

SURF COAST SHIRE COUNCIL | AUGUST 2022







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## STUDY TEAM

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## **INTRODUCTION**

The Surf Coast Safer Cycling Strategy has been developed to inform Council policy and approach to improving safety and access for cyclists within Surf Coast Shire over the next five years.

The development of the Strategy has included:

- A review of relevant strategies, current research and best practice;
- A review of the existing cycling network and infrastructure;
- Analysis of cyclist casualty crashes; and
- Consultation with the community and key stakeholders.

## STRATEGIC CONTEXT

The Surf Coast Safer Cycling Strategy supports the *Victorian Road Safety Strategy 2021-2030* and the *Victorian Cycling Strategy 2018-2028*.

The Strategy is consistent with the *Surf Coast Road Safety Strategy 2016-2021*, in particular the actions for Goal 4: Safer Cycling. It is a critical link in Council's *Climate Emergency Response Plan 2021-2031* to promote active transport and embed climate considerations into road and pathway infrastructure planning.

## **VISION AND TARGETS**

Our vision is connecting people with places through an integrated, safe cycling network.

To measure the effectiveness of the strategy, we have adopted three overarching targets as follows:

Target 1: Improve the safety and quality of the cycling experience

Target 2: Reduce fatal and serious injury cyclist crashes by 30% by 2030

Target 3: Increase participation in cycling

## **KEY THEMES**

The consultation, crash data analysis and network review identified the following key themes as critical areas of focus:

- connectivity of the cycling network
- cycling infrastructure
- maintenance of infrastructure
- · cycling to school
- education, promotion and communication
- supporting infrastructure and amenity
- events and tourism cycling
- effective planning
- effective planning

## **GOALS**

The goals of the Strategy are set out below.

#### Goal 1: A connected, accessible and integrated cycling network

• The Strategy aims to improve priority cycling connection to key destinations across Surf Coast Shire and facilitate safe access to the cycling network by all types of cyclists.

#### **Goal 2: Safe Cycling Infrastructure**

 Cyclist safety is an emerging road safety issue in Surf Coast and safety concerns discourage many in the community from cycling more. The Strategy aims to improve cyclist safety and stress by the provision of appropriate infrastructure, addressing crash locations and improving maintenance of on-road and off-road facilities.

#### Goal 3: An attractive cycling destination

 Cycling events and tourism attract thousands of people to the Surf Coast every year and helps support the local economy. The Strategy aims to continue improving Surf Coast's image as an attractive cycling destination.

### Goal 4: Integrated planning for cycling

• The Strategy supports a holistic, integrated approach to planning for cycling to facilitate the delivery of cycling infrastructure and improve cycling outcomes. The Strategy aims to improve planning for cycling in new developments to ensure safe and appropriate infrastructure is delivered, which connects to an overall cycling network.

#### Goal 5: Improved cycling partnerships and collaboration

• The Strategy aims to foster strong partnerships with road authorities, land managers and other organisations to improve planning and delivery of cycling infrastructure, and encourage collaboration with community groups to support and promote cycling participation.

### Goal 6: A safe and inclusive cycling culture to encourage participation

 The Strategy aims to improve driver and cyclist behaviour and encourage participation in cycling through education and promotion. This will be supported by the provision of bicycle rails, drinking taps, repair stations, wayfinding signage and other infrastructure to enhance the cycling experience.

### **ACTION PLAN**

A detailed action plan has been developed to enable delivery of the six Safer Cycling strategic goals. The action plan will guide Council and its partners in planning and delivery of a cycling network and safety initiatives which addresses the six goals, which considers key issues which have been identified through data analyses, community consultation and stakeholder engagement. For each action, responsibility for implementation has been nominated and performance measure has been identified to allow implementation of the strategy to be monitored.



### FROM THE MAYOR



I am pleased to introduce the Surf Coast Safer Cycling Strategy 2022-27.

As our shire population grows and changes and our region moves towards a more healthy connected community, reliance on an integrated and safe cycling network is of high importance.

This new strategy is central to our ambition to improve cycling safety and connections and increase participation in cycling, whilst reducing fatal and serious cycling related crashes in our region.

The strategy aligns with and enhances state and federal strategies, the Transport Accident Commission's Safe System approach and includes an action plan shaped by broad consultation.

We have taken into account the thoughts and concerns of the many people who responded to our community survey, as well as considered input from stakeholders ranging from Victoria's Department of Transport and Victoria Police, to organisations like school parent groups, community and sporting groups and tourist and business associations.

Their valued feedback has helped identify six key areas of focus:

- A connected, accessible and integrated cycling network
- Safe cycling infrastructure
- Surf Coast Shire as an attractive cycling destination
- Good integrated planning for cycling
- Improved cycling partnerships and collaboration
- A safe and inclusive cycling culture to encourage participation

This strategy will inform and guide Council's actions in these and other areas. This is just one important element as we continue working on the broader transport picture for our region.

Victorian crash data indicates that 10% of all recorded accidents within our shire during the past five years have involved cyclists.

This is an increase of 50% compared with the previous five-year period, which is likely related to an increased uptake in cycling during recent years.

The Surf Coast Safer Cycling Strategy 2022-27 will be a valuable tool as we work collaboratively with communities, authorities and other land managers to reduce the toll and the trauma.

**Cr Libby Stapleton** 

J. Stepleto

Mayor

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## 1. Introduction

#### 1.1 About the strategy

The Surf Coast Safer Cycling Strategy has been developed to inform Council policy and approach to improving safety and access for cyclists within Surf Coast Shire over the next five years. Our vision is:

# Connecting people with places through an integrated, safe cycling network

To achieve this, the Strategy:

- Recognises there are different types of cyclists within Surf Coast Shire, with differing infrastructure needs;
- Identifies prioritised cycling routes that form a cycling network;
- Provides direction for improving connections and safety for cycling;
- Sets criteria for cyclist provision in future developments; and
- Aligns with the Victorian Cycling Strategy 2018-2028, and Council's Road Safety Strategy 2016-2021 and Climate Emergency Response Plan 2021-2031.

The overarching aims of the Strategy are to:

- Improve the safety and quality of the cycling experience;
- 30% reduction in fatal and serious injury cyclist crashes by 2030; and
- Increase participation in cycling.

To realise these aims, an Action Plan provides prioritised actions for implementation over the next five years, along with performance measures. However, further work is required to investigate and develop the detail of the proposed actions.

#### 1.2 **Strategy development**

The development of this Strategy has included:

- A review of relevant strategies, plans and documents;
- A review of the existing cycling network and infrastructure;
- Analysis of the Department of Transport records of cyclist casualty crashes for the last five years (up to November 2020); and
- · Consultation with the community and key stakeholders.

The Strategy draws on relevant research, best practice and experience from other iurisdictions.

#### Implementing the strategy 1.3

Council will collaborate with its partners, stakeholders and the community to implement the Strategy.

The Strategy provides strategic direction to support safe cycling policy and sound decision making on investment priorities. Implementing the individual elements of the Strategy will be dependent on attracting investment and competing for funding through the annual budget process.

## 2. Strategic context

#### 2.1 State strategies

The Surf Coast Safer Cycling Strategy supports the following State strategies.

### Victorian Road Safety Strategy 2021-2030

The Victorian Road Safety Strategy 2021-2030 aims to halve road deaths and reduce serious injuries by 2030. One of the strategy's strategic focus areas is vulnerable and unprotected road users, which includes cyclists. Levers of change include safer travel speeds (for vehicles), infrastructure improvements and education programs.

#### Victorian Cycling Strategy 2018-2028

Victoria's Cycling Strategy 2018-2028 aims to increase the number, frequency and diversity of Victorians cycling for transport by:

- Investing in safer, lower stress, better-connected network, prioritising strategic corridors
- Making cycling a more inclusive experience.

The Victorian Strategy prioritises strategic cycling corridors but recognises that neighbourhood cycling connections are essential to provide safe access to local destinations.

#### 2.2 **Council policies and strategies**

The Surf Coast Safer Cycling Strategy aligns with the objectives of the Council Plan 2017-2021, specifically in relation to health and wellbeing and provision of infrastructure, and supports Council policies and strategies, including the following:

### Surf Coast Shire Council Plan 2021-2025

The Council Plan incorporates a long-term community vision for Surf Coast Shire. Of the seven themes adopted in the Council Plan, the following three have particular relevance to the Safer Cycling Strategy:

- Theme two: Healthy Connected Community
- Theme three: Environmental Leadership
- Theme four: Sustainable Growth.

The Surf Coast Safer Cycling Strategy can potentially link to the following Council Plan Strategies:

- Strategy 5: Make it easier to people to move around our towns and in nature without relying on cars.
- Strategy 8: Reduce greenhouse gas emissions to limit the impacts of climate changes.
- Strategy 13: Support tourism and events that encourage people to stay longer and appreciate and care for this place.

### Surf Coast Road Safety Strategy 2016-2021

The development of a strategy to guide bicycle infrastructure planning and bicycle safety activities is an action in Surf Coast's Road Safety Strategy 2016-2021.

Bicycle Safety was identified as one of eight themes being a critical area of focus. The Road Safety Strategy includes actions as shown in Figure 1 to address bicycle safety in the Surf Coast.

#### **GOAL 4: SAFER CYCLING**

	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME
4.1	Rename Pathway Strategy to Walking and Cycling Strategy or similar. Review and update Strategy to guide bicycle infrastructure planning and bicycle safety activities.	SCSC - Infrastructure Development Unit	Completion of Strategy Review	End 2017
4.2	Develop business cases to fund infrastructure improvements and bicycle safety activities as recommended by Strategy	SCSC - Infrastructure Development Unit	Business case submitted	Each year from 2018
4.3	Increase police presence on key cycling routes at key cycling times.	Victoria Police	Council to seek feedback on driver and cyclist behaviour.	Every 6 months
4.4	Provide bicycle related messages on VMS to coincide with cycling events (see Action 8.2).	SCSC - Design & traffic Communications Project Management Unit	4 messages related to bicycles	Per year
4.5	Review event management for cycling events. Ensure traffic management schemes are prepared for (and enforced) for major events by organisers.	SCSC - Events	Traffic Management Plans required and enforced by Council for major cycling events.	As required

Figure 1: Bicycle Safety Action Projects (Surf Coast Road Safety Strategy 2016-2021)

#### Surf Coast Climate Emergency Response Plan 2021-2031

The Surf Coast Safer Cycling Strategy is a critical link in Council's Climate Emergency Response Plan 2021-2031 to promote active transport and embed climate considerations into road and pathway infrastructure planning. Council's Climate Emergency Response Short Term Corporate Action Plan 2020 identifies initiatives that can be implemented in three priority areas: reducing emissions, adapting to the changing climate and empowering people. Of particular relevance to the Safer Cycling Strategy are the following actions:

Integrate climate emergency considerations within Council's Pathway Strategy review to identify and elevate priority of active transport opportunities.

- Investigate opportunities for installation of bicycle racks at bus shelters to improve active transport connections.
- Build on the Walk to School Program to improve active transport at the shire's schools.

#### Torquay Town Centre Urban Design Framework

This Urban Design Framework (August 2017) identified the following key objectives in relation to cycling within the Town Centre:

- Eliminate 'missing links' and 'missing connections' in the on-street cycle network, creating a cohesive integrated active transport network; and
- Encourage the use of more sustainable transport modes within the road infrastructure and decrease reliance on private vehicles.

The Access and Movement Plan adopted for Torquay Town Centre Urban Design Framework is shown in Figure 2. This plan shows Anderson Street, Zeally Bay Road and Fischer Street as key existing bicycle routes to the Torquay Town Centre.

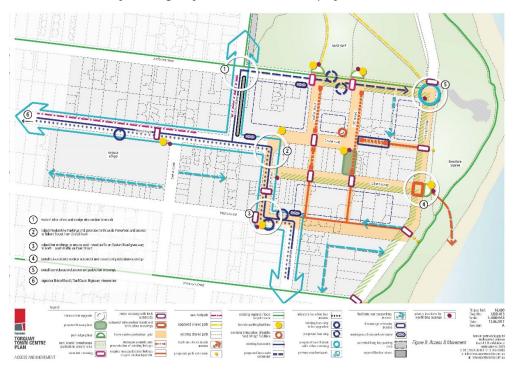


Figure 2: Access and Movement for Torquay Town Centre Plan

#### Other Strategies

The Strategy aligns with other Council Strategies and Plans including:

- Pathways Strategy (under review at the time of development of the Safer Cycling Strategy).
- Open Space Strategy 2016-2021.
- Various structure plans and outline development plans.

## 3. Surf Coast Shire

Surf Coast Shire is located in south-western Victoria, approximately 95km from Melbourne and 21km south of Geelong. The Shire comprises beach, bushland and rural environments with nine distinct townships, including Torquay, Jan Juc, Anglesea, Lorne and Winchelsea.

The Shire is one of the fastest growing regional municipalities in Victoria, with the estimated population of just over 30,500 in 2020<sup>1</sup>. It is also a major destination for visitors and tourists, with the population trebling during summer holiday periods.

Cycling in Surf Coast has increased significantly for commuting, recreation, fitness and competition over the last ten years.

The region is an attractive destination for recreational cyclists and major cycling events. The Shire has hosted events including the Cadel Evans Road Race, Amy's Grand Fondo, Great Ocean Road and Otway Classic Ride, and the RACV Great Victorian Bike Road. There are also many cycling groups and clubs operating in the region.

As a mode of transport, cycling is becoming increasingly prevalent, particularly in Torquay and Jan Juc.

Existing cycling infrastructure within the Shire includes shared paths, on-road bicycle lanes and sealed shoulders on some rural roads. Bike racks are also provided at many locations. However, additional cycling infrastructure and improvements to existing infrastructure is desirable to support safer cycling within the Shire.

#### **Cyclists in Surf Coast** 3.1

There are different reasons people choose to cycle in Surf Coast, primarily for transport (commuter cyclists including children commuting to school), recreation, or fitness. It is recognised that the ability and attitudes of cyclists differ, as does the type of infrastructure they desire.

In relation to cycling, people can be grouped into four categories. A study undertaken in the USA (by Roger Geller, Portland) outlines the four types of cyclists, as indicated in the diagram below.



The majority are classified as "interested but concerned". These cyclists like to ride but are put off by the need to ride close to motor vehicles, particularly on higher speed and higher volume roads. This is indicative of the thinking of many within the Surf Coast community, particularly recreational and commuter cyclists.

The "enthused and confident" cyclists are already riding but may ride more if the cycling experience was better. Many fitness cyclists are likely to fall in this category.

The "strong and fearless" are a small group of cyclists that will cycle regardless of the

<sup>&</sup>lt;sup>1</sup> Sourced from Council Plan 2021-25

road and traffic conditions. The "no way, no how" group will not cycle for a variety of reasons.

This Strategy seeks to cater for all types of cyclists within Surf Coast<sup>2</sup>.

## 4. Existing Cycling Network

An inventory of the existing cycling network and infrastructure was carried out using Council's classification and asset data, and a detailed review of aerial imagery from January 2021. The purpose of this inventory is to provide a holistic overview of the cycling network and identify where there are missing links.

Existing on- and off-road cycling infrastructure was classified as 'standard' or 'narrow' based on the width criteria adopted as part of this strategy (further discussed in Section 8.3).

Detailed cycling network maps are provided in Appendix A. These maps show cycling infrastructure across the Shire, including the smaller towns, and show where connections are missing. These maps provide the primary reference for community, asset management and planning with regard to existing cycling infrastructure and where future links could be planned.

The review of existing cycling infrastructure in conjunction with community and stakeholder feedback on how people want to cycle in the region indicates that some of the cycling network is not well connected or provides less-than-optimal infrastructure.

## 5. Cyclist Crash data

Casualty crash data records from the Department of Transport (DoT) were reviewed to identify crashes involving cyclists in Surf Coast Shire.

The data represented in Figure 3 shows that there were 42 cyclist crashes in Surf Coast Shire in the five-year period from mid-2015 to mid-2020, accounting for 9.1 percent of all road user crashes in Surf Coast. This is an increase of 50% compared to the previous fiveyear period, which is likely related to an increased uptake in cycling in recent years.

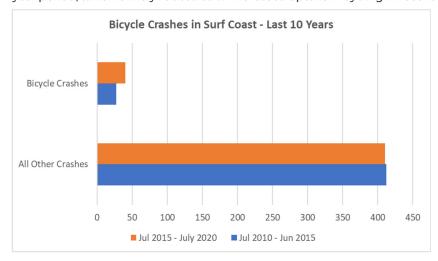
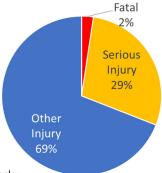


Figure 3: Cycling Crashes compared to all other Crashes in last 10 years

 $<sup>^{\</sup>rm 2}$  Mountain bike single track trails have not been assessed as part of this review

Of the 42 crashes which occurred in the most recent five-year period, there was one fatal crash and 12 crashes resulting in serious injury.

Half of the total crashes occurred on roads managed by DoT, including 18 crashes (43%), including seven serious injury crashes (54%) on the Great Ocean Road.



Multiple cyclist crashes occurred on the following Council roads:

- Horseshoe Bend Road (five crashes, including one serious injury crash)
- Bell Street (three crashes, including one serious injury crash)
- Fischer Street (two crashes)

Of the remaining three serious injury cyclist crashes, one each occurred on Surf Coast Highway (Torquay), Forest Road (rural Surf Coast) and Erskine Falls Road (Lorne). The only fatal cyclist crash occurred on Atkins Road just outside of Winchelsea.

The crash data review also found that:

- About 40% of fatal and injury crashes occurred at intersections and 60% occurred at midblock locations;
- About 70% of fatal and injury crashes occurred on roads with a speed limit of 60 km/h or less;
- Most crashes occurred during the warmer months, particularly December and January; and
- About 45% of fatal and injury crashes did not involve collision with another vehicle (that is, another vehicle was not reported in the crash data records).

Maps showing crash locations and details are provided in **Appendix B**.

### 6. Consultation

Consultation was a key part of the development of this strategy and various community, stakeholder and Steering Committee consultation activities were undertaken. These activities provided information on the key issues for safe cycling in Surf Cost and helped to identify future opportunities for collaboration and partnerships.

#### 6.1 **Community Consultation**

The community was invited to complete an online survey between 24 April 2021 and 9 May 2021 to inform the development of the Strategy and Action Plan. The survey sought feedback on cycling experiences, issues and opportunities in Surf Coast. More than 600 responses were received and analysed. Background information, including a profile of respondents, and detailed analysis of responses is provided in **Appendix C**.

#### **6.2** Stakeholder Engagement

A broad range of stakeholders participated in an on-line workshop on 8 June 2021 to provide input on issues related to cycling in Surf Coast and to brainstorm opportunities for improving the strategic approach to safe cycling in the Shire.

Representatives from Council, Victoria Police, Department of Transport (DoT), Transport Accident Commission (TAC), Great Ocean Road Coast and Parks Authority (GORCAPA), Department of Environment, Land, Water and Planning (DELWP) and Cape Otway Shire Council were invited to attend the workshop.

Various community groups were also contacted directly via email and invited to provide input to the project.

A summary of issues and suggestions identified by stakeholders is provided in **Appendix** D.

#### **Steering Committee Workshops**

Issues and opportunities were also identified through the Safer Cycling Strategy Steering Committee which meet at key stages throughout the project. Steering Committee workshops provided strategic directions throughout the development of this strategy.

The Steering Committee consisted of Council officers and representatives from the Department of Transport, Victoria Police and Transport Accident Commission.

## 7. Key themes

Key themes identified from the consultation, crash data analysis and network review are outlined below.

#### 7.1 Connectivity of cycling network

While the existing cycling network provides connections to some key destinations, particularly in and around the more populated townships of Torquay and Jan Juc, there are significant gaps in the network. Identified issues include:

- Gaps in off-road trails and lack of connections to key destinations;
- Desire for region-wide cycling connections, in particular:
  - Between coastal towns
  - Bellbrae/Jan Juc/Torquay to Armstrong Creek/Geelong/Waurn Ponds
  - Torquay Foreshore to Barwon Heads via Point Impossible;
- Lack of continuous, safe and fit-to-purpose cycling connections to key destinations and through towns;
- Desire for improved crossings across busy roads, particularly in and around the townships.

The community feedback indicates that the existing cycling network does not always correlate well with how people want to access key destinations. There is a strong community desire to refresh the cycling network and provide safe and integrated connections with infrastructure that suitably caters for the type of cyclist using the routes (e.g. commuter cyclists including school commuters, recreational cyclists or fitness cyclists).

#### 7.2 Cycling infrastructure

Cycling infrastructure should be appropriate for the intended user. This is a challenge given the mix of recreational, commuter and fitness/training cyclists in Surf Coast and their differing needs. For example, fitness cyclists may be unwilling to use an off-road path as it does not allow for high-speed riding, and they would likely prefer a wide shoulder on a main road. In contrast, recreational and commuter cyclists would most likely prefer separated cycling paths away from traffic and pedestrians at busy locations.

Currently there is minimal road space allocated to bicycle lanes within townships other than Torquay. Where bicycle lanes are present in Torquay, they are often impacted by on-street car parking, traffic volumes and speeds.

Cycling on roads between towns typically occurs on the main carriageway or the road shoulder where provided. However, road shoulders vary in terms of width and surface quality and can hold debris, often forcing cyclists to use the main carriageway. High traffic volumes and speeds pose safety issues for these cyclists, as well as poor driver attitudes.

Off-road paths for cycling are typically shared with pedestrians (shared paths). On some narrow, busy paths, greater separation between cyclists and other path users is desired to reduce potential for conflicts. Other issues identified with off-road paths are surface type (e.g. unsealed), alignment (sharp corners, steep descents) and overgrown vegetation. There is also some ambiguity about the use of paths for cyclists where they are not signed.

#### 7.3 Maintenance

Maintenance of on-road bicycle lanes and shoulders and off-road paths can impact safety and experience of cyclists, particularly in relation to pot holes, loose debris or gravel and overgrown vegetation.

#### 7.4 Cycling to school

Many children in the Surf Coast currently ride to school. However, there are safety concerns related to crossing points, inappropriate parking and driver behaviour, and conflict with pedestrians on paths. Improvements to cycling routes to schools will encourage more children to ride more often.

#### 7.5 Education, promotion and communication

Most of the cyclist crashes in Torquay were caused by drivers not observing or giving way to cyclists. The consultation also identified concerns related to aggressive or inappropriate behaviour from drivers and cyclists, particularly on the Great Ocean Road, lack of awareness of the Road Rules, and a poor cycling culture in the Surf Coast. There is a role for education, promotion and communication in addressing these issues to make the Surf Coast a safer place for cycling.

#### 7.6 Supporting infrastructure and amenity

A desire for greater supporting infrastructure and cycling amenity was identified by the community during consultation, including bicycle parking, drinking taps, directional signage, cycle repair stations and electric bike charging stations.

#### 7.7 Events and tourism cycling

There are numerous issues in relation to cycling events, such as accessing event villages, local access during events, community attitudes and tolerance, and traffic management during events.

A sharp rise in cycling during warmer months, along with walking and vehicular traffic, leads to increased conflicts between path and road users. This is also apparent in the crash data analysis which showed an increase in cycling crashes during warmer months.

There are opportunities to improve cycling amenity and infrastructure to support cycling related tourism.

#### 7.8 **Effective planning**

A more holistic and integrated approach towards planning for cycling, with a focus on linking the strategy with Council's long-term vision, will achieve better outcomes for cycling.

A key issue is the provision of cycling infrastructure in, and connections to, new subdivisions to cater for a community of all ages and cycling abilities. This can be inhibited by:

- Planning Scheme and Infrastructure Design Manual place only limited requirements around the provision for cyclists in new subdivisions and do not always require design that aligns well with end user needs; and
- Unclear direction of the future cycling network, which can result in disconnected and unintegrated cycling facilities to and within new development areas.

Better coordination and communication between Council departments may provide opportunities to improve cycling outcomes.

As the cycling network in the Surf Coast is under the jurisdiction of multiple agencies, the approach to planning for cycling should be strategic and collaborative.

### 8. THE STRATEGY

#### **APPROACH** 8.1

The overall approach to the development of the Strategy is to be clear, realistic and flexible with regard to what can be achieved in its five-year span. The Strategy outlines what Council should prioritise for investment and advocacy over the next five years to ensure resources are focused on delivering improvements of greatest benefit.

The Strategy sets overarching targets and goals to realise its vision of connecting people with places through an integrated safe cycling network. An Action Plan has been developed to broadly cover the following aspects and to address current and emerging issues discussed in **Section 7**:

- Planning (e.g. for provision of new cycling infrastructure),
- Engineering (e.g. safety treatments),
- Education (e.g. user behaviour campaigns); and
- Promotion (e.g. of cycling events).

The Strategy recognises that any infrastructure delivered should be 'fit for purpose', be it for recreation, commute, or fitness. A prioritisation process, outlined in Section 8.4, identifies the priority cycling routes for recreational, commuter and fitness cyclists, and provides a tool for prioritising improvements on sections of routes.

The Strategy is informed by Victoria's Safe System principles and considers other transport modes, particularly walking. The Strategy addresses the key elements of Safe System as follows:

- Safe roads targeting high risk and exposure locations for infrastructure treatments.
- Safe speeds identifying locations where a reduction in vehicle speeds through reduced speed limits or traffic management treatments are desirable to improve cyclist safety.
- Safe people identifying opportunities to educate the community.

Collaboration with other authorities, agencies and the community is integral to the delivery of the Strategy.

#### 8.2 Targets

The three overarching targets of the Strategy are as follows:

- Target 1: To improve the safety and quality of the cycling experience;
- Target 2: To reduce fatal and serious injury cyclist crashes by 30% by 2030; and
- Target 3: To increase participation in cycling.

#### Goals 8.3

Strategic goals have been developed based on the emerging themes and issues discussed in **Section 7** to achieve the overarching targets of the Strategy and accomplish its Vision.

#### Goal 1: A connected, accessible and integrated cycling network

The Strategy aims to complete priority routes and missing links to provide improved connections to key destinations across Surf Coast Shire and facilitate safe access by all types of cyclists.

The background review and consultation has identified missing links and preferred routes, both on-road and off-road, to be prioritised for funding investment.

New and upgraded cycling infrastructure should meet the minimum criteria outlined below. The criteria have been established with regard to relevant Austroads and DoT guides. Table 1, Table 2 and Table 3 summarise the adopted minimum width criteria for shared pathways, two-way bicycle paths and on-road cycle lanes respectively.

Notwithstanding these adopted minimum standards, all upgrades and new infrastructure should consider the guidelines set within the Austroads Guide to Road Design Part 6A Paths for Walking and Cycling. In particular, widths may need to increase to meet the operational characteristics and user needs of the individual routes. Similarly, consideration should be given to separation of pedestrians and cyclists where there are safety or conflict issues, such as where there are high volumes of pedestrians and/or cyclists. This analysis will form part of the detailed design of individual upgrades and new infrastructure provision.

SHARED PATHWAYS	MINIMUM WIDTH
	IN METRES
Recreation/open space reserves within townships	
High volume areas, such as Foreshore	3.0m
All other locations	2.5m
Road reserves	
Abutting front of property boundaries with no clearance	3.0m
Abutting rear/side of property boundaries	2.5m
Abutting front of property boundaries with clearance	2.5m
Abutting school boundaries	2.5m
Outside of townships	2.0m

 Table 1: Width Criteria for Shared pathways

TWO-WAY CYCLE PATHWAYS	MINIMUM WIDTH
	IN METRES
Recreation/open space reserves within townships	
all locations	2.5m
Road reserves within townships	
all locations	2.5m
Outside of townships	2.0m

 Table 2: Width Criteria for Cycle pathways

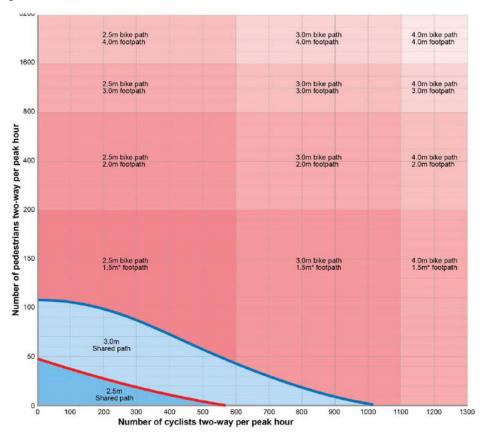
ON-ROAD CYCLE FACILITY	MINIMUM WIDTH (METRES) FOR EXISTING FACILITY		MINIMUM WIDTH (METR FOR NEW FACILITY	
	60 KM/H OR LESS <sup>1</sup>	ABOVE 60 KM/H¹	60 KM/H OR LESS <sup>1</sup>	ABOVE 60 KM/H <sup>1</sup>
On-road cycle lane	1.2m	1.5m	1.5m	1.8m
Shared on-road cycle and parallel parking lane	3.3m	N/A	3.7m	N/A
Shoulders on cycling routes (applicable to rural roads)	1.2m	1.5m	1.5m	1.8m

Note 1: the posted speed limit is used, unless  $85^{\rm th}$  percentile speed is known

**Table 3:** Width Criteria for On-road Cycle lanes and shoulders

Separated paths should be considered where pedestrian and cyclist volumes exceed the numbers shown in Source: Austroads Guide to Road Design Part 6A: Paths For Walking **And Cycling** 





Source: Austroads Guide to Road Design Part 6A: Paths For Walking And Cycling

Figure 4: path type (separated path to be provided where shaded pink)

As the use of electric bicycles and scooters (E-bikes and E-scooters) increases in the future, the infrastructure needs and safety risks for this mode will need explicit consideration, in line with any future regulatory requirements. Notwithstanding this, consideration should be given to this emerging technology at the project development and design stage of individual infrastructure and integrated planning projects.

Share-bicycles with dockless bicycle technology may present challenges for Council in the future. Council should ensure that share bike operators are accountable for their bicycles.

### **Goal 2: Safe Cycling Infrastructure**

Cyclist safety is an emerging road safety issue in Surf Coast with cyclist crashes increasing from 6% of total crashes in the previous five-year period to 9% in the recent five-year period. Safety was identified as the top reason by the community why they cycle less often than they would like to in Surf Coast. The Strategy aims to improve cyclist safety and stress through provision of improved infrastructure appropriate for the intended users (be it recreation, commuter or fitness cyclists), addressing high risk identified crash locations and improving maintenance of on-road and off-road facilities. To meet the crash reduction target of this Strategy, a range of actions have been developed to improve safety for cyclists with infrastructure improvements focused on high use cycling routes and known crash risk areas.

Desirably a fully separated cycling facility would be provided on cycling routes where speeds and traffic volumes are high. However, separated cycling infrastructure is not feasible on all routes in the short to medium term and therefore, a transitional approach has been adopted in this Strategy, with consideration given to the intended user.

On routes where the identified bicycle users are on road fitness and training cyclists, the approach comprises of a number of suitable measures, such as the reduction in speed limits, provision of signage, etc. in addition to the provision of wider/standard shoulders or cycle lanes to reduce the likelihood of fatal and serious injury cyclist crashes.

On cycling routes with high traffic volumes intended to be used by recreational or commuter cyclists, the approach is to provide infrastructure that will fully separate cyclists from vehicles as funding becomes available.

#### Goal 3: An attractive cycling destination

Cycling events attract thousands of people every year to Surf Coast and help support the economy. Surf Coast is in unique position to foster increased cycling tourism through promotion, support for cycling events, and provision of supporting facilities at priority locations. This strategy aims to continue improving Surf Coast's image as a cycling destination.

#### Goal 4: Integrated planning for cycling

An integrated approach to planning for cycling can facilitate the future delivery of improved cycling infrastructure and connections. This includes integrated planning for cycling across Council departments and collaboration with other road agencies and land managers.

Planning for appropriate cycling connections in new developments which connect to the existing strategic cycling network is critical to ensure a well-connected and integrated cycling network into the future.

This strategy aims to plan, design and deliver new strategic cycling routes or upgrade the existing cycling network in a more integrated and holistic manner

### Goal 5: Improved cycling partnerships and collaboration

Strong partnerships with road authorities, land managers and other organisations can improve planning and delivery of cycling infrastructure. Collaboration with community groups can support and promote cycling participation.

#### Goal 6: A safe and inclusive cycling culture to encourage participation

The Strategy aims to improve safety for all road and path users with respect to cycling and encourage cycling participation.

Improving cycling safety will require more than just provision of cycling infrastructure. Education and campaigns can influence driver, cyclist and pedestrian behaviour, for example in reinforcing Road Rules and path etiquette. Together with promotional

activities, participation in cycling can be encouraged. This will also be supported by provision of bike racks, drinking taps, repair stations, wayfinding signage and other infrastructure to enhance the cycling experience.

#### 8.4 Cycling Route Prioritisation

A systematic framework has been developed to inform the prioritisation of cycling infrastructure upgrades. This involved a three-step process to identify high priority locations for infrastructure upgrades. The prioritisation assessment accounts for the various needs of different types of cyclists, reflecting the community feedback.

### 8.4.1 *Identification of priority cycling routes*

The first step was to identify key cycling routes that are currently being used, or desired to be used, by the community and provide essential linkage to destinations, irrespective of the state of the existing infrastructure. Mapping of Point of Interest (POI) was carried using Council's spatial data and most recent available aerial imagery to initiate the identification of candidate cycling routes for infrastructure upgrades. Feedback from the community on missing links and desired cycling connections informed the initial identification of key cycling corridors. Stakeholder input and Strava heatmaps<sup>3</sup> formed the basis of criticality of different routes.

Priority cycling routes were identified for the three types of cyclists as follows.

#### Fitness routes

This mode predominantly represents on-road cyclists often cycling for long distances at high speeds, and often in large groups. Key fitness cycling routes were identified based on a review of routes often selected by cycling clubs or racing events and local knowledge of where road cyclists are heavily concentrated in Surf Coast. Consideration was also given to roads that provide connections to adjacent Council areas and to the current and future regional hubs catering for fitness cyclists.

#### Commuter routes

In general, commuter cyclists desire low-stress on- or off-road routes that connect to destinations such as shops, employment centres and schools. As such, regional and local commuter routes were identified that link areas of greater population to destinations having regard to the directness and likely level of service along the route.

#### Recreational routes

Recreational routes are used by people cycling for leisure, enjoyment and to visit attractions. Recreational cycling routes, both regional and local, were identified based on the community feedback, the location of recreation reserves, playgrounds, trailheads and tourist attractions such as views, beaches, etc.

Priority cycling routes for fitness, commuter and recreational cyclists are presented in Appendix E.

<sup>&</sup>lt;sup>3</sup> Strava is a social network and training tool for cyclists, runners and swimmers. Users record their physical activity using a dedicated GPS device or utilise the mobile app, and upload the file to their profile. Strava anonymised this information and makes it available through their "Global Heatmap" tool, showing aggregated all public activities over the last two years across the world.

#### 8.4.2 Short-listing of cycling routes

A targeted workshop with Steering Committee was undertaken to shortlist priority cycling routes that better align with strategic context, regional or local significance, purpose of cycling and community feedback.

**Appendix F** provides a list of shortlisted routes for further consideration.

#### 8.4.3 Development of high priority routes

Following the selection of shortlisted routes, high priority locations for infrastructure investment were determined based on:

- A level of stress rating for fitness and commuter routes using empirical data as informed by DoT's Level of Traffic Stress Methodology (prepared by WSP, Rev B, 25 June 2020) and adapted to fit the strategic nature of this application. It is noted that the shortlisted recreational routes, being predominantly off-road are assumed to be designed and delivered to generate a low-stress environment; and
- **Prioritisation scoring** based on a range of subjective and empirical criteria for all three cycling modes.

#### Level of Traffic Stress Ranking

The Victorian Cycling Strategy supports a Level of Traffic Stress (LTS) approach to investing in the cycling network. The level of traffic stress is the potential or actual stress arising from interactions with motor vehicles and varies across the network depending on numerous factors, e.g. type of cycling facility, traffic volume, vehicle speeds, intersections and crossings, etc.

People, particularly the "interested by concerned group" make their choice to cycle based on the highest level of stress they expect to encounter. In order to take up cycling as an alternative to cars, people generally want a network of low-stress cycling routes that connect them directly and conveniently to their destinations. Figure 6 of the Victorian Cycling Strategy illustrates traffic stress as four points on a scale and is reproduced below.



A stress rating was computed for the shortlisted fitness and commuter routes using the

empirical data (refer to **Appendix F**) as informed by DoT's *Level of Traffic Stress Methodology*.

## 8.4.4 Prioritisation scoring criteria

It is critical that that along with the stress rating, criteria reflecting the user perspective of the route, the volume of cyclists using or likely to use a route and the level of connection to destination provided are considered in ranking the priority of the routes. Criteria used to prioritise fitness, commuter and recreation cycling routes are summarised in **Appendix F.** 

#### 8.4.5 *Outcomes*

The high priority routes developed based on the above process are shown in **Table 4** to **Table 7.** The Tables also reference the relevant actions in the Action Plan.

RANKING	ROUTE	SECTION	REFERENCE ACTION NO.
1	Cape Otway Road	Hendy Main Road to Buckley Road South	1.5, 1.6
2	Coombes Road Cape Otway Road Blackgate Road	Messmate Road to Anglesea Road  Buckley Street South to Winchelsea-Deans Marsh Road  Pt Impossible Road to Council boundary	1.5, 1.6 1.3 1.9
3	Hendy Main Road Forest Road	Anglesea Road to Princes Highway  Great Ocean Road to Larcombes Road	1.4

Table 4: Fitness Cycling High Priority Routes

RANKING	ROUTE	SECTION	REFERENCE ACTION NO.
1	Fischer Street Horseshoe Bend Road	Merrijig Drive to White Street  Merrijig Drive to Blackgate Road	4.11 1.7, 1.8, 2.15
2	Fischer Street  Horseshoe Bend Road  Great Ocean Road	Bristol Road to Beach Road  Blackgate Road to Mt Duneed Road/Council boundary  Bells Boulevard to Duffields Road	4.11 1.7, 1.8 4.6
3	Fischer Street Surf Coast Highway Horseshoe Bend Road Great Ocean Road	Darian Road to Merrijig Drive Bristol Road to Beach Road The Esplanade to Merrijig Drive Bellbrae to Bells Boulevard and Duffields Road to Spring Creek	4.11 1.12 1.7, 1.8, 2.15 4.6

Great Ocean Road	Through Anglesea	4.12

Table 5: Regional/Primary Commuter Cycling High Priority Routes

RANKING	ROUTE	SECTION	REFERENCE ACTION NO.
1	Darian Road	Surf Coast Highway to Fischer Street	1.11
1	Noble Street	Camp Wilkin to Great Ocean Road	1.11
	Beach Road	Eton Road to Fischer Street	1.11
2	Camp Road	Anglesea shops to Wray Street	1.11
	Eton Road	Beach Road to Grossmans Road	1.11
	Camp Road	Anglesea Primary School to Wray Street	1.11
3	Noble Street	McMahon Avenue to Camp Wilkin	1.11
3	Lorne	Deans Marsh Road to Bay Street	4.8
	Aireys Inlet	Fairhaven to bottom shops	1.11

Table 6: Local Commuter/School Cycling High Priority Routes

RANKING	ROUTE	SECTION	REFERENCE ACTION NO.
1	Surf Coast Walk	Bell/The Esplanade to Deep Creek	4.7
2	Surf Coast Walk	Jan Juc to Bell Street/The Esplanade	4.7
3	Shipwreck Trail Surf Coast Walk Surf Coast Walk	Swing Bridge to Lorne Pier  Deep Creek to Sands Boulevard  Pt Roadknight to Anglesea shops	4.8 4.7 4.7
4	Surf Coast Walk Surf Coast Walk Anglesea Camp Road	Deep Creek to Sands Boulevard Pt Roadknight to Anglesea shops Main shops to Coogoorah Park Main shops to Anglesea Bike Park	4.7 4.7 1.11 1.11
5	Surf Coast Walk Surf Coast Walk Surf Coast Walk/The Esplanade Great Ocean Road path	Bells Beach Road/Jarosite track to Bells Beach car park (top end)  Bells Beach car park (top end) to Jan Juc  Sands Boulevard to Pt Impossible  Hurst Road trailhead to Ironbark Basin  trailhead	4.7 4.7 1.9 4.9
	Ironbark Basin	Trailhead to Bells Beach Road	4.7

Table 7: Recreation/Tourist Cycling High Priority Routes

### 8.5 Action Plan

An action plan has been developed to guide Council and its partners in delivering targeted, safer cycling initiatives to realise the above goals.

For each action, responsibility for implementation has been nominated. In addition, a performance measure and timeframe has been identified to allow implementation of the strategy to be monitored.

CYCLI	CYCLING STRATEGY LEADERSHIP						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
L.1	Develop a business case for provision of an active transport officer on a part-time basis. This officer would be responsible for implementation and monitoring of actions identified in the Safer Cycling Strategy.	Engineering Services & Social Infrastructure Planning	An active transport officer appointed	End-2022			
L.2	Ensure Safe System principles are incorporated into planning and delivery of both Council and developer funded cycling infrastructure.	Project Management Office  Development Engineering  Planning	Safe System Assessments undertaken where required	Ongoing			
L.3	Develop an overall business case for investment to priority cycling routes to support grant applications where required	Active Transport Officer supported by: Social Infrastructure Planning Design and Traffic Road Safety Officer	Business case developed	Early 2023			
L.4	Evaluate implementation of Action Plan and overall effectiveness of the Safer Cycling Strategy	Active Transport Officer	Strategy evaluation report	End 2027			

GOAL	GOAL 1: A CONNECTED, ACCESSIBLE AND INTEGRATED CYCLING NETWORK						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
1.1	Develop funding applications and/or advocate to state/federal government for provision of high priority shared pathways, cycle pathways and on-road cycle lane connections as listed in 1.3, 1.6 and 1.11.	Active Transport Officer supported by: Social Infrastructure Planning Design and Traffic Road Safety Officer	Minimum one funding application per year	Each year			

GOAL	. 1: A CONNECTED, ACCESSIBLE AND INTEGRATED CYCLING NETWORK			
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME
1.2	Develop business cases to fund provision of cycling network improvements as recommended by the Strategy.	Active Transport Officer supported by: Social Infrastructure Planning Design and Traffic Road Safety Officer	Business case developed	Each year
1.3	Provide new shoulders according to the width criteria provided in Table 3, in conjunction with upcoming renewal/upgrade/rehabilitation works where possible, to complete the missing link at the following high priority fitness/training cycling routes:  - Cape Otway Road – Buckley Road South to Marshmans Outlet (approx. 1.3km)  - Cape Otway Road – Parish Lane to Winchelsea-Deans Marsh Road (approx. 4km)  - Forest Road – south of Gum Flats Road (approx. 6.9km)	Project Management Office Asset Management Design and Traffic	2.5km of shoulders provided per year on average	End of 2027
1.4	Advocate to DoT for provision of new shoulders according to the width criteria provided in Table 3 to complete missing links at the following high priority fitness/training cycling routes:  - Hendy Main Road – Anglesea Road to Greenfield Drive (approx. 13.5km)  - Hendy Main Road – Princes Highway to Cape Otway Road (approx. 3.1km).	Design and Traffic	Submission to DoT	End of 2022
1.5	Leverage existing proposed capital works at the following high priority fitness/training cycling routes for provision of on-road cycling infrastructure according to the width criteria provided in Table 1:  - Coombes Road (Surf Coast Highway to Ghazeepore Road)  - Cape Otway Road (Lloyd Mews to Lowndes Road)  - Grays Road (Hendy Main Road to Flaxbournes Road)	Project Management Office  Design and Traffic	Cycling infrastructure incorporated into capital works	End of 2022

GOAL	GOAL 1: A CONNECTED, ACCESSIBLE AND INTEGRATED CYCLING NETWORK					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
1.6	Provide wider shoulders according to the width criteria provided in Table 3 in conjunction with upcoming renewal/upgrade/rehabilitation works where possible, at the following high priority fitness/training cycling routes:  - Coombes Road – Ghazeepore Road to Anglesea Road (approx. 3km).  - Cape Otway Road – Church Road/Hortips Road to Buckley Road South (approx. 6km).  Consider options to reallocate road space to provide additional space for cycling facility (i.e. reduce traffic lane width) where funding for road widening is not available. For roads with speed limit of 60 km/h or less, traffic lane width could be reduced to 2.9 m. For roads with speed limit of 70 or 80 km/h or less, traffic lane width could be reduced to 3.1m where AADT is up to 1,000 vehicles per day or 3.3m where large trucks are present.	Project Management Office  Design and Traffic  Asset Management	2km of widened shoulder provided per year on average	End of 2027		
1.7	Advocate to DoT for the inclusion of the following priority commuter routes as Strategic Cycling Corridors with upgrades recommended to reach target of low stress cycling environment:  - Fischer Street – South Beach Road to Bristol Road.  - Horseshoe Bend Road – Mt. Duneed Road to The Esplanade.	Executive Management  Economic Development  supported by:  Design and Traffic	Submission to DoT	End of 2023		
1.8	Seek funding to deliver a strategic low-stress cycling link to Armstrong Creek via a shared pathway or separated cycle lanes along Horseshoe Bend Road from The Esplanade. The section north of South Beach Road is to be prioritised to enable both commuter and recreational connection to the City of Greater Geelong.	Executive Management  Economic Development  supported by:  Design & Traffic	Business case developed, background study undertaken and funding sought	End of 2025		
1.9	In collaboration with GORCAPA, seek funding to deliver a strategic low-stress and multi-purpose cycling link to the Thirteenth Beach bike trail from Torquay comprising:  - a sealed and shared road (with a 30 km/h speed limit) for cars and cycles in the unsealed section of The Esplanade with separated pedestrian path.	Executive Management and Economic Development Supported by:	Business case developed, background study undertaken and funding sought	End of 2026		

GOAL	GOAL 1: A CONNECTED, ACCESSIBLE AND INTEGRATED CYCLING NETWORK					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
	- a sealed shared pathway from The Esplanade to Pt Impossible Road.	Social Infrastructure Planning				
	- a sealed and shared road (with a 30 km/h speed limit) for cars and cycles on Pt Impossible Road.	Design and Traffic				
	- a sealed shared pathway or separated/protected cycle lanes along Blackgate Road					
	from Pt Impossible Road to Breamlea Road, or a shared pathway across Thompsons					
	Creek and Karaaf wetlands .					
1.10	Seek funding to deliver a strategic low-stress and multi-purpose cycling link between	Executive Management	Business case developed, background study	End of 2027		
	Surf City and Torquay Town Centre via a shared pathway or separated/protected	Economic Development	undertaken and funding sought			
	cycle lanes along Bristol Road.	Supported by:				
		Design and Traffic				
		Designand frame				
1.11	Provide a shared pathway or protected cycle lanes according to the width criteria	Project Management Office	Deliver two projects	End 2027		
	provided in Table 1 or Table 2 at the following high priority commuter and/or school cycling routes:	Design and Traffic				
	- Eton Road/Beach Road to the Spring Valley bike park, including bridge across Spring					
	Creek, Torquay (DCP funded project).					
	- Great Ocean Road to the Spring Valley bike park in drainage reserve.					
	- Spring Creek bridge to Surf Coast Highway along the northern boundary of Spring					
	Creek Recreation Reserve.					
	- Darian Road – Surf Coast Highway to Fischer Street. - Beach Road – Eton Road to Fischer Street.					
	- Eton Road – Beach Road to Grossmans Road.					
	- Noble Street – McMahon Avenue to River Reserve Road.					
	- Camp Road – Anglesea shops to Primary School/bike park (also catering for					
	recreation cyclists).					
	- Fairhaven to Aireys Inlet Primary School.					

GOAL	GOAL 1: A CONNECTED, ACCESSIBLE AND INTEGRATED CYCLING NETWORK					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
1.12	Advocate to DoT or seeking funding for provision of a shared pathway according to the width criteria provided in Table 1 to complete a missing link at the following high priority commuter cycling routes:  - Surf Coast Highway – Spring Creek Recreation Reserve to Grossmans Road.  Consider leveraging the service roads with appropriate traffic management treatments as part of this network connection.	Design and Traffic	Submission to DoT	End 2025		
1.13	Review movement and place classification of priority cycling routes to ensure they reflect appropriate desirable cyclist classifications.	Design and Traffic  Social Infrastructure Planning	Review undertaken	End of 2023		
1.14	Advocate to DoT for provision of safe crossing points at the following priority locations:  - The Great Ocean Road / Strathmore Drive (West), Jan Juc.  - The Great Ocean Road at Spring Creek, Torquay.	Design and Traffic	Submission to DoT	End of 2023		
1.15	Ensure provision of a safe cyclist crossing at the Surf Coast Highway/Bristol Road intersection through signalisation.	Project Management Office	Signalisation completed	End of 2023		

GOAL	GOAL 2: SAFE CYCLING INFRASTRUCTURE					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
2.1	Submit funding applications (TAC, state or federal) for upgrades to priority cycling facilities, provision of safe crossing points and/or intersection treatments listed in 2.2-2.5, 2.7 and 2.8.	Engineering Services	Minimum one funding application per year	Each year		
2.2	Develop and provide consistent Shared Path signage and/or pavement markings where pathways meet minimum standards outlined in Table 1. Priority paths from the	Design and Traffic	2 projects per year	Each year		

GOAL	GOAL 2: SAFE CYCLING INFRASTRUCTURE					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
	cycling network maps (refer to Appendix A) for provision of signage/pavement markings are:					
	<ul> <li>Nautical Rise, Torquay.</li> <li>South Beach Road, Torquay.</li> <li>North Torquay fronting Surf Coast Highway.</li> <li>Deep Creek Reserve west of Fischer Street, Torquay.</li> <li>Coogoorah park, Anglesea.</li> <li>Anderson Street, Winchelsea.</li> <li>Main Street, Winchelsea.</li> </ul>					
2.3	Advocate to GORCAPA for provision of consistent Shared Path signage and/or pavement markings where Surf Coast Walk meets minimum standards for shared paths as outlined in Table 1. Priority sections of path from the cycling network maps for provision of signage/pavement markings are:  - Torquay Foreshore Deep Creek Reserve to Beach Road.  - Little Rock lookout point to Bells Beach.  - Hurst Drive/Edgewater Crescent to Anglesea Caravan Park.	Social Infrastructure Planning	Submission to GARCAPA	End of 2023		
2.4	Establish and install consistent signage (W6-V11), messaging boards, pavement marking (Share Road with Cyclists), etc. on the following rural roads if/when separation of cyclists and drivers (with cycle lane, shoulder, etc.) cannot be achieved due to physical or funding constraints:  - Cape Otway Road between Hendy Main Road and Winchelsea-Deans Marsh Road.  - Horseshoe Bend Road between Blackgate Road and Mt Duneed Road.  - Forest Road north of the Great Ocean Road.  - Blackgate Road between Horseshoe Bend Road to Pt Impossible Road.	Design and Traffic	Standards established and signage installed	End of 2023		
2.5	Provide bicycle 'sharrow' pavement symbols at roundabouts on the following high priority cycling routes where cycle lanes are terminated prior to the roundabouts:	Design and Traffic		End 2024		

GOAL	GOAL 2: SAFE CYCLING INFRASTRUCTURE						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
	<ul> <li>Bell Street, Torquay.</li> <li>Fischer Street, Torquay.</li> <li>Horseshoe Bend Road, Torquay.</li> <li>Grossmans Road/Eton Road, Torquay.</li> <li>Noble Street/Murray Street, Anglesea.</li> </ul>						
2.6	Advocate DoT to provide painted cycle lanes and bicycle boxes on priority cycling routes at the following signalised intersections:  - Great Ocean Road/Duffields Road, Jan Juc  - Great Ocean Road/Hoylake Avenue, Jan Juc	Design and Traffic	Submission to DoT	End of 2024			
2.7	Review 100km/h speed limits on key fitness cycling routes and seek a reduction in speed limits to a maximum of 80km/h where appropriate. The following list of routes should be reviewed as a priority:  - Grossmans Road.  - Cape Otway Road.  - Ghazepore Road.  - Coombes Road.  - Blackgate Road west of Horseshoe Bend Road.  - Atkins Road.  - Buckley Road South.  - Grays Road.	Design and Traffic	Application to DoT submitted	End of 2022			
2.8	Develop and implement a shared road zone and LATM treatments to encourage lower speeds (30 km/h or less) on priority cycling routes as follows:  - River Reserve Road, Anglesea.  - Strathmore Drive West, Jan Juc.  - Pt Impossible Road, Torquay.  - Unsealed section of The Esplanade, Torquay.	Design and Traffic	Application to DoT submitted	End of 2022			

eek changes to Road Management Plan to set criteria for intervention actions regeted to shoulders and cycle lanes on priority cycling routes as identified in the etwork maps to mitigate hazards/defects such as spillage/obstruction, potholes, tting and water across roads and vegetation clearance if detected during reactive proactive inspections.  The changes to Road Management Plan to classify all shared paths in road, park and creation reserves as identified in the network maps as Primary Pathway, and apply lated inspection program and intervention actions.	RESPONSIBILITY  Asset Management  Operations  Asset Management	Review completed and changes adopted as appropriate	End of 2026
rgeted to shoulders and cycle lanes on priority cycling routes as identified in the etwork maps to mitigate hazards/defects such as spillage/obstruction, potholes, tting and water across roads and vegetation clearance if detected during reactive proactive inspections.  The changes to Road Management Plan to classify all shared paths in road, park and creation reserves as identified in the network maps as Primary Pathway, and apply	Operations	appropriate	End of 2026
creation reserves as identified in the network maps as Primary Pathway, and apply	Asset Management		
	Operations	Review completed and changes adopted as appropriate	End of 2026
eek changes to Road Management Plan to add intervention criteria for lateral egetation clearance for primary pathways.	Operations	Review completed and changes adopted as appropriate	End of 2026
dvocate increased maintenance of the following priority cycling routes on roads anaged by DoT, including: Hendy Main Road. Great Ocean Road.	Active Transport Officer DoT	Submission to DoT	Ongoing
stablish level of service agreement with DELWP/GORCAPA for maintaining priority cling routes and mountain bike trails to a consistent standard.	DELWP GORCAPA Active Transport officer	Agreement executed	Ongoing
ncourage community to report maintenance issues through Council's website.	Communications Team	Promotion on Council website or other medium	Annually
ek funding through Federal Blackspot Program or alternate funding source to	Design and Traffic	Funding application submitted	End of 2022
nce	ing routes and mountain bike trails to a consistent standard.  burage community to report maintenance issues through Council's website.  c funding through Federal Blackspot Program or alternate funding source to dement the following along Horseshoe Bend Road:  otected on-road cycle lanes between South Beach Road and Quay Boulevard.	GORCAPA Active Transport officer  ourage community to report maintenance issues through Council's website.  Communications Team  refunding through Federal Blackspot Program or alternate funding source to lement the following along Horseshoe Bend Road:  Design and Traffic	GORCAPA Active Transport officer  Community to report maintenance issues through Council's website.  Communications Team  Promotion on Council website or other medium  of funding through Federal Blackspot Program or alternate funding source to element the following along Horseshoe Bend Road:  Ottected on-road cycle lanes between South Beach Road and Quay Boulevard.

GOAL	GOAL 2: SAFE CYCLING INFRASTRUCTURE					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
	<ul> <li>The 50 km/h speed limit south of South Beach Road.</li> <li>Sharrows pavement marking on each approach to and within roundabouts south of South Beach Road.</li> </ul>					
2.16	Seek funding through Federal Blackspot Program or alternate funding source to implement the following treatments along Bell Street, Torquay between Surf Coast Highway and The Esplanade:	Design and Traffic	Funding application submitted	End of 2025		
	- Green surface treatment to cycle lanes. - Install removable speed cushions at regular intervals.					
2.17	Review all road reconstruction and upgrade projects on priority cycling routes including new roundabouts for implications to cyclist safety.	Design and Traffic	Road reconstruction projects and new roundabouts reviewed	Ongoing		

GOAL	GOAL 3: AN ATTRACTIVE CYCLING DESTINATION					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
3.1	Develop and promote Surf Coast cycling video.	Events and Tourism	Video developed and promoted	Mid-2022		
3.2	Develop/refresh maps of cycling routes for fitness and recreational cyclists that can be promoted/accessed on Council's website and GPS-enabled mobile/fitness devices with hardcopies available at Visitor Centre and major tourist destinations.	Events and Tourism Information Technology	Maps developed/refreshed and available for use	End 2024		
3.3	Identify and prioritise key locations (e.g. at trailheads) where supporting facilities are desirable, such as toilets, water taps, information boards, shelters, etc.  Develop a business case for provision of facilities.	Economic Development Parks Vic GORCAPA Social Infrastructure Planning	Prioritised list of supporting facilities at key locations Submit business case	End 2022 Each year		

3	Provide cycling safety messaging on VMS, potentially with warning lights on targeted fitness cycling routes during holiday periods.	Department of Transport  Road Safety Officer	Provide VMS and/or warning lights on at least 2 routes during holiday periods.	Ongoing
3	Review existing cycling safety messaging coinciding with cycling events to find opportunities for improvements.	Events and Tourism  Communications Team	Review undertaken	End of 2023
3	Review messaging and locations for improvements, to reduce disruption and improve safety and continue to provide event access and traffic management.	Events and Tourism  Design & Traffic	Review undertaken	End of 2023

GOAL	SOAL 4: INTEGRATED PLANNING FOR CYCLING					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
4.1	When planning for growth and new development consideration of the provision for cycling within and through the development to be incorporated into the planning process. This should include consideration of cycling connections to services, recreational spaces, key destinations and connect to the overall cycling network. This may occur at various stages in development planning, including but not limited to the preparation of Precinct Structure Plans, Structure Plans and Development Plans, and the consideration of planning permit applications including applications for subdivision.	Planning  Development Engineering	Developers of new land releases to be required to incorporate appropriate cycling provision	Ongoing		
4.2	Adopt the minimum criteria set within Austroads Guide to Road Design Part 6A; Paths for Walking and Cycling and within IDM standard drawings for provision of shared cycling facility on designated cycling routes through new subdivisions i.e. currently:  - 2.5m (minimum width) wide shared primary pathway with 0.5m clearance on each side of path on one side of proposed primary and secondary access roads as	Planning  Development Engineering	Criteria adopted for provision of shared paths on designated cycling routes through new developments	Ongoing		

GOAL	GOAL 4: INTEGRATED PLANNING FOR CYCLING						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
	described in Council's Road Management Plan 2.5m shared primary pathway with 0.5m clearance on each side of path within proposed parks and recreation reserves.						
4.3	Adopt the following minimum criteria for provision of cycling infrastructure in new subdivisions on all of the proposed primary and secondary collector roads as described in Council's Road Management Plan:  - 1.5m wide on-road cycle lane in each direction.  - Shared path to be provided on one side of the road. The shared path width to be in accordance with table 5.4 in Austroads Guide to Road Design Part 6A; Paths for Walking and Cycling taking into consideration projected pedestrian and cyclist volumes. A minimum clearance of 0.5m to be provided on each side of path.	Planning  Development Engineering	Criteria adopted for provision of cycling facilities on proposed primary and secondary collector road in new developments	Ongoing			
4.4	Prepare submission to the Local Government Infrastructure Design Association to adopt modified minimum criteria for provision cycling facilities in new subdivisions in the Infrastructure Design Manual (IDM) to align with Austroads Guide to Road Design Part 6A; Paths for Walking and Cycling. Consideration should be given within the submission to increasing the offset from the property boundary from 500mm to 1m.	Development Engineering	Submission prepared	End 2022			
4.5	Consider provision of cycling infrastructure in township place-making/urban renewal projects.	Integrated Planning Project Management Asset Management	Cycling infrastructure considered for place- making/urban renewal projects	Ongoing			
4.6	Advocate to DT/ state and federal government or seek funding for provision of low- stress shared use path along the Great Ocean Road between Bellbrae and Spring Creek to cater for commuter and recreational cyclists, and children riding to school. Consider leveraging Old Great Ocean Road and the Great Ocean Road Service Road (with appropriate traffic management treatments) as part of this connection.	DoT Culture and Community Economic Development	Submission to DoT	End 2025			

GOAL	GOAL 4: INTEGRATED PLANNING FOR CYCLING						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
4.7	Advocate to DELWP / GORCAPA to investigate width upgrades to Surf Coast Walk or complete missing links identified in infrastructure mapping (refer to Appendix A) according to the width criteria provided in Table 1 at high priority locations as follows:  New sealed cycling path – Torquay Playground/Zeally Bay Road to Sand Boulevard.  Wider pathway or separate cycling path – Spring Creek to Torquay Playground/Zeally Bay Road (where required).  Wider pathway – Jan Juc to Spring Creek (where required).  New cycling path – southern side of Bells Beach Road between Jarosite Track and eastern end of the Bells Beach car park.  Wider pathway – Pt Roadknight to Anglesea shops.	Social Infrastructure Planning Recreational Planner	Submission to DELWP/GORCAPA	End 2022			
4.8	Advocate to DELWP / GORCAPA to investigate width upgrades to Shipwreck Trail in Lorne as identified in infrastructure mapping (refer to Appendix A) according to the width criteria provided in Table 1.	Social Infrastructure Planning Recreational Planner	Submission to DELWP/GORCAPA	End 2022			
4.9	Advocate to DEWLP / GORCAPA and DoT to investigate formalisation of an off-road cycling link between Anglesea bike park at Camp Road and Surf Coast Walk at Pt Addis via Firebreak track, Ixodia track, Great Ocean Road path and Jarosite track for recreational purposes, as shown in priority cycling route mapping (Refer to Appendix E).	Social Infrastructure Planning Recreational Planner	Submission to DELWP/GORCAPA	End 2022			
4.10	Seek funding for the investigation of safe crossing points at Merrijig Drive in Torquay North.	Active Transport Officer Engineering Services	Grant funding application	End 2023			
4.11	Seek funding for the investigation of safe and low-stress cycling connection options along Fischer Street.	Active Transport Officer Engineering Services Design and Traffic	Grant funding application	End 2022			

GOAL	GOAL 4: INTEGRATED PLANNING FOR CYCLING					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
4.12	Advocate to DoT to undertake a cyclist safety study along Great Ocean Road in Surf Coast Shire to identify opportunities to improve safety including the development of Safe System treatments to reduce fatal and serious injury crashes.	Active Transport Officer  Design and Traffic	Submission to DoT	End 2023		

GOAL	GOAL 5: IMPROVED CYCLING PATNERSHIPS AND COLLABORATION						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
5.1	At regular meetings with DoT, include 'Safer Cycling Strategy' as an agenda item to discuss strategy updates, Principal Bicycle Network (PBN) and Strategic Cycling Route (SCC) planning, infrastructure provision, safety programs and funding opportunities.	Design and Traffic DoT	Safe Cycling Strategy included as agenda item	Each meeting			
5.2	Collaborate with adjacent road authorities to share ideas in the cyclist safety space and alignment of messaging, education and promotion campaigns.	Design and Traffic  Social Infrastructure Planning  Communications Team	Discussion with adjacent road authorities	Each year			
5.3	Facilitate meetings every six months between planning, asset management, economic development, tourism, open space, social infrastructure and traffic departments to discuss the upcoming work and collaboration opportunities in the cycling space.	All Council departments listed in Action	Meeting scheduled	Every 6 months			
5.4	Include cycling safety as an agenda item in regular road safety liaison meetings between G21 Councils, DoT, TAC and police to improve safety of cyclists in Surf Coast.	Executive Management Design and Traffic Road Safety Officer	Cycling safety included as agenda item	Each meeting			
5.5	At regular meetings with DELWP and GORCAPA, include cycling safety as an agenda item to discuss cycling issues, opportunities and upcoming works.	Social Infrastructure Planning	Cycling safety included as agenda item	Each meeting			

GOAL	GOAL 5: IMPROVED CYCLING PATNERSHIPS AND COLLABORATION						
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME			
5.6	Collaborate with community groups to support and promote cycling participation.	Events and Tourism  Youth Services  Communications Team	Make contact with community groups	Each year			

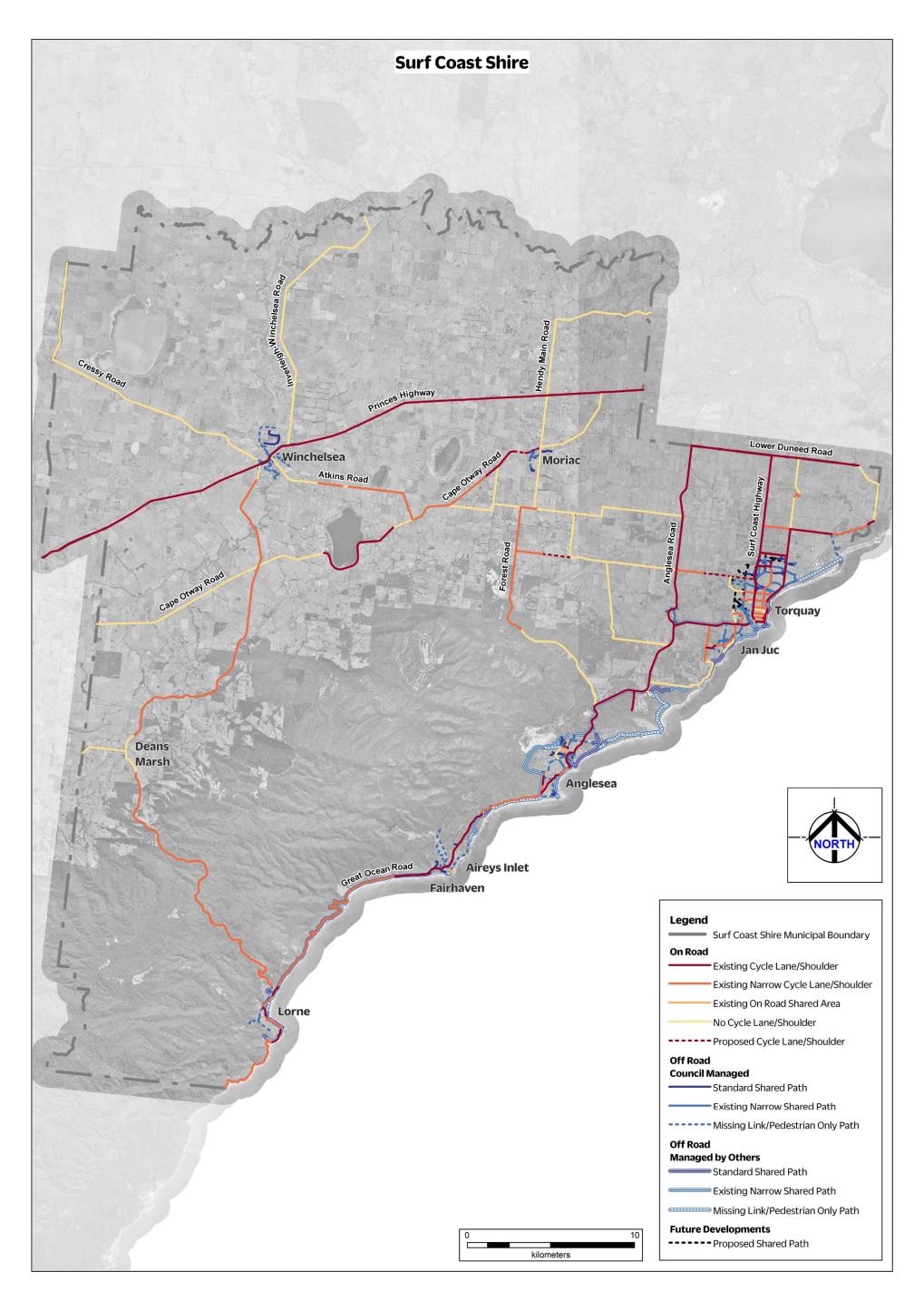
GOAL	GOAL 6: A SAFE AND INCLUSIVE CYCLING CULTURE TO ENCOURAGE PARTICIPATION					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
6.1	Develop a strategy to educate all road users on cyclist safety and to educate cyclists on safe interactions with other road and path users.	Road Safety Officer  Communications Team	Development and adoption of strategy	End of 2022		
6.2	Support and develop a targeted program to increase awareness of cycling laws among all road users, including rules for riding on footpaths, and provide safe cycling messaging (such as, 'shared the road' and 'share the path') in partnership with cycling advocacy groups, partner land and road managers.	Road Safety Officer Communications Team Events and Tourism Positive Ageing/ Access and Inclusion Officer	2 initiatives implemented	End 2026		
6.3	Work with schools to encourage students and parents to safely ride to school and participation in Bike Ed programs.	Road Safety Officer Health and Wellbeing Team Youth Officer	Number of students cycling to school	Ongoing		
6.4	Continue to implement Active Paths to Schools program.	Active Transport Officer  Health and Wellbeing Team  Youth Officer	Program implemented in 2 schools Business case submitted	Each year End of 2022		

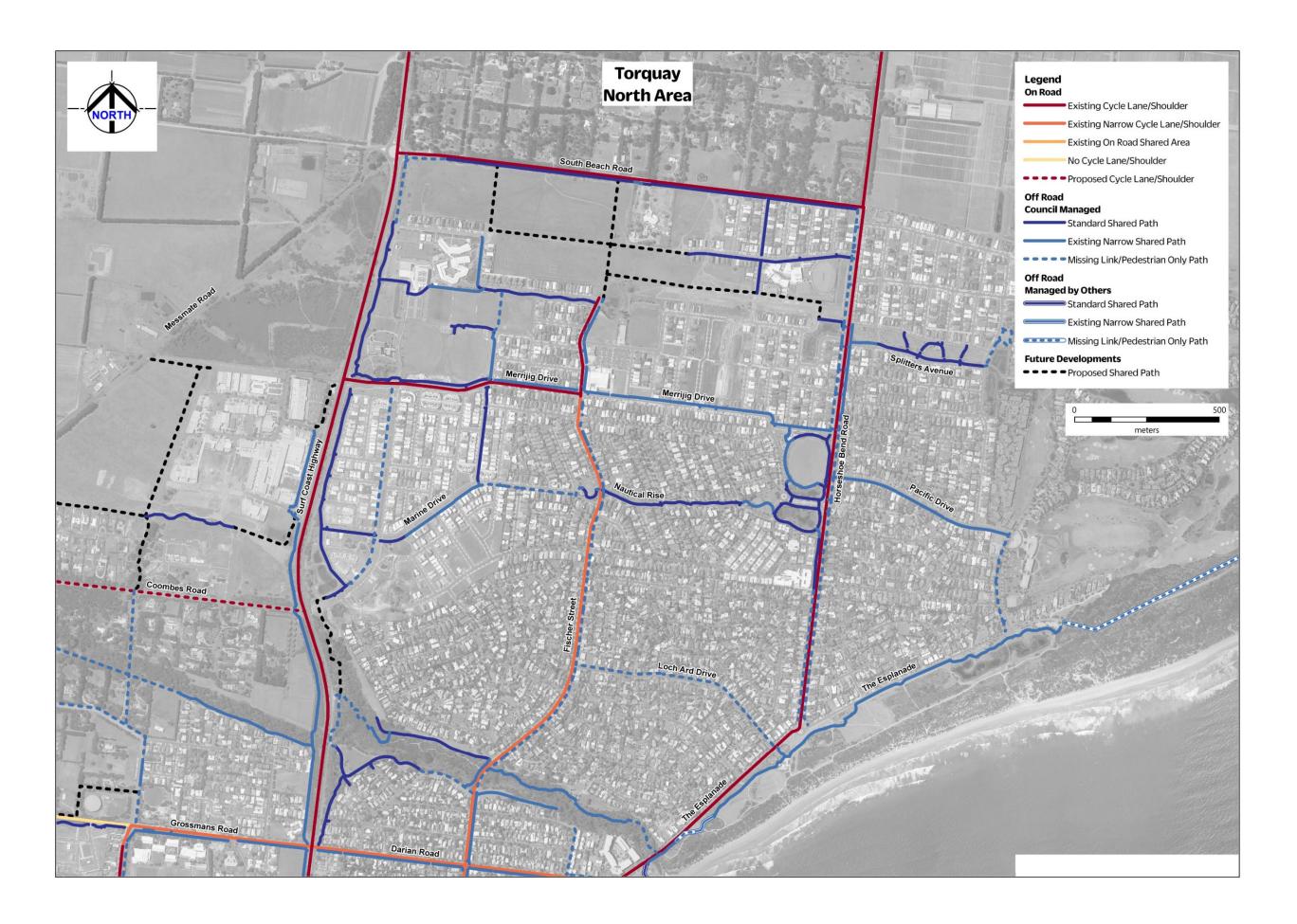
GOAL	GOAL 6: A SAFE AND INCLUSIVE CYCLING CULTURE TO ENCOURAGE PARTICIPATION					
	ACTION	RESPONSIBILITY	PERFORMANCE MEASURE	TIMEFRAME		
6.5	Identify priority locations and deliver supporting infrastructure such as bicycle rails, drinking taps, repair stations and e-bike charging stations. Ensure bicycle parking is accessible and conveniently located at key destinations, e.g. shopping centres, recreation centres, schools, tourist attractions and bus stops, and is provided in accordance with Australian Standard AS2890.3.	Social Infrastructure Planning Economic Development	5 amenity projects	End 2026		
6.6	Seek funding to deliver cycling wayfinding signage for destination-based route guidance at the following high priority recreational/tourist routes:  - Surf Coast Walk, Pt Impossible to Bells Beach.  - Bells Beach to Anglesea shops via Ironbark Basin, Pt Addis Road, Great Ocean Road path, Firebreak track and Camp Road.  - Surf Coast Walk, Anglesea shops to Pt Roadknight.  - Shipwreck trail, Lorne.	Social Infrastructure Planning Economic Development Events and Tourism	Business case submitted	End of 2024		
6.7	Continue police presence on popular cycling routes during peak periods (e.g. holidays, during events).	Victoria Police	Police presence	Per year		
6.8	Include questions relating to cycling in State's annual survey to gauge cycling participation and highlight Council's commitment to cycling.	Communications Team	Cycling related questions included in State's Annual Survey	Each year		
6.9	Consult with local cycling clubs, shops and event organisers to identify opportunities to distribute safe and considerate cycling information developed through Actions 6.1 and 6.2.	Communications Team  Events and Tourism		ongoing		
6.10	Develop and implement trial programs, such as pop-up cycleways, shared streets and active transport streets to promote cycling culture and improve acceptance and interactions between cyclists and other modes. Align with community road safety program.	Road Safety Officer  Events and Tourism  Communications	2 trial programs	End 2026		

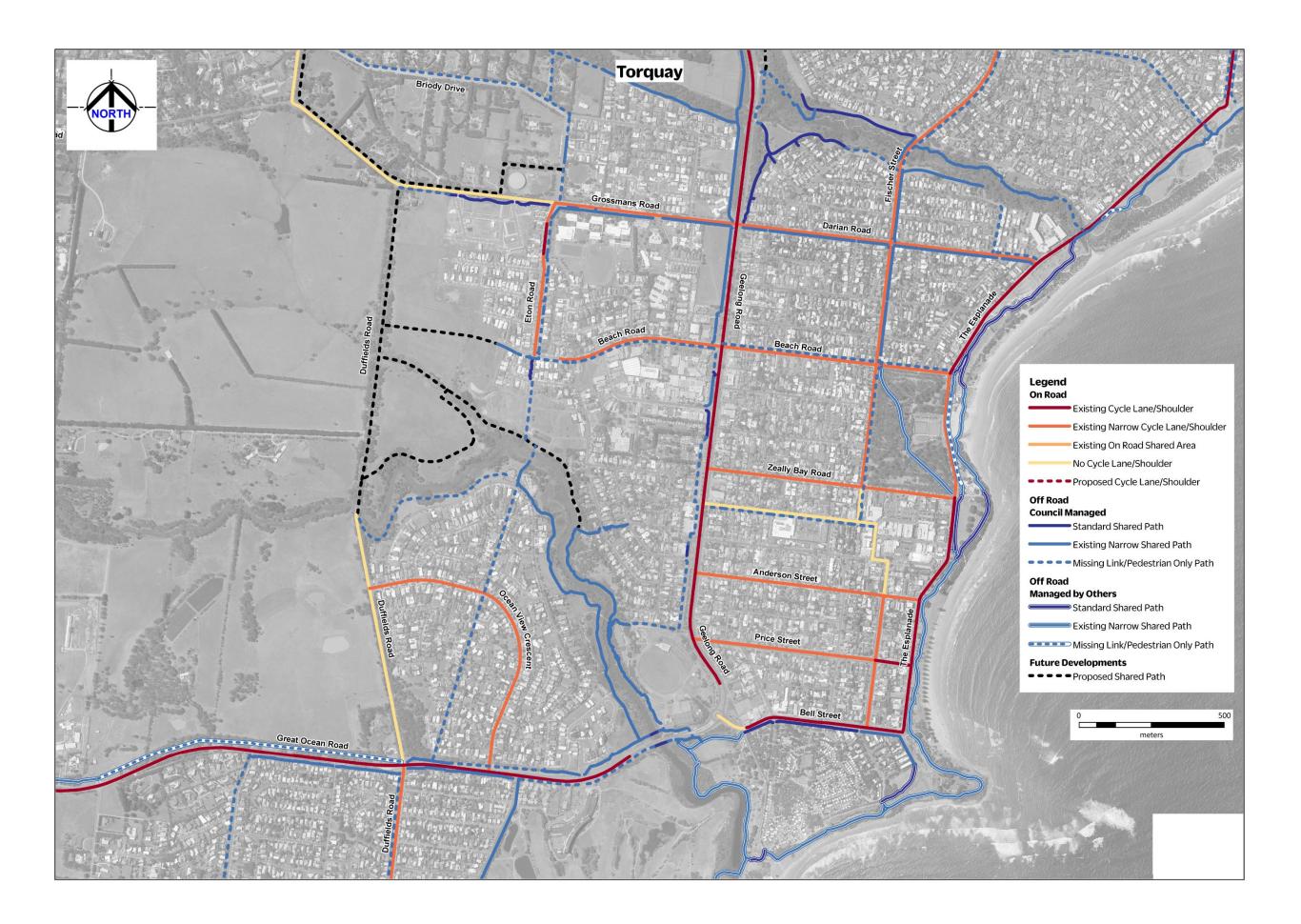
## **SAFER CYCLING STRATEGY 2022 – 2027**

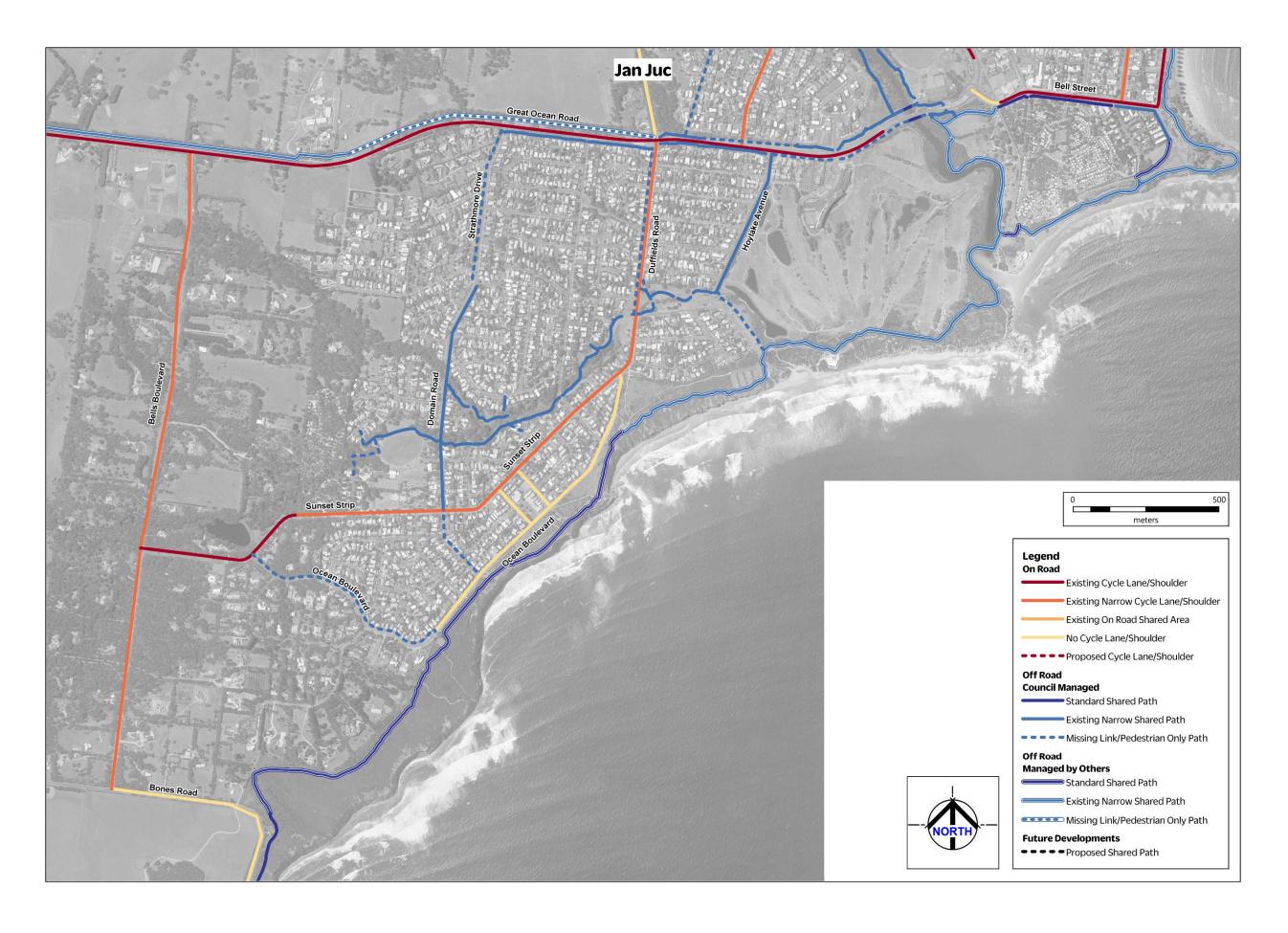
# **APPENDIX A**

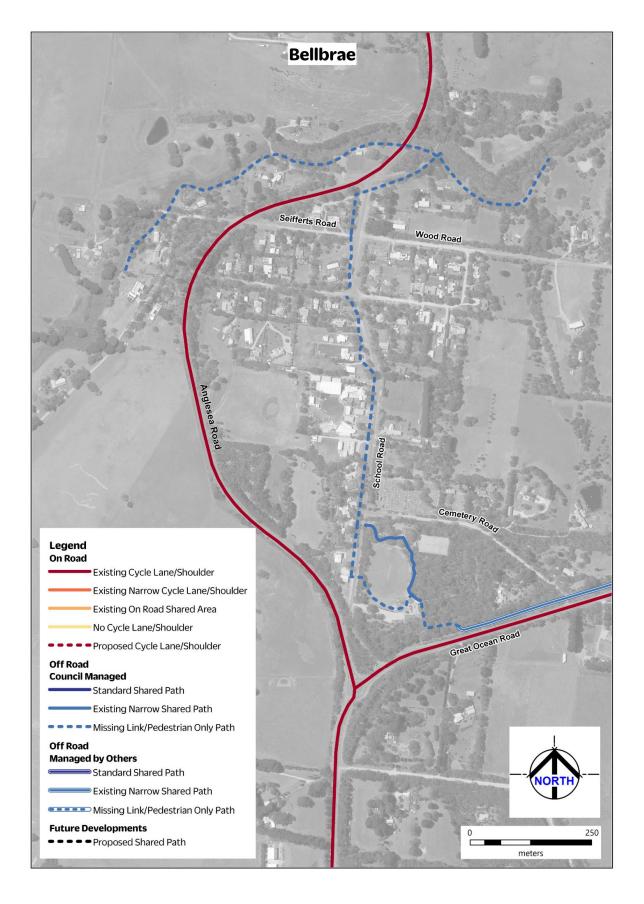
**Surf Coast Cycling Network Maps** 

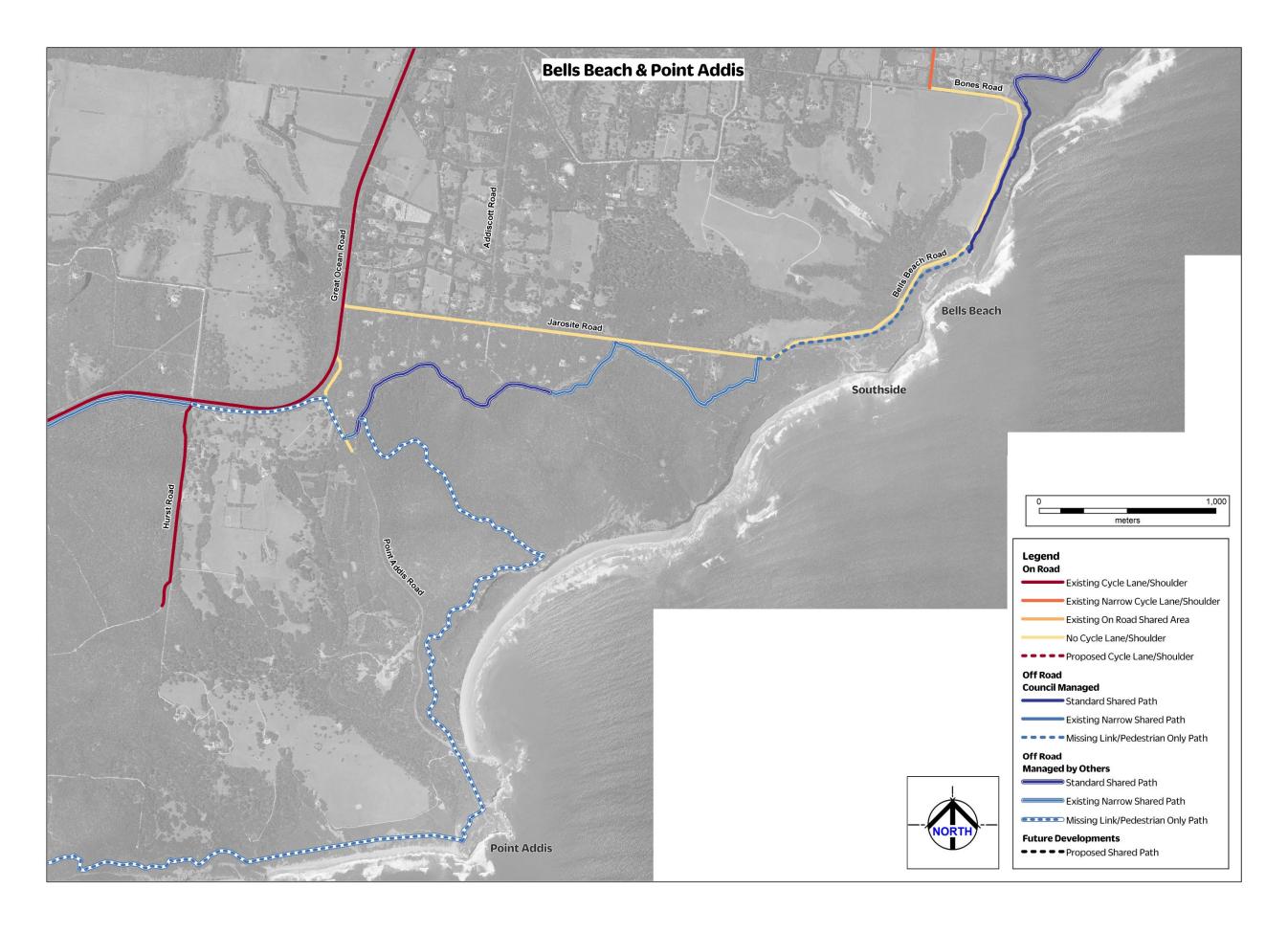


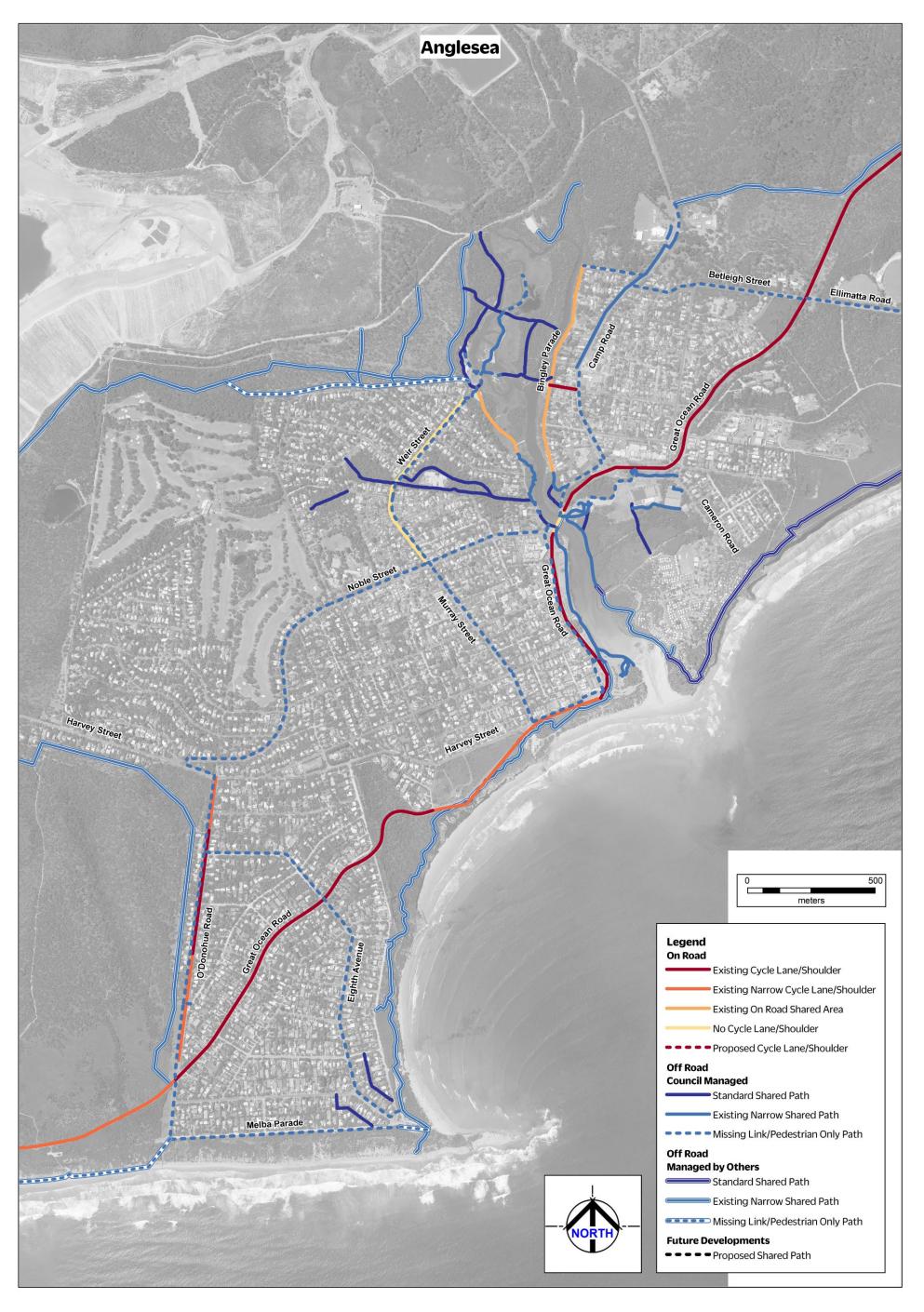


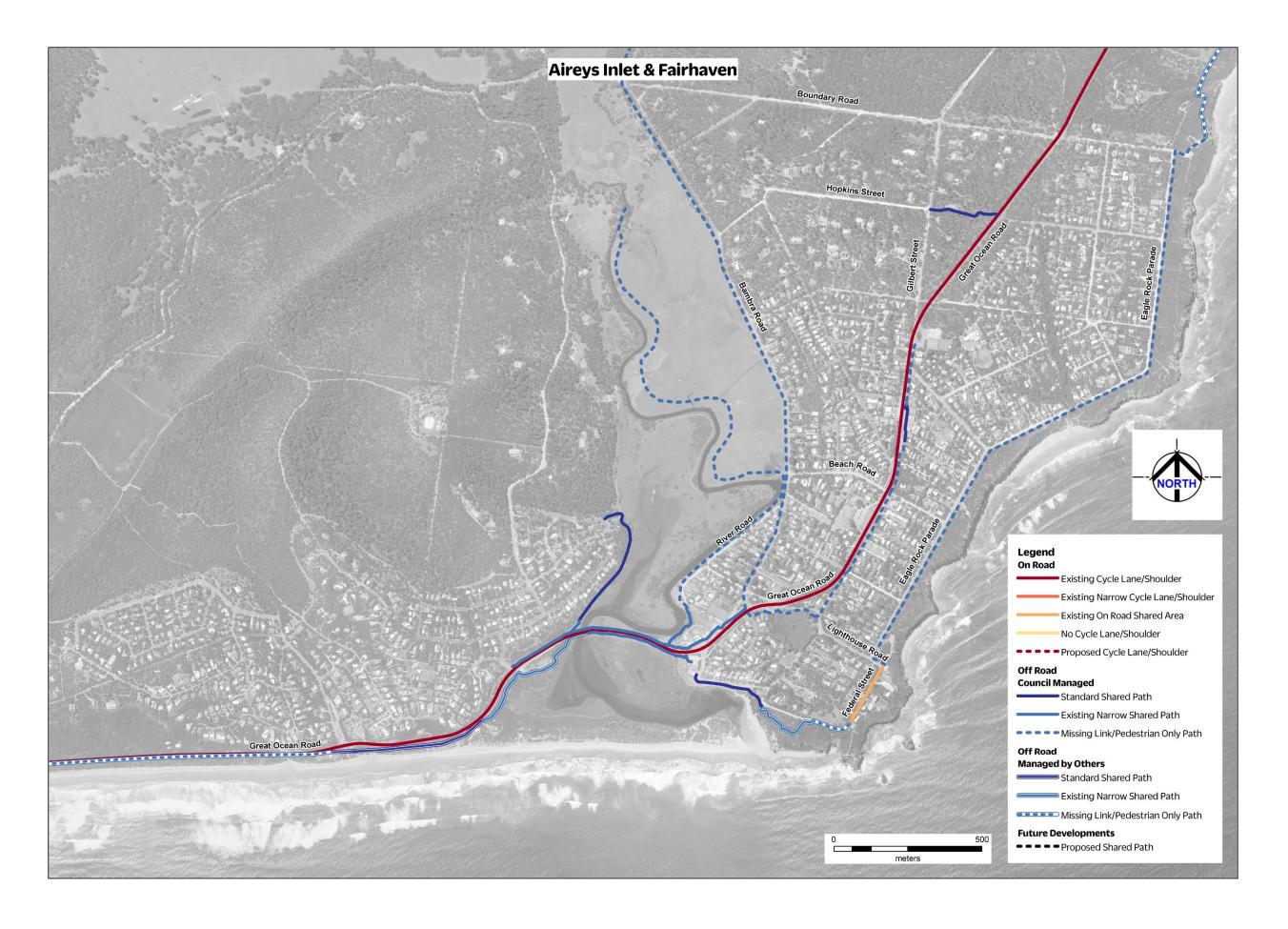


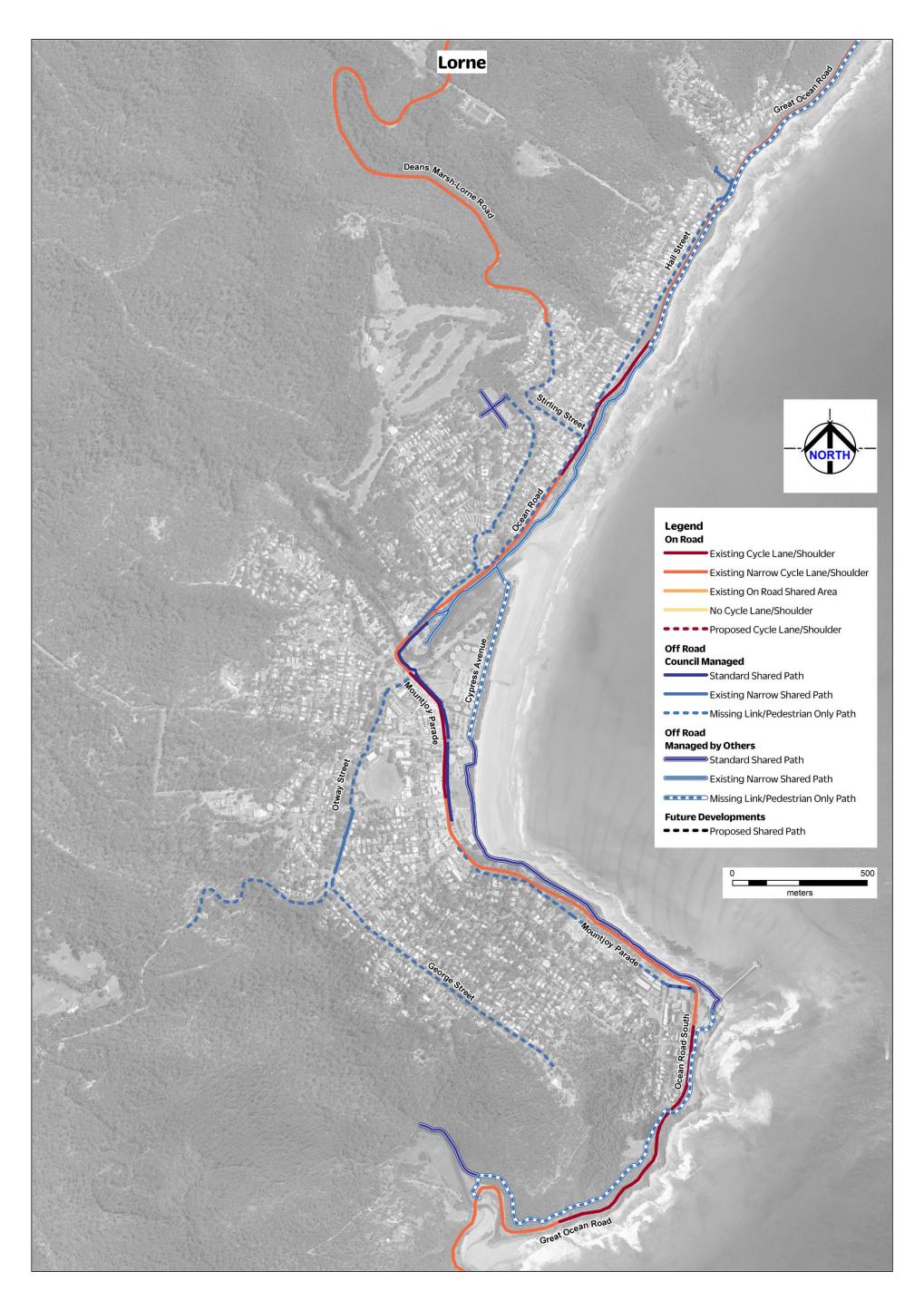


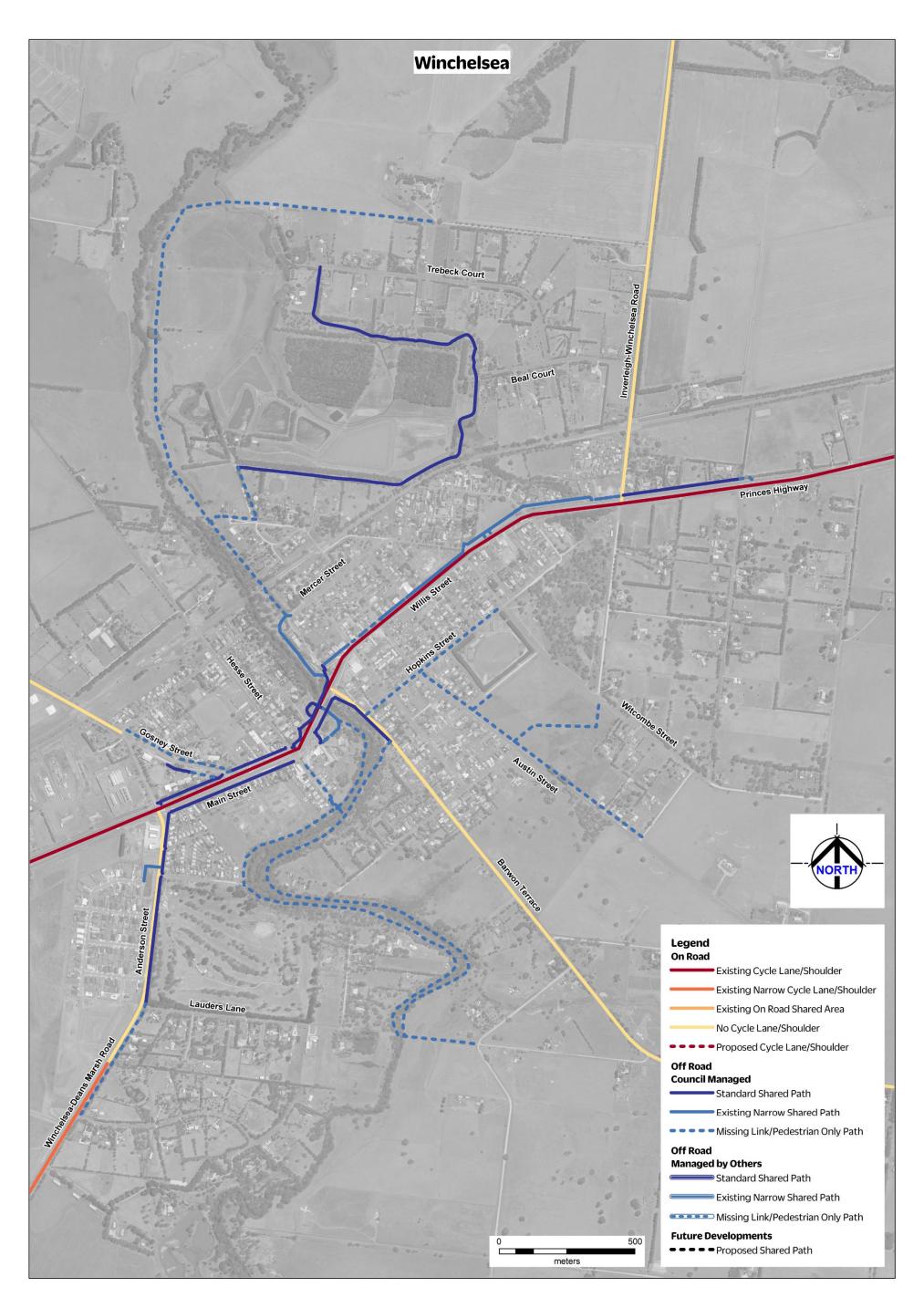


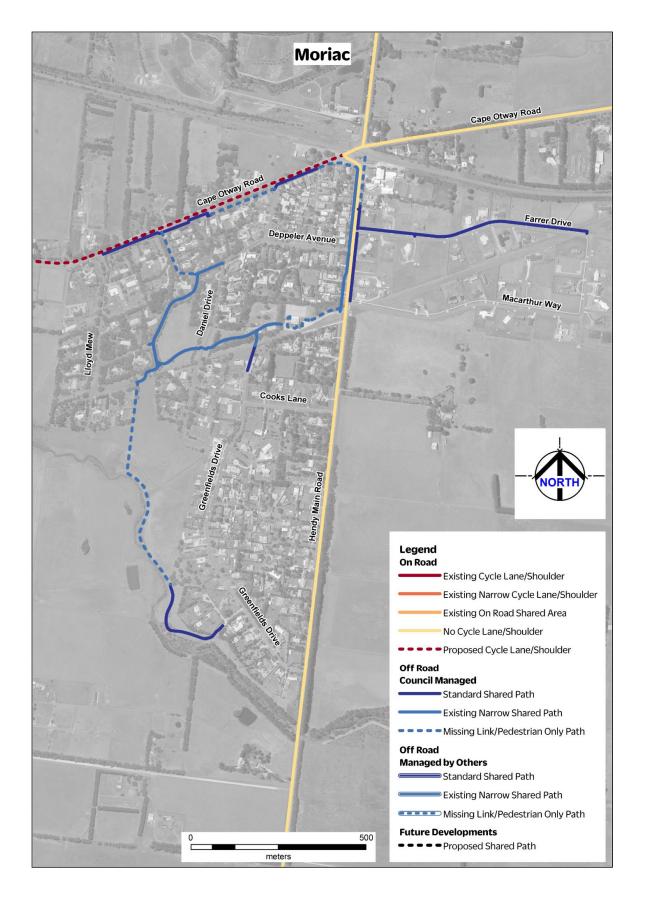


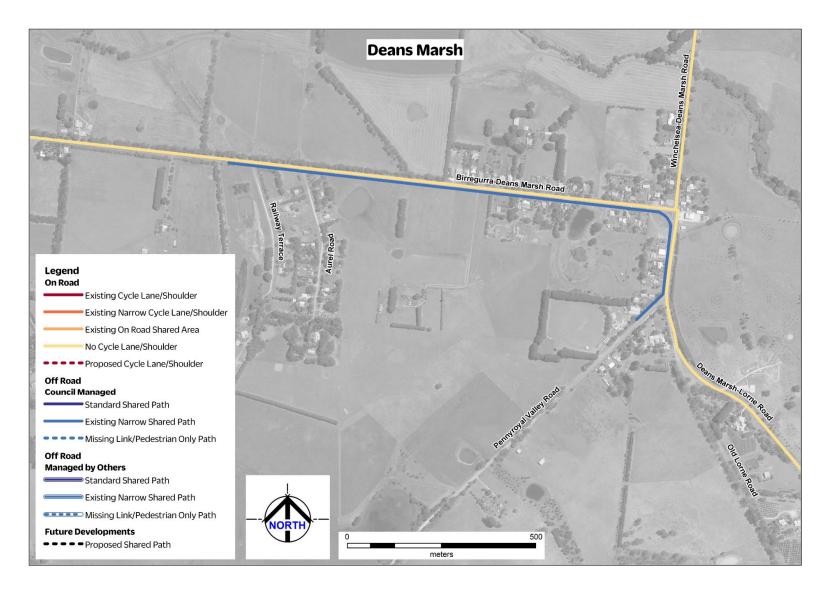












# **APPENDIX B**

**Detailed Crash Data Analysis** 

### **B1. Reported crashes**

Road users involved in a crash involving injury to persons are required, by law to report the details to the police who then pass a report onto VicRoads for incorporation in their Road Crash Information System (RCIS).

The casualty crash information available to Councils and the public through 'Crashstats' database was used to inform key crash trends and identify cyclist safety issues in Surf Coast.

For the period of around five years, from July 2015 to November 2020, there were 42 cyclist crashes reported, including one fatality and 12 serious injury crashes, accounting for 9.1% of all road user crashes in the Surf Coast.

By comparison, for the previous five-year period, July 2010 to June 2015, there were a total of 27 cyclist crashes, reflecting 6.1 percent of all crashes. This indicates a 50% increase in cyclist crashes in the most recent five-year period compared to the previous five-year period. This could be related to the cycling uptake in recent years.

Distribution of severity of crashes for the five year period analysed is shown in Figure B1.

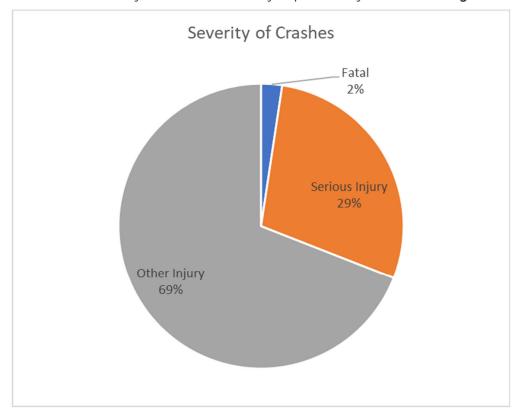


Figure B1: Severity of Bicycle Crashes

Crash maps are provided in Attachment 1. Clusters of crashes are apparent within the townships, in particular Torquay/Jan Juc (19), Anglesea (5) and Lorne (4), and on Great Ocean Road between the townships (7).

## **B2.** Crash statistics

Casualty crash data for the five-year analysis period, as shown in **Figure B2**, indicates cyclist crashes were more prominent during the warmer months, particularly December and January. This is reflective of the increased number of cyclists and other road users during these periods associated with holiday makers and visitors to the Shire.

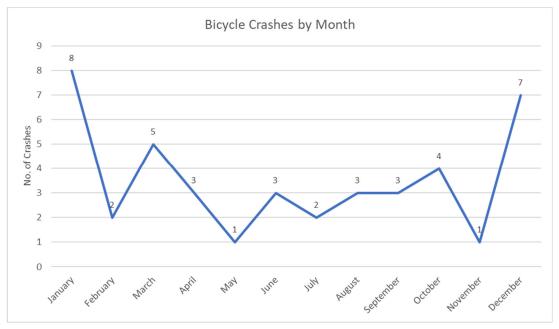


Figure B2: CYCLIST Crashes by Month

Half of all cyclist crashes (i.e. 21 of 42) occurred on roads managed by Department of Transport (DoT), whilst Council managed roads accounted for the remaining half (21). Of particular relevance are the following:

- 18 of the 22 cyclist crashes (7 serious injury and 11 'other' injury crashes) reported on DoT roads occurred on Great Ocean Road;
- 5 of the 21 cyclist crashes (1 serious injury and 4 'other' injury crashes) reported on Council roads occurred on Horseshoe Bend Road (Torquay);
- 3 of the 21 cyclist crashes (1 serious injury and 2 'other' injury crashes) reported on Council roads occurred on Bell Street (Torquay); and
- 2 of the 21 cyclist crashes (2 'other' injury crashes) reported on Council roads occurred on Fischer Street (Torquay).
- These Council managed roads recorded one cyclist crash each: Coombes Road
  (Torquay), Atkins Road (rural Surf Coast), Ocean View Crescent (Torquay), Cameron
  Road (Anglesea), The Esplanade (Torquay), Princes Terrace (Jan Juc), Forest Road
  (rural Surf Coast), Erskine Falls Road (rural Surf Coast) and Nautical Rise (Torquay).

The above suggests that there is significant overrepresentation of crashes occurring on Great Ocean Road. This reflects both the higher volume of people driving and cycling along Great Ocean Road and less than desirable conditions for cyclists.

Nearly 55 percent (or, 23 of 42) of all cyclist crashes occurred away from intersections (i.e. at midblock locations) as shown in Figure B3, with the remaining (i.e. 19 of 42) crashes reported at intersections. Key trend includes:

- Highest midblock collisions reported on Great Ocean Road (11 out of 23);
- Two midblock incidents on Bell Street in Torquay;
- Highest intersection collisions on Great Ocean Road (7 of 19) followed by Horseshoe Bend Road (5 of 19); and
- More than one crash was reported at two intersections: Great Ocean Road / Noble Street in Anglesea (one 'left near' and one 'right near' causing 'other' injuries) and Great Ocean Road / Deans Marsh-Lorne Road (one 'lane side swipe' causing a 'other' injury and one 'right through' crash causing a serious injury).

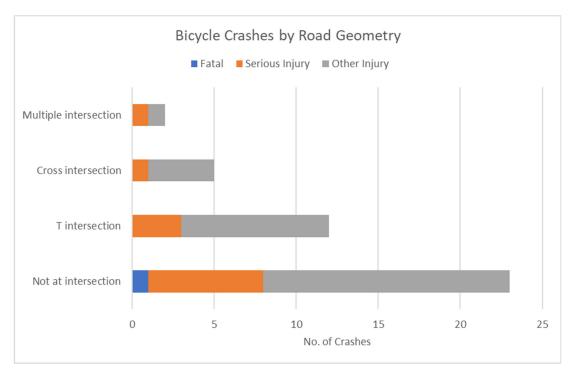


Figure B3: Bicycle Crashes by Road Geometry

Almost 75% of all cyclist crashes was reported on roads with the posted speed limit of 60 km/h or below, as shown in Figure B4. There were 18 of 42 cyclist crashes on roads with the posted speed zone of 50 km/h.

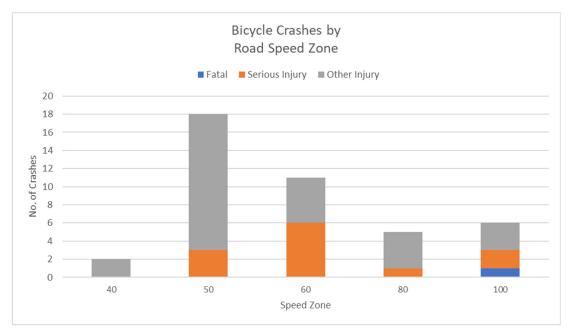


Figure B4: Bicycle Crashes by Speed Zone

31% (or, 13 of 42) of all cyclist crashes did not involve collision with another vehicle as shown in Figure B5. Most of these crashes involved a cyclist leaving the carriageway due to another vehicle or road curvature, or striking with an object. There were seven of 13 such crashes reported on Great Ocean Road, whereas Horseshoe Bend Road accounted for two crashes.

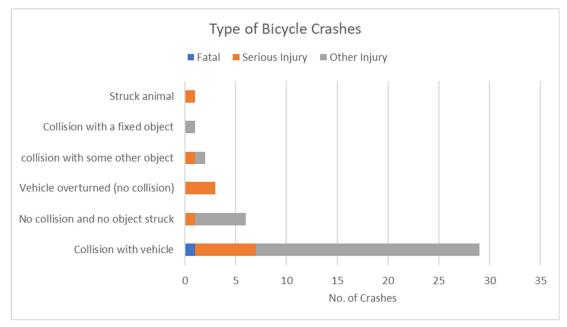


Figure B5: Type of Bicycle Crashes

As shown in Figure B6, the five most frequent causes of crashes involving cyclists in the last five years in Surf Coast include:

- Side swiped by a vehicle making left turn (6) at the intersection;
- Out of control on carriageway (5);

- Side swiped by a vehicle travelling parallel to cyclist in the same direction (4);
- U-turns at the intersections (3); and
- Struck by a vehicle travelling in perpendicular direction (at right angles to each other) at an access/driveway (3);

The following patterns were observed in the classification of cyclist crashes:

- 3 of the 6 'left near' cyclist crashes occurred on Horseshoe Bend Road; and
- All 4 'lane side swipe' cyclist crashes occurred on Great Ocean Road.

Of those crashes involving cyclists which result in serious injury, the top three causes included:

- Out of control on carriageway (2);
- Side swiped by a vehicle travelling parallel to cyclist in the same direction (2); and
- Vehicle and bicycle travelling in opposite direction, and one vehicle turning right across the path of the other at the intersection (2).

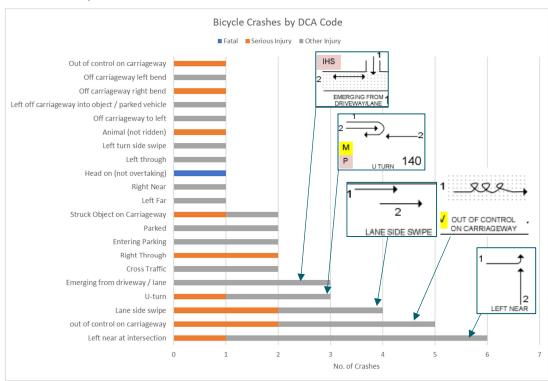


Figure B6: Classification of cyclist Crashes by DCA Code

#### **B2.1 Crashes on Council managed Roads**

There were 21 of 42 cyclist crashes reported on roads managed by Council with most prominent roads being Horseshoe Bend Road, Bell Street and Fischer Street:

- Five crashes on Horseshoe Bend Road, Torquay comprising
  - a northbound cyclist struck by a vehicle turning left from Quay Boulevard;
  - a southbound cyclist struck a parked vehicle after leaving the carriageway at Kalkarra Crescent:

- a northbound cyclist struck by a vehicle turning left from South Beach Road;
- a northbound cyclist struck by a vehicle turning left from Merrijig Drive; and
- a cyclist ran off the carriageway to left while turning right into Pacific Drive.
- Three crashes on Bell Street (Torquay) comprising
  - a westbound cyclist struck by a vehicle entering angle parking just east of Munday Street;
  - an eastbound cyclist struck by a vehicle entering parallel parking just east of Rudd Avenue: and
  - a westbound cyclist struck by a vehicle turning right into Surf Beach Drive.
- Two crashes on Fischer Street (Torquay) comprising
  - a southbound cyclist struck by a vehicle crossing Fischer Street from the west at Centreside Drive; and
  - a southbound cyclist struck by a vehicle crossing Fischer Street from the west at Zeally Bay Road.

## **B2.2** Crashes on DOT Managed Roads

The Great Ocean Road appears to be problematic for cyclists, with 18 crashes occurring at various locations:

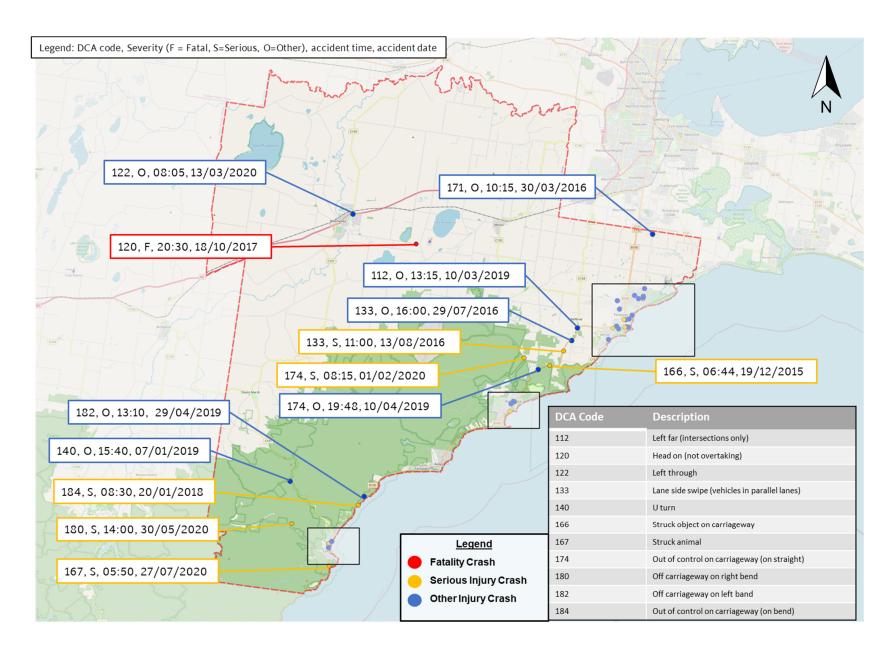
- Two crashes in Jan Juc, comprising
  - an eastbound cyclist struck by another vehicle emerging from driveway just west of the Diggers Way intersection; and
  - a lane side swipe between two cyclists traveling westbound at Duffields Road.
- Five crashes between Jan Juc and Anglesea, comprising
  - a westbound cyclist struck object on carriageway west of Jarosite Road;
  - a lane side swipe between two cyclists travelling north-eastbound north of Jarosite Road;
  - a lane side swipe between a cyclist and a vehicle traveling north-eastbound near Addiscott Road;
  - a cyclist travelling north-eastbound struck by a vehicle turning from School Road;
  - an out-of-control cyclist travelling south-westbound collided with another bicycle west of Jarosite Road.
- Four crashes in Anglesea, comprising
  - a north-eastbound cyclist struck by a vehicle turning left from Noble Street;
  - a north-eastbound cyclist struck by a vehicle turning right from Noble Street;
  - a north-eastbound cyclist struck by vehicle turning right into Murray Street/Harvey Street; and
  - a north-eastbound cyclist struck by a vehicle turning left from Camp Road.
- Two crashes between Anglesea and Lorne, comprising
  - an out-of-control cyclist at bend travelling north-eastbound; and

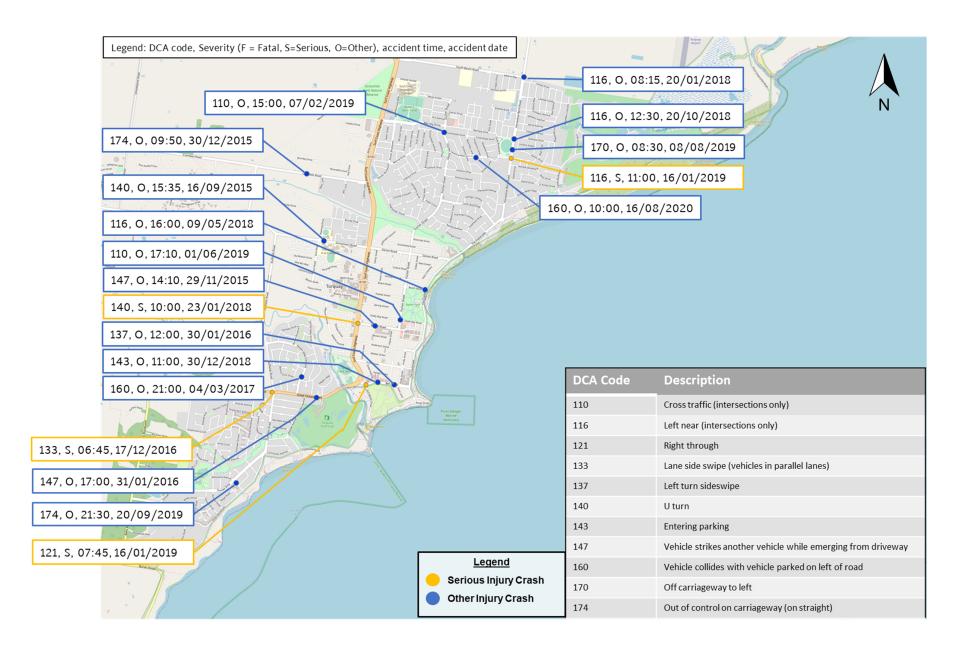
- a south-westbound cyclist left the carriageway due to left bend.
- Four crashes in Lorne, comprising
  - a lane side swipe at the Deans Marsh Road roundabout between a bicycle and a vehicle in parallel lanes travelling north-eastbound; and
  - an out-of-control cyclist travelling south-westbound at the Deans Marsh-Lorne Road intersection;
  - a north-eastbound cyclist struck object on carriageway south of Doble Street;
  - a northbound cyclist struck by a vehicle entering parking between Grove Road and Otway Street.
- A southbound cyclist struck by animal just south of Lorne.

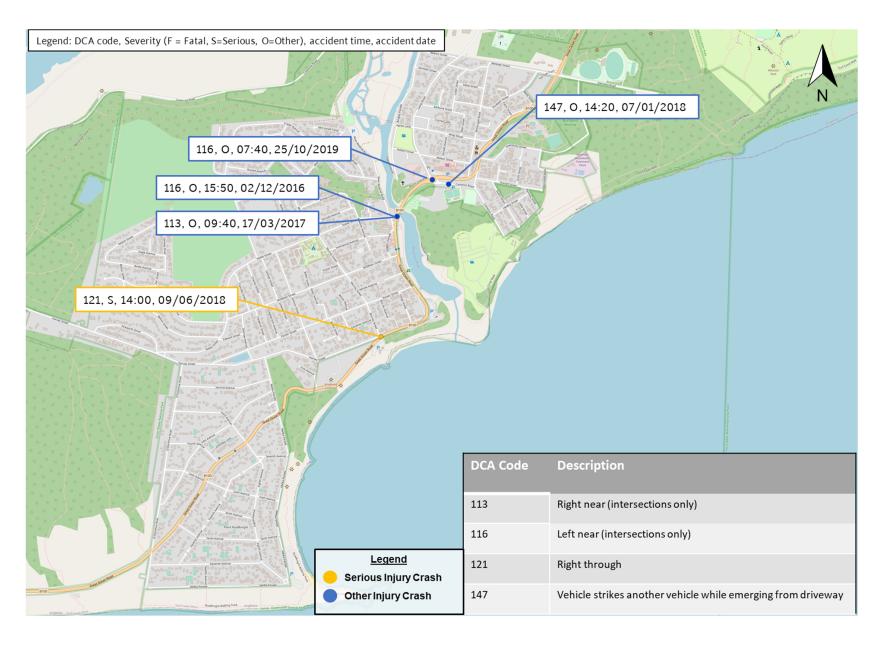
In addition, the following three crashes were reported on roads managed by DoT:

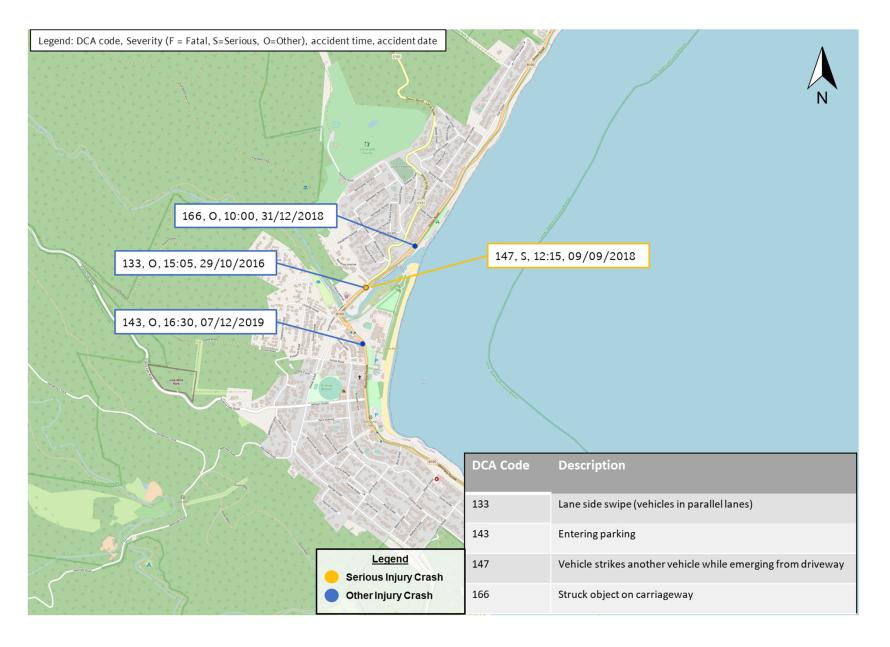
- Surf Coast Highway, Torquay a southbound cyclist struck by a vehicle making a Uturn at the Bristol Road intersection;
- Deans Marsh-Lorne Road a northbound cyclist struck by a vehicle making a U-turn;
- Princes Highway, Winchelsea a westbound cyclist struck a vehicle turning left into Worland Street.

**Attachment 1: Crash Maps** 









# **APPENDIX C**

**Results from Community Consultation** 

#### **C1.** Introduction

At the commencement of the Safer Cycling Strategy, the community was engaged via an online survey between 24 April 2021 and 9 May 2019. The purpose of this engagement was to understand key issues and experiences in relation to cycling in the Surf Coast and inform the development of the Strategy and its Action Plan.

An invitation to complete the on-line survey was promoted via pavement stickers located in Torquay, Jan Juc, Anglesea, Aireys Inlet, Lorne, Winchelsea and Moriac, posts on Council's social media pages, distribution of postcards to shops and businesses within and outside the municipality and direct email to targeted interest groups including schools and community networks

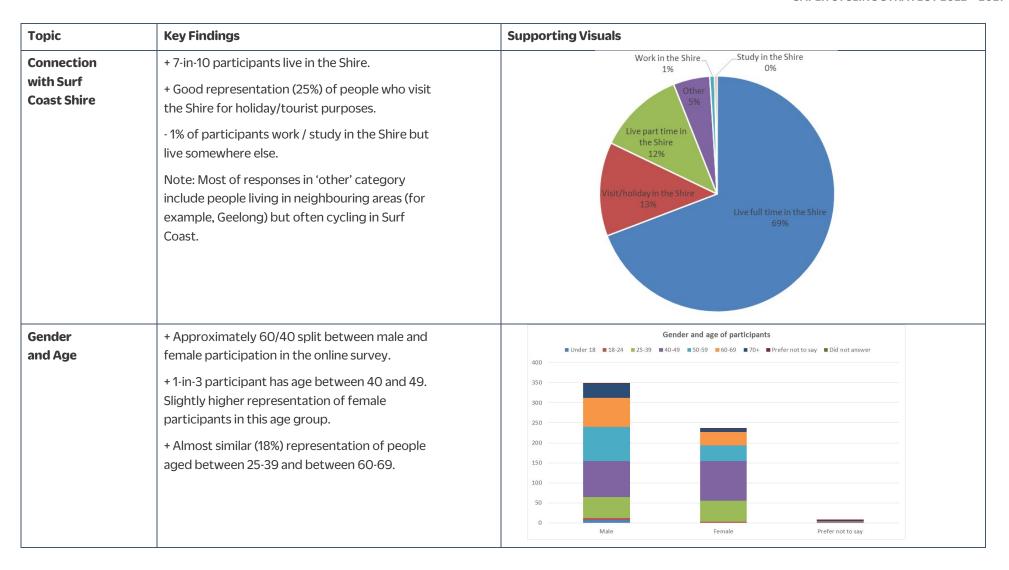
Almost 600 responses were received, predominantly from people who cycle (96%), but also with small representation from people who do not ride bicycles (4%).

A summary of key findings from the online survey is outlined below.

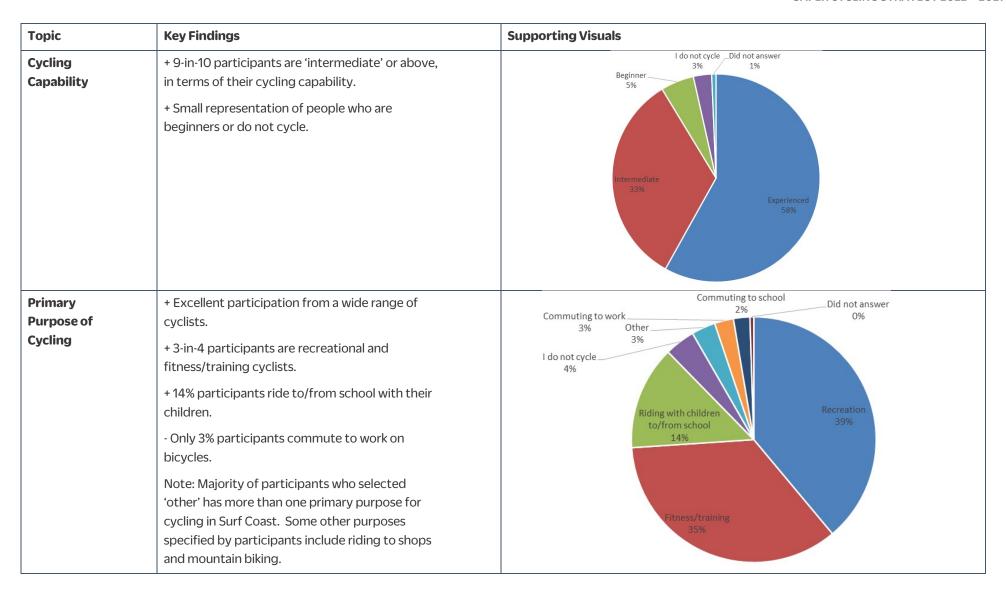
### **Profile of respondents C2.**

A profile of those who responded to the online survey is provided in **Table C1**.

## **SAFER CYCLING STRATEGY 2022 – 2027**



## **SAFER CYCLING STRATEGY 2022 – 2027**



## SAFER CYCLING STRATEGY 2022 - 2027

Key Findings	Supporting Visuals
+ Excellent participation from a wide range of	I do not cycle Did not answer  3% \ 1%
cyclists.	
+ 2-in-3 participants are regular cyclists, riding at	Occasionally (once in a
- 11% participants ride only once in a while.	while) 11%
	A few times a month 21%
	1-2 days per week
	+ Excellent participation from a wide range of cyclists. + 2-in-3 participants are regular cyclists, riding at least once a week.

Table C1: Profile of Community Participants

#### **Key cycling locations C3**.

The community was asked to identify their cycling locations and comment on what they like about them.

The top locations in the Shire, where more than 50 participants of the online survey cycle, were:

- 1. Torquay (350 responses)
- 2. Jan Juc (139 responses)
- 3. Anglesea (106 responses)
- Great Ocean Road (101 responses)
- 5. Lorne (69 responses)
- 6. Rural Surf Coast (54 responses)

Figure C1 and Figure C2 show most common / frequent cycling locations in the Surf Coast aggregated by the purpose of cycling. This suggests that:

- More fitness/training cyclists ride in and through Torquay and Anglesea than recreation cyclists;
- Jan Juc appears to be popular among recreation cyclists and parents riding with children to/from school, but not as much for fitness/training cycling;
- Key purpose of cycling on Great Ocean Road appears to be fitness/training closely followed by recreation;
- Fitness/training cycling is more prominent in Rural Surf Coast; and
- Aireys Inlet and Otway National Park trails appear to be quite common among recreation cyclists.

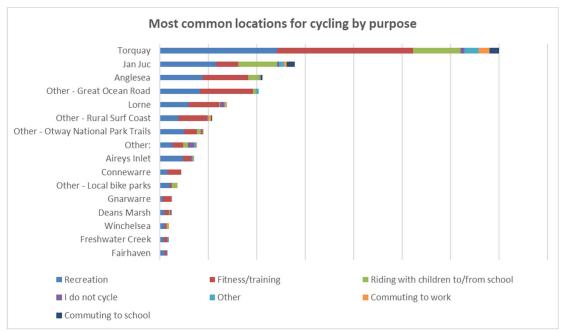


Figure C1: Most Common Locations for Cycling Identified by Community Participants

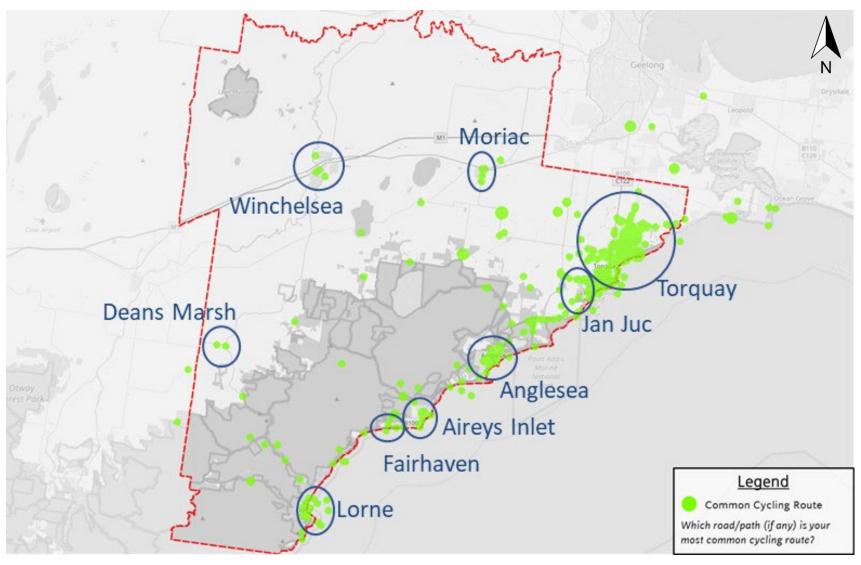


Figure C2: Map of Cycling Locations identified by Community Participants

#### C3.1. **General Cycling Issues**

The community was asked to choose reasons why they cycle less than they would have liked or not cycle in Surf Coast? Safety concerns, missing links and poor response from other road users (such as drivers, pedestrians, etc.) were the top three reasons, as illustrated in Figure C3. The key reason specified by respondents in the 'other' category was poor road/surface conditions, including but not limited to the presence of debris, gravels and the lack of shoulder.

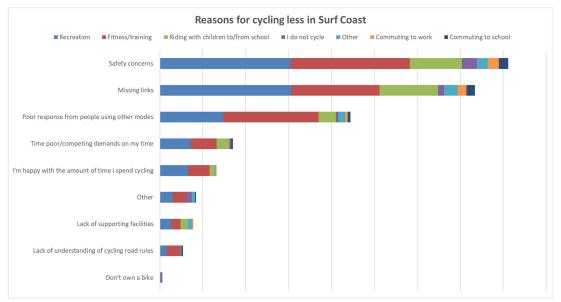


Figure C3: Community Response – Reasons for Cycling Less

The community was asked to identify potential improvements that would encourage them to cycle more often in Surf Coast. Responses are shown in Figure C4. Recreational cyclists sought more off-road paths, safer on-road links and upgrades to existing off-road paths. Fitness/training riders desired safer on-road links, upgrades to existing on-road infrastructure and less traffic stress. Safer crossings and more off-road paths were identified to encourage increased cycling to/from schools.

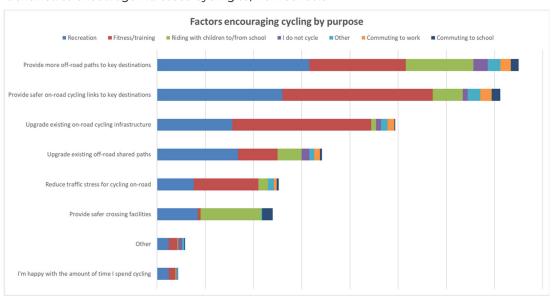


Figure C4: Community Response - Factors Encouraging cycling

The community was also asked to identify supporting facilities and amenity that would encourage more cycling in Surf Coast. Responses are graphed in Figure C5. Bicycle parking was the most desired cycling amenity. Recreational cyclists also selected directional signage and education programs as higher priority. Fitness/training cyclists and riders to school ranked drinking taps and directional signage among the top three choices.

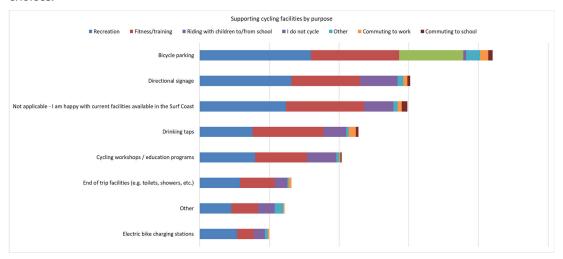


Figure C5: COMMUNITY RESPONSE – Supporting Facilities needed

The community was asked how can roads be improved for cycling? Responses shown in Figure C6 indicates that roads can primarily be improved for cycling by provision of cycle lanes, sealed shoulders and separation from moving or parked vehicles. Cyclists riding to/from school particularly favoured improvements to crossings and intersections. Reduction in vehicle speeds and volumes was also of particular interest to fitness/training cyclists.

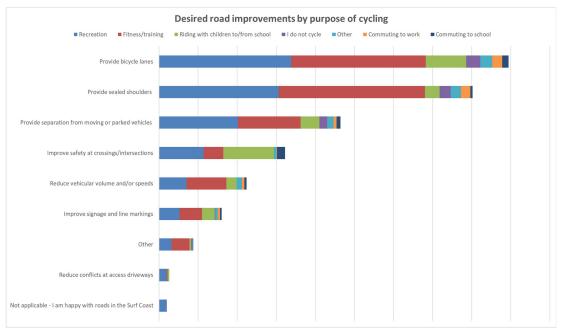


Figure C6: COMMUNITY RESPONSE - Selected On-Road Improvements

The community was also asked how can off-road paths be improved for cycling? Responses shown in Figure C7 indicates that off-roads can primarily be improved for cycling by widening shared paths, providing separation from pedestrians and improving pavement/surface condition. Cyclists riding to/from school particularly favoured provision of safer crossings along off-road paths. Improvement to signage and marking was also of some interest to all type of cyclists.

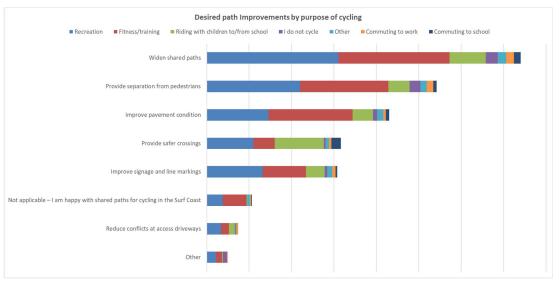


Figure C7: COMMUNITY RESPONSE – Selected Path Improvements

The community was asked to identify general infrastructure items requiring improvements for safer on and off-road cycling. Desired improvements for on-road cycling that appropriately address key issues were:

- Provision of dedicated bicycle lanes;
- Improved road maintenance;
- Installation of sealed, standard shoulders (in lieu of spray seal);
- Separation from moving or parked vehicles; and
- Cycle friendly treatments at intersections and crossings.

Desired improvements at off-road facilities that could address key issues were:

- Provision of standard, wider shared paths;
- Separation from pedestrians;
- Provision of all-weather pavement surface;
- Provision of cycle friendly crossings; and
- Signage, route guidance and line markings.

### **Location Specific Cycling Issues C5.**

The community was asked to identify location-specific safety, infrastructure and link/connection issues. Figures C8-C10 show heatmaps highlighting where issues were identified by community. Details of community identified issues are provided in **Table** C2.

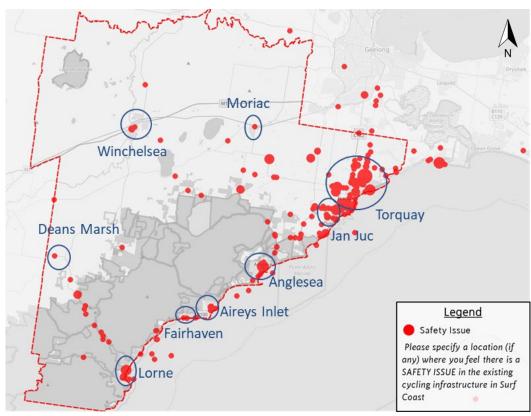


Figure C8: Map of Locations with Safety Issues Identified by Community

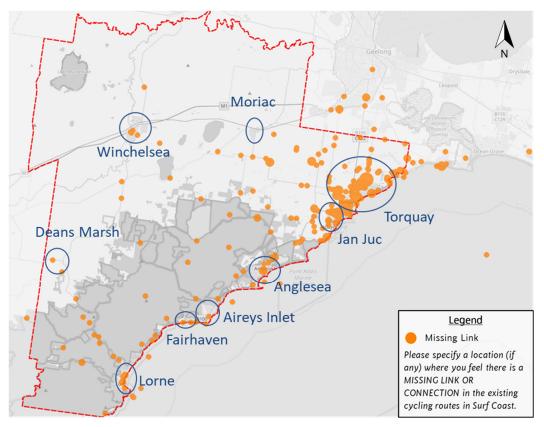


Figure C9: Map of Locations with Missing Link Issues Identified by Community

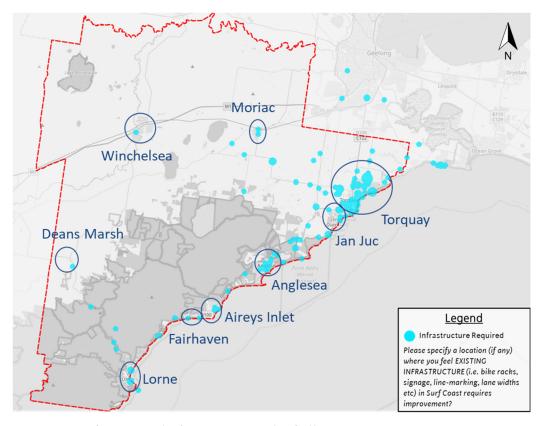


Figure C10: Map of Locations with Infrastructure Issues Identified by Community

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
	Off-road path between Strathmore Drive/Christian College and Duffields Road Safer crossing across Great Ocean Road at/near Strathmore Drive	Unsafe crossing point across Great Ocean Road at Strathmore Dr (east and west) and Duffields Road, particularly for school children High vehicle speeds on Great Ocean Road	Old Great Ocean Road too narrow, unsealed and poorly maintained (being used as defacto path for school children and many riders)
	Transition between road and shared bridge at Spring Creek, continuous cycling link missing	Debris on Great Ocean Road causing dangerous cycling conditions	Signage to alert motorists of crossing activity
Great Ocean Road, Spring Creek to Anglesea Rd	Off-road path connecting Torquay and Jan Juc with Bellbrae (particularly Primary School)	Shoulders between Anglesea Road and Strathmore Dr too narrow	
		Unsafe condition and transition near Spring Creek Bridge	
		Over vegetation causing lack of cyclist sight distance	
		Spring Creek bridge too narrow for both walkers and riders	
	Off-road path between Pt Impossible to Breamlea and Barwon Heads	Conflicts with kerbside car parking activity and dooring	Lack of cycle racks and storage along the foreshore at playgrounds, beach, etc.
	Whites Beach	Bike movements interrupted by parked cars	On- road bike lanes not wide enough
The Esplanade and Point Impossible Road, Torquay		Cyclists occupying road lane to avoid conflicts with parked cars	Lack of signage to alert motorists of bicycle movements across and along The Esplanade
	Bridge over Thompsons Creek to enable direct connection to Breamlea	Conflict between cyclists, dog walkers and pedestrians on shared path in the foreshore	Proper maintenance lacking on Pt Impossible Road and The Esplanade
	Torquay to Breamlea off-road link via the foreshore and Pt Impossible (to avoid busy Horseshoe Bend Road and Blackgate Road)	Pt Impossible Road unsafe and unsuitable for cycling	extension
	,	The foreshore too busy for comfortable cycling	

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
Torquay east of Surf Coast Highway	Missing safer crossings across Merijig Drive, Fischer Street and Horseshoe Bend Road  Lack of connection between Quay 2 development into Torquay  Connection between the northern area of Torquay to Old Torquay (skate parks to beach)  Connection between the northern area of Torquay to Bellbrae via Coombes Road  Linkage of current path in Deep Creek Reserve to the northern area of Torquay  No bike lanes on Merrijig Drive east of Shopping Centre connecting to Horseshoe Bend Road  East-west on-road link in Old Torquay connecting The Esplanade to the highway  Missing on-road cycle lanes on Bristol Road  Access across Surf Coast Highway limited to Merrijig Drive and Darian Road with missing link at Coombes Road	Unsafe to cross Merrijig Dr due to high volumes, particularly at Horseshoe Bend Road and near shopping centre  Unsafe to cross Horseshoe Bend Road due to high volumes and speeds, particularly at Merrijig Dr and Quay Blvd  Unsafe to cross Fischer St  Cyclist safety compromised at roundabout intersections along Fischer St and Merijig Drive  Bike lanes along Geelong Road dangerous, particularly post installation of safety barriers  Conflict between parked cars and bike lane on Fischer St  High vehicle speeds in Fischer St, Merrijig Dr  Parked vehicles obstructing cycling on Gilbert St  Unsafe bend for cycling at Merrijig  Dr/Centreside Dr/Quay Blvd	Lack of bicycle parking in central Torquay and town centre (Gilbert Street)  Poor condition of Surf Coast Hwy shoulders/bike lane  Separation lacking between bike lane and parked cars on Horseshoe Bend Road (western side)  Paths too narrow around Torquay Coast School (separation needed for cyclists)
Torquay west of Surf Coast Highway, north of Great Ocean Road, south of Grossmans Road	No connection across Spring Creek from school precinct / Eton Road Missing link between Grossmans Road and Great Ocean Road away from Surf Coast Highway	Duffields Road with no bike lanes / shoulders and high volumes / speeds unsafe and unsuitable for cyclists  Unsafe crossing for cyclists in southern section of Geelong Road  Bell Street / Surf Coast Highway / Great Ocean Road roundabout unsafe for cyclists	Spring Valley bike park poorly maintained Poor surface quality on Duffields Road No drinking taps in Spring Creek Reserve

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
	Missing off road path on the western side of Surf Coast Highway to avoid the Bell Street roundabouts to sporting grounds No safe and direct route for children to ride to school precinct		
	No off-road path between Geelong and Torquay along Surf Coast Hwy limiting	Unsafe on-road link to Geelong	Poor/narrow shoulders for cyclists
Surf Coast Highway north of South Beach Road	commute riders	High speeds and volumes  Shoulder narrowing at Thompsons Creek and post installation of safety barriers not suitable for riding	Debris on shoulders by cyclists
Beachioad		Between Blackgate Road and South Beach Road particularly unsafe	
		Difficult and dangerous intersection for cyclists at Surf Coast Highway/Blackgate Road	
Jan Juc south of Great Ocean Road	Safer off-road path from Jan Juc to Bellbrae Bike path linking Torquay, Jan Juc, Bells Beach and Pt Addis Lack of suitable off-road link for cyclists between Torquay and Bells Beach	Cliffside trail between Bells Beach and Torquay too narrow and unsafe for cycling, cyclists' speeds on this trail a concern  High speeds in Torquay Boulevard / Sunset Strip unsafe for cyclists  Ocean Boulevard too narrow for safer cycling	Lack of bicycle parking around Torquay Surf Lifesaving Club and Jan Juc shops
Bells/Southside/Pt Addis Beach	Lack of off-road connection between Bells Beach, Southside Beach and Pt Addis Pt Addis to Bellbrae off-road link	Insufficient width for safer cycling on Bells Beach Road, Bones Road and Point Addis Road	Lack of maintenance on Surf Coast trail/walk for cycling

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
Blackgate Road	Lack of off-road connection between Torquay to Barwon Heads trail along Blackgate Road Missing paved section in Blackgate Road east of Anglesea Rd	Unsafe for cycling out of Torquay to 13 <sup>th</sup> Beach due to shoulders being too narrow, inconsistent and high vehicle speeds	Lack of width for cycling along Blackgate Road between Point Impossible Road and Breamlea Rd Poor shoulder condition on Blackgate Road west of Point Impossible Rd
Horseshoe Bend Road north of South Beach Road	Continuation of bike lanes / sealed shoulder north of Torquay all the way to Geelong as a preferred route over Surf Coast Highway	Insufficient road width for cycling Upgraded shoulders and lane markings not up to standard Increased vehicle volumes and speeds in recent years Large drop offs from carriageway dangerous for cyclists Vegetation impeding cycling Poor surface condition and presence of debris hazard for cycling	Lack of suitable shoulder width along Horseshoe Bend Road for cycling north of S Beach Rd Poor surfacing along Horseshoe Bend Road for cycling north of South Beach Rd
Coombes Road	Missing off-road connection between intersection of Coombes/Messmate Rd and Surf Coast Highway	Lack of bike lane/sealed shoulder for cyclists Insufficient width to cater for safer cycling Poor condition of road surface, particularly edges Low speed limit compliancy along Coombes Rd (signed 60km/h but cars travel faster)	Poor condition of shoulder/road surface along Coombes Rd
Grossmans Road, Torquay	No off-road connection along Grossmans Road west of Eton Rd/Illawong Dve roundabout	Insufficient width for safe on-road cycling west of Eton Rd roundabout	Insufficient road/shoulder width for cycling along Grossmans Road

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
		Sections with no shoulders and edge linemarking High vehicle speeds and volumes	
Ghazepoore Road		Missing suitable cycling infrastructure to link to Geelong High traffic volumes Unsealed section between Coombes and Dickins Roads not suitable for cycling	
Bellbrae	Missing School Road crossing near Bellbrae Primary School/Cemetery Road Missing paved connection along Old Great Ocean Road	Unsafe crossing in School Road near Cemetery Road Cemetery Road unsafe for children cycling due to insufficient width	Insufficient bicycle parking at Bellbrae Primary School
Anglesea Road		Lack of shoulders, barriers forcing cyclists to ride on the road	Poor surface and insufficient width of shoulders along Anglesea Rd
Great Ocean Road between Bellbrae and Anglesea	No off-road link between Hurst Road (east) and Point Addis Road off-road trails Lack of off-road link between Hurst Road and Bellbrae along the Great Ocean Road	Crossing at Hurst Road, Addiscott Road and Gundrys Road desired but unsafe Insufficient shoulder widths at pinch points Debris on shoulders causing cyclists to use the road Intersection at Jarosite Road dangerous for cyclists	Lack of end-of-trip bicycle facilities at Hurst Road attractions
Anglesea	Cycling link between Point Roadknight and Anglesea beach/shops/town	Debris on Great Ocean Road shoulders causing danger to cyclists	Lack of maintenance of sweeping of Great Ocean Road shoulders in Anglesea towards Bellbrae

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
	No off-road connection between Anglesea shops and Primary School and bike park Missing footpath on Camp Road between shops and Wray Street	Cycling across Great Ocean Road at / around Anglesea River Bridge Crossing Anglesea River Bridge on Great Ocean Road Poor condition of off-road trail between Anglesea Surf Lifesaving Club and Point Roadknight Noble Street roundabout not safe for cyclists	Lack of sufficient shoulder/bike lane width along Great Ocean Road east of Anglesea River bridge toward Bellbrae Insufficient shoulder width on Great Ocean Road for cycling west of Anglesea Surf Lifesaving Club Insufficient shoulder width on Great Ocean Road for cycling between Anglesea River bridge and Camp Road roundabout Wooden bridges in Coogoorah Park linking off-road trails need improvement Lack of bicycle parking at Lions Park
Great Ocean Road between Anglesea and Aireys Inlet	Link these two via inland unsealed roads	Lak of sufficient shoulders and debris forcing cycling along Great Ocean Road	Lack of bicycle facilities at Urquhart Bluff along Great Ocean Road Drinking water bike tool stops
Aireys Inlet and Fairhaven	Safe off-road connection between Aireys Inlet and Anglesea Safe off-road path between Aireys Inlet and Moggs Creek Cycle link between top and bottom shops in Aireys Inlet	Lack of safer bicycle crossing near Fairhaven SLSC, top shops and bottom shops Moggs Creek bridge too narrow, barrier to safer cycling Gravel local roads in Aireys Inlet hinder safer cycling	Lack of bike parking at Fairhaven SLSC Insufficient widths and poor road condition on Great Ocean Road for cycling in and around Aireys Inlet and Fairhaven
Great Ocean Road between Fairhaven and Lorne		Road too narrow with no shoulders, unsafe especially at turns/bends  Debris, particularly leaf and gravel a safety risk for cyclists	Lack of appropriate sealed shoulders on Great Ocean Road between Fairhaven and Lorne

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
			Poor shoulder/road condition of Great Ocean Road between Fairhaven and Lorne (2)
Lorne	Off-road cycling connection to townships to the east (Anglesea, Aireys Inlet, etc) and Apollo Bay Lack of off-street connection between Otway trails and Lorne shops	Uneven shoulders on Great Ocean Road through the township High vehicle speeds on Deans Marsh-Lorne Road in Lorne Riding too dangerous on Great Ocean Road / Mountjoy Parade during busy times	Lack of bicycle parking at Lorne Insufficient width on Deans Marsh Road for cycling to/from Lorne Insufficient width on Mountjoy Parade for cycling Confusing linemarking in Mountjoy Parade
Deans Marsh - Lorne Road		High vehicle speeds in parts of Deans Marsh- Lorne Road  Visibility of drivers to bicycles riding uphill, particularly at turns and corners  Recreational riders at risk due to inexperience with dangerous road condition  Infrequent / lack of signs at critical locations warning motorists of cyclists	Insufficient width for separate cyclists from cars  Unstable / rough edges a hazard for cyclists  Poor road condition
Winchelsea	Difficult to cross Main St (Princes Hwy) near Barwon Terrace and Hesse St to shops	Soft shoulders / rough edges of Barwon Terrace unsafe for cycling Main Street dangerous for cycling near shopping centre	
Hendy Main Road		Too narrow, no shoulders Riders in traffic lanes interacting with cars	Insufficient road width on Hendy Main Road for cyclists

Location	'Missing Link' Issues	'Safety' Issues	'Infrastructure' Issues
		Cars unable to pass riders due to heavy traffic volume High vehicle speeds (>100 km/h) Groups of cyclists riding abreast	Poor road condition
Cape Otway Road		Road too narrow for 2 cars plus cyclist  Little to no separation from vehicles due to insufficient width  Pinch points drawing cyclists in traffic lanes	Road condition (too many dips) dangerous for cyclists
Forest Road		Lack of continuous shoulders forces cyclists into traffic lanes Interaction with heavy trucks	New shoulders not well maintained

Table C2: Community Identified Specific Issues

### **C6. Summary of Key Issues**

## Cyclist Safety

Safety concern' was identified as the top reason by the community as to why people cycle less or do not cycle in Surf Coast Shire.

Key location-specific *issues* raised by the community in relation to safety of cyclists have been summarised in **Table C3**.

KEY SAFETY ISSUES	LOCATIONS
	Great Ocean Road at Strathmore Drive (east and west) and Duffields Road
	Merrijig Drive at Horseshoe Bend Road, shopping centre and at the bend
	Horseshoe Bend Road at Merrijig Drive, Quay Boulevard
Unsafe crossing for cyclists due to	Fischer Street
missing infrastructure and/or	School Road near Bellbrae Primary School or Cemetery Road
traffic conditions	Southern section of Surf Coast Highway (between Darian Road and Bell Street)
	Great Ocean Road at Hurst Road, Addiscott Road and Gundrys Road
	Great Ocean Road near Fairhaven SLSC and top and bottom shops in Aireys Inlet
	Great Ocean Road in Lorne and Anglesea
	Fischer Street / Merrijig Drive roundabout
	Surf Coast Highway / Blackgate Road
	Great Ocean Road / Jarosite Road
Unsafe intersection due to lack of consideration for cyclists	Bell Street / Surf Coast Highway / Great Ocean Road roundabout
	Great Ocean Road / Noble Street roundabout
	Great Ocean Road / Strathmore Drive (east and west)
	Merrijig Drive / Centreside Drive / Quay Boulevard
	Merrijig Drive east of Fischer Street (no on-road bike lanes)
	Horseshoe Bend Road north of South Beach Road
	Duffields Road
High vehicle speeds and/or	Fischer Street
volumes and lack of/inadequate cycling infrastructure causing high	Surf Coast Highway south of South Beach Road
stress environment	Grossmans Road west of Eton Road roundabout in Torquay
	Hendy Main Road
	Parts of Great Ocean Road
	Torquay Boulevard / Sunset Strip in Jan Juc

KEY SAFETY ISSUES	LOCATIONS
	Blackgate Road
	Coombes Road
	Deans Marsh Road out of Lorne
	Forest Road
	The Esplanade
Conflicts with kerbside parking	Fischer Street
activity	Gilbert Street
	Western side of Horseshoe Bend Road
	Torquay Foreshore
	Parts of Surf Coast Trail/Walk
Conflicts with pedestrians and dogs	The Esplanade extension to Pt Impossible
due to lack of separation, narrow paths, blind corners and limited	Pt Impossible Road
passing opportunities	Around Bells Beach, Southside Beach and Pt Addis Road
	Central Torquay
	Roads leading to Torquay Town Centre
	Anglesea River bridge
Pinch points (narrowing of cycle	Spring Creek bridge
lanes/shoulders)	Surf Coast Highway at Thompsons Creek particularly post
	installation of barriers
	Horseshoe Bend Road
	Deans Marsh-Lorne Rd
Poor road condition, rough edges,	Hendy Main Rd
verges or soft shoulders	Anglesea Road
	Coombes Road
	Many parts of Great Ocean Road

Table C3: Community identified Key Safety issues

## Cycling Infrastructure

Key location-specific *issues* raised by the community in relation to cycling infrastructure were:

- Old Great Ocean Road too narrow, rough surface and poorly maintained. This offroad track could be used as key cycling route by school children and parents to/from Bellbrae Primary School;
- Roads too narrow with intermittent to no shoulders on routes frequently used by fitness/training cyclists: Horseshoe Bend Rd, Grossmans Road (west of Eton Road

- roundabout), Deans Marsh-Lorne Road, Hendy Main Road, Cape Otway Road, Anglesea Road, Blackgate Road, Great Ocean Road, Forest Road and Duffields Road;
- Overgrown vegetation, lack of proper maintenance on Surf Coast trail/walk generally between townships, more specifically around Bells Beach, Southside and Pt Addis;
- Spring Valley bike park poorly maintained;
- No drinking taps in Spring Creek Reserve;
- Unsealed pavement on Point Impossible Rd and The Esplanade extension not desired for recreational cycling to 13th Beach;
- Too narrow / inadequate trail between:
  - Anglesea SLSC and Point Roadknight
  - Cliffside trail between Bells Beach and Torquay too narrow;
- Lack of signage to alert motorists of bicycle movements across and along The Esplanade and Bell Street;
- Lack of sufficient bicycle parking and storage at Central Torquay, The Esplanade, Torquay Foreshore, Bellbrae Primary School, Lions Park (Anglesea), Torquay and Fairhaven life-saving clubs, and Lorne beach;
- Drinking water and bike turnouts on Great Ocean Road between townships; and
- Lack of end-of-trip bicycle facilities at Hurst Rd.

## Missing links

'Missing links' was identified as one of the top reasons by the community as to why people cycle less or do not cycle in the Surf Coast.

The community identified the following as missing links in the cycling network:

- Torquay to Geelong, to cater for commuter needs;
- Between Jan Juc and Bellbrae Primary School, including safer crossing(s) across Great Ocean Road:
- Crossings across Horseshoe Bend Road at Merrijig Drive, and The Esplanade at Horseshoe Bend Road, enabling safer riding between Merrijig Drive and the Torquay Foreshore:
- Between Torquay and 13th Beach (The Esplanade-The Esplanade extension to Pt Impossible-Pt Impossible Road-Blackgate Road);
- Bridge over Thompsons Creek to enable direct connection between Pt Impossible and Breamlea:
- Direct route between the northern areas of Torquay, Old Torquay and the Foreshore;
- On-road cycle link on Merrijig Drive east of Fischer Street to Horseshoe Bend Road;
- Access across Surf Coast Highway (currently limited to Merrijig Drive and Darian Road);
- Between Grossmans Road (school precinct) and Great Ocean Road away from busy Surf Coast Highway;

- Off-road link / crossing along Great Ocean Road between Hurst Road and Bellbrae;
- Dedicated connection between Bells Beach, Southside Beach and Pt Addis;
- Off-road link between Hurst Road (east) and Point Addis Road off-road trails;
- Between Point Roadknight and Anglesea beach/shops/town;
- Path from Aireys Inlet to the Fairhaven Surf Club (Surf Coast Walk path too steep and Great Ocean Road too busy);
- Better connection to Anglesea shops from schools, bike parks, recreational reserves;
- Off-road access between Torquay, Jan Juc, the mountain bike trails near Bellbrae and Anglesea;
- Cycle link between top and bottom shops in Aireys Inlet;
- Crossing Princes Hwy near Barwon Terrace and Hesse Street in Winchelsea; and
- Off-road links between townships along Great Ocean Road (in general).

### **Other Considerations**

In addition to the location-specific issues summarised above, some community participants have also raised the following key issues.

- Impacts on safer cycling to schools and shops during warmer months due to increased tourist traffic and parking activity;
- Safer rides to school and lack of safe crossings and off-road paths connecting community to schools in Surf Coast, especially Torquay, Jan Juc, Aireys Inlet, Anglesea and Lorne;
- Driver behaviour and aggressiveness towards cyclists (for example, cutting a cyclist off and passing very closely);
- Many riders visiting the area are not as familiar with the roads and community accepted practices;
- Cyclists riding two or more abreast causing frustration and delays for following motorists by not allowing them to pass; and
- Dangerous or aggressive riding, particularly by fitness/training cyclists on descends.

# **APPENDIX D**

**Stakeholder Feedback** 

#### **D1. General cycling issues**

Stakeholders were asked to identify key barriers to safer cycling in the Surf Coast. The top *issues* inhibiting safer cycling were:

- Lack of suitable cycling infrastructure on road and off road;
- Missing links and connections to key destinations, particularly schools, town centres and beach attractions (for example, SLSC);
- Unsatisfactory road, traffic or speeding conditions which causes high stress among cyclists;
- Driver behaviour, response and negative attitude towards cycling, and a car dominant culture;
- Conflicts with other road users due to lack of segregation and at crossings/intersections due to inadequate treatments; and
- Inadequate route guidance, wayfinding and directional signage catering for riders of all ages and abilities.

In addition to the above, other soft issues that emerged from discussions with stakeholders were lack of awareness or knowledge of the Road Rules by both drivers and cyclists, cyclist aggressiveness or behaviour (for example, two or more cyclists riding abreast) and lack of cycling culture.

As the cycling network in the Surf Coast is under the jurisdiction of multiple agencies, stakeholders suggested that a strategic approach and working collaboratively to deliver safer outcomes for cyclists should be initiated.

Community group stakeholders identified the following issues in relation safer cycling in the Surf Coast:

- Safer road crossings and fit-to-purpose off-road paths are a priority for children and parents at Bellbrae Primary School. It is felt there is an opportunity to improve the safety for students and encourage cycling to school. This would allow children to experience the independence and freedom of cycling to school;
- Drivers and cyclists are not necessarily aware of all of relevant Victorian Road Rules. This could put these users at risk on roads; and
- Lack of skills among cyclists on how to navigate narrow shoulders and unlit roads with higher speeds. This can lead to safety issues for both drivers and cyclists.

Stakeholders were asked to identify key issues and considerations in relation to the cycling network / connections to destinations that the Surf Coast Cycling Strategy could address. The top *issues* inhibiting safer cycling were:

- Lack of identified priority cycling routes that link key destinations (e.g. schools, town centres, jobs, reserves, playgrounds);
- Roads linking townships or key destinations (for example, Bells Beach to Southside) are unsafe for cycling or have lack of off-road options;
- Fit to purpose cycling facilities missing for school and commuter use;
- Lack of investment in upgrading or maintaining cycling infrastructure;

- Unsuitable cycling conditions on parts of some key off road paths (for example, Surf Coast Walk); and
- Inadequate cycling infrastructure and safe connections within new developments.

In addition to the above, other soft *issues* highlighted by stakeholders were:

- Limited education programs to promote safer cycling culture and improve community knowledge of route options;
- Lack of strategic thinking when developing new links and connections; and
- Missed opportunities due to lack of cohesive / integrated approach between road authorities and land owners in developing cycling routes / network.

#### **D2. Specific cycling issues**

A group of stakeholders relevant to the topic were asked to identify missing safe links connecting land managed by different authorities. Top answers were:

- Across main arterials, such as Great Ocean Road between land managed by Surf Coast and Great Ocean Road Coastal Committee;
- Cape Otway Road, between Surf Coast and Colac Otway; and
- Horseshoe Bend Road, between Surf Coast and Geelong via Armstrong Creek.

Targeted engagement was undertaken with a broad range of stakeholders to identify much wider issues and challenges in the cycling space. Table D1 summarises a set of questions brainstormed with these stakeholders, based on their professional experience and knowledge.

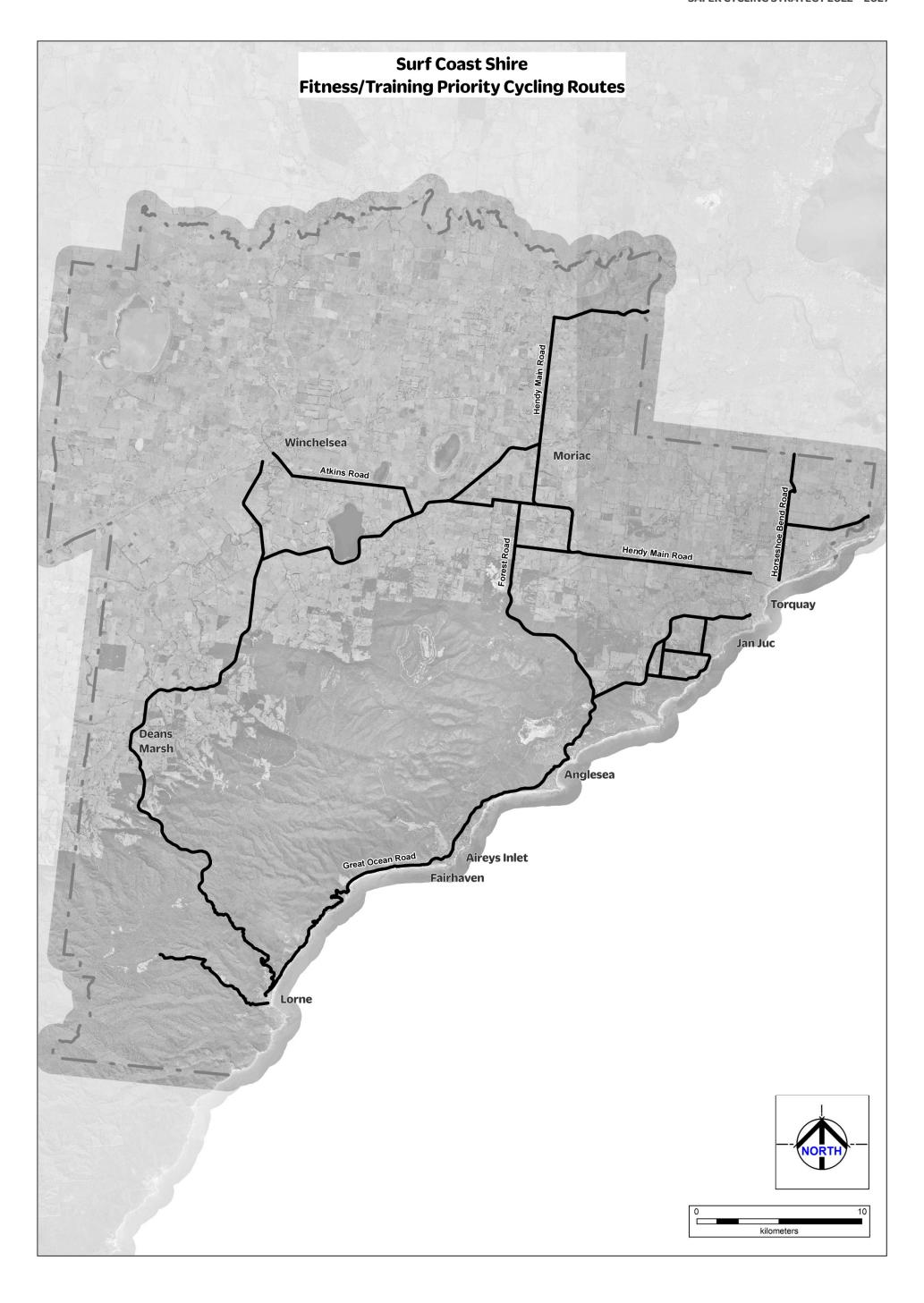
TARGETED QUESTIONS	STAKEHOLDER RESPONSES
What challenges are there to supporting / increasing cycling related tourism?	Lack of infrastructure and facilities (toilets, water taps, shelter, information board, etc.) at trail heads Lack of directed funding Competition with other regions (and the State Government support) all wanting to be the premier cycling destination Lack of information on routes and suitability / cycle touring options. Technology to support cycling routes is lacking. Complacency – thinking that location is enough for a good experience – need good quality and safe routes Building on cycle friendly community
What challenges exist in accommodating safe cycling events within Surf Coast?"	Community attitude, tolerance and behaviours  Negative perception from media  Not many options for cycling specific routes – often only one road in and out of event village within townships

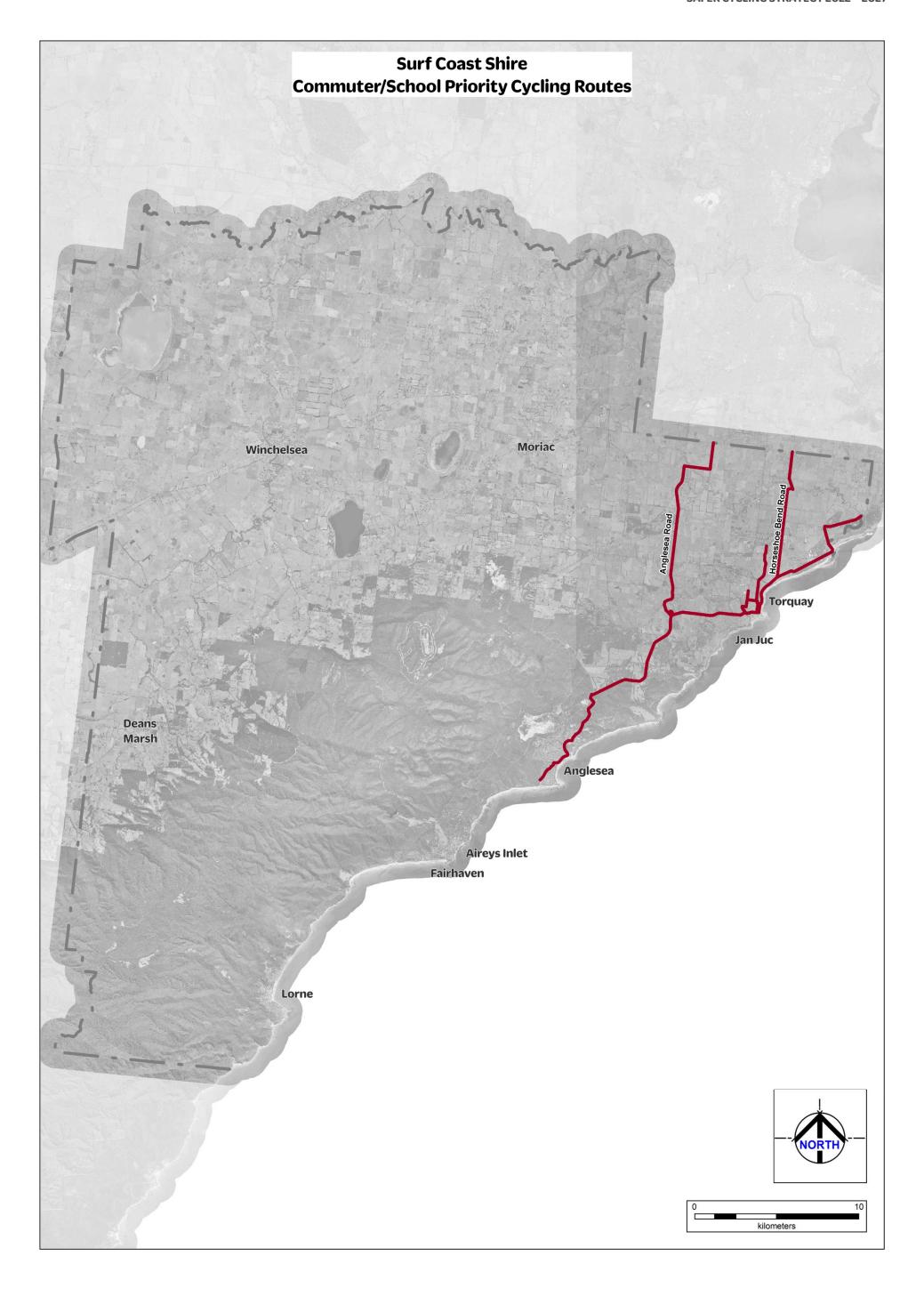
TARGETED QUESTIONS	STAKEHOLDER RESPONSES
	Terrain and access, getting in and out of coastal towns difficult
	Traffic management around Torquay for cycling events
What are the planning barriers that inhibit inclusion of cycling infrastructure in new developments and within open space?	No mandatory (only voluntary) requirements to provide cycling infrastructure in new developments
	No set standards for cycling lanes or paths in new developments
	Lack of vision or clear directions on future cycling links to new development areas
	Timing – once development plans are established then it is difficult to revise them down the track when land use and traffic volume projections change
What are key issues with the existing cycling network in relation to maintenance, surface types and data capture?	Funding (limited allocation)  Clear expectation on level of service required on different cycling infrastructure
What are the key challenges around the interaction between cycle lanes, parking lanes, bus stops and local law enforcement in the existing network?	Narrow road reserves in new subdivisions in Torquay unsuitable for on-road cycling
	Parking activity around schools (a lot of complaints around inappropriate parking and the resultant conflicts discouraging people from cycling to school)
	Lack of on-street parking (leading to inappropriate parking and behaviour)
	Behaviour of road users, both cyclists and drivers
What are the key concerns regarding cyclist- pedestrian interactions and safety?	Lack of clear signage on shared paths (i.e. casual walkers may not expect paths being used by cyclists)
	Shared paths may not be best solution in some situations – separation of walkers and riders needed on busy paths
	Shared paths too narrow resulting in limited room for cyclists to pass
	Compatibility, different users pay attention differently
	Speed differential between walkers and riders

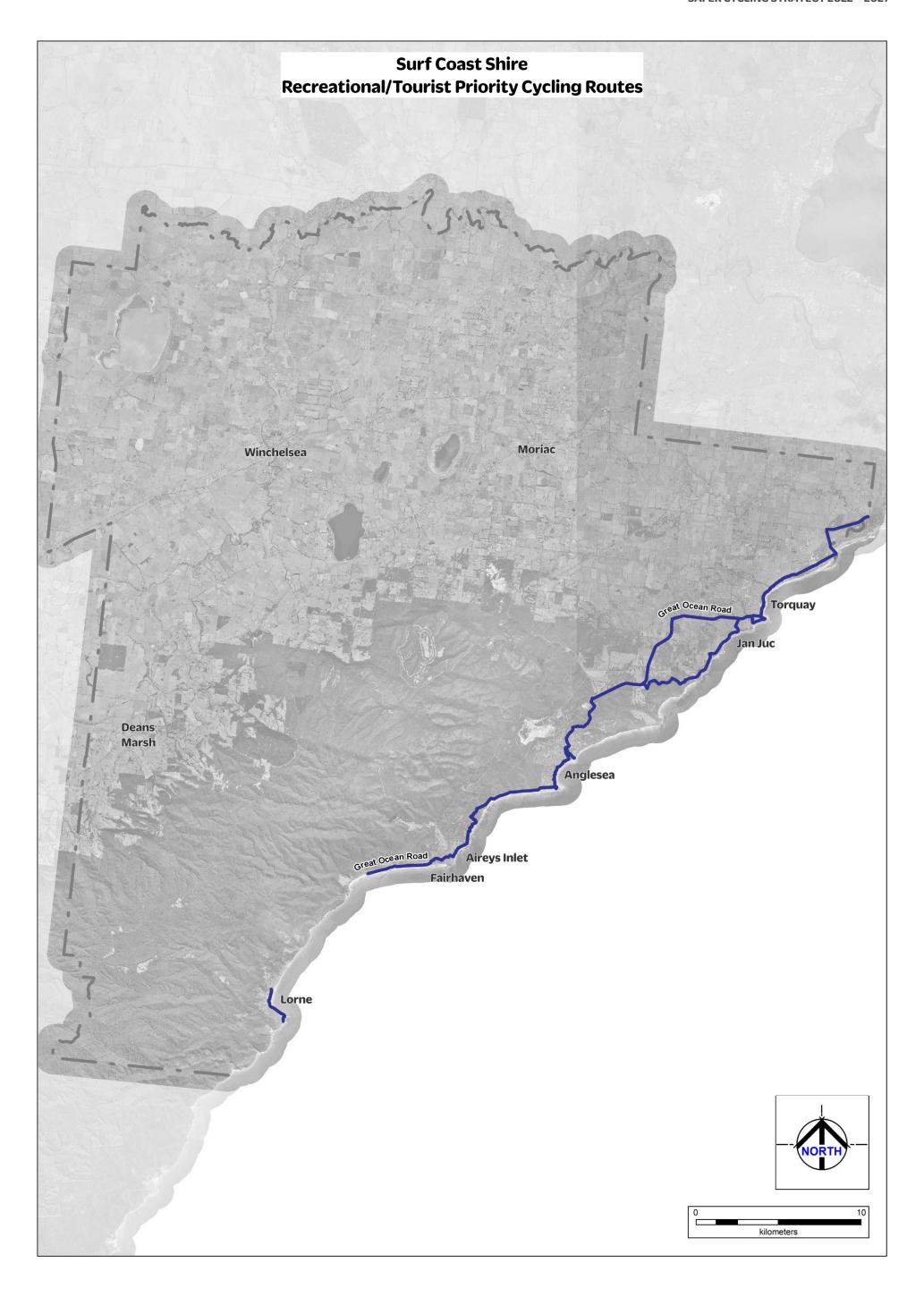
Table D1: Stakeholder Responses to Targeted Cycling issues

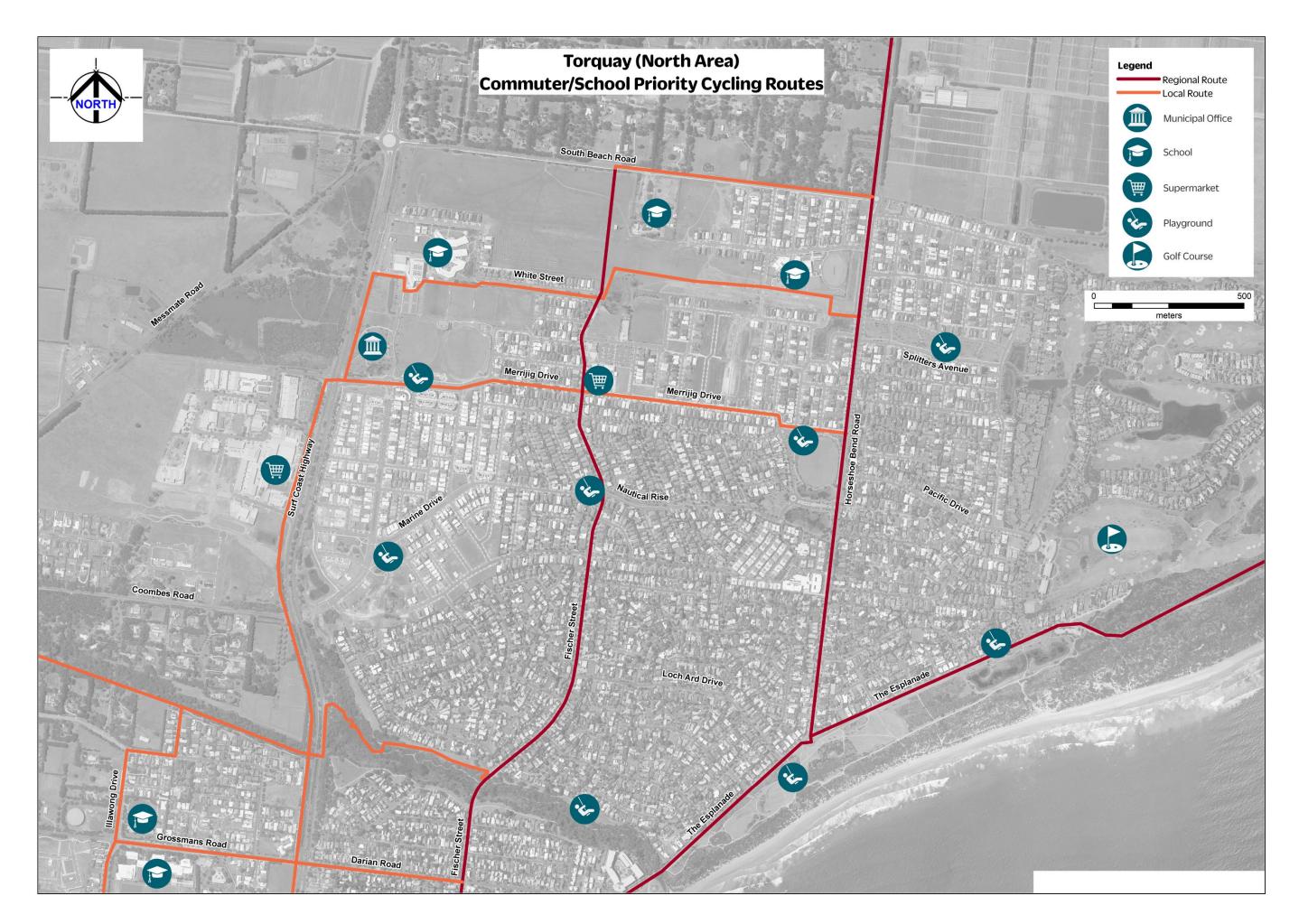
## **APPENDIX E**

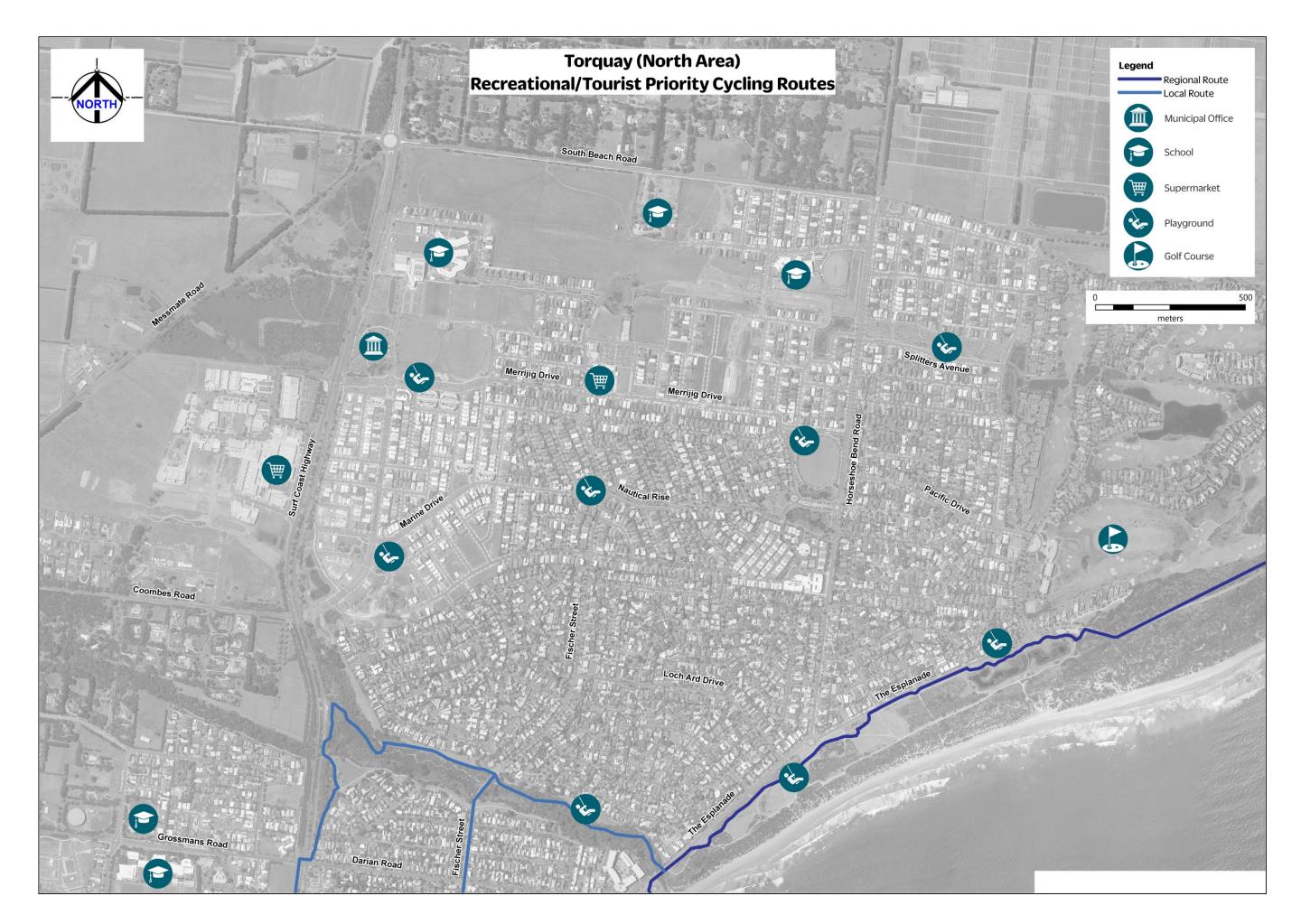
**Priority Cycling Routes for Fitness, Commuter and Recreation Cyclists** 

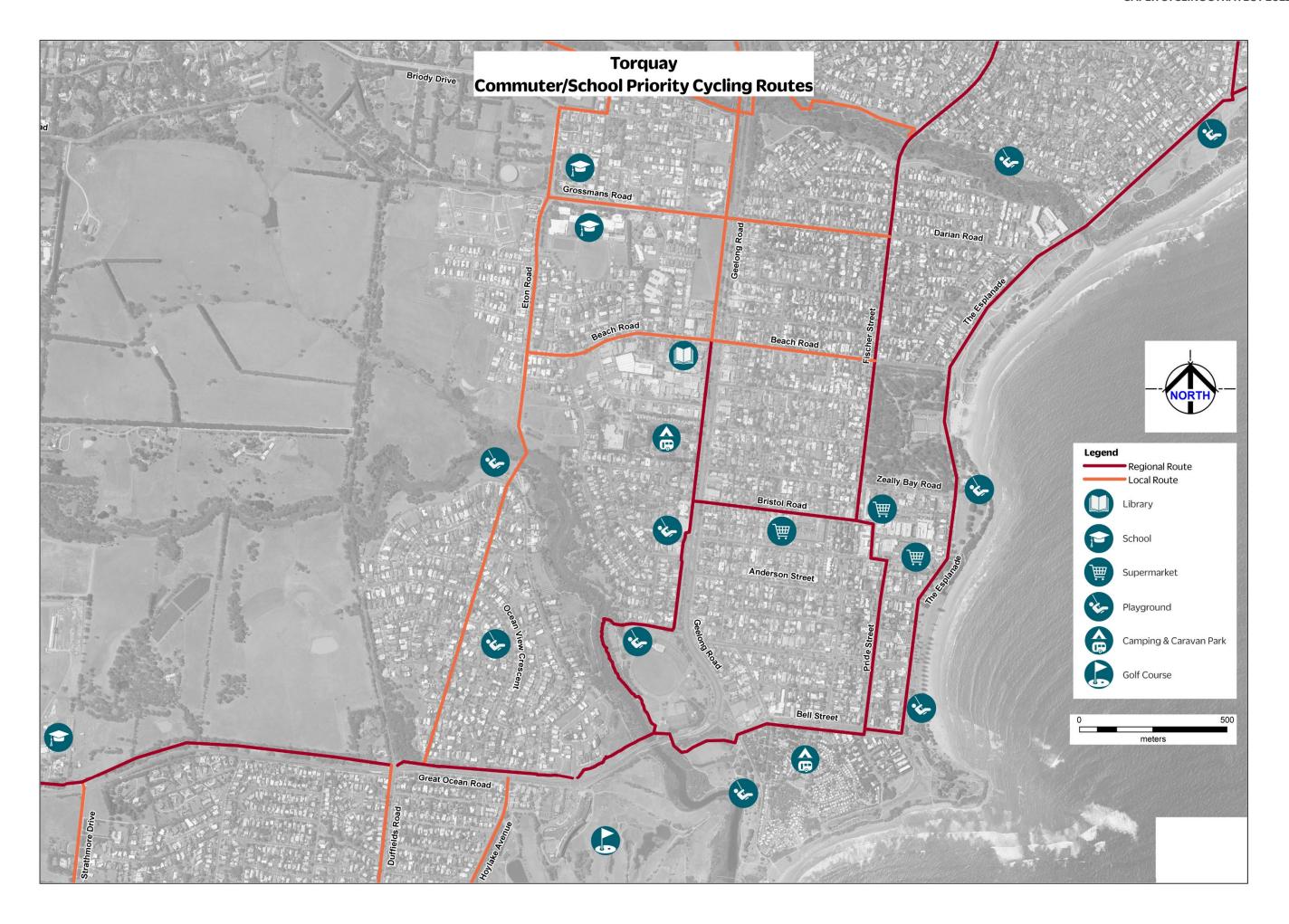


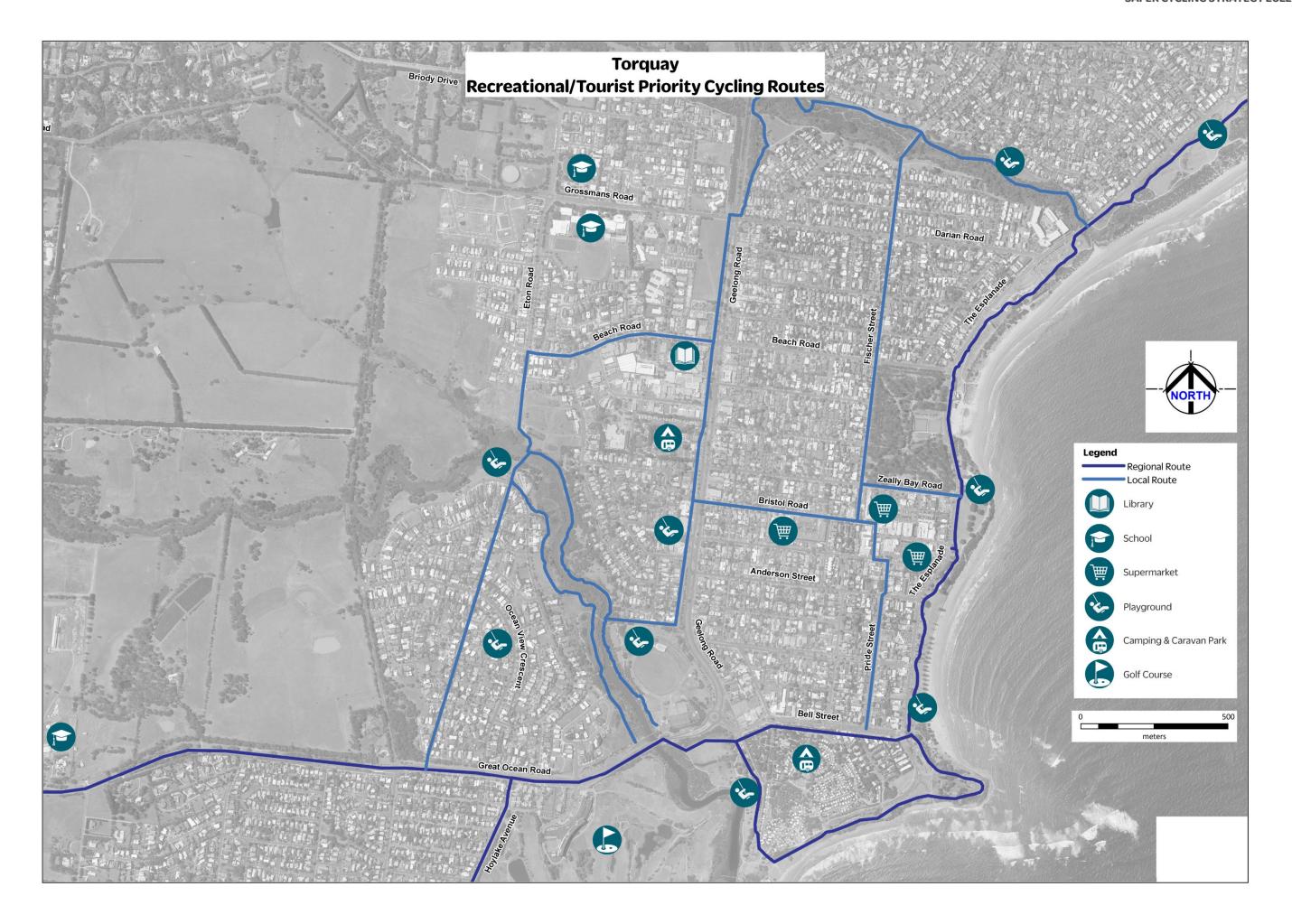


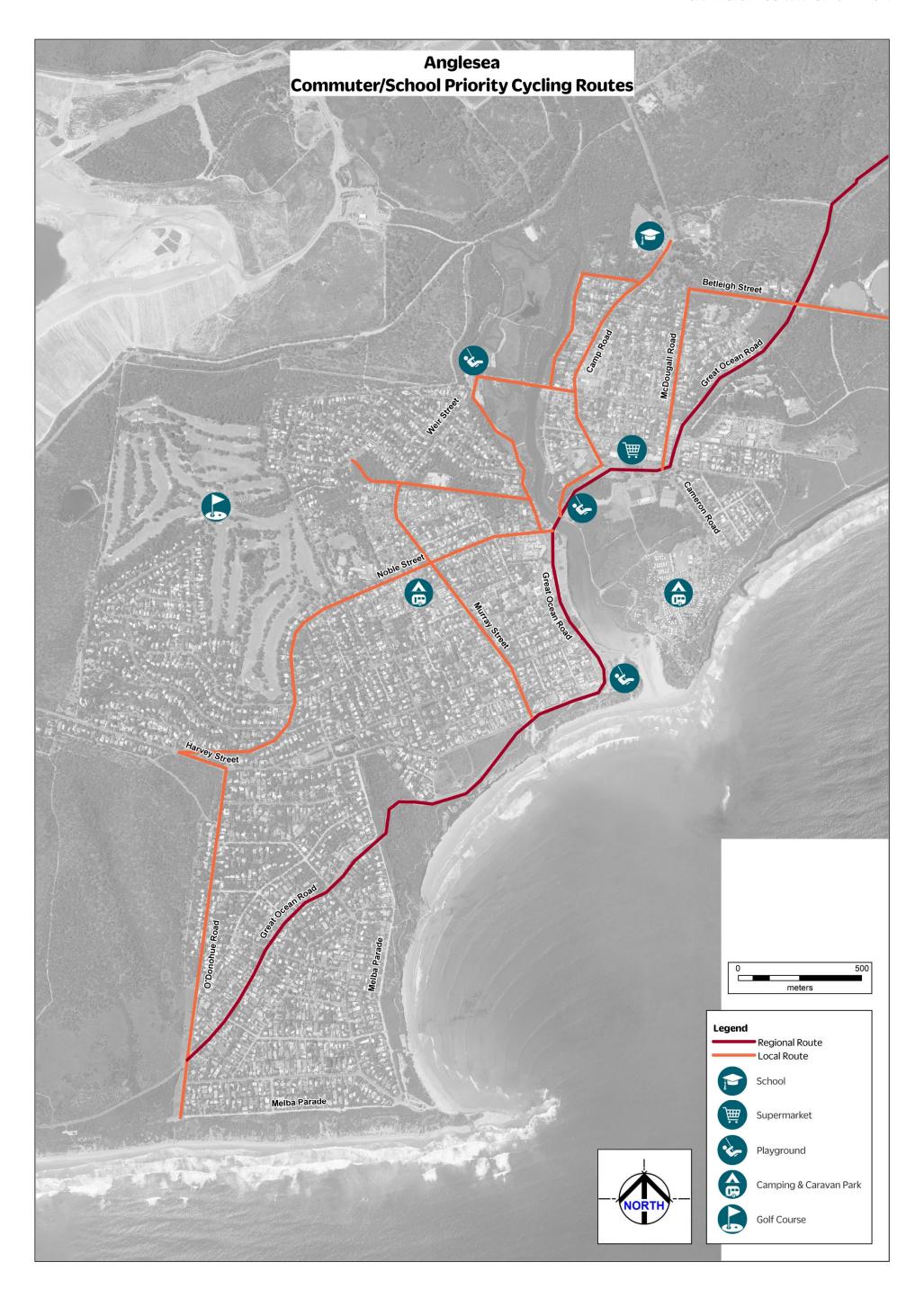


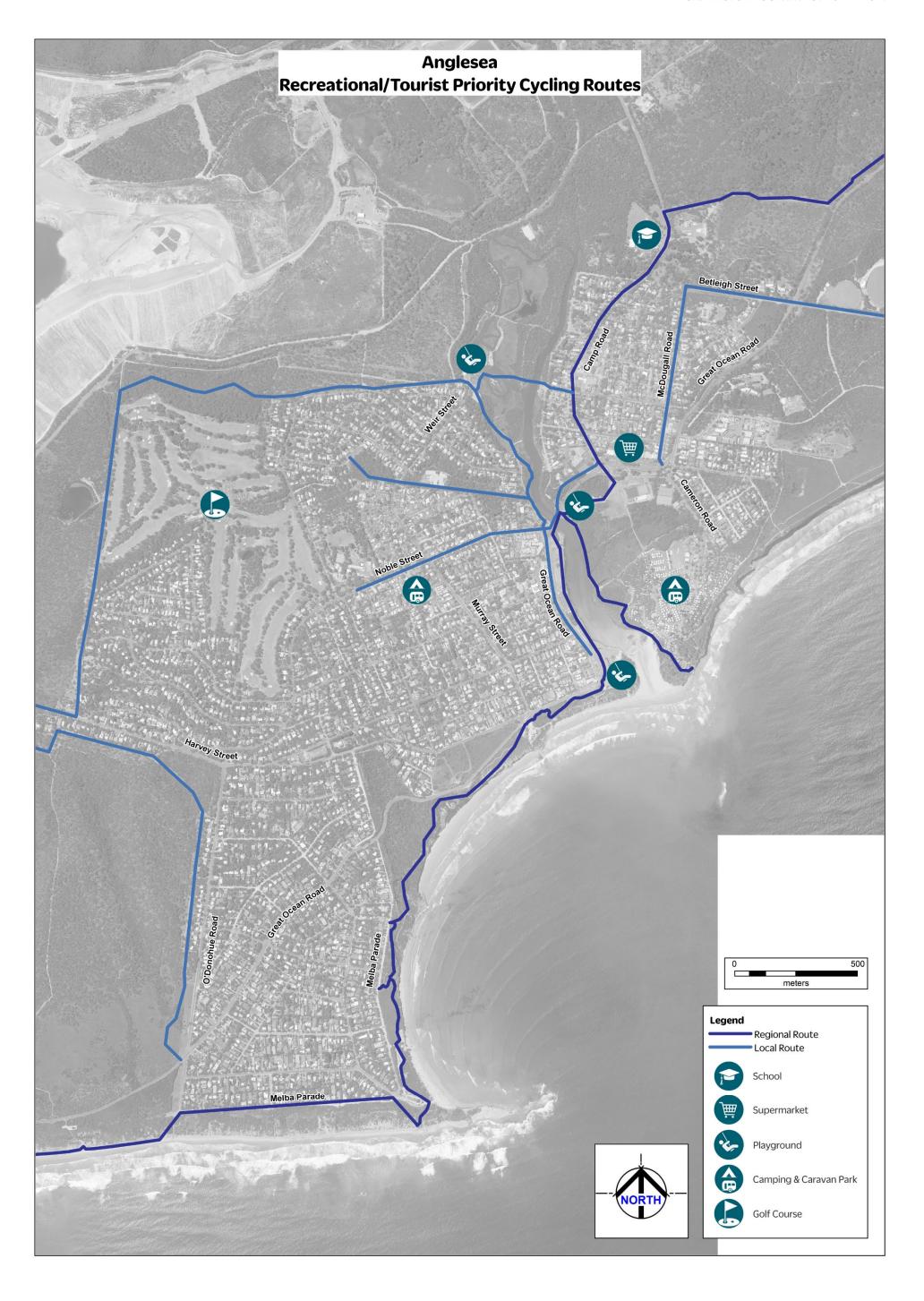


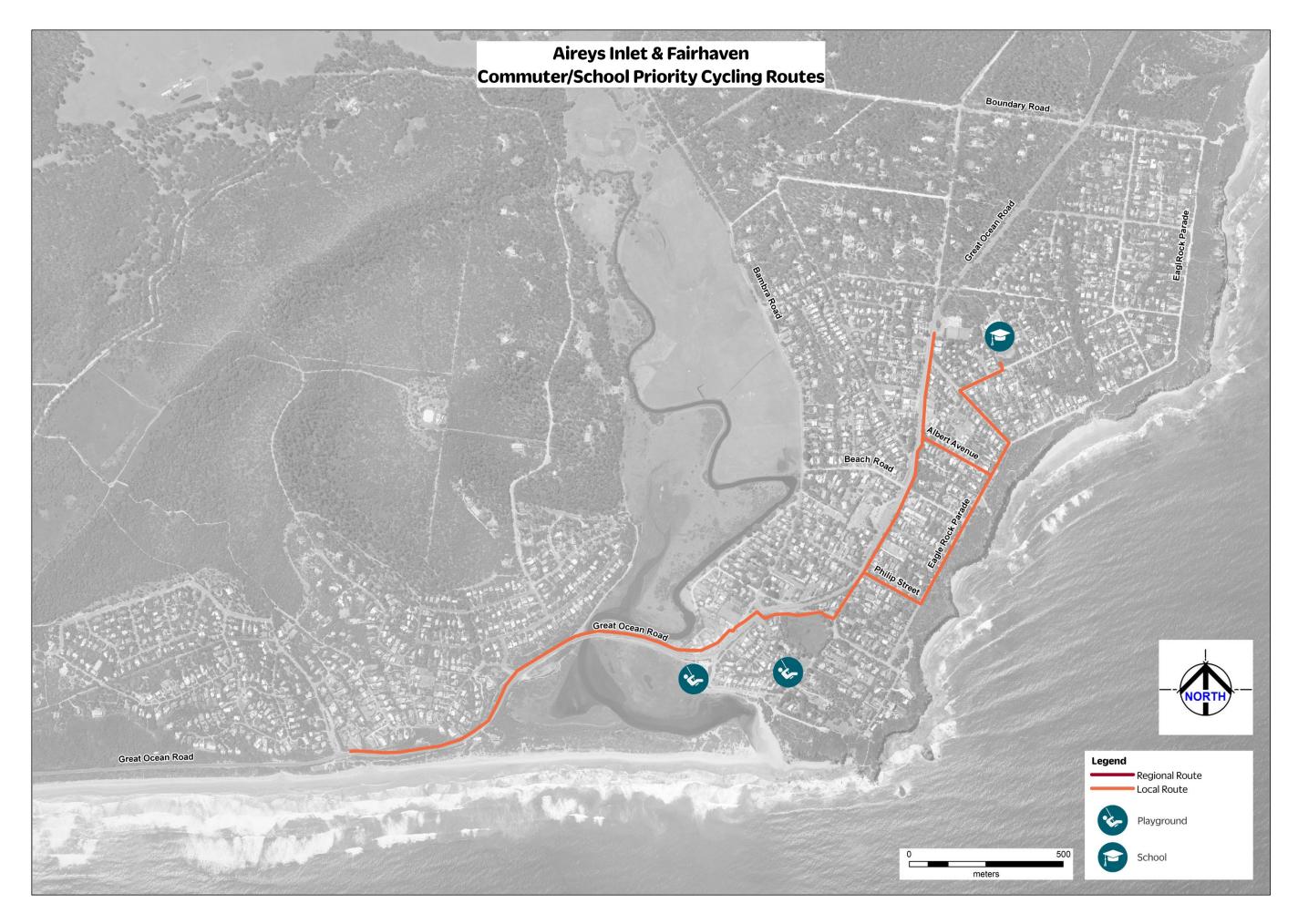


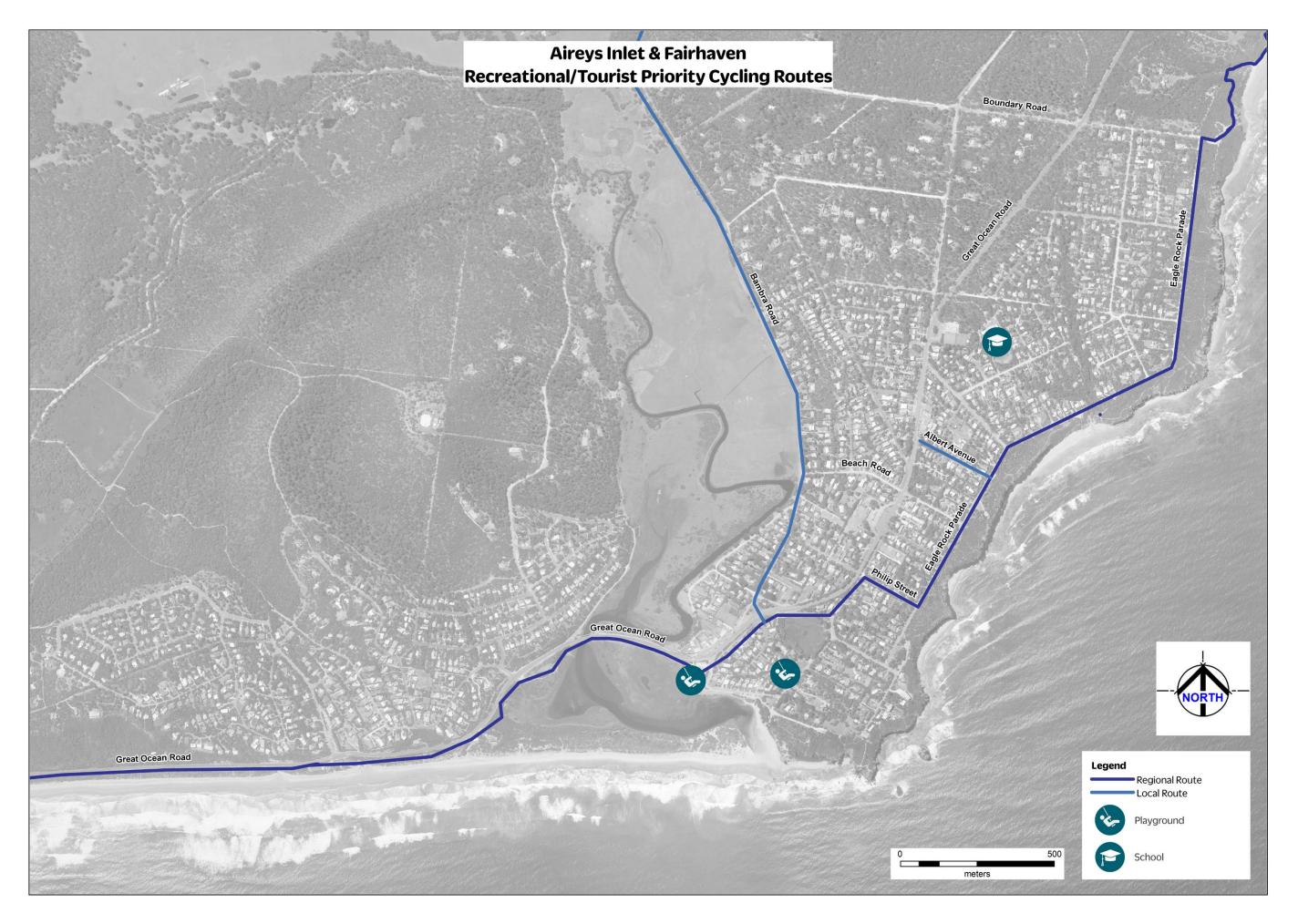






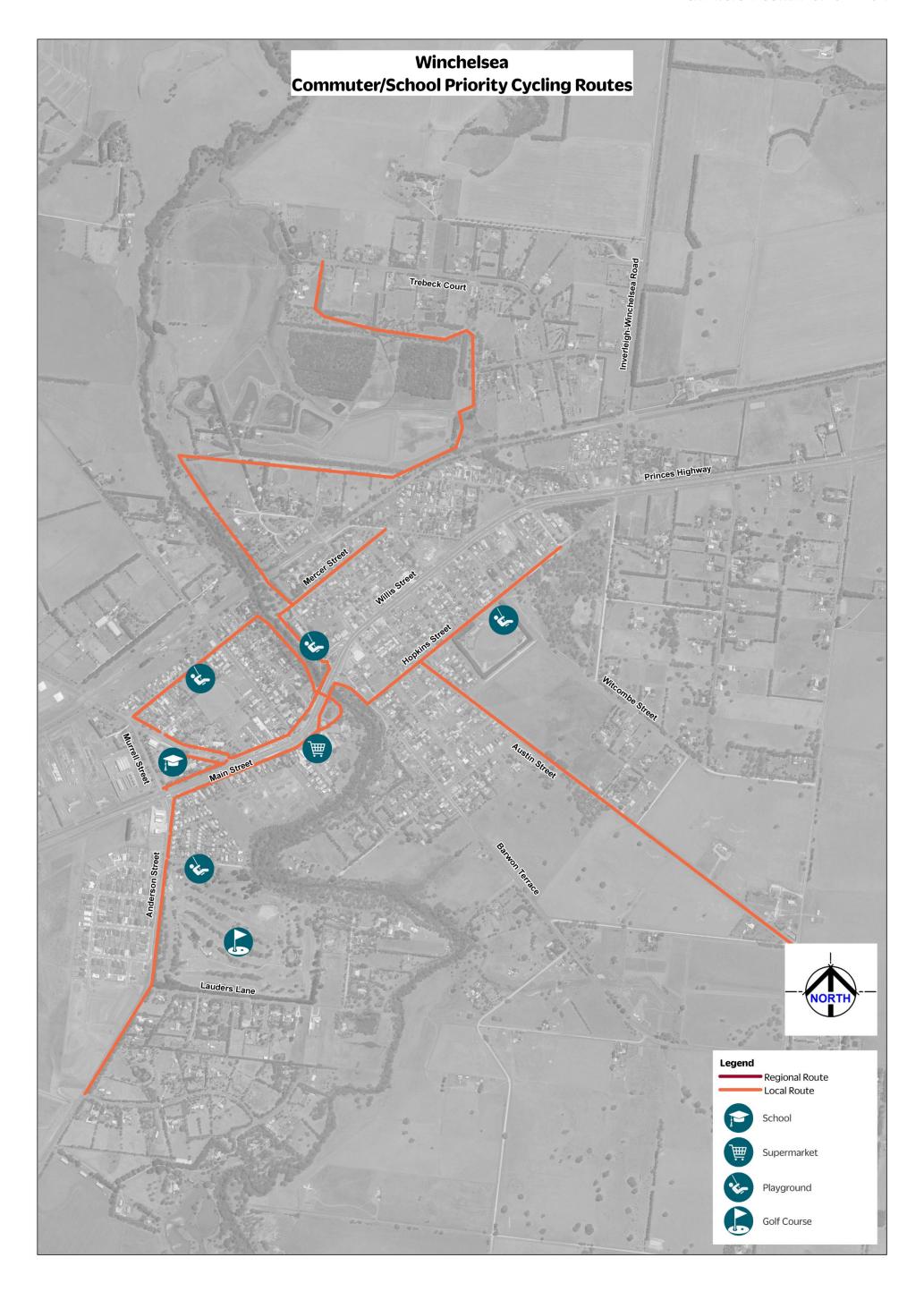


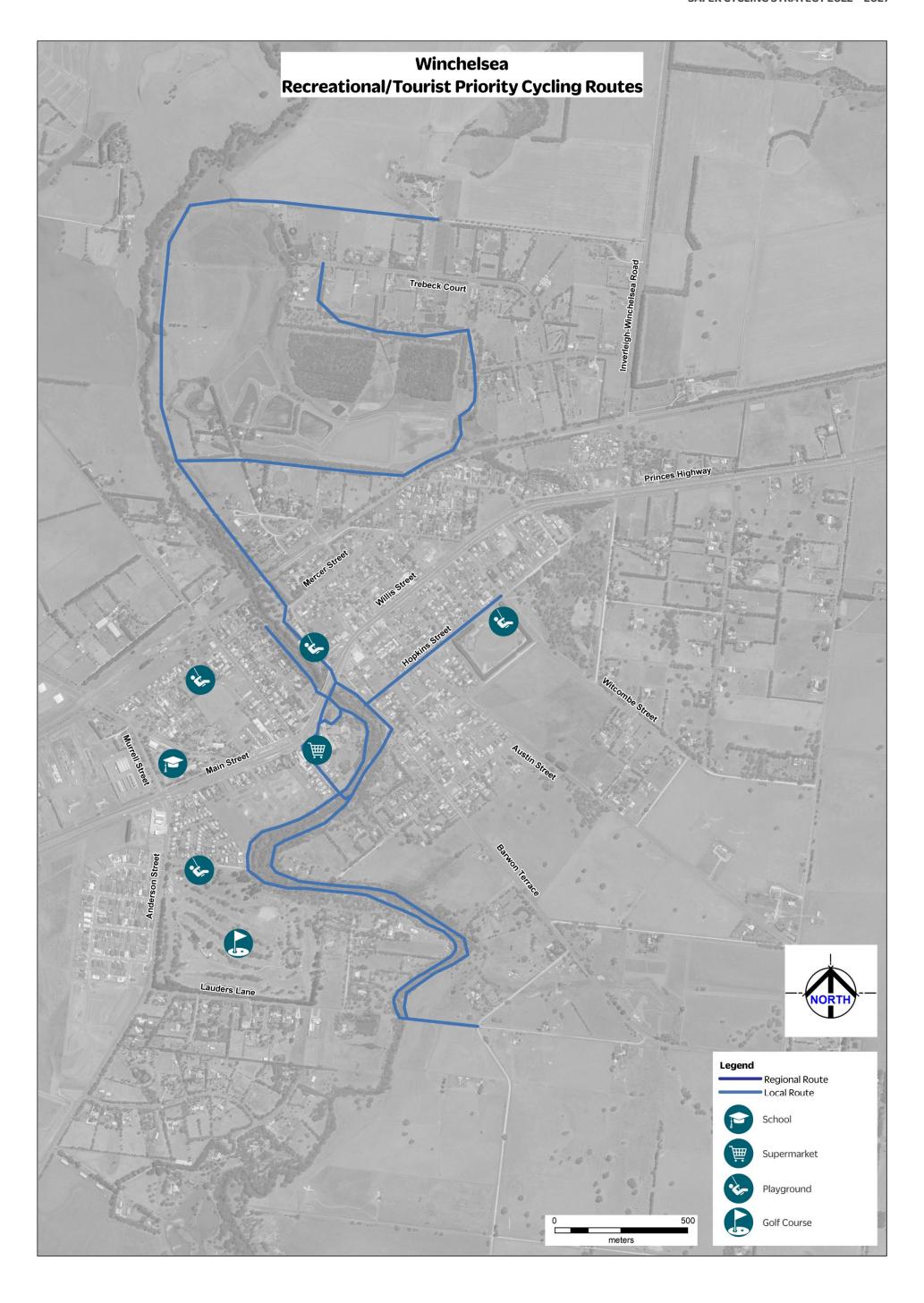












# APPENDIX F

**Details of Prioritisation Assessment** 

#### F1. **Shortlisted routes**

Shortlisted routes for each of the three cycling modes are listed below.

### Fitness routes

- Cape Otway Road
- Coombes Road
- Hendy Main Road
- Horseshoe Bend Road
- Blackgate Road
- Forest Road

The Great Ocean Road is not included in the list above. The significance of the route is recognised and an action has been included in the Action Plan to advocate to DoT for a study of cyclist safety along the route with an aim to identify potential improvements. Part of the Great Ocean Road, through Torquay, Jan Juc, Anglesea, Aireys Inlet and Fairhaven currently provides 'standard' shoulders or cycle lanes, further improvements may be recommended through the cyclist safety study. The remaining part of Great Ocean Road, to Lorne has significant constraints (e.g. topography, limited road reserve, sensitive vegetation, etc.), which present challenges for infrastructure upgrade works to cater for fitness cyclists.

### Commuter routes

### Regional on-road or off-road routes:

- Torquay to Armstrong Creek via Horseshoe Bend Road and The Esplanade.
- Torquay Town Centre to Torquay North via Fischer Street.
- Torquay to Barwon Heads via The Esplanade/Surf Coast Walk, Pt Impossible Road and Blackgate Road.
- Bellbrae to Torquay via Great Ocean Road and Bell Street.
- Jan Juc to Surf City via Spring Creek Reserve and Surf Coast Highway.

### Local on-road or off-road routes:

- Jan Juc to Grossmans Road school precinct via Drainage Reserve, Spring Creek bridge at bike park and Eton Road.
- Torquay Town Centre to Surf City via Bristol Road.
- Surf City to Torquay North via Beach Road.
- Grossmans Road school precinct to Torquay North via Darian Road.
- Sunset Strip and Duffields Road, Jan Juc.

### **Local off-road routes:**

Western area of Anglesea to shopping centre and Primary School.

- Anglesea shopping centre to Primary School and bike park.
- Fairhaven to top and bottom shops to Aireys Inlet Primary school.
- Northern area of Lorne to school and Mountjoy Parade shops.
- Winchelsea school to shopping centre and Riverbank.

### Recreational routes

### Regional off-road routes:

- Torquay to Thirteenth Beach bike trail.
- Surf Coast Walk through Torquay, Jan Juc to Bells Beach.
- Bells Beach to Anglesea shops via Ironbark Basin, Pt Addis Road, Great Ocean Road path, Firebreak track and Camp Road.
- Surf Coast Walk, Anglesea to Fairhaven via Pt Roadknight, Urquhart Bluff and lighthouse.

### **Local off-road routes:**

- Anglesea main shops to Coogoorah.
- Anglesea visitor centre to Coogoorah via River Reserve Road.
- Camp Wilkin to Anglesea main shops via Noble Street.
- Swing bridge to Lorne Pier.
- Winchelsea shops to Barwon Parks mansion via Riverbank.

### F2. Level of Traffic Stress (LTS) data used

The following empirical data was used to calculate stress rating for shortlisted commuter and recreation routes:

### **Fitness routes:**

- Speed limit, sourced from DoT's speed zone data;
- Daily traffic volumes, sourced from Council historical count data or DoT's volume estimates; and
- Proportion of route with no or narrow shoulder or cycle lane, calculated using Council's asset data and most recent available aerial imagery.

### **Commuter routes:**

- Speed limit; sourced from DoT's speed zone data;
- Daily traffic volumes, sourced from Council historical count data or DoT's volume estimates:
- Likely on-street parking turnover, informed by local area knowledge and nearby land uses served:
- Type of on-street parking; observed via most recent available aerial imagery; and

• Number of intersections with no provision for cyclists; observed via most recent available aerial imagery.

### F3. Prioritisation Criteria

The following criteria were used to score overall prioritisation of each of the shortlisted routes for fitness, commuter and recreation cyclists.

### **Fitness routes:**

- Level of Traffic Stress (LTS) rating, computed using empirical data;
- Proportion of length with standard shoulders or cycle lanes, calculated using Council's asset data and most recent available aerial imagery; and
- Likely utilisation/attractiveness, informed by Strava heatmaps<sup>4</sup>. A view of the cycling heatmap in Surf Coast is provided in **Figure F1**. Routes of higher usage are brighter in red colour.

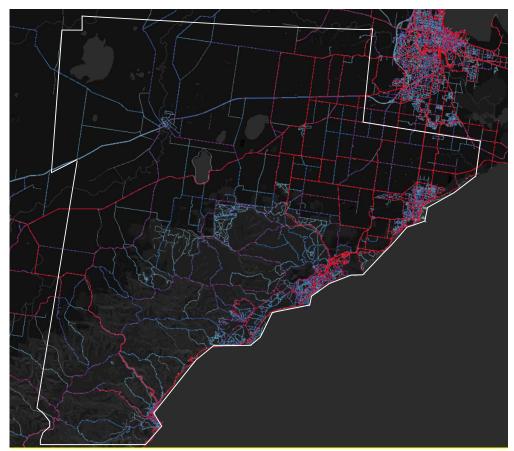


Figure F1: Strava Cycling Heatmap

<sup>&</sup>lt;sup>4</sup> Strava is a social network and training tool for cyclists, runners and swimmers. Users record their physical activity using a dedicated GPS device or utilise the mobile app, and upload the file to their profile. Strava anonymised this information and makes it available through their "Global Heatmap" tool, showing aggregated all public activities over the last two years across the world.

### Regional / local Commuter routes:

- LTS rating, computed using empirical data;
- Indicative network connectivity, informed by proportion of businesses potentially served:
- Direct access to businesses, as reviewed via most recent available aerial imagery;
- Zone population, sourced from .id community estimated data; and
- School route or access, as reviewed via most recent available aerial imagery.

### **Local off-road commuter routes:**

- Length of the section;
- Feasibility/constructability for route upgrades or new construction, informed by
  route characteristics (e.g. bridges, steps, steep topography, limited reserve, etc.) and
  challenges (e.g. impacts to private properties, services, sensitive vegetation,
  heritage, etc.);
- School route or access, as reviewed via most recent available aerial imagery; and
- Likely pedestrian conflicts, informed by the locality and attractiveness to walking.

### **Recreation routes:**

- Length of the section;
- Feasibility/constructability for route upgrades or new construction, informed by
  route characteristics (e.g. bridges, steps, steep topography, limited reserve, etc.) and
  challenges (e.g. impacts to private properties, services, sensitive vegetation,
  heritage, etc.);
- Number of destinations/attractions per kilometre; informed by Point of Interest data and reviewed by most recent available aerial imagery;
- · Likely desirability, informed by views, ease of cycling, community feedback, etc.; and
- Likely pedestrian conflicts; informed by the locality and attractiveness to walking.

## **F4.** Scoring of Shortlisted Routes

The outputs from the prioritisation assessment of shortlisted routes are provided in Table **F1-F5**.

			LTS Rating	Prioritisatio	n Ranking
ID	Route	Section	Average LTS Rating	Cumulative score	Route Ranking
1A	Coombes Road	SCH to Messmate	3	6	6
1B	Coombes Road	Messmate to Anglesea Road	4.3	9	3
2A	Hendy Main Road	Angelsea Rd to Greenfields	3.7	9	3
2B	Hendy Main Road	Greenfields to COR	3	8	4
2C	Hendy Main Road	COR to Princes	3.7	9	3
2D	Hendy Main Road	Princes Hwy to Barrabool Road	3.7	7	5
3A	Cape Otway Road	Hendy Main Rd to Buckley S	3.3	11	1
3B	Cape Otway Road	Buckley S to WDMR	3	10	2
4A	Horseshoe Bend Road	The Esplanade to S Beach Road	2.3	8	4
4B	Horseshoe Bend Road	S Beach Road to Blackgate Road	3.3	8	4
4C	Horseshoe Bend Road	Blackgate Road to Council boundary	3.7	8	4
5A	Blackgate Road	HSB Road to Pt Impossible Road	3	7	5
5B	Blackgate Road	Pt Impossible Road to Council boundary	4	10	2
6A	Forest Road	GOR to Larcombes Road	3.7	9	3

Table F1: Fitness Cycling routes – Prioritisation Scoring

			LTS Rating	Prioritisati	on Ranking
ID	Route	Sections	Highest LTS Rating	Cumulative Score	Route Ranking⁴
1A	Fischer Street	Bristol to Beach	3.5	14	2
1B	Fischer Street	Beach to Darian	3	12	4
1C	Fischer Street	Darian to Merrijig	3	13	3
1D	Fischer Street	Merrijig to White	4	15	1
2A	Bristol Road	Fischer to SCH	3	12	4
ЗА	Surf Coast Highway	Spring Creek to Bristol	5	12	4
3B	Surf Coast Highway	Bristol to Beach	5	13	3
4A	Bell Street	SCH to Davidson	3	11	5
4A	The Esplanade	Bell St to Zeally Bay	3.5	12	4
4B	Bell Street	Davidson to The Esplanade	3.5	12	4
4B	The Esplanade	Zeally Bay to Darian	3.5	11	5
4C	The Esplanade	Darian to HSB Rd	3	12	4
4D	The Esplanade	HSB Rd to Sands Blvd	. 3	12	4
4E	The Esplanade	Sands Blvd to Pt Impossible	2	10	6
5A	Pt Impossible Road	Pt Impossible to Blackgate	3	12	4
6A	Blackgate Road	Pt Impossible Rd to Council boundary	4	10	6
7A	Horseshoe Bend Road	The Esplanade to Merrijig	4	13	3
7B	Horseshoe Bend Road	Merrijig to S Beach	4	15	1
7C	Horseshoe Bend Road	S Beach to Blackgate	5	15	1
7D	Horseshoe Bend Road	Blackgate to Council boundary	4	14	2
8A	Great Ocean Road	Bellbrae to Bells Blvd	5	13	3
8B	Great Ocean Road	Bells Blvd to Duffields	5	14	2
8C	Great Ocean Road	Duffields to Spring Creek	5	13	3
8D	Great Ocean Road	Odonohue to Betleigh	5	13	3

Table F2: Regional/Primary Commuter Cycling routes – Prioritisation Scoring

			LTS Rating	Prioritisati	on Ranking
ID	Route	Sections	Highest LTS Rating	Cumulative Score	Route Ranking
1A	Eton Road	Beach to Grossmans	2.5	7	2
2A	Beach Road	Eton to SCH	2	7	2
2B	Beach Road	SCH to Fischer	2	7	2
3A	Darian Road	SCH to Fischer	3	8	1
3B	Darian Road	Fischer to The Esplanade	2	4	4
5A	Sunset strip	Oceans to Duffields	3	4	4
6A	Duffields Road	Oceans to GOR	3	5	3

Table F3: Local Commuter Cycling routes – Prioritisation Scoring

			Prioritisation Rankin	
ID	Route	Sections	Cumulativ e Score	Route Ranking
1A	Noble Street	McMahon Ave to Camp Wilkin/Big 4	17	3
1B	Noble Street	Wilkin/Big 4 to River Reserve	19	1
2A	Camp Road	School to Wray St	17	3
2B	Camp Road	Wray St to Shops	18	2
ЗА	Lorne	Stony Creek to Hall/GOR	13	5
3B	Lorne	Hall/GOR to Deans Marsh Road	14	4
3C	Lorne	Deans Marsh Road to Bay Street	16	3
4A	Aireys Inlet	School to bottom shops via top shops	14	4
4B	Aireys Inlet	Bottom shops to Fairhaven SLSC	16	3
5A	SC Drainage Reserve	GOR to Beach/Eton	14	4
6A	Winchelsea	School to shops	14	4
6B	Winchelsea	Shops to playground	14	4

Table F4: Local Commuter Cycling routes – Prioritisation Scoring

			Prioritisati	on Ranking
ID	Route	Sections	Cumulative Score	Route Ranking
1A	Surf Coast Walk	Fairhaven to Lighthouse	15	6
1B	Surf Coast Walk	Lighthouse to Urquhart Bluff	8.5	9
1C	Surf Coast Walk	Urquhart Bluff to Pt Roadknight	8	9
1D	Surf Coast Walk	Pt Roadknight to Anglesea shops	17.5	4
2A	Camp Road	Anglesea shops to Firebreak track	18	4
2B	Firebreak Track	Anglesea bike park to Forest Road	12.5	8
2C	GOR path	Forest Road to Hurst Rd car park	13.5	7
2D	GOR path	Hurst Rd car park to Ironbark car park	16	5
2E	Ironbark track/Jarosite track/Surf Coast Walk	Ironbark car park and SCW/Bells Beach Rd	16.5	5
3A	Surf Coast Walk (Bells Beach Rd)	SCW/Bells Beach Road to top car park	16	5
3B	Surf Coast Walk	Bells Beach to Jan Juc	16.5	5
3C	Surf Coast Walk	Jan Juc to Bell/Esplanade	20	2
3D	Surf Coast Walk	Bell/Esplanade to Deep Creek	21	1
3E	Surf Coast Walk	Deep Creek to Sands	18	4
3F	Surf Coast Walk	Sands to Pt Impossible	16.5	5
4A	Pt Impossible Road/Blackgate Road	Pt Impossible to Barwon Heads	13.5	7
5A	Lorne	Swing Bridge to Lorne Pier	19	3
6A	Anglesea	Main shops to Coogoorah	17.5	4
6B	Anglesea	Coogoorah to Visitor Centre	15	6
6C	Anglesea	Camp Wilkin to Main shops	15	6
7A	Winchelsea	Orchards Road to shops	14	7
7B	Winchelsea	Shops to Barwon Parks Mansion via Riverbank	13.5	7

Table F5: Recreational Cycling routes – Prioritisation Scoring