
CONNECTED
Yarra Ranges Integrated Transport Strategy
2020-2040
CONNECTED
Yarra
Ranges
Council



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Mayor's Foreword

Transport is something we use multiple times every day, but it's not always something we think about deeply.

When we drive to work, walk to the shops or ride a bike, we're using different transport networks in our community – and our choices are often made subconsciously, based on what's easiest or most familiar to us.

The Yarra Ranges is one of the most car-dependent municipalities in the wider Melbourne area and we know that as the population continues to grow, we need to act now to ease future congestion.

That's where *Connected*, our Integrated Transport Strategy comes in.

Our community members have told us that while they rely on their cars, they also want more public transport with better connections between modes, better footpaths, more walkable neighbourhoods and cycling networks separated from roads.

We know that most car trips in the Yarra Ranges are less than three kilometres long.

While there are many members of the community who will need to take trips by car, we also know that by improving the infrastructure people use to walk and ride, more people will be able to make those journeys on foot or by bike.

Regardless of how you travel, this strategy identifies the need for us to have more bike paths and lanes separated from road traffic, to avoid both vehicles and bike traffic mixing in unsafe ways.



More footpaths, more space in car parks and new charging stations for electric vehicles are also key parts of the strategy, preparing our community for the ways we will travel in the future.

We also have an important role at Council to advocate to other levels of Government for improvements to bus and train timetables – such as more frequent services and integration between buses and trains. We'll also be advocating for better infrastructure to make travelling without a car easier for everyone, helping to free up the road network for those that have to drive.

Connected will guide Council's decisions around transport infrastructure for the next 20 years and is the result of expert analysis and significant community feedback.

At Council, we're confident the priorities and goals in *Connected* will prepare the Yarra Ranges for better, safer and more accessible transport.

Cr Richard Higgins,

Yarra Ranges Mayor



Overview

What is *Connected*?

Connected is the new Integrated Transport Strategy for the Yarra Ranges. It is the key strategic document that guides transport planning and decision-making over the next two decades. *Connected* outlines the most pressing challenges and the big moves required to make getting around in the Yarra Ranges more convenient, safer and more sustainable. *Connected* is our vision for the transport network of the future. *Connected* highlights our current travel patterns, and a set of targets and actions designed to respond to the community's concerns and aspirations regarding transport and accessibility.

Why do we need an Integrated Transport Strategy?

Connected creates the framework and direction to align transport investment and policy decisions with the aspirations the community hold for the Yarra Ranges of the future. A well implemented Integrated Transport Strategy ensures *we are all pulling in the same direction,* to get the outcomes we want, to create a Yarra Ranges that is:

- Safer
- Healthier
- More connected
- Sustainable, and
- More inclusive.

Yarra Ranges currently has a population of 160,000 and is projected to grow to 185,000 by 2041[1]. As one of the most car dependent communities in Greater Melbourne, it's difficult to overstate the magnitude of the challenge Yarra Ranges faces. We've heard the community want more options to get around without having to always get in their car. Creating more walkable neighbourhoods, a cohesive cycling network, and integrated public transport

How do we want our children and grandchildren to get around in the future? *Connected* is Council's strategy to ensure we have sustainable, safe and efficient options to get around Yarra Ranges and beyond.

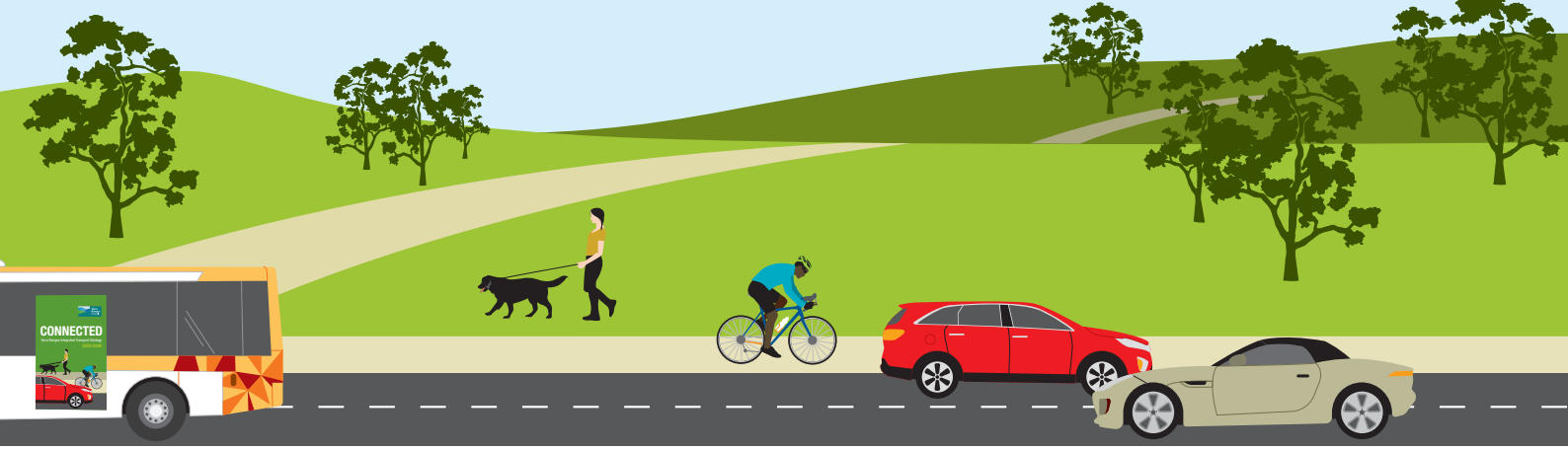


can only be achieved through the creation of a coordinated approach to transport planning. *Connected* provides the strategic blueprint to guide transport investment, policy and advocacy actions.

The Case for Change

The traditional approach to transport planning has not delivered the best outcomes for the community. Traffic and parking congestion remains a pressing issue, growing risks from climate change requires a decrease in emissions from transport, and most of our townships are already built-out, with little room to expand or widen roads. Melbourne's population continues to increase, and Yarra Ranges will need to accommodate some of this growth. We have reached the maximum supply for our road network.

1 https://forecast.id.com.au/yarra-ranges



There are limited opportunities to widen roads or add new lanes. Additional population growth will need to be managed within the existing transport network.

To make sure the road network is suitable for those that need to drive, we will provide more attractive options for those trips that can be done by foot, bicycle or public transport. Developing a suite of actions that make it easier for people to leave the car at home and jump on a bike or take a stroll to the shops will help replace many of the ~1,000,000 car trips under 3km that take place every week in Yarra Ranges. This will allow us to absorb a growing population without increasing the number of cars on our roads. Without the actions to encourage more walking, cycling and public transport that are included in *Connected*, we'd see an estimated extra 50,000 car trips everyday by 2036. Bumper to bumper, these cars would stretch from Lilydale to the NSW border (over 220km).

To ensure Yarra Ranges remains a great place to live, work and visit, *Connected* outlines a modest target of reducing trip by car by 20% from current levels. Doing so will free up space on our roads and car parks for those who need to drive. It will also allow us to accommodate the future population growth while easing traffic and parking congestion.

A unifying theme within *Connected* is the need to *'do more with less'*. Better managing our transport assets with initiatives like real time information of vacant car parks and innovative treatments to ensure our streets are welcoming to a diverse set of transport options are characteristic of this *'doing more with less'* theme. *Connected* also takes advantage of some exciting new transport technology. We're going to develop a network of electric vehicle chargers so that residents, businesses and visitors can begin to take advantage of the newer, lower cost electric vehicles that are starting to become available in Australia.

A Yarra Ranges with a more diverse set of transport options means that when you do need to get in your car, that trip will be better because there will be less competition for road space and parking.





What we're going to do

Our overall approach to investing and managing the transport system is centred around providing better transport options for trips that can be converted to sustainable modes, so that the journey becomes more reliable for those that have to drive.

For trips less than 3km

We will increase opportunities for people to walk and cycle to local destinations, including shops, schools, and train stations.

Just over half of all car trips in Yarra Ranges are less than 3km. While some of these trips will need to be done by car, there are many that could be easily completed by walking (less than 1km) or cycling (less than 3km) if the right infrastructure was provided. We will expand the current walking and cycling network to allow people the opportunity to walk and cycle. This category represents the biggest opportunity for Yarra Ranges Council to reduce local traffic and parking congestion.



For trips greater than 3km

We will advocate to the State Government for more frequent train and bus services that are better integrated, and an overhaul of the bus network with direct routes that take people where they want, when they want.

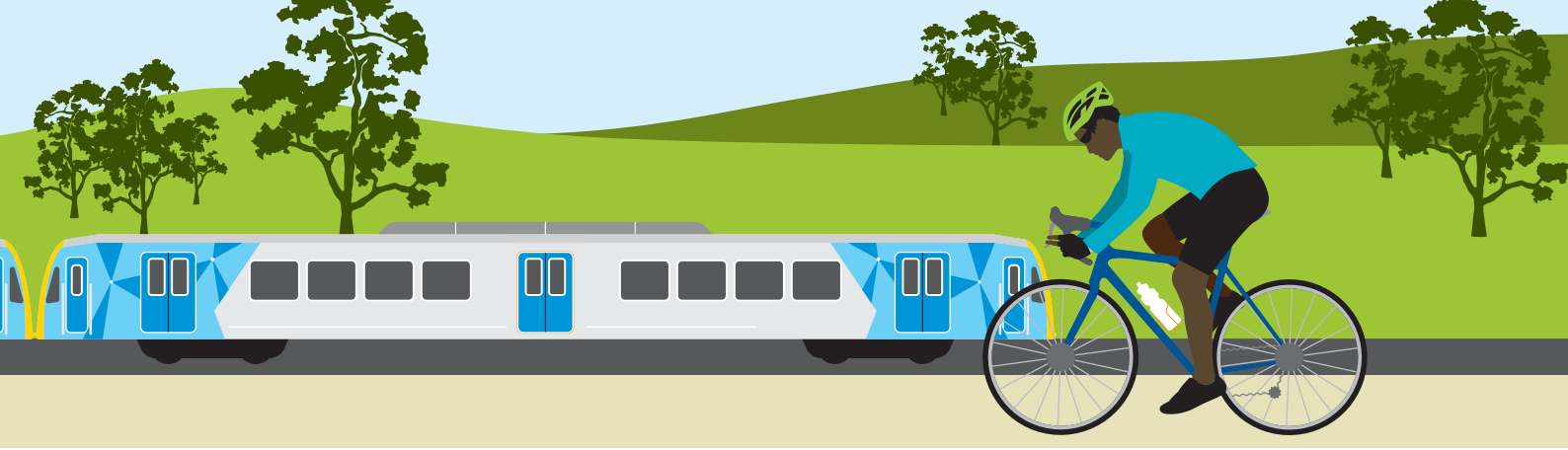
Many residents work outside the municipality and access essential services across Greater Melbourne. Very often, these trips are beyond comfortable walking and cycling distances. When talking to the community, we were frequently told that people wanted to use the bus and train network but a lack of service coordination meant it was not uncommon for people to see their bus depart just as they were pulling into the station on a train, leaving a very long wait for the next bus. We will advocate to the State Government to improve bus and train connectivity using pulse timetabling, overhaul the bus network to create more direct bus routes that connect to local destinations, and create a truly accessible network that all Yarra Ranges residents can enjoy.

How *Connected* will work for Yarra Ranges

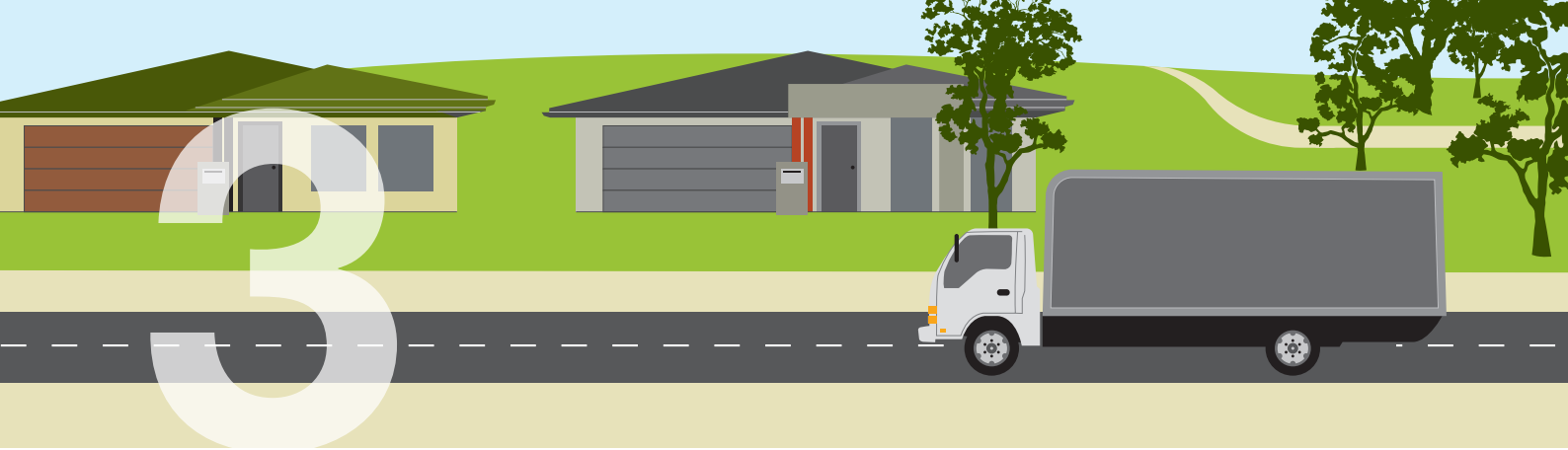
Connected is our key strategic document that will guide transport projects, advocacy, and decision-making in Yarra Ranges. It will provide guidance, support, and evidence-based justification to a range of important projects and plans across the municipality. These include, but are not limited to:

- Township Place Plans
- Township Structure Plans
- Level Crossing Removal Projects
- Advocating to State and Federal Governments
- Road upgrade projects
- Targeting local issues

Connected provides the blueprint for Council to work to improving transport, for all modes, throughout the next decade. If successful, it will make Yarra Ranges a more attractive place for those who work, live, and visit Yarra Ranges.







Connected has been a combined effort

A hallmark of this Integrated Transport Strategy has been the consultative process that has been used, from day one. Council's *Internal Working Group*, *Executive Leadership Team*, Councillors and the Yarra Ranges community have played an active role in the development of the Strategy we call *Connected*. It's called *Connected* because it connects the different areas of Yarra Ranges policies that transport touches on; the environment, economic development, social inclusion, accessibility and community wellbeing.

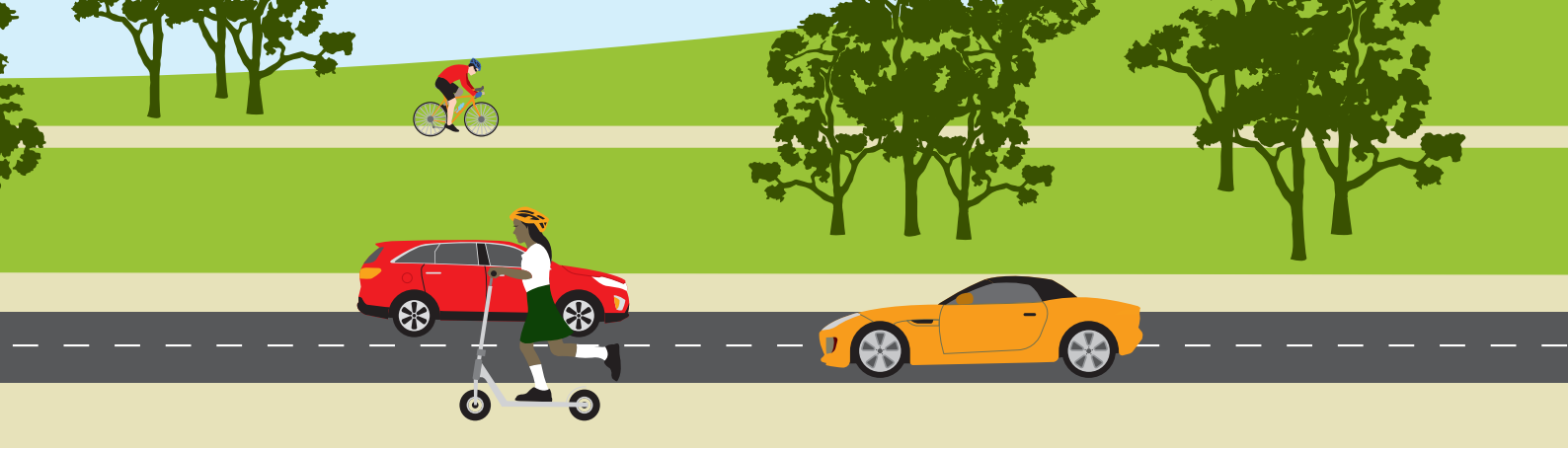
Fundamentally, the future of transport in Yarra Ranges needs to be about connecting people and communities through sustainable, accessible mobility. *Connected* has been developed with a wide range of community members that all have an interest making transport work for all members of the Yarra Ranges community and its visitors.

An *External Reference Committee* was established to assist in the development of *Connected* and included State Government representatives. This group has been able to identify issues and solutions to improve the functioning of the transport system. Moreover, pre-existing groups, such as Council's *Youth Ambassadors*, the *Indigenous Advisory Committee* and the *Disability Advisory Committee* have been consulted at various stages in the development of the Strategy. Many of the Actions included in the Strategy have occurred as a direct result of these discussions.

The Yarra Ranges community have also been central to the development of the Strategy, across a number of platforms and at various stages. This includes hundreds of individual conversations through the pop-up sessions held across the Yarra Ranges, and hundreds of responses to the online survey and CrowdSpot platform. The community's views and aspirations for the future of transport in Yarra Ranges has been a fundamental input into the creation of *Connected*.

The Youth Ambassadors, Disability Advisory Committee, and the Indigenous Advisory Committee provided great local insight, and the following passages offer examples of what they shared with the *Connected* team.





"We rely on bus services, as car ownership is lower in Indigenous communities because of economic constraints."

Indigenous Advisory Committee member

"70% of people with a disability are indistinguishable from the general community."

Disability Advisory Group member

"When people turn 18, getting a license offers a sense of freedom that is even more important than people being able to consume alcohol."

Youth Ambassador





Big issues facing Yarra Ranges

Yarra Ranges is a collection of unique towns and villages, closely connected to some of the most beautiful natural environments in Australia. The lifestyle that makes living in the Yarra Ranges so special is coming under threat from a range of issues that can be partially addressed through effective transport policy. The big issues facing Yarra Ranges which *Connected* will help address are described below in Figure 1.

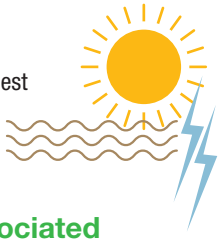


By creating a diversified, integrated transport system, Yarra Ranges residents, workers and visitors will be able to choose between a more diverse set of transport options, beyond having to use the car for every trip.



1 Climate change

Transport is the second largest and fastest growing source of carbon emissions.



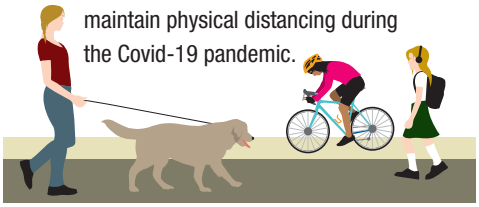
2 Traffic issues associated with population growth

The dominance of car travel, even for short trips in Yarra Ranges, exacerbates traffic congestion and parking issues.



3 Public health

Walking and cycling is not adequately supported by safe path networks and bike lanes to towns and facilities. This is to improve our health and maintain physical distancing during the Covid-19 pandemic.



4 Low density

Even though 90% of the Yarra Ranges community live in just 9% of the landmass, there are still many residents that need to travel long distances and this can be outside the public transport network. For these trips, the car will continue to be the dominant mode for the foreseeable future.



5 Economic development

Creating people orientated, vibrant town centres and employment precincts will bolster businesses in the Yarra Ranges, helping locals and visitors support commerce in the region and attract investment.



6 Road safety

Connected supports the Vision Zero goal of eliminating deaths on Yarra Ranges roads by designing streets that minimise the risk and severity of collisions, so that every road user can travel in safety, whether travelling by foot, bicycle, public transport or motor vehicle.



7 Equity of access

Mobility is important to everyone in Yarra Ranges. Whether you are young, elderly, disabled or low income, everyone has the right to convenient, safe transport options. The implementation of *Connected* will make accessing everyday services and destinations easier for these groups.



Figure 1 Big issues facing Yarra Ranges *Connected* will address



Yarra Ranges – Strategic Direction and Policy Alignment

Connected has been designed to align and support the strategic direction set by Council and the community.

The five strategic objectives within the Council Plan are identified below, as well as a brief explanation of how *Connected* serves to support these objectives.

1 Connected and Healthy Communities

A strategic approach to transport provides a diverse set of mobility options, helping to connect communities. A transport system that prioritises walking and cycling provides everyday opportunities for physical activity and connection to nature, and delivers greater coverage and frequency of public transport, will help make the Yarra Ranges community healthier and more connected.

2 Quality Infrastructure and Liveable Places

Connected delivers a plan for using the capacity of our transport network in a more efficient manner. It recognises the importance of creating vibrant streets and provides the guidance necessary to progressively re-align our key streets in Activity Centres to reflect the aspirations of our community for sustainable, liveable town centres.

3 Protected and Enhanced Natural Environment

The natural environment is one of the reasons Yarra Ranges is so unique. *Connected* has been designed to minimise the impact transport systems can have on Yarra Ranges' natural environment and bolsters opportunities for the community to connect with these special places via improvements to walking, cycling and public transport.

4 Vibrant Economy, Agriculture and Tourism

An effective transport system is critical to a healthy economy, bringing product to market, activating the growing tourism industry, attracting investment and allowing residents to access employment opportunities. By reducing the heavy reliance on motor vehicles, *Connected* helps take cars off the road, making it easier for primary producers to get their products out. Enhancing the quality of the walking and cycling network helps to support local businesses by encouraging people to do their shopping locally, and makes Yarra Ranges an even more attractive place to visit. A practical example of how *Connected* helps to bolster the vibrancy of the local economy is through its *electric vehicle charging network*, helping to attract visitors to come and stay in the region longer. Integrating active transport with public transport and improving the integration of buses and trains also gives more people the option to leave the car at home more often.

5 High Performing Organisation

As an organisation, we will strive to become a leading Council in implementing transport policy and initiatives that align with our wider strategic goals, lower reliance



on car use for short trips and make Yarra Ranges a great place for walking, cycling and using public transport. While we understand the car will still be central to the lives of Yarra Ranges residents, workers and visitors for decades to come, we are not going to be afraid to trial innovative solutions that make the best use of existing assets.

Key themes

A set of interlinked key themes have been developed and designed to support Council's wider strategic direction. These key themes are identified in Figure 2.

A *Safe Yarra Ranges* will be achieved by adopting the Safe Systems approach to transport safety in which the fallibility of the road user contributes to the design outcome of our roads. Moreover, the actions contained in *Connected* provide strong support for a safer pedestrian and cycling environment, helping to reduce the risk of collisions.

A *Healthy Yarra Ranges* will be achieved by prioritising the incidental physical activity that can be gained from everyday walking and cycling. Moreover, by reducing the need to take short car trips, *Connected* will help improve local air quality.

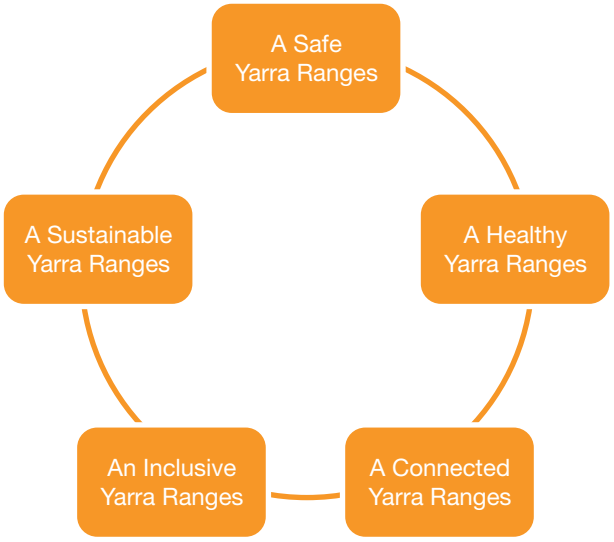


Figure 2 Key themes of *Connected*

The Yarra Ranges community will become more *connected* and *inclusive* by strengthening the diversity of transport options and advocating for enhanced integration between different modes of transport.

Yarra Ranges will become more sustainable through the implementation of Connected through initiatives such as better opportunities to walk and cycle, and electric vehicle charging stations.

65% of all fatal crashes occur on roads with a posted speed limit of 80km/h or higher.

40km/h zones were the only areas of the road network to record no fatalities in Yarra Ranges in the last five years.

15% of crashes involving a bike rider or pedestrian were hit and runs by car drivers in Yarra Ranges.



6

Vision and Guiding Principles

Vision [2]

Transport in Yarra Ranges provides safe, efficient access for the whole community, while protecting the natural environment and unique character of its towns and villages.

Guiding principles

1. Townships are vibrant, people focused destinations to socialise, engage in commerce and access services.



2. Public transport along key corridors is fast, accessible, frequent and offers seamless integration between modes.



3. Public transport hubs are connected to communities through best practice pedestrian design and a cohesive, attractive bicycle network.



4. Safe Systems underpins the design of the entire transport network.

5. Walking and cycling are the first choice for trips under 1km and 3km: Residents are provided with safe, high quality and connected walking and cycling opportunities for local trips.



6. Demand for car use is reduced in order to support the wider vision and objectives.

2 A *vision* does not attempt to describe the current situation. Rather, it highlights what Council wants to see in the future.



Mode hierarchy

The space on our road network is limited and there is strong competition for scarce space. To assist Council in making consistent, transparent decisions that work to support our vision and principles, two transport mode hierarchies have been developed; one for *town centres* and another for *regional roads.* This is in recognition of the townships and villages connected by regional roads that is part of Yarra Ranges' unique character. Our mode hierarchy, which we will use to allocate space in the heart of our towns and villages is shown in Figure 3.

While the mode hierarchy within our townships prioritise sustainable mobility, our regional roads have a different role in our transport system, where motorised transport will continue to be the priority in road space allocation decisions. The mode hierarchy for regional roads is shown in Figure 4. Bike riders and walkers are shown separately to illustrate that corridors will be provided in adjacent links (ie. Warburton Highway and Warburton Rail Trail).

In practical terms, these road hierarchies will assist Council in determining how space is allocated between modes in situations in which there is insufficient space to cater to every mode of transport. While motor vehicles may have priority on the main carriageway on these regional roads, providing a safe, separated pathway for active modes will be a priority of *Connected.*

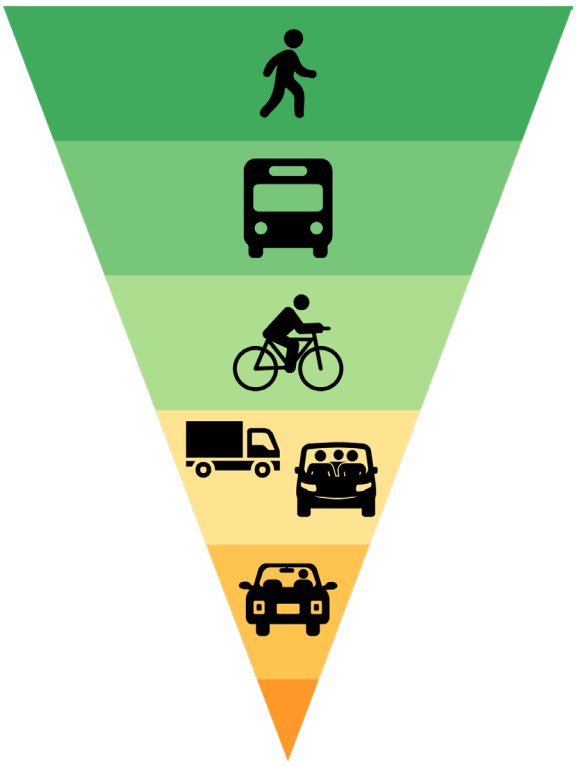


Figure 3 Mode Hierarchy - Town Centres

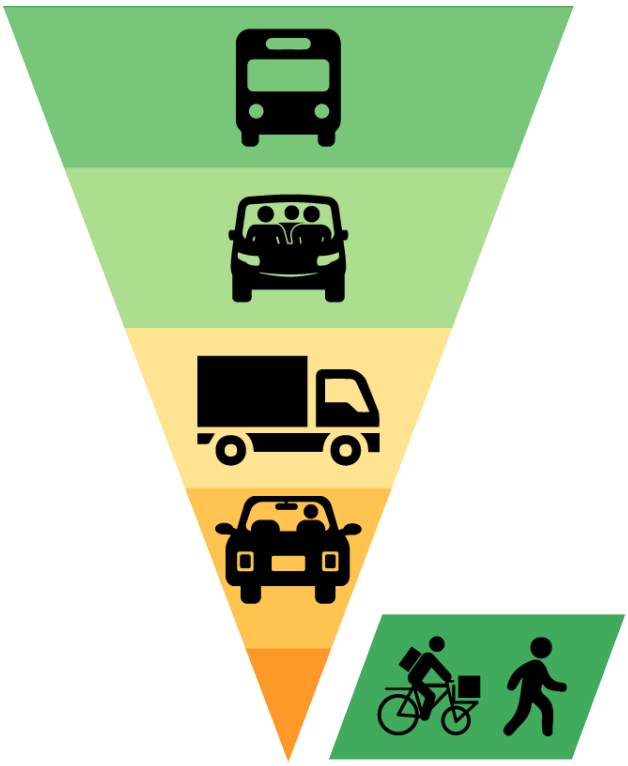


Figure 4 Mode Hierarchy - Regional Roads



Community consultation: What you told us

The development of *Connected* began with an extensive community engagement process. The following activities were undertaken in order to build a deep understanding of community sentiment and aspirations for Yarra Ranges.

- Five pop up sessions were held in popular shopping areas across Yarra Ranges, including in urban areas, the Hills and Valley. Hundreds of hours of face to face conversations took place, to develop a strong understanding of the frustrations and aspirations for the community on how they want to get around in the future. Each pop up took place on Saturday, allowing anyone to stop by and provide their input on transport issues in Yarra Ranges.
- A digital map-based survey (CrowdSpot) was promoted, with hundreds of Yarra Ranges residents dropping a pin on a map to identify areas they'd like to see improved.
- An online survey gave the community a more in-depth opportunity to understand travel behaviour and what it would take to make walking, cycling and public transport more attractive.



- Deep dive interviews were held with an *External Reference Group*, to learn what professional stakeholders and community leaders considered to be the biggest transport issues and how transport policy can be used to make Yarra Ranges an even better place to live and work.
- We conducted interviews and presentations with over 6 additional community groups, gaining a deeper understanding how we can make *Connected* work best for the community.
- A total of 465 people reviewed the Draft Strategy through the website with 15% providing detailed feedback. About 2,000 people reviewed the summarised Draft Strategy information on the *Connected* webpage. All this helped us to form a final document that is best placed to tackle the current and future transport challenges in Yarra Ranges.

What we heard

Overall, the key theme the community expressed was a frustration associated with car use (congestion and parking difficulty), and a desire to have better options for walking, cycling and public transport use. People did not like that buses and trains were uncoordinated, and an infrequent bus service exacerbated this issue.

Consistent points raised by the community included:

- Separated bike paths/lanes would help more people riding and reduce the frustration of cars and bikes mixing in unsafe ways.



- People rely on their cars.
- There are many areas without footpaths and crossing busy roads felt unsafe.
- Traffic congestion detracts from the quality of life in Yarra Ranges and many people expect it will get worse with population growth. The Warburton Highway and the future Quarry development were identified as specific areas of concern.
- Buses and trains don't meet up, meaning that all too often people are left waiting for very long periods when interchanging transport modes.
- Buses do not run frequently enough, stop too early in the evening and don't meet the needs of people travelling on the weekend.
- Tele-bus users are passionate about the service it offers.
- People are concerned that large, empty buses are not a good use of resources.
- Extending train lines would help to bring the rail system to more of the Yarra Ranges community and boost tourism.
- Car parks at train stations are full very early in the morning.
- There is not enough disabled parking at key destinations.

Figure 5 provides an overview of the arterial roads, railway lines, and shared path transport infrastructure that connects Yarra Ranges, including proposed/planned infrastructure.

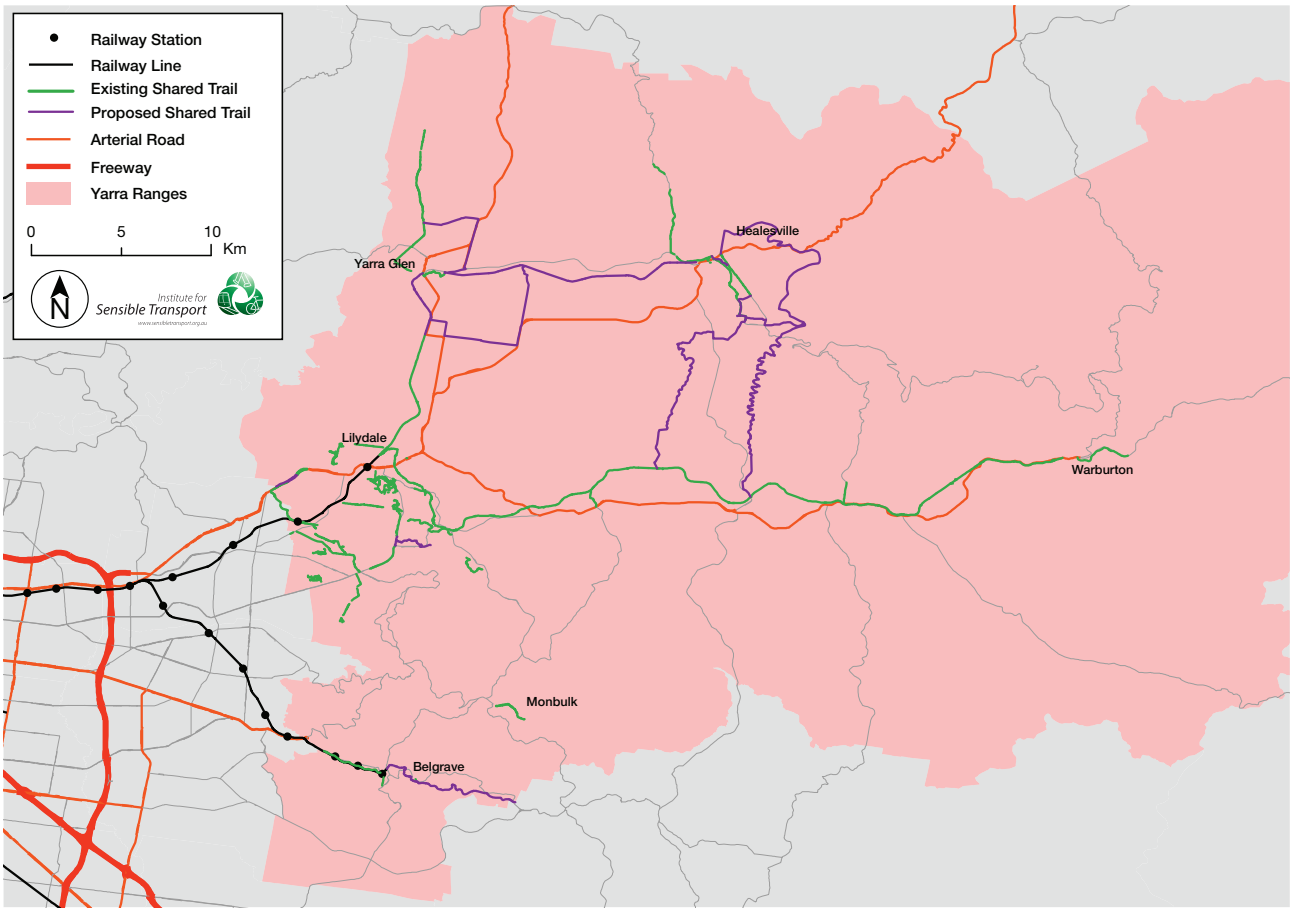
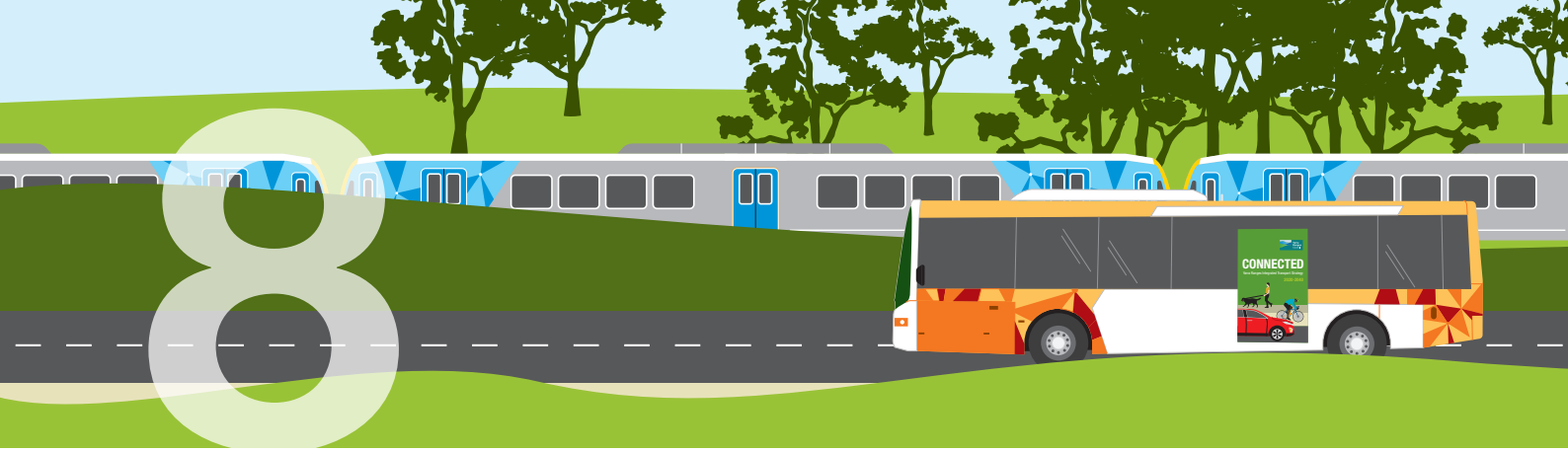


Figure 5 Yarra Ranges - Transport Infrastructure



How we get around, now and in the future

How we travel today

Yarra Ranges is a highly car dependent municipality. While there are many trips well beyond the public transport network, or too far or hilly to walk or cycle, there are a surprisingly large number of short car trips that happen every day. The car has become the default mode of transport for many. This adds to congestion and parking pressure, reduces opportunities for physical activity and adds to climate change, local air and noise pollution.

In 2016, there was an estimated 270,000 car trips that began in Yarra Ranges every day. With population growth, this is set to rise to 320,000 car trips by 2036. There is also an estimated 130,000 car trips taking place every day within Yarra Ranges under 3km. Put another way, half of all car trips within Yarra Ranges are less than 3km. If the transport system doesn't change, with projected population growth, this could increase to 152,000 by 2036.

We need to take action, to at the very least hold car trip numbers at their current level. To fully support the vision of Council and the community, we must begin to *reduce* car travel, to boost the reliability of the road system for those that need to use their car. Transition out the short car trips for walking and cycling offers the easiest way to reduce local traffic and parking congestion, while increasing the vibrancy and liveability of Yarra Ranges.

The good news is that our community is largely concentrated in the key suburbs and towns that make up Yarra Ranges, as shown in Figure 7. In fact, 90% of our population reside in just 9% of our land area.

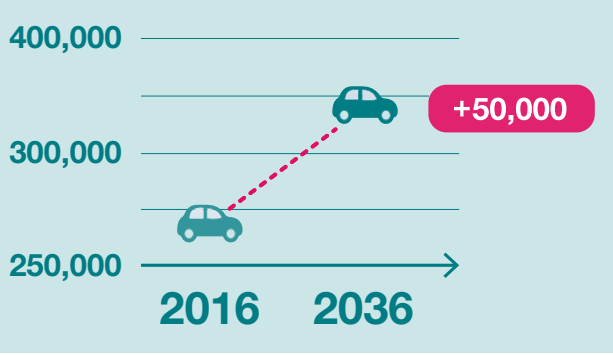


Figure 6 Car trips beginning in Yarra Ranges, now and in 2036 under Business as Usual



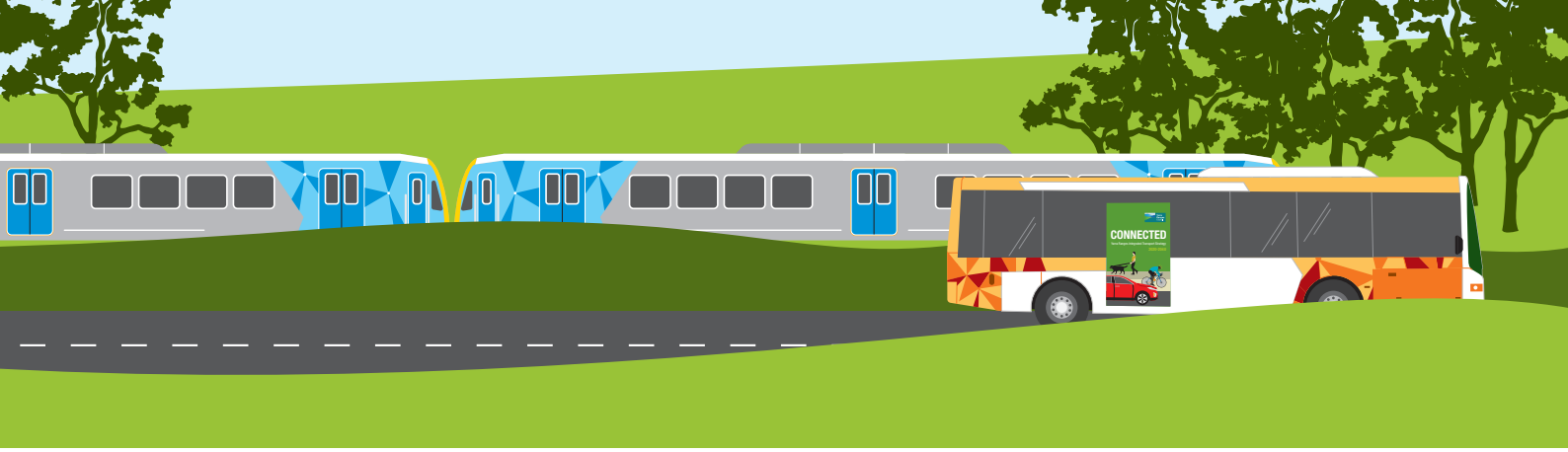
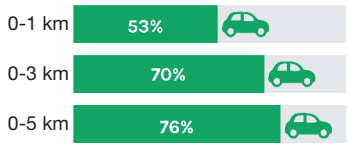


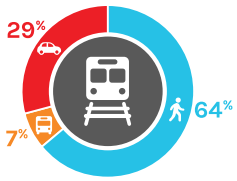
Figure 7 offers a snapshot of existing transport conditions in Yarra Ranges.

MOST CAR TRIPS ARE SHORT



Source: VISTA

HOW COMMUTERS ACCESS THE TRAIN

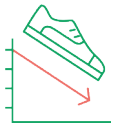


Source: VISTA

WALKING AND CYCLING ARE DECREASING*



-67%



-50%

* For trips to work between 2006-2016. Source: ABS Census



15% of trips within Yarra Ranges are by foot

Source: VISTA

E-BIKES



2X Sales doubled in 2017-18*



Perfect for commuting and climbing hills



Maintains speed with less effort



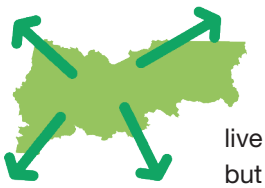
Allows to travel longer distances than a regular bike

* Based on national sales. Source: The Australian

WHERE RESIDENTS WORK



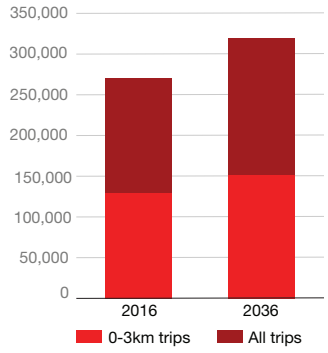
39% live and work in Yarra Ranges



61% live in Yarra Ranges but work outside

Source: ABS Census

If we don't act, there will be an additional **50,000** car trips on Yarra Ranges roads every day by 2036



Source: VISTA

SAFETY IN YARRA RANGES



More than **65%** of fatalities occurred on roads with speed limits of 80km/h or more



1 in 5 crashes involve a motorcycle



15% of crashes involving a bike rider or pedestrian were hit and runs by car drivers

Source: VicRoads

Figure 7 Key transport data - Yarra Ranges



The data shown in Figure 7 highlights the case for change. The modes of transport that need to grow for the Council and community to achieve their strategic objectives are declining and car use is growing. If these trends continue, it threatens to detract from the quality of life that draw people to the Yarra Ranges. Walking and cycling to work is becoming less common than it was a decade ago and too many people are injured on our roads.

Figure 8 shows the population density of Yarra Ranges, where 90% of the population live within 9% of the land within the municipality.

The large number of short car trips and the concentration of the Yarra Ranges population (Figure 8) provides a real opportunity to reverse the trends and patterns shown in Figure 7. The actions included in *Connected* will help more people get to where they need to go, safety and conveniently by foot, bike and public transport.

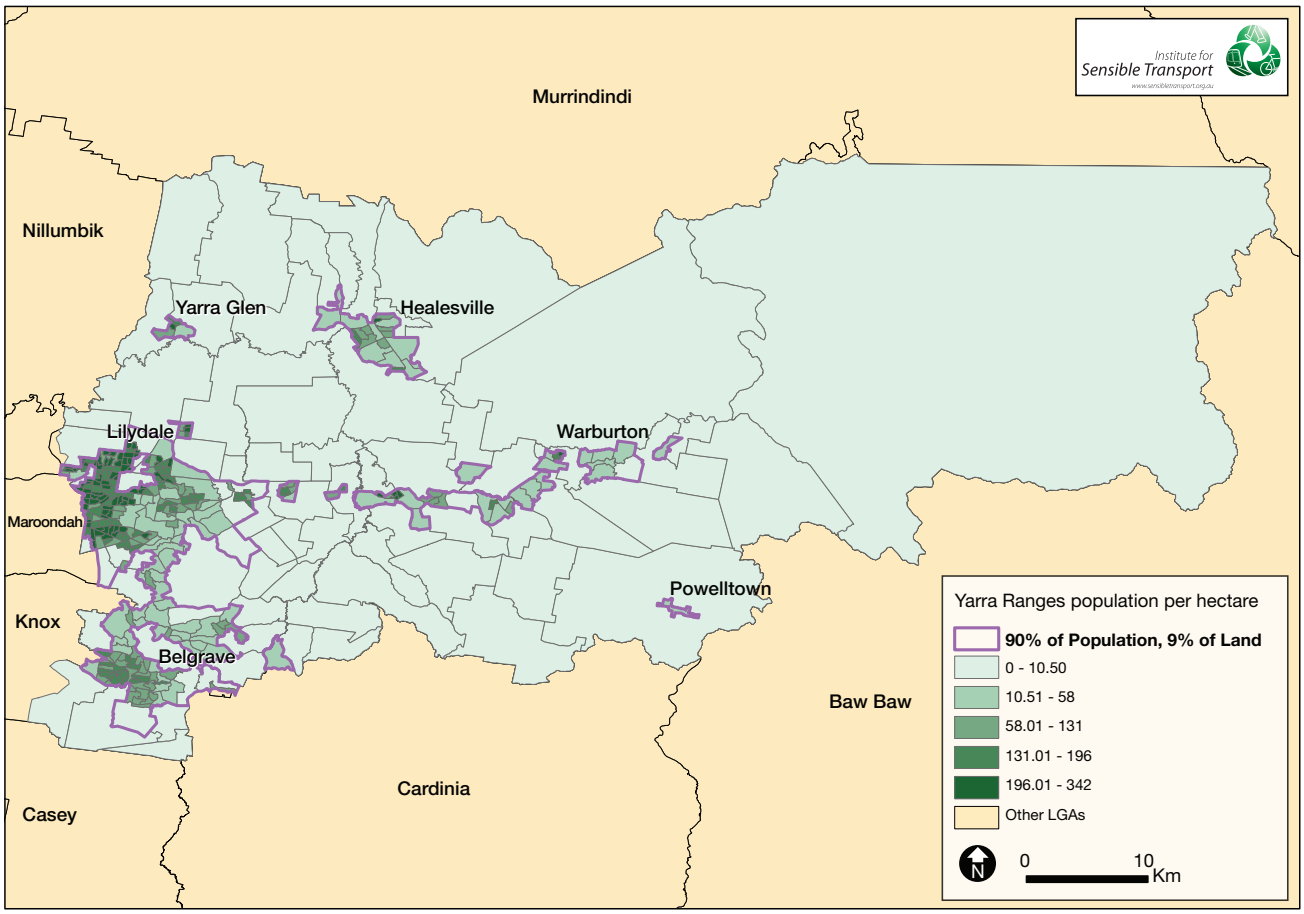
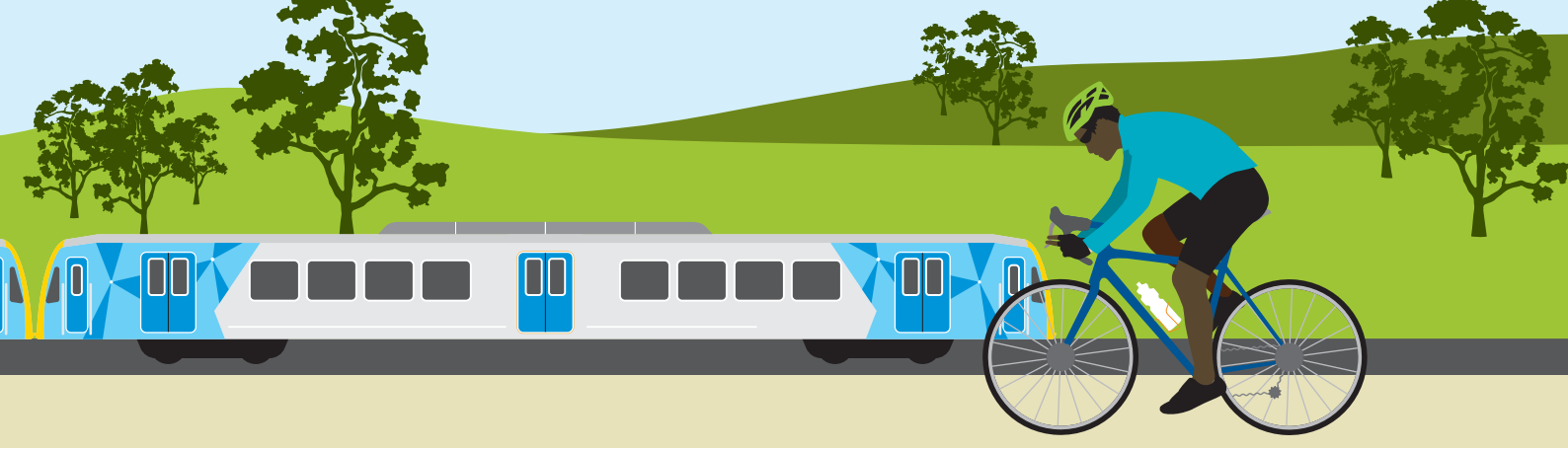
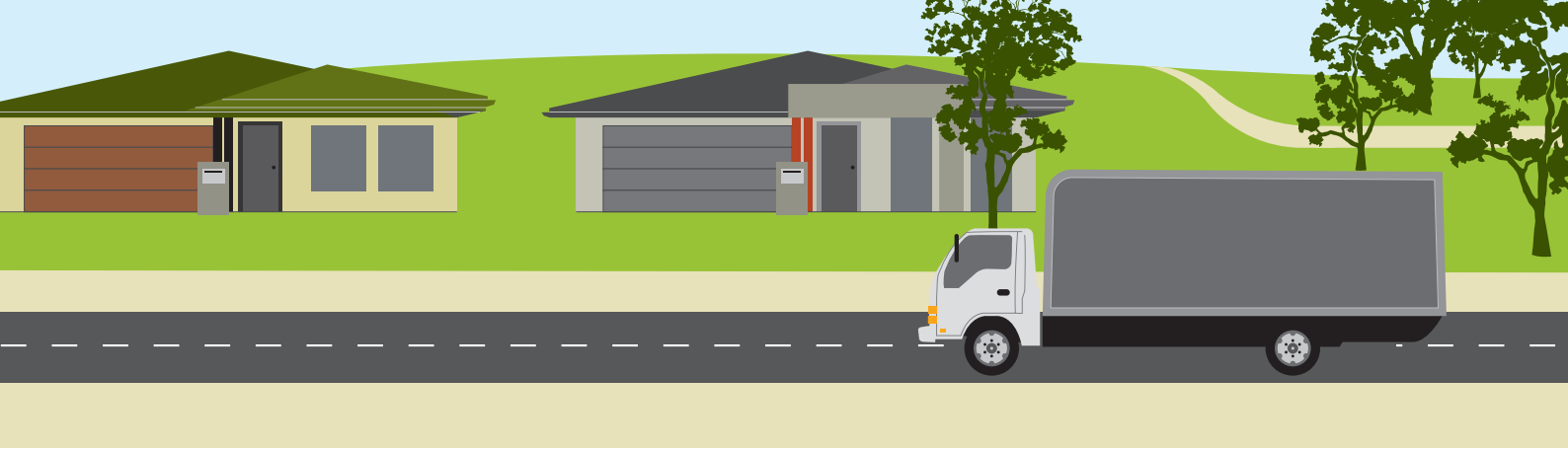


Figure 8 Population density - Yarra Ranges

Source: ABS







Transport scenarios

A series of transport scenarios have formed an important element of *Connected*. These scenarios provide achievable targets that will allow us to monitor our progress towards realising our vision for transport in our community. These scenarios are based on Yarra Ranges transport patterns, from the latest 2016 data. Two future scenarios are offered – a *business as usual* scenario, which is what we'd expect to happen if we don't change the way we plan transport. A *sustainable* scenario is also offered, which includes realistic targets for modest growth in sustainable transport. Each of these scenarios have a forecast year of 2036.

Trips to work

The latest data shows some 89% of Yarra Ranges residents drive to work. If nothing is done, this is forecast to rise to 90% by 2036. With population growth increasing by 18% by 2036, this will put an extra 50,000 car trips on Yarra Ranges roads at current mode share levels. This threatens the unique natural environment and relaxed way of life that people love about the Yarra Ranges.



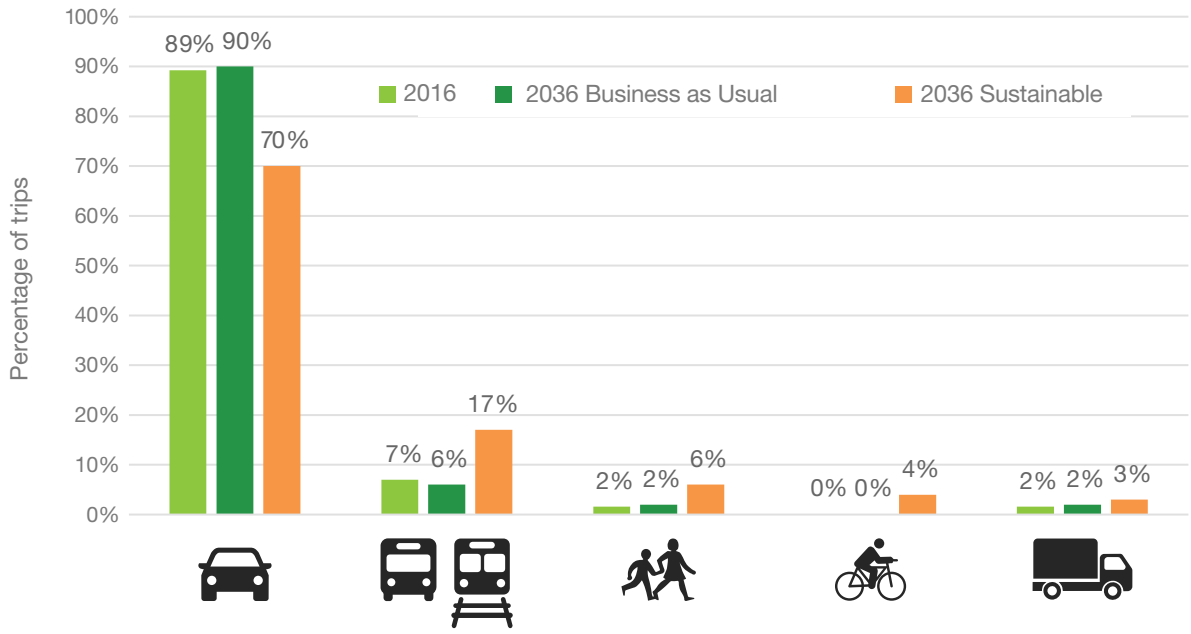
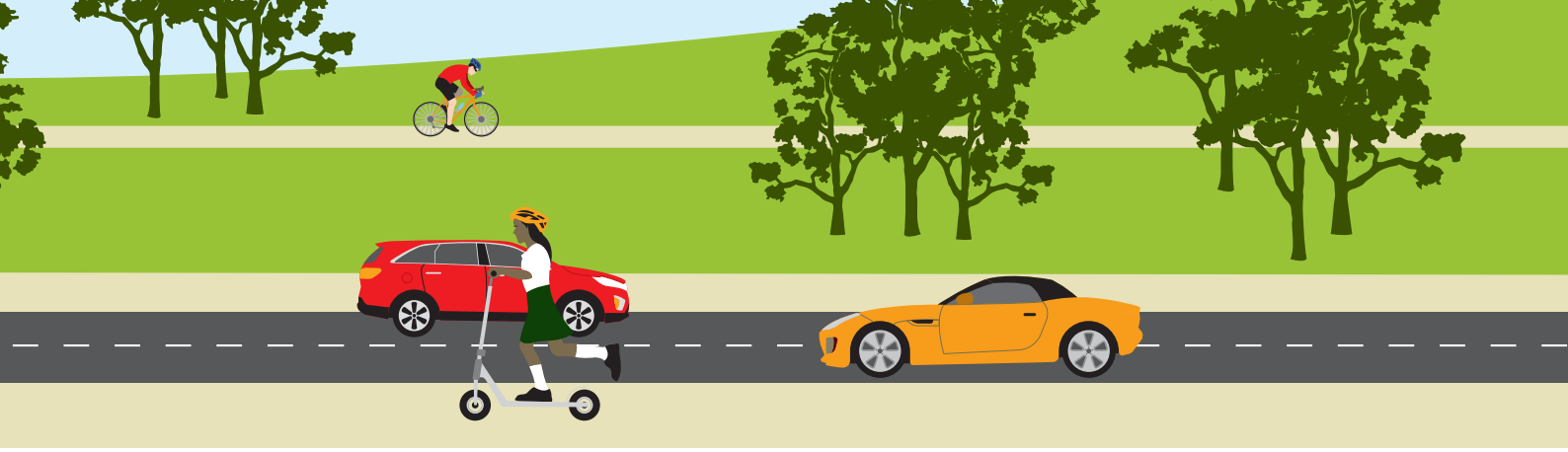


Figure 9 Journeys to work, now and in the future

NB: Truck symbol is 'other' and includes, in addition to trucks, taxis, motorbikes etc.
Source: 2016 data based on Australian Bureau of Statistics (2017)



The *sustainable scenario* shown in Figure 9 is the option that best aligns with Yarra Range's long-term strategic objectives and community aspirations. This scenario sees the car continue to account for the majority of trips, but now only 7 out of 10 trips are by car, with a greater set of options for those seeking to travel by public transport, walking and cycling. This will allow us to accommodate the projected population increase in Yarra Ranges while providing a permanent drop in traffic congestion similar to school holiday levels. Figure 10 expresses trips to work in total numbers, showing that maintaining the same level of car use today into 2036 (Business as Usual), there are going to be more cars on the road leading to worsening traffic congestion and parking problems. By taking the sustainable scenario approach, *Connected* helps to maintain and improve our quality of life.

Because of population growth, if we maintain the same level of car use today into 2036, we will get an extra 10,000 cars commuting to work every day.

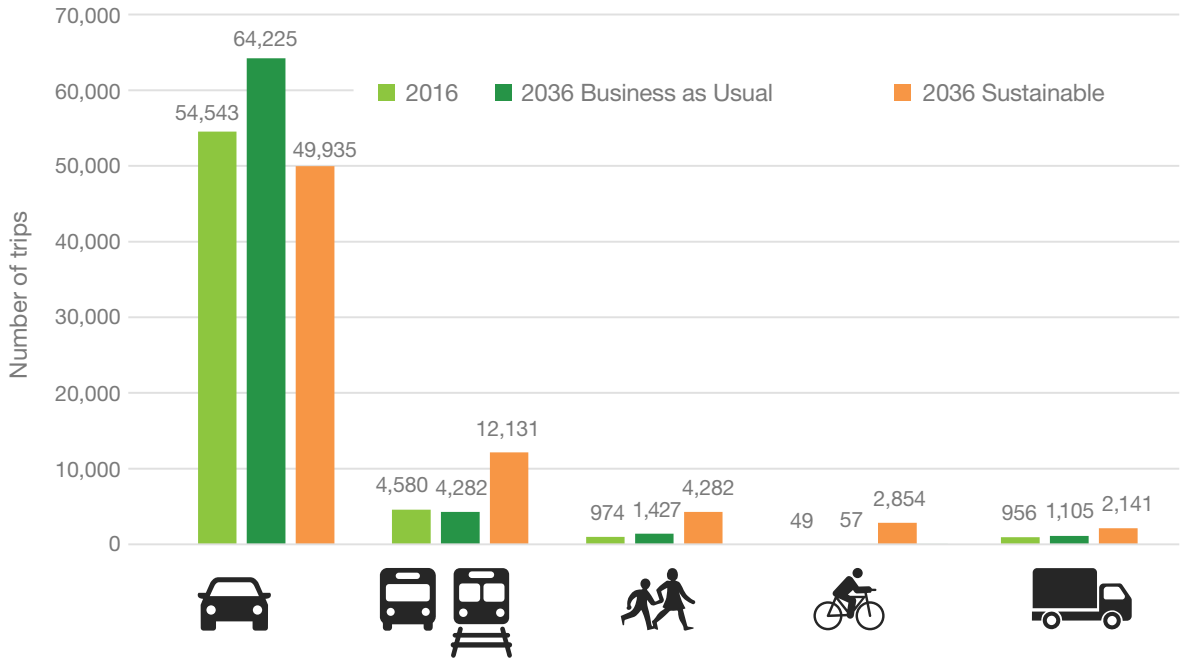


Figure 10 Journeys to work, now and in the future (total numbers)

NB: Truck symbol is 'other' and includes, in addition to trucks, taxis, motorbikes etc.



Figure 11 provides key targets across each of the Census years between now and 2036, to help ensure we are staying on track to meet our long-term target.

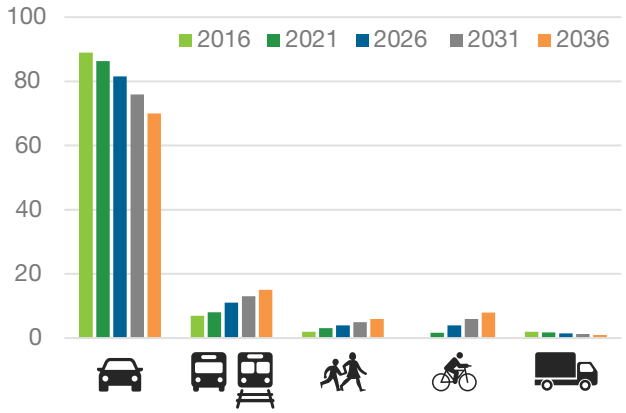


Figure 11 Sustainable scenario mode share interim targets - journey to work

NB: Truck symbol is 'other' and includes, in addition to trucks, taxis, motorbikes etc.
Source: 2016 data based on Australian Bureau of Statistics (2017)

Some 90% of trips to work in Yarra Ranges are by car. Providing suitable infrastructure to give people more sustainable options is a consistent theme of Connected. Figure 12 identifies the targets across each of the Census years between now and 2036 for trips to work under 7km.

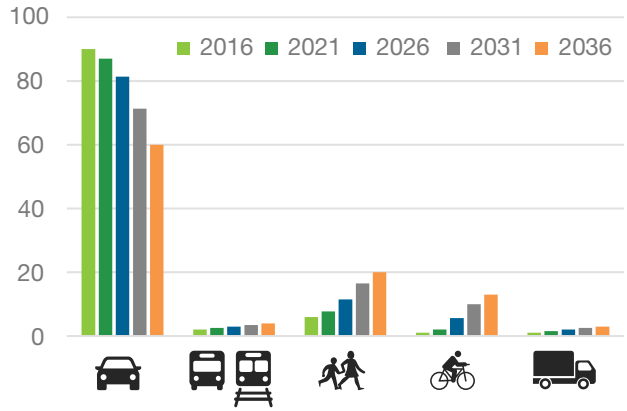


Figure 12 Sustainable scenario mode share interim targets - journey to work < 7km

Source: 2016 data based on Australian Bureau of Statistics (2017)

The *sustainable scenario* shown in Figure 12 continues to see 6 out of 10 people who live 7km or less from their work drive. It provides a target to boost walking and cycling especially, given that it is trips under 7km that are most transferrable to active modes.

Shopping, social and personal trips under 3km

Figure 13 shows that around 3 out of 4 Yarra Ranges' residents use the car for trips less than 3km. A Business as Usual approach (i.e. do nothing new) would result in this rising to 83% by 2036. This, coupled with population growth, would make congestion and parking problems worse than they are today.

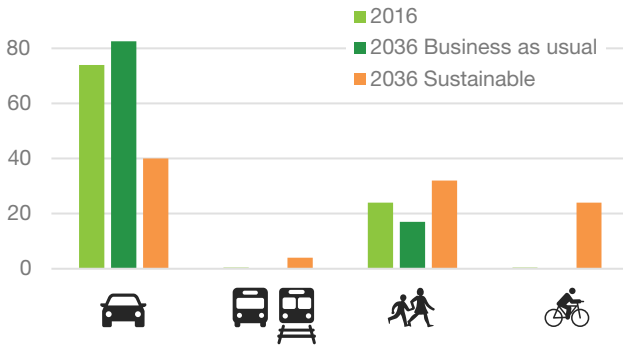
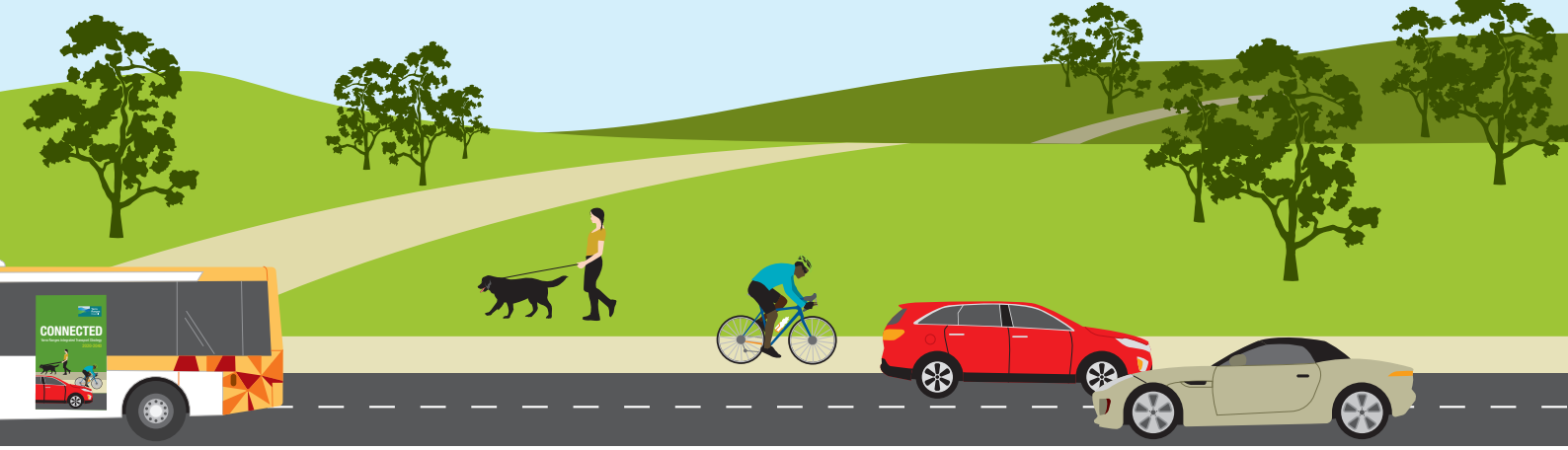


Figure 13 Shopping, social and personal trips 3km or less

Source: 2016 data based on Transport for Victoria (2017) figures.

The 2036 *sustainable scenario* shown in Figure 13 offers a pathway for the future, in which the transport system is designed to diversify the options for people travelling in Yarra Ranges. This leads to car use for these very short trips dropping to 40%, and a growth in all other modes, but especially walking and cycling. The benefits to the community include greater transport choice, healthier lifestyles, cleaner air, safer streets and a better outcome for those that have to drive.



The benefits to the community from a more supportive environment for sustainable transport include greater transport choice, healthier lifestyles, cleaner air, safer streets and a better outcome for those that have to drive.

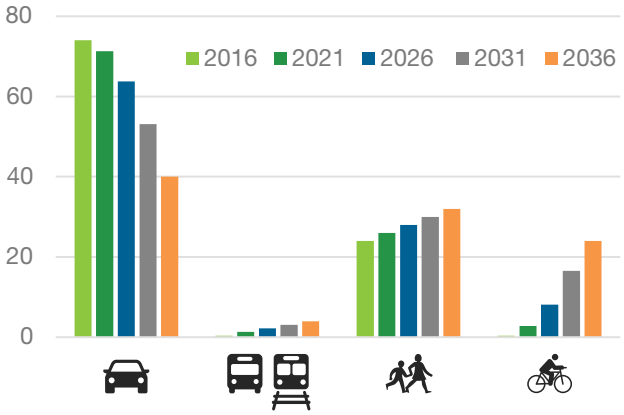


Figure 14 Sustainable scenario interim targets - non-work trips under 3km

Source: 2016 data based on Transport for Victoria (2017) figures.

Figure 14 provides the interim targets under the *sustainable scenario* for shopping, social and personal trips under 3km. By providing these interim targets, we're able to monitor how we are tracking and making sure Yarra Ranges in 2036 continues to be a great place to live, work and visit.





What we're going to do – our major moves

Achieving the vision and transport targets outlined in Connected will require a fresh approach to the way Council make transport and land use decisions. We know past efforts could have done more to deliver the outcomes our community want.

This section describes what we're going to do to ensure our day to day and long-term actions align with our broader community vision for a more sustainable, safer and more connected Yarra Ranges.

The following provides a snapshot of some of the major moves included in *Connected*. A more detailed set of Actions can be seen in the Implementation Table in Appendix 2.

Apply 20-minute neighbourhood principles with active transport priority

Connected includes a suite of actions designed to make walking and cycling the first choice for the many short trips that occur every day within our local neighbourhood. Street designs that make walking and cycling safe, including prioritised crossing points, dedicated lanes for cycling and lower speed limits in built up areas will make our town centres more people oriented.

Expand the footpath network across Yarra Ranges, using a prioritisation framework

Walking is the most sustainable mode of transport and an activity enjoyed by many people in Yarra Ranges. A legacy of past development phases has meant that some of our streets have been built without footpaths, making it difficult and dangerous to walk. For many people in the community, walking is a vital mode of transport, connecting them to services, shops and schools. It is for this reason that Connected places a high priority on the expansion of the footpath network, and proposes a decision-making framework to ensure the most important gaps in the footpath network are filled in first, including connections to the off-road trail network.

The ability to get exercise and maintain appropriate physical distancing during the Covid-19 will place even more pressure on our existing footpaths and bike paths. We will work with the community to identify areas under strain and opportunities to provide safe walking and bike riding infrastructure while more people are using our paths and trails to keep healthy and active during the pandemic.

Advocate for much-needed transport infrastructure

There are several large infrastructure projects that Yarra Ranges needs in order to manage our transport system while managing future growth. We will advocate to State and Federal Governments to deliver these vital projects as soon as possible. These include (but are not limited to): improved rail frequency and service reliability, the duplication of railway between Mooroolbark and Lilydale Station, the new railway station to serve the Lilydale Quarry development, and options to manage through traffic on Main Street, Lilydale.



We will also advocate strongly to the Department of Transport for a wholesale review of the bus network to ensure that bus routes and timetables match contemporary needs. This includes greater evening and weekend frequencies and expansion of tele-bus services. We will seek to work with the State Government, local community groups, and private transport operators to provide on-demand bus services in areas not currently serviced by public transport.

Train services in Yarra Ranges are currently constrained through archaic signalling systems, poor track conditions, large sections of single track, which compound poor service frequency (particularly outside of peak times). Upgrades to high capacity signalling across the Burnley Group, expanding track capacity (track improvements within Burnley Group), and improved frequency in both peak and off-peak times. We advocate that PTV implements changes to improve service on these lines, including changes to Burnley Junction, quadruplication of the line between Burnley and Camberwell, duplication between Mooroolbark and Lilydale. We further advocate that key constraints identified in the Network Development Plan be addressed, including constraints at Ringwood Junction and single-track sections on the Belgrave Line. While duplication of the entire Belgrave Line may prove problematic, duplication between Ferntree Gully and Upwey is feasible, given reservation size and track curvature. This duplication, along with a second platform at Tecoma Station, would allow more services with increased reliability along the entire Belgrave corridor. Options to alter the operation of the Belgrave Line to increase frequency at all times of the day should be advocated to PTV and DoT.



Capitalise on large infrastructure projects

Yarra Ranges has seen large increases in State Government projects, including the Level Crossing Removal Projects and Commuter Car Parking Upgrades. These projects offer unique opportunities for Council to leverage off these projects to make further improvements to our townships, including advocating to the State Government and undertaking projects ourselves. This may include safer crossings and wider footpaths, better parking outcomes for commuters and residents, safe bike connections, alternative traffic routes, bus network reviews, and the implementation of township place plans.

Real time car parking information displays

Finding a car park can be difficult and that's why we are going investigate opportunities to install smart infrastructure to provide real time information on where available parking bays are. This will help people find a park sooner, and less time circling.

Better integrate our train stations with the wider transport network

For many people in Yarra Ranges, the train station is their connection to the rest of Melbourne and *Connected* contains a series of actions designed to make it easier for people to transfer from one mode of public transport to another. Some of the key transport integration actions are introduced below.

Create high quality walking and cycling networks connecting the community to their train stations

We've heard that finding a car park at a train station is getting harder, and we know that building more car parks only goes so far. *Connected* makes it easier for more people to access train stations via sustainable modes, meaning less frustration and more reliable journeys.



Coordinate buses and trains by advocating for *pulse timetables*

Few experiences are more frustrating than seeing your bus pull away from the station just as your train arrives on the platform. We understand this is an all-too-common occurrence, which is why *Connected* advocates to the State Government for the introduction of *pulse timetables.* In essence, this means that the bus arrives at a station with sufficient time for passengers to get to their train and then the bus waits at the station until disembarking train passengers can get to the bus.

Integrate cycling and public transport by advocating for bike racks on buses

Many trips in the Yarra Ranges can be too hilly or far to cycle and sometimes the closest bus stop is beyond an easy walk from home. Installing bus racks on the front of buses is an easy way to expand the catchment of routes and helps improve the door-to-door journey time for people travelling by bus. Importantly, for those new to cycling, it can be comforting to know that if something goes wrong, you can always pop your bike on the bus. Council will be advocating to the State Government for all suitable bus routes in the Yarra Ranges to have bike racks installed on the front of the bus.

For the Route 683 (Chirnside Park to Warburton), we will be advocating for a bike trailer capable of holding more than 20 bikes, to assist those visiting the *Warburton Mountain Bike Destination* to use a combination of train and bus. This will help to alleviate concerns regarding car parking issues in Warburton and increase accessibility.

Support the use of community co-working spaces

Technology and the shift towards a service led economy means tele-commuting is an increasingly viable option. For various reasons, it is not always easy for people to work from home, and it for this reason that Yarra Ranges will increase their support of existing community co-working spaces and identify opportunities for new spaces where none currently exist. This will help people in some of the more remote townships of the Yarra Ranges reduce the number of long trips they need to make each week by car. This is especially important as we negotiate the need to work and study at home because of the Covid-19 pandemic.

Create electric vehicle charging hubs

The number of electric vehicles (EVs) in Australia has grown rapidly and this is expected to increase substantially in the coming years. To support people's decision to use EVs, Yarra Ranges will facilitate the development of the network of publicly available charging stations. These will serve to support visitors to the Yarra Ranges, as well as those in Yarra Ranges community with an EV.





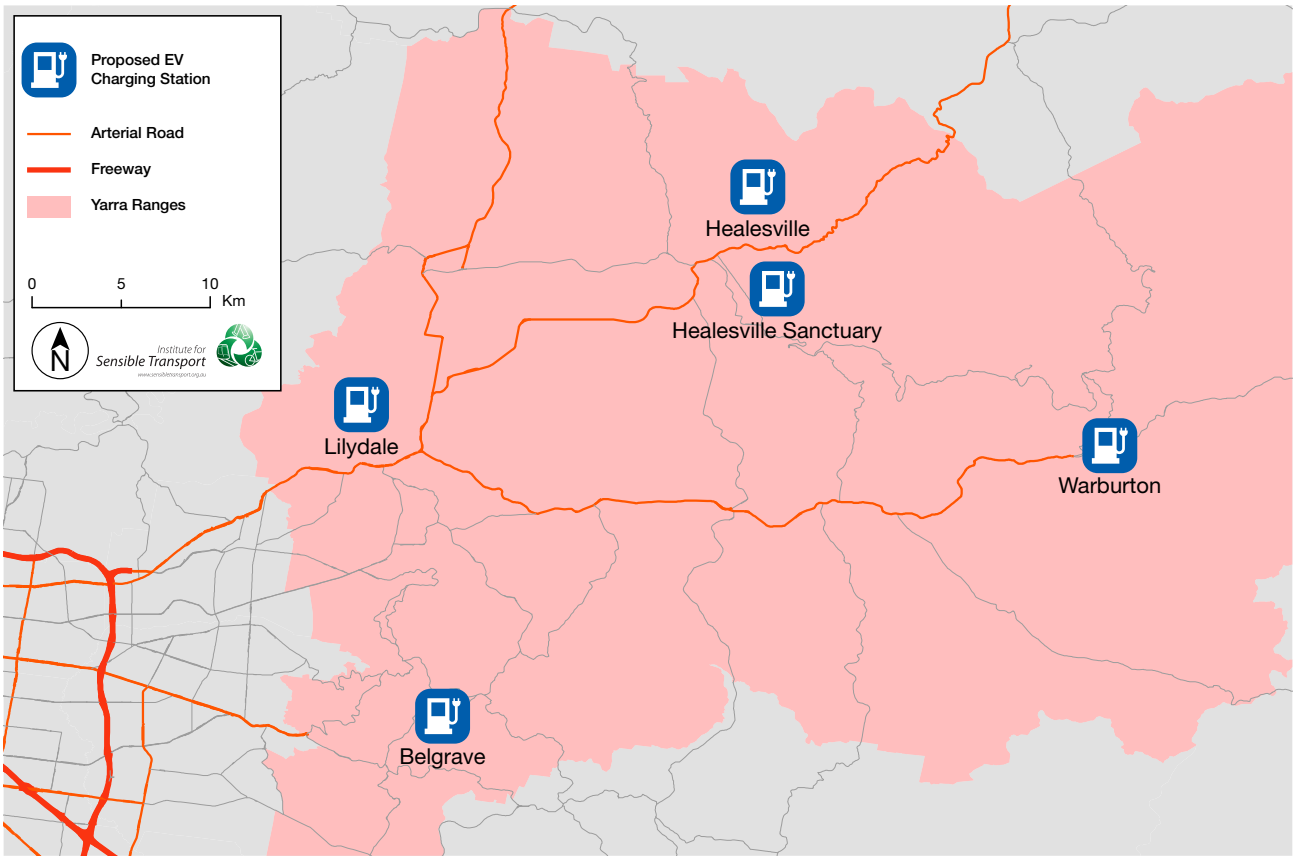


Figure 15 EV charging network (proposed)

Monitor and act on emerging transport technology

There are a range of new and innovative transport technology likely to change transport patterns and behaviour in the near future. This includes the inclusion of hydrogen cell cars, autonomous vehicles and buses, Mobility as a Service and other on-demand transport systems, trackless trams, and passenger drone technology. While many of these are still some time away from a reality, Yarra Ranges will work to form early policy positions on each technology. This will ensure we are well-placed to receive the benefits of new transport technology while protecting the natural and built elements that make Yarra Ranges the best place in the world to live.

Create a coherent, attractive and safe cycling network

So many of the trips we make by car are surprisingly short – and cycling is a great mode for trips under 5km. Council will be developing a comprehensive cycling network to enable more people to ride in a safe environment, connecting communities to shops and other key destinations. This will provide more opportunities for bike transport trips, and greater uptake of e-bike and electric personal mobility devices.

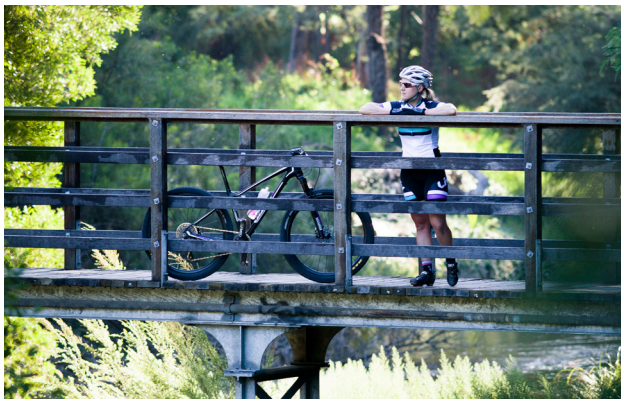
We will develop and construct a Cycling Transport Network, oriented on three levels of cycling routes. Figure 16 provides an overview of different types of cycling environments.





Figure 16 Main types of cycling environments - future cycling network

At the *Neighbourhood* scale, streets will be low-stress and low-speed with bicycles mixing with other modes. *Local connections* will include separated infrastructure that connects to key destinations, including activity centres and schools. *Regional bicycle links* will be long distance links that connect townships together.



Cycling in the Hills

Council will work with the Department of Transport to help ensure the Mount Dandenong Tourist Road cycle infrastructure project achieves the best outcome to make this iconic road safer, especially for vulnerable road users.

Council will further advocate for safer conditions and better infrastructure to support walkers and bike riders across the Hills area, including (but not limited to) popular roads such as Mountain Highway, Olinda-Monbulk Road, and Monbulk Road.





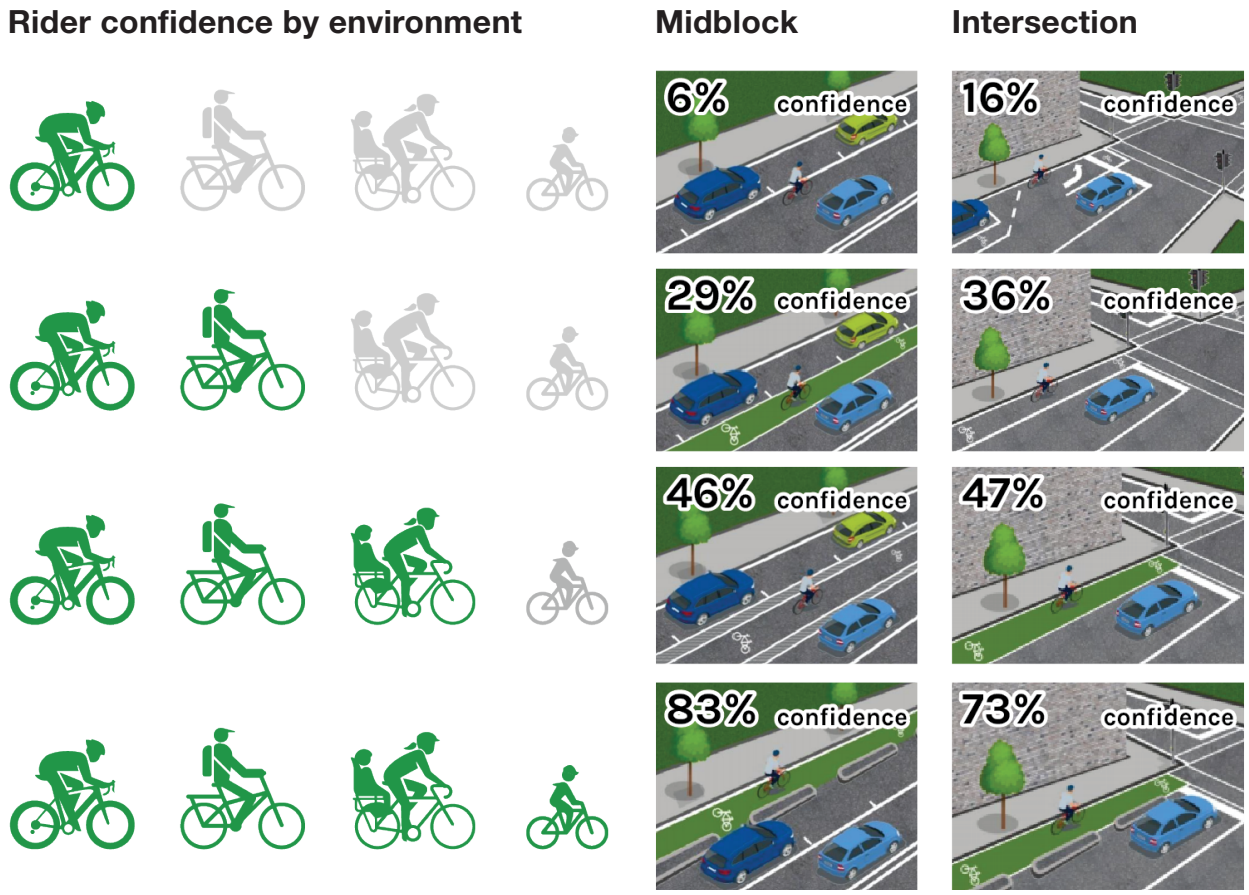


Figure 17 Who is comfortable riding on what type of bicycle infrastructure?
Source: Base on CDM Research and ADSF Research for City of Melbourne (2017)

Figure 17 provides an outline of what type of infrastructure appeals to different types of cyclists. Currently the typical street riding environment in Yarra Ranges only caters to the *'fast and fearless'*. A goal of *Connected* is to widen the appeal of riding a bike by creating a network of bicycle infrastructure that appeals to a more diverse set of the community.

Based on research commissioned by the City of Melbourne, Figure 17 shows that to encourage a more casual bike riding environment that is inclusive of all ages, genders, and abilities, cycling infrastructure that is separated from traffic is required. By providing separated facilities along key local routes and safe crossings at intersections, we will encourage more people to consider riding a bicycle for everyday trips while providing safer conditions for those who currently ride.

Neighbourhood Routes

Neighbourhood links will form the majority of bicycle infrastructure across Yarra Ranges. This will consist of low-speed and low-stress streets in residential areas, with wayfinding signage to direct people to Local and Regional routes and key destinations. Effective neighbourhood routes have a maximum speed limit of 40km/h and restrict through movements for vehicles.



Safe Active Streets

Safe Active Streets are one way to provide neighbourhood cycling routes. The Western Australian Government have begun rolling out Safe Active Streets in Perth to provide safe waking and cycling corridors through residential areas. While they can form part of the neighbourhood cycling network, they are about more than just cycling. They include traffic calming, new trees and other vegetation and priority access for pedestrians and cyclists along the street. These boulevards encourage neighbourhoods to use the streets for play and socialising, while providing safe connections to local cycling routes and key destinations.

More information about the WA programme can be found here:
https://www.transport.wa.gov.au/activetransport/safe-active-streets-program.asp



We will work with residents of Yarra Ranges to identify a suitable street to trial a Safe Active Street in each Council region.



Local Routes

Local routes connect neighbourhoods to local destinations, including shops, schools, train stations, and regional cycling routes. Local routes require separation from other transport modes. This includes separated on-road lanes, shared paths, and off-road paths. They are often the most visible parts of the cycling network and carry the most bicycle traffic. Local routes are designed to connect key destinations together.

Regional Routes

The Warburton Rail Trail is a successful regional cycling route in Yarra Ranges, connecting townships between Lilydale and Warburton to each other, and to key destinations. The regional network is being further expanded to connect Coldstream, Yarra Glen, and eventually Healesville together to Lilydale and the Warburton Rail Trail.

In the Hills region, the Ringwood-Belgrave Rail Trail provides an off-road alternative to Burwood Highway within Yarra Ranges, connecting to shops in Upper Ferntree Gully and further afield. The regional routes are about connecting townships together, for locals to enjoy healthy, safe and sustainable walking and cycling, and as a great tourism drawcard for the region.

Investigate 40km/h speed limit on residential streets

Safety is at the core of *Connected* and this is why we will be investigating areas of lowering the speed limit on residential streets from 50km/h to 40km/h. This will save lives and make our neighbourhoods more accessible and welcoming, especially for children and the elderly. As highlighted in Figure 18 when a pedestrian is hit by a car travelling at 50km/h, they only have a 1.5 in 10 chance of surviving, compared to a 5 in 10 survival rate at 40km/h. This will only occur in areas where there is a clear safety benefit and where there is community support for such a change. As only a small proportion of our commute trips are on residential streets, this safe speed limit change will not impact noticeably on travel times. Figure 18 illustrates the chance of survival for different vehicle speeds.

Differences in speed limits along a section of road or in different areas can be confusing for people. In order to ensure consistency and compliance, speed reductions will be rolled out on a region by region basis.

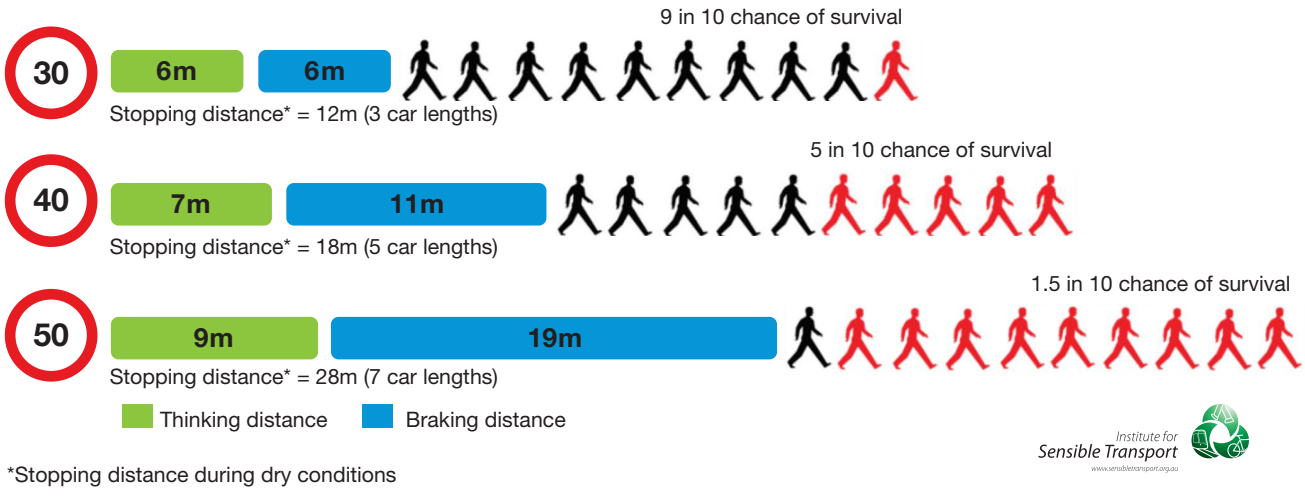


Figure 18 Chance of survival for different vehicle speeds



Transforming Yarra Ranges Council to become a leader in sustainable mobility

There is a great deal that can be done to ensure Council leads by example and makes sustainable mobility a priority for staff travel. Moreover, *Connected* helps Council build the thinking on active and sustainable travel into our workflow by providing recommended street design for a range of street types. Applying the *Movement and Place Framework* will help to ensure we maximise the vibrancy and potential of our streets, whether they be shopping strips, a regional road or a residential street.

Additional training and personal development will be provided to Council staff, to ensure they have the skills and capabilities to successfully take-on the transport challenges facing Yarra Ranges. This will keep staff up to date with best-practice and leading transport innovations.

We are going to provide our staff with the confidence to experiment and trial innovative solutions to ensure we meet our transport targets.

A *Travel Plan* will also be developed for Yarra Ranges Council offices, to both monitor the progress of our organisation in shifting towards more sustainable modes of transport and provide the basis of trialling creative method of reducing car use.

We will also undertake work to test the feasibility of 100% of the organisational fleet becoming zero emission by 2030.

Street innovation

Many of the streets in Yarra Ranges were designed many decades ago and our transport and liveability challenges have changed markedly since then. It is therefore necessary for our streets to evolve to reflect the changing needs of our community.

Connected delivers a set of preferred street designs for typical types of streets found in Yarra Ranges. These can be used as a starting point when the re-design of a street or a creation of a new street is planned. The following cross-sections are intended as starting points for the

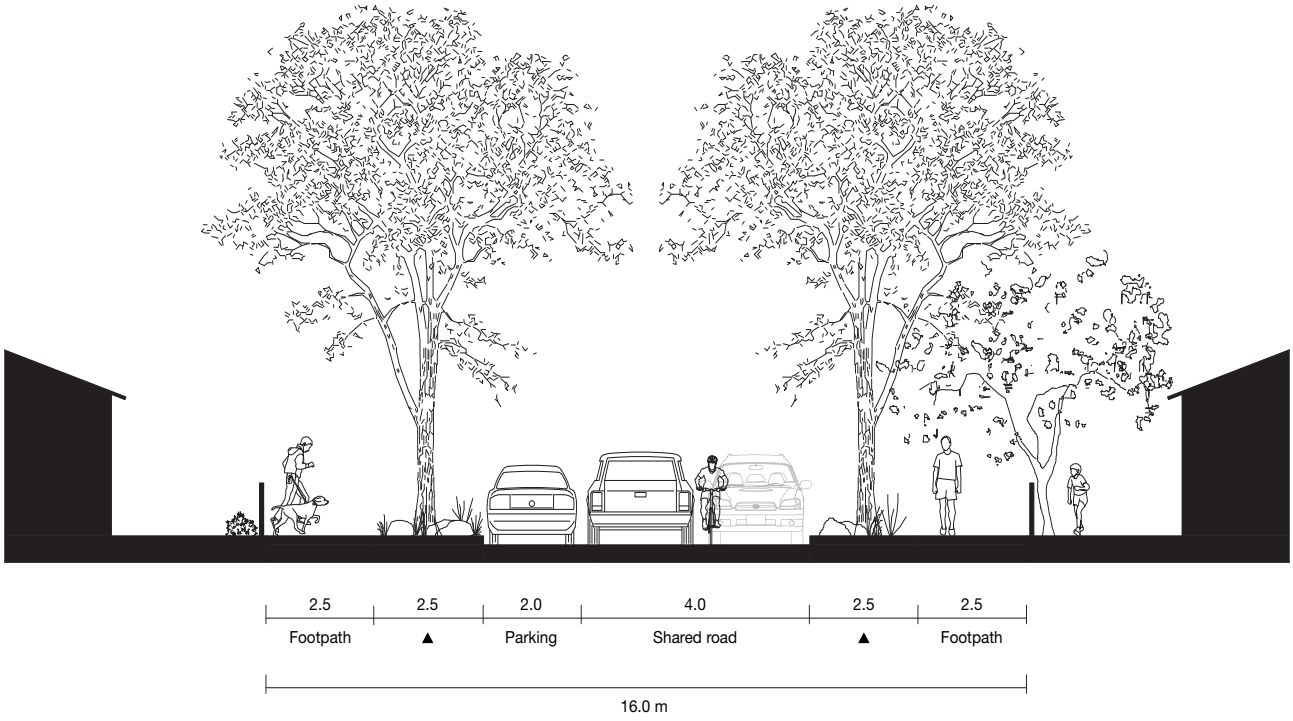


Figure 19 Residential street - preferred design



planning of new or redesigned streets. Sufficient tree planting, best-practice lighting (such as smart street lighting for EV charging), topography, and other elements will need to be considered on a street-by-street basis. Where the road is listed as a 'declared road', Council will work with the Department of Transport to deliver the preferred street design.

Residential streets

Most residential streets are approximately 16m wide between title boundaries. They provide footpaths on each side, with wide nature strips that include trees. Parking is provided on one or both sides of the street with 4m provided for two-way vehicle movements. Council's preferred street layout for residential areas is shown in Figure 19.

All new residential areas should be speed limited to a maximum of 40km/h, reflecting the dynamic use these streets have for neighbourhood congregation and high numbers of children. With the slower speeds, people on bicycles are safe to share the road space with other modes. When vehicles are travelling 40km/h it is also easier for elderly people to judge when it is safe to cross.

When residential streets are re-designed, they will include measures to encourage motorists to travel at a safe speed. This includes threshold gating at the beginning of residential streets, road materials such as pavers to provide tactile and audible speed warnings, and traffic calming devices. The residential area layout should be designed to prevent through vehicles, with only local access necessary.

Collector roads

Collector roads link residential areas to key destinations, including activity centres and arterial and regional roads. Wide footpaths and trees should be provided along both sides of the road, including separated bicycle facilities. They should be speed limited to a maximum of 50km/h. Parking may be provided on both sides of the road. Duplication could be provided through removal of the parking bays and reducing the median width. A preferred design for a collector road is shown in Figure 20.

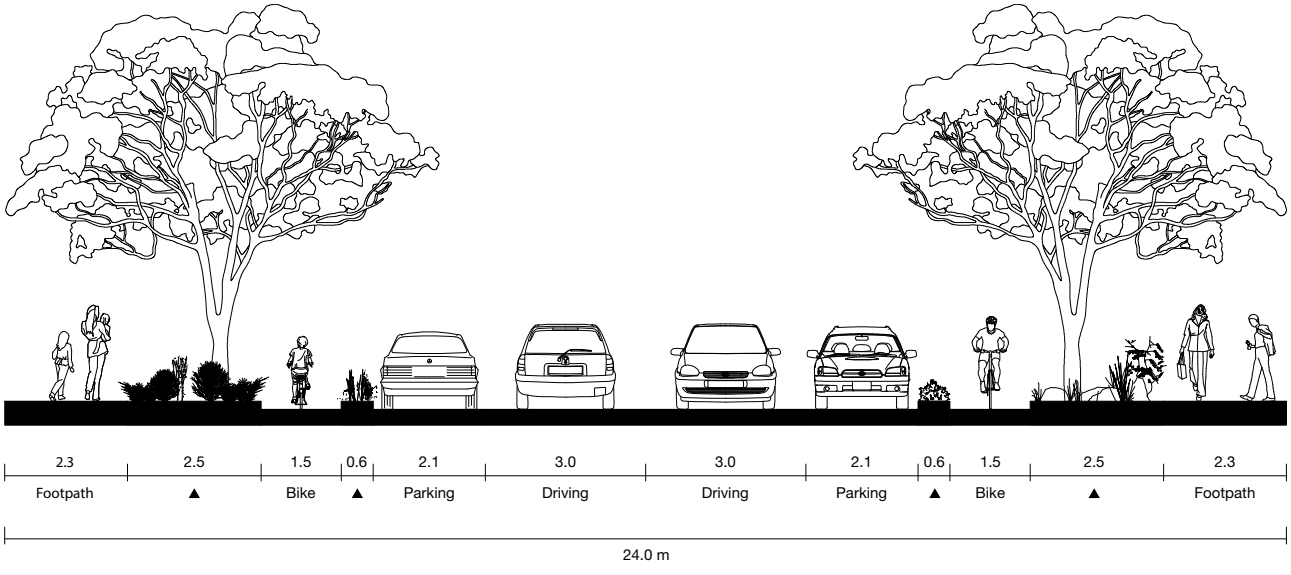


Figure 20 Collector road - preferred design



Activity Centre streets

Activity Centres are the focal points of economic and civic participation in a township. They include shops, libraries, schools, medical facilities, and public transport hubs. Wide footpaths should be provided on both sides of the street with space for street furniture such as tables, chairs, and wayfinding signage. Trees should be provided throughout the street. With high pedestrian and vehicle volumes, bicycle facilities should be separated from other modes. Activity Centre streets should be speed limited to a maximum of 40km/h. On-street parking should be prioritised for disabled parking, loading zones, and short-term parking. Additional parking should be sought through off-street parking areas to maximise open space opportunities.

Arterial roads

Arterial roads carry the highest vehicle volumes in Yarra Ranges. They range between 1 and 3 lanes in each direction, with a speed limit up to 80km/h. On-street parking is not recommended on these roads but may be provided if space is available. A median strip is provided to separate vehicle directions and can provide space for turning lanes. Pedestrians and bicycle riders should be provided for on both sides and set back and separated from the carriageway. Figure 22 provides a cross section of a preferred design for a 30m arterial road.

Occasionally, for a variety of historical reasons, activity centres can have a very large arterial road, with widths of up to 60m. Figure 23 provides a cross section for a 60m street. An example of this street is Main Street, Lilydale.

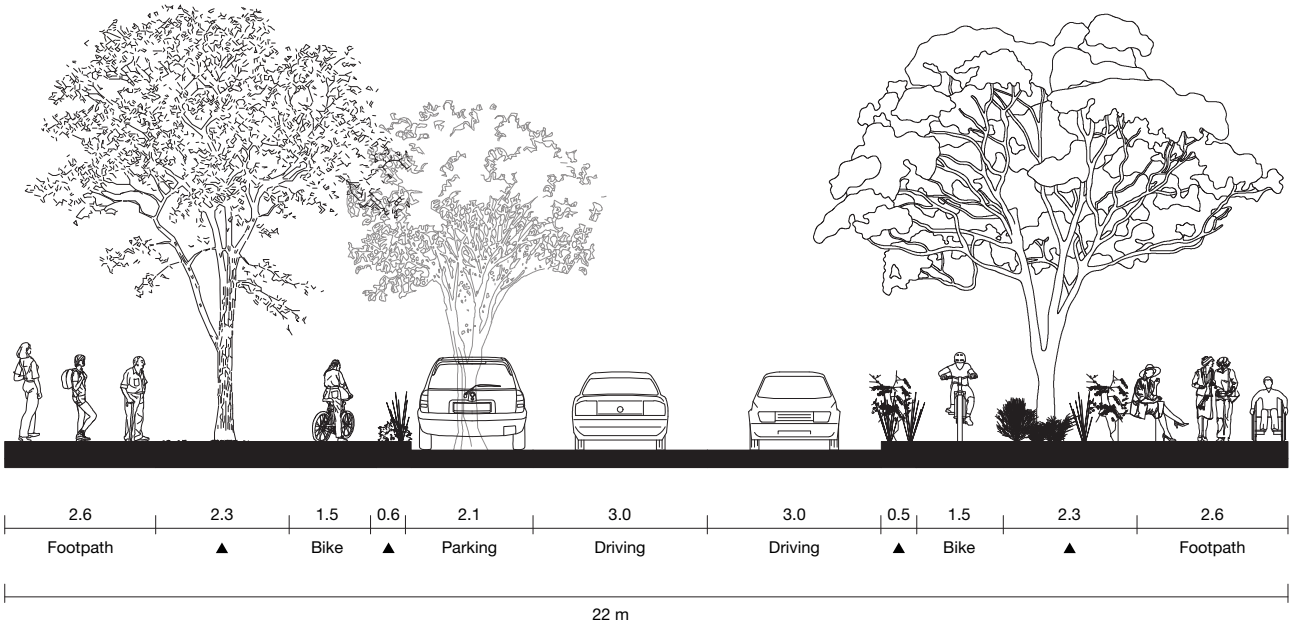
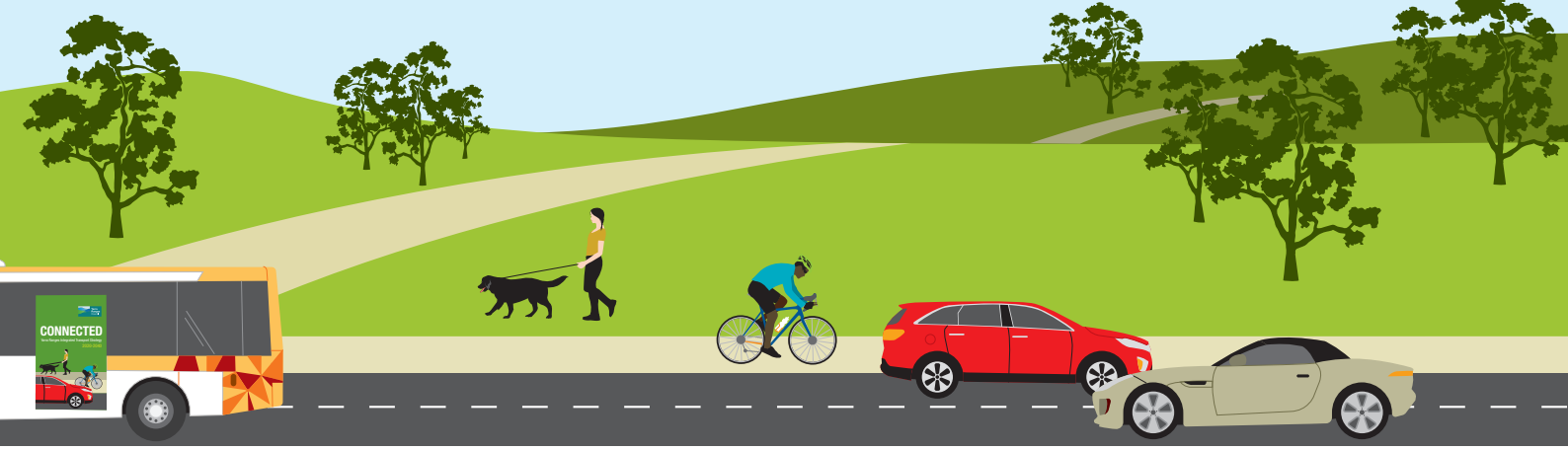


Figure 21 Activity Centre streets - preferred design



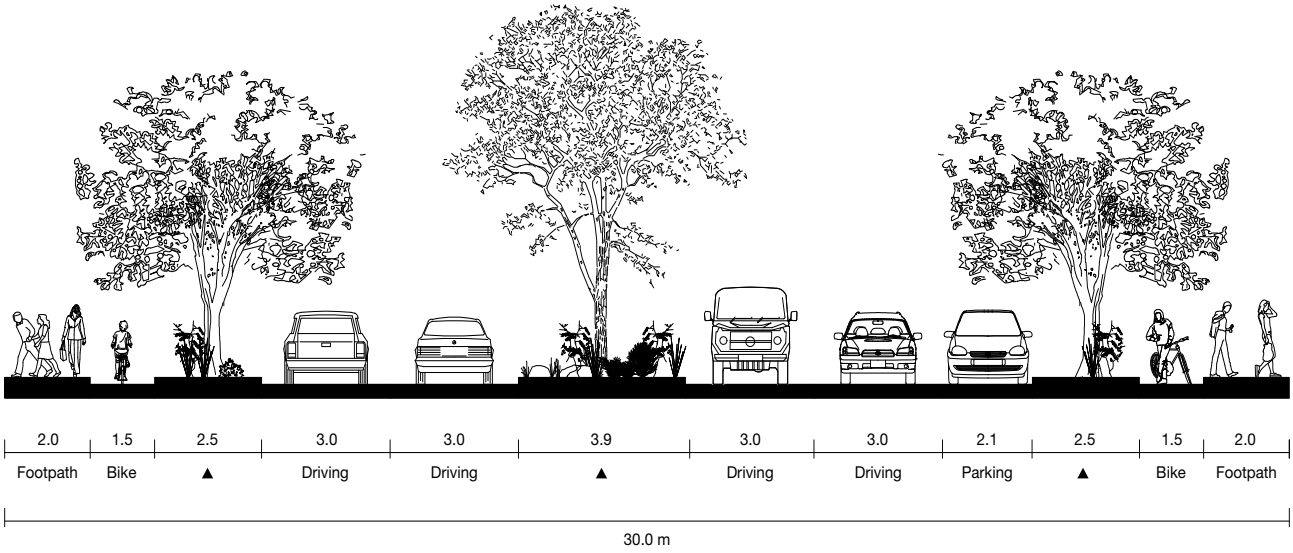


Figure 22 Arterial road 30m - preferred design

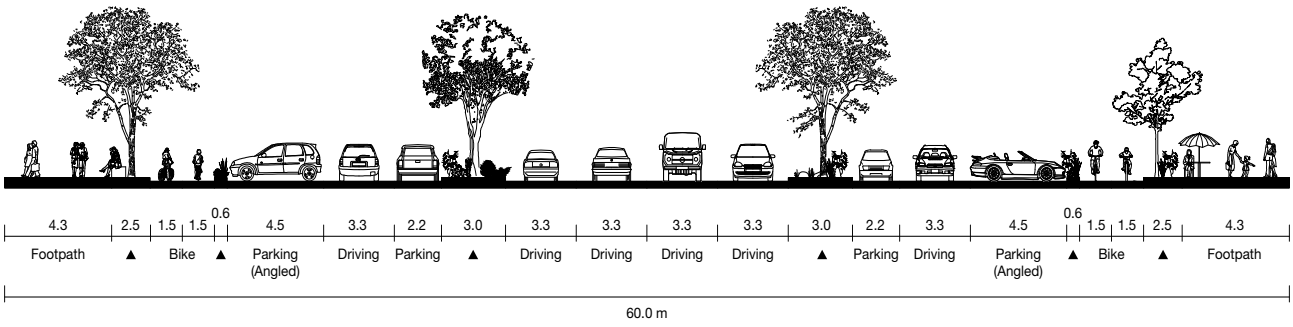


Figure 23 Arterial road 60m - preferred design



Figure 24 Regional road - preferred design

Regional roads

Yarra Ranges has many regional roads. These roads form key connections for regional townships and carry freight traffic from agriculture and manufacturing precincts within Yarra Ranges and from further afield. They are speed limited between 80 and 100km/h and provide wide carriageways in each direction. Figure 24 provides an indication of the preferred design for regional roads. Rumble strips should demarcate the edges of each travel lane. Sealed shoulders should be provided on each side to act as emergency stopping lanes and can be used by cyclists, with a low-profile flexible road divider placed 600mm inside the lane from the rumble strip. LED lane lights should be installed on roads with high night-time risk and areas with conflict points. This would provide additional safety benefits without impeding the ability for the shoulder to be used for emergency stopping.

Install kerb outstand bus stops

Targeted implementation of kerb outstands helps to create DDA Compliant stops *and* increases the number of car parking bays. The key benefits of kerb outstand bus stops include:

- Better opportunity for DDA Compliance
- Enhanced priority for bus services, reducing delay for buses
- Reduced loss of kerbside parking, as the sweep clearance required for indented bays is no longer required. This increases the availability of kerbside parking.

All access for school bus services

To make better use of scarce resources, Council will lobby for the general public to be able to use school bus services in areas in which the public bus services does not provide a suitable alternative.




60
60



What we're *not* going to do (and why)

Create new residential or large-scale commercial land releases beyond an easy walk from high quality public transport

Yarra Ranges is lucky to have the bulk of its population within defined townships and this makes the planning of an efficient transport system easier. By concentrating development within defined town centres with good public transport and amenities within walking distance, it's easier for people to reduce their reliance on the motor vehicle and live healthier, more sustainable lifestyles.



Build additional car parking as our first response to concerns regarding parking problems

We know that car parking concerns feature highly on the community's list of concerns regarding transport issues in Yarra Ranges, especially at train stations. Two major expansions to existing car parking at train stations have been committed to by the State Government. The Mooroolbark and Belgrave train stations will receive hundreds more car parking bays each.

When looking at the evidence on other car parking expansions across Melbourne, we know that in most cases, people who previously walked or got public transport to the station are the ones that take up the additional spots. This works against many of the strategic directions of *Connected*, as well as Council's wider Strategic Objectives.

We understand the community want reliable, low cost and convenient methods of accessing train stations, and it is for this reason that a major thrust in the Actions including in *Connected* include better bus, walking and cycling integration with transport hubs. This is a more space and energy efficient method of achieving the objective of getting more people to train stations.

However, when we do require more car parking, we will ensure it is in appropriate locations that enhance the pedestrian connectivity of activity centres.

See Figure 25 for more information on our approach to managing car parking issues.



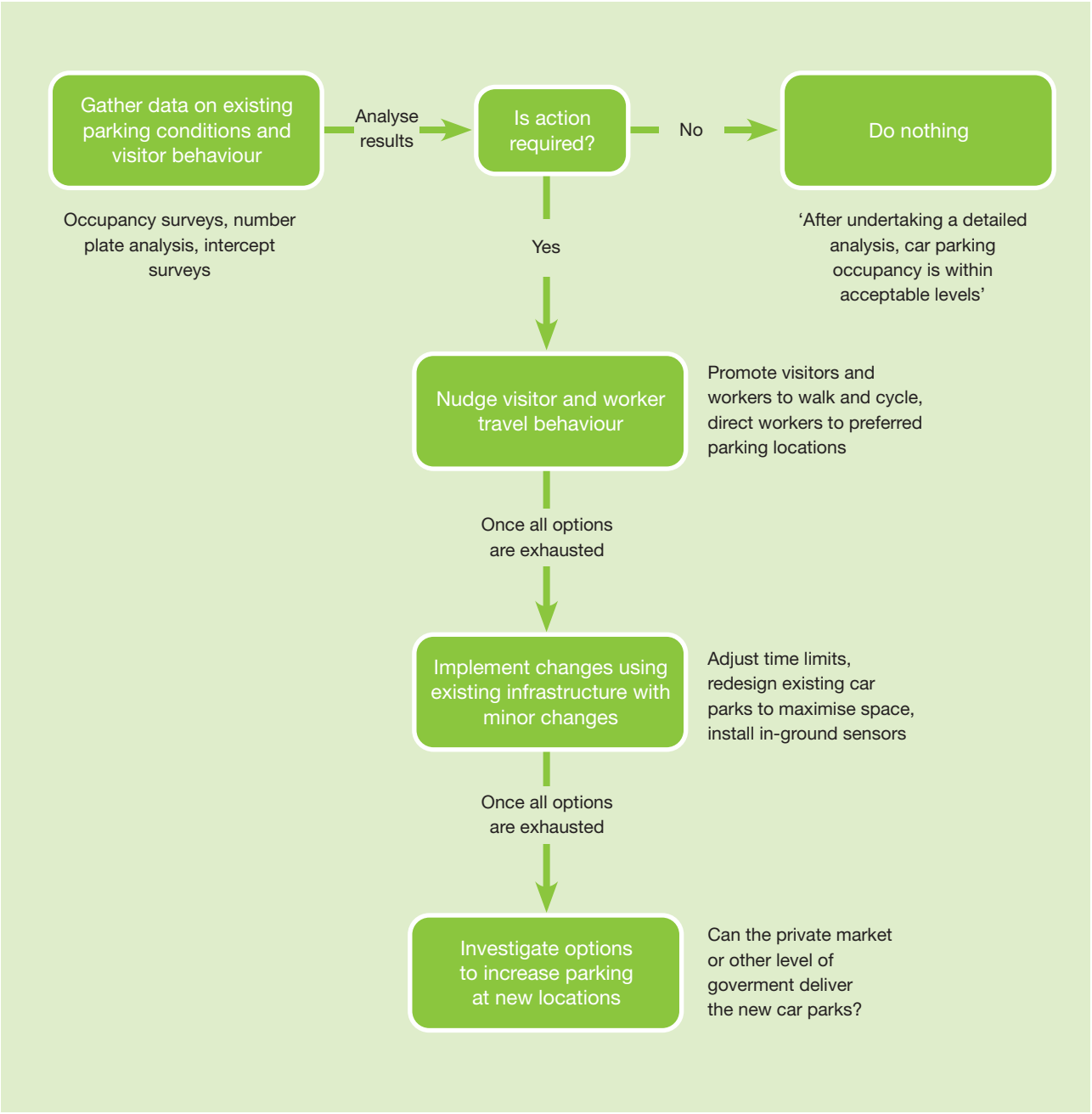


Figure 25 Strategic framework for car parking actions

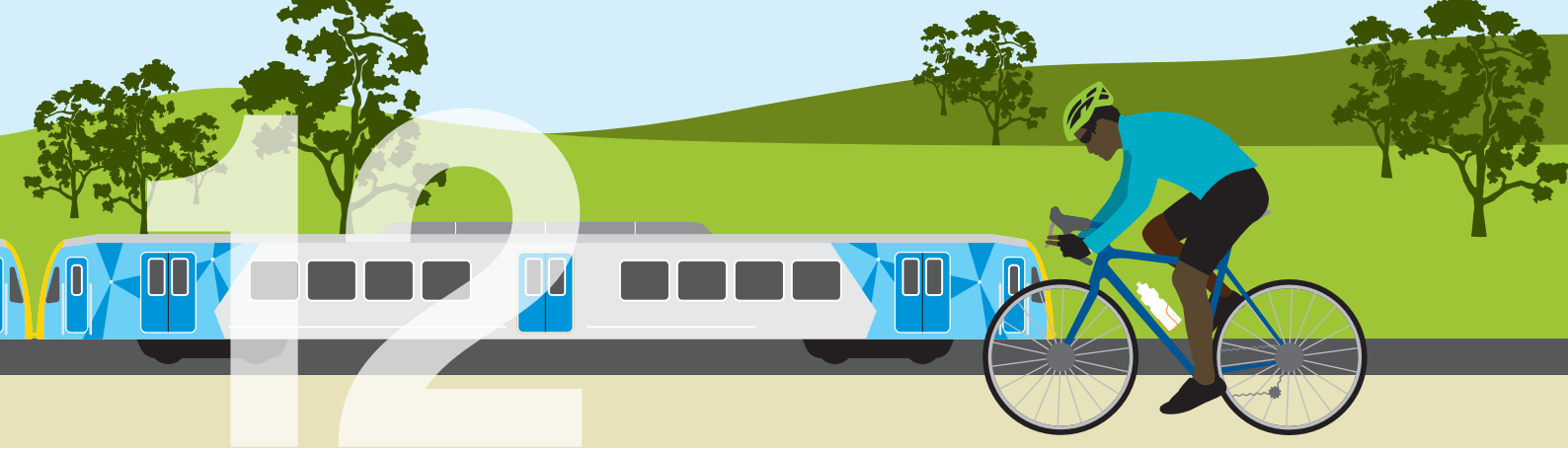


Implementation

The implementation of Connected is a staged, long term program of work. This includes some low-cost initiatives that will be implemented entirely by Council within a short time frame, longer term, more costly projects and advocacy projects, such as much needed improvements to the public transport network.

A list of suggested actions is included within the Action and Implementation Plan in Appendix 2 of this document. Many of the actions that are township specific should be implemented in coordination with the Yarra Ranges Draft Place Plan Prioritisation Schedule.

The cost ranking shows the estimated cost of actions while the funding source highlights which actions have existing funding and where additional funding will be required. It should be noted that the funding allocation may be spread over multiple years. The impact shows the estimated geographic area the action will impact on. Please note, these are estimates only and detailed costings will be undertaken in the development of each action.



References

Australian Bureau of Statistics. (2017). Census 2016. from Australian Government http://www.abs.gov.au/websitedbs/censushome.nsf/home/2016

Transport for Victoria. (2017). *Victorian Integrated Survey of Travel and Activity* Retrieved from Melbourne: https://transport.vic.gov.au/data-and-research/vista/vista-data-and-publications/



Appendix 1: Additional information on car parking

Car parking is one of the most hotly contested issues in Yarra Ranges and was a frequent topic of discussion during the engagement process. Government policies have increased the supply of car parking. The widespread availability of free parking has increased car use, and off-street parking requirements have reduced housing affordability. City governments in other parts of Australia and internationally have begun to align their approach to parking management with their broader policies (e.g. climate change, urban liveability) and this usually results in a reduced requirement for parking, and greater use of pricing as a means of balancing demand with supply. Cities have also begun reallocating space previously used for parking to other purposes, such as urban greening, public transport priority, wider footpaths and protected bicycle lanes.

Most parking in Melbourne, and Yarra Ranges, appears free to the user. This disguises the underlying cost of land and construction ($20,000 plus per parking bay); and broader costs including opportunity costs of land used for parking rather than other land uses or transport modes.

Free ample parking encourages car ownership and use. Circling for free on-street parking (which drivers prefer to off-street parking) is a significant contributor to traffic. Up to 30% of traffic in shopping strips is caused by people in cars looking for a free parking space.





Car parking – Fun facts provides a summary of pertinent facts related to car parking.

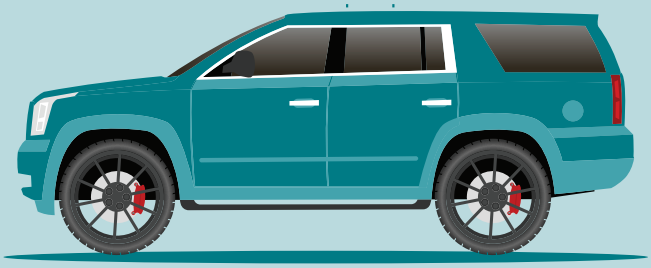
Car parking: fun facts

Cars sit idle for 95% of the day and is the second most expensive item most people will ever buy

Historically, car parking policies have shaped cities into car dominated landscapes

Car parking subsidises car use and can undermine housing affordability

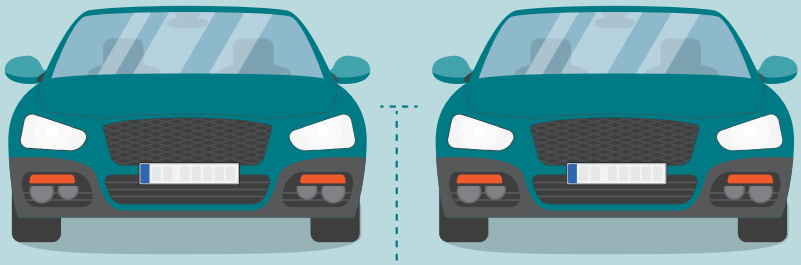
On- and off-street parking can account for 50% of all land use in a city



Free car parking removes an incentive to use sustainable modes

Parking – Key Issues identifies the key issues related to car parking reform for Yarra Ranges.

Parking - Key Issues



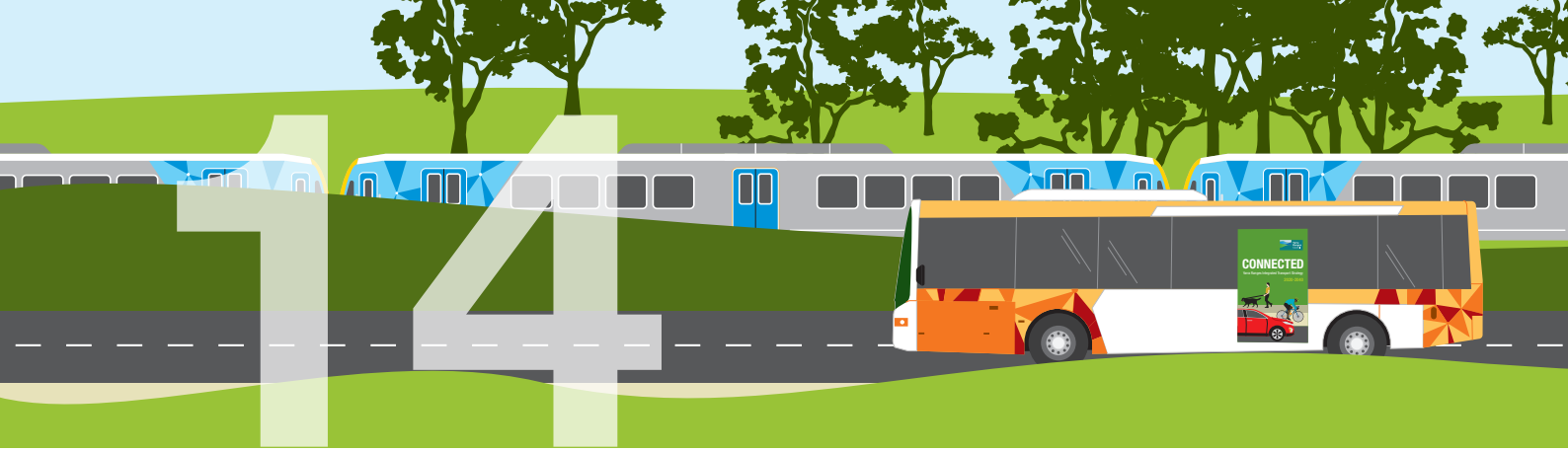
Car parking impacts negatively on built form outcomes and housing affordability

Increasing need to use space more efficiently as Yarra Ranges' population grows

Generous parking supply reduces the ability to address climate change and sustainable transport

Disability access and creating a diversity of transport mode choice is critical to an equitable Yarra Ranges

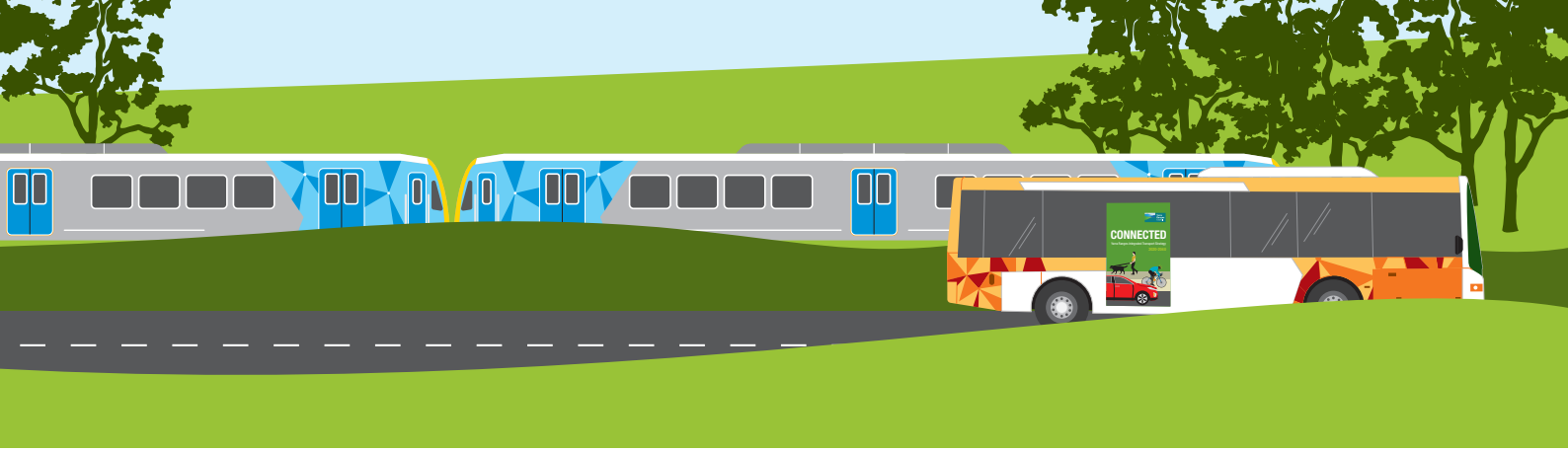
Urban vibrancy and quality of the street and public realm is important to the community.



Appendix 2: Implementation Plan

ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
Category 1: Built Form						
1	Built environment limiting opportunities for vibrant townships	Apply the principles of 20 minute neighbourhoods and the Movement & Place Framework when undertaking projects within townships, including Place Plans, Structure Plans and Master Plans. This aims to improve the vibrancy of townships through enabling the community to walk or ride to local shops, public transport and/or other key services. Potential improvements include preventing unnecessary through traffic, prioritising pedestrian crossings at key points, including bicycle infrastructure, street furniture and shade etc.	High	No cost	Existing	Regional
Category 2: Cycling						
2	Limited opportunities for using the bike for transport	Develop and construct a Cycling Transport Network using best practice design principles, including the development of Safe Active Streets. The network will centre around encouraging people who currently do not cycle with a focus on links to schools, activity centres, train stations, and employment precincts. This will provide more opportunities for bike transport trips, and greater uptake of e-bike and electric personal mobility devices.	High	No cost	Strategies	Regional
3	Unacceptably high levels of road injuries	Work with the Department of Transport, local residents and businesses to identify opportunties to improve safety and accessibility for bike riders in the Dandenong Ranges. We will focus on popular roads, including but not limited to, Mt Dandenong Tourist Road, Mountain Highway, Olinda-Monbulk Road, and Monbulk Road. We recognise that riding in the Hills is a popular activity and will remain so, but further work to create a safer and friendlier road environment for all users of roads in the Dandenongs is required.	Medium	Above $1,000,000	TBC	Regional

1 **Funding Source Definitions:** **Existing** - Using existing resources **TBC** - Delivery will be subject to funding bids
Strategies - Undertaken as part of other strategies where funding sources are yet to be confirmed



ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
Category 3: Public Transport						
4	Bus route frequencies that don't meet people's needs or integrate well with train services	Advocate to the Department of Transport for a Bikes on buses program in Yarra Ranges, to help increase the convenience of both cycling and bus use, and boosting door-to-door travel times.	High	No cost	Existing	Suburb
5	Bus route frequencies that don't meet people's needs or integrate well with train services	Develop Train Station Access Plans for every train station in Yarra Ranges, focused on boosting the attractiveness of walking, cycling and bus services. This will address barriers to getting more people walking, riding, and catching public transport to ensure those who need to drive to the station can find a space.	High	$250,000 - $1 million	TBC	Regional
6	Bus route frequencies that don't meet people's needs or integrate well with train services	Advocate to the Department of Transport for a pulse timetable to be implemented for the buses that arrive/depart from Belgrave Train Station, once assessed the pulse timetable could be applied at Lilydale Station.	High	No cost	Existing	Regional
7	Train Frequency and Service Reliability	Advocate to the State Government to improve service frequencies and reliability on the Lilydale and Belgrave Lines. Upgrades to high capacity signalling across the Burnley Group, expanding track capacity (track improvements within Burnley Group), and improved frequency in both peak and off-peak times.	High	Under $50,000	TBC	Regional
8	Bus route frequencies that don't meet people's needs or integrate well with train services	Advocate to the Department of Transport for an urgent Bus Review. Poor bus frequencies, a lack of integration with train services and the need for additional routes and new tele-bus service areas will help make public transport a more attractive choice for more people in the Yarra Ranges.	High	Under $50,000	Existing	Regional

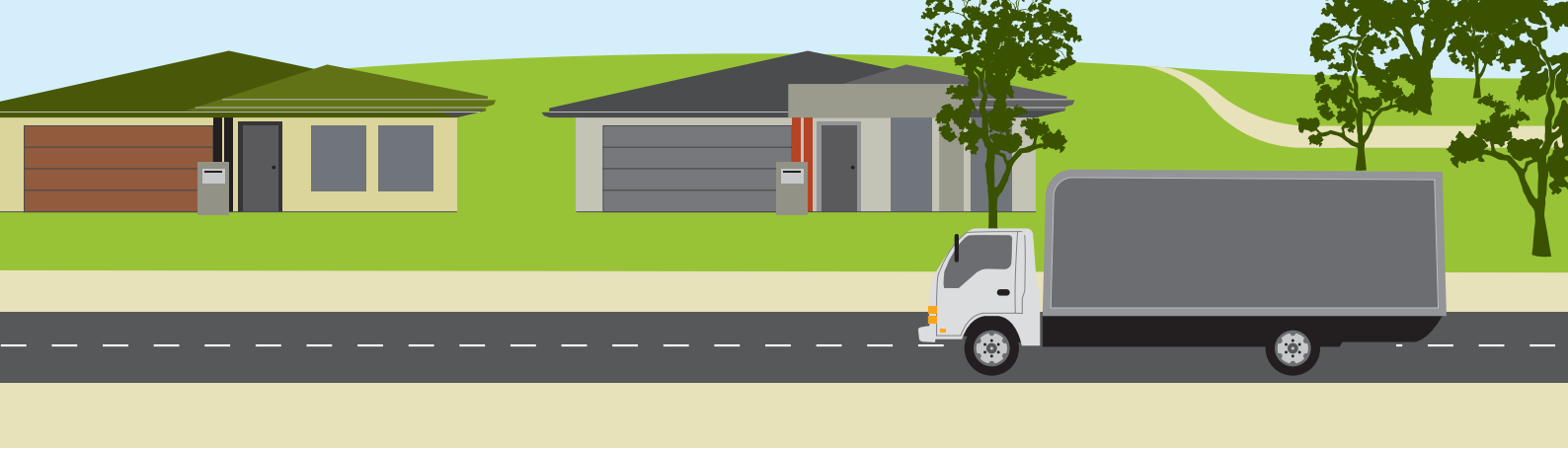


ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
9	Bus route frequencies that don't meet people's needs or integrate well with train services	Work with state government to ensure all public transport stops are Disability Discrimination Act compliant by 31 December 2022, including an audit of all existing stops to determine accessibility to and at each stop.	High	No cost	Existing	Regional
10	Bus route frequencies that don't meet people's needs or integrate well with train services	Advocate to State Government to improve relationships with Indigenous people through public transport staff undertaking cultural awareness training for working with Indigenous passengers and having an Indigenous recruitment program that provides a path to employment within the public transport sector.	High	Under $50,000	Existing	All of Yarra Ranges
11	Traffic and parking congestion	Advocate to State Government for more disabled car parking bays at train station car parks.	High	No cost	Existing	Regional
12	Bus route frequencies that don't meet people's needs or integrate well with train services	Advocate to the State Government for all members of the community to be able to access school bus services, especially in parts of Yarra Ranges where there is very little public transport access.	High	No cost	Existing	All of Yarra Ranges
13	Bus route frequencies that don't meet people's needs or integrate well with train services	Work with the Department of Transport, local community groups, and private transport operators to investigate options to expand transport services across Yarra Ranges, improving access and mobility options for everyone. Our goal is to trial one new on-demand service pilot project ready to implement within 12 months.	High	Under $50,000	TBC	All of Yarra Ranges

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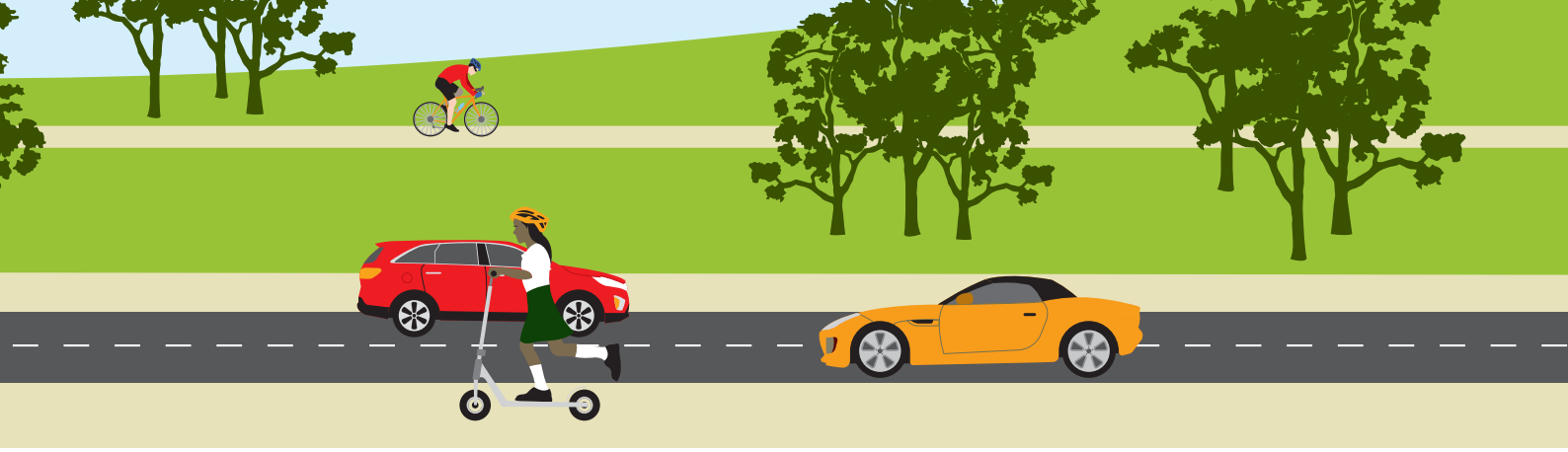


ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
14	Bus route frequencies that don't meet people's needs or integrate well with train services	Targeted implementation of kerb outstands for bus stops, which help create Disability Discrimination Act compliant stops and increases the number of car parking bays.	Medium	$250,000 - $1,000,000	TBC	Regional
15	Bus route frequencies that don't meet people's needs or integrate well with train services	Investigate the development of a Peer 2 Peer ride sharing platform/system proposal that aims to efficiently match drivers with spare capacity with passengers looking a ride.	Medium	$50,000 - $250,000	TBC	All of Yarra Ranges
16	Bus route frequencies that don't meet people's needs or integrate well with train services	Support improvements and expansion of Community Transport services to help elderly and transport-disadvantaged groups participate fully in society. Work with Community Transport operators in Yarra Ranges to determine the key issues and opportunities to improve access to community transport and deliver a pilot in the Upper Yarra area.	Medium	$50,000 - $250,000	TBC	All of Yarra Ranges
17	Bus route frequencies that don't meet people's needs or integrate well with train services	Work with the Department of Transport and Major Events in Yarra Ranges to encourage more public transport to and from events. Explore options such as embedding the cost of the bus trip into the event ticket and operating more Public Transport services on event days.	Medium	Under $50,000	TBC	All of Yarra Ranges



ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
18	Bus route frequencies that don't meet people's needs or integrate well with train services	Develop a best-practice bus stop design template, including sightlines, comfort, weather protection, seating, and amenities including an audit of stops appropriate for this program. Use the best-practice bus stop design template to advocate to State Government and bus operators for delivering high quality bus stops, particularly at transport hubs and key bus corridors.	Low	Under $50,000	Existing	District Region/ Activity Centre
Category 4: Walking						
19	Unfriendly pedestrian network	Continue the footpath building program – to provide a complete network of footpaths in the built-up areas of Yarra Ranges and connect into the trail network, using the Footpath prioritisation framework prepared as part of *Connected*.	High	Above $1,000,000	Existing	Regional
Category 5: Travel Demand Management						
20	Built environment limiting opportunities for vibrant townships	Identify Transit Orientated Development opportunities with Strategic Planning to reduce demand for car use as the default mode and encourage active transport to activity centres and employment precincts.	Medium	$250,000 - $1,000,000	TBC	Regional
21	Traffic and parking congestion	Support existing Co-working spaces and identify new opportunities in areas where no co-working facilities exist.	Low	No cost	Existing	District Region/ Activity Centre
Category 6: Motor Vehicles						
22	Built environment limiting opportunities for vibrant townships	Identify and develop neighbourhood unit areas and apply local area traffic management tools, to make local residential streets more safe and attractive for residents. This may include: more street trees, lower speed limits, restricting rat-running, community gardens, and other neighbourhood improvements.	High	$250,000 - $1,000,000	TBC	All of Yarra Ranges

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ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
23	Built environment limiting opportunities for vibrant townships	Work with local communities in each of the townships with a regional route through its Activity Centre to create a "Welcome To…" creative or cultural project designed to signal to arriving motorists that they have entered the heart of a township and to slow down to a safe speed. Alternatives could include tree lined streets for amenity and threshold treatments throughout the townships main street.	High	Above $1,000,000	TBC	All of Yarra Ranges
24	Traffic and parking congestion	Implement car parking action framework, whenever a car parking issue is identified, to help ensure consistency of response and alignment with the vision and objectives of *Connected*.	High	$50,000 - $250,000	TBC	All of Yarra Ranges
25	Unacceptably high levels of road injuries	Work with the Department of Transport to investigate opportunities to provide safer speeds in local streets and main streets of townships, where there is a clear safety benefit and where the majority of the community support such a change. Investigate potential residential areas for 40km/h in defined townships and 30km/h in main street of key townships (e.g. Belgrave)	High	$250,000 - $1,000,000	TBC	Regional
26	Unacceptably high levels of road injuries	Include footpaths/shared paths within the design, where possible, of roads which are sealed as part of the Roads for the Community Initiative where possible.	High	$250,000 - $1,000,000	Existing	Regional
27	Unacceptably high levels of road injuries	Undertake a safety audit of Warburton Highway to facilitate advocacy to State Government to enhance safety and harmonise speed zones.	High	$50,000 - $250,000	TBC	Regional
28	Unacceptably high levels of transport emissions	Develop an Implementation Plan to convert 100% of the Council fleet to zero emission vehicles by 2030.	High	No cost	Strategies	All of Yarra Ranges
29	Traffic and parking congestion	In streets around the Mooroolbark and Belgrave Train Station, convert informal, all day parking spaces to space that are available for local residents and visitors to use during the day. This is a continuation of the existing project at Belgrave that is responding to the increased commuter parking being provided by the Victorian Government.	Medium	$50,000 - $250,000	TBC	District Region/ Activity Centre



ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
30	Traffic and parking congestion	Look for opportunities to install Parking Overstay Detection System (PODs) in car parking bays in high demand areas, in conjunction with real time digital signage to identify the number of available parking bays.	Medium	$250,000 - $1,000,000	TBC	District Region/ Activity Centre
31	Unacceptably high levels of transport emissions	Develop a Transport Emissions Inventory in order to track emissions from transport. This is designed to help us understand how we are tracking in reducing our emissions and is similar to what many other councils in Melbourne have begun to do.	Medium	No cost	Strategies	District Region/ Activity Centre
32	Unacceptably high levels of transport emissions	Engage with the private sector to install electric vehicle charging stations in iconic locations within Yarra Ranges, including: Healesville township, Healesville Sanctuary, Warburton, and Belgrave.	Medium	No cost	Strategies	District Region/ Activity Centre
33	Unacceptably high levels of transport emissions	Promote electric vehicle use by creating an electric vehicle Charging Map and info page on Council Website.	Medium	No cost	Existing	District Region/ Activity Centre
34	Bus route frequencies that don't meet people's needs or integrate well with train services	Engage with ride sourcing services and Commercial Passenger Vehicles Victoria to determine what is required to better meet the needs of residents and visitors via taxi and taxi like services.	Low	Under $50,000	TBC	District Region/ Activity Centre
35	Traffic and parking congestion	Work with existing car share providers to explore opportunities for providing car share services within Yarra Ranges.	Low	No cost	Strategies	District Region/ Activity Centre
Category 7: Organisational						
36	Limited opportunities for using the bike for transport	Whenever a road is resurfaced, install a bike lane if it forms part of the proposed bike network or would enhance bike connectivity. Only add lane if there is sufficient space and is safe to do so.	High	No cost	Existing	All of Yarra Ranges

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Strategies - Undertaken as part of other strategies where funding sources are yet to be confirmed



ID	PROBLEM	ACTION	PRIORITY ACTIONS	COST	FUNDING SOURCE[1]	IMPACT
37	Unacceptably high levels of road injuries	Introduce a framework for prioritising areas for Local Area Traffic Management (LATM) and a toolkit of street design initiatives to address local traffic safety and amenity issues. LATMs allow Council and local communities to address traffic and local street concerns at the neighbourhood level.	High	Above $1,000,000	TBC	All of Yarra Ranges
38	Organisational capacity to address contemporary transport issues	Develop a detailed plan to work with school communities, the Department of Education, Ride2School, and Vic Health to undertake travel plans focused on increasing the rate of walking, cycling and public transport. This should include a school travel survey, an audit of the walking and cycling environment across the school's catchment and an examination of crash data and speed limits.	High	Under $50,000	TBC	Regional
39	Unacceptably high levels of road injuries	Develop a Road Safety Plan.	Medium	$50,000 - $250,000	TBC	Regional
40	Organisational capacity to address contemporary transport issues	Use the biennial data collected by Council to prepare reports focused on communicating with the community how Council is tracking with regard to the targets set out in the Integrated Transport Strategy.	Medium	Under $50,000	TBC	District Region/ Activity Centre
41	Organisational capacity to address contemporary transport issues	Monitor transport innovation and new technology (such as hydrogen fuel and autonomous vehicles) to identify opportunities to further support the strategic objectives of *Connected*.	Medium	No cost	Existing	District Region/ Activity Centre
42	Organisational capacity to address contemporary transport issues	Include a biennial transport satisfaction survey among residents and businesses in Yarra Ranges (Council to investigate best delivery method for survey e.g. mail, online, SMS, etc.). This action should also include a Travel Diary Survey, which, when combined with VISTA data, will provide a quantitative picture of distance and minutes of travel by all modes of transport in Yarra Ranges. This can be used to quantify the economic benefits of walking and cycling, and include an analysis of the METS (metabolic equivalents of tasks) to provide a picture of the impact active transport is having on the health of residents.	Low	$50,000 - $250,000	TBC	District Region/ Activity Centre

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