

# Active Transport Strategy 2013-2023 **FINAL**

Colac Otway Shire

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# Executive Summary

## INTRODUCTION

This document presents the Colac Otway Shire Council's new 10-year Active Transport Strategy 2013-2023 ("the Strategy"). The Strategy aims to create a physically and socially supportive environment for walking and cycling across the Colac Otway Shire ("the Shire"). Such an environment will support a diverse cross section of the community to use walking and cycling to access a range of key destinations including shopping, education, recreation and employment.

## THE STRATEGY FRAMEWORK

The development of the Strategy has been based on a behavioural change framework, which has the benefit of having a broader consideration of the physical, social, individual and political factors that ultimately influence people's decision to walk and cycle. An incremental approach is proposed, where the community are encouraged and enabled to gradually increase their participation in walking and cycling by replacing some of the local trips they normally make by car. The development of walking and cycling networks and associated facilities has focused on enhancing access to key local destinations, including schools, shopping strips, parks and train stations.

### 3 GOALS

Three overarching goals are proposed:

#### Healthy People

The Strategy aims to support the health and wellbeing of the Shire's residents by enabling and promoting physical activity through walking and cycling for transport and recreation.

#### Healthy Communities

The Strategy aims to support the health and sustainability of local communities through the provision of enhanced walking and cycling infrastructure, which will encourage more people onto the street supporting social interaction while reducing reliance on car-based travel for local trips.

#### Healthy Economy

The Strategy aims to contribute to the health and sustainability of the local economy by supporting local cycling tourism and local businesses.

### 4 PRINCIPLE TARGETS

The four key targets to achieve the goals of the Strategy are:

- **Target 1:** 30% participation in cycling for the proportion of the population who have rode a bicycle at least once in the last 7 days.
- **Target 2:** 40% participation in walking for the proportion of the population who have walked at least once in the last 7 days.
- **Target 3:** Zero fatal and serious pedestrian and cyclist injuries by 2023.
- **Target 4:** 95% confidence levels that it is safe to walk and cycle.

## RECOMMENDED ACTIONS

A range of infrastructural, behavioural, policy and regulatory, promotional and leadership actions are proposed:

#### Infrastructural actions

A range of infrastructural proposals have been developed based on internationally recognised design principles and design concepts drawn from global best practice:

- New on and off-road bicycle routes and the completion of missing links in the existing network.
- Improved transitions from bicycle lanes to intersections and the provision of new facilities at intersections.
- Completing the Old Beechy Rail Trail and undertaking a feasibility study for the development of the Tiger Rail Trail.
- Short and long term bicycle parking provision at key destinations.
- New and upgraded accessible footpaths.
- Removal of footpath interruptions and enhanced access and permeability for pedestrians of all abilities.
- Undertaking the development of an integrated wayfinding Strategy for walking and cycling.
- Undertaking the development of a trails wayfinding Strategy.

#### Behavioural actions

Four core behavioural programs have been proposed to motivate and enable greater participation in walking and cycling, with each program comprising a range of activities:

- Cycling Efficacy Program
- Road Coexistence Program
- Walking Promotion Program
- School Travel Program

#### Policy and regulatory actions

- Require all new developments to provide for the needs of pedestrians and cyclists.
- Require all road schemes to give due consideration to the needs and impact on pedestrians and cyclists.
- Apply the Australian Urban Design Protocol – Designing for People, for all street scheme projects.
- Explore with the police how road rules to govern motorists could be more regularly enforced.
- Explore the reduction of 60 km/h speed limits to 50 km/h for main streets in all small towns and a blanket 40 km/h speed limit for residential streets and around schools.
- Explore the reduction of 60 km/h and 50 km/h speed limits to 40 km/h for main streets in Colac and Apollo Bay and 40 km/h speed limit for residential streets and around schools.

#### Promotional actions

A range of promotional actions have been developed for the marketing of active transport:

- Promote cycling as a form of travel for all events in marketing collateral and on Council's website.
- Provide bicycle valet parking at all major events.
- Incorporate focus imagery to include people of all abilities.
- Collect and publish people's stories of change.
- Run an annual workshop for local residents on developing projects to promote active transport.
- Provide small seed funding grants for well-developed and planned ideas and initiatives.

#### Leadership actions

A range of actions have been proposed to position the Colac Otway Shire Council as role model and leader in the planning, promotion and facilitation of active transport:

- Develop a Sustainable Travel Plan
- Host an annual Sustainable Transport Week.
- Develop a promotional pack for new staff.
- Promote active transport as part of staff inductions.
- Promote new facilities and activities.
- Undertake an audit of all Council workplaces to determine the current level of provision of end-of-trip facilities.
- Promote facilities as best practice.
- Run bicycle skills and maintenance training classes for staff.
- Maintain a bicycle pool for short local business trips.
- Provide staff with access to walking and cycling gear.
- Provide appropriate maintenance and repair equipment on-site.
- Develop and make available maps of safe and convenient routes.
- Run an annual workshop with staff who walk and cycle to gather feedback on issues

## DELIVERING THE STRATEGY

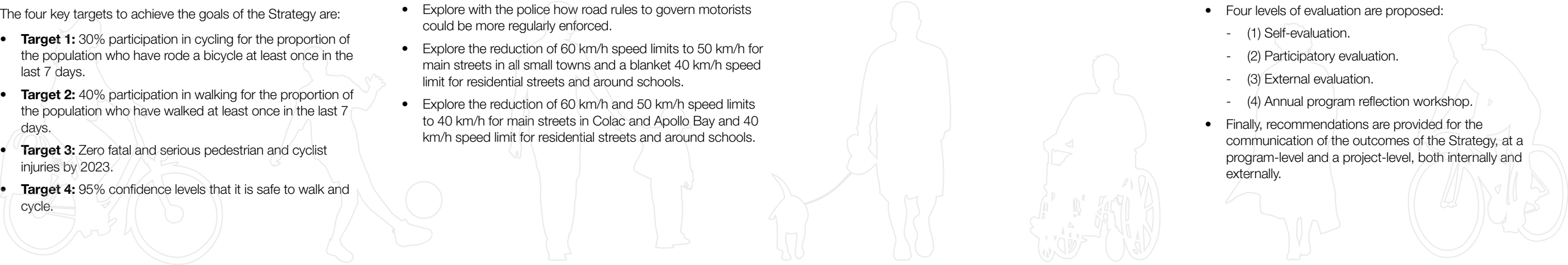
A framework for the delivery of the Strategy covering management, maintenance, funding and implementation and including the following key actions:

- Form a Steering Committee, chaired by a Councillor, to oversee the delivery of the Strategy.
- Appoint an officer to lead the delivery of the Strategy on a day-to-day basis.
- Liaise closely with other regional Councils to identify bicycle infrastructure designs that can be adopted.
- Explore 'Place-based' approach to provide for walking and cycling.
- Explore how project outcomes can be more closely aligned to community needs.
- Provide an online form to enable members of the public to report maintenance issues.
- Commission independent audits of facilities every three years.
- Ensure that existing facilities are reinstated after the completion of road works.
- Ensure that all road works take account of the needs of cyclists.
- Develop a program for cleaning and vegetation pruning for on-road and off-road bicycle facilities.
- Undertake periodic inspections of bicycle parking facilities.
- Develop business cases for bicycle routes and associated facilities on VicRoads principle bicycle network.
- Maximise opportunities to implement new bicycle facilities when other road construction projects are being delivered to reduce costs and increase the reach of each annual budget.

## MONITORING AND EVALUATING THE STRATEGY

A Monitoring and Evaluation Framework has been developed for the Strategy covering:

- Key goals and targets, including appropriate indicators.
- Data collection methods have been identified for monitoring progress towards the goals and targets.
- Four levels of evaluation are proposed:
  - (1) Self-evaluation.
  - (2) Participatory evaluation.
  - (3) External evaluation.
  - (4) Annual program reflection workshop.
- Finally, recommendations are provided for the communication of the outcomes of the Strategy, at a program-level and a project-level, both internally and externally.





# Vision

In 2023 small and large towns across the Shire will no longer be reliant on private cars for all local trips. Walking and cycling will be safe, attractive and convenient ways to access a range of local destinations, including schools, shops, workplaces and public transport.

The walking and cycling infrastructure and facilities of Colac and Apollo Bay will have matured into well connected networks of routes that offer a high level of accessibility and user experience for the whole community, regardless of age, ability, gender or socio-economic standing.

Streets have been redesigned for people and are now considered to be highly prized assets by the Shire's residents. They have become places where people walk, cycle and engage with each other. With the increase in people on the streets there is a greater sense of safety and security in local communities.

The investment in walking and cycling has made a significant contribution to the local economy. The investment in supporting infrastructure and promotional activities has had a noticeable positive impact for local businesses in small and large towns. Cycling tourism is a growth industry with many visitors attracted to the Shire's many recreational and mountain bike trails.

The increase in physical activity gained from greater levels of participation in walking and cycling has been identified as a contributing factor to the reduction in obesity and chronic heart problems across the Shire.

Walking and cycling are now a normal part of the Shire experience.





# Introduction

# 1

# Introduction

## 1.1 Background

This document presents the Colac Otway Shire Active Transport Strategy 2013-2023 (“the Strategy”). The development of the Strategy was funded by the Victorian Department of Planning and Community Development (DPCD). In September 2012 GHD were commissioned to develop the Strategy in collaboration with a Steering Committee comprising officers from Council, and representatives of the DPCD and Otway Health. The development of the Strategy was based on extensive research and consultation, with important input from the Steering Committee at key milestones throughout the project.

## 1.2 The approach

The following key tasks informed the development of the Strategy:

- A workshop with the Steering Committee to develop a draft vision for the Strategy, which was then crafted as the project progressed.
- A review of key active transport related policies at local, state and federal level.
- A review of land-use, demographics and travel data.
- A review of existing active transport behavioural and promotional programs.
- A review of available social research on the barriers and motivation for walking and cycling.
- A review of walking and cycling related crash statistics for the Shire.
- A photographic survey of existing walking and cycling facilities across the Shire.
- A workshop with officers to review the planning and delivery of active transport projects and programs.
- A community survey of walking and cycling participation.
- Community talk shops in Birregurra, Colac and Apollo Bay.
- Feedback from several community groups and key government agencies.

The Strategy was developed within a behavioural change framework, which provides a holistic context to develop a set of infrastructural, behavioural, policy and regulatory, promotional and leadership actions that are appropriate for the Shire.

## 1.3 Aim and objectives

### Aim

The aim of the Strategy is to provide strategic directions and policy outcomes that address immediate and longer term community needs over the next ten years for greater levels of participation in walking and cycling for transport and recreation.

### Objectives

- Review and document existing levels of Active Transport provision in the Shire, the adequacy of the current quantity and quality including core infrastructure, and identify unmet needs of the community.
- Determine the current community use of Active Transport as a means of transport and recreation.
- Review the Shire’s existing Active Transport management principles, policies and practices and identify possible opportunities for improvement.
- Clearly articulate the benefits of Active Transport.
- Identify a long term vision and strategies to achieve this vision.
- Link this project with Council’s Transport Connections – Access, Connect, Belong (ACB) project.
- Assess the advantages, disadvantages and sustainability of each option and identify preferred options for implementation.
- Identify a prioritised framework, highlighting likely resource implications and potential funding opportunities for implementation of the recommended actions and strategic directions.
- Identify a management framework and key tasks required to regularly monitor, review and evaluate implementation progress, update key actions and assess project outcomes.

## 1.4 How to read this document

This document is structured in 5 further chapters.

### Chapter 2 – Understanding the Local Context

This chapter presents an understanding of the local context – the current physical and natural environment; the policy context for active transport; existing projects and programs; local crash statistics; key demographics; and land-use constraints and opportunities.

### Chapter 3 – A framework for Supporting Active Transport

This chapter presents the basis for determining projects and programs to create a physically and socially supportive environment for active transport.

### Chapter 4 – Actions for Supporting Active Transport

This chapter presents a range of infrastructural, behavioural, policy and regulatory, promotional and leadership actions to both enable and motivate greater levels of participation in walking and cycling across the Shire.

### Chapter 5 - Delivering the Strategy

This chapter presents a framework for delivering the proposed actions, including a prioritised implementation plan.

### Chapter 6 - Monitoring and evaluating the Strategy

The final chapter of the document sets out a framework for monitoring and evaluating the Strategy at a program and project level.



# Understanding the Local Context

# 2

## 2. Understanding the Local Context

### 2.1 Introduction

This chapter presents an analysis of the Shire context in terms of the existing conditions, provisions and participation levels in walking and cycling. As noted in the previous chapter, this review is undertaken through the lens of a behavioural change framework (i.e. a socio-ecological model of human behaviour), with a specific focus on walking and cycling.

The following aspects of the local context are presented in this chapter:

- The spatial context for the Shire.
- The demographic profile of the Shire.
- The health and wellbeing of the Shire.
- The active transport policy context at a local, state and federal level.
- The key social, environmental and economic benefits of active transport.
- The existing walking and cycling networks and associated facilities.
- Current infrastructural, behavioural and promotional programs.
- Walking and cycling safety.
- Stakeholder engagement outcomes.

The outcomes of this review have been synthesised and are presented in a SWOT analysis at the end of the chapter.

### 2.2 Spatial context

The Shire is a rural, residential and resort area. The Shire encompasses a total land area of 3,250 square kilometres, of which a large proportion is State Forest and National Park, including beaches, coastline, rainforests, waterfalls, lakes and craters. Much of the rural area is used for timber getting and agriculture, with farming, cropping and dairying being the main agricultural pursuits. Agricultural activity is concentrated in the northern part of the Shire, although timber and fishing are prevalent in the south. Tourism is an important industry, especially in the southern section along the Great Ocean Road. The Shire has two main townships, with many small villages and localities. The largest town is Colac, which serves as an administrative, retail and commercial centre. The other major township is Apollo Bay, which serves as the major tourism centre.

Figure 1: The location of Colac Otway Shire in Victoria

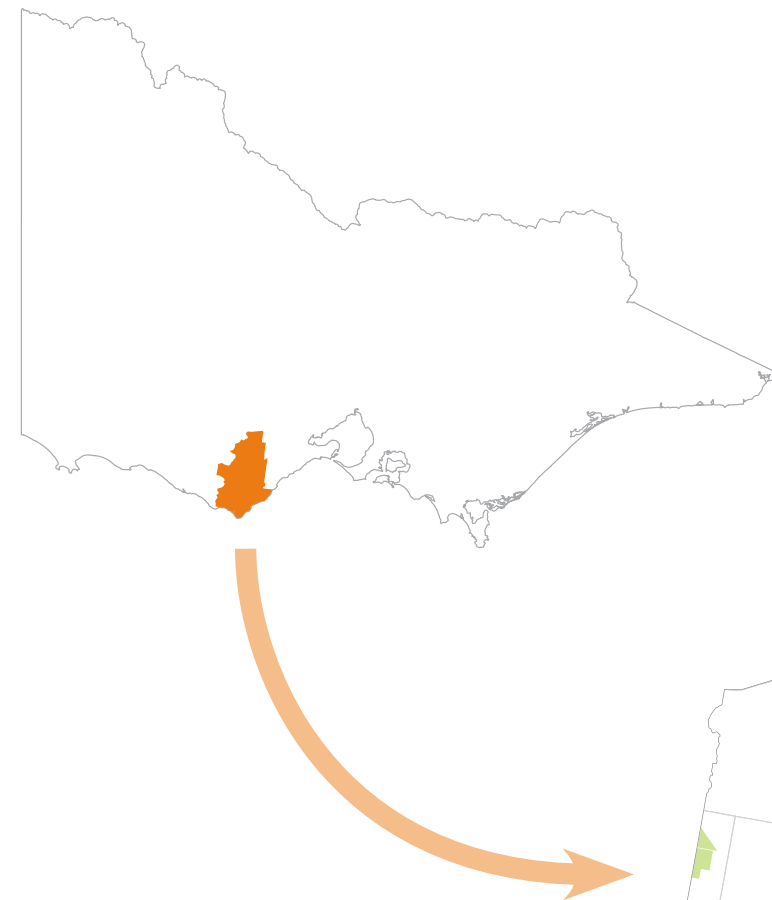


Figure 2: Colac Otway Shire



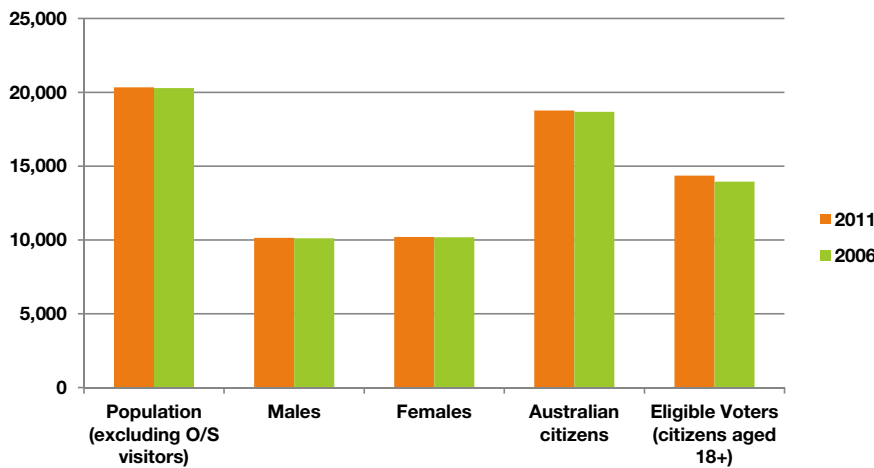


## 2.3 Demographic profile

The following section presents a summary of the demographic profile of the Shire. These statistics provide useful information on the local context; particularly emerging trends that help inform the development of actions for the Strategy.

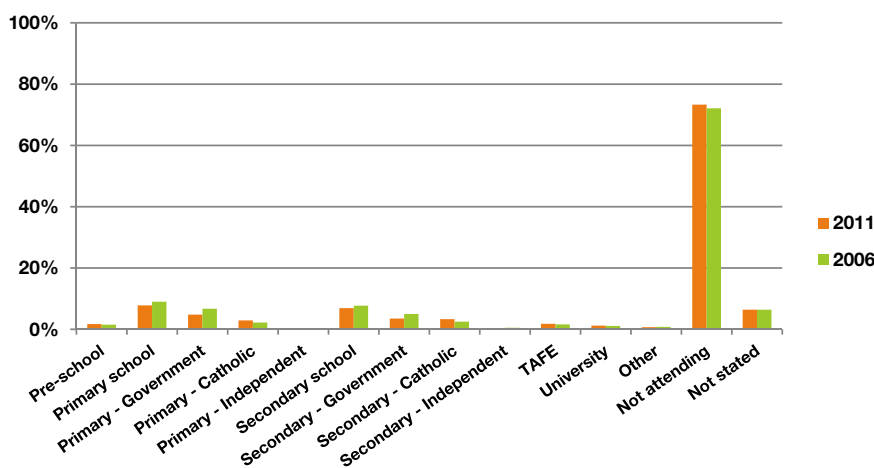
### 2.3.2 Statistics

Figure 3: Population



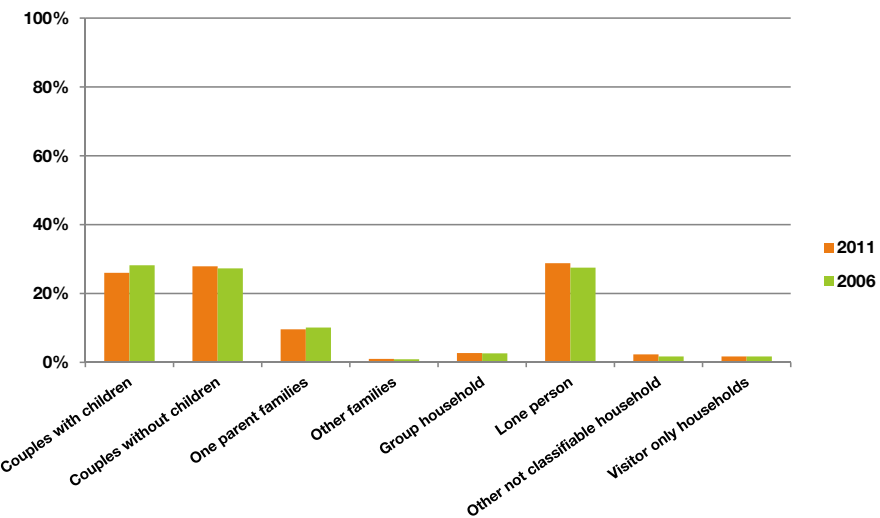
The Census population of the Shire in 2011 was 20,343 (an increase of 50 persons from the 2006 census), living in 11,320 dwellings with an average household size of 2.4.

Figure 4: Education



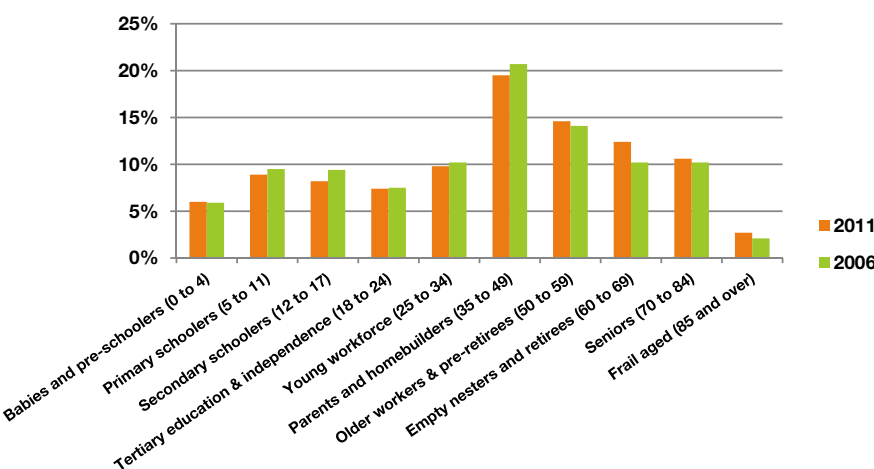
Approximately 34% of the Shire's population attend an educational institute (down 4% from the 2006 census), of which 16% attend primary school, 14% attend secondary school, 3% attend a tertiary institute, and 1% are other.

Figure 5: Household Size



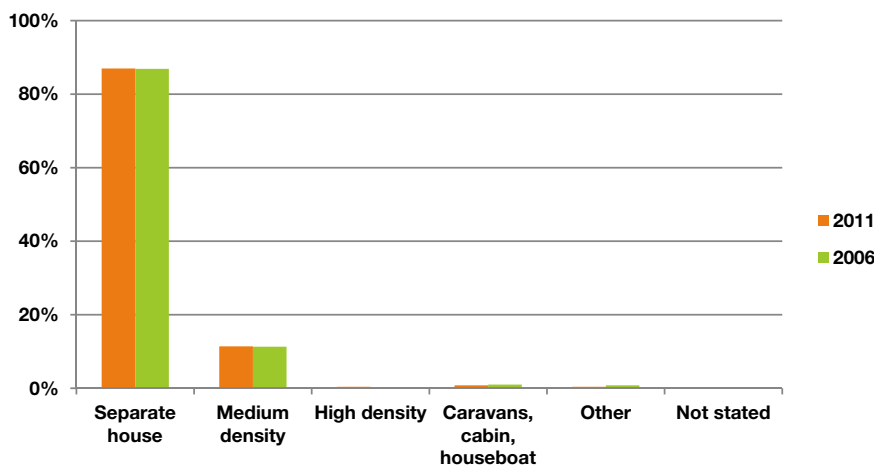
In the Shire, 26% of households are made up of couples with children compared with 27% in Regional VIC. Couples with children and people living together is declining slightly with a greater proportion of single person households.

Figure 6: Age



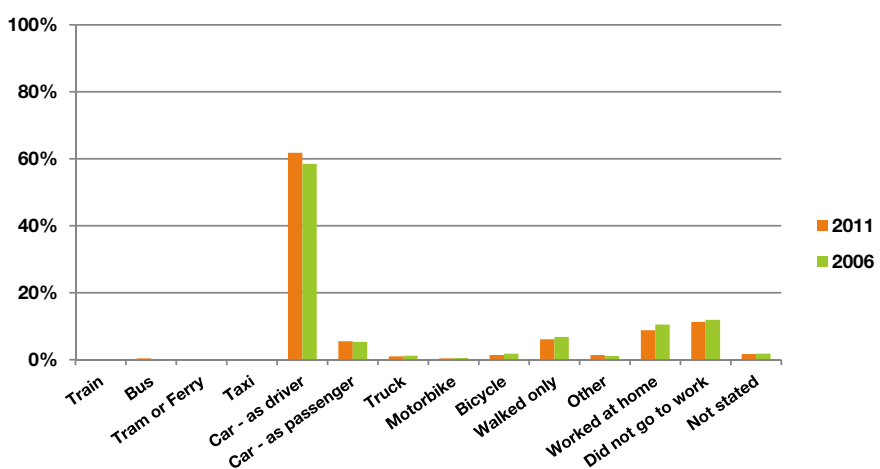
The Shire has the same proportion of pre-schoolers and a higher proportion of people at post retirement age than Regional VIC. The data shows a slightly increasing older population (50 and over) and declining younger population (under 50).

Figure 7: Household Structure



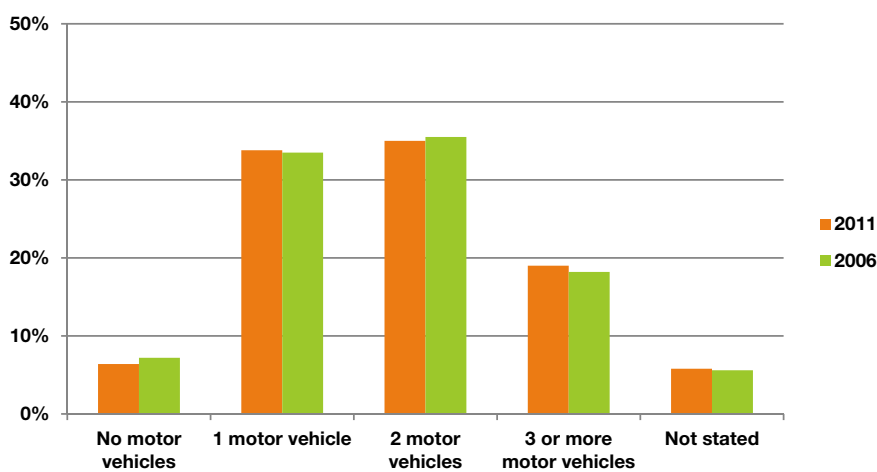
In the Shire 12% of the dwellings are medium or high-density, compared to 11% in Regional VIC. Housing types are predominantly separate dwellings.

Figure 8: Travel to work



In the Shire 700 people ride their bike or walk to work. Together walking and cycling account for 7.5% of the total mode split (down 1.1% from the 2006 census), which is significantly higher than the average for Regional Victoria (5.4%). Cycling levels have fallen 22% from 2006.

Figure 9: Car Ownership



In the Shire 54% of households had access to two or more motor vehicles, compared to 55% in Regional VIC. Car-free households has fallen slightly from 2006 but there has been an increase in households with 3 or more cars.

2.3.3 Conclusions

The Shire has a relatively small and geographically dispersed population, which has changed little over the 5 years between the 2006 and 2011 census. The low density characteristics of the shire also manifest in the type of housing structure, with the vast majority of the population living in separate houses.

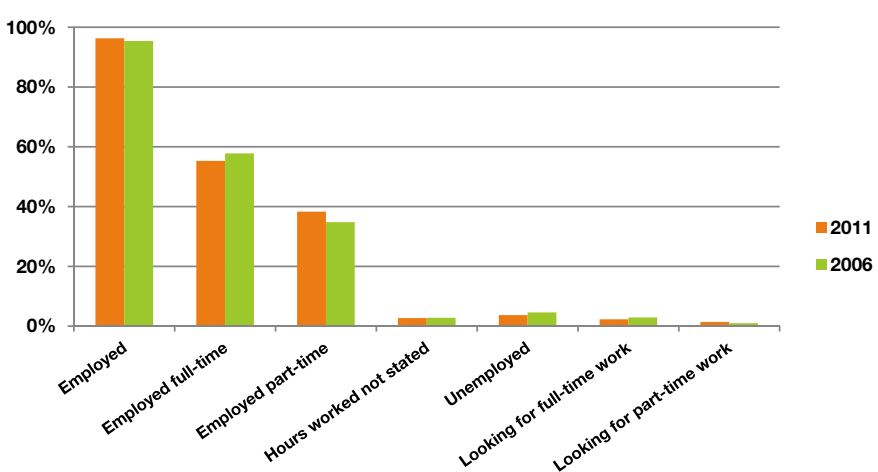
The majority of the population in education are attending primary and secondary school, which should provide the focus for actions to promote walking and cycling for education-based trips.

While the car is the main mode of travel for work journeys, it is slightly lower than the average for Regional Victoria and there has been an increase in households with no motor vehicles. At the same time, the Shire has higher levels of walking and cycling than the average for Regional Victoria, which suggests potential for growing participation in active transport. However, this only relates to travel to work with no data available for short local journeys which have the highest potential for active transport.

Access to transport or mobility is often a problem for many people living in relatively rural areas. In a 2011 survey on Community Wellbeing conducted by VicHealth, just over a quarter (25.2%) of all respondents indicated they experience transport limitations, slightly above the Victorian State average (23.7%).

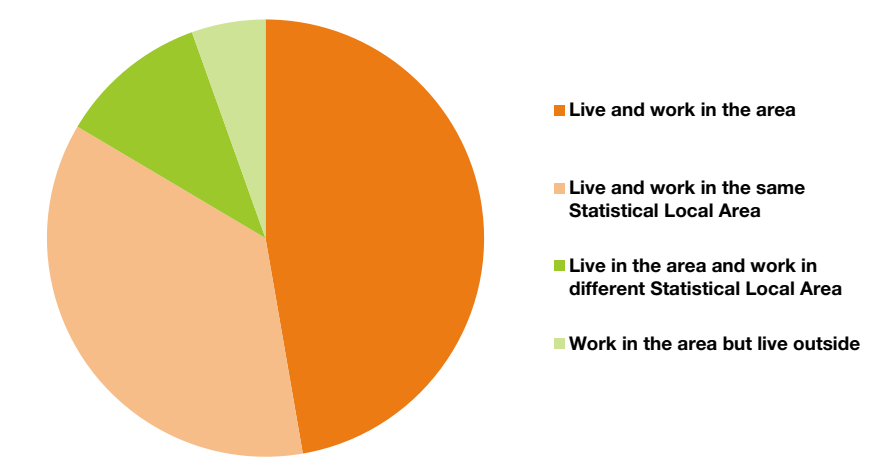
Overall, there are no significant demographic trends that support growth in active transport participation. However, the Shire's higher than average use of walking and cycling for travel to work suggests potential for growth. In certain cases, active transport could help reduce transport limitations. However, it is acknowledged that such opportunities might be limited given the dispersed nature of settlements across the Shire.

Figure 10: Employment Status



Approximately 9,474 people living in the Shire are employed, of which 55% are working full time and 38% part time. Overall unemployment has fallen slightly since 2006. Employment levels are slightly above the average for Regional Victoria.

Figure 11: Residential Location of Workers



Approximately 6% of the Shire workers live outside the area.



## 2.4 Health and wellbeing

Whilst the Shire is a popular destination for hiking, cycling, sea and lake based recreational activity, the population of the Shire appear to have a more car-centric and less active lifestyle than what is available to them on their doorstep. Studies have shown that across the Shire, one third of residents state they are physically inactive. This represents a higher proportion of inactive people than the population of rural Victoria and all Great South Coast municipalities. Health issues in the population that are related to a sedentary life style include heart disease, risk of stroke, diabetes, risk of colon and breast cancer and some weight bearing musculoskeletal disorders.

The trend of increasing inactivity (The rate of physical inactivity increased from 310 to 354 per 1000 people during 2001-2005) has concurrently led to an increase in the rate of obesity, to a level such that Colac Statistical Local Area has the highest rate of obesity in the G21 region. For a population of under 22,000, this is a staggering statistic that led to the National Preventive Health Taskforce identifying an urgent need to address and improve the situation.

A range of programs related to embedding physical activity into daily life and developing policies that encourage increasing activity have been implemented.

A worrying but recognised future generational issue is the prevalence of childhood and adolescent obesity that has been steadily increasing in Australia. It poses the single biggest threat to the health of Australian children and the negative impacts on health and psychological well-being are well described and are substantial. Recent estimates suggest that the health impacts of obesity may be so great that today's children will be the first generation for many centuries to experience a lower life expectancy than their parents. The Shire is not immune to this trend.

The work from the Sentinel Site for Obesity Prevention program by The Deakin University/Department of Human Services (DHS) partnership in the Barwon-South Western region of Victoria indicated that prevalence of overweight and obese people was 17% in preschool children, 26.7% in primary and 26% in secondary school students.

The research highlights a need to focus on early intervention and prevention strategies, to instil behavioural adaptation in youth to prevent future health issues. At the same time, an aging and growing population means that strategies around increasing physical activity also need to work with people who are driven by different incentives.

The recommended 30 minutes of daily physical activity can easily be achieved through several short walking or cycling trips.

## 2.5 Active transport policy context

The following section presents the key strategies and plans at national, state and local level that provide the policy context for active transport in the Shire.

### Federal policy

#### *The Australian National Cycling Strategy (NCS) 2011-2016*

The aim of the NCS is to double the number of people cycling in Australia by 2016, based on the delivery of six key priorities and objectives: cycling promotion, infrastructure and facilities, integrated planning, safety, monitoring and evaluation, and guidance and best practice. These key priorities have generic actions that can be applied within states, territories and local governments in accordance with community aspirations, priorities and available resources.

#### *Draft Walking, Riding and Access to Public Transport, Oct 2012*

This report, developed by the Major Cities Unit, explores the role of an integrated urban transport system based on walking, cycling and public transport. The document provides a strong business case for investment in active transport, highlighting the various social, environmental and economic benefits of walking and cycling. A range of measures are proposed covering the broad categories of planning, building and encouragement.

#### *National Urban Policy*

The National Urban Policy provides the framework for improving the productivity, liveability and sustainability of Australian cities. The policy proposes to “improve accessibility and reduce dependence on private motor vehicles”, noting the negative role of cars on road safety. To achieve this, the policy proposes stronger support for walking, cycling and public transport.

#### *State of Australian Cities 2012*

The State of Australian Cities report provides a review of the development of Australian cities including demographics, productivity, liveability, sustainability and governance. The report highlights the role and importance of safe urban environments and the need to support walking, cycling, and public transport.

#### *National Road Safety Plan 2011-2020*

The National Road Safety Plan 2011–2020 is a 10-year framework, based on the Safe System approach, with the aim that “no person should be killed or seriously injured on Australia’s roads”. The Plan proposed a target of a 30 percent reduction in the annual numbers of both deaths and serious injuries.

### State policy

#### *Pedestrian Access Plan 2010*

The Pedestrian Access Plan sets out the Victorian Government’s vision for a more pedestrian-friendly transport system. The aim of the plan is to encourage more walking, especially for short trips. The plan establishes broad policy principles to investment in walking over the next 10 years – including infrastructure, planning and design, safety and behaviour change programs.

#### *Cycling into the Future 2013–23*

The new Victorian bicycle plan proposes a “holistic, co-ordinated and strategic approach to considering the needs of all bike riders and developing policies, programs and actions to address these needs”. One of the key goals is to “reduce safety risks – reduce conflicts and risks to make cycling safer”.

#### *Draft Victorian Road Safety Plan, Sep 2012*

The Victorian Road Safety Plan (under development as of Jan 2012) proposes a close alignment with the national Road Safety Plan 2011-2020, following the principles of the safe system approach. Among the strategic priorities are pedestrians and cyclists.

#### *Victorian State Disability Plan 2013 - 2016*

The Victorian State Disability Plan 2013 - 2016 proposes to improve access to buildings and places by outlining strategies to both increase the application of accessible design standards in the built environment and make community facilities and public spaces more accessible and safer.

### Local policy

#### *Apollo Bay Strategic Footpath Network Plan*

This plan outlines the development of a Strategic Footpath Network within the Apollo Bay Township, specifically the implementation of a Primary Network (to be undertaken in the short term) and Secondary Network (to be undertaken in the longer term). A budget of \$50,000 per year for 4 years has been proposed. The plan addresses many of the current gaps in the walking network of Apollo Bay.

#### *Colac CBD & Entrances Project 2012*

This project sets out a range of recommendations to shape access and movement, buildings and land use, streetscapes and open space within the context of the areas defined by the CBD and the entrances to Colac. The project makes a number of key recommendations with regards to walking and cycling, including infrastructural enhancements to routes and crossings (e.g. mid-block crossings, shared space, intersection redesigns and high quality “Botanic Corridor” for pedestrian movement).

#### *Colac Otway Recreation Strategy 2006-2010*

This Strategy identifies and addresses the recreation needs of the community within the Shire, through a short, medium and long term action plan. Among the recommendations of the Strategy was the development of a Bicycle Strategy, the completion of the Old Beechy Rail Trail and development of a shared pathway between Apollo Bay and Skenes Creek.

#### *Colac Otway Public Open Space Strategy 2011*

The open space Strategy covers the provision of shared pathways, and walking and cycling routes to promote greater levels of physical activity and improve the overall health of the community.

#### *Colac Structure Plan 2007*

The structure plan provides a framework for the development of the built environment in Colac. A number of recommendations are provided for improving safe access to schools by walking

and cycling. Other proposals relating to traffic management, particularly relating to the control of traffic are also intended to support walking and cycling.

#### *Colac-Elliminyt Commuter Footpath Strategy 2012*

This Strategy proposes a range of infrastructure measures to provide convenient and safe access to facilities and services by walking, with a focus on commuter or transport needs rather than recreation. The Strategy is based on defining service levels for footpaths and identifying priority ratings.

#### *Township Masterplans*

Masterplans have been developed for most small towns across the Shire, providing high-level short, medium and long term development opportunities. Recommendations cover enhancements for pedestrian access and in some case proposals are provided for cycling.

#### *Kennett River, Wye River, Separation Creek Structure Plans 2008*

The Structure Plan provides a framework for the ecologically sustainable development and integrated management of the hamlets of Kennett River, Wye River and Separation Creek. The plan provides guidance on land use, built form and public space development to achieve overall economic, social and environmental objectives. Key proposals for walking and cycling include:

- Enhance pedestrian access to the foreshore.
- Introduce a 40 km/h zone through the hamlets during peak holiday times.
- Investigate options for shared pathways along the Great Ocean Road and inland.

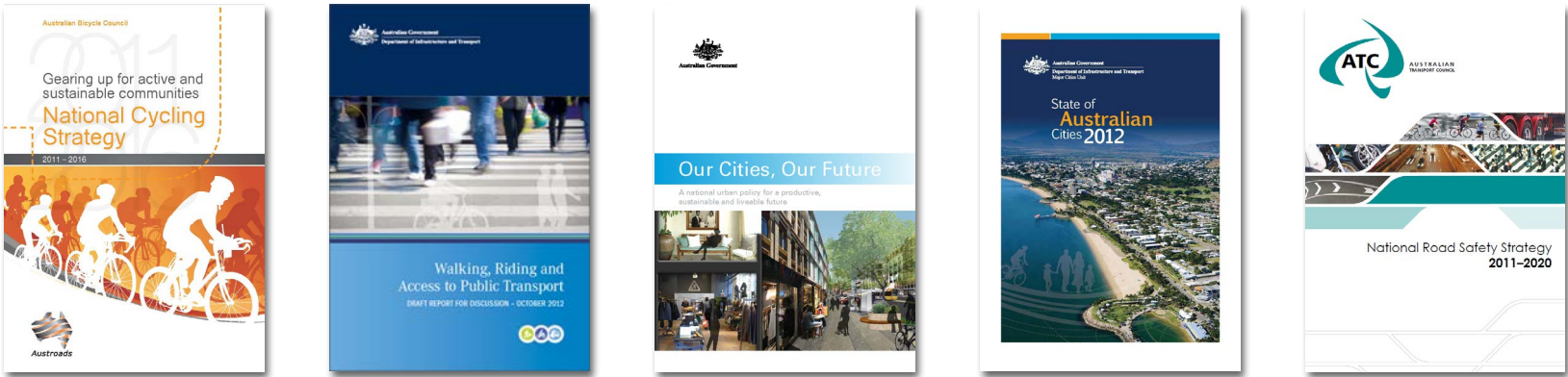
#### *Barwon South West Regional Trails Master Plan 2009*

The masterplan covers the nine local government areas of the City of Greater Geelong, the Warrnambool City Council, the Surf Coast, Colac Otway, Corangamite, Moyne, Southern Grampians and Glenelg Shire Councils, and the Borough of Queenscliffe. The masterplan provides recommendations for the development of mainly off-road recreational trails, including the Old Beechy Rail Trail and the further development of the Great Ocean Road Walk from Apollo Bay to Princetown. A number of recommendations are made to enhance the Old Beechy Rail Trail, including reducing the proportion of on-road sections in Colac and improving on-road sections between Beech Forest and Apollo Bay.

#### *Red Rock Region Community Infrastructure Plan 2013*

The Community Infrastructure Plan proposes a range of projects to enhance the connectivity between the townships within the region of Red Rock. These recommendations include provisions for walking and cycling. The plan was developed post completion of the research and analysis undertaken for the Active Transport Strategy, as such the specific recommendations could not be included. However, the plan has since been endorsed by Council and therefore all recommendations relating to walking and cycling infrastructure are supported in this strategy.

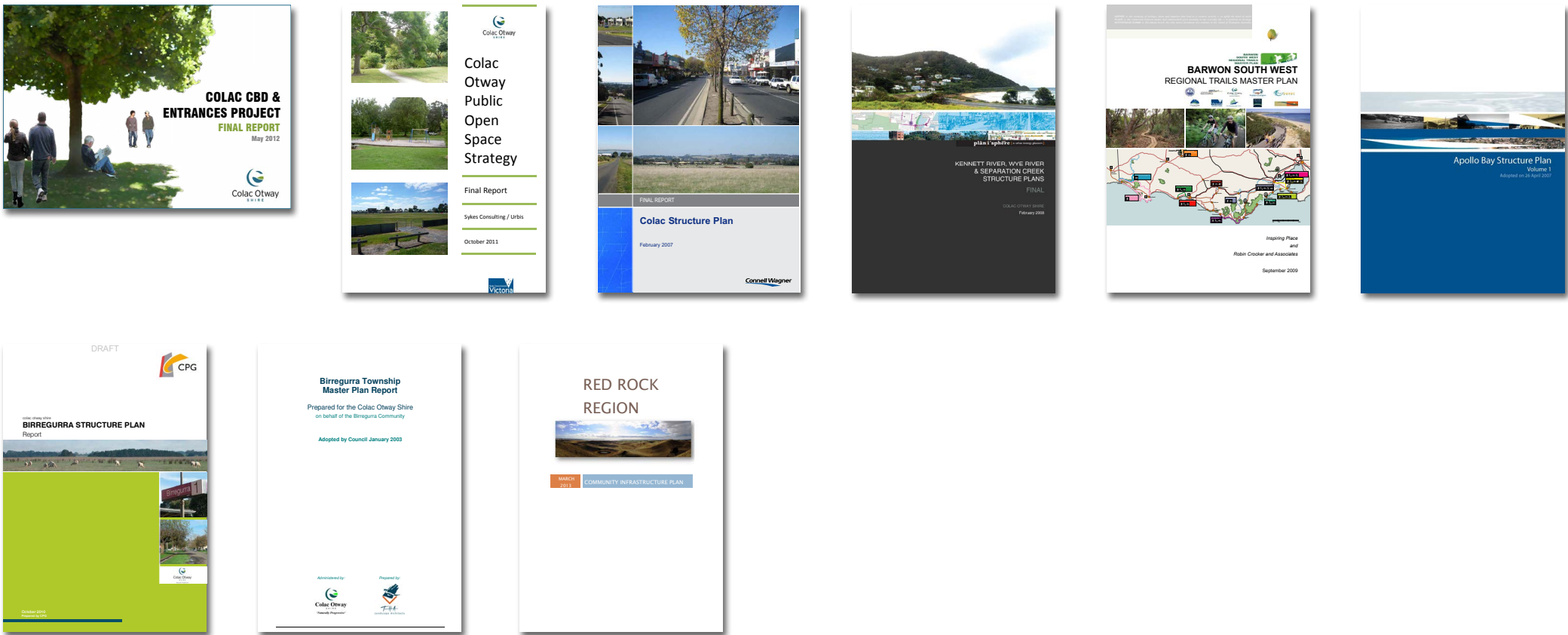
Federal policy



State policy



Local policy





## 2.6 The benefits of active transport

### A ECONOMIC

Active transport provides a myriad of societal and individual economic benefits:

- At a societal level, planning and constructing one kilometre of road costs the equivalent of 110 kilometres of bikeway (Department of Infrastructure and Transport, 2012). In addition to the associated public infrastructure savings, active transport aids the reduction of negative externalities; including decongestion, noise reduction, improved air quality and the reduction of greenhouse gas emissions.
- The net health benefit per kilometre walked is approximately 144 cents, which is roughly 70% of the total economic benefits of a walking project (Department of Infrastructure and Transport, 2012).
- At an individual level it was estimated in 2008 that owning one less car meant a household could spend an extra \$110,000 on a new home and repay a \$300,000 housing loan in 12 years instead of 25 years (Victorian Government, 2012).



### B ENVIRONMENTAL

The key environmental benefits of the active transport can be summarised as:

- Walking and cycling emit a negligible amount of greenhouse gases.
- Switching to active transport helps decrease noise and air pollution.
- Active transport uses land in a very efficient manner relative to motor vehicles, requiring less road space and parking.
- Switching to active transport helps to reduce the 'heat island' effect that is created by urban development.
- Unlike motor vehicles, active transport does not emit oil and petrol residue, which becomes a major source of water pollution once it enters the stormwater system (Cycling Promotion Fund, 2007).
- Bicycles have relatively low levels of 'embodied energy': A typical \$500 bike embodies just 8.8 gigajoules of energy, or 0.75 tonnes of CO2 equivalents, whereas a typical \$30,000 car embodies 475 gigajoules of energy, or 41 tonnes of CO2 equivalents (Cycling Promotion Fund, 2007).
- Active transport produces minimal air pollution. In Australia it is estimated that 900 to 2,000 early deaths are caused from vehicle based air pollution each year (Cycling Promotion Fund, 2007).



### C SOCIAL

The key social benefits of the active transport can be summarised as:

- The public health benefits of walking and cycling infrastructure far outweigh the associated injury costs. The health benefit from walking 1 km is estimated at 168 cents whereas the cost is just 24 cents (Queensland Department of Transport and Main Roads, 2011).
- Physical inactivity costs the Australian economy approximately \$13.8 billion per year (Department of Infrastructure and Transport, 2012). Active transport is a very effective way to increase daily physical activity.
- Active transport is highly beneficial for mental as well as physical health as it triggers endorphins.
- Active transport increases community safety by providing informal surveillance through greater numbers of people on the street.
- Active transport positively contributes to social and community capital: Residents on streets with lower traffic volumes and speeds are more likely to know their neighbours and show greater concern for their local environment (Appleyard, 1981).
- Walking and cycling play an important role in sustaining the vibrancy of the public realm which in turn affects the liveability of our towns and cities.
- Active transport is an equitable form of transport enabling non-drivers to access a reasonable distribution of public resources.



2.7 Existing walking and cycling networks

2.7.1 Introduction

The following section presents a summary of the review of existing walking and cycling infrastructure and facilities.

The existing networks are presented spatially in a consolidated format to show the level of provision and level of connectivity. Some of the current problems are presented visually and the key issues to be addressed by the Strategy are then summarised.

The level of issues is clearly greater for the main towns of Apollo Bay and Colac where more developed networks exist. Although the smaller towns and townships have less developed networks and appear to have less issues, the impact on the community is relative. For example, in some small towns with no provision of basic pedestrian facilities, the impact of providing new footpaths could be significant.

The issues identified are considered along with the outcomes of the consultation process and the broader understanding of the local context before appropriate actions are developed.

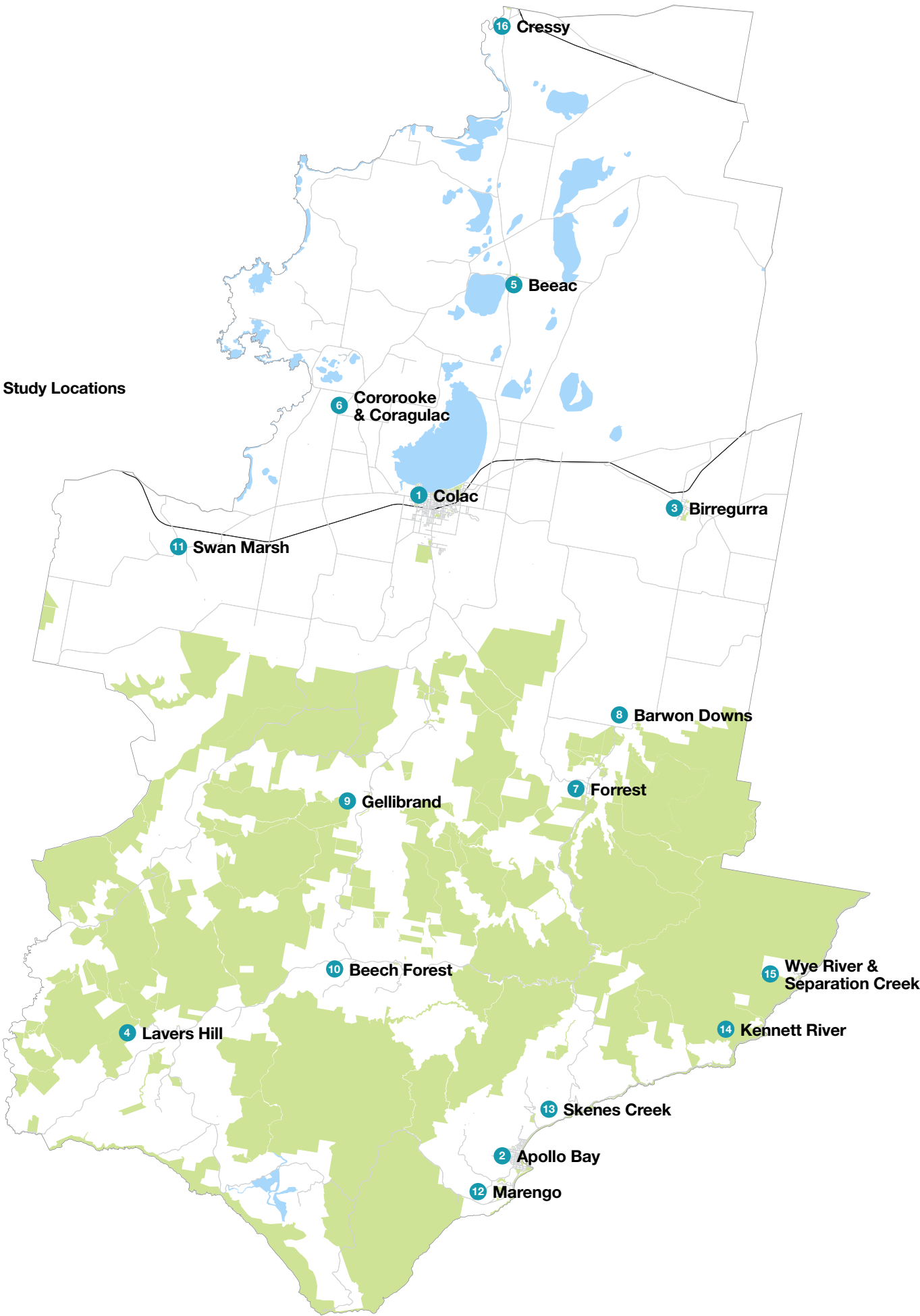
The towns reviewed for the Strategy are presented in Figure 12 shown opposite.

2.7.2 Approach

The review of existing walking and cycling networks did not take the form of a detailed audit of the condition of these facilities, rather photographic surveys were undertaken to establish the existing typologies, level of connectivity, and other barriers that might limit their use.

All of the identified issues have been considered within the context of the local community, particularly the population and number of local destinations or land-uses.

Figure 12: Colac Otway Shire Study Locations





# 1 Colac

## Walking Network

Colac has the most developed walking network in the Shire, which also serves the largest centre of population (12,118).

The network comprises a range of footpath typologies including high quality wide footpaths in the main shopping areas to narrower sealed footpaths on local streets. However, there remains a number of gaps in the network in both mature and newly developed areas. This includes streets with provision on only one side.

A common feature of the network is the lack of priority for pedestrians at intersections, particularly on roundabouts, which affects the permeability of the network and town. Similarly, there is limited provision of mid-block crossings. Many streets are in excess of 10 metres (kerb to kerb) with no safe provision for crossing, a particular concern for young children, senior citizens and people with disabilities.

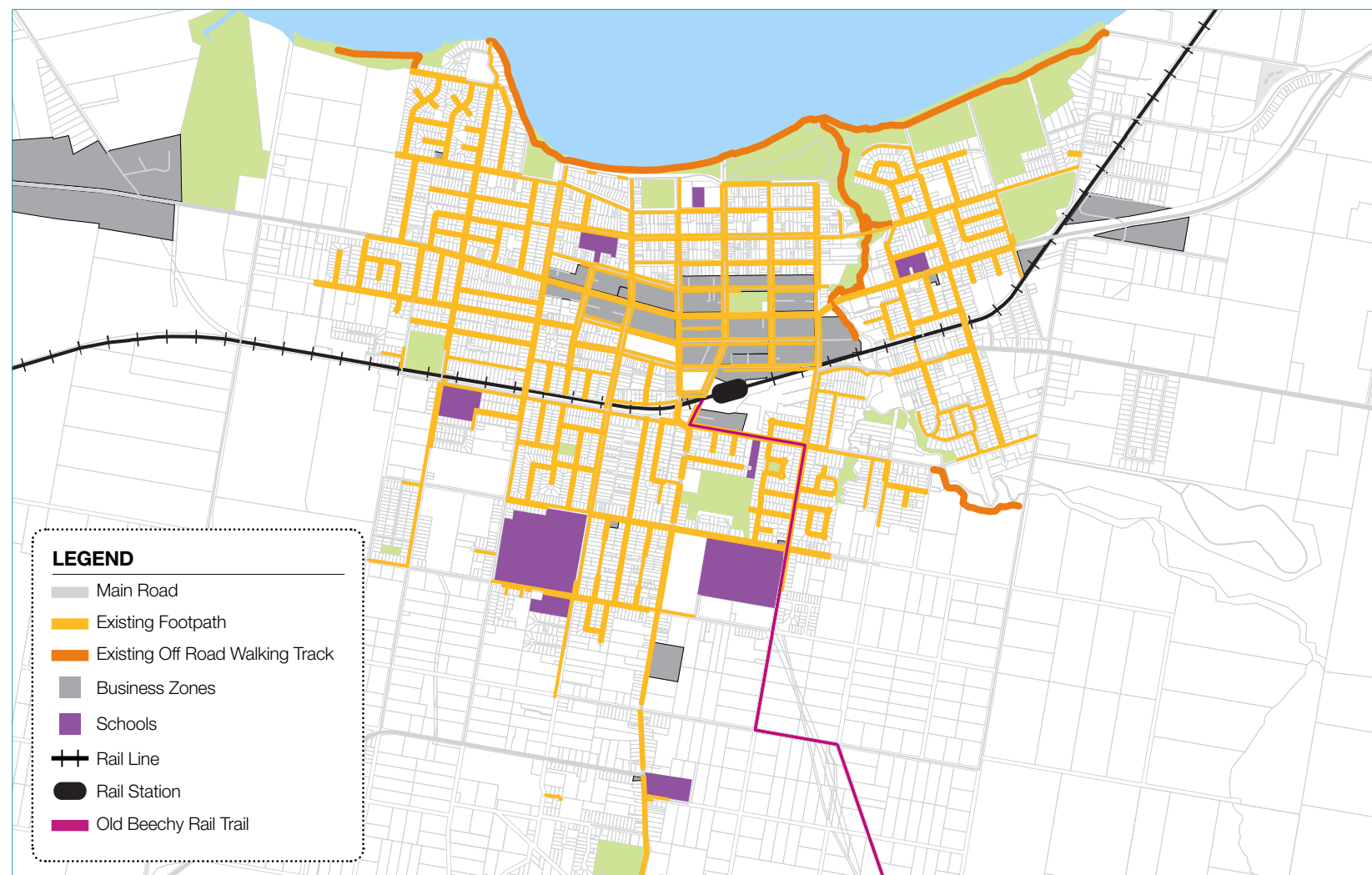
The legibility of the town, particularly for visitors, is limited by the lack of wayfinding. There are few directional or destination signs guiding the movement of people on foot or by bicycle.

Streetscapes are often homogenous, particularly local streets. The lack of diversity and landscaping reduces the overall attractiveness of the walking experience.

In general, most streets are relatively clean and well maintained.

### KEY ISSUES TO ADDRESS

- Missing links in existing footpaths.
- Missing footpaths on one side of some streets.
- Lack of pedestrian priority at intersections.
- High speed limits in high pedestrian activity areas.
- Lack of mid-block crossings.
- Lack of wayfinding.
- Homogenous streetscapes.



## Key Issues



Missing links in existing footpaths



Lack of priority for pedestrians on main street



Lack of mid-block crossings where demand exists



Intimidating environments for people



Lack of priority for pedestrians on roundabouts



Shared space that operates as a street



Streets without mid-block crossing opportunities



Streets with no footpath provision



Homogenous streetscapes



Absence of footpaths on one side of street



# 1 Colac

## Cycling Network

Colac also has the most developed cycling network in the Shire, which serves the largest centre of population (12,118).

The network comprises bicycle lanes that are for the exclusive use of cyclists; bicycle lanes that are shared with car parking; and shared footpaths. The majority of bicycle lanes are in relatively good condition with few maintenance issues.

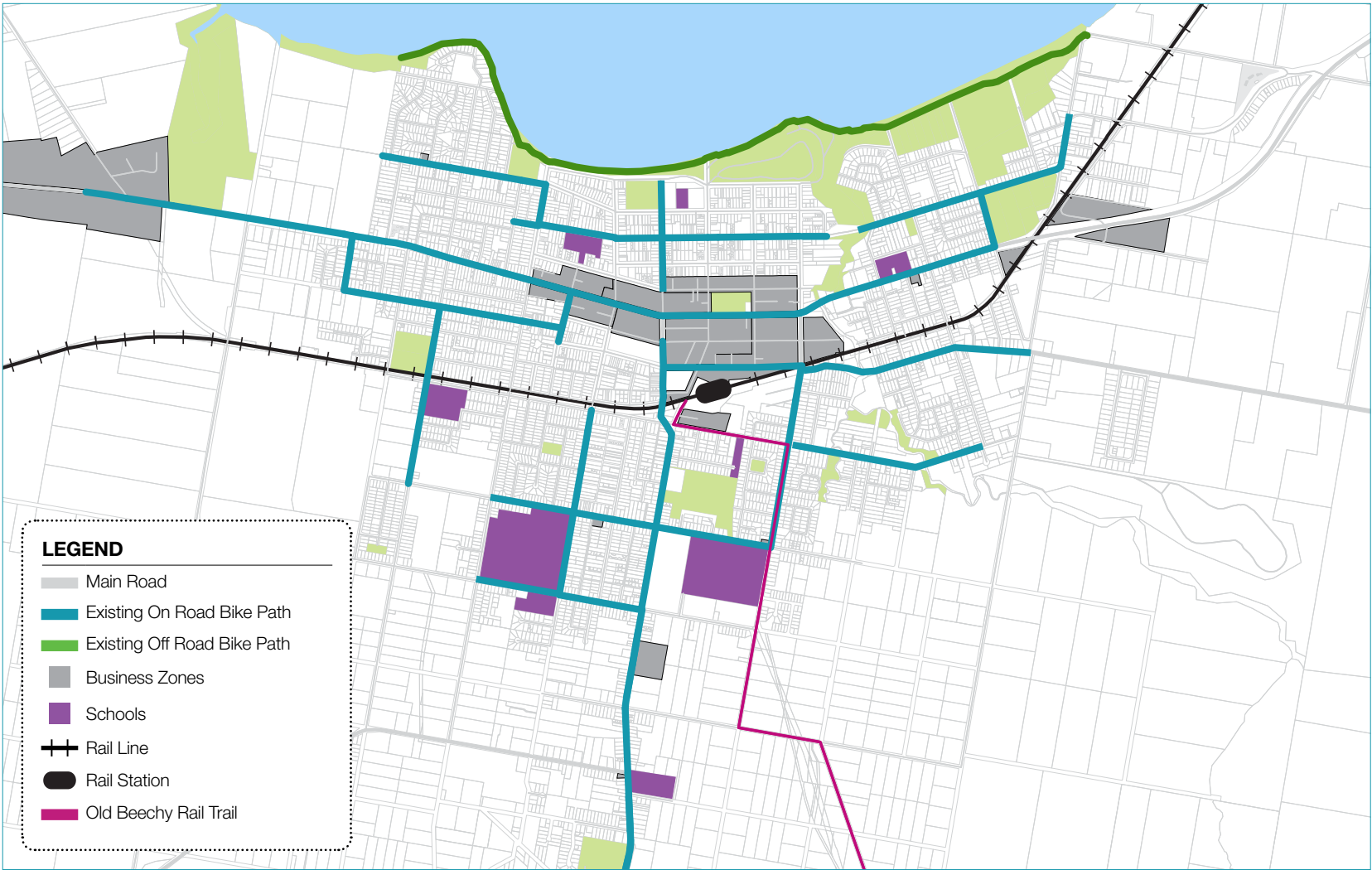
The main issue with the existing network is the lack of connectivity created by the absence of appropriate facilities at intersections and the lack of transition between bicycle lanes and intersections. Many lanes often begin and end at random locations.

There are many opportunities to improve the current network with new links and routes. Given the abundance of width of many streets, there are opportunities to provide exclusive bicycle lanes with buffers on both sides to provide protection from moving traffic and to mitigate the potential for car dooring.

The provision of bicycle parking is sporadic and there is considerable variation in quality. While some of the newer developments in the town benefit from good quality parking, most is out-dated and limited in capacity.

The lack of wayfinding is also evident. There are no directional signs for cyclists at present.

- KEY ISSUES TO ADDRESS**
- Absence of bicycle facilities at intersections.
  - Potentially unsafe transition from bicycle lanes to roundabouts.
  - Lack of appropriate transition from bicycle lanes to intersections and vice versa.
  - Missing links on existing routes.
  - Opportunities for alternative routes on lesser trafficked roads running parallel to Murray Street.
  - Limited provision of appropriate bicycle parking.
  - Illegal car parking in designated bicycle only lanes.
  - Lack of wayfinding.



## Key Issues



Termination of bicycle lanes on side streets



Illegal car parking in bicycle lanes



No transition from intersections to bicycle lanes



Bicycle lanes on Murray street?



Lack of appropriate bicycle parking



Opportunities in rail reserve



No bicycle facilities at intersections



Restricted access on off-road routes



Intimidating environments for cycling



Transition from bicycle lane to roundabouts



## 2 Apollo Bay

### Walking Network

Apollo Bay has the second most developed walking network in the Shire, serving the second largest centre of population (1,095). However, during the summer periods, this rises to an estimated 15,000 (significantly higher than the permanent population of Colac).

The network comprises a range of footpath typologies including high quality wide footpaths in the main shopping areas to narrower sealed footpaths on local streets. However, there remains many gaps in the network. Many streets have footpaths on only one side, others have no provision at all.

Similar to Colac, there is an obvious lack of priority for pedestrians at intersections and on side streets. On the main street there are limited mid-block crossings providing access to the foreshore.

Some intersections create significant barriers for the movement of pedestrians. For example, there are virtually no pedestrian facilities at the intersection of the Great Ocean Road (Collingwood Street) and Nelson Street.

Nelson Street, between the Great Ocean Road and the Harbour, currently provides a gravel path for pedestrians while motor vehicles enjoy a sealed road. During peak times significant numbers of pedestrians use this gravel path.

In general, most streets are relatively clean and well maintained.

#### KEY ISSUES TO ADDRESS

- Missing links in existing footpaths.
- Poor pedestrian connection with developing areas.
- Missing footpaths on one side of some streets.
- Poor level of provision on paths with high demand.
- Lack of pedestrian priority at intersections.
- Lack of mid-block crossings / poor connectivity with the Foreshore.
- High speed limits in high pedestrian activity areas.
- Lack of wayfinding.



### Key Issues



No formal footpaths to eastern end of town



Poor provision for pedestrians at intersections



Missing gaps in existing network



Lack of pedestrian refuges



Absence of footpath



Interruptions in network at side streets



No provision at busy intersections



Lack of mid-block crossings



Poor provision in new developments



Discontinuation of existing paths



## 2 Apollo Bay

### Cycling Network

Apollo Bay has a number of existing bicycle lanes, comprising lanes for the exclusive use of cyclists and those shared with car parking.

The overall network is quite limited and there is generally poor connectivity between residential areas and key destinations, such as schools and the main shopping areas.

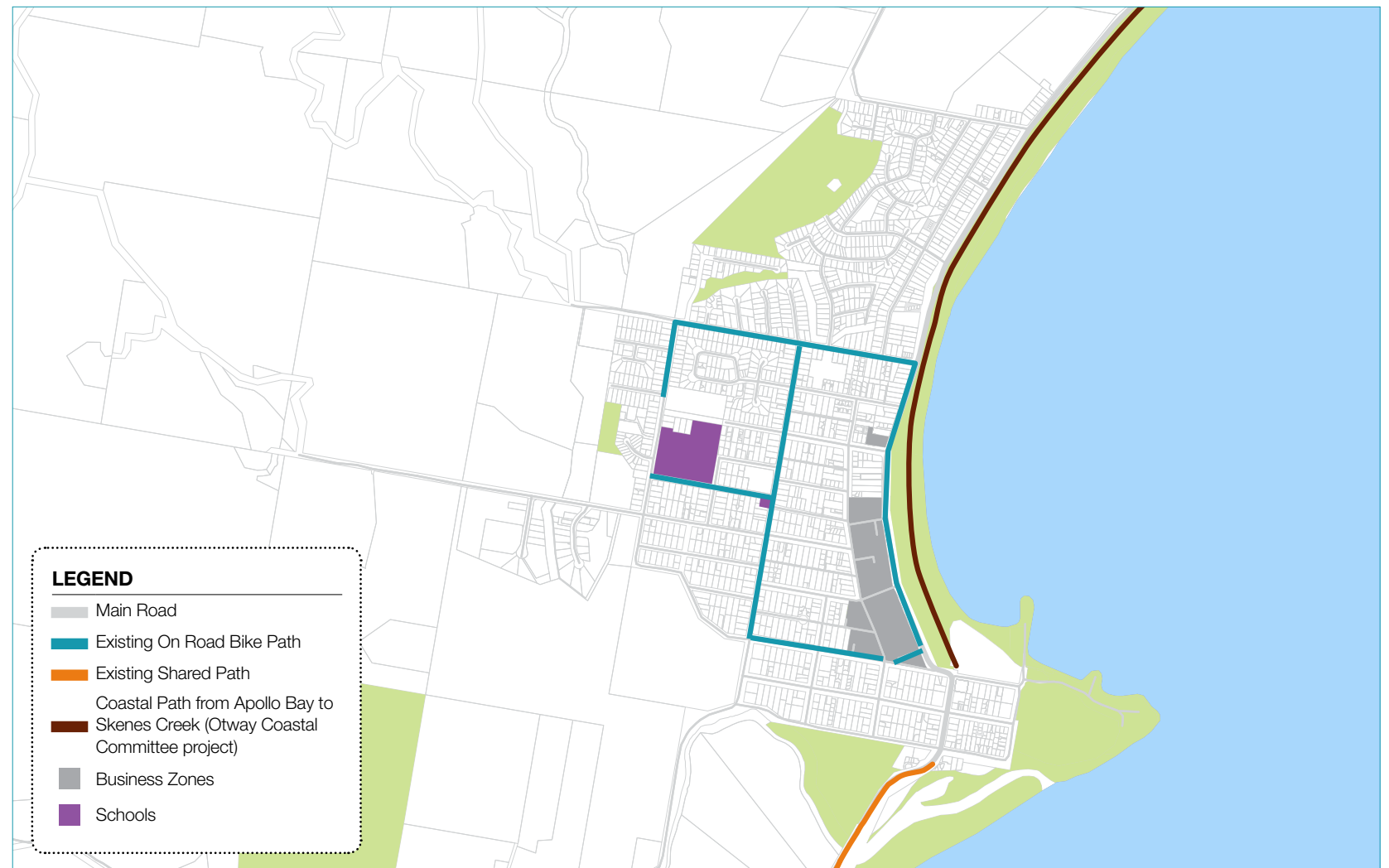
Similar issues identified for Colac also apply to Apollo Bay. For example, there is poor provision for the transition from intersection to bicycle lanes and vice versa. In a number of locations the current provision does not meet the VicRoads or Austroads standards.

Some existing bicycle lanes, such as the exclusive lane on the southern side of the Great Ocean Road on the eastern side of Apollo Bay, are in very poor condition. Line markings are badly worn away and there is no delineation on the foreshore side. Problems with this lane continue along its length into the main street area. Car parking along the shopping strip often protrudes out into the lane forcing cyclists to move into the main carriageway. The lanes also terminate unnecessarily at McLaren Place.

Generally, there is limited provision for bicycle parking and there are no wayfinding signs for cyclists.

#### KEY ISSUES TO ADDRESS

- Limited connectivity to key destinations.
- Absence of bicycle facilities at intersections.
- Lack of appropriate transition from bicycle lanes to intersections and vice versa.
- Missing links on existing routes.
- Poor condition of existing infrastructure.
- Limited provision of appropriate bicycle parking.
- Illegal car parking in designated bicycle only lanes.
- Lack of wayfinding.



### Key Issues



No provision on side streets



Random beginning of bicycle lane



Poorly maintained bicycle lane



Poorly maintained road edge on bicycle lane



Random termination of bicycle lanes



Illegal parking in bicycle lanes



Inappropriate bus parking



Random termination of bicycle lane



Random starting point for bicycle lanes



Limited safe crossing facilities for cyclists



### 3 Birregurra

#### Walking & Cycling Network

There is a very limited walking network in Birregurra with no designated provisions for cycling. Many streets lack any footpath provision and others have limited facilities.

The main street of the town is abundantly wide and has a 60 km/h speed limit, with no provision for safe crossings.

#### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths.
- Opportunity for shared footpath on Roadknight Road
- Lack of mid-block crossings.



#### Key Issues



Width of main street



Lack of pedestrian crossings



Lack of connection



Absence of facilities to train station



Lack of pedestrian refuges

### 4 Lavers Hill

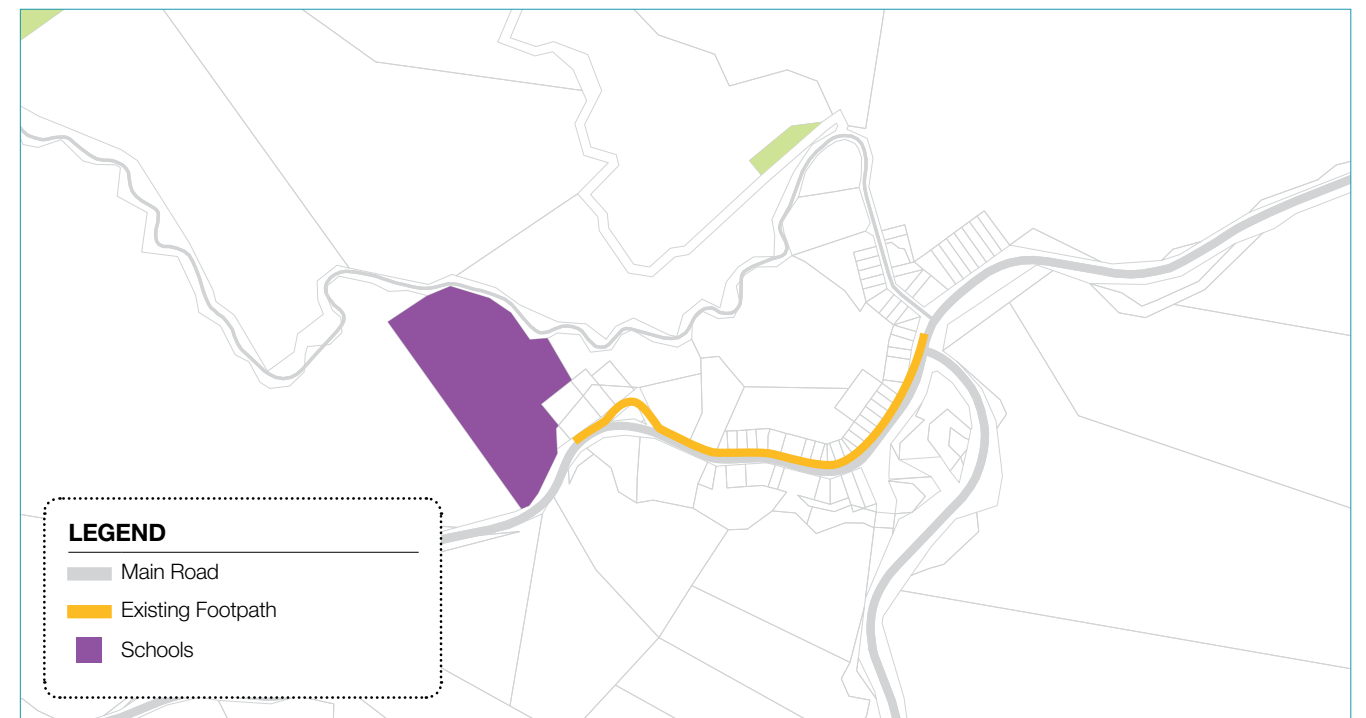
#### Walking & Cycling Network

Lavers Hill is a relatively busy stop over for tourist traffic on the Great Ocean Road. However, it is a very inhospitable environment for pedestrians and cyclists. The combination of a 60 km/h speed limit and the poor provision of facilities for pedestrians and cyclists

make active transport unsafe and unattractive.

#### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths, crossings and bicycle lanes.
- High speed limit.
- Opportunity for streetscape approach.



#### Key Issues



60 km/h speed limit



Lack of facilities at intersections



No crossing facilities



Unfriendly pedestrian environment

## 5 Beeac



### KEY ISSUES TO ADDRESS

- Lack of pedestrian footpaths.
- High speed limit.
- Lack of pedestrian crossings.



Pedestrian unfriendly environment

## 6 Cororooke & Coragulac



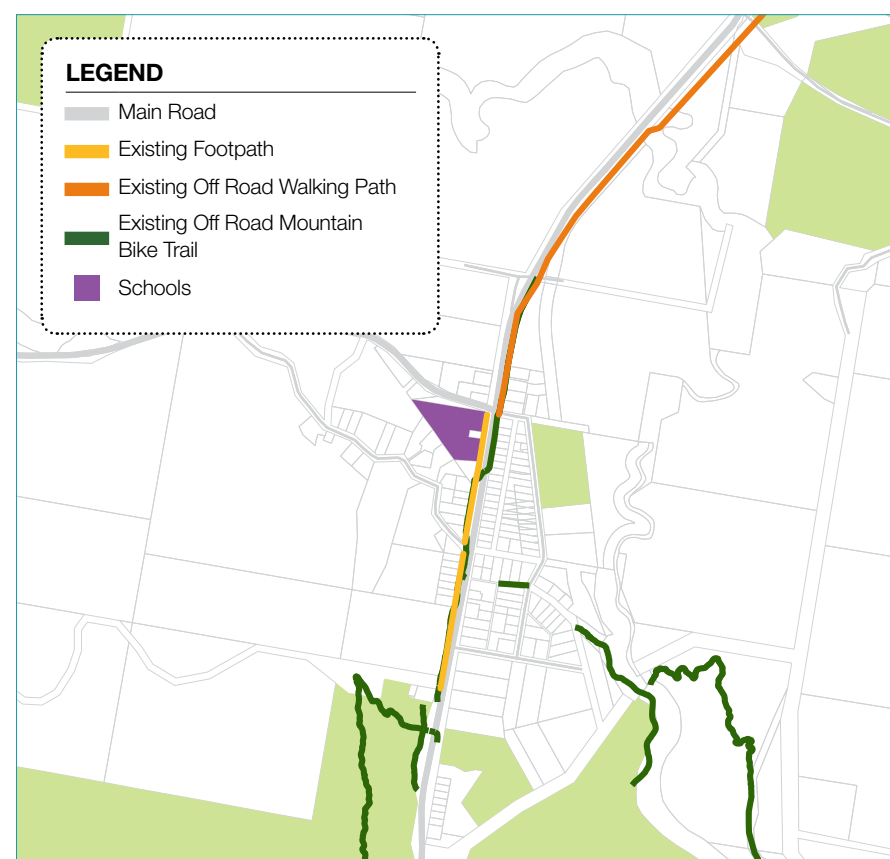
### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths.
- Connection with Coragulac and Colac.
- High speed limit.



Lack of footpaths

## 7 Forrest



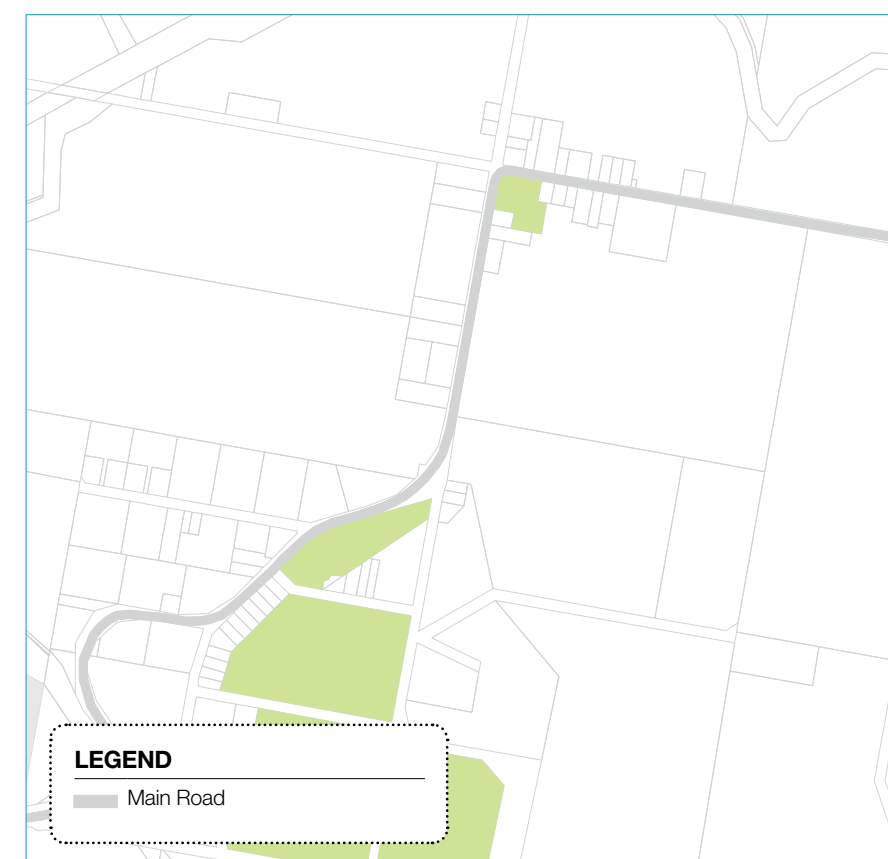
### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths and bicycle lanes.
- Opportunity to connect Tiger Rail Trail with Mountain Bike Trails.
- Lack of pedestrian crossings.
- High speed limit.



Lack of pedestrian facilities

## 8 Barwon Downs



### KEY ISSUES TO ADDRESS

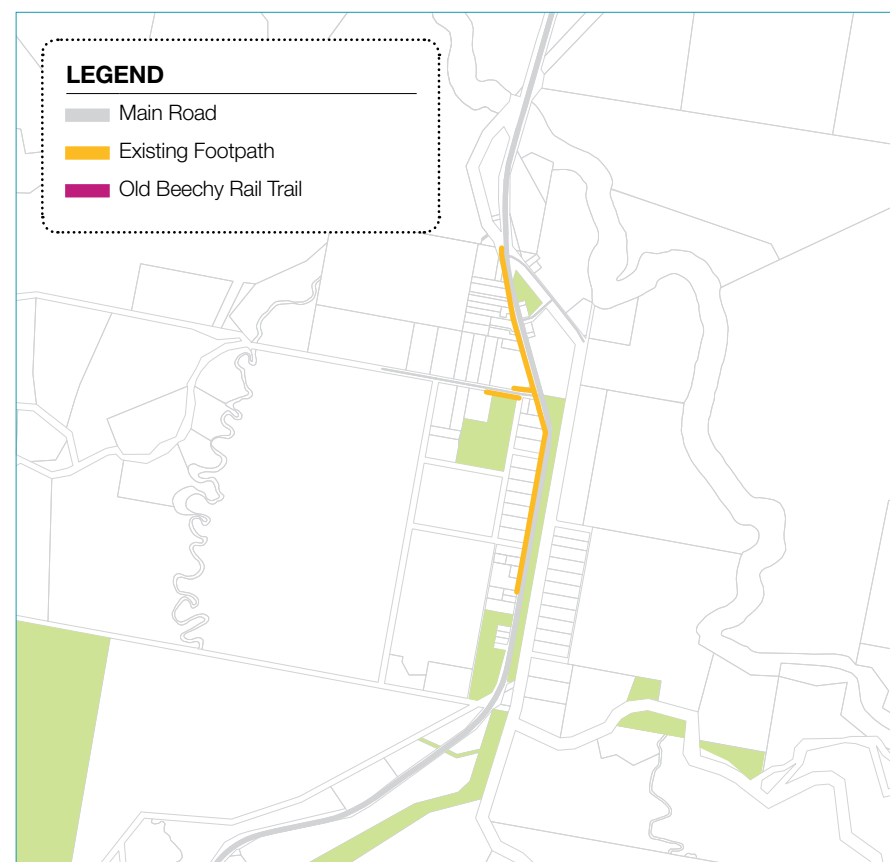
- Missing pedestrian footpaths and bicycle lanes.
- High speed limit.



Lack of pedestrian facilities



## 9 Gellibrand

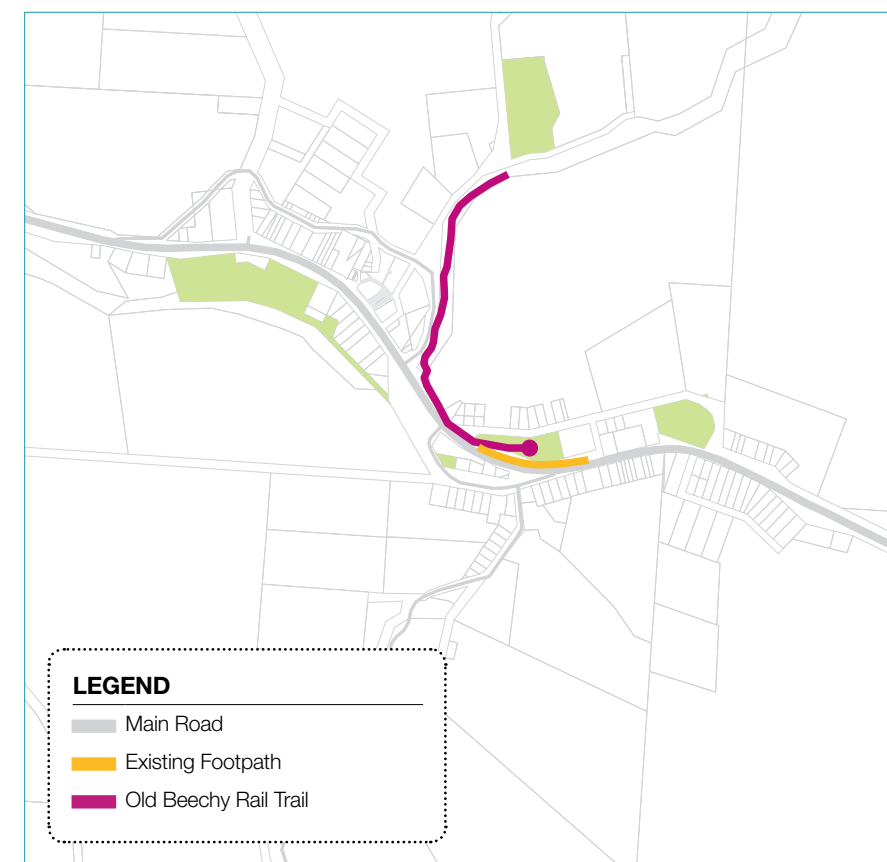


### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths.
- High speed limit.
- Lack of pedestrian crossing facilities.
- Poor connections for Old Beechy Rail Trail.

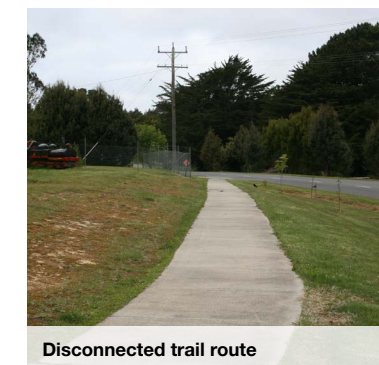


## 10 Beech Forest

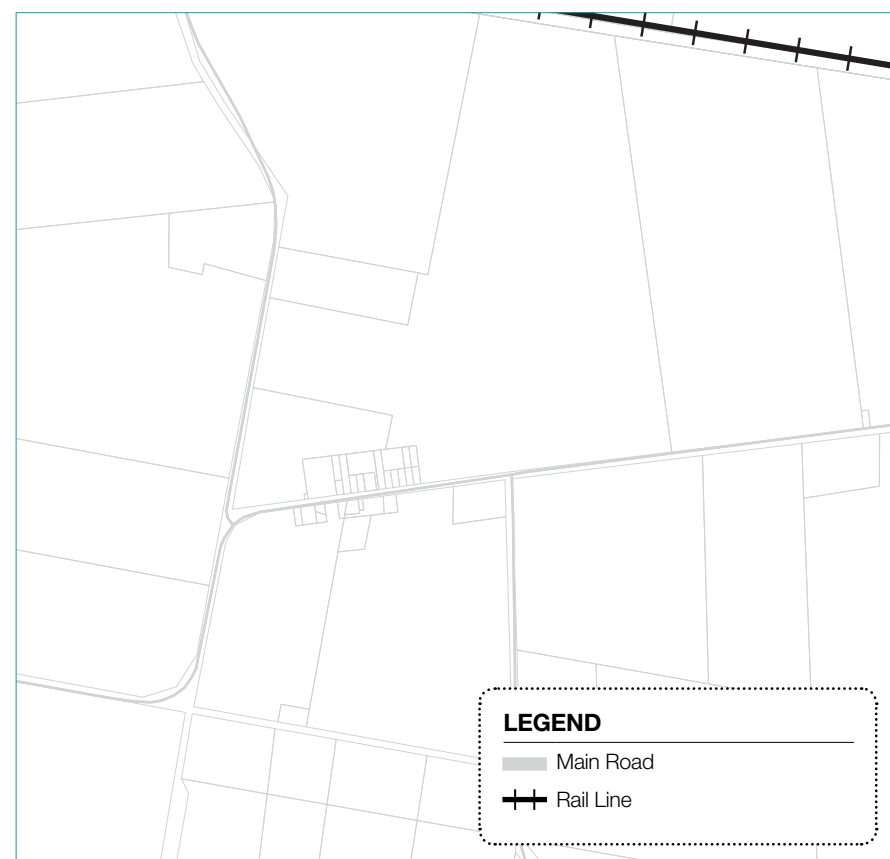


### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths.
- Missing links in the Old Beechy and bicycle lanes.
- High speed limit.



## 11 Swan Marsh



### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths.
- High speed limit.



## 12 Marengo



### KEY ISSUES TO ADDRESS

- Opportunity to upgrade existing shared path connection to Apollo Bay.
- High speed limit.



## 13 Skenes Creek



### KEY ISSUES TO ADDRESS

- Limited pedestrian footpaths and bicycle lanes.
- High speed limit.
- High traffic volumes on Great Ocean Road.
- Poor pedestrian connectivity to foreshore.

## 14 Kennett River



### KEY ISSUES TO ADDRESS

- Limited pedestrian footpaths and bicycle lanes.
- High speed limit.
- High traffic volumes on Great Ocean Road.
- Poor pedestrian connectivity to foreshore.

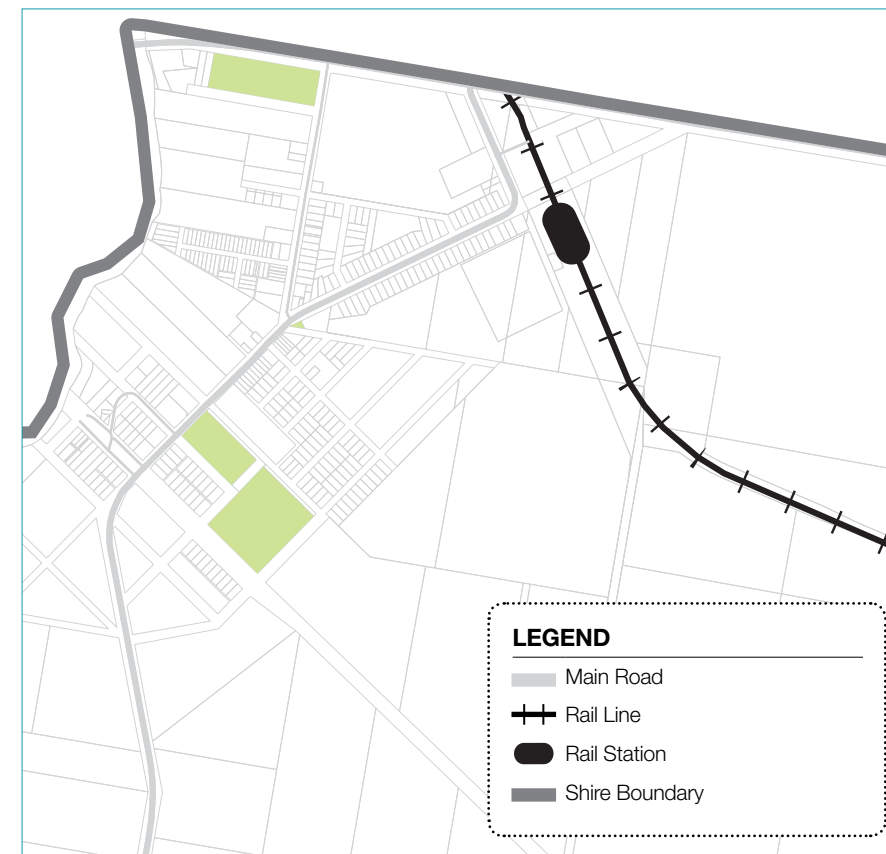
## 15 Wye River & Separation Creek



### KEY ISSUES TO ADDRESS

- Limited pedestrian footpaths and bicycle lanes.
- High speed limit.
- High traffic volumes on Great Ocean Road.
- Poor pedestrian connectivity to foreshore.

## 16 Cressy



### KEY ISSUES TO ADDRESS

- Missing pedestrian footpaths and bicycle lanes.
- High speed limit.



## 2.8 Existing infrastructure projects

A number of active transport related infrastructure projects are already underway or are specified in existing Colac Otway Shire Council plans and strategies (as discussed in Section 2.5). These projects have been reviewed and are incorporated (where appropriate) in the Strategy, including:

- Proposed new footpaths and upgrades to existing facilities have been incorporated from masterplans developed for Beeac, Beech Forest, Birregurra, Cressy, Gellibrand, Forrest, Lavers Hill and Swan Marsh.
- Proposed new footpaths and bicycle paths and upgrades to existing facilities have been incorporated from various plans developed for Colac including the Colac CBD & Entrances Project 2012, the Colac Otway Recreation Strategy 2006-2010, the Colac Otway Public Open Space Final Report 2011, the Colac Structure Plan 2007 and the Colac Commuter Footpath Strategy 2012.
- Proposed new footpaths and bicycle paths and upgrades to existing facilities have been incorporated from various plans developed for Apollo Bay including the Apollo Bay Strategic Footpath Network Plan and the Apollo Bay Urban Boundary and Settlement Strategy.
- Proposed new footpaths and upgrades to existing facilities have been incorporated from the Kennett River, Wye River, Separation Creek Structure Plans 2008.

The footpath strategies for Colac (together with the Colac CBD & Entrances Project) and Apollo Bay have provided the foundation for actions to address gaps in existing walking facilities.

Furthermore, it is acknowledged that work is ongoing on the completion of the Old Beechy Rail Trail. As such, no additional proposals have been included in this Strategy relating to this work. Uncompleted sections of the trail are shown as proposed in the actions.

## 2.9 Behavioural and promotional related programs

The following behavioural and promotional activities have been delivered in the Shire over the last 5 years.

**Table 1: Past and present behavioural and promotional activities**

ACTIVITY	TARGET GROUPS	DESCRIPTION	LEAD AGENCY	TYPE
<b>Walking School Bus</b>	Primary school children	The Shire was successful in gaining funding from VicHealth to introduce, coordinate and sustain Walking School Buses for Primary Schools in the Shire. In 2004 two Colac Primary Schools commenced a Walking School Bus for their School. The Walking School Buses did not recommence in 2005.	VicHealth with the Colac Otway Shire Council	Behavioural Program
<b>Go for Your Life</b>	Children aged 4-12 years olds	The 'Go for your life' Community Education Program was a Victorian Government initiative that travels throughout Victoria to schools, community events and other settings, promoting the 'Go for your life' messages of physical activity and healthy eating. 'Be Active Eat Well' (BAEW) was a 3-year (2003-2006) community-wide childhood obesity prevention demonstration program in Colac, run through 'Go for your life', which successfully reduced unhealthy weight gain in children aged 4-12 years. Active transport was one of the areas targeted as an intervention to reduce obesity.	VicHealth	Behavioural Program
<b>The Hunt for the Golden Gumboot</b>	8 - 80 year olds	An event designed to connect our community to parks and open spaces as a way of enhancing physical and mental health. Encourage individuals, and identified communities, to be physically active by providing engaging opportunities in parks. Market opportunities for increased Old Beechy Rail Trail use with flow on effects including health and wellbeing, social and regional economic benefits (recommendation from Old Beechy Rail Trail Marketing Plan). Get the family together, take a friend or the dog, get out and get active whilst discovering the Old Beechy Rail Trail. Participants need to keep an eye out for one of forty gumboots painted gold that will be hidden along a section of the Trail.	Colac Otway Shire Council	Behavioural Program
<b>Transport Connections</b>	People with limited access to transport	<p>The aim of the program is "To respond to the needs of people with limited access to transport and/or education, leisure, health, employment, fresh food and social opportunities and to demonstrate a more innovative approach to developing regional solutions."</p> <p>Key areas of activity will include:</p> <ul style="list-style-type: none"><li>• Active Transport - Promoting environmental sustainability; supporting forms of self-powered transport such as walking, cycling and skateboarding.</li><li>• Community Information and Education - Exploring options for reducing car usage, promoting opportunities to use different forms of transport and encouraging the community to access these options.</li><li>• Community Transport - Using accessible vehicles to meet local transport needs not catered for by existing public transport.</li><li>• Outreach Models - Utilising social enterprise models, supporting agencies and organisations to bring their goods and services to people.</li><li>• Private Transport - Supporting more effective use of private transport.</li><li>• Virtual Access - Using information technology to support or improve access to resources and services that may not be easily accessible, to improve social connectivity for isolated residents.</li></ul>	Victorian Department of Planning and Community Development	Behavioural Program
<b>Bike Ed Program</b>	Children aged 9-13 years	Bike Ed programs are funded through VicRoads and focus on educating children aged 9-13 years, about the skills and knowledge required to ride a bicycle safely and independently. The program comprises a mix of practical activities conducted off-road and on-road combined with classroom-based activities. The five modules include: getting started; basic bike skills; building skills for riding in traffic; riding on paths and riding on-road.	Roadsafe Otway Roadsafe Colac	Behavioural Program
<b>Active Aging supported by the Active Service Model (OPASS)</b>	Older persons and people with support needs	The key principles of this activity are participation (lifelong learning, paid and unpaid work), health (achieving and maintaining good physical and mental health in later life), and safety (ensuring the "protection, safety and dignity of older people by addressing the social, financial and physical security rights and needs of people as they age").	VicHealth	Behavioural Program
<b>National Ride 2 School Day</b>	Primary school children	The Ride 2 School Program works with families, communities, policy-makers and partner organisations to encourage students to ride, walk, skate or scoot to school. As of January 2013, 10 local primary schools are involved in the program.	Victorian Department of Transport (through Bicycle Network Victoria)	Behavioural Program
<b>National Ride 2 Work Day</b>	Workplaces	The Ride 2 Work Program is a nationally run program that actively encourages people thinking of commuting by bicycle to give it a try for one day. Existing riders can share their knowledge and experience with peers, as well as support and encourage those starting out.		Behavioural Program



2.10 Walking and cycling safety

2.10.1 Introduction

The following chapter presents a summary of the crashes involving pedestrians and cyclists in the Shire. The crash data has been obtained from VicRoads' publicly-accessible crash database, CrashStats. The database has been searched for all locations in the Shire. The search period was the 10-year period July 2001 to June 2011, which is the latest complete 10-year period available.

CrashStats contains information on casualty crashes that are reported to Victoria Police. A casualty crash is defined as a crash in which somebody is injured and needs treatment or hospitalisation. Crashes that result in property damage only, or those that are not reported to or by the police, are not included in the CrashStats database.

Pedestrian and cyclist crashes are presented spatially in Figures 13, 14 and 15. Some crashes were recorded outside of Apollo Bay and Colac but there were no clusters of number or type.

According to the data from CrashStats, no cyclist crashes are recorded for Apollo Bay.

2.10.2 Summary findings

The data examined shows there are no intersections or road links with multiple fatalities or serious injuries to children or the elderly. There were however multiple injuries or fatalities at intersections and road links for pedestrians and cyclists of all ages. There is one intersection and two road links where multiple collisions involving a pedestrian have occurred:

- Two collisions at the intersection of the Princes Highway West and Queen Street, Colac.
- Three collisions at Princes Highway West between Corangamite Street and Gellibrand Street, Colac.
- Two collisions at Princes Highway between Hesse Street and Queen Street, Colac.
- Two collisions at the intersection of Hart Street and Miller Street, Colac.
- Two collisions at the intersection of Bromfield Street and Gellibrand Street, Colac.
- Two collisions at the intersection of Princes Highway West and Gellibrand Street, Colac.

In Colac, Gellibrand Street presents some concern for cyclists and the intersection of Murray Street and Queens Street suggests there are some safety issues for pedestrians.

While there are no clusters of crashes in Apollo Bay, the intersection of the main street and Hardy Street and main street and Nelson Street appear to present some safety concerns for pedestrians.

Figure 13: Pedestrian Crashes in Colac

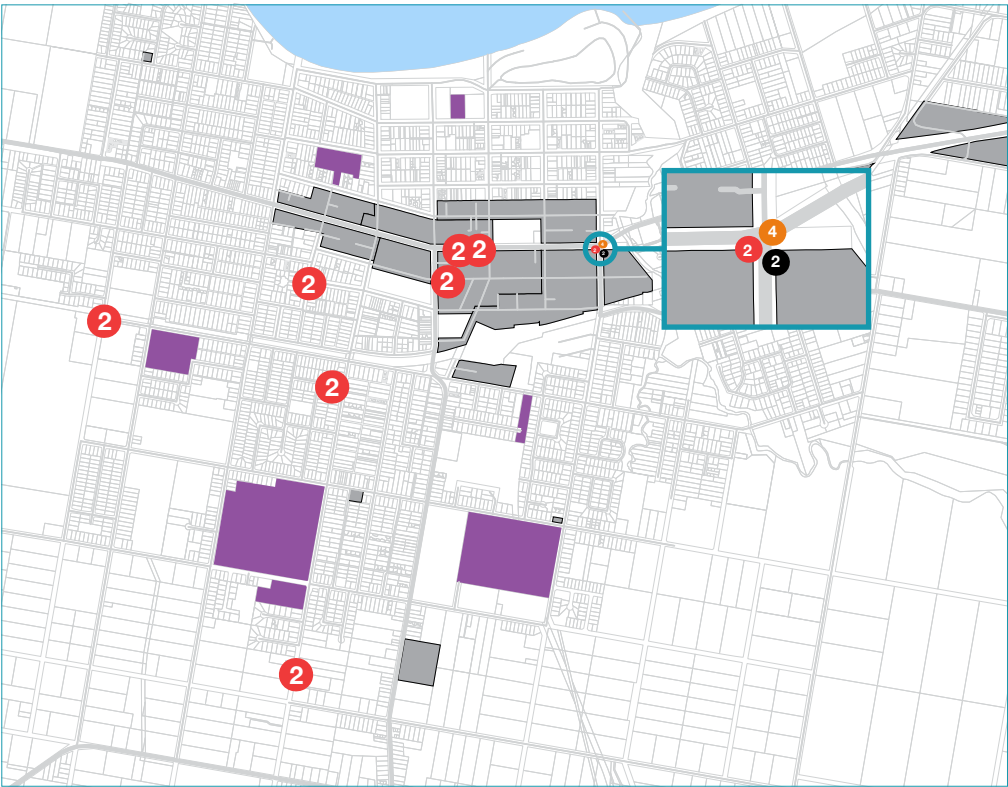


Figure 14: Cyclist Crashes in Colac

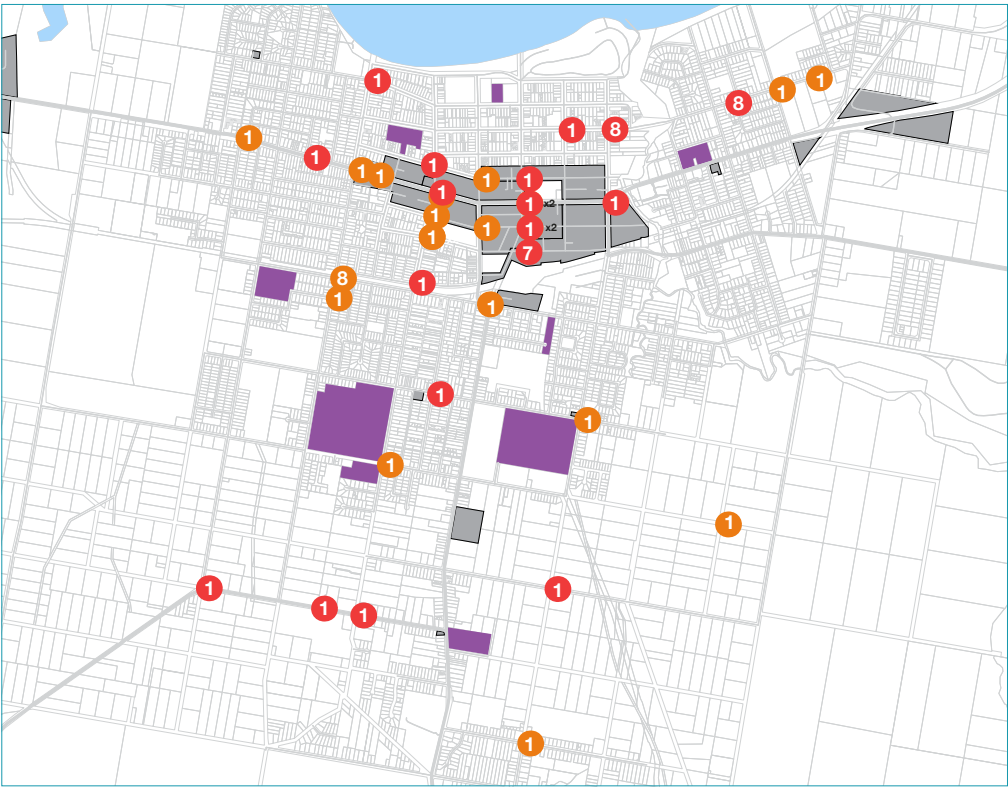
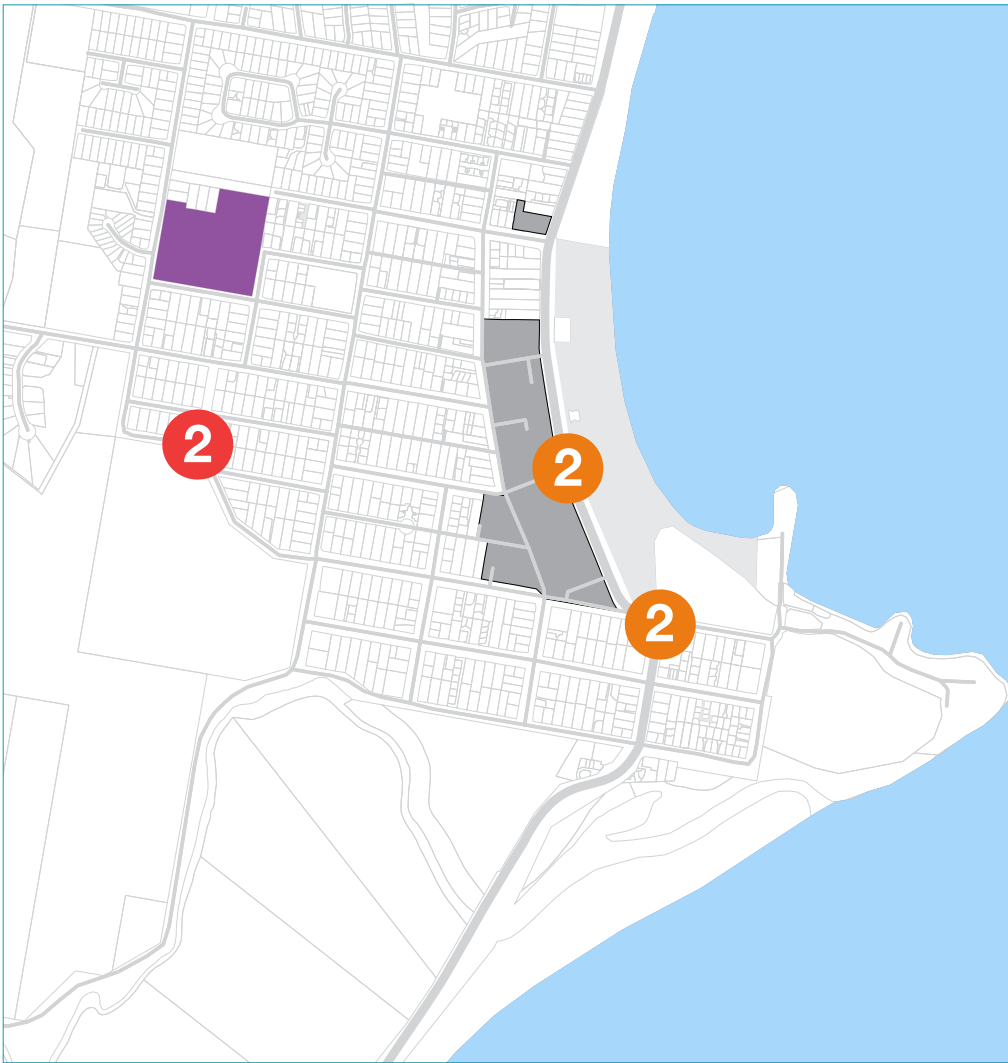


Figure 15: Pedestrian Crashes in Apollo Bay



**LEGEND**

Crash Severity	Crash Type
● Fatal	1 Collision with vehicle
● Serious	2 Struck pedestrian
● Other	3 Struck animal
	4 Collision with a fixed object
	5 Collision with some other object
	6 Vehicle overturned (no collision)
	7 Fall from or in moving vehicle
	8 No collision and no object struck
	9 Other accident

2.10.3 Severity of Crashes

Crash history was obtained from VicRoads Crash Stats database for the 10 years July 2001 to June 2011. Data from the site is displayed in Table 2.

Table 2: Severity of crashes in the Colac Otway Municipality

	FATAL	SERIOUS INJURY	OTHER INJURY	TOTAL
All Crashes	37	402	503	942
Pedestrians	2	15	17	34
4-16	0	1	2	3
60+	0	4	3	7
Cyclists	0	21	24	45
4-16	0	2	6	8

Overall there were 942 casualty crashes recorded during the 10 year period, with 37 fatal crashes (4 percent of the total). There were 402 serious injury crashes (43%).

There were 34 pedestrian crashes (3.6%) and 45 cyclist crashes (4.8%). There were two pedestrian fatalities, but no cyclist fatalities.

Pedestrian crashes

Two pedestrian crashes resulted in fatalities (6% of all pedestrian crashes) whilst the remainder are evenly distributed between serious and non-serious injury crashes:

- Pedestrian fatality at the intersection of Princes Highway West and Colac-Forrest Road, Colac: pedestrian struck while crossing from the near side of the road.
- Pedestrian fatality on the Princes Highway between Aireys Reserve Road and McDonnell’s Road, near Birregurra: pedestrian struck while playing, working, lying or standing on the road.
- Of the pedestrian crashes involving 4-16 year olds there was only one serious injury - serious injury to a 6 year old pedestrian on McKenzie Street, Colac, between Richmond Street and Hart Street; pedestrian struck while crossing from the far side of the road.

Pedestrian crashes involving people over 60 years included four serious injuries and three other injuries:

- Serious injury to a 60 year old on the Colac-Lavers Hill Road between Gellibrand-Carlisle Road and the entrance to Old Beach Forest Road at Gellibrand East Road, near Gellibrand: pedestrian struck while playing, working, lying or standing on the road.
- Serious injury to a 60 year old on Forest Street between Slater St and Aireys Street, Colac.
- Serious injury to a 60+ year old on the Colac-Ballarat Road between Lang Street and Wallace Street, Beeac.
- Serious injury to a 60 year old on Bromfield Street between Colac-Lavers Hill Road and Railway Street, Colac.

Cyclist crashes

The 45 cyclist crashes are almost evenly distributed between serious and other injuries. Cyclist crashes involving 4-16 year olds have resulted in two serious injuries and six non-serious injuries:

- Serious injury to a 15 year old cyclist at the intersection of Aireys Street and Queen Street, Colac: cyclist collision with cross traffic.
- Serious injury to a 15 year old cyclist at the intersection of Armstrong Street and Moore Street, Colac: the cyclist was struck while turning right.

2.10.4 Type of crashes

The most common crash type for pedestrian crashes is pedestrians struck while crossing from the near side of the road (32%), followed by pedestrians struck while crossing from the far side of the road and struck while playing, working, lying or standing on the road (both 15%).

The most common crash type for cyclist crashes is cross traffic at intersections involving cyclists (33%), followed by cyclists struck by a right turning vehicle (11%), cyclists striking a left turning vehicle (9%) and rear end crashes involving cyclists (7%).

2.11 Stakeholder engagement

2.11.1 Introduction

The following section presents the outcomes of a consultation process undertaken among key external stakeholders.

2.11.2 The consultation process

A THE WIDER COMMUNITY

WHO

All residents of the Shire.

HOW

Web-based and Hardcopy Active Transport Survey on travel patterns and behaviour and the barriers to walking and cycling.

Community ‘Talk Shops’ held as part of local events to engage directly in conversation about the key barriers and opportunities for active transport in the Shire.

WHEN

The survey was administered during December 2012.

Talk Shops took place in Colac (5th Dec 2012), Birregurra (6th Dec 2012) and Apollo Bay (26th January 2013).

B COMMUNITY GROUPS

WHO

Foreshore Committee of Management; Barwon Downs Community Group; Beeac Progress Association; Beech Forrest & District Progress Association; Birregurra Community Group; Carlisle River Community Group; Cressy and District Action Group; Forrest & District Community Group; Gellibrand Kawarren Progress Association; Harrington Memorial Park Committee; Johanna Public Purposes Reserve Committee Inc.; Kennett River Association Inc.; Lavers Hill Progress Association; Red Rock Progress Association; Skenes Creek Advancement Association; Swan Marsh Hall Committee; Wye River & Separation Creek Progress Association; Sport and Recreation Clubs and Communities in the Shire; Disability Network- CODA; Otway Business Inc.; Apollo Bay Chamber of Commerce; Otway Ranges Walking Track Association Inc.; Colac Cycling Club; and Colac Veteran Cycling Club Inc.

HOW

Community groups were contacted directly through the Colac Otway Shire Council and invited to make submissions on the key issues and barriers for active transport and the main priorities for the Strategy.

WHEN

November 2012

C GOVERNMENT AGENCIES

WHO

VicRoads; Public Transport Victoria; VicTrack; the G21 Alliance; Department of Planning and Community Development; Department of Transport; Road Safe Colac and Road Safe Otway.

HOW

Government agencies were contacted through email and invited to make submissions on the key issues and barriers for active transport and the main priorities for the Strategy.

WHEN

November 2012

D ADVOCACY GROUPS

WHO

Victoria Walks; Bicycle Network Victoria.

HOW

Advocacy groups were contacted through email and invited to make submissions on the key issues and barriers for active transport and the main priorities for the Strategy.

WHEN

November 2012



### 2.11.3 The Wider Community

The following information summarises the key findings from the consultation process with the wider community, from both the active transport survey and talk shops.

#### CYCLING



##### Profile of existing cyclists

- 1 The majority of cyclists ride everyday.
- 2 Most cyclists have been riding for more than 10 years.
- 3 The vast majority ride for recreational purposes.
- 4 Most cyclists ride at the weekend.
- 5 The majority of cyclists ride 2-5 km in a typical journey but a significant number ride more than 20 km.
- 6 Cycling is a significant social activity carried out with friends and family.

##### Top 3 Barriers

- 1 Sharing the road with motorised traffic.
- 2 The lack of safe, connected and attractive bicycle lanes.
- 3 The lack of appropriate bicycle parking facilities.

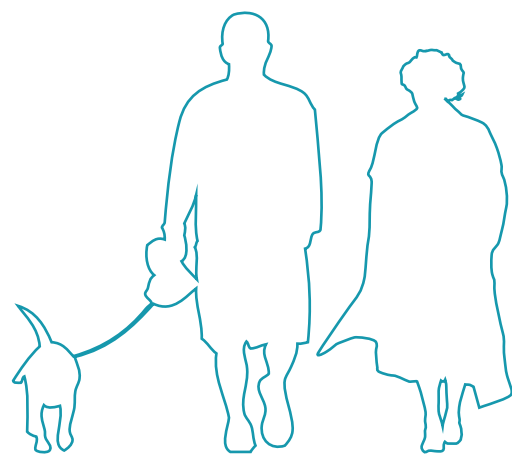
##### Top 3 Motivators

- 1 Health and well-being - general fitness.
- 2 Fun and enjoyment.
- 3 Relaxation and stress release.

##### Enabler for greater cycling participation

- 1 More respect and greater levels of care and attention from motorists for cyclists.
- 2 The provision of safe, connected and attractive bicycle lanes that provide access to key destinations.
- 3 Greater provision of appropriate bicycle parking facilities.
- 4 Safe environments for children to learn to ride a bicycle.
- 5 Information on choosing a bicycle and how to maintain it.
- 6 Better bicycle parking facilities for schools.
- 7 Safer environments around schools.

#### WALKING



##### Profile of existing walkers

- 1 The majority walk most days of the week.
- 2 Most walkers have been participating for more than 10 years.
- 3 The vast majority walk for recreational purposes but a significant proportion walk to the local shops.
- 4 The vast majority walk at the weekend.
- 5 The majority walk 1-5 km in a typical journey.
- 6 Walking is a significant social activity carried out with friends and family.

##### Top 3 Barriers

- 1 The lack of footpaths.
- 2 The poor connectivity of footpaths to key destinations.
- 3 Perception that it is unsafe to walk at night.

##### Top 3 Motivators

- 1 Health and well-being - general fitness.
- 2 Fun and enjoyment.
- 3 Relaxation and stress release.

##### Enabler for greater walking participation

- 1 More and higher quality footpaths, connected to key destinations.
- 2 Better provision of safe crossing points, especially on heavily trafficked roads.
- 3 More street lighting, especially where footpaths are of a low quality.
- 4 Lower speed limits, especially in shopping strips, near schools and parks and in residential areas.
- 5 Designated recreational walking routes.

2.11.4 Other Stakeholders

**B Community Groups**

*Wye River & Separation Creek*

**Key issues for supporting walking & cycling:**

- The location and terrain of the area is the biggest incentive and barrier for walking and cycling.
- Cycling is almost impossible in the townships unless you're extremely fit.
- Most cycling takes place on the Great Ocean Road.
- Walking is the best way to see and get around Wye River & Separation Creek.

**Key objectives for the Strategy to address:**

- The Strategy should focus on safety and accessibility - The road shoulders within Wye and Sep need upgrading to better facilitate pedestrians.
- The Strategy should address the significant increase in population during the summer period.

**Local projects and initiatives to consider:**

- Upgrading of Paddy's Path , connecting Wye River & Separation Creek: Paddy's Path is the only safe access between Wye and Sep but is currently just a gravel track and subject to frequent landslip. During the peak summer season, pedestrians often walk along the edges of the Great Ocean Road between Wye River & Separation Creek, which is extremely dangerous given the volume of traffic and lack of familiarity with the area.
- Constructing a walking track from the end of Dunoon Rd through 3 Council Recreation Reserve blocks down to Paddy's Path: Currently for the Eastern half of Wye River, the only way down to the beach and shop/pub is down The Boulevard, which is heavily used during the peak summer period.
- Constructing a 'bridge' over a small gully at the intersection of The Boulevard and Koonya St into Harrington Park to allow safe pedestrian access through the park, down to the beach: There have been numerous near misses over the years as pedestrians, mums with prams, kids, dogs, bike riders and cars compete for space.

**B Community Groups**

*Cressy and District Action Group*

**Key issues for supporting walking & cycling:**

- Walking and cycling is essential in helping to keep people healthy: better and more footpaths would support healthier lifestyles.
- We need safe footpaths, separate from the road.
- Footpaths need to connect residential areas with the main street.

**B Community Groups**

*Lavers Hill Progress and District Association*

**Key issues for supporting walking & cycling:**

- Participation in walking and cycling is limited in Lavers Hill by the lack of provision for safe walking or cycling.
- There are five houses on the Lavers Hill - Cobden Road ("Cobden Road") but there are no footpaths, only a grass verge, which often gets wet and slippery with heavy rainfall.
- College Drive is a small side road to Great Ocean Road, providing access to the Lavers Hill School, the church and two houses. It has a concrete footpath which is in good condition but the landscaping is considered unsuitable as rainwater from Great Ocean Road is directed across the lowest point of the footpath. This means that for most of the year this section of the footpath is inundated, with a layer of mud underneath. Maintenance only takes place when a complaint is lodged with Council.
- The speed limit through town is too high (60 km/h)
- The road surface is in terrible condition.
- In town there is a good footpath on one side of the road but there are no provisions beyond the school.
- There are no safe points to cross the Great Ocean Road.
- No thought has been given or provision made for walkers or cyclists west of the school: The speed limit is 80 km/h and there are only patches of roadside to walk on; It is incredibly dangerous for walkers - in some parts there is a very steep embankment with vegetation forcing people to walk on the road.
- Lavers Hill and District Progress Association would like the following done to encourage, facilitate and make safe walking and cycling in Lavers Hill:

**Local projects and initiatives to consider:**

- Improve landscaping and drainage around the footpath in College Drive Lavers Hill.
- The speed limit through Lavers Hill Township should be lowered to 50 km/h.
- The Great Ocean Road surface needs to be re-laid.
- A safe crossing place to access the tennis court, hall and roadhouse.
- Bicycle lanes in both directions along the Great Ocean Road through the town.
- There should be a shared path from the school to Melba Gully Road.
- A shared path from Lavers Hill Township to Melba Gully road would make a great tourist attraction, as well as providing a fun experience for local residents. It would be a great addition to the Old Beechy Rail Trail, with a section of the original rail visible along the path, and some other historic rail infrastructure just to the side of the path.
- The school have expressed an interest in the creation of a track across School land to the school's rear boundary with Cobden Road.

**The priorities should be:**

- Lowering the speed limit in town to 50 km/h.
- Building the shared path from the Lavers Hill school to the Melba Gully Road turn off.

**C Government Agencies**

**Key issues for supporting walking and cycling:**

- Lack of appropriate facilities for on and off-road cycling.
- Conflict with vehicles and conflict with other trail users.
- Lack of awareness of the benefits of cycling/walking.

**Key objectives the Strategy should address:**

- Quantifying the benefits of active transport.
- Developing facilities and programs using universal design principles.

**D Advocacy**

No direct submissions were received

2.12 SWOT analysis of the current active transport environment

The following analysis is based on the outcomes presented in the previous sections.

Table 3: SWOT analysis

	PHYSICAL ENVIRONMENT The built and natural environment (e.g. bicycle infrastructure and local topography).	SOCIAL FACTORS The local culture; the influence of family, friends and peers; ethnicity and religious beliefs.	POLICY AND REGULATION Legislation, regulatory or policy making actions that are often formal legal actions taken by local, state or federal governments but also can be informal local policies or rules in settings such as schools or workplaces.	INTRAPERSONAL FACTORS The individual's knowledge, attitudes, and self-efficacy that influences behaviour and decisions.
STRENGTHS	<ul style="list-style-type: none"><li>• The topographies within the main and small towns are relatively flat supporting trips by walking and cycling.</li><li>• The majority of key destinations are within 1-2 km catchment of most residential areas, supporting short local trips by walking and cycling.</li><li>• Within the main towns (Colac and Apollo Bay) there are relatively well developed walking and cycling facilities, providing a good foundation to create a connected, safe and attractive network of facilities.</li></ul>	<ul style="list-style-type: none"><li>• Many of the towns across the Shire benefit from close knit communities where residents are actively involved in various groups and activities.</li></ul>	<ul style="list-style-type: none"><li>• There is strong national and state policy context for active transport, further strengthened by recent work of the Major Cities Unit.</li><li>• There are several existing plans and strategies which include proposals for enhancing walking and cycling infrastructure, including developing more attractive and people-oriented streets.</li></ul>	<ul style="list-style-type: none"><li>• Most existing walkers and cyclists are regular participants, and most have been active for more than 10 years.</li></ul>
WEAKNESSES	<ul style="list-style-type: none"><li>• In the main towns (Colac and Apollo Bay) bicycle lanes are rarely connected and there are almost no provisions at intersections.</li><li>• There are very limited end-of-trip facilities for cyclists across all towns.</li><li>• Most main streets across all towns carry large trucks creating an intimidating environment for walking and cycling.</li><li>• Poor provision for cyclists at intersections reduces the safety and attractiveness of cycling</li><li>• No wayfinding Strategy in place across the Shire creates an illegible network, and prohibits the uptake of walking and cycling.</li><li>• Many of the smaller townships have little or no footpaths, nor facilities to cross high speed roads.</li><li>• The distances and environments between towns limits the attractiveness of walking and cycling.</li></ul>	<ul style="list-style-type: none"><li>• A very poor level of awareness of cyclists on the road, evidenced by the high perception that cycling is unsafe when sharing the road with motorised traffic.</li><li>• A lack of acceptance of walking and cycling as a viable, safe and attractive form of travel for local and longer trips as evidenced by the low overall mode share for trips by active transport modes.</li><li>• The high proportion of people who currently experience transport limitations may perceive car ownership and use as a more attractive mobility option even when walking and cycling could be viable for some trips.</li><li>• High levels of obesity and chronic heart disease partly attributable to low levels of physical activity.</li></ul>	<ul style="list-style-type: none"><li>• Many of the smaller towns have 60 km/h speed limits on their main streets, creating an unsafe and unattractive environment for walking and cycling.</li><li>• Many existing bicycle lanes in the main towns are used for car parking.</li><li>• Permitting cars to enter Botanic Gardens sends a clear message to the community that the 'car is king' and welcomed: given the abundance of free car parking within metres of the Gardens there is no rationale for allowing people to take cars into the Gardens – this area should be a sanctuary for people to walk and young children to play without any need to worry about motorised traffic.</li></ul>	<ul style="list-style-type: none"><li>• Low perception of safety, particularly when sharing the road with motorised traffic.</li><li>• Lack of knowledge to plan a route by bicycle or navigate roads/ street.</li><li>• Lack of self-efficacy to share the road with motorised traffic.</li><li>• High value placed on car ownership and use among the community.</li><li>• Walking and cycling are not perceived as convenient or practical, even among regular participants.</li><li>• Most walking and cycling trips are for recreation rather than utility purposes, and most activity takes place on the weekend.</li></ul>
OPPORTUNITIES	<ul style="list-style-type: none"><li>• Within Colac there are significant opportunities to connect the Old Beechy Rail Trail with the Botanic Gardens using Gellibrand Street as a redefined space where pedestrians and cyclists are prioritised.</li><li>• The considerable width of most streets in most towns provides opportunities for retrofitting pedestrian and bicycle facilities.</li><li>• The considerable width of most streets in most towns provide opportunities for enhanced streetscapes (through for example, landscaping and road narrowing) to create stimulating safe and attractive environments for people to walk and cycle.</li></ul>	<ul style="list-style-type: none"><li>• Building on the participation of local schools in a range of programs to increase physical activity among children aged 4-13 years.</li><li>• The above average levels of walking and cycling for the journey to work provide a foundation for greater levels of participation in walking and cycling in the Shire.</li></ul>	<ul style="list-style-type: none"><li>• The coordination of walking and cycling projects in the Shire through a combination of Council officers and external stakeholders creates a platform for more effective delivery of actions arising from the Strategy.</li><li>• The recent increase in penalties resulting from a parliamentary inquiry into car doorings, presents an opportunity to create a cycling environment that is more socially and physically supportive, where motorists will also see the value from a personal perspective of being more aware of the presence of cyclists on the street.</li><li>• The delivery of walking and cycling projects can often be achieved through other projects (e.g. streetscape schemes, road safety projects and development control).</li></ul>	<ul style="list-style-type: none"><li>• Existing programs (e.g. Transport Connections) provide a basis for integrating walking and cycling related behavioural programs.</li><li>• Most existing walkers and cyclists travel distances of between 2 and 5 km, suggesting there is potential to encourage short local trips by active transport.</li></ul>
THREATS	<ul style="list-style-type: none"><li>• The continued low-density development of towns, particularly the main towns, will reduce the attractiveness of walking and cycling as journeys to local destinations will become longer in distance.</li></ul>	<ul style="list-style-type: none"><li>• The perception that cycling is associated with low socio-economic standing or students who cannot afford to purchase a car</li><li>• Not addressing the perceived illegitimacy of cycling as a road user.</li><li>• The growing levels of obesity and chronic heart disease from low levels of physical activity will require a holistic approach beyond the outcomes of an active transport Strategy. As such, key stakeholders must work in a cooperative and coordinated manner to achieve results.</li></ul>	<ul style="list-style-type: none"><li>• Although Council is now taking a more holistic approach to walking and cycling across the Shire, unless formal processes and policies are put in place for accountability then it will be difficult to achieve good outcomes.</li></ul>	<ul style="list-style-type: none"><li>• Not designing and delivering behavioural and promotional programs and activities that are contextually aligned with the needs of the wider community.</li></ul>



# A Framework for Supporting Active Transport

# 3

# 3. A Framework for Supporting Active Transport

## 3.1 Introduction

This chapter presents the framework for enabling and motivating greater levels of participation in walking and cycling in the Shire. The framework sets out the basis for the selection of actions to create a more supportive environment for active transport.

An incremental approach is proposed, where the community can gradually increase their participation in walking and cycling by replacing some of the local trips they normally make by car.

## 3.2 Behaviour change frameworks

The development of the Strategy has been based on a behavioural change framework, as opposed to a traditional engineering approach. Human behaviour is determined not by any one single factor (e.g. infrastructure) but rather by an environment of multiple influencing factors. The benefit of using a behavioural change framework is manifest in the broader consideration of the ‘user system’ that influences people’s behaviour.

### Addressing the “user system”

Strategies to support more people to participate in walking and cycling need to address the “system” in which these decisions are made and where travel patterns are formed.

The user system comprises:

- **Intrapersonal factors** – these are factors which are specific to us as individuals (e.g. our self confidence in our ability to ride a bicycle).
- **Social factors** – these factors which are specific to societies (e.g. the influence of friends, family and colleagues).
- **Policy and regulation** – refers to the influence of wider government policy and enforcement of regulation (e.g. policy strongly supportive of active transport).
- **Physical environment** – this is both the built and natural environment (e.g. walking and cycling facilities).

### Adopting a behavioural model

This Strategy adopts a behavioural model consisting of motivating factors and enabling factors. For a group of actors (in this case, the residents of the Shire, and to a lesser extent residents of adjoining municipalities) to adopt a particular behaviour (i.e. more cycling, more often, for all journey purposes) both factors need to be active in their lives.

The model comprises:

- **Motivating factors:** are intrinsic desires, connected to peoples’ identities that attract them to certain behaviours.
- **Enabling factors:** are changes to:
  - Peoples’ environments (both social and physical); and
  - Their self-efficacy that lowers the perceived risks of adopting.

## 3.3 Cultural change for cycling

Cycling across Australia is widely considered to be a sporting activity, with a strong association with road racing and recreational pursuits (e.g. mountain biking). This perception was strengthened in 2011, when Melbourne was officially recognised as a world sports-cycling city by the Union Cycliste Internationale - the world governing body for sports cycling - only the second nominated city in the world, after Copenhagen in 2007. Melbourne is not recognised as a leading world city for everyday cycling. A clear distinction has to be made between sports cycling and cycling for everyday purposes (i.e. for journeys to work, education, shopping and social purposes). The aim of Cycling Strategies at a local government level is to support everyday cycling for transport.

In cities around the world where a strong cycling culture exists, cycling is an everyday activity undertaken by the majority of people, regardless of age, gender or social standing. As a result, there is greater respect among all road users. Motorists and cyclists share an understanding of each other’s needs. In cities across the world with high levels of cycling for everyday journeys, policy has sought to make cycling the most attractive form of transport for short trips.

The Strategy therefore focuses on supporting cycling in the community as an everyday or normalised activity, to make short local trips, primarily focused on accessing activity centres, education, green open space and rail stations.

## 3.4 Incremental change

# Small x Many = Big

Incremental change has two key benefits:

1. Small changes are usually perceived to have a lower risk attached to them and are therefore more likely to be adopted; and
2. Small changes made by many people produce a larger change overall in the longer term

Change efforts, particularly where people associate a high perception of risk with the proposed change have a high record of failure, especially when they are pitched as all-or-nothing endeavours. However, when changes are proposed on an incremental basis, where people can trial the change first in safe and familiar environment (e.g. their local community), the perception of risk is greatly reduced and the more likely they are to be adopted.

On this basis, it is appropriate to promote walking and cycling for short local trips and longer recreational trips, especially among people who lack the confidence and self-efficacy to ride in certain conditions (e.g. in peak traffic, sharing the road with motorised traffic).

## 3.5 Design principles

The provision of a safe, connected, legible and attractive network of bicycle routes, supported by appropriate end-of-trip facilities, is a critical element of an environment where cycling is an intuitive choice for short local trips. The following section presents the framework for the design, development, planning and prioritisation of bicycle infrastructure proposals in the Strategy. The design principles adopted here are consistent with state, federal and international best practice.

### International design principles for cycling

The following design principles are well-established across the world for the design of bicycle networks:

#### Convenience

- Cycling routes must be perceived as convenient, offering journeys which are convenient as or more so than alternative modes and routes.
- Routes should connect trip origins and destinations.
- Routes should be unimpeded by unnecessary street furniture, inconvenient (but avoidable) grades or detours.

#### Accessibility

- Routes should link trip origins and destinations.
- Routes should be continuous and coherent, and clearly legible to a novice user (including providing for wayfinding signage and maps where necessary).
- Provision should be provided to cross busy roads and other barriers while minimising delay and maximising safety.
- Provision should be provided in and through areas otherwise inaccessible to motor vehicles (such as parks), taking due consideration of pedestrians.

#### Safety

- Facilities should be perceived to be safe as well as offering real safety benefits. These safety benefits need take into account the relative risk of design alternatives and the baseline situation, as well as the different cyclist groups likely to be attracted to a route.
- Traffic volumes and speeds should be reduced where cyclists and vehicles share road space, ideally to around 30 km/h.
- Reallocation of road space to cyclists should be considered, particularly at potential conflict points (particularly intersections). Both physical (infrastructure) and temporal (traffic signals) separation should be considered.
- Sightlines, surface quality and vegetation should not present a hazard to the widely varying types of riders likely to use a facility.

#### Comfort

- Infrastructure should cater for the breadth of the community (see 8-80 rule).
- Feelings of comfort will be influenced both by physical conditions (e.g. width, gradient and surface quality) and by perceptions of safety. Dealing with the latter through the provision of high quality, often segregated, and infrastructure is critical.

#### Attractiveness

- Aesthetics are important: the look and feel of cycling infrastructure and adjoining land uses (such as parks) will influence feelings of comfort and personal safety.
- In context the use of high quality materials that are also functional make cycling facilities attractive for both riders and the community more generally.
- Maintenance will influence attractiveness (as well as safety). Maintaining a high quality pavement clear of debris such as gravel and glass makes for more attractive cycling infrastructure.

Australian Urban Design Protocol

The following principles from the Australian Urban Design Protocol provide an holistic approach for designing environments that support walking and cycling:

It prioritises people walking or riding before vehicles

- Are pedestrians and bicycles given first priority on the streets, followed public transport, then the movement of goods, and finally cars?
- Is it convenient for pedestrians and bicycles to use and cross roads safely and with ease?
- Are there direct and continuous walking and bicycling routes between key local places?

It is easy to get around on foot, bike, wheelchair, pushing a pram or wheeling luggage

- Is it easy to find your way around the neighbourhood when walking or bicycling?
- Are footpaths and crossovers suitable for a range of people and abilities?
- Are there bicycle-only paths that are clearly marked and separated from footpaths and roads?

Buildings and streets feel like they’re the right size and type for that place

- Are street networks designed to encourage walking between places?
- Are building types and uses appropriate for their location?
- Are the building scales appropriate for that location?

It encourages physical activity and social interaction, and promotes a healthy lifestyle

- Is it convenient to walk or ride to local facilities and public transport, reducing the need to drive?
- Are facilities provided for outdoor activity?
- Is there a variety of outdoor recreation areas within walking distance (500m<sup>1</sup>) of homes and work places?
- Are trees and plants located along streets and paths, to provide shade, comfort and visual interest?
- Are there scenic walking and bicycling routes through parks and bushland or along rivers, lakes and sea shores?

Existing Design Guidelines

The design of walking and cycling facilities should also reference existing Colac Otway Shire Council guidelines, including but not limited to the Infrastructure Design Manual.

3.6 Prioritisation process

In order to determine the priority of infrastructure-related action a Weighted Criteria Scoring System has been developed. This scoring system has been based on the *How to Prepare a Pedestrian Access and Mobility Plan* (NSW RTA<sup>2</sup>, 2002).

The Weighted Criteria Scoring System is based on four categories, as follows:

(A) Land use

For walking and cycling to be viable, practical and attractive ways to access key destinations, facilities must connect people where they live with key local destinations.

Under the category of land-use there are 3 criteria, as follows:

- Access to key land-uses – higher scores are awarded to facility proposals that serve main commercial areas/street, schools, rail stations and green open space (passive and active) land-uses;
- Proximity to key land-uses – higher scores are awarded to facility proposals that are directly adjacent to the key land-uses above those that require connection via designated routes; and
- Proposed future land-use development – higher scores are awarded to facility proposals that support future land-use development.

(B) Traffic impact

Infrastructure is often most needed where the impact from motorised traffic is greatest. Therefore higher points are awarded for facility proposals on heavier trafficked routes.

(C) Safety

Safety (both perceived and actual) is a core principle for the design of active transport facilities and for enabling and attracting people to walk and cycle. Under this category there are 2 main criteria, as follows:

- Identified crash hotspots from Crash Stats – higher scores are awarded to facility proposals with the potential to address locations of quantified safety issues; and
- Identified hazardous locations through consultation - higher scores are awarded to facility proposals with the potential to address locations of safety concern as identified through consultation with the community.

(D) Continuity of routes

This category provides another level of detail to categories (A) and (C), in terms of connection and access to land uses. The importance of connectivity is that it addresses the value of a bicycle infrastructure on the basis of whether or not it is completing a “missing link” in an existing local or strategic bicycle route

The weighted criteria scoring system and outcomes are presented in Appendix C.

Each facility proposal is scored against the same criteria, and then assigned a High, Medium or Low priority as follows:

Table 4: Severity of crashes in the Colac Otway Municipality

PRIORITY	FROM	TO
High	56	112
Medium	36	55
Low	0	35

Facility proposals for walking and cycling are assessed separately.

<sup>1</sup> Colac Otway Shire Council Open Space Strategy recommends 400m.

<sup>2</sup> Now referred to as the RMS (Roads and Marine Services in New South Wales)



# Actions for Supporting Active Transport

# 4

# 4. Actions for Supporting Active Transport

## 4.1 Introduction

This chapter presents the recommended actions to create an environment in the Shire that is supportive of walking and cycling.

Actions are categorised as follows:

- **Infrastructural:** covering active transport facilities (e.g. bicycle lanes, footpaths and wayfinding).
- **Behavioural:** covering behaviour change programs.
- **Policy and Regulation:** covering land-use planning, enforcement and speed limits.
- **Promotional:** covering the marketing of active transport.
- **Leadership:** covering the role of the Shire Council as role models and leaders in active transport.

Each action is subject to detailed investigation and design. Infrastructural actions have been subjected to a high-level “ground truthing” assessment and the outcomes have been factored into the prioritisation of these actions.

## 4.2 Infrastructural Actions

### 4.2.1 Introduction

The following section presents a range of actions to enhance the existing walking and cycling networks in the main and small towns of the Shire.

The network maps combine proposals from existing plans and strategies, and new proposals developed in the preparation of the Strategy. Footpaths and bicycle lanes (on-road and off-road) are presented in a consolidated format, as ‘existing’ and ‘proposed’. Where appropriate, annotations have been provided on maps to illustrate the concept behind the proposals.

Walking and cycling facilities at intersections (including mid-block crossings) are presented as ‘typical designs’ based on appropriate standards and guidelines, namely Austroads Guide to Road Design; Guide to Traffic Management; Guide to Road Safety; and VicRoads Cycle Notes.

In addition, careful consideration has been given to international best practice to provide a range of design concepts for specific walking and cycling facilities and streetscape schemes. Some of these concepts have been transposed for specific locations in towns across the Shire. These visuals are intended to be conceptual only and are not exact representations of appropriate designs.

General guidance is provided on end-of-trip facilities for cycling and wayfinding for both walking and cycling. Although the development of a wayfinding Strategy for the Shire is beyond the scope of an Active Transport Strategy, general guidance has been provided.

### 4.2.2 End-of-trip facilities

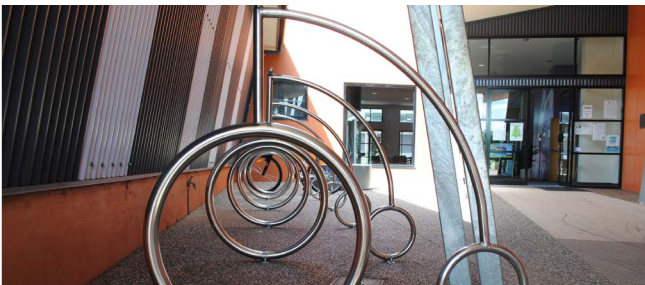
This section presents the key actions to enhance the end-of-trip experience when people arrive at their destination by bicycle.

#### Proposed Actions

- **(I-1)** Provide appropriate short-stay bicycle parking rails in shopping strips – liaise with local businesses to identify appropriate locations and to minimise impact on the operation of the street (particularly to avoid creating clutter that creates a barrier for people with visual and physical impairments).
- **(I-2)** Develop a business case for installing long-stay bicycle parking facilities at all rail stations, working closely with VicTrack to determine appropriate locations.
- **(I-3)** Work with local leisure and recreation facilities to develop short and long term plans to address immediate and future bicycle parking needs.
- **(I-4)** Work with local primary schools (through the Ride 2 School program) to develop short and long term plans to address immediate and future bicycle parking needs – also refer to ‘School Travel Program’ in section 4.3.3.
- **(I-5)** Run a design competition to create artistic bicycle parking racks that represent the local culture (indigenous and/or modern).
- **(I-6)** Run an EOI for the provision of Parklets on the main streets of Apollo Bay and Colac. Parklets are a low cost way to soften the feel of a street and provide additional space for people to sit, eat and enjoy the street environment. They increase the allocation of space for people and can be provided in proximity to cafes and restaurants to support local businesses. Furthermore, they provide additional bicycle parking in locations of high demand.



Long Stay Bicycle Parking



Short Stay Bicycle Parking

### 4.2.3 Wayfinding and signage

In Victoria the design of bicycle wayfinding and signage is guided by VicRoads Cycle Note 11, and further guidance is provided in the Guide to Traffic Management – Part 10: Traffic Control and Communication Devices (Austroads 2009e) and AS 1742.2:2009 and AS 1742.9:2000.

More recently the Victorian Department of Transport released *You are here: a guide to developing pedestrian wayfinding* (2011), which also notes “‘Finger-pointer’ signs at street-sign level are easier for cyclists to read as they pass quickly, whereas complex information boards at street level are of little or no use. Distance to travel and the time it takes to read a destination are likely to interest cyclists.”

While a detailed wayfinding strategy was beyond the scope of this Strategy, the actions proposed are intended to provide the basis for such work.

#### Proposed Actions

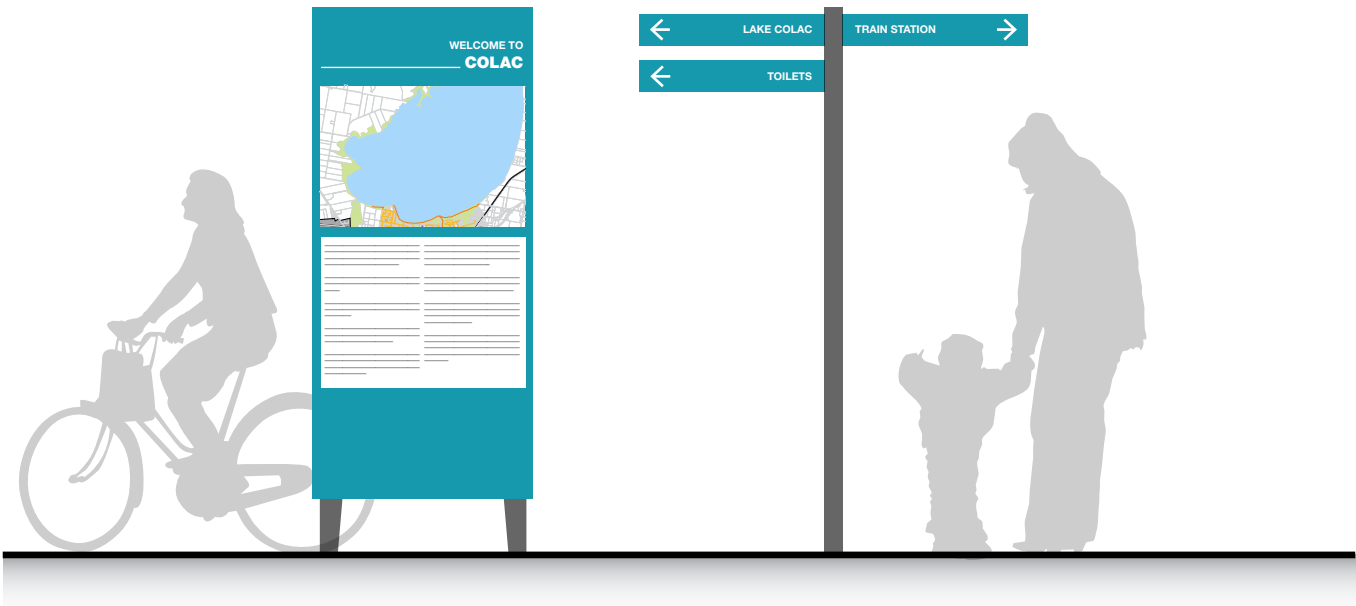
- **(I-7)** Develop an integrated walking and cycling wayfinding Strategy for Colac and Apollo Bay (see also ‘Walking Promotion Program’ in section 4.3.3), to include destination, directional and informational signage – see example shown opposite.
- **(I-8)** Develop a trails wayfinding Strategy to incorporate mountain bike trails.



Mock-up of Pedestrian Wayfinding (Directional Signage)



Mock-up of Bicycle Wayfinding (Directional Signage)





# 1 Colac

## Walking Network

The map opposite presents the existing and proposed walking network for Colac.

The footpath improvements in Colac are primarily based on the Colac-Elminyt Commuter Footpath Strategy 2012 and the Colac CBD and Entrances Study 2012. This considerable body of work has made recommendations for enhanced footpaths, greater priority at roundabouts and mid-block crossings.

These proposals have been complemented in this Strategy with actions principally relating to wayfinding and streetscape improvement projects.

Furthermore, a range of design concepts are proposed (based on global best practice) to inform the development of the network.

