURE 15: FSI crashes by road type in Moorabool Shire Council — Council Roads include Forest Roads

When we look at the crashes from a speed zone perspective, we note that almost half occur in 100 km/h speed limit zones (77 crashes) followed by 110 km/h speed limit zones (41 crashes) as shown in Figure 16. These indicate the need to improve safety on rural roads and high-speed roads where the consequences of a crash are likely to be more severe.
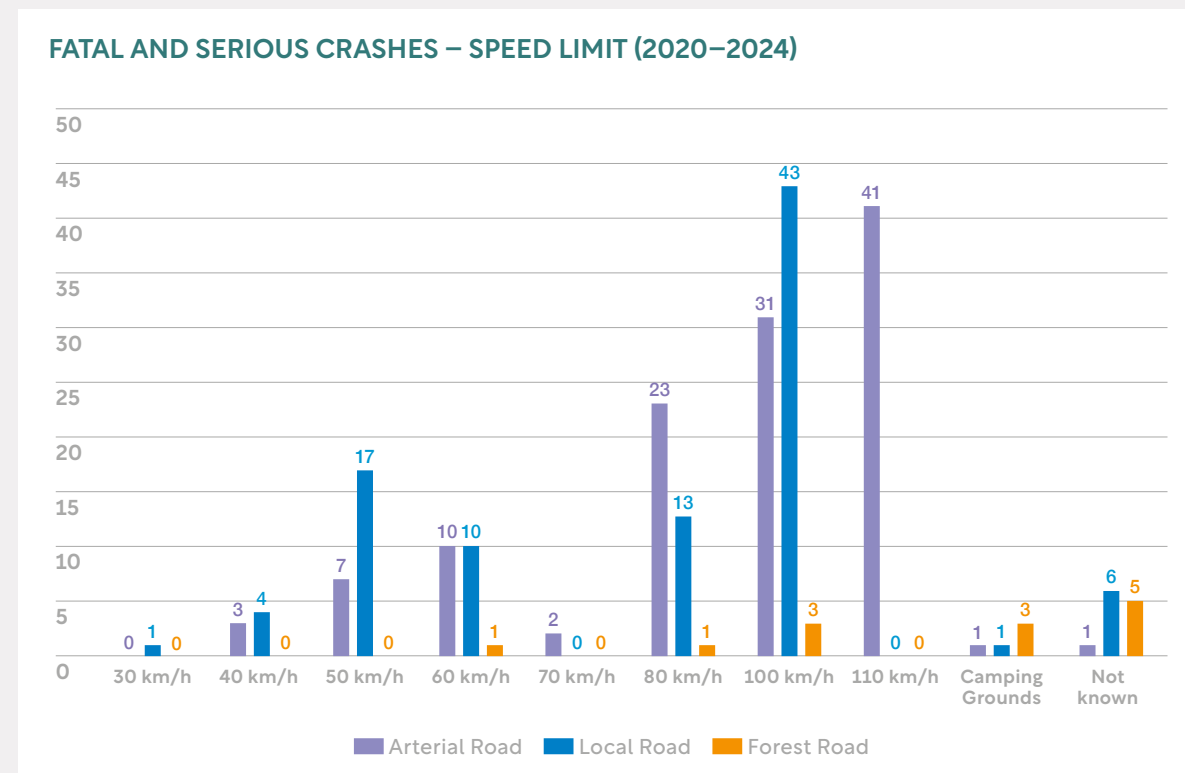
FATAL AND SERIOUS CRASHES – SPEED LIMIT (2020–2024)

Legend: ■ Arterial Road ■ Local Road ■ Forest Road

FIGURE 16: FSI crashes by speed limit in Moorabool Shire Council — Local Road Graphs include Forest Roads

What are the most common types of crash?

As shown in Figure 17, the most common crash type for FSI crashes are off path crashes (vehicles who have left the traffic lane) on both straights and curves potentially indicating areas of improvement for both the delineation of the roadway as well as improving roadside protection (e.g., the installation of roadside safety barriers). This is followed by crashes at intersections as well as crashes between vehicles travelling in both the opposite (typically head-on) and the same direction of travel (typically rear-end) and may indicate distracted motorists and/or poor alignment of the carriageway reducing sight lines for motorists.
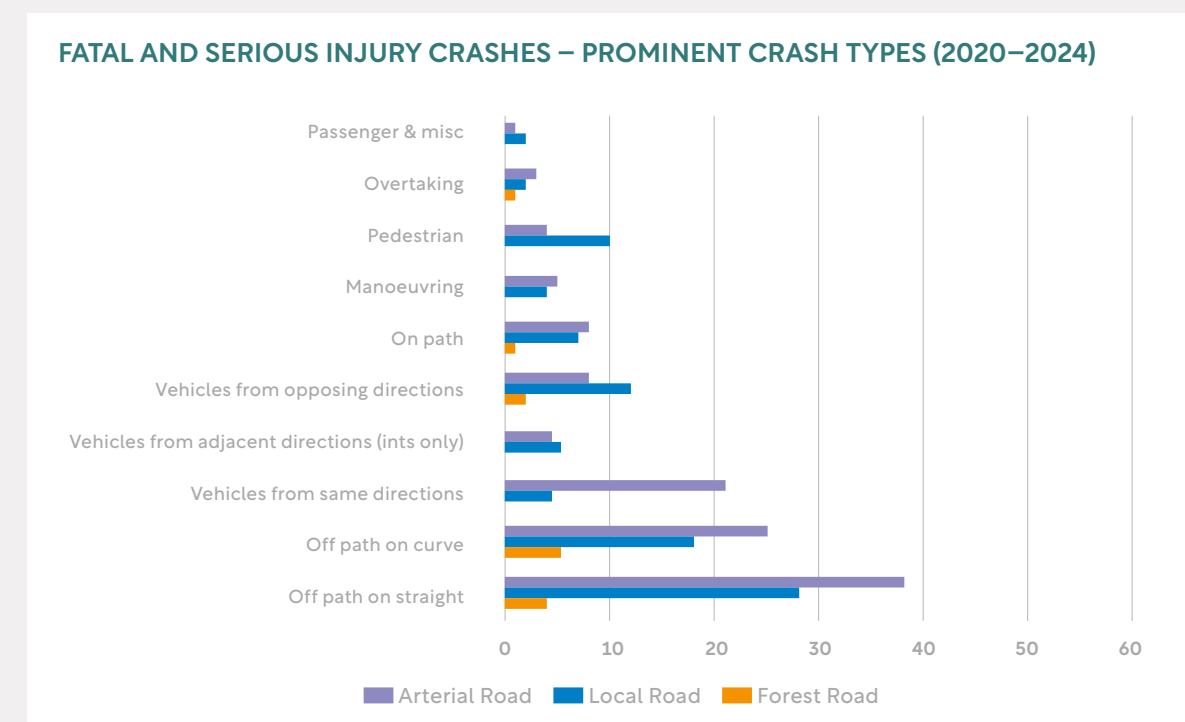
FATAL AND SERIOUS INJURY CRASHES – PROMINENT CRASH TYPES (2020–2024)

Legend: ■ Arterial Road ■ Local Road ■ Forest Road

FIGURE 17: FSI crash types in Moorabool Shire Council — Local Road includes Forest Roads

Who is involved in crashes?

Figure 18 shows how the total number of fatal and serious injuries are distributed across different road users. Most crashes involve drivers, followed by motorcyclists and then heavy vehicles and other road user types. The high proportion represented by drivers is typical, however the high proportion of motorcyclists indicates opportunities to improve road safety for them as they are vulnerable road users and at high risk of more serious injuries if involved in a crash. It was noted that FSI motorcyclist crashes were spread across all road types within the Council including arterial roads, local roads, and tracks within state forests.

ROAD USER TYPES INVOLVED IN FATAL AND SERIOUS INJURY CRASHES (2020–2024)

Drivers
69%

Pedestrian
4%

Motorcycle
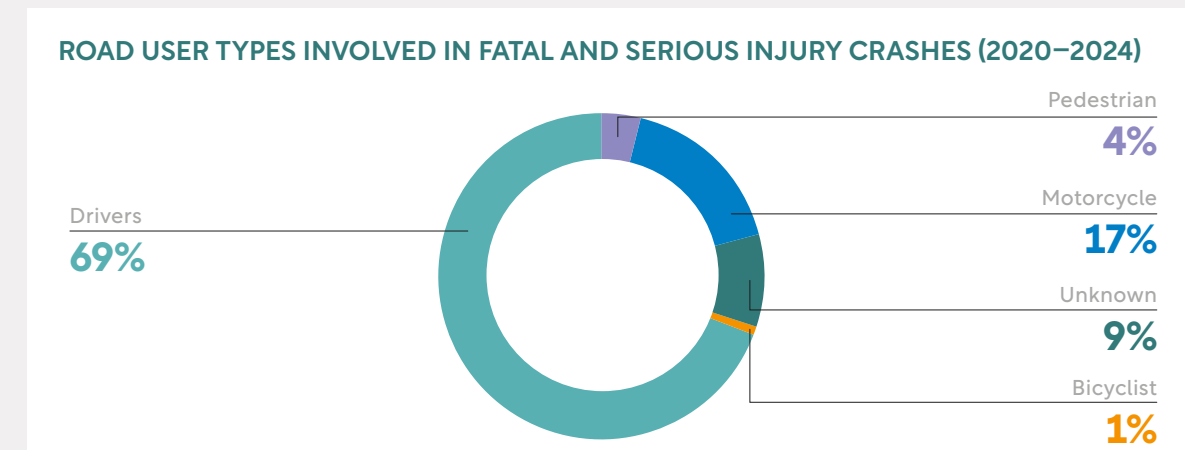**17%**

Unknown
9%

Bicyclist
1%

FIGURE 18: Proportion of FSIs by road user type in Moorabool Shire Council — Local, Arterial and Forest Roads

When we look at the age groups involved in fatal and serious injury crashes (Figure 19) we see that the most affected age groups are aged 30-59 years; and then those in the 18-29 years. The significant number of middle-aged adults involved in FSI crashes is expected, given the median age at 39 for the Council (2021, ABS) whilst the high proportion of youths highlight areas for improvement with regards to younger drivers including enhanced education and awareness of road safety.
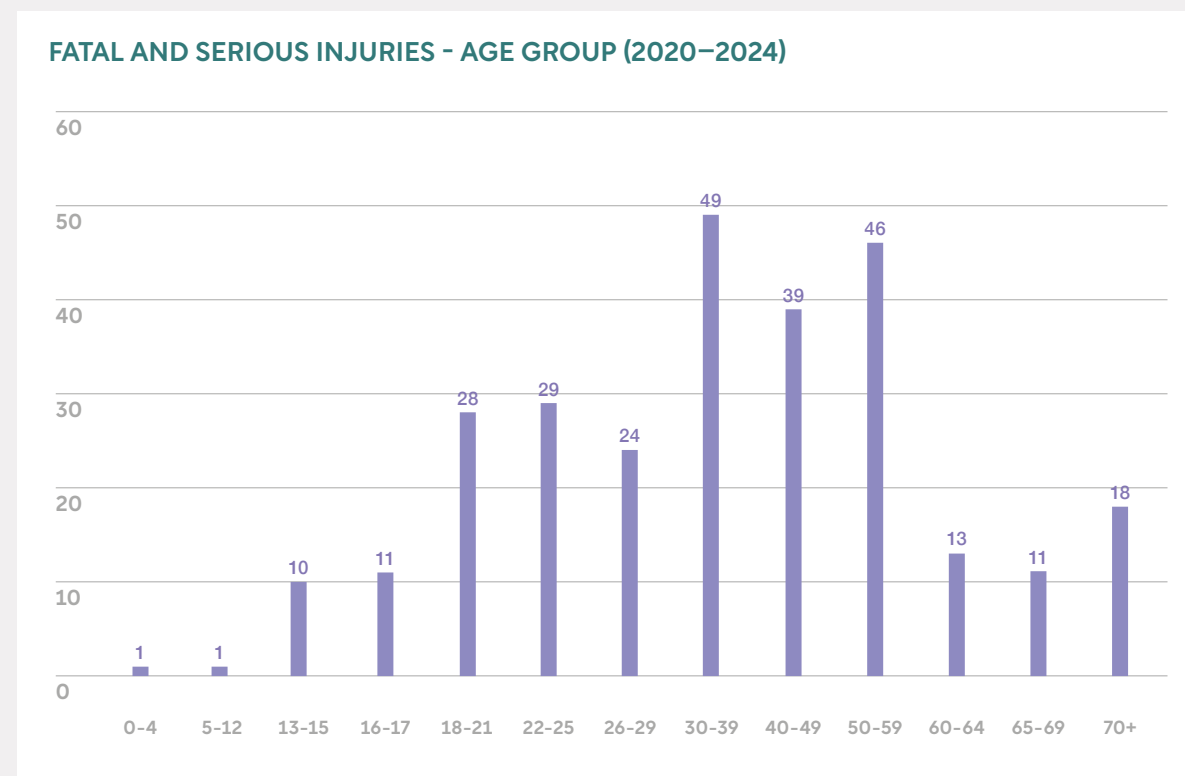

FATAL AND SERIOUS INJURIES - AGE GROUP (2020–2024)

FIGURE 19: FSIs by age group in Moorabool Council — Local, Arterial, and Forest Roads

Other crash characteristics

No unusual crash patterns were observed when analysing the days of the week where FSI crashes were occurring or with regards to the atmospheric and road conditions. The following was noted:

- FSI crashes were also spread throughout the week with the most crashes occurring on the weekend (Figure 20).
- The FSI crashes were also spread throughout the year with no significant trend observed throughout the months (Figure 21).
- Most FSI crashes occurred in clear and dry conditions (Figure 22 and Figure 24). Under these conditions, almost three-quarters of the crashes occurred during the day, and 15% occurred in the dark without street lighting.

FATAL AND SERIOUS CRASHES - DAY OF WEEK (2020–2024)
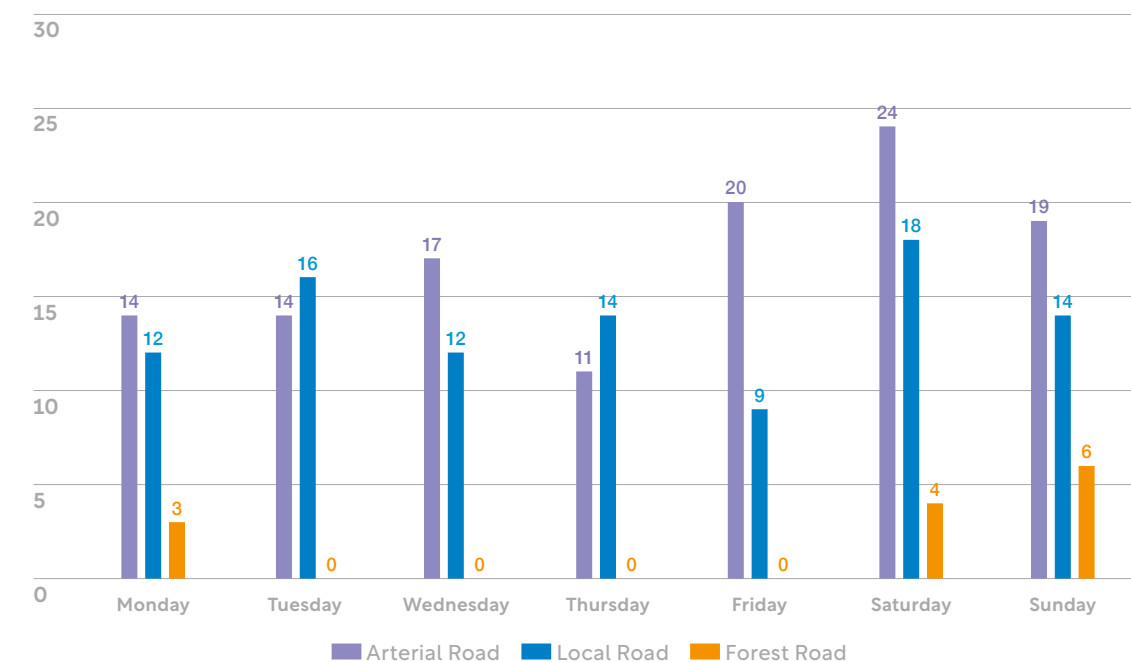
FIGURE 20: FSI crashes by day of the week in Moorabool Shire Council — Local Road Graphs include Forest Roads

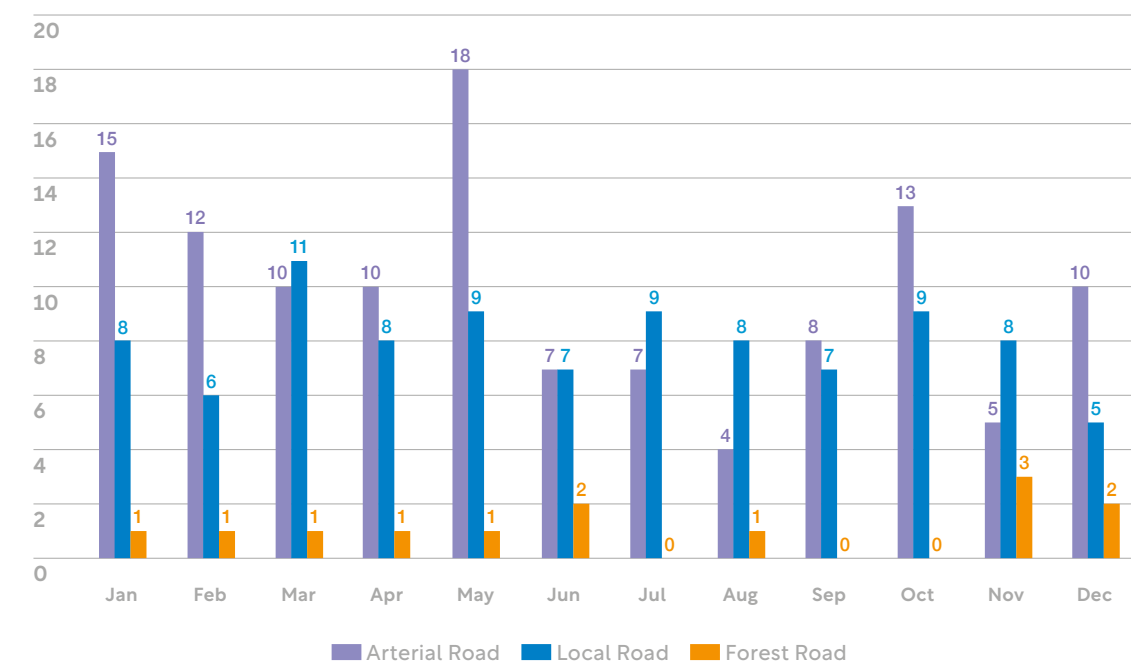**FATAL AND SERIOUS INJURY CRASHES - MONTH (2020–2024)**

FIGURE 21: FSI crashes by month in Moorabool Shire Council — Local Road Graphs include Forest Roads

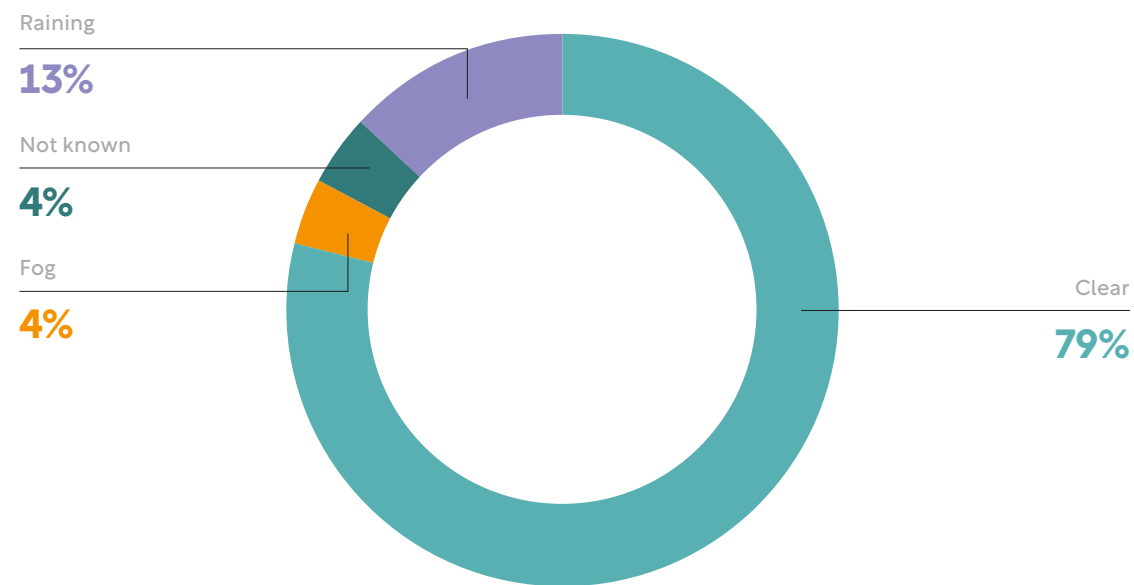**FATAL AND SERIOUS CRASHES - ATMOSPHERIC CONDITIONS (2020–2024)**

Raining
13%

Not known
4%

Fog
4%

Clear
79%

FATAL AND SERIOUS CRASHES - ROAD SURFACE CONDITIONS (2020–2024)

Wet
20%

Not known
4%

Muddy
1%

Icy
0%

Dry
75%

FIGURE 23: FSI crashes by road surface conditions in Moorabool Shire Council – Local, Arterial, and Forest Roads

What did you tell us?

An online survey was designed and conducted for the community to express their views on road safety within Moorabool Shire. A total of 149 (110 online and 39 via hard copy) respondents completed the survey.

The online survey provided valuable information to supplement the crash data, which enables us to identify road safety issues that matter to the community. The following breakdown summarises what you told us.

Travel within Moorabool Shire

Moorabool Shire's primary form of transport is vehicular traffic. This is reflected in the survey data which shows that the main modes of daily and weekly travel are driving and walking. Cars are typically used for medium to long trips, while walking is preferred for short ones. It was noted that there was a significant volume of respondents who use the train a few times a year, likely to travel into Melbourne or neighbouring townships.

HOW OFTEN DO RESPONDENTS USE THE FOLLOWING MODES OF TRANSPORT IN THE SHIRE

Legend: Daily · A few times a week · A few times a month · A few times a year · Rarely or never

FIGURE 24: Key modes of transport by use

Perceptions of safety

With regards to the level of safety on roads, almost 3/4 of respondents felt that local streets were the area of key conc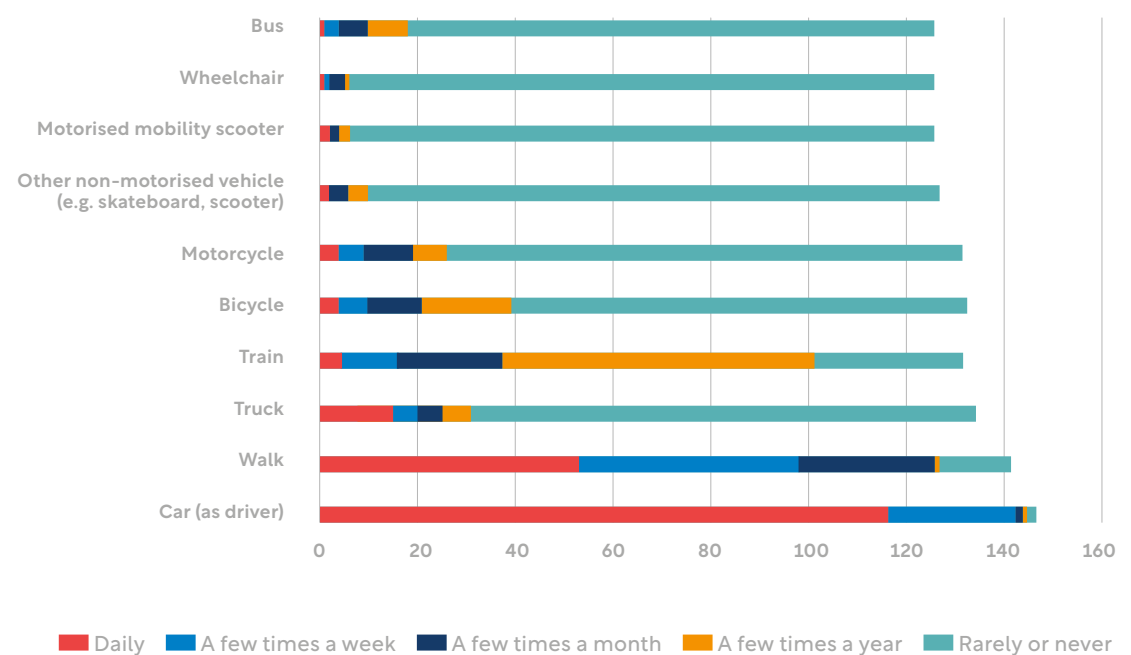ern with many responses stating various reasons for this including maintenance, speeding and the presence of heavy vehicles in urban areas. This was followed by just over half of respondents listing arterial roads, suggesting that the perceived key locations of concern for road safety are throughout the entire network rather than limited to localised areas.
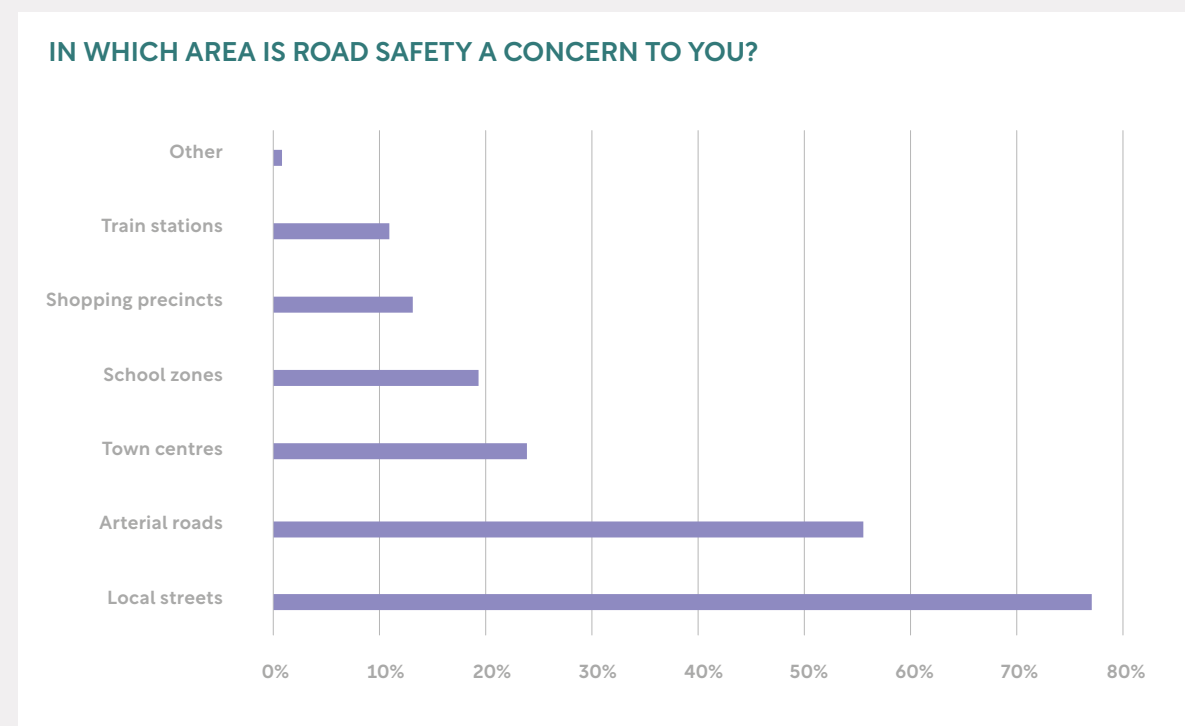
IN WHICH AREA IS ROAD SAFETY A CONCERN TO YOU?

FIGURE 25: Perceived locations of concern for road safety

As shown in Figure 26 and Figure 27, there are varied opinions on the level of safety across the road network in urban and rural areas with a similar split in opinions across both locales, indicating very different levels of perceptions from road users in the Council which may be attributed to diverse personal experiences, roads used as well as the mode of transport used.

VIEWS ON ROAD SAFETY IN URBAN AREAS

Very Poor **11%**
Poor **15%**
Excellent **0%**
Good **30%**
Average **44%**

Excellent | Good | Average | Poor | Very Poor

FIGURE 26: Perceptions of road safety (urban)

VIEWS ON ROAD SAFETY IN RURAL AREAS

Very Poor **16%**
Poor **20%**
Excellent **1%**
Good **27%**
Average **36%**

Excellent | Good | Average | Poor | Very Poor

FIGURE 27: Perceptions of road safety (rural)

Figure 28 shows the almost 2/3 of respondents felt that bicycle/shared path safety was either average or good in urban areas. Concerns were raised in this area including the lack of paths (including the need for complete & connected paths), dangers in cyclists sharing the road with vehicles in traffic lanes and the emerging issue of e-scooters/e-bikes and managing their interactions with other road users.

VIEWS ON BICYCLE/SHARED PATH SAFETY IN TOWNS & URBAN AREAS

Very Poor **6%**
Poor **12%**
Excellent **3%**
Good **41%**
Average **38%**

Excellent | Good | Average | Poor | Very Poor

FIGURE 28: Perceptions of active network path safety

Perceptions of speed limits

Figure 29 and Figure 30 show that 2/3 of most respondents felt that speeds were appropriate throughout the Shire. It is important to note that the posted speed limits are a guide to the maximum speed at which a vehicle can travel on a road. Speed is a complex aspect of the road network, with several factors influencing it including weather conditions, road surface conditions, and familiarity with the road geometry. Furthermore, speed limits on some roads may need adjustment due to variations in traffic volumes and modes of use, underscoring the importance of regularly monitoring and updating them in coordination with the Department of Transport and Planning (DTP).

VIEWS ON SPEED LIMITS IN TOWNS & URBAN AREAS

Not sure
2%

The speed limits are much too low
14%

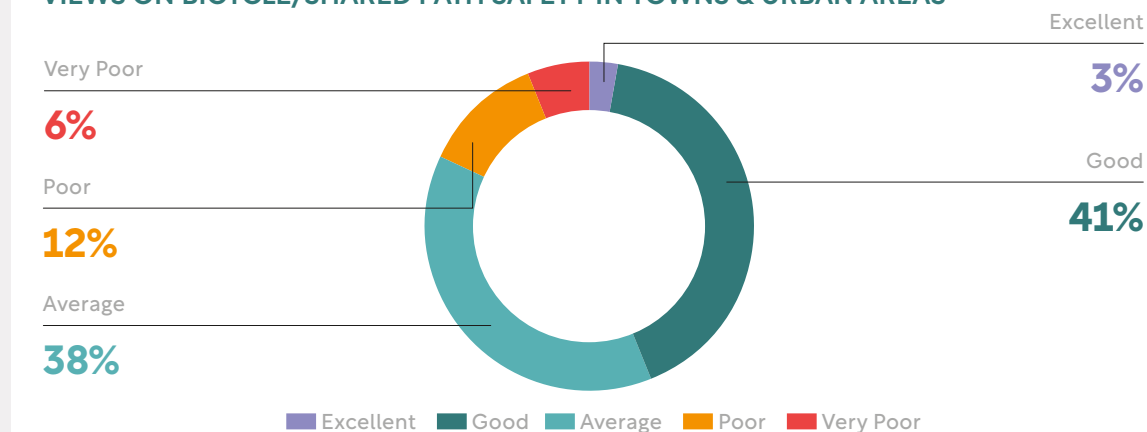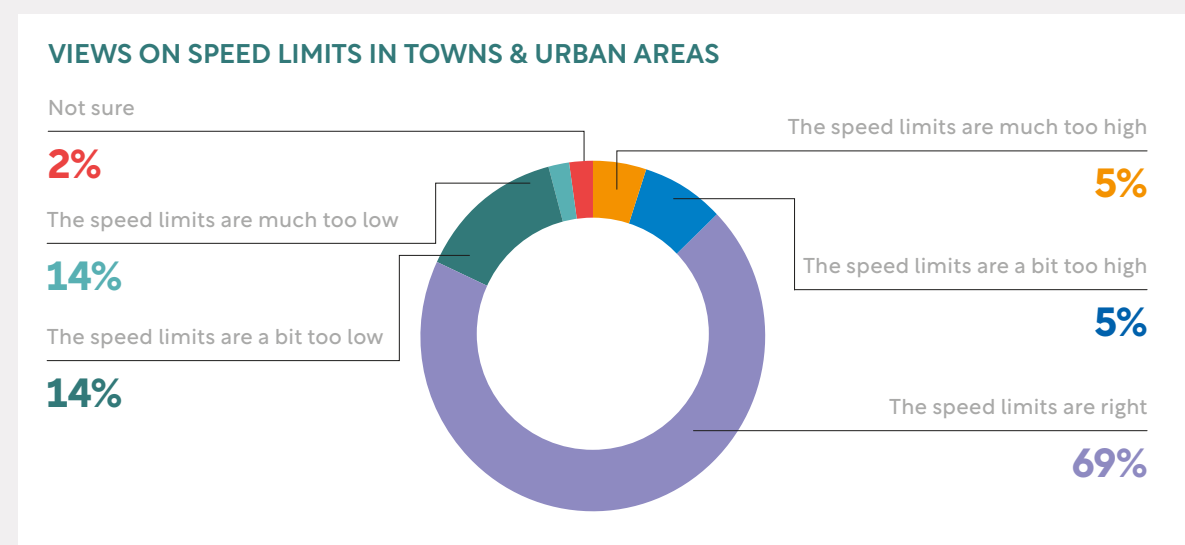The speed limits are a bit too low
14%

The speed limits are much too high
5%

The speed limits are a bit too high
5%

The speed limits are right
69%

FIGURE 29: Perception of speed limits in towns & urban areas

VIEWS ON SPEED LIMITS IN RURAL AREAS

Not sure
1%

The speed limits are much too low
3%

The speed limits are a bit too low
10%

The speed limits are much too high
3%

The speed limits are a bit too high
16%

The speed limits are right
67%

FIGURE 30: Perception of speed limits in rural areas

Key road safety concerns

Figure 31 lists a wide range of road safety concerns from respondents. It is noted that road conditions are listed as the most significant concern and although crashes are rarely caused by poor surface quality. Speeding and the use of mobile phones were listed as other significant factors, highlighting a need for enhanced enforcement, road user education, and targeted campaigns.

TOP ROAD SAFETY CONCERNS FROM RESPONDENTS

Non-use of seatbelts
Non-use of helmets by motorcyclists and cyclists
Unlicensed drivers
Drink driving
Insufficient safe cycling paths
Drug driving
School zone speed limit compliance
Insufficient pedestrian crossings
Mix of vehicles and cyclists on roads
E-scooters and E-bikes
Rat running (using small, often residential streets to...
Insufficient footpaths for pedestrians
Poor lighting
Lack of knowledge of road rules
Roadside hazards
Road signs/linemarkings are unclear
Heavy vehicles
Mobile device usage
Speeding
Road conditions

0% 10% 20% 30% 40% 50% 60% 70% 80%

FIGURE 31: Key areas recommended to improve road safety

How we will move towards zero trauma – The Safe System

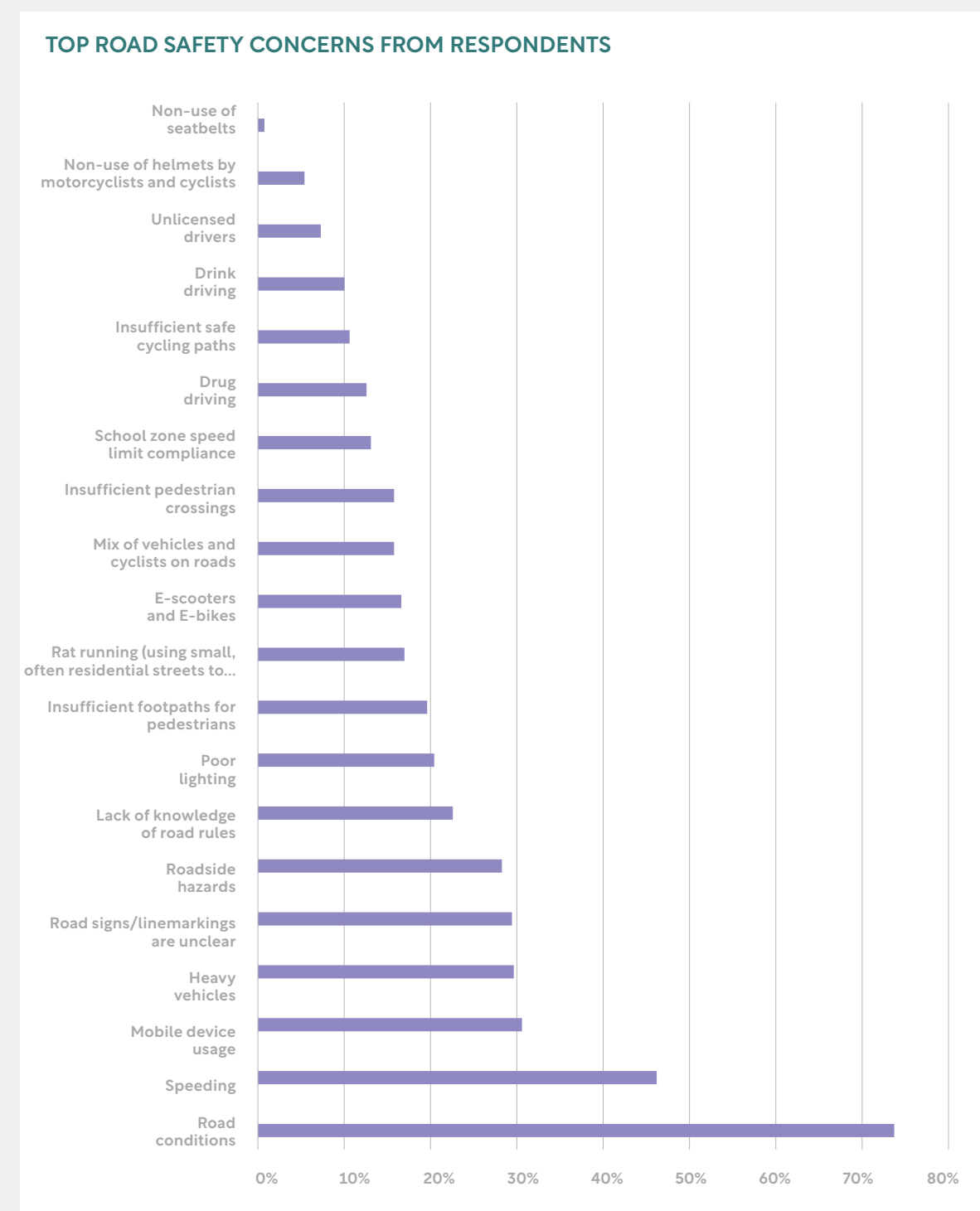The Safe System is an internationally recognised framework to reduce road trauma, based on the success in Sweden which achieved a reduction of fatalities by 40% over 10 years (Towards Zero Conference, Stockholm 2013). This has been recognised in Australia, and many other countries, as best practice and Moorabool Shire Council is committed to using the Safe System in all our road safety projects and practices.

Safe Roads

Design, operation and maintenance of the road and roadside to reduce likelihood and severity of crashes.

Safe Speeds

Speed limits, compliance and physical constraints resulting in safer speeds to limit the likelihood and severity of crashes.

Reducing Road Trauma

Work to prevent crashes that result in death or serious injury

EDUCATION AND INFORMATION • INNOVATION • STANDARDS • COORDINATION • DATA, RESEARCH AND EVALUATION • ROAD RULES AND ENFORCEMENT • LICENSING AND REGISTRATION

Safe Vehicles

Safety features and technology in vehicles to limit the likelihood and severity of crashes.

Safe People

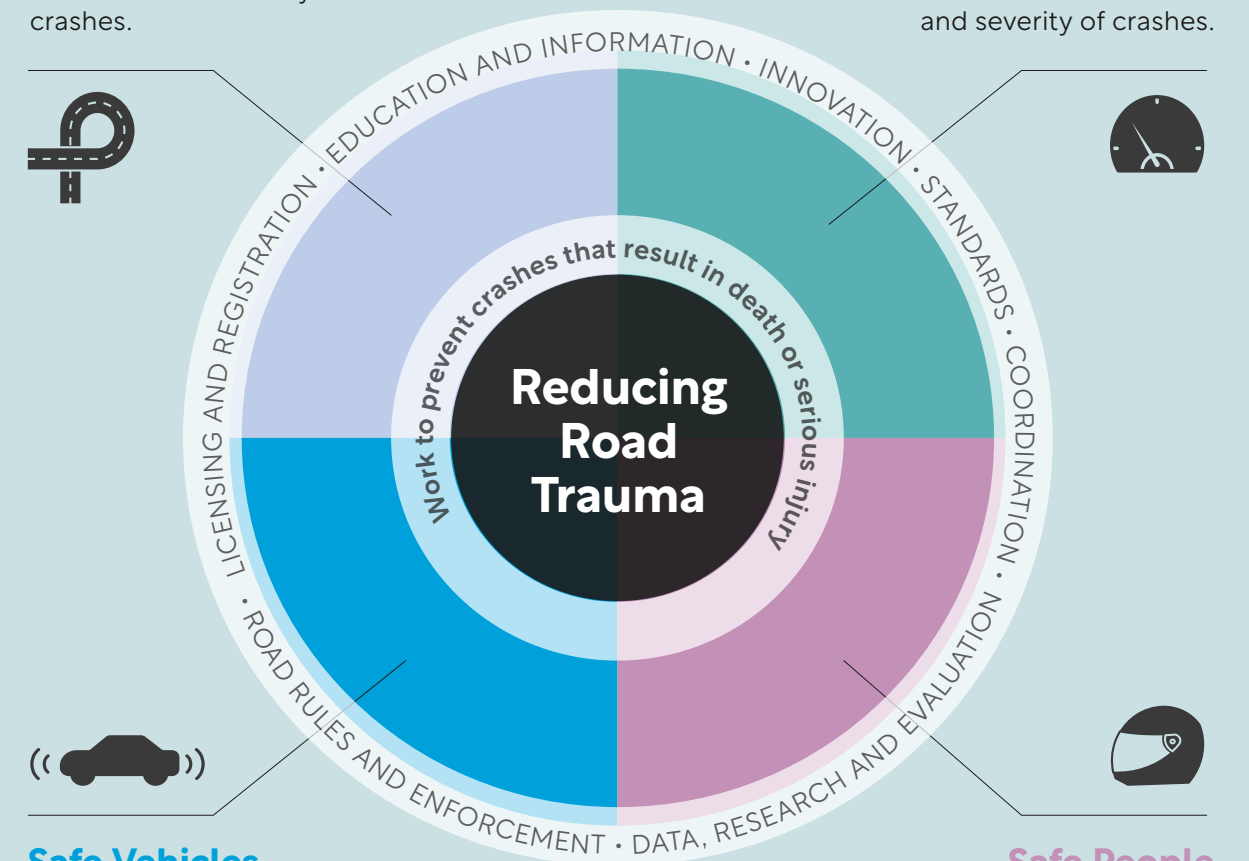Road user behaviour, including licensing, education, enforcement and personal safety equipment.

FIGURE 32: The Safe System (Source: Victoria Road Safety Action Plan 2)

Principles of the Safe System

- ➡ The goal is to reach zero FSIs on our roads
- ➡ Vulnerability of people
- ➡ People are prone to making errors
- ➡ Shared responsibility for road safety

1.	**The only acceptable fatality or serious injury toll on our roads is zero (zero tolerance)**	Everyone is susceptible to being injured. Road safety needs to be focused towards reducing fatal and serious injuries.
2.	**People are vulnerable**	If vehicles crash at high-speed, then our bodies are subject to forces they cannot withstand. The approximate tolerances for the human body under different crash conditions (TAC) 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 While our natural tolerances to physical forces are outside of our control, there is a lot that we can do to reduce or avoid physical impacts greater than can be withstood by the human body.
3.	**People make mistakes**	Human error is inevitable, and on our roads human error can result in crashes and trauma. However, crashes need not (and should not) result in death 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.
4.	**Shared responsibility**	Creating a safe road network is everyone's responsibility. Businesses, organisations, communities and individuals, and Moorabool Council all have a role to play in moving towards zero trauma on our roads.

Elements of the Safe System

The Safe System comprises four interacting elements which encompass all the factors that contribute to a crash:

1. Safe roads

We will address the most severe risk locations and risk factors on our roads.

Road infrastructure plays a vital role in helping to reduce the likelihood of crashes and/or the severity of injuries if there is an accident and hence should be designed accordingly to minimise both. Our roads should be forgiving of errors by road users and provide the safest possible outcome in adverse circumstances.

2. Safe speeds

We will encourage people to travel at safe speeds.

When a crash occurs, the weight and speed of the vehicle at the moment of impact determine how much force is transferred to the people involved. Based on understanding of the tolerances of the human body, the 'Safe Speeds' element aims to ensure that speed limits are appropriate, road users travel at speeds that are safe for the conditions and are compliant with the set limits.

3. Safe people

We will engage with the community.

Crashes often involve an element of human error and based on the understanding that road safety is a shared responsibility, safe road use is an important factor to consider. This includes a wide range of areas including road user behaviour, licensing, education, training, and personal protective equipment. Examples of this may include taking power naps to prevent driving while fatigues or wearing appropriate safety equipment whilst riding a motorcycle (approved crash helmet, protective clothing).

4. Safe vehicles

We will promote the use of safe vehicles.

Better safety features are continually being introduced to vehicles. These features can assist in preventing crashes by automatically detecting dangerous situations and reacting appropriately, or by reducing the impact forces on those involved in a crash.

Post-Crash Care

When a serious crash occurs, emergency services are required to attend the scene. The length of time between when the crash occurs and when emergency treatment is received is a critical factor in the severity of a crash. It is essential that emergency response times and accessibility for emergency vehicles are considered in our road safety planning.

What can Council do and what can you do?

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 to decide what results we want to achieve.

Research[1] 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 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 and as such they have influenced our strategy and our Action Plan, see Table 1.

Furthermore, in alignment with the Safe System approach and the recognition that road safety is a shared responsibility, there are several ways that both Council and we can make a difference, including the following:

What Council Can Do

Safe roads

- As a Road Authority, we have a primary responsibility for the safety of the roads we own and manage, including a duty of care towards road users.
- As a Planning Authority, we have a duty to consider the implications of decisions regarding land use and developments and ensure that road safety is not compromised.
- Lobbying higher levels of government for funding transport infrastructure and services which will benefit the community.
- Lobbying higher levels of government for changes to legislation which may have a particular impact on its community, e.g. state wide initiatives to improve safety around E-Mobility devices.

Safe speeds

- Lobby and collaborate with DTP for appropriate speed limits throughout the road network as DTP set and approve speed limits across both Council and DTP managed roads.
- Conduct campaigns and install infrastructure which reinforce appropriate speeds throughout the Council's road network.

Safe people

- As an employer and fleet operator we have a duty to ensure the safe operation of our staff and vehicles (applying these principles and practices to our contractors) and to provide leadership to other organisations and the broader community in improving driving standards.
- Promote a culture of safety by ensuring our staff are well-trained, informed, and supported in adopting safe practices, and extend these expectations to contractors and partners.
- Lead by example within the community by encouraging responsible road user behavior and supporting education initiatives that reduce risk for drivers, pedestrians, and cyclists.

Safe vehicles

- Purchase fleet vehicles which are ANCAP Five-Star safety rated with Advanced Driver Assistance Systems such as Intelligent Speed Assist, Lane Keep Assist, Blind Spot Detection, and Emergency Brake Assist.
- Ensure policies promote the purchase and use of the safest vehicles, and safe driving practices.
- Ensure our fleet is well maintained and in a roadworthy condition.

1 Fylan F., Hempel. S., Grundelf, B., Conner, M., Lawton, R. (2006), *Effective Interventions for Speeding Motorists. Road Safety Research Project 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 (2003). *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

What You Can Do

Safe roads

- Report all road faults and hazards
  - on local roads to Moorabool Shire Council either by phone (03) 5366 7100, by email **info@moorabool.vic.gov.au** or online **https://www.moorabool.vic.gov.au/Building-and-planning/Roads-and-transport/Report-a-road-maintenance-issue**, or via Antenno mobile phone app.
  - on arterial roads to Department of Transport and Planning **(https://www.vicroads.vic.gov.au/traffic-and-road-use/report-a-road-issue)**
- Report any crashes or incidents to Victoria Police so that they can be added to the State Government database of crashes.

Safe speeds

- Travel at a safe speed that is appropriate to the conditions.
- Never exceed the speed limit, but also remember that it's a limit, not a target, and always drive to the conditions.
- Allow plenty of time for your trip so you do not feel the need to rush.
- Report hoon behaviour (driving in a reckless antisocial manner) to the Crime Stoppers Hoon Hotline on 1800 333 000 or online: **https://report.crimestoppersvic.com.au**

Safe people

Everybody

- Be a role model for the travel behaviour you want to see in our community.
- Share roads and paths by being mindful of other road users.
- Concentrate when you are driving, riding, and walking – beware of distractions.
- Do not use your mobile phone whilst driving, riding, or crossing the road.
- Watch out for cyclists when driving, parking, and opening your car door.
- Always wear full safety gear if you travel on a motorbike or scooter.

Young Drivers

- Visit the VicRoads website to access or find out about programs that help young drivers while they are on their Ls. Check out:
  - Learner Kits; Your Ls; myLearners; Road Smart; L2P; Fit to Drive; keys2drive; DriveSmart
- Direct young drivers to **SaferPplaters.com.au** to reduce their risks in their first years of driving.
- Find out about the L2P program via the following link: **https://www.moorabool.vic.gov.au/Services-and-support/Community/TAC-L2P-Program**
- Consider becoming an L2P mentor to help a young driver without access to a supervisor get vital driving practice.

- Assist a young driver to get 120 hours of supervised driving practice, making them safer when they become a probationary driver.
- Encourage your sporting club to undertake a Looking After Our Mates education session via the following link: https://transport.vic.gov.au/news-and-resources/education-resources/looking-after-our-mates-year-12

Active Transport

- Consider walking, cycling, scooting, and using public transport to reduce congestion and to improve health.
- Identify a safe route to school for your children and teach them to use that route.
- Keep your nature strip clear of obstructions, allowing your community to walk around your neighbourhood safely and ensure clear sightlines when exiting and entering driveways.
- Always wear a helmet when cycling and be "bright at night" by fitting lights to your bike.
- When cycling, scooting, or walking, on shared paths be courteous and mindful of other users, and remember that erratic behaviour can lead to a collision.

- Road Safety Victoria (Department of Transport and Planning) has produced a series of fact sheets to support the safe use of motorised scooters and powered wheelchairs: https://www.vicroads.vic.gov.au/safety-and-road-rules/pedestrian-safety/motorised-mobility-devices

Safe vehicles

- Make sure that your next new car is ANCAP Five-Star Safety Rated.
- Use TAC's How Safe is Your Car rating when purchasing a second-hand car.
- Consider purchasing vehicles fitted with Advance Driver Assistance Systems such as Intelligent Speed Assist, Lane Keep Assist, Blind Spot Detection, and Emergency Brake Assist.
- 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.

TABLE 1: Best practice across Safe System pillars

		What works
SAFE ROADS	✓	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 crossing, and roadside barriers.
	✓	Gateway treatments on the approach to lower speed areas.
SAFE SPEEDS	✓	Reducing speeds where the crash risk is high.
	✓	Reducing travel speeds to below 30 km/h in locations 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.
SAFE PEOPLE	✓	Communicating the Safe System philosophy to the community.
	✓	Implementing road safety programs that are evidence based.
	✓	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 help people develop good judgement, resilience, coping strategies and refusal skills enabling them to act in a responsible and safe manner.
	✓	Using resources available from Department of Transport and Planning, 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.
	✓	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 visible enforcement presence.

What works

SAFE VEHICLES	
✓	Encouraging people to use the TAC How Safe is Your Car website when looking for a second-hand car.
✓	Encourage people to purchase vehicles with Advance Driver Assistance Systems such as Intelligent Speed Assist, Lane Keep Assist, Blind Spot Detection, and Emergency Brake Assist.
✓	Company policies that promote the purchase and use of the safest vehicles, and safe driving practices.

Action Plan

Initiative	Action	Performance Measure	Timeframe	Delivery Team
SAFE ROADS – We will address the most severe risk locations and risk factors on our roads				
1.	Proactively seek opportunities to apply for funding and grants to address road safety outcomes. (Review all available grant funding schemes and prepare a provisional and prioritised program of applications.)	• Number of applied grants versus number of successful applications.	Annual	Asset Management
2.	Council to attend Road Safe Central Highlands meetings.	• Attend bimonthly meetings, provide data to inform the meetings, and proactively support appropriate actions.	Bimonthly	Engineering Services
3.	Utilise safe system principles in reveiw and approval of all development applications	• Number of Development applications utilised Safe System Principles.	Ongoing	Planning & Regulatory Services and Engineering Services
4.	Annually review road crash statistics	• Number of Road Safety Audits identified. • Result of analyzing trends and opportunities for funding with a report to senior management.	Ongoing	Engineering Services
5.	Include delineation improvement in Long Term Capital Projects Program	• Number of projects completed that included delineation.	Ongoing	Asset Management, Operations, Engineering Services

Initiative	Action	Performance Measure	Timeframe	Delivery Team
6.	Develop a program of road widenings and upgrades in the Long-Term Capital Improvement Program for implementation	• Number of upgrades completed and and intersections sealed.	Annual	Asset Management and Engineering Services
7.	Continue to complete inspections to ensure pathways are clear and accessible allowing the community to walk around the neighbourhood safely.	• Conduct proactive and reactive inspections in accordance with Council's RMP.	Ongoing	Asset Management
8.	Implement pedestrian improvements identified through the Local Area Traffic Management Process.	• Include the identified list of works in the Long-Term Capital Improvement Program, as appropriate.	Ongoing	Asset Management
9.	Strengthen road maintenance through improved RMP inspections and using technology	• RMP compliance achieved. • Increased accuracy and proportion of the network inspected using technology-assisted methods.	Ongoing	Asset Management, Operations
10.	Explore the options for developing a safety rating for council's rural roads	• Review of relevant systems and develop business case	Ongoing	Asset Management
SAFE SPEEDS – We will encourage people to travel at safe speeds				
11.	Continue review of speed limits to ensure alignment with Safe System Principles (including contractor and developers construction sites)	• Number of Audits conducted and Traffic Management Plans received.	Ongoing	Engineering Services
12.	Monitor speeding and other unsafe road user behaviour reported by the community.	• Number of requests received by the community annually.	Ongoing	Engineering Services
13.	Maintain and update register of traffic counts for Local Roads.	• Number of traffic counts conducted annually	Ongoing	Engineering Services
14.	Notify Victoria Police of areas identified as having issues with speeding or hoon behaviour.	• Number of issues reported to Victoria Police annually	Ongoing	Engineering Services

Initiative	Action	Performance Measure	Timeframe	Delivery Team
SAFE PEOPLE — We will engage with the community				
15.	Promote road safety in the community by participating in National Road Safety Week, supporting safe driving campaigns, and sharing partner messages through Moorabool Matters and social media.	• Number of road safety campaigns supported annually • Number of road safety related post published on social media annually	Ongoing	Communications, and Community Strengthening, Engineering Services
16.	Strengthen awareness of existing programs such as the TAC L2P and Wiser Driver Program through improved publicity and outreach.	• Number of promotional activities taken annually	Ongoing	Communications, Assets, Community Strengthening
17.	Support youth road safety by promoting the Road Safety Education Victoria website and its resources to local schools.	• Number of schools provided with information or resources annually	Ongoing	Community Strengthening, Communications
SAFE VEHICLES — We will promote the use of safe vehicles				
18.	Assist in managing e-mobility devices (such as E-scooters and E-bikes) by advocating to Government for stricter controls on the legal framework in the purchase and operation of these devices.	• Number of formal advocacy submissions provided to Government annually	Ongoing	Communications and Community Strengthening
19.	Notify Victoria Police of areas identified as having issues with speeding or hoon behaviour.	• Number of issues reported to Victoria Police annually.	Ongoing	Engineering Services

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