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Frankston Bicycle Strategy
Frankston City Council

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aurecon

Contents

Glossary

Bicycle facility	A public facility especially constructed for bicycle traffic, which can refer to any part of a bicycle route, bicycle path, bicycle lane, associated signage or parking equipment
Bicycle lane	A marked lane or part of a marked lane, that is designated by a bicycle lane sign
Bicycle route	Any marked route which forms part of a bicycle network, which may utilise different types of bicycle facilities and may be on-road or off-road
CAD	Central Activities District
DCP	Developer Contribution Plan
Footpath	An area open to the public that is designated for, or has as one of its main uses, use by pedestrians
LAAP	Local Area Access Program
LMA	Linking Melbourne Authority, formerly known as the Southern and Eastern Integrated Transport Authority (SEITA)
MTN	Metropolitan Trail Network
Off-road	A bicycle path or shared path that is located on public or private land that is not generally open to motor vehicle traffic
On-road	A bicycle facility that forms part of the road, such as a bicycle lane
PBN	Principal Bicycle Network
Road	An area that is open to or used by the public and is developed for, or has as one of its main uses, the driving or riding of motor vehicles
Shared path	An area open to the public that is designated for use by both bicycle riders and pedestrians
Shared trails	An area open to the public that is designated for use by bicycles, equestrians and pedestrians
Transition	A facility which makes it possible to travel between an on-road bicycle lane and a bicycle path or other off-road facility
Urban Growth Boundary	A planning tool to manage the growth of Melbourne it contains the growth of urban areas
VTP	Victorian Transport Plan

Some definitions adapted from RTA NSW Bicycle Guidelines

Executive summary

The Frankston Bicycle Strategy identifies a number of initiatives to improve cycling facilities and safety and encourage more cycling across Frankston City.

In developing this Strategy, due consideration was given to improving cycling safety and linking communities and facilities, as well the needs of all types of cyclists, regardless of their age, experience or reason for cycling.

Consultation
Extensive community and stakeholder consultation, including school surveys, a BikeScope Survey and community workshops were undertaken to assist in developing the recommendations within this Strategy. Further to this, fieldwork in the form of bicycle rides were undertaken across Frankston City's bicycle network.

Strategic input
The role of cycling within the community from a health, environmental and sustainability perspective is recognised within a number of Frankston City Council and State Government policies and strategies, including:

- Environmental Strategy, 1998
- Recreational Strategy, 2009 – 2014
- Health and Wellbeing Plan, 2007 – 2011
- Victorian Transport Plan, 2009

In addition, as central Frankston is one of six CADs identified within Melbourne @ 5 million, it will have a greater focus on sustainable modes of transport and in turn provides Council an opportunity to improve cycling facilities within and to the CAD.

Most importantly Peninsula Link will include a high quality north-south inland shared path along the roadway length within Frankston City. This significant investment in cycling within Frankston provides Council a unique opportunity and a platform to build upon across the City.

Crash statistics
In undertaking this strategy, due consideration was given to recorded injury road crashes involving cyclists across Frankston City. This highlighted a high proportion of crashes:

- Occurring along Nepean Highway, especially along the section of the road within Frankston Central West, highlighting a need to implement measures along this road length.
- Involving school-aged cyclists, with many of these are occurring as a result of cycling along the footpath on local streets. This highlights the need for improved education measures and for more bicycle facilities in residential areas.

Existing bicycle network
As part of this strategy, routes have been broken down into two types of routes: *Primary routes* and *Secondary routes*. Primary routes are those that provide important links both within Frankston City and also to neighbouring municipalities. On the other hand, secondary routes will provide a more local bicycle network and will act as feeders to arterial bicycle routes.

There is currently 12.8km and 30.7km of completed primary on-road and off road paths and 1.6km and 9.8km of secondary on-road and off-road paths within Frankston City respectively.

Bicycle routes also form a part of the Principal Bicycle Network (PBN) and Metropolitan Trail Network (MTN), for which VicRoads and Parks Victoria are responsible for implementing.

At present, there are three key routes within Frankston City that also link to bicycle networks in neighbouring municipalities.

Bay Trail (off road)
The Northern section of the Bay Trail consists of the *Seaford Wetlands Path* from McKennize Street to Eel Race Road. The north section connects to Kingston City and continues north along the Edithvale Seaford Wetland and then onto Beach Road.

There is a gap in trail from McKennize Road in Seaford to Mile Bridge, Frankston.

The southern section of the Bay Trail commences at Allawah Aveune along Kananook Creek and Frankston Waterfront until it reaches the destination of Frankston Pier. At this point the trail heads inland to link with the Baxter Trail, however the connection between the Waterfront and the Baxter Trail needs to be improved. The Baxter Trail then runs along the Stony Point Railway line to the Mornington Peninsula Shire.

The *Nepean Highway* provides an on-road link from Frankston South to Mornington Peninsula, which in turn it provides an on-road route to many of Mornington Peninsula's seaside towns along Point Nepean Road (e.g. Rosebud and Rye). To the north along Nepean Highway there are vital sections missing at Oilvers Hill west side and both ways through the CAD and Seaford.

The *Frankston – Cranbourne Road* on-road link was recently installed by VicRoads as part of the Cranbourne Road upgrade and connects Frankston City to Casey; however the path is partially disjointed at McMahons Road and does not provide a connection to/from Frankston CAD from Fletcher Road.

Proposed bicycle network
This report has identified a number of routes that should be implemented across Frankston City. The primary routes were assessed against various categories and have identified improvements along the following routes to be of the highest priorities:

On-Road:
- Nepean Highway – Provision of paths along both sides of the road for the entire length (within Frankston City)
- Seaford Road / Ballarto Road - Provision of paths along both sides of the road for the entire length
- Dandenong Road / Dandenong Frankston Road – Provision of paths along both sides of the road for the entire length (within Frankston City)
- Cranbourne Road / Cranbourne Frankston Road – Completion of a key missing link and connections into Frankston CAD

Off-Road:
- Bay Trail (including linking existing Seaford Wetlands and Frankston - Baxter Trails) – a complete off road link connecting with Kingston to the north, through Frankston CAD and foreshore and with Mornington Peninsula to the south
- Dandenong-Frankston Trail – Provision of facilities from Frankston CAD along Dandenong Road / Dandenong Frankston Road (within Frankston City)
- Skye Trail – Provides a path between Kananook Creek and McClelland Dr along Overport Rd and Skye Rd
- Cranbourne Frankston Trail – Completion of missing links between Frankston CAD and Casey along Cranbourne Road / Cranbourne Frankston Road

It is important to note that many of the proposed routes include the completion of many of the missing links in Frankston City bicycle network.

In addition, a number of secondary routes have been identified throughout Frankston City.

Maintenance and renewal

- In managing the sections of the network for which Council is the authority, it is recommended that Council:
- Undertake an inspection of all facilities for which Council is responsible for annually
- Develop a process by which defects can be reported and recorded
- Develop assessment criteria in relation to potential risks with types and levels of defects
- Implement a bicycle facilities maintenance and renewal schedule

Other Initiatives and recommendations included in this Strategy include:

- Direction on standards, cross sections and materials that could be used in developing bicycle paths
- Promoting cycling:
  - Designating a Sustainable Transport Officer and implementing a Bicycle Marketing Plan
  - Encourage schools to participate in Ride2School
  - Develop and maintain a bicycle facilities map of Frankston City
  - Implement a directional signage system for both on-road and off-road bicycle routes
- Improving safety:
  - Support the BikeEd program at local schools
  - Implement the Safe Routes to School program at local schools
  - Provide lighting of off-road paths where warranted
- Planning
  - Use planning scheme provisions to ensure new developments incorporate appropriate facilities for cyclists
  - Encouraging Green Travel Plans
  - Developer contributions

Funding

Bicycle Victoria has compiled a Bicycle Expenditure Index, known as BiXE, to compare per capita spending on bicycle facilities by local government authorities across Victoria. The latest version of the index that has been compiled is BiXE 2008, which is based on the analysis of data for the 2008-09 financial year shows Frankston City's per capita spending on bicycle facilities ($3.11) falls well below the average figure for outer metropolitan councils. This amount is also less than the $5 per resident that Bicycle Victoria advocates as a 'fair and responsible threshold for local government expenditure on bike riding infrastructure'.

As summarised in the table below, the cost of implementing all the paths recommended in this Strategy equates to approximately $40 million.

This equates to a significant investment, which may be partly attributed to the fact that a comprehensive network has been recommended, but also due to the fact that minimal investment has appeared to be put into bicycle paths since the 1997 Frankston Bicycle Strategy was developed.

Whilst Council is not the only authority responsible for implementing the recommended paths, this would require a considerable increase in expenditure by Council to fulfil many of the recommended improvements and to take advantage of the opportunities provided through the Peninsula Link shared path and the Frankston CAD improvements.

		Length (km)	Cost $ million
Primary	**On-road**	65.5	10.5
	Off-road	39.4	9.4
Secondary	**On-road**	47.5	3.6
	Off-road	80.2	16.4
	Total	**232.6**	**39.9**

It is also important to point out that the State Government provides approximately $25 million a year of funding to bicycle schemes through various programs and agencies.

Program	Agency	Estimated Funding
VicRoads Bicycle and Pedestrian Program.	VicRoads	$10 million
Bicycle Projects as part of Major Road Projects.	VicRoads	$5 million
TravelSmart and Local Area Access Program.	DoT	$4 million
Metropolitan Trail Network	Parks Victoria	$3 million
Provincial Pathways Program.	Regional Development Victoria	$2 million
Active Transport for Cycling and Walking to Schools.	VicHealth and Department of Victorian Communities	$1 million
	Total	**$25 million**

Other potential funding sources and programs are also identified in the Strategy.

1. Introduction

There are a number of economic, health, social and environmental benefits to cycling and accordingly the popularity of cycling is continually increasing. In order to facilitate this growing demand into the future and to encourage people to enjoy these benefits, Frankston City Council appointed Aurecon Australia Pty Ltd to develop the Frankston Bicycle Strategy.

In developing this Strategy, due consideration was given to improving cycling safety and linking communities and facilities, as well the needs of all types of cyclists, regardless of their age, experience or reason for cycling.

In developing the Frankston Bicycle Strategy, Council has undertaken extensive community and stakeholder consultation, including school surveys, a BikeScope Survey (undertaken by Bicycle Victoria) and community workshops. Further to this, in order to obtain first-hand experience of the existing conditions for cyclists within Frankston City, fieldwork in the form of bicycle rides was undertaken. In total, this consisted of approximately 100km of cycling over three days.

A key consideration of this strategy is the proposed Peninsula Link, which will include a pedestrian and walking path along the Freeway and therefore provide a key north-south route through Frankston City.

The Frankston Bicycle Strategy has been able to identify a number of potential on-road and off-road paths and improvements to existing paths and includes a maintenance schedule.

In addition, this Bicycle Strategy has identified a number of bicycle initiatives in three main areas; promoting cycling, improving safety and end-of-trip facilities.

The recommendations that this report has made are summarised in Table 1.1 below.

In order to implement these improvements and initiatives, this Bicycle Strategy has identified numerous funding sources (in particular State Government Agencies) for which Frankston City Council can apply for funding.

Whilst Frankston City Council has produced this Bicycle Strategy, the success of the Strategy is dependent on the support of the local community, businesses and Government in implementing the recommendations and initiatives it sets out.

Table 1.1 Summary of recommendations

Proposed bicycle network *Section 6*	Maintenance and renewal *Section 7*	Initiatives *Sections 8 to 11*

• Provision of various bicycle facilities, including:
  • Primary on-road routes
  • Primary off-road routes
  • Secondary on-road routes
  • Secondary off-road routes
	• Implementation of a bicycle facility maintenance program, including:
	  • Monitoring
	  • Bicycle facilities auditing
	  • User defect reporting
	  • Assessment and prioritisation
	  • A regular maintenance schedule
	• Implementation of a bicycle facility renewal program
		• End of trip facilities:
		  • Provide bicycle racks at retail locations
		  • Encourage provision of bicycle enclosures and lockers at major destinations
		  • Encourage employers to provide shower facilities for cyclists
		  • Use planning scheme provisions to ensure new developments incorporate appropriate facilities for cyclists
		• Promoting cycling:
		  • Designating a Sustainable Transport Officer and implementing a Bicycle Marketing Plan
		  • Leveraging bicycle events to promote cycling within Frankston City
		  • Encourage schools to participate in Ride2School
		  • Investigate feasibility of providing bicycle racks on buses
		  • Develop and maintain a bicycle facilities map of Frankston City
		  • Implement a directional signage system for both on-road and off-road bicycle routes
		  • Investigate the feasibility of a public bike hire scheme
		  • Encourage organisations to undertake Green Travel Plans
		• Improving safety:
		  • Support the BikeEd program at local schools
		  • Implement the Safe Routes to School program at local schools
		  • Implement a local campaign to complement proposed state-wide 'Look out for cyclists' campaign
		  • Provide lighting of off-road paths where warranted
		  • Implement system of emergency reference markers on off-road routes isolated from roads

2. Strategic inputs

A number of studies and policies have been undertaken by the State Government and Frankston City Council, which highlight the strategic importance of cycling, cycling facilities and the Frankston Bicycle Strategy moving forward. The chart contained in Figure 2.1 shows the hierarchy of these documents. The documents most relevant to the present strategy are discussed further in the sections below.

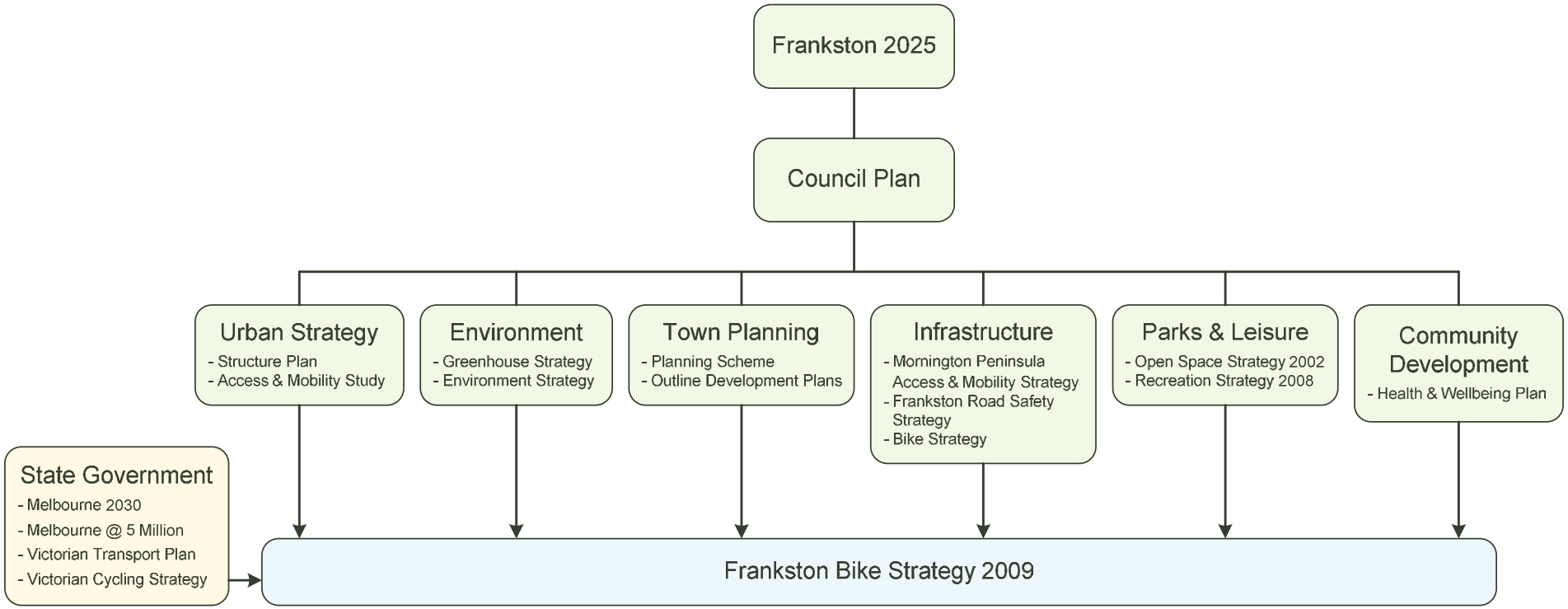


Figure 2.1 Frankston Bicycle Strategy document hierarchy

2.1 Local government documents

Documents and strategies produced by Frankston City Council are summarised below:

Frankston Bicycle Strategy, Sinclair Knight Merz 1997
This document, produced more than a decade ago, is the previous bicycle strategy undertaken for Frankston City. The strategy contained a list of 40 recommended bicycle projects. Each project was assigned a priority for implementation, on a three-level scale.

However, an analysis of this list has shown that only around about one-third of the projects have been implemented, some of them only partially. Furthermore, many of the projects that were designated at the highest priority level have not been realised.

Frankston 2025, Frankston City Council 2008
Frankston 2025 expresses the community's shared vision for the future of Frankston City. It is the result of a community-wide visioning process and its purpose is to inform and guide both Council and community decision-making. Frankston 2025 outlines nine themes that embody this vision. In particular, three of these themes are directly applicable to cycling.

Theme 4, 'Active and healthy', envisions a community where people are active and healthy. One way this may be achieved is if cycling is popular, which would be helped by safe and attractive paths connecting suburbs and taking advantage of the City's natural assets.

Theme 8, 'Well planned, well built and well maintained', imagines a Frankston City that is attractive, efficient and accessible. As part of this, it is hoped that dependence on cars will be reduced and that cycling will form a part of an integrated transport system. In addition, car access will be limited in the city centre, with cycling a preferred method of transport.

Theme 9, 'Clean and green' aims to reduce the environmental impacts of activities within the City. Increased cycling is one means of helping to achieve this goal.

Frankston City Council Plan 2008 – 2012, Frankston City Council 2008
This document is Council's four year plan, covering the period from 2008 until 2012. It contains specific strategies that aim to support the vision for the future as outlined in Frankston 2025. Six strategic objectives are identified in this plan and indicators to monitor the progress towards achieving these. Under each strategic objective key strategies are outlined, along with initiatives under each strategy.

Strategic objectives number 3, 'Active and healthy community with a vibrant culture' and 4, 'Well planned, well built and well maintained', relate to cycling. In particular, the following are directly relevant to cycling.

- key strategy 3.2, 'Provide opportunities that encourage people to engage in active and passive recreation';
- initiative 3.2.2, 'Collaborate with local sporting and recreational groups and associations to promote access and utilisation of Council's facilities, open space and reserves, including Linear Open Space Trails (tracks following a physical feature such as waterways and foreshore)';
- key strategy 4.4, 'Integrate transport planning by providing safe and functional pedestrian, bicycle and vehicle networks'; and
- initiative 4.4.2, 'Review and implement the Bicycle Strategy'

Mornington Peninsula Access and Mobility Study (Transport Plan), Booz Allen Hamilton 2006
The primary objective of this report is to develop an integrated transport plan that meets access and mobility needs of Frankston City Council and Mornington Peninsula Shire areas over the next 25

years. It was identified that walking and cycling are transport options for over 80% of the population and have numerous health, economic and environmental benefits. As a social inclusion initiative, it was proposed that local walking and cycling strategies and networks be developed and be better maintained, as well as developing long distance pedestrian and cyclist trails. It was also identified that to improve cyclist safety and management of visitor peaks, action must be taken to influence cyclists' on road route choices and to develop a regional on road bicycle strategy.

Recreation Strategy 2009 – 2014, Frankston City Council 2009

This document addresses the broad scope of recreation provision defined as physical activity that is undertaken in the public realm for a personal sense of enjoyment. Within the report, cycling was identified as a form of recreation. It recognised a need for a new bicycle / trail strategy within Frankston City Council, which provides a real alternative to car transit, develops the tourism potential of off road trails, makes the arterial roads more cyclist friendly and assists everyday cyclists. It was identified that a bicycle connection between foreshore activities was needed, with a continuous trail from Oliver's Hill to Keast Park. It also proposed that that a way-finding and interpretive signage plan be implemented that integrates with the natural and heritage qualities of the foreshore.

City of Frankston – Frankston Road Safety Strategy, Ove Arup & Partners 2001

This report was developed as part of a state wide attack on road safety concerns with emphasis on vulnerable road users including pedestrians, cyclists, motorcyclists, the young and the old. It identified and recommended the following:

- Update and implement the recommendations in the Frankston Bicycle Strategy (1997) to ensure an efficient and coordinated network
- Encourage community access of cyclist education programs to increase awareness of road safety issues
- Communicate and cooperate with bicycle groups
- Raise community awareness regarding road rules and etiquette which relate to cyclists to increase awareness.

Environmental Strategy 1998

The Environmental Frankston City Council's key strategic document to guide planning decisions and operational processes towards environmental sustainability. The strategy has been prepared in the context of global, national and local policies. The environmental vision for the municipality is;
"Frankston City will be a place where Council and the community have worked in partnership to achieve sustainability"

The Environmental Strategy has been developed around the following key themes:

- *Resource Conservation* (including waste minimisation, water and energy conservation)
- *Land and Catchment Management* (including pest plants and animals, fire prevention, sustainable land and water management)
- *Biological Diversity* (including indigenous plants and animals on private and public land)
- *Cultural Heritage* (including sites, places and objects of Aboriginal and Non-Aboriginal significance)
- *Urban Environment* (including litter, pollution, transport, companion animals, sustainable residential and industrial development)

The Urban Environment key theme aims to create sustainable development which offers a high quality living environment for residents of Frankston City. In order to achieve this the strategy outlines the following actions:

- Continue to implement the Regional Open Space Plan, including the construction of the Port Phillip Bay Trail.
- Implement Frankston's Bicycle Strategy.
- Promote bicycle use throughout the municipality by providing information and details on the bike path network as designated in the Bicycle Strategy.

Greenhouse Strategy 1999
The Frankston City's Greenhouse Strategy provides a framework for action to reduce greenhouse gas emissions. Greenhouse gas build-up threatens global and local climate change.

The Greenhouse Strategy is to be an evolving strategy, taking into account emerging and developing technologies and the strengthening of greenhouse science and projections.

In June 1999 Frankston City set an ambitious target of reducing community emissions by 20 % below the 1995 level and corporate emissions by 25% below the 1995 levels by 2010.

In order to achieve these targets the strategy outlines 9 objectives, with the following objective relating to cycling:

"to modify the urban form and transport system to reduce travel demand, to promote the use of transport alternatives"

Based on this objective and to assist with achieving the greenhouse targets the strategy recommends the following reduction measures to help reduce energy use:

- The implementation of a Frankston Bicycle Strategy
- Promote bicycle use throughout the municipality by providing information and details on bike path networks as designated in the Bike Strategy

Health and Wellbeing Plan 2007-2011
The long-term vision of the Health and Wellbeing Plan is of Frankston City as a healthy, vibrant and resilient community in which the wellbeing of all citizens is supported and sustained by ensuring that everyone has the opportunity to develop to their full potential. The three health and wellbeing priorities are:

1. Improving mental health and wellbeing
2. Promoting food security and healthy eating
3. Promoting physical activity

Promoting Physical Activity recommended improvements to the walkability of local neighborhoods to ensure that adequate infrastructure for active transport and active recreation is planned into new developments and retro-fitting projects in Frankston City by:

- Implementing Healthy by Design guidelines in the local planning
- scheme and into infrastructure projects
- Review and implement Footpath strategy
- Review and implement Bike Paths Strategy

Frankston City Open Space Strategy, Robin Crocker and Associates 2002
This Strategy identifies ways of improving open space and better meeting the leisure needs of the community The study covers areas ranging from the foreshore and bush land to local and district parks, playgrounds, recreation reserve and undeveloped open space.

A vision was developed for a popular and leafy network of open space, building on the natural, landscape and leisure values of the City's foreshore, parks, reserves and waterways.

A series of seven goals and 36 strategies were developed to achieve a high quality open space system for Frankston. Goal 4 of the strategy was to *"Develop a shared pathway network".*The five actions listed in relation to this Goal were:

1. Progressively design, construct and maintain priority off road shared bicycle/walking paths, including extensions to the Bay Trail and Boggy Creek Trail
2. Continue a policy of requiring paths with connections to facilities and major paths as part of new subdivisions

3. Establish a paths maintenance program and undertake regular maintenance and minor improvement works
4. Liaise with Vic Roads to develop an on road bicycle network
5. Promote the health and environmental benefits of cycling and safe cycling practices.

2.2 State government documents

The State Government has also produced documents relevant to this strategy, and these are discussed below.

Victorian Cycling Strategy - 2009

The Victorian Cycling Strategy was recently released by the State Government in March 2009 and builds on the cycling actions contained in the Victorian Transport Plan. It focuses on encouraging cycling as a mode of transport, and to achieve this, the strategy lists five strategic directions. These are:

- Build networks to connect communities
- Promote and encourage a culture of cycling
- Reduce conflicts and risks for cyclists
- Integrate cycling with public transport
- Integrate cycling needs with land use planning, transport planning and the built environment

Melbourne 2030

Melbourne 2030 is the State Government's strategic planning document for metropolitan Melbourne and was released in October 2002. The measures proposed under this Strategy will help to achieve some of the objectives contained in Melbourne 2030. As Frankston City is one of Melbourne's 31 municipal councils it is considered to be a part of Melbourne 2030.

The recommendations contained in this Strategy support Direction 8 of Melbourne 2030, which seeks to provide better transport links. Improving cycling facilities within the City and creating cycling routes that link key destinations will help to encourage cycling within this area. This will help to reduce the environmental impact of transport, as well as improving sustainability. Better cycling facilities will also improve transport choices within the City.

In order to comply with the Melbourne 2030 plan, certain areas within the City are required to produce a structure plan to identify shortfalls, amongst other items, in transport accessibility and linkages, i.e. bicycle strategies. Areas within Frankston City that require structure plans are the Frankston CAD.

Melbourne @ 5 Million

In December 2008 the Premier and Minister for Planning released the *Melbourne @ 5 Million* report which provides policy initiatives that are complementary to the directions of *Melbourne 2030* and builds on the achievements of the Transit Cities program. *Melbourne @ 5 million* provides policy initiatives that are complementary to the directions of *Melbourne 2030* and the two documents should be considered together.

It outlines the implications of the *Victoria in Future 2008* growth projections for Melbourne, which indicate that the city's population is likely to reach 5 million before 2030. Actively managing this growth and change is an important part of Melbourne's future liveability.

The scale of growth now anticipated in Melbourne suggests a need for six designated Principal Activity Centres to be reclassified as Central Activities Districts (CADs). The following centres, which were previously part of the Transit Cities Program, have now been designated a CAD:

- Box Hill
- Broadmeadows
- Dandenong
- Footscray

- Frankston
- Ringwood

There are a number of projects within Frankston CAD that will improve links between the railway station, town centre and the foreshore. The projects will create a public transport gateway for Frankston CAD to connect the Mornington Peninsula and Melbourne's CBD. Improvements to Kananook Creek will reconnect Frankston CAD with the bay and create a new space for shops, services and recreation. Higher-density development will also be a feature.

$10.5 million has been spent over the past five years on:

- A Master Plan
- A new learning centre at the Chisholm Institute of TAFE
- Upgrading Wells Street
- Improvements to Kananook Creek and the foreshore

Frankston CAD was allocated an additional $11.6 million over four years in the 2006-07 State Budget to revitalise the Kananook Creek precinct by creation of a new boardwalk and other improvements to unlock its development potential and to improve links between the railway station, the town centre, the Creek and the foreshore. DPCD is working in collaboration with Frankston City Council on these projects and construction commenced in early 2009.

2.3 Summary

Through a number of policies and strategies, Frankston City Council has recognised the role cycling plays to the community in providing:

- Numerous environmental improvements
- An alternative sustainable mode of transport
- Health benefits
- Recreation
- A good use of open space

State Government policies reaffirm the role cycling has in achieving the above improvements.

In addition, as central Frankston is one of Melbourne's six CAD's, which will have a greater focus on sustainable modes of transport, it provides Council an opportunity to expand on the infrastructure provided for Frankston CAD across Frankston City. This in turn will assist Council in achieving the numerous objectives outlined within the strategies and policies detailed above.

3. Crash analysis

3.1 Bicycle crash data

An analysis has been undertaken of recorded crashes involving bicycles taking place within Frankston City during the six calendar years between January 2002 and December 2007 inclusive.

It is important to note that CrashStats only records crashes that result in fatalities and/or injuries that have occurred on or adjacent to the road network. This means that crashes that occur in off-road locations and minor incidents are not included. The Frankston Bicycle Strategy has taken into account clusters of crashes involving cyclists and accordingly has recommended measures to address these problem areas.

It was found that 143 crashes involving cyclists occurred with the six year period examined. Of these, approximately one-third resulted in serious injuries, with the remained resulting in minor injuries. No fatal crashes involving cyclists were recorded during this period. This is shown in Figure 3.1 below.

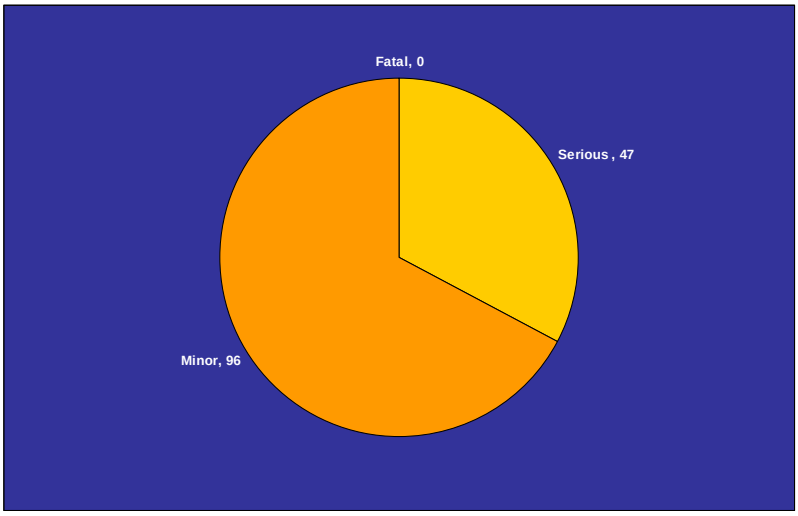


Figure 3.1 Bicycle crashes by severity

3.2 Comparison with other municipalities

The proportion of crashes involving cyclists in Frankston City is 6.4%. This proportion is lower than the figure for Metropolitan Melbourne as a whole and is also lower than the neighbouring municipalities of Kingston and Mornington Peninsula. However, it is higher than Casey and Greater Dandenong. This is summarised in Table 3.1.

Table 3.1 Crashes in Frankston City and other municipalities

Municipality	Total crashes	Bicycle crashes	% of total crashes involving bicycles
Cardinia	1,418	26	1.8%
Casey	3,510	140	4.0%
Greater Dandenong	3,577	155	4.3%
Kingston	3,067	294	9.6%
Mornington Peninsula	2,471	193	7.7%
Yarra Ranges	3,115	99	3.2%
Frankston City	2,241	143	6.4%
Metropolitan Melbourne	68,334	4,847	7.1%

3.3 Crash location

The spatial distribution of crashes involving cyclists within Frankston City was analysed to see if any patterns were apparent. The location and severity of each bicycle crash has been plotted on the maps that are attached in Appendix A.

It is evident that a high proportion of crashes (68 out of 143) occur along major cycling routes, particularly along Nepean Highway. The severity and number of crashes along major routes are summarised in Table 3.2 below.

Table 3.2 Clusters of crashes along major cycling routes

Road	Location	Length (km)	Serious crashes	Minor crashes	Comments
Nepean Highway	Seaford	5.2	4	6	Two serious crashes occurred just south of Entrance Road. Two minor crashes occurred approximately 250m south of McCulloch Avenue.
	Frankston	3.2	2	14	A high volume of crashes have occurred along this relatively short section of road. Within this section of road there are concentrations of crashes around the intersections of Overton Road (three crashes), Beach Street (two crashes) and Wells Street (two crashes).
	Frankston South	1.6	1	1	The two crashes along this section occurred in isolated locations.
Dandenong – Frankston Road	Carrum Downs	5.0	2	3	Within this section of road four crashes were located along a 1.2km long portion between Hall Road and Bogey Creek.
	Seaford	3.4	4	6	Within this section three crashes occurred in proximity to the intersection with Seaford Road.

Road	Location	Length (km)	Serious crashes	Minor crashes	Comments
Skye Road	Frankston	3.9	1	5	No crash trends are evident.
Cranbourne Road	Frankston	4.2	2	10	No crash trends are evident.
Cranbourne – Frankston Road	Langwarrin	5.9	1	1	The two crashes along this section occurred in isolated locations.
Moorooduc Highway	Frankston City	5.9	2	3	Two of these crashes occurred near the intersection of Goldborough Court.

Clusters of crashes also occurred along some of the minor roads within Frankston City. The severity and number of crashes along major routes are summarised in Table 3.3 below. This also highlights that a high proportion of these crashes were serious.

Table 3.3 Clusters of crashes along minor roads

Road	Location	Length (km)	Serious crashes	Minor crashes	Comments
Young Street	Frankston	1.0	0	4	Three of these crashes occurred within a 200m section between Wells Street and Playne Street.
Dandenong Road East	Frankston	1.4	2	1	All three crashes are concentrated within a 180m section between the intersections of Colin Avenue and Cricklewood Avenue.
Excelsior Drive	Frankston North	0.9	2	2	Two out of four crashes were serious.
Around Northgateway and Noel Road (cluster)	Langwarrin	0.5 (radius)	3	1	Three out of these four crashes involved young cyclists aged between 11 and 13 inclusive. A high proportion of these crashes (three out of four) were classified as serious.

3.4 Crash types

Figure 3.2 below summarises the bicycle crashes by VicRoads 'Definitions for Classifying Accidents' (DCA). It is evident that the most common type of crash involves motorised vehicles emerging from driveways striking cyclists. The second most common is a vehicle travelling from a footway striking a vehicle on the carriageway. In most cases, this arises when a cyclist leaving the footpath is struck by a motorised vehicle travelling along the carriageway. The third and fourth most common types of crash involve a vehicle striking a cyclist from behind and sideswiping a cyclist respectively.

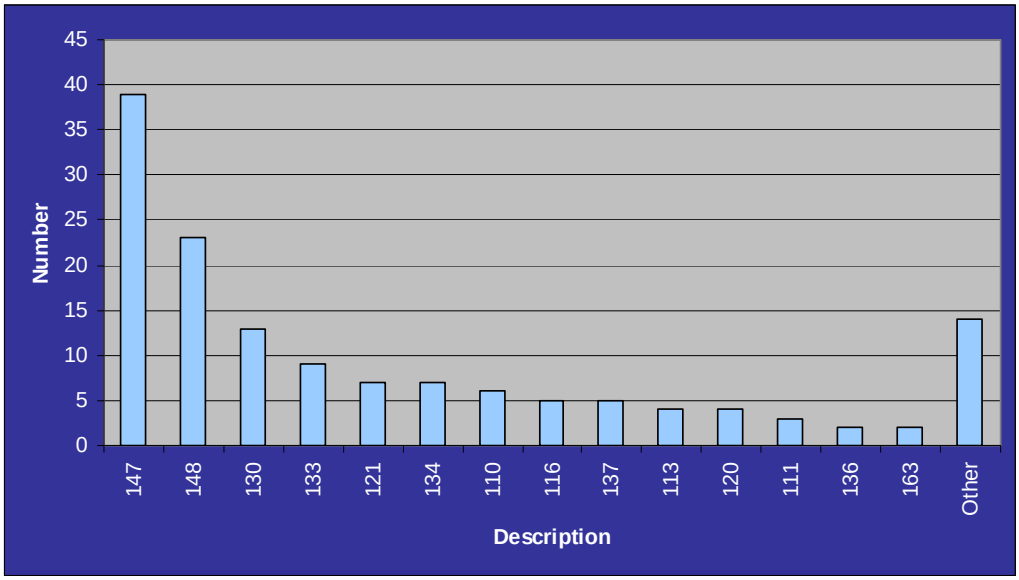


Figure 3.2 Number of crashes by type (DCA)

Key: *147 Vehicle strikes another vehicle while emerging from driveway*
148 Vehicle off footpath strikes vehicle on carriageway
130 Rear end (vehicles in same lane)
133 Lane side swipe (vehicles in parallel lanes)
121 Right through
134 Lane change right (not overtaking)
110 Cross traffic (intersections only)
116 Left near (intersections only)
137 Left turn sideswipe
113 Right near (intersections only)
120 Head on (not overtaking)
111 Right far (intersections only)
136 Right turn sideswipe
163 Vehicle strikes door of parked/stationary vehicle

Closer examination of the two most common crash classifications indicates that younger cyclists are overrepresented in these crash types. School-aged cyclists (aged 5 to 17 inclusive) were involved in 58% and 78% of crashes with DCA 147 and 148 respectively.

This is significantly higher than the average of 38% of cyclists involved in all types of crashes who are school-aged. This is likely to be because younger cyclists are more likely to ride along footpaths due to their young age and also may be less aware of other vehicles.

3.5 Crash characteristics

Weather and light conditions

Around 80% of crashes occurred during the day and about 90% of crashes occurred in dry conditions. This indicates that weather and light conditions are not significant in causing crashes involving cyclists in Frankston City.

Crash type and location

As shown in Figure 3.3, approximately half of the crashes occurred at an intersection, with the other half occurring at midblock locations.

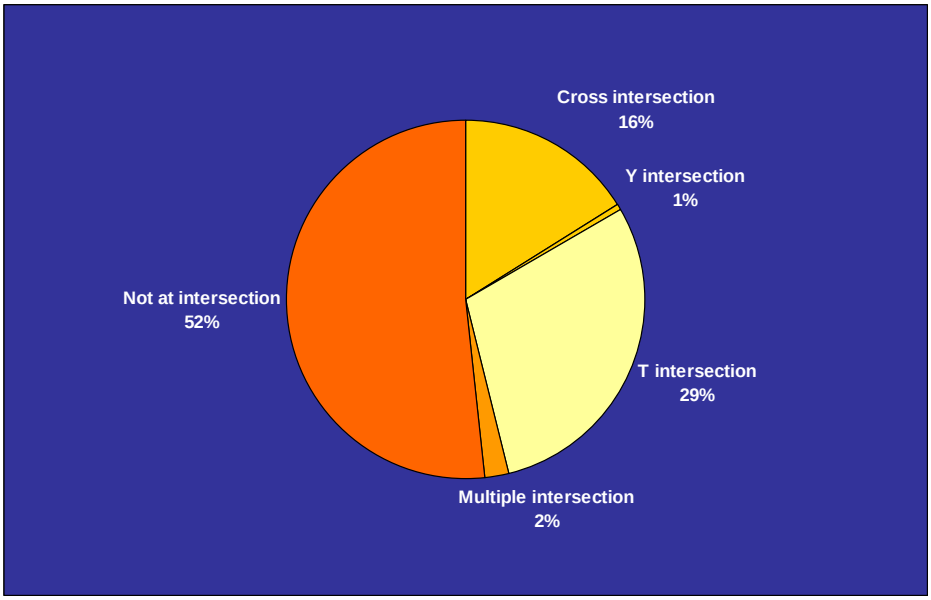


Figure 3.3 Bicycle crashes by type of location

Age of cyclists involved in crashes

The age of cyclists involved in crashes in shown in Figure 3.4 below. Of note is that over one in three cyclists involved in crashes were school-aged cyclists (aged between 5 and 17 inclusive). In addition, it can be seen in Figure 3.4 below that cyclists aged 13-15 years who are involved in crashes are particularly prone to sustaining serious injuries.

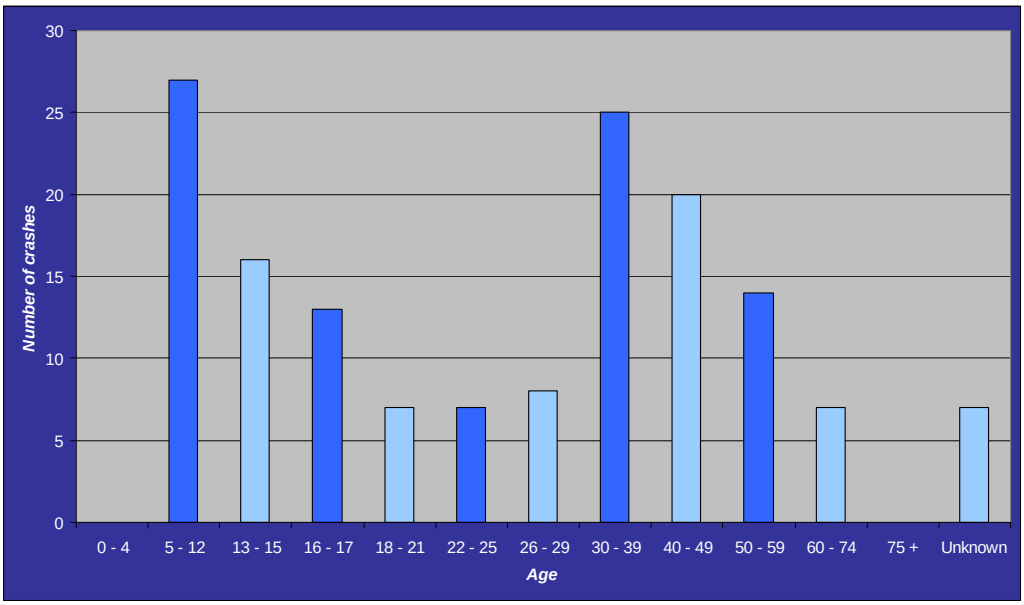


Figure 3.4 Number of cyclists involved in crashes by age

Other Trends

Other Trends identified as part of the CrashStats analysis includes:

- Almost all (97.2%) crashes involved a cyclist colliding with a vehicle
- Over 80% of cyclists involved in crashes were male, with fewer than 20% being female
- Whilst more crashes occur on Wednesdays and Thursdays, there was no obvious trends with respect to the day of the week crashes occur

- There appears to be less crashes occurring during the winter (June to August) than in other months. However, a low percentage of crashes also occur in January.
- Many crashes are occurring during the traditional peak traffic periods, in particular between 08:00 and 09:00; and between 15:00 and 18:00
- In terms of the speed zone that the crashes occurred in, the largest proportion (approximately 40%) occurred in 50km/h zones. A further 30% occurred in 60km/h zones, with almost all of the remainder occurring on higher speed roads.

In addition, as shown in Figure 3.5, whilst there was a significant decline in crashes involving cyclists in 2004 and 2005, the number of crashes increased again in 2006 and 2007.

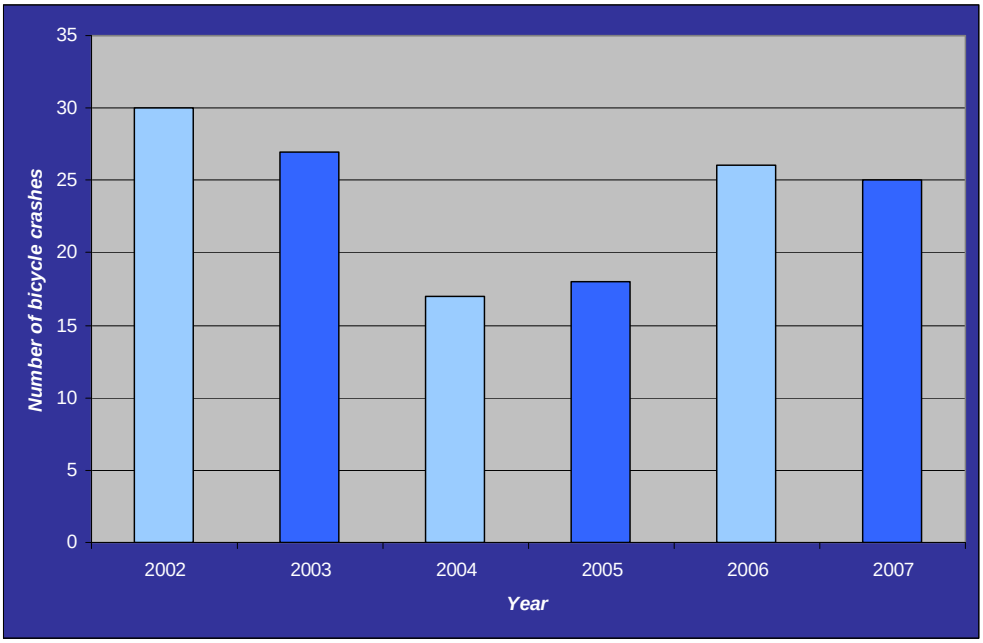


Figure 3.5 Bicycle crashes by calendar year

3.6 Summary

This section identified a number of areas which have a cluster of crashes involving cyclists within Frankston City. In particular, there is a high concentration of crashes occurring along Nepean Highway, especially along the section of the road within Frankston Central West. Accordingly, the strategy includes initiatives to address these safety concerns.

In addition, it has been noted that a high proportion (over one in three) of bicycle crashes involve school-aged cyclists and that many of these are occurring as a result of cycling along the footpath on local streets.

This would suggest that measures to educate school children on cycle safety should be increased. However, such measures may not necessarily be limited to children.

Apart from educating school children in cycle safety, Council should build awareness in the community of where cyclists are likely to be encountered and review existing road treatments and signage near schools to improve pedestrian and cyclist safety.

This also highlights the desire for children to ride off-road and that bicycle safety could improve considerably, should more off road bicycle facilities and secondary routes in residential areas be made available. Such facilities however would need good links between them and to other bicycle paths and lanes to return the maximum safety benefits.

4. Existing bicycle network

4.1 Local government spending

Bicycle Victoria has compiled a Bicycle Expenditure Index, known as BiXE, to compare per capita spending on bicycle facilities by local government authorities across Victoria. The latest version of the index that has been compiled is BiXE 2008, which is based on the analysis of data for the 2008-09 financial year.

As can be seen in Figure 4.1 below, Frankston City's per capita spending on bicycle facilities ($3.11) falls well below the average figure for outer metropolitan councils. This amount is also less than the $5 per resident that Bicycle Victoria advocates as a 'fair and responsible threshold for local government expenditure on bike riding infrastructure'.

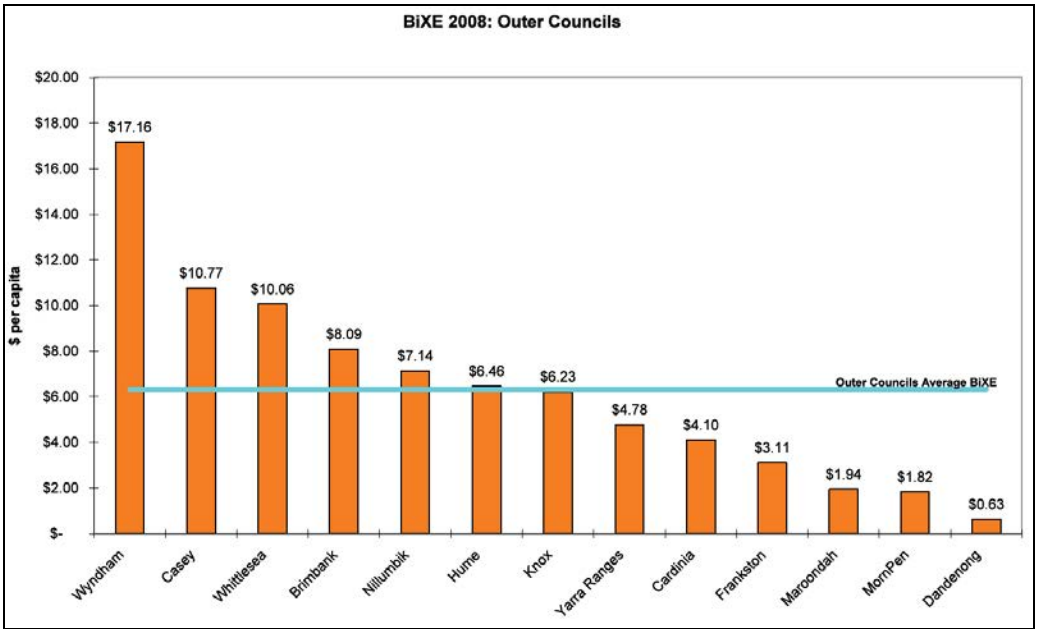


Figure 4.1 BiXE 2008 for outer metropolitan councils
Source: Bicycle Victoria, BiXE 2008: The Bicycle Expenditure Index

4.2 Route typology

As part of this strategy, routes have been broken down into two types of routes: *Primary routes* and *Secondary routes*. Primary routes are those that provide important links both within Frankston City and also to neighbouring municipalities. On the other hand, secondary routes will provide a more local bicycle network and will act as feeders to arterial bicycle routes.

There is currently 12.8km and 30.7km of completed primary on-road and off road paths and 1.6km and 9.8km of secondary on-road and off-road paths within Frankston City respectively.

Bicycle routes may also form a part of the Principal Bicycle Network (PBN) and Metropolitan Trail Network (MTN).

Figure 4.2 provides a summary of existing routes within Frankston City.

4.3 Principal Bicycle Network (PBN)

Certain bicycle routes, both existing and proposed, are part of the Melbourne-wide Principal Bicycle Network (PBN). These routes are arterial cycling routes and are predominantly on-road. VicRoads has

primary responsibility for the development of this network, which is then implemented either by VicRoads or local councils. This has implications for funding of proposed routes, which is discussed further in Section 11.2.1.

It is important to note that Vic Roads are currently updating the PBN and it is recommended that Frankston City Council consult with Vic Roads to ensure the PBN reflects the proposed routes outlined in this strategy. Additionally Central Activities District catchment zones should not exclude established neighbourhoods such as Carrum Downs.

4.4 Metropolitan Trail Network (MTN)

The Metropolitan Trail Network (MTN) is a network of recreational bicycle routes in metropolitan Melbourne, largely consisting of off-road shared pedestrian bicycle paths. Parks Victoria has the primary responsibility for coordinating the development of the MTN. VicRoads and local councils may implement MTN projects belonging to them.

While the primary function of the MTN is to provide for recreational cycling, there are a number of routes that are popular with commuter cyclists as well. These routes can serve an arterial cycling function for less confident riders. The MTN is also integrated with the Principal Bicycle Network. The majority of routes on the MTN are off-road, but there are a number of short sections of on-road routes that link sections of off-road paths.

Figure 4.3 provides a summary of the PBN and MTN, as provided by VicRoads. Noting that measures have been implemented since this map was produced, as such it may not fully reflect existing conditions.

4.5 Regional links

At present, there are four existing links between the bicycle network within Frankston City and bicycle networks in neighbouring municipalities.

Seaford Wetlands
At the northern end, this shared path in the Seaford Wetlands, continues across the Eel Race Drain into Kingston City. This route then continues north to Patterson River, which then connects to the Eastlink Trail. This provides an off-road bicycle route to points further north, including Greater Dandenong, Monash and Knox.

Bay Trail (includes the Baxter trail)
As detailed in this report, through the implementation of various connections (particularly along the foreshore), this could also links up along the Stony Point Railway line to Mornington Peninsula.

Whilst there are currently limited cycling facilities in Mornington Peninsula linking to this route, the Mornington Peninsula Bicycle Strategy includes a recommendation to extend to link this trail to Somerville and onto Balnarring.

Nepean Highway
The Nepean Highway provides an on road link from Frankston South to Mornington Peninsula, which in turn it provides an on-road route to many of Mornington Peninsula's seaside towns along Point Nepean Road (e.g. Rosebud and Rye).

As detailed in this report, Olliver's Hill is a barrier for cyclists, particularly north bound and the lack of on road facilities along the full length of Frankston forms a physical constraint as well as a road safety issue.

Frankston – Cranbourne Road

This on-road lane was recently installed by VicRoads as part of the Cranbourne Road upgrade and connects Frankston City to Casey, however there are two sections of the trail that need to be improved:

- Cranbourne Road / McMahons Road intersection does not cater for cyclists on the approach to the intersection
- The path ends at Cranbourne Road / Fletcher Road intersection and as such does not connect with Frankston Station or Frankston CAD

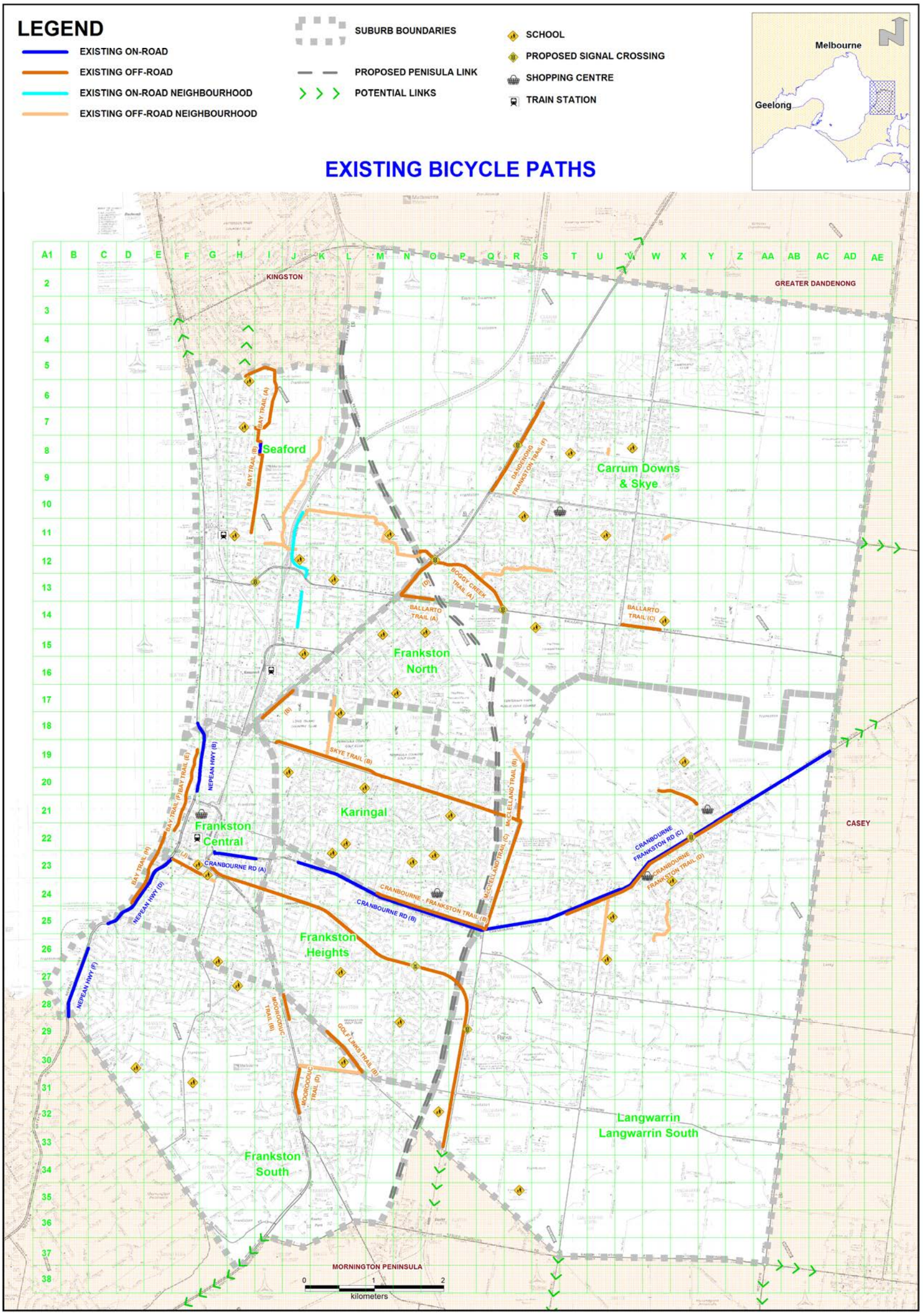


Figure 4.2 Existing on-road and off-road paths in Frankston City

vicroads

Information Services

PRINCIPAL BICYCLE NETWORK
MAP 14 - FRANKSTON

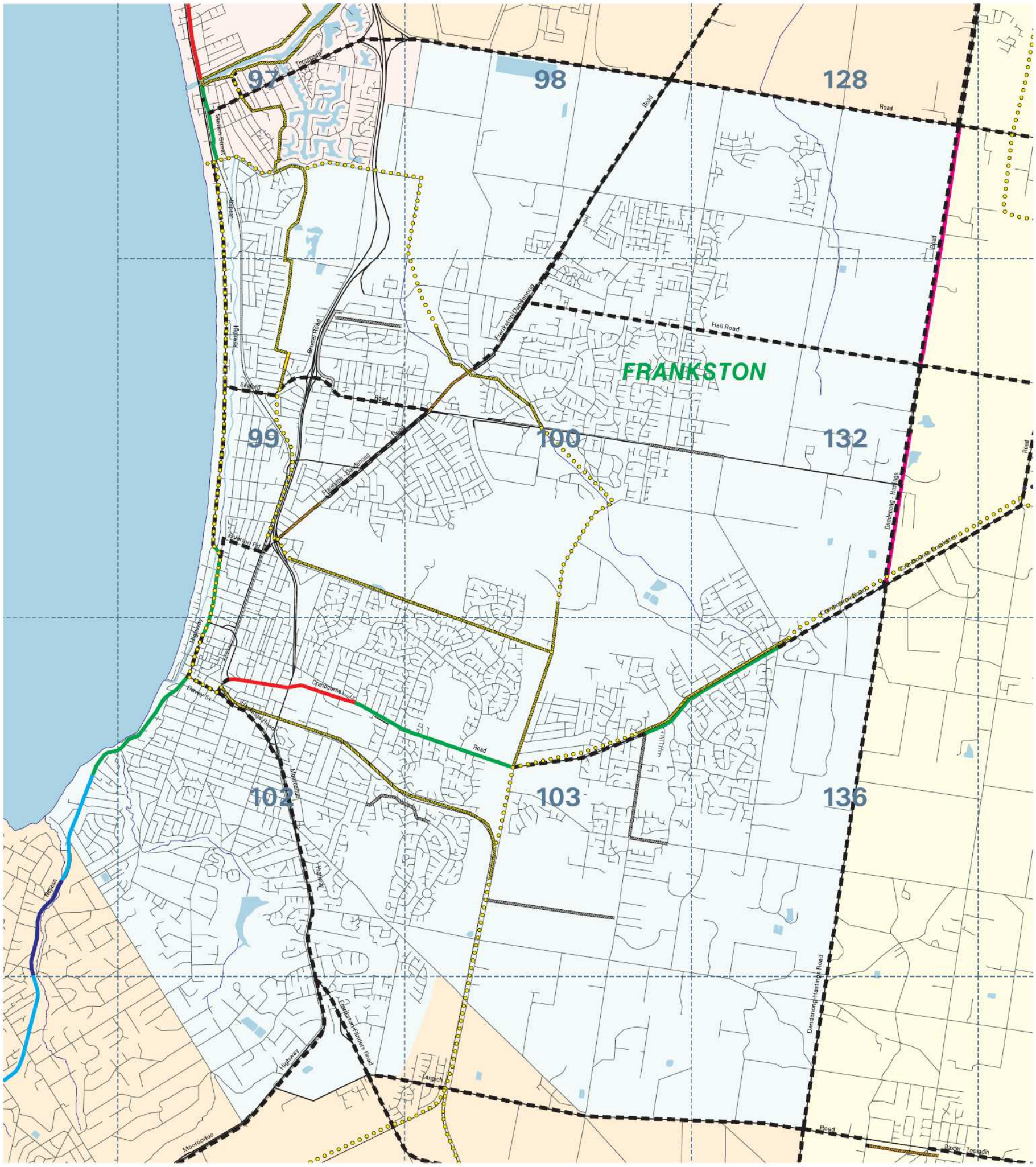


Figure 4.3 VicRoads' Principal Bicycle Network Map of Frankston

4.6 Existing primary routes

Several primary bicycle route corridors have been identified within Frankston City. These listed in Table 4.1 below.

Table 4.1 Primary on-road and off-road bicycle route corridors

On-road corridors	Off-road corridors
1. Nepean Highway	A. Bay Trail
2. Thompsons Road	B. Wetlands - Wells Trail
3. Lathams Road / Hall Road	C. Dandenong - Frankston Trail
4. Seaford Road / Ballarto Road	D. Ballarto Trail
5. Dandenong Road / Dandenong - Frankston Road	E. Skye Trail
6. Cranbourne Road / Cranbourne - Frankston Road	F. Cranbourne - Frankston Trail
7. Golf Links Road / Baxter - Tooradin Road	G. McClelland Trail
8. Humphries Road / Mountain Avenue	H. Moorooduc Trail
9. Western Port Highway (Dandenong - Hastings Road)	I. Frankston - Baxter Trail
	J. Golf Links Trail
	K. Boggy Creek Trail

It should be noted that none of these routes are currently complete. Further details are provided later in this Section.

4.6.1 Existing primary on-road routes

At present, on-road bicycle facilities in the form of bicycle lanes exist along two primary routes - Nepean Highway and Cranbourne Road / Cranbourne - Frankston Road. However, these bicycle lanes are discontinuous, with missing links along both of these routes. The characteristics of these two routes are described further in Table 4.2 below. All of the sections listed form part of the Principal Bicycle Network (PBN). These existing bicycle routes are also shown on the maps in Appendix B.

Table 4.2 Existing primary on-road bicycle facilities

Section	Name	Type	Length	Width	Material	Comments / Photos
			Nepean Highway			
B	Nepean Hwy (Mile Bridge to O'Grady Av) **(PBN)**	Bicycle lane adjacent to parking lane	1000m x 2 sides	1.7m	Bitumen	
D	Nepean Hwy (Bay St S to Plummer Av) **(PBN)**	Bicycle lane adjacent to parking lane	1200m x 2 sides	1.7m	Bitumen	
F	Nepean Hwy Hopes Rise to Humphries Rd south bound **(PBN)**	Bicycle lane, shared bicycle/ parking lane	1500m x 1 side	2.2 - 3.2m	Bitumen	

Section	Name	Type	Length	Width	Material	Comments / Photos
F	Humphries Rd to Olivers Hill north bound **(PBN)**	Bicycle lane, shared bicycle/ parking lane	1000 m x 1 side	2.2 - 3.2m	Bitumen	
Cranbourne Road / Cranbourne - Frankston Road						
A	Cranbourne Rd (Fletcher Rd to Clarendon St) **(PBN)**	Bicycle lane, bicycle lane adjacent to parking lane	600m x 2 sides	1.5 - 2.6m	Bitumen	 No safe cycle connection provided to Frankston Station or CAD.

Section	Name	Type	Length	Width	Material	Comments / Photos
C	Cranbourne - Frankston Rd (Moorooduc Hwy to Western Port Hwy) **(PBN)**	Bicycle lane	8.5km x 2 sides	1.3 - 1.7m	Bitumen	 Bike lanes do not continue through the Moorooduc Hwy intersection, making it difficult for cyclists.

4.6.2 Existing primary off-road routes

At present, off-road bicycle facilities exist along parts of some primary routes. These are detailed in Table 4.3 below. Some of these routes form part of the Principal Bicycle Network (PBN) or Metropolitan Trail Network (MTN); where this is the case, it has been noted in the table. These existing bicycle routes are also shown on the maps in Appendix B.

Table 4.3 Existing primary off-road bicycle facilities

Section	Name	Type	Length	Width	Material	Comments
			Bay Trail			
A	Eel Race Rd (Seabrook Way to Patterson River Secondary College) **(MTN)**	Shared	400m	2.0m	Bitumen	 Connects with footbridge to Paterson River
B	Edithvale-Seaford Wetlands west (Patterson River Secondary College to McKenzie St) **(MTN)**	Shared	2400m	2.4m	Bitumen, gravel	 Runs along Wetlands, except for the full length of Wilson Grove

Section	Name	Type	Length	Width	Material	Comments
E	Beach St to Allawah Ave **(MTN)**	Shared	500m	3.0m	Exposed aggregate	
F	Wells St Bridge to Beach St **(MTN)**	Shared	300m	3.0m	Exposed aggregate concrete	 This section of path was just completed with Parks Victoria funding
H	Frankston Waterfront Boardwalk and path (Frankston Grandview Gr to Wells St bridge) **(MTN)**	Shared	1200m	2.4 - 3.0m	Timber boardwalk, bitumen	 Lighting built into wooden railings along boardwalk north of Frankston Pier

Section	Name	Type	Length	Width	Material	Comments
J	Plowman Pl, Bay St south to Young St **(MTN)**	Shared	220m	2.5m	Bitumen	 The connection from Frankston Waterfront to Plowman Pl is missing
K	Beauty Park, Young St to Baxter St **(MTN)**	Shared	240m	2.5m	Exposed aggregate and bitumen	 The connection from Baxter St to the start of the Baxter Trail is missing

Section	Name	Type	Length	Width	Material	Comments
M	Baxter Trail, Cranbourne Rd to Golf Links Rd **(MTN)**	Shared	6600m	2.7m	Bitumen	 High level of maintenance required, signage needs upgrading

Dandenong - Frankston Trail

Section	Name	Type	Length	Width	Material	Comments
C	Dandenong - Frankston Rd, east side (Walbundry Av to Pine St) **(PBN)**	Shared	600m	1.5 - 2.0m	Concrete	 Small section of path with no connection to the south or north
E	Dandenong - Frankston Rd, east side (Ballarto Rd to Boggy Creek) **(PBN)**	Shared	700m	1.2 - 1.8m	Concrete	 Small section of path with no connection to the south or north

Section	Name	Type	Length	Width	Material	Comments
F	Dandenong - Frankston Rd (Hall Rd to Wedge Rd)	Shared	1800m	1.3 - 2.5m	Concrete, bitumen, gravel	 A section of the shared path is disconnected and is in poor condition
			Ballarto Trail			
A	Ballarto Rd, northside (Dandenong - Frankston Rd to service road)	Shared	750m	1.4 - 2.0m	Concrete	 The path along Ballarto Rd is designed to allow cyclists to use the service road, as such there is no shared path along the service road sections

Section	Name	Type	Length	Width	Material	Comments
C	Ballarto Rd, northside (McCormicks Rd to Skye Primary School)	Shared	600m	1.9 - 2.0m	Bitumen, concrete	
Skye Trail						
B	Skye Rd (Cascade St to McClelland Dr) **(MTN)**	Shared	3800m	1.6 - 2.3m	Bitumen, gravel, concrete	 There is no connection to the Frankston Freeway footbridge at Wave St. At the eastern end of the trail, there is no safe crossing to the McClelland Trail
Cranbourne - Frankston Trail						

Section	Name	Type	Length	Width	Material	Comments
B	Cranbourne Rd , north side (Lindrum Rd to McClelland Dr)	Shared	1600m	1.4 - 2.5m	Concrete	
D1	Cranbourne - Frankston Rd (Govan St to Centre Rd) **(MTN)**	Shared	2400m	1.4m	Concrete, bitumen	
D2	Cranbourne - Frankston Rd , north side Potts Rd to Raneen Dr, south side Centre Rd to Homestead Rd **(MTN)**	Shared	350m	1.4 - 2.4m	Concrete	
McClelland Trail						

Section	Name	Type	Length	Width	Material	Comments
B	McClelland Dr, west side(Centenary Park Dr to Skye Rd) **(MTN)**	Shared	800m	1.5 - 2.1m	Concrete, gravel	 Connects to public golf course and Centenary Park (soccer ground), Frankston East Tennis Courts and there is an opportunity to potentially link to the Peninsula Link trail
C	McClelland Dr, east side (Skye Rd to Cranbourne - Frankston Rd) **(MTN)**	Shared	1600m	1.4 - 1.9m	Concrete, bitumen, gravel	 Trail moves from west to eastern side of the road, however there is no safe crossing facility. The condition of this trail is poor.

Moorooduc Trail

Section	Name	Type	Length	Width	Material	Comments
B	Moorooduc Hwy (Golf Links Rd to service road)	Shared	400m	2.2m	Concrete	 East side of road, lacks signage
D	Moorooduc Hwy (Robinsons Rd to Woodside Av)	Shared	700m	1.4 - 1.8m	Concrete, gravel	

Golf Links Trail

Section	Name	Type	Length	Width	Material	Comments
B	Golf Links Rd (Netherplace Drive to Franciscan Ave)	Shared	1000m	1.5 - 2.0m	Concrete, gravel	 North-east side of road
	Golf Links Rd, west side Settlers Way to Robinson Rd	Shared	600m	1.5 – 2.0m	Concrete	

Boggy Creek Trail

Section	Name	Type	Length	Width	Material	Comments
A	Boggy Creek (Peninsula Link to Ballarto Rd) **(MTN)**	Shared	1700m	2.6m	Concrete, gravel	 No safe crossing over Frankston Dandenong Rd, however this may be resolved as part of Peninsula Link
D	Boggy Creek (Lexton Dr TO Granite Dr)	Shared	600m	2.0 – 2.5m	Gravel	

4.7 Existing secondary routes

Secondary routes consist of routes that perform a more local function compared to primary routes. Typically, they run through residential areas or along local streets and serve local shops, schools and recreational facilities. Secondary routes also function as feeders to primary routes.

For the purposes of this strategy, Frankston City has been divided into eight neighbourhood areas, as listed below:

- Frankston Central (Frankston CAD)
- Seaford
- Frankston North
- Carrum Downs & Skye
- Karingal
- Langwarrin / Langwarrin South
- Frankston Heights
- Frankston South

The following tables show existing secondary routes, split into on-road and off-road facilities. These existing bicycle routes are also shown on the maps in Appendix B.

4.7.1 Existing secondary on-road routes

Table 4.4 Existing secondary on-road bicycle facilities

Number	Name	Type	Length	Width	Material	Comments
			Seaford			
5	Harnett Dr (Heversham Dr to Hi-Tech Pl)	Bicycle lane adjacent to parking lane	500m	1.5m	Bitumen	
6	Brunel Rd (Maple St to Seaford Rd)	Bicycle lane	1000m	1.5m	Bitumen	

4.7.2 Existing secondary off-road routes

Table 4.5 Existing secondary off-road bicycle facilities

Number	Name	Type	Length	Width	Material	Comments / Photos
			Frankston Central			
1	Beauty Park (Baxter St to Yuille St)	Shared	200m	2.0m	Gravel	
			Seaford			
3A	Edithvale-Seaford Wetlands east	Shared	2800m	2.4m	Bitumen, dirt, gravel	
3B	Austin Rd (Erwin Dr to Brunel Rd)	Shared	400m	1.2 - 2.2m	Concrete, gravel	
4A	Edithvale-Seaford Wetlands west McKenzie St to Austin Rd	Shared	400m	2.4m	Bitumen, gravel	

Number	Name	Type	Length	Width	Material	Comments / Photos
4C	Erwin Dr (Arden Ct to Seaford Rd)	Shared	300m	2.3m	Gravel	
Frankston North						
7	Maple St Reserve / Belvedere Reserve	Shared	2100m	2.6m	Concrete, gravel	
13	Centenary Park Dr	Shared	300m	1.6 - 1.8m	Concrete	Crosses the road at the tennis courts
Carrum Downs & Skye						
8	Botany Park	Shared	800m	1.6 - 2.5m	Concrete, coloured bitumen	
9	Greenwood Reserve	Shared	400m	2.5m	Concrete	
10	Brunnings Rd to Elstar Dr connection	Shared	100m	2.0m	Concrete	
11	Guilia Pl to Balinga Dr connections	Shared	100m	2.1m	Concrete	

Number	Name	Type	Length	Width	Material	Comments / Photos
			Karingal			
12	Nats Track	Shared	900m	1.0 - 3.3m	Gravel, dirt	
			Langwarrin / Langwarrin South			
14	Warrandyte Rd (Langwarrin Primary School to Cranbourne - Frankston Rd)	Shared	1000m	0.8 - 2.1m	Concrete, bitumen, gravel	
15A	Bay Trail to Telstra site connector	Shared	100m	2.4m	Bitumen	
62A	Langwarrin Equestrian & Recreation Reserve (Southgateway to Bushy Crt)	Shared	1000m	1.5 - 2.0m	Cement	

Number	Name	Type	Length	Width	Material	Comments / Photos
66	Langwarrin Flora and Fauna Reserve (Centre Break)	Shared	1900m	1.5 - 2.0m	Gravel	
67	Langwarrin Flora and Fauna Reserve (Tea-Tree Tack, Reservoir Track)	Shared	700m	1.5 - 2.0m	Gravel	
68	Langwarrin Flora and Fauna Reserve (Long Crescent South)	Shared	700m	1.5 - 2.0m	Gravel	

Number	Name	Type	Length	Width	Material	Comments / Photos
			Frankston South			
16	Robinsons Rd – between Moorooduc Hwy and Golf Links Rd	Shared	900m	2.2m	Concrete	

5. Stakeholder consultation

A number of interested parties and stakeholders were consulted during the development of this Strategy to ensure that the breadth of issues affecting cycling in Frankston City was fully understood. This consultation is described in the sections below.

5.1 BikeScope survey

In developing the Strategy, Frankston City Council engaged Bicycle Victoria to undertake a BikeScope survey, which provided Frankston City residents and bike users an opportunity to identify issues, recommend measures and provide general feedback on bicycle issues across Frankston City.

The survey found that people cycle in Frankston City for a variety of reasons, with the two most popular reasons being for recreation and health and fitness. People cycle to a wide range of destinations in Frankston City; with many destinations concentrated in and around the Frankston CAD.

With respect to people who cycle as a family, not surprisingly they preferred to cycle in safe environments such as local streets and off-road paths.

Respondents were asked to list priorities for improvements in bicycle facilities. For on-road improvements, a wide variety of roads were suggested for improvement. The top ten responses, for both major and local roads, are listed in Table 5.1 below. One point to note is that for major roads, Nepean Highway stood out as the most mentioned road. It was mentioned by over half of all respondents and was mentioned by more than four times as many respondents as the second-ranked road.

Table 5.1 Top ten on-road improvement identified by BikeScope survey

Major roads	Local roads
1. Nepean Highway	1. McClelland Drive
2. Dandenong - Frankston Road	2. Railway Parade
3. Cranbourne - Frankston Road	3. Baden Powell Drive
4. Moorooduc Highway	4. Wells Road
5. McClelland Drive	5. Humphries Road
6. Frankston - Flinders Road	6. Kars Street
7. Humphries Road	7. All roads
8. Ballarto Road	8. Young Street
9. Beach Street	9. Nepean Highway
10. Wells Road / Dandenong Road West	10. Beach Street

For off-road improvements, the Frankston - Baxter Trail was the most common response. In particular, respondents would like to see access to the Frankston CAD from this trail improved. The Bay Trail was also mentioned a number of times, along with the Seaford Wetlands Trail.

Another issue raised is that a lack of satisfactory crossings of major roads is a barrier to encouraging greater levels of cycling to schools. Poor driver attitudes towards cyclists in Frankston City was also mentioned, with education and advertising campaigns suggested as a possible solution. A greater number of public toilets and water fountains in the Frankston CAD was another improvement suggested.

5.2 Stakeholder workshop

On 21 April 2009 Aurecon, in association with Frankston City Council, facilitated two community workshops, which were attended by various stakeholders, bicycle users and members of the community. The workshops provided Aurecon and Council representatives with the opportunity to:

- Present some of the key findings to date
- Seek feedback input into any potential measures for the strategy
- Understand what currently works well within Frankston City
- Understand the key issues affecting cycling in Frankston City
- Prioritise any improvements

The key issues raised during the workshop were:

- Discontinuous route along the foreshore and Nepean Highway
- Lack of networks to schools and key centres
- The need for additional routes to the CAD and Frankston Station
- The lack of connectivity between trails
- Cycling in the CAD was perceived as being dangerous
- The Seaford Wetlands route is incomplete

The need for a Frankston Bicycle User Group (BUG) was identified by the community an important forward step to ensuring cyclists have an active voice within the community and to Council. Accordingly, it is understood one of the attendees has taken a number of key steps in coordinating the formation of a Frankston BUG.

Some of the positives issues raised were:

- Baxter Trail
- The new boardwalk forming part of the Bay Trail
- Existing facilities at Frankston Station (e.g. the bicycle cages)
- The bike lanes along Cranbourne Road

The workshop also provided attendees an opportunity to prioritise where money should be spent on improving bicycle infrastructure, are detailed in Section 6.2.2.

5.3 Frankston City Council Officers

Aurecon met with a number Council Officers to obtain background information in relation to Council operations, maintenance, events, funding opportunities and safety programs. This also provided Officers an opportunity to provide input into the direction and expectations of the Strategy. Some of the key issues identifies included:

- A number of environmentally sanative areas in Frankston City which may constrain the implementation of bicycle paths. This includes Frankston Reservoir, The Pines Flora and Fauna Reserve, Seaford Wetlands, Boggy Creek and Kananook Creek
- The need to undertake a risk assessment of existing and proposed bicycle network
- The importance of providing safe routes to schools
- The lack of maintenance on some of the existing off-road paths
- The importance of on-going education of school children and the wider community
- The need for a register of proposed on-road facilities (with designs), to ensure that these are implemented when an opportunity arises (e.g. during the resurfacing)
- The need for a bicycle / sustainable transport officer within Council

Aurecon also attended a number of Working Party Meetings and an information session with Frankston City Council's Senior Management.

5.4 School survey - Council

In December 2008, Council undertook a survey at three local primary schools to identify what constraints are impacting on students cycling to school. This survey also looks at opportunities to promote cycling for school aged children within Frankston.

The survey found that around 20% of students used a bicycle as one of their usual modes of transport to school. Common reasons given regarding the best aspects of cycling were that it provided exercise and was fun. Also, almost all of the students surveyed had access to a bicycle. Around one-third said they cycled a lot, one-third cycled not very often and one-third would like to ride more. These factors suggest that there is scope to increase the level of cycling amongst primary school aged children in Frankston City.

A common response regarding barriers to increased cycling was the difficulty of crossing major roads. This suggests that one action that can be taken to encourage cycling is to provide safe crossings of major roads for cyclists. In addition, a path network that links to schools is another initiative that would encourage more children to cycle to school.

5.4.1 Ride2School

13 Schools in the Frankston area participate in the Ride2School program. Council should continue to build on the number of schools participating in the Ride2School program as a way of educating and promoting cycling.

5.5 School TravelSmart surveys

In 2008, TravelSmart surveys were undertaken at three schools within Frankston City. Examining the travel habits of students, these surveys provide useful data on the potential for increased cycling for school trips. The schools where the surveys were undertaken are:

- Langwarrin Primary School
- St Jude's Primary School
- Elisabeth Murdoch College

For both of the primary schools, it was found that most children travelled to school by car. Only a small proportion (6% and 1%) respectively cycled. However, it was also found that almost all students owned a bicycle (around 95% in both cases). Also, there were quite a few respondents who live within 5km of their respective school but currently do not walk or cycle. This data indicates that there is the opportunity to increase the number of primary school children cycling to school.

However, the surveys also found that there are barriers to encouraging more primary school students to cycle (or walk) to school. A key factor is that many parents feel that their child is too young. Safety and security was another concern raised. However, the surveys also identified that around half of respondents in both cases agreed that improved cycling and walking would encourage the use of these sustainable transport options. This indicates that providing improved cycling infrastructure around schools (for example off-road paths) is essential to encourage more primary school pupils to cycle to school.

For Elisabeth Murdoch College, fewer students came to school by car, with a higher proportion walking or using public transport. However, only 2% cycled. Fewer students (only 67%) indicated that they owned a bicycle. Nevertheless, there were 59 respondents who live within 5km of the school, who have the potential to walk or cycle to school.

5.6 External stakeholders

Aurecon also met with representatives of VicRoads Metropolitan South East Region to discuss the issues identified, constraints and opportunities with implementing such measures. More importantly, this meeting provided an opportunity to discuss funding opportunities for bicycle facilities in Frankston City.

Aurecon also attempted to liaise with representatives of Linking Melbourne Authority (LMA), in respect to the proposed bicycle facilities associated with Peninsula Link. However, as the bicycle routes along Peninsula Link have not been finalised, LMA considered meeting up with Aurecon to discuss the strategy would be a conflict of interest.

5.7 Summary

In summary the consultation undertaken identified:

- A strong desire to improve bicycle facilities throughout Frankston City, but in particular along Nepean Highway and the Baxter / Bay Trail
- The need for additional measures to encourage school aged children to cycle to school and to cycle within a safe environment
- That there will be environmental constraints to implementing some of the proposed off-road paths
- The need for a Frankston Bicycle User Group
- That cycling within Frankston CAD is perceived as being dangerous

6. Recommended bicycle network

A proposed bicycle network for Frankston City has been devised, building on the existing bicycle network and taking a number of factors into account. The factors considered are discussed below and the proposed routes are shown on the maps in Appendix B and are also listed in the tables below.

The lack of connectivity and continuity between existing bicycle facilities in particular, is considered a major weakness of the existing bicycle network within Frankston City. As such, one of the main objectives when considering the proposed route network was to ameliorate this situation.

Many of the proposed routes will fill in missing links along existing routes, which will have a major benefit by improving their continuity. Other routes aim to connect different routes together. The end results will be a network of interconnecting, continuous bicycle facilities, as opposed to the largely isolated and discontinuous facilities that exist at present.

Cyclists are generally divided into the following three categories, each of which has varying needs and expectations:

Type of Cyclist	Cycling needs
Experienced – Commuters, competitive and high use recreational users	• Direct routes • On road bicycle lanes • End use facilities such as showers and change rooms
Recreational – Family and learner users	• Off road bicycle paths • Safe environment • Good links to and between routes
Leisure/ Tourist – Do not necessarily reside within Frankston City	• Directional signage and mapping information • Rest areas • Good links and connections between routes

Therefore, when formulating the bicycle facility proposals presented below, the needs of all cyclists have been considered. This has resulted in a range of different proposals, that differ both in facility type (on-road or off-road) and the destinations which they serve.

For example, various off-road routes, running through residential areas and connecting to schools have been proposed. These will cater for less experienced cyclists, such as families and students cycling to school. Several on-road routes running along arterial roads will serve more experienced cyclists, who prefer riding along arterial roads as they generally provide direct routes. On-road routes through residential areas have also been suggested.

6.1 Opportunities

6.1.1 Peninsula Link

Shared path

Peninsula Link is a road project, consisting of a 25km freeway between EastLink and the Frankston Freeway at Carrum Downs and the Mornington Peninsula Freeway at Mt Martha, providing a bypass of the Frankston CAD. The project is currently in the planning stage and is anticipated to be completed in early 2013.

As part of this project, a 3.0m wide paved shared path will be provided along the length of the roadway within Frankston City. This will provide a high quality in land north-south off-road bicycle route through Frankston City. In addition, it is planned that this path will continue further north to connect with the

Patterson River shared path, providing a connection to points further north, and also south in Mornington Peninsula Shire. The exact alignment of this path is still under consideration and is yet to be finalised. This strategy proposes several bicycle routes that will link to the proposed Peninsula Link shared path.

Frankston City needs to ensure that the Peninsula Link has a destination such as Mornington, Safety Beach or Hastings. This can be achieved by supporting State Government and Mornington Peninsula Shire on this initiative.

Nepean Highway, Frankston

In addition, the completion of Peninsula Link will present the opportunity to develop the bicycle network in other parts of Frankston City by reducing traffic volumes along certain roads, including along certain sections of Nepean Highway. Traffic modelling undertaken for Peninsula Link has predicted that this is likely to be the case in the vicinity of the Frankston CAD. as shown in Table 6.1 below.

Table 6.1 Nepean Highway 2011 two-way weekday average daily traffic volumes

Road section	2011 base volumes	2011 with bypass volumes	Change (vehicles)	Change (%)
Nepean Hwy: Overton Rd - Mereweather Av	30,600	29,900	-700	-2.3%
Nepean Hwy: Beach St - Playne St	32,100	25,100	-7,000	-21.8%
Nepean Hwy: Davey St - Humphries Rd	45,400	39,500	-5,900	-13.0%

Source: Frankston Bypass Environmental Effects Statement (EES)

This reduction in traffic volumes presents the opportunity to reconfigure the road to better cater for the needs of cyclists. For example, between Beach St and Playne St, the two-way daily traffic volume on a weekday with Peninsula Link is expected to be 25,100. This converts to a one-way volume of 12,550 vehicles per day. Assuming a 10% peak flow factor gives a one-way flow of 1,255 during the peak hour.

As this section of road is at present a six-lane divided road, the above shows that the completion of Peninsula Link will present an opportunity to reduce the number of traffic lanes to four and to mark bicycle lanes along this road, or alternatively shared bus / bicycle lanes. This will rectify the present missing link, as there is a gap between the existing bicycle lanes along the Nepean Highway. This gap runs from O'Grady Avenue to Bay Street South, adjacent to the Frankston CAD.

6.1.2 Road improvements

Road improvements are undertaken by both Council and VicRoads, such as road duplications. When such road improvements projects are being constructed, the opportunity should be taken to implement bicycle facilities in conjunction with such projects. This is likely to be more cost effective than implementing bicycle facilities separately and also minimises any inconvenience experienced by the community.

For example, a current proposal that is set to be implemented is the signalisation of the Hastings Road / Yuille Street intersection. This project presents an opportunity to implement a section of the proposed on-road route along Yuille Street in the vicinity of this intersection.

6.1.3 Development

An opportunity exists to implement bicycle facilities in conjunction with new developments, such as housing or industrial estates. Implementing bicycle facilities in areas of new development prior to or in tandem with the progress of the development itself is important, as it will ensure that cycling is considered as a transport option as soon as the development is occupied. If the provision of bicycle

facilities lags behind development, then occupants' transport habits may become locked in and difficult to alter. Provision of bicycle facilities in or adjacent to a new development may also benefit the developer, as these may be used as a selling point. Further, as discussed further in the funding opportunities section, it may also be possible for the developer to contribute to the construction of such bicycle facilities.

6.1.4 Olivers Hill

The Frankston Safe Boat Harbour, also known as the Frankston Marina, is a project that has been recently approved by the Minister for Planning. This project consists of a boat marina in Port Phillip Bay, adjacent to Olivers Hill.

In addition, it is understood that works will need to be undertaken at some stage to stabilise the cliff at Olivers Hill.

The opportunity exists to implement the proposed bicycle facilities on Section E of the Nepean Highway in conjunction with these projects.

6.2 Prioritisation

6.2.1 Methodology

Primary routes

Prioritisation of Bicycle Infrastructure Proposals, published by the Australian Bicycle Council and the federal Department of Infrastructure, Transport, Regional Development and Local Government, provides guidance on the prioritisation of bicycle facilities. It also suggests a list of criteria for assessing proposed bicycle facilities. These are listed in the form of five objectives and 14 sub-objectives, which are outlined below:

- Strategic
  - completion of state networks
- Connectivity
  - schools
  - tertiary institutions
  - employment zones
  - recreational
  - tourism
  - public transport
- Economic
  - mode shift
  - impact on motor vehicles
  - economic impacts
- Safety
  - cycling safety
  - pedestrian safety issues
- People and communities
  - level of service
  - townscape/urban planning

Prioritisation of Bicycle Infrastructure Proposals further suggests that the above criteria be used as part of a multi-criteria analysis (MCA). Therefore, in order to prioritise the proposals for primary bicycle routes, the broad qualitative impact of each proposal was identified under each of the above five objectives. A score was then assessed for these objectives for each proposal, with the following weightings:

- Strategic: /10
- Connectivity: /10
- Economic: /5
- Safety: /15
- People and communities: /10

The sum of these individual scores yields a total score for each proposal out of 50. The priority level of each proposal was then assigned using the total score as follows:

- 40-50: high priority
- 30-39: medium priority
- ≤29: low priority

Secondary routes

A less formal approach has been used to prioritise the secondary bicycle routes that are proposed. Each of these routes has been listed under the neighbourhood in which it is located (if a route runs through more than one neighbourhood, it is listed under the neighbourhood it is located in for the majority of its length). Warrants for improved bicycle facilities in each neighbourhood have been listed, with a judgement then made as to the priority level that should be assigned to that neighbourhood.

6.2.2 Feedback from public consultations

As part of the stakeholder workshops discussed earlier, participants were given an opportunity to provide input on the prioritisation of bicycle projects in Frankston City. Each group of participants was given ten hypothetical 'dollars', which they were able to assign to particular cycling projects as they saw fit. The amount spent on each project in total by all groups was then calculated and a ranked list of cycling projects was then produced. The top ten priorities that resulted from this process are shown in Table 6.2.

Table 6.2 Top ten priorities emerging from public consultations

Rank	Item description	Score	Number of groups raising item
1	Completion of the Bay Trail	13.85	6
2	Creating a cycle-safe Frankston CAD	11.75	3
3	Improved bicycle facility surface maintenance	5.57	4
4	Employment of a bicycle officer at Council	4.50	2
5	East-west bicycle paths to feed proposed Peninsula Link Path	3.83	2
6	Cycling links to schools and residential areas	3.75	3
7	Improved bicycle signage	3.16	2
8	Improved off-road bicycle links	3.05	2
9	Connection to the Eastlink shared path	2.36	2
10	Improved bicycle links to Frankston CAD	2.29	2

Two projects received a particularly high score relative to other projects. The first of these is the completion of the Bay Trail, which was listed by almost every group and received the highest overall score. The second highest priority is for the Frankston CAD to be made safer for cyclists, as this area is currently perceived as being an unsafe shared environment between motorists and cyclists.

6.3 Costing

The capital cost of each proposal has been estimated using typical unit costs as supplied by Frankston City Council.

It is important to note that the costs indicated for each proposal are indicative only. Aurecon's definition of indicative costs is as follows:

> An Indicative Cost is a first cost indication (at current prices at the date stated) provided to the Client based on an outline estimate of the Client's needs; prepared by reference to feasibility sketches or assessed without sketches and based in appropriate cases on the knowledge of costs for similar projects. An indicative cost is intended only as a guide for a pre-feasibility and planning purposes, it is not an estimate and may not be quoted as such. Indicative Costs are prepared using broad cost parameters (eg. Buildings and pavements on a cost per square meter basis).

Since Aurecon has no control over the cost of labour, materials, equipment or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, any opinion or indicative costs by Aurecon is made on the basis of our experience and represents Aurecon's judgement as experienced and qualified professional engineers. Aurecon cannot and does not, however, guarantee that proposals, bids or actual construction costs will not vary from our budgets and estimates.

6.4 Recommended path improvements

Tables 6.3 to 6.41 provide a summary of the recommended bicycle paths that should be implemented as part of this strategy. This includes descriptions, indicative costs and prioritisation.

6.4.1 Primary on-road routes

Nepean Highway

Table 6.3 Nepean Highway proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Nepean Highway				
A	Nepean Hwy (Eel Race Rd to Mile Bridge) **(PBN)**	Indent parking into nature strip along eastern side of road, reallocate space formerly used by parking lane to create bicycle lanes in both directions	4700m x 2 sides	2 288 000	PBN, Black Spot	VicRoads
C	Nepean Hwy (O'Grady Av to Bay St South) **(PBN)**	Reduce general traffic lanes from three to two in each direction, use space to create a bicycle lane in each direction; alternatively, these lanes may be designated as bus / bicycle lanes	1000m x 2 sides	25 000	PBN, Black Spot	VicRoads
E	Hopes Rise (Nepean Hwy service road) **(PBN)**	Formally designate existing *southbound* shoulder as bicycle lane (by adding signage and pavement markings), link into existing bicycle lanes at either end of this section	500m x 1 side	4 000	PBN	VicRoads
	Nepean Hwy (Plummer Av to Hopes Rise) **(PBN)**	Construct *northbound* bicycle path along western side of carriageway. *Note this is actually an off road path, but included in this section of the strategy as it forms part of the on-road route*	500m x 1 side	1 300 000	PBN	VicRoads

Table 6.4 Nepean Highway proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	C	E
Strategic	This is a key cycling route within Frankston City and is also important regionally as it forms part of a cycling loop around Port Phillip Bay. It has also been designated as part of the state-wide Principal Bicycle Network (PBN).	10/10	10/10	10/10
Connectivity	This route provides access to a wide variety of destinations. Sections A and C both provide bicycle access to schools, and all sections run in the vicinity of various recreation facilities. The coastline of Frankston City is one of its key assets in terms of attracting visitors and tourists. As this route runs parallel to the coast, it takes advantage of this and has the potential to attract visitors who would like to cycle along this route to enjoy the seaside scenery on offer.	10/10	10/10	10/10
Economic	Enhanced access to businesses in Frankston CAD and Seaford. Increased cyclist numbers may lead to increased spending at these businesses. For Section C, construction of Peninsula Link has been predicted to reduce traffic volumes on this section of road, which will mitigate any adverse impacts from reducing the number of traffic lanes.	5/5	5/5	3/5
Safety	Almost half of all reported crashes involving cyclists in Frankston City occur along this route. Providing bicycle lanes along this route will help to increase motorist awareness of the presence of cyclists and may thus reduce the number of crashes involving cyclists. In particular, there are a very high number of crashes occurring along Section C, with a number of crashes also within Section A.	12/15	15/15	8/15
People and communities	This route, once complete, will provide an important north-south link to the Frankston CAD, which is a principal activity centre. A continuous on-road route without gaps will also improve the level of service for cyclists travelling along this corridor.	10/10	10/10	10/10
Time line / priority / total score	All sections of this route are a high priority and it is recommended that they be implemented within 1 to 3 years.	**47/50**	**50/50**	**41/50**

Thompsons Road

Table 6.5 Thompsons Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Thompsons Road				
A	Thompsons Rd (McCormicks Rd to Western Port Hwy) **(PBN)**	Widen existing sealed shoulders to provide 2.0m wide bicycle lane in each direction	3200m x 2 sides	325 000	PBN	VicRoads
B	Thompsons Rd Learmonth to EastLink **(PBN)**	Widen existing sealed shoulders to provide 2.0m wide bicycle lane in each direction	2300 x 2	130 000	PBN	VicRoads

Table 6.6 Thompsons Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B
Strategic	This route provides an east-west cycling route in the north of Frankston City. It is part of the Principal Bicycle Network (PBN) and will potentially continue east into the City of Casey.	7/10	7/10
Connectivity	This route runs through a mostly undeveloped area, although it is adjacent to the Sandhurst Club Golf Course. The importance of this route will increase if the region around it is developed in the future.	5/10	5/10
Economic	The economic impact of this route is not likely to be significant.	2/5	2/5
Safety	The reported cycling crash history for this road does not suggest any particular safety problem; nevertheless, marked bicycle lanes will enhance cyclist safety by providing road space for cyclists and drawing the attention of motorists to the potential presence of cyclists.	8/15	8/15
People and communities	This route will improve the level of service for cyclist by providing them with a continuous east-west route along the northern boundary of Frankston City.	5/10	5/10
Time line / priority / total score	This route is a low priority and it is recommended that it be implemented in tandem with development in its vicinity.	**27/50**	**27/50**

Lathams Road / Hall Road

Table 6.7 Lathams Road / Hall Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Lathams Road / Hall Road				
A	Lathams Rd (Peninsula Link to Dandenong - Frankston Rd)	Provide 2.0m wide bicycle lanes in both directions	1600m x 2 sides	411 000	Council	Council
B	Hall Road (Dandenong - Frankston Rd to McCormicks Rd) **(PBN)**	Indent parking on both sides of road to provide space for 2.0m wide bicycle lanes	2200m x 2 sides	713 000	PBN	VicRoads
C	Hall Rd (McCormicks Rd to Western Port Hwy) **(PBN)**	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	3200m x 2 sides	821 000	PBN	VicRoads

Table 6.8 Lathams Road / Hall Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B	C
Strategic	This route will provide an east-west on-road bicycle route in the northern part of Frankston City. Sections B and C of this route are part of the Principal Bicycle Network (PBN), and will potentially continue east into the City of Casey.	7/10	7/10	7/10
Connectivity	Section A of this route runs through an industrial area and will provide access to this employment centre. It will also connect with the proposed Peninsula Link shared path. Section B of this route runs through a mostly residential area, providing access to Carrum Downs Regional Shopping Centre, schools and parks. Section C of this route runs through a predominantly undeveloped area, although its importance may increase if development proceeds along this section.	7/10	7/10	4/10
Economic	Section A will improve bicycle access to the industrial areas surrounding it. Section B will improve bicycle access to the Carrum Downs Regional Shopping Centre, which may encourage more cyclists to visit this centre. The economic impact of Section C is not likely to be significant.	3/5	3/5	2/5
Safety	The reported cycling crash history for this road does not suggest any particular safety problem; nevertheless, marked bicycle lanes will enhance cyclist safety by providing road space for cyclists and drawing the attention of motorists to the potential presence of cyclists.	8/15	8/15	8/15
People and communities	This route will improve access for residents to local facilities along this route. This route will also improve the level of service for cyclists as it will enable them to utilise continuous on-road bicycle lanes.	7/10	7/10	5/10
Time line / priority / total score	Sections A and B are a medium priority, recommended for implementation within 3 to 6 years. Section C is a low priority and it is recommended that it be implemented as development adjacent to the section proceeds.	**32/50**	**32/50**	**26/50**

Seaford Road / Ballarto Road

Table 6.9 Seaford Road / Ballarto Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Seaford Road / Ballarto Road				
A	Seaford Rd (Nepean Hwy to Dandenong - Frankston Rd) **(PBN)**	Reconfigure existing lanes to create bicycle lanes in both directions	3000m x 2 sides	49 000	PBN	VicRoads
B	Ballarto Rd (Dandenong - Frankston Rd to McCormicks Rd)	Seal existing shoulders to provide 2.0m wide bicycle lane in each direction	3300m x 2 sides	332 000	Council	Council
C	Ballarto Rd (McCormicks Rd to Western Port Hwy)	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	3200m x 2 sides	322 000	Council	Council

Table 6.10 Seaford Road / Ballarto Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B	C
Strategic	This route will provide an east-west off-road cycling route, which will link on-road cycling routes along Nepean Highway and Dandenong - Frankston Road, as well as the proposed Peninsula Link shared path. Section A is part of the Principal Bicycle Network (PBN).	10/10	8/10	8/10
Connectivity	Section A of this route runs through an established residential area and provides access to various shops, schools and parks. It also provides a link to the centre of Seaford, including the train station there. Section B also passes through a mostly residential area and will provide access to various parks, as well as Carrum Downs Plaza and Flinders Community College. Section C goes through an area that is mostly undeveloped, but it will provide access to Skye Primary School, Sky Golf Course and Skye Reserve.	9/10	7/10	4/10
Economic	Section A will provide access to businesses located in the centre of Seaford. Section B will improve bicycle access to Carrum Downs Plaza, which may encourage more cyclists to visit this retail centre. There is likely to be less economic benefit from Section C.	4/5	3/5	1/5
Safety	There has been a concentration of reported crashes involving cyclists in Section B of this route. Providing bicycle lanes along this route will help to increase motorist awareness of the presence of cyclists and may thus reduce the number of crashes involving cyclists. Marked bicycle lanes will also improve safety in the remaining sections of this route.	8/15	14/15	8/15
People and communities	This route will improve access for residents to local facilities along this route. This route will also improve the level of service for cyclists as it will enable them to utilise continuous on-road bicycle lanes.	9/10	8/10	5/10
Time line / priority / total score	Sections A and B of this route are a high priority and are recommended for implementation within 1 to 3 years. Section C is a low priority and its implementation should take place as the area around it is developed.	**40/50**	**41/50**	**26/50**

Dandenong Road / Dandenong - Frankston Road

Table 6.11 Dandenong Road / Dandenong - Frankston Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Dandenong Road / Dandenong - Frankston Road						
A	Dandenong Rd (Beach St to Overton Rd)	Remove existing painted median to create space for 2.0m wide bicycle lane in both directions	1300m x 2 sides	57 000	VicRoads, Council	VicRoads
B	Dandenong - Frankston Rd (Overton Rd to Ballarto Rd) **(PBN)**	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	2900m x 2 sides	292 000	PBN, Black Spot	VicRoads
C	Dandenong - Frankston Rd (Ballarto Rd to Hall Rd) **(PBN)**	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	2000m x 2 sides	201 000	PBN	VicRoads
D	Dandenong - Frankston Rd (Hall Rd to Wedge Rd) **(PBN)**	Seal existing shoulders to provide 2.5m wide bicycle lanes in each direction	1800m x 2 sides	181 000	PBN	VicRoads
E	Dandenong - Frankston Rd (Wedge Rd to Thompsons Rd) **(PBN)**	Seal existing shoulders to provide 2.5m wide bicycle lanes in each direction	1800m x 2 sides	181 000	PBN	VicRoads

Table 6.12 Dandenong Road / Dandenong - Frankston Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B	C	D	E
Strategic	This route will form a key on-road bicycle route to the north-east part of Frankston City. It will also provide an access route to the Frankston CAD and may ultimately form part of a route through to Dandenong. Sections B, C, D and E are part of the Principal Bicycle Network (PBN).	10/10	8/10	8/10	8/10	8/10
Connectivity	Section A of this route runs through an established residential area and will provide a new bicycle link to the Frankston CAD from the north. Section B also runs through a residential area and in the vicinity are parks, schools and shops. Section C services residential areas to the south-east and an industrial area to the north-west, and provides access to local shops. Section D goes through a newer residential area, and will also serve The Local Village Shopping Centre. Section E runs through a relatively undeveloped area, but provides access to Carrum Downs Reserve.	9/10	9/10	7/10	7/10	4/10
Economic	This route, especially Section A, will enhance bicycle access to the Frankston CAD and may therefore have a positive economic impact. Sections B, C and D will also improve bicycle access to local shops.	4/5	3/5	3/5	3/5	2/5
Safety	There have been several recorded crashes involving cyclists along this route over the period 2002 to 2007. These are especially prevalent in Sections B and C. Providing bicycle lanes along this route will help to increase motorist awareness of the presence of cyclists and may thus reduce the number of crashes involving cyclists, both in these two sections and also along the remainder of the route.	8/15	14/15	14/15	8/15	8/15
People and communities	Completion of this route will improve access to the principal activity centre of the Frankston CAD, thus improving the level of service for cyclists travelling along this corridor.	9/10	8/10	7/10	7/10	5/10
Time line / priority / total score	Sections A and B of this route are a high priority and are recommended for implementation within 1 to 3 years. Sections C and D are a medium priority and it is recommended that they be implemented within 3 to 6 years. Section E is a low priority and its implementation should take place as the area around it is developed.	**40/50**	**42/50**	**39/50**	**33/50**	**27/50**

Cranbourne Road / Cranbourne - Frankston Road

Table 6.13 Cranbourne Road / Cranbourne - Frankston Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Cranbourne Road / Cranbourne - Frankston Road						
B	Cranbourne Rd (Clarendon St to Deane St) **(PBN)**	On road bicycle lanes do not continue through the intersection	620m	5 000	Black Spot PBN	VicRoads

Table 6.14 Cranbourne Road / Cranbourne - Frankston Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	B
Strategic	Completion of the section will close the last missing link in this key on-road bicycle route. This route provides an important east-west bicycle link through Frankston City. This route is part of the Principal Bicycle Network (PBN).	10/10
Connectivity	This section of the route runs adjacent to the Frankston Bulky Goods Centre. However, in addition it will enhance bicycle access to the Frankston CAD, which is a commercial and public transport hub, from the east. It will also provide access to Chisholm TAFE.	9/10
Economic	Improving access to the Frankston CAD from this route is likely to encourage more people to cycle to the CAD.	4/5
Safety	Over the period of 2002 to 2007, there was one reported crash involving cyclists in this section. Providing marked bicycle lanes in this section will enhance cyclist safety by providing road space for cyclists and drawing the attention of motorists to the potential presence of cyclists.	12/15
People and communities	Completion of this missing link will greatly improve the level of service to cyclists utilising this route, by removing this critical gap. It will also provide access to the Frankston CAD which is a principal activity centre.	9/10
Time line / priority / total score	This route is a high priority and it is recommended that it be implemented within 1 to 3 years.	**44/50**

Golf Links Road / Baxter - Tooradin Road

Table 6.15 Golf Links Road / Baxter - Tooradin Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Golf Links Road / Baxter - Tooradin Road						
A	Golf Links Rd (Moorooduc Hwy to Robinsons Rd)	Utilise existing parking lane / shoulder as bicycle lane in both directions by adding appropriate signage and pavement markings	1700m x 2 sides	21 000	Council	Council
B	Golf Links Rd (Robinsons Rd to McClelland Dr)	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	1600m x 2 sides	161 000	Council	Council
C	Golf Links Rd (McClelland Dr to Warrandyte Rd)	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	2000m x 2 sides	201 000	Council	Council
D	Baxter - Tooradin Rd (Warrandyte Rd to Western Port Hwy) **(PBN)**	Seal existing shoulders to provide 2.0m wide bicycle lanes in each direction	3000m x 2 sides	302 000	Council	Council

Table 6.16 Golf Links Road / Baxter - Tooradin Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B	C	D
Strategic	This route will provide a link between Moorooduc Highway, the proposed Peninsula Link shared path and the Frankston - Baxter Trail, through Sections A and B. This route will also link to the Frankston CAD via the proposed route along the Moorooduc Highway. Section D of this route is part of the Principal Bicycle Network (PBN).	8/10	8/10	6/10	7/10
Connectivity	Section A of this route runs through a relatively established residential area. It also provides access to Towerhill Shopping Centre, as well as St Augustine Primary School and Mt Erin Secondary College. Sections B and C runs through predominantly rural environs with small pockets of residential development. In addition, Section C also runs adjacent to Woodleigh School, Baxter Primary School and Mulberry Hill National Trust (a tourist attraction). Section D runs through a mostly rural area.	7/10	7/10	5/10	4/10
Economic	This route, especially Sections A and C, will improve bicycle access to local shops. In addition this route, in particular Sections A and B, will improve access to the Frankston CAD by feeding into the proposed Moorooduc Trail.	4/5	3/5	3/5	2/5
Safety	Over the period of 2002 to 2007, there were two reported crashes involving cyclists along this route, one in Section B and one in Section D. This reported cycling crash history does not suggest any particular safety problem; nevertheless, marked bicycle lanes will enhance cyclist safety by providing road space for cyclists and drawing the attention of motorists to the potential presence of cyclists.	8/15	10/15	8/15	10/15
People and communities	Completion of this route will improve the level of service for cyclists in this corridor, by providing continuous on-road bicycle lanes. This route will also provide a link to the principal activity centre at the Frankston CAD.	7/10	7/10	5/10	5/10
Time line / priority / total score	Sections A and B of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years. Sections C and D are a low priority and it is recommended that they be implemented in tandem with development in their vicinity.	**34/50**	**35/50**	**27/50**	**27/50**

Humphries Road

Table 6.17 Humphries Road proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Humphries Road						
A	Humphries Rd (Nepean Hwy - Moorooduc Hwy)	Mark 1.3m wide bicycle lanes in both directions along existing carriageway, by adding appropriate signage and pavement markings	4800m x 2 sides	59 000	Council	Council

Table 6.18 Humphries Road proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A
Strategic	This route will provide an important cycling link between Nepean Highway and Moorooduc Highway, running through an established residential area and also serving those in Mornington Peninsula Shire.	8/10
Connectivity	This route provides access to the adjacent residential areas. This route will also provide access to various parks, including Baden Powell Reserve and Overport Park It will also link to north-south routes heading to the Frankston CAD and to the propsed Moorooduc Hwy and Seges Rd paths.	7/10
Economic	This route is not expected to have a significant economic impact, although it will improve bicycle access to local businesses.	2/5
Safety	Over the period 2002 to 2007, there were two recorded crashes involving cyclists along this route, both in. Providing bicycle lanes along this route will help to increase motorist awareness of the presence of cyclists and may thus reduce the number of crashes involving cyclists.	12/15
People and communities	Providing on-road bicycle lanes along this route will improve the level of service for cyclists travelling in this area.	7/10
Time line / priority / total score	All sections of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years.	**36/50**

Western Port Highway (Dandenong - Hastings Road)

Table 6.19 Western Port Highway (Dandenong - Hastings Road) proposed primary on-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Western Port Highway (Dandenong - Hastings Road)						
A	Western Port Hwy (Thompsons Rd to Cranbourne - Frankston Rd) **(PBN)**	Complete sealing existing shoulders to provide 2.5m wide bicycle lanes in each direction	6300m x 2 sides	1 232 000	PBN	VicRoads
B	Western Port Hwy (Cranbourne - Frankston Rd to North Road) **(PBN)**	Seal existing shoulders to provide 2.5m wide bicycle lanes in each direction	3900m x 2 sides	479 000	PBN	VicRoads
C	Western Port Hwy (North Rd to Baxter - Tooradin Rd) **(PBN)**	Seal existing shoulders to provide 2.5m wide bicycle lanes in each direction / if road is duplicated, provide 2.5m wide sealed shoulders on both carriageways to be used as bicycle lanes	3500m x 2 sides	430 000	PBN	VicRoads

Table 6.20 Western Port Highway (Dandenong - Hastings Road) proposed primary on-road route prioritisation details

Objective	Qualitative impacts	A	B	C
Strategic	This route will provide an important north-south link, not only for Frankston City but also for neighbouring municipalities and is thus of regional importance. It is designated as part of the Principal Bicycle Network (PBN) and will ultimately provide a link between Dandenong and Hastings.	9/10	9/10	9/10
Connectivity	At present, the area in the vicinity of Western Port Highway is relatively rural and this route will not directly serve any major destinations. However, the importance of this route will increase as development in its vicinity proceeds.	2/10	2/10	2/10
Economic	This route is not likely to have any major economic impact.	1/5	1/5	1/5
Safety	For the period 2002 to 2007, there has been one recorded crash involving a cyclist on this route in Section C. Nevertheless, the reported cycling crash history for this road does not suggest any particular safety problem. In any case, marked bicycle lanes will enhance cyclist safety by providing road space for cyclists and drawing the attention of motorists to the potential presence of cyclists.	8/15	8/15	10/15
People and communities	Completion of this route will improve the level of service for cyclists travelling along this corridor.	5/10	5/10	5/10
Time line / priority / total score	This route is a low priority and it is recommended that it be implemented in tandem with development in its vicinity.	**25/50**	**25/50**	**27/50**

6.4.2 Primary off-road routes

Bay Trail

Table 6.21 Bay Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Bay Trail				
C	McKenzie St and Station St (Edithvale-Seaford Wetlands west to Kananook Creek Reserve)	Develop segregated paths within the road cross section, may require some widening into the nature strip.	500m	164 000	MTN	Council
D	Station St to Mile Bridge, between Foreshore and Kananook Creek Reserve) (**MTN)**	Paths to be developed along this corridor	3100m	Depends on path chosen (approximately 1 016 000)	MTN	Council
E	Kananook Creek (Mile Bridge to Allawah Ave) (**MTN)**	Construction along Kananook Creek to 2.5 - 3.0m wide shared path. Should include widening of footbridges at Fiochi Ave and Allawah Ave to 2.5m wide.	200m	200 000 Plus cost of bridge widening	MTN	Council
G	Wells St Bridge to Frankston Yacht Club (**MTN)**	A new path along Kananook Creek	450m	147 000	MTN	Council
I	Frankston Pier to Plowman Place	Exact path to be determined, but likely to include upgrading existing pedestrian crossing into a Toucan crossing	300m	Depends on path chosen (approximately 150 000)	MTN	Council

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
L	Baxter St (Park St to Playne St) (**MTN)**	Widen existing footpath on east side of road to a 2.5 – 3.0m wide shared path Widening is also required of the Baxter St bridge (east side) by approximately 1.5 m to accommodate shared path.	300m	358 000	MTN	Council

Table 6.22 Bay Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	C	D	E	G	I	L
Strategic	This route, when complete, will provide a key off-road route along the foreshore and ultimately to Baxter through Mornington Peninusla. It is also of regional significance, as it will form part of the wider Bay Trail, an off-road cycling route around much of Port Phillip Bay. This route is also designated as part of the Melbourne-wide Metropolitan Trail Network (MTN).	10/10	10/10	10/10	10/10	10/10	10/10
Connectivity	This route is very important in terms of improved connectivity. It runs alongside established residential areas and also provides access to recreation facilities related to the foreshore (beach, parks, piers, etc.). Section E in particular will provide a link to the Frankston CAD, an important commercial and public transport hub, which also contains Chisholm TAFE. Section D will also provide access to railway stations, as well as local recreation facilities and schools.	8/10	8/10	9/10	8/10	8/10	8/10
Economic	Section E of this route would greatly improve cyclist access to the Frankston CAD, which may result in increased spending, especially at retail outlets. Section D may have a similar effect on the smaller centre of Seaford. In particular, as this route runs along the foreshore, it may have the potential to attract tourists who would be interested in cycling along this path to enjoy the coastal scenery on offer.	4/5	4/5	5/5	4/5	4/5	4/5
Safety	Almost half of all reported crashes involving cyclists in Frankston City occur along Nepean Highway. Providing an off-road bicycle route along parallel to Nepean Highway may reduce crashes if some cyclists decide to use the off-road route rather than the on-road route. In particular, there are a very high number of crashes occurring in a concentrated area adjacent to proposed Section E of the Bay Trail, with a number of crashes also occurring near Section D.	13/15	13/15	15/15	10/15	10/15	10/15
People and communities	This route will provide a north-south off-road cycling access to the Frankston CAD, which is a principal activity centre. A continuous off-road cycling route will also improve the level of service to cyclists.	8/10	8/10	9/10	8/10	8/10	8/10
Time line / priority / total score	Sections C, D and E of this route in particular are considered a high priority and it is recommended that they be implemented within 1 to 3 years.	**43/50**	**43/50**	**48/50**	**38/50**	**38/50**	**38/50**

Dandenong – Frankston Trail

Table 6.23 Dandenong – Frankston Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Dandenong – Frankston Trail						
A	Dandenong Rd East (Beach St to Overton Rd)	Widen existing footpath between Beach St and Fletcher Rd on eastern side to a 2.5 – 3.0 wide shared path. Implement new shared path on eastern side. This may require clearing of vegetation.	1350m	221 000	Council	Council
B	Dandenong – Frankston Rd (Overton Rd to Walbundry Av)	Widen existing footpath on south-west side of road to 2.5 – 3.0m wide shared path	300m	49 000	VicRoads	VicRoads
D	Dandenong – Frankston Rd (Pine St to Ballarto Rd)	Widen existing footpath on south-west side of road to 2.5 – 3.0m wide shared path	2000m	328 000	VicRoads	VicRoads
F	Dandenong – Frankston Rd (Boggy Creek to Hall Rd)	Widen existing footpath on south-west side of road to 2.0m wide shared path, where no existing footpath construct 2.5 – 3.0m wide shared path	1200m	262 000	VicRoads	VicRoads
H	Dandenong – Frankston Rd (IGA supermarket to Thompson Rd)	Widen existing footpath on south-west side of road to 2.5 – 3.0m wide shared path, where no existing footpath construct 2.5 – 3.0m wide shared path	2100m	491 000	VicRoads	VicRoads

Table 6.24 Dandenong – Frankston Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A	B	D	F	H
Strategic	This route will function as an access route to the Frankston CAD from the north-east of Frankston City. It will also form part of a potential off-road cycling link to Dandenong and will connect to the proposed Peninsula Link shared path.	10/10	10/10	8/10	8/10	8/10
Connectivity	This route will connect with a number of other paths. Section D of this runs through an established residential area, serving local shops and parks, whilst also connecting two disjointed sections of existing shared path. Section F will also serve residential areas and local shops, and will connect two discontinuous sections of existing shared path. Section E runs through a relatively undeveloped area, but it does serve Carrum Downs Reserve.	9/10	9/10	8/10	8/10	4/10
Economic	Sections A and B will help provide a link to the major commercial centre of the Frankston CAD. Completion of Sections D and F will facilitate cyclist access to local shops. The economic impact of Section H is likely to be relatively small, as it runs through a less developed area.	4/5	4/5	3/5	3/5	1/5
Safety	Along Sections D and F, there are concentrations of recorded crashes involving cyclists. Implementing a shared path in these sections may help to improve cyclist safety by providing an alternative off-road facility which cyclists may utilise. In the vicinity of Sections A, B and H the data does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15	8/15	14/15	14/15	8/15
People and communities	Completion of this route will improve access to the principal activity centre of the Frankston CAD, thus improving the level of service for cyclists travelling along this corridor.	9/10	9/10	8/10	8/10	6/10
Time line / priority / total score	Sections A, B, D and F of this route are a high priority and are recommended for implementation within 1 to 3 years. Section H is a low priority and its implementation should take place as the area around it is developed.	**40/50**	**40/50**	**41/50**	**41/50**	**27/50**

Ballarto Trail

Table 6.25 Ballarto Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Ballarto Trail				
B	Ballarto Rd (Tamarisk Dr to McCormicks Rd)	Widen existing footpath on north side of road to 2.0m wide shared path, where no existing footpath construct 2.5 – 3.0m wide shared path	2700m	491 000	VicRoads	VicRoads
D	Ballarto Rd (Skye Primary School to Western Port Hwy)	Widen existing footpath on north side of road to 2.0m wide shared path, where no existing footpath construct 2.5 – 3.0m wide shared path	2600m	655 000	VicRoads	VicRoads

Table 6.26 Ballarto Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	B	D
Strategic	This route will provide an east-west off-road cycling route, which will provide a link to the Dandenong – Frankston Trail and also the proposed Peninsula Link shared path.	8/10	8/10
Connectivity	Section B of this route runs adjacent to an established residential area. It will provide access to several parks, as well as Flinders Christian Community College and Carrum Downs Plaza. Section D runs through a less developed area, but will still provide access to Skye Primary School, Sky Golf Course and Skye Reserve. The importance of this section will increase as development proceeds adjacent to it.	7/10	4/10
Economic	Section B will improve cyclist access to Carrum Downs Plaza, which may encourage more cyclists to visit this retail centre. There is likely to be less economic benefit from Section D.	3/5	1/5
Safety	The reported cycle crash history in the vicinity of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15	8/15
People and communities	This route will improve access for residents to local facilities along this route. The completion of Section B in particular will improve the level of service for cyclists by connecting two currently orphaned sections of shared path on Ballarto Road.	8/10	5/10
Time line / priority / total score	Section B is a medium priority route, recommended for implementation within 3 to 6 years. Section D is considered a low priority route and is recommended that it be implemented as development adjacent to the section proceeds.	**34/50**	**26/50**

Skye Trail

Table 6.27 Skye Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Skye Trail				
A	Overton Rd (Nepean Hwy to Dandenong Rd), Skye Rd (Dandenong Rd to Wave St – footbridge) **(PBN)**	Widen existing footpath on south side of road to 2.5 – 3.0m wide shared path	1000m	164 000	PBN	VicRoads

Table 6.28 Skye Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A
Strategic	The completion of this section of the Skye Trail will complete a key east-west off-road cycling route in Frankston City.	10/10
Connectivity	Whilst this section of the Skye Trail will not serve any major destinations in its own right, it will fill a key missing link on this route, by linking the existing shared path along Skye Road to Nepean Highway and the foreshore. Completion of this section will therefore provide an east-west feeder route to the Bay Trail.	9/10
Economic	Again, this section of the Skye Trail is unlikely to have a significant economic impact, but by providing a feeder to the Bay Trail, is likely to improve access to many businesses.	4/5
Safety	The reported cycle crash history in the vicinity of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15
People and communities	This section will greatly improve the level of service for cyclists by providing a continuous east-west route that links with other cycle routes.	9/10
Time line / priority / total score	This route is a high priority and is recommended for implementation within 1 to 3 years.	**40/50**

Cranbourne – Frankston Trail

Table 6.29 Cranbourne – Frankston Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Cranbourne – Frankston Trail				
A	Cranbourne Rd (Playne St to Lindrum Rd)	Widen existing footpath on north side of road to 2.5 – 3.0m wide shared path	2600m	426 000	MTN	Council
C	Cranbourne – Frankston Rd (McClelland Dr to Govan St) **(MTN)**	Widen existing footpath on south side of road to 2.5 – 3.0m wide shared path	1600m	262 000	MTN	Council
E	Cranbourne – Frankston Rd (Centre Rd to Western Port Hwy) **(MTN)**	Construct 2.5 – 3.0m wide shared path on south side of road	1700m	557 000	MTN	Council
F	Connection to City of Casey	In conjunction with Parks Victoria and the City of Casey, an off road trail connecting Frankston City to the Cranbourne Botanical Gardens be agreed.	TBD	TBD	MTN	Council

Table 6.30 Cranbourne – Frankston Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A	C	E
Strategic	This route will provide a key off-road access to the Frankston CAD from the eastern parts of Frankston City. Sections C and E also form part of the Metropolitan Trail Network (MTN) and will potentially be part of an off-road cycling route extending eastwards into the City of Casey. It will also act as an east-west feeder to the proposed Peninsula Link shared path.	9/10	9/10	9/10
Connectivity	Section A of this route runs through a very established area and will provide access to the key commercial and public transport hub of the Frankston CAD, which also contains a campus of Chisholm TAFE. This section also runs in the vicinity of various schools, the Frankston Bulky Goods Centre, Jubilee Park and Monash University. Section C does not provide links to any major destinations, but will connect two previously disjointed sections of shared path. Section E of this route runs through a relatively undeveloped area, but its importance will increase if this area is developed.	9/10	7/10	4/10
Economic	Section A will improve access to businesses both in the Frankston CAD and at the Frankston Bulky Goods Centre. Section C will improve bicycle access to local shops and Centro Karingal. There is likely to be less economic benefit from Section E.	4/5	3/5	1/5
Safety	There is a concentration of reported crashes involving cyclists along Cranbourne Road adjacent to Section A. Providing an off-road shared path along this section may improve safety by encouraging some cyclists to use this facility. The reported cycle crash history in the vicinity of Sections C and E does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	14/15	8/15	8/15
People and communities	This section will greatly improve the level of service for cyclists by providing a continuous east-west route that links to other cycle routes. Section A will also complete an off-road cycling link between the Frankston CAD, which is a principal activity centre, and Karingal, which is a major activity centre.	9/10	7/10	5/10
Time line / priority / total score	Section A of this route is a high priority and is recommended for implementation within 1 to 3 years. Section C of this route is a medium priority and it is recommended that it be implemented within 3 to 6 years. Section E is a low priority and its implementation should take place as the area around it is developed.	**45/50**	**34/50**	**27/50**

McClelland Trail

Table 6.31 McClelland Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		McClelland Trail				
A	McClelland Dr (Ballarto Rd to Centenary Park Dr)	Construct 2.5 – 3.0m wide shared path on east side of road	2900m	950 000	Council	Council
D	McClelland Dr (Cranbourne – Frankston Rd to Telstra site) (**MTN**)	Construct 2.5 – 3.0m wide shared path on west side of road	1100m	360 000	MTN	Council

Table 6.32 McCelland Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A	D
Strategic	This route will provide a north-south off-road bicycle route through the middle of Frankston City. Part of Section A and all of Section D are part of the Metropolitan Trail Network (MTN).	8/10	8/10
Connectivity	Section A will provide access to Carrum Downs Plaza, as well as various recreation facilities such as parks and sporting grounds. It will also provide a link between Carrum Downs and Langwarrin. Section D will provide access to Langwarrin Flora and Fauna Reserve, Peninsula Private Hospital and Centro Karingal. In addition, it will also fill a missing link between the existing shared path along McCelland Drive and the Baxter Trail.	7/10	9/10
Economic	Section A is not likely to have a significant economic impact. Section D will help to improve bicycle access to Centro Karingal and may encourage more cyclists to visit this centre.	2/5	4/5
Safety	The reported cycle crash history in the vicinity of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15	8/15
People and communities	Completion of this route will greatly improve the level of service for cyclists by providing a continuous north-south off-road bicycle route through the middle part of Frankston City. Section D in particular will also fill a missing link, as well as provide access to the major activity centre of Karingal.	7/10	9/10
Time line / priority / total score	All sections of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years.	**32/50**	**38/50**

Moorooduc Trail

Table 6.33 Moorooduc Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Moorooduc Trail				
A	Moorooduc Hwy (Cranbourne Rd to Golf Links Rd)	Widen existing footpath on east side of road to 2.5 – 3.0m wide shared path	1900m	311 000	PBN	VicRoads
C	Moorooduc Hwy (Service road to Robinsons Rd)	Widen existing footpath on east side of road to 2.5 – 3.0m wide shared path	700m	115 000	PBN	VicRoads
E	Moorooduc Hwy (Woodside Av to Sages Rd)	Construct 2.5 – 3.0m wide shared path on east side of road	2000m	655 000	PBN	VicRoads

Table 6.34 Moorooduc Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A	C	E
Strategic	This route will provide an important bicycle access route to the Frankston CAD from the southern part of Frankston City. This route also has the potential to continue south into Mornington Peninsula Shire.	9/10	8/10	8/10
Connectivity	Section A of this route will connect with east-west routes that will provide access to the Frankston CAD. In addition, this route runs adjacent to the Frankston Bulky Goods Centre, Monash University, Frankston Hospital and Frankston Memorial Park. Section C will directly serve a predominantly residential area, but will connect two previously disjointed sections of shared path. Section E runs through a less densely populated area, but will provide access to local shops and Baxter Park.	10/10	7/10	7/10
Economic	Section A of this route in particular will improve bicycle access to the Frankston CAD and the Frankston Bulky Goods Centre from the south of Frankston City, which may encourage more cyclists to visit these centres. Economic benefits from Sections C and E may flow to local shops that are adjacent to these sections	4/5	3/5	3/5
Safety	The reported cycle crash history in the vicinity of the incomplete sections of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15	8/15	8/15
People and communities	This route will improve the level of service for cyclists in the south of Frankston City, especially those heading to the principal activity centre at the Frankston CAD by providing a continuous north-south off-road route.	9/10	8/10	8/10
Time line / priority / total score	Section A of this route is a high priority and is recommended for implementation within 1 to 3 years. Sections C and E of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years.	**40/50**	**34/50**	**34/50**

Golf Links Trail

Table 6.35 Golf Links Trail

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Golf Links Trail				
A	Golf Links Rd (Moorooduc Hwy to Frankston Golf Club)	Widen existing footpath on north-east side of road to 2.5 – 3.0m wide shared path	900m	147 000	Council	Council
C	Golf Links Rd (Robinsons Rd to Frankston – Baxter Trail)	Construct 2.5 – 3.0m wide shared path on north-east side of road	1500m	491 000	Council	Council

Table 6.36 Golf Links Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	A	C
Strategic	This route will serve as an east-west link between three north-south off-road bicycle routes, namely the Moorooduc Trail, proposed Peninsula Link shared path and Frankston – Baxter Trail.	8/10	8/10
Connectivity	This route will provide access to St Augustine Primary School and Mt Erin Secondary College, as well as Towerhill Shopping Centre. In addition, it will improve connectivity to the three north-south routes as mentioned above, which provide access to the Frankston CAD.	7/10	7/10
Economic	By itself, completion of this route will improve bicycle access to local businesses. In conjunction with the routes it connects to, it will provide cyclist with access to the major commercial centres of the Frankston CAD and Karingal.	3/5	3/5
Safety	The reported cycle crash history in the vicinity of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	8/15	8/15
People and communities	This route will improve the level of service for cyclists travelling between the three north-south routes that it connects. It will also assist bicycle access to the principal activity centre of the Frankston CAD and the major activity centre at Karingal.	7/10	7/10
Time line / priority / total score	All sections of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years.	**33/50**	**33/50**

Boggy Creek Trail

Table 6.37 Boggy Creek Trail proposed primary off-road bicycle facilities

Section	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Boggy Creek Trail				
A	Boggy Creek (Frankston Dandenong Rd to Ballarto Rd)	Construct link to Myna Court and bridge crossing point over Boggy Creek.	100m	20 000 path 150 000 bridge	-	Council
B	Boggy Creek (Ballarto Rd to McClelland Dr) (**MTN)**	Construct 2.5 – 3.0m wide shared path along Boggy Creek. Whilst alignment is proposed to run parallel with Boggy Creek, this needs to be agreed and determined in consultation with Parks Victoria	1400m	459 000	MTN	Council
C	Boggy Creek (McClelland Dr to Lexton Dr)		2200m	721 000	MTN	Council

Table 6.38 Boggy Creek Trail proposed primary off-road route prioritisation details

Objective	Qualitative impacts	B	C
Strategic	Section B of this route will provide a link from Carrum Downs through to the proposed route along McClelland Dr and is part of the Metropolitan Trail Network (MTN). Section C runs through a relatively undeveloped area, providing a link to Langwarrin.	7/10	6/10
Connectivity	Section B of this route will provide access to Flinders Community College and The Pines Flora and Fauna Reserve. By connecting with the existing path at Section D, a link will be provided to Langwarrin Plaza.	6/10	6/10
Economic	This route may attract visitors who wish to cycle through a relatively undeveloped environment. It will also provide access to Langwarrin Plaza.	3/5	3/5
Safety	The reported cycle crash history in the vicinity of this route does not appear to indicate that there is any particular safety problem. Nevertheless, a high-quality off-road shared path, with adequately designed road crossings, is likely to provide a safe environment for cycling.	10/15	10/15
People and communities	This route will provide an improved level of service for cyclists wishing to travel between Ballarto Road, McClelland Drive and Langwarrin.	7/10	7/10
Time line / priority / total score	All sections of this route are a medium priority and it is recommended that they be implemented within 3 to 6 years.	**31/50**	**30/50**

6.4.3 Secondary routes

Table 6.39 Proposed secondary on-road bicycle facilities

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Frankston Central				
19	Beach St (Nepean Hwy to Young St)	Provide bicycle lane in each direction by implementing parking restrictions	400m x 2 sides	15 000	Black Spot	Council
19A	Beach St (Nepean Hwy to Kananook Creek Blvd)	Extend off road shared path to link with on road path at Nepean Highway.	50m	7 000	Council	Council
20	Beach St (Young St to Cranbourne Rd)	Provide bicycle lane in each direction by banning parking on one side of road or removing central median, link lanes to existing crossing of railway line	1800m x 2 sides	68 000	Council	Council
21	Playne St (Nepean Hwy to Baxter St)	Provide bicycle lane in each direction by narrowing or removing existing general traffic lanes	400m x 2 sides	15 000	Council	Council
22	Young St (Beach St to Playne St)	Provide bicycle lane in each direction by removing existing central median	600m x 2 sides	81 000	Council Black Spot CAD	Council
26	Fletcher Rd (Cranbourne St to Frankston Railway Station)	Provide bicycle lane in each direction by removing existing central median and/or narrowing nature strips	200m x 2 sides	27 000	VicRoads	VicRoads
		Seaford				
4B	Erwin Drive (Austin Rd to Arden Ct)	Provide bicycle lane in each direction	230m x 2	3 000	Council	Council
30	Klauer St (Hartnett Dr to Dandenong – Frankston Rd)	Provide bicycle lane in each direction by removing existing painted central median	500m x 2 sides	19 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
31	Hartnett Dr (Klauer St to Hi-Tech Pl)	Provide bicycle lane in each direction by narrowing and/or removing existing traffic lanes	300m x 2 sides	11 000	Council	Council
31A	Railway Pde (Seaford Rd to Eel Race Rd)	Provide bicycle lane in each direction along Railway Pde from Seaford Road to Eel Race Rd, then along eel race road to the west to meet Nepean Hwy. This lane will connect Seaford station and shops.	3200m x 2 sides	440 000	Council	Council
32	Hartnett Dr (Heversham Dr to Seaford Rd)	Provide bicycle lane in each direction by narrowing existing central median and/or nature strip	200m x 2 sides	27 000	Council	Council
33	Austin Rd (Brunel Rd to Henry Cr)	Provide bicycle lane in each direction by implementing parking restrictions	1200m x 2 sides	29 000	Council	Council
Frankston North						
36	Monterey Bwd (Dandenong – Frankston Rd to Excelsior Dr)	Mark existing shoulders as bicycle lanes using appropriate signage and pavement markings	1500m x 2 sides	18 000	Council	Council
37	Excelsior Dr (Dandenong – Frankston Rd to The Pines Flora and Fauna Reserve)	Mark existing shoulders as bicycle lanes using appropriate signage and pavement markings	1400m x 2 sides	17 000	Black Spot	Council
38B	Honeysuckle St (Excelsior Dr to Tamarisk Dr)	Provide bicycle lane in each direction	400m x 2 sides	5 000	Council	Council
Carrum Downs & Skye						
40	Colemans Rd and Boundary Rd (Lathams Rd to Frankston Dandenong Rd)	Provide bicycle lane in each direction.	3800m x 2 sides	46 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
41	O'Gradys Rd (Dandenong – Frankston Rd to Lyrebird Dr)	Provide two-way on-road bicycle path by implementing parking restrictions	1000m	121 000	Council	Council
42	Lyrebird Dr (Ballarto Rd to Greenwood Dr)	Provide two-way on-road bicycle path by implementing parking restrictions	1700m	206 000	Council	Council
43	Currawong Dr (Hall Rd to Lyrebird Dr)	Provide two-way on-road bicycle path by implementing parking restrictions	500m	61 000	Council	Council
44	Greenwood Dr (Lyrebird Dr to Ballarto Rd)	Provide bicycle lane in each direction by implementing parking restrictions	1200m x 2 sides	30 000	Council	Council
45	Gamble Rd (Greenwood Dr to Palkana Dr)	Provide bicycle lane in each direction by implementing parking restrictions. Note that there is a gap in the road between McCormicks Rd and Veronica Way, however a road reservation is in place.	1500m x 2 sides	37 000	Council	Council
46	Cadles Rd (Hall Rd to Wedge Rd)	Provide two-way on-road bicycle path by implementing parking restrictions	1800m	218 000	Council	Council
47	Brunnings Rd (Cadles Rd to McCromicks Rd)	Provide two-way on-road bicycle path by implementing parking restrictions	900m	109 000	Council	Council
49	Wedge Rd (Dandenong – Frankston Rd to Taylors Rd)	Provide bicycle lane in each direction by implementing parking restrictions. Note: Wedge Rd east of McCormicks Road is not currently all sealed	3100m x 2 sides	102 000	Council	Council
Karingal						
54	Ashleigh Av (Beach St to Karingal Dr)	Provide two-way on-road bicycle path by banning parking on one side of road	1500m	182 000	Council	Council
55	Karingal Dr (Skye Rd to Cranbourne Rd)	Provide two-way on-road bicycle path by implementing parking restrictions	2600m	315 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
Langwarrin / Langwarrin South						
59	Potts Rd (Cranbourne – Frankston Rd to Ballarto Rd)	Provide bicycle lane in each direction by implementing parking restrictions	2850m x 2 sides	35 000	Council	Council
63	Southgateway (Cranbourne – Frankston Rd to Centre Rd)	Provide two-way on-road bicycle path by implementing parking restrictions	1300m	158 000	Council	Council
64	Centre Rd (Cranbourne – Frankston Rd to North Rd)	Widen road into existing shoulder to provide bicycle lane in each direction	2900m x 2 sides	567 000	Council	Council
72	Barretts Rd (Robinsons Rd to Golf Links Rd)	Road is not currently sealed, however path should be implemented when sealed	1700m	21 000	Council	Council
Frankston Heights						
73	Deane St (Cranbourne Rd to Monash University)	Provide bicycle lane in each direction by implementing parking restrictions, link to existing crossing of railway line	600m x 2 sides	7 000	Council	Council
Frankston South						
83A	Overport Rd (Derinya Primary School to Humphries Rd)	Marked shoulders between Derinya Primary School and Humphries Rd are not currently defined as a bicycle lane. Provide bicycle pavement markings and signage.	1200m	15 000	Council	Council
83B	Yuille St / Overport Rd (Hastings Rd to Derinya Primary School)	Provide two-way on-road bicycle path by implementing parking restrictions	3100m	376 000	Council	Council
88	Sycamore Rd / Lawson Av (Overport Rd to Moorooduc Hwy)	Provide two-way on-road bicycle path by implementing parking restrictions	1300m	158 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
91	Marcus Rd	Widen road to provide bicycle lane in each direction	800m x 2 sides	156 000	Council	Council
95	Moorooduc Hwy west, Humphries Rd to 200m north along Service Road	Provide on road bicycle path	200m	24 000	Council	Council
97	Moorooduc Hwy west Service Road, 50m north Mountain Ave to 100m north of Harrow Hill Ct	Provide on road bicycle path	200m	24 000	Council	Council
99	Moorooduc Hwy west, Service Road 150m south of Jinchilla Ave to Sanders Rd	Provide on road bicycle path	1600m	194 000	Council	Council
101	Moorooduc Hwy west, Service Road 40m north of Sanders Rd to Sycamore Rd	Provide on road bicycle path	600m	73 000	Council	Council
103	Moorooduc Hwy west Service Road, 100m south of Mincha St to Macorna St	Provide on road bicycle path	450m	55 000	Council	Council

Table 6.40 Proposed secondary off-road bicycle facilities

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
		Frankston Central				
25	Cranbourne St to Frankston Railway Station link	Provide 2.5m wide shared path through railway station car park to link Cranbourne St to Frankston Railway Station	200m	55 000	Council	Council
85	Frankston Hospital Connection	Using existing crossing of Yuille St, construct 2.5m wide shared path through tennis complex and car park to hospital	200m	55 000	Council	Council
		Seaford				
28	Eel Race Drain (Patterson River Secondary College to Old Wells Rd)	Provide 2.5m shared path along south side of Eel Race Drain	800m	219 000	Council Peninsula Link	Council
29	Edithvale-Seaford Wetlands east (Eel Race Drain to existing track)	Upgrade existing track to 2.5m wide shared path including connection point/crossing to the Frankston BMX track.	1000m	109 000	Council Peninsula Link	Council
34	Austin Rd to East Rd link	Upgrade existing track to 2.5m wide shared path, construct connection from existing crossing of East Rd to existing shared path through Belvedere Reserve	400m	109 000	Council	Council
		Frankston North				
35	Messmate St, Forest Dr link (Nats Track extension)	Widen existing footpath along Messmate St and Forest Dr and provide connection through Monterey Community Park, in order to provide a 2.5m shared path between Nats Track and Monterey Bvd	1000m	109 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
38C	Tamarisk Dr (Honeysuckle St to Ballarto Rd)	Implement 2.0 to 2.5m shared path on eastern side	1200m	328 000	Council / Parks Victoria	Council / Parks Victoria
39	The Pines Flora and Fauna Reserve (connection from Boundary Track to Centenary Park Dr)	Upgrade existing track to 2.5m wide shared path and provide shared path bridge across Peninsula Link	700m	191 000 plus cost of bridge	Peninsula Link	Council
Carrum Downs & Skye						
23	East side of EastLink, Colemans Rd to Thompsons Rd	Construct a 2.5m wide shared path	2100m	573 000	Council	Council
23B	Lathams Rd to EastLink	Extend proposed off road shared path 2.5m wide from EastLink to Lathams Road via Melbourne Water easement. A section of this path already exists.	1500m	220 000	Council	Council
48	Cadles Rd (Wedge Rd to Brunnings Rd), Brunnings Rd (Cadles Rd to McCormicks Rd)	Widen existing footpath along west side of Cadles Rd and north side of Brunnings Rd to create 2.5m wide shared path	1800m	197 000	Council	Council
48A	Oberon Drive to Luscombe Ave and Carrum Downs Primary School	Construct a 2.5m wide shared path to connect with Carrum Downs Primary School and Luscombe Avenue	600m	80 000	Council Education Melbourne Water	Council Education Melbourne Water
50	McCormicks Rd (Ballarto Rd to Hall Rd)	Widen existing footpath on west side of road to 2.5m wide shared path	1600m	147 000	Council	Council
51	McCormicks Rd (Hall Rd to Wedge Rd)	Widen existing footpath on west side of road to 2.5m wide shared path, where no existing footpath construct 2.5m wide shared path	1600m	175 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
52	McCormicks Rd (Wedge Rd to Thompsons Rd)	Construct 2.5m wide shared path along west side of road	1600m	437 000	Council	Council
		Karingal				
53	McMahons Rd (Skye Rd to Cranbourne Rd)	Provide a 2.5m shared path on the west side of McMahons Rd (same side as John Paul College)	1600m	TBD	Council	Council
56	Ballam Park	Designate existing network of paths through park as shared paths using appropriate signage	3130m	6 000	Council	Council
		Langwarrin / Langwarrin South				
15B	Willow Rd to Bay Trail	Develop a potential connection by constructing a 2.5m wide gravel trail between Bay Trail and McClelland Trail	400m	75 000	Council	Council
57	Pindara Bvd (McClelland Dr to Cranbourne – Frankston Rd)	Widen existing footpath on west / south side of road to 2.5m wide shared path, construct 2.5m wide shared path between end of Pindara Bvd and McClelland Dr. A crossing across McClelland Dr and connection to the Peninsula Link path should be considered.	2000m	300 000	Council	Council
58	Quarry Rd (Cranbourne – Frankston Rd to Granite Dr), Granite Dr (Quarry Rd to Leonard Dr)	Widen existing footpath on north-east side of Quarry Rd to 2.5m wide shared path, widen existing footpath on south side of Granite Dr to 2.5m wide shared path	900m	98 000	Council	Council
60	Lang Rd, Mathew Ct, Hedgely Ct and Hazeldene Pl	Upgrade existing path along this corridor to provide continuous 2.5m wide shared path	800m	87 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
61	Northgateway (Cranbourne – Frankston Rd to Southgateway)	Widen existing footpath to provide 2.5m wide shared path	1200m	131 000	Council	Council
62A	Langwarrin Equestrian & Recreation Reserve (Southgateway to North Rd)	Widen existing track to provide 2.5m wide shared path. Where no path currently exists, construct one	1500m	328 000	Council	Council
62B	Melbourne Water Easement	North Rd to Altarnun Rd	1300m	355 000	Council	Council
65	Warrandyte Rd (Robinsons Rd to Langwarrin Primary School)	Widen existing footpath on east side of road to provide 2.5m wide shared path, where no path currently exists construct one	2200m	600 000	Council	Council
69	Robinsons Rd (Frankston – Baxter Trail to Warrandyte Rd)	This trail currently exists however the focus will be on lifting the standard of this trail or an additional trail be constructed outside the reserve to achieve the aim of connecting to the wider Frankston City network of trails. This would be a joint project with Parks Victoria with the location of the trail agreed to as part of the design phase.	1900m	519 000	Council & Parks Victoria	Council & Parks Victoria
70	Robinsons Rd (Warrandyte Rd to Western Port Hwy)	Construct 2.5m wide shared path adjacent to road	3000m	819 000	Council	Council
71	Golf Links Rd (Frankston – Baxter Trail to Mulberry Hill National Trust)	Construct 2.5m wide shared path along north side of Golf Links Rd to Mulberry Hill National Trust	400m	109 000	Council Peninsula Link	Council
Frankston Heights						

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
74	Nursery Av, Jubilee Park, Hillcrest Rd	Construct 2.5m wide shared path along Nursery Av, through Jubilee Park, along Hillcrest Rd. Connection also provided to Bay Trail.	1400m	382 000	Council	Council
75	Lee St (Frankston – Baxter Trail to Cranbourne Rd)	Widen existing footpath on west side of road to provide 2.5m wide shared path, provide connection to Frankston – Baxter Trail	600m	66 000	Council	Council
76	Heatherhill Rd and Franciscan Ave (Moorooduc Hwy to Robinsons Rd)	Widen existing footpath adjacent to road to provide 2.5m wide shared path	4000m	437 000	Council	Council
76A	Golf Links Rd to Stotts Lane	Council to investigate the opportunity to provide an off road shared path connection between Franciscan Ave and Stotts Lane via the community church.	150m	20 000	Council	Council
77A	Heatherhill Rd to Frankston – Baxter Trail link	Formalise existing track along water reserve as 2.5m wide shared path, provide crossing over railway line to Frankston – Baxter Trail	400m	109 000	Council	Council
77B	Heatherhill Rd (Franciscan Ave to Wittenberg Ave), Winternberg Ave and Aquarius Dr	Widen existing footpath adjacent to road to provide 2.5m wide shared path. Potential to provide connections to Peninsula Link path	2900m	382 000	Council Peninsula Link	Council
78	Robinsons Rd (Golf Links Rd to Frankston – Baxter Trail)	Widen existing footpath on north side of road to provide 2.5m wide shared path, which includes a safe crossing point and connection to Bayside Christian College and Peninsula Link.	1300m	273 000	Council Peninsula Link	Council
		Frankston South				

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
18	Roasedale Gr and Jinchilla Ave (Humphries Rd to Moorooduc Hwy)	Implement 2.5m wide shared path along Rosedale Gr and widen existing footpath along Jinchilla Ave	1900m	453 000	Council	Council
79	Stotts La (Golf Links Rd to Baxter – Tooradin Rd)	Widen existing footpath on west side of road to provide 2.5m wide shared path. In areas where no path currently exists, then a path is to be constructed.	2000m	546 000	Council	Council
80	Highland Dr (Frankston - Flinders Rd to Manuka Ct), Manuka Ct, Escarpment Dr	Widen existing footpath adjacent to road to provide 2.5m wide shared path. In areas where no path currently exists, then a path is to be constructed.	900m	172 000	Council	Council
81	Frankston - Flinders Rd (Nepean Hwy to Sages Rd)	Widen existing footpath on south-west side of road to provide 2.5m wide shared path. In areas where no path currently exists, then a path is to be constructed.	1500m	410 000	Council	Council
82	Sages Rd (Moorooduc Hwy to Frankston - Flinders Rd) and Baxter-Tooradin Rd (to Peninsula Link)	Construct 2.5m wide shared path along north side of road	1650m	450 000	Council	Council
84	Young St / Kars St / Baden Powell Dr (Playne St to Humphries Rd)	In line with the Mornington Peninsula Bike Strategy, on road bike lanes to be provided on Baden Powell Drive	5200m	TBD	Council	Council
86	Liddesdale Av / The Range / The Close / Pratt Av / Delacombe Park / Towerhill Rd (Nepean Hwy to Moorooduc Hwy)	Provide 2.5m wide shared path along route by widening existing footpaths and constructing a new path where none exists	3100m	573 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
87	Overport Rd (Delacombe Park to Humphries Rd)	Widen or construct footpath on east side of road to 2.5m wide shared path from Delacombe Park to Humphries Road	3000m	440 000	Council PBN	Council
89	Frankston Reservoir (Circuit Trail)	That Frankston Council recognises that Parks Victoria manage the development of Frankston Reservoir (Frankston Natural Features Reserve) however, propose that a shared path connection East / West should be provided through the Reserve	TBD	TBD	Parks Victoria	Council
92	Seaview Rd (Baden Powell Dr to Overport Rd)	Construct 2.5m wide shared path adjacent to road	1000m	273 000	Council	Council
93	Humphries Rd / Mountain Av (Nepean Hwy to Moorooduc Hwy)	Construct 2.5m wide shared path along south side of road	4800m	1 310 000	Council	Council
94	Overport Park and St Ives Ave	Provide network of 2.5m wide shared path throughout proposed park or surrounds (utilising existing track alignment where feasible). Includes link to Rosedale Grove.	900m	246 000	Council	Council
96	Moorooduc Hwy west, 200m north of Humphries Rd to 50m north of Mountain Ave	Provide network of 2.5m wide shared path (utilising existing track alignment where feasible)	700m	191 000	Council	Council
98	Moorooduc Hwy west (section adjacent to aged care facility between Jinchilla Ave and Harrow Hill Ct)	Widen existing path to 2.0 to 2.5m to shared path	120m	13 000	Council	Council
100	Moorooduc Hwy west, north of Sanders Rd	Widen existing path to 2.0 to 2.5m to shared path	40m	4 000	Council	Council

Number	Name	Description	Length	Construction cost ($)	Possible funding	Responsible authority
102	Moorooduc Hwy west, Sycamore Rd to 100m south of Mincha St	Sign post and line mark path between Sycamore and Tower Hill Rd and widen path north of Tower Hill Rd to 2.0 to 2.5m. Toucan signal crossing across Tower Hill Rd may be required.	500m	85 000	Council	Council
104	Moorooduc Hwy west, Macorna St to Hastings Rd	Widen existing path to 2.0 to 2.5m to shared path	400m	44 000	Council	Council

Prioritisation details

Table 6.41 Proposed secondary route prioritisation details

Frankston Central	Seaford	Frankston North	Carrum Downs & Skye
• Contains the Frankston CAD, which is a principal activity centre • The proposed routes in this neighbourhood link many important destinations, including retail, education and health facilities • Access to the Frankston CAD has been mentioned as a high priority by many stakeholders • There are at present many bicycle crashes in the CAD; these issues were also raised by many stakeholders	• The Seaford Wetlands are an important recreational area, and the completion of a shared path loop has been a positive with many stakeholders	• The proposed routes in this neighbourhood provide links to local schools and shops	• This area is home to many young families, who would be likely to utilise shared paths • The proposed routes in this neighbourhood provide links to local schools and shops • Some proposed routes provide access to industrial areas which are employment centres
High priority	Medium priority	Low priority	Medium priority

Karingal	Langwarrin / Langwarrin South	Frankston Heights	Frankston South
• The proposed routes in this neighbourhood provide links to local schools and shops • Large catchment of residents • Paths will also provide good links to the Skye Trail and Cranbourne - Frankston Trail	• This area is home to many young families, who would be likely to utilise shared paths • The proposed routes in this neighbourhood provide links to local schools and shops	• The proposed routes in this neighbourhood provide links to local schools	• This area is relatively underserved by existing bicycle facilities • This area is almost fully developed with established residential areas • Some of the routes proposed will take advantage of the opportunity presented by the redevelopment of the Frankston Reservoir Park
Low priority	Medium priority	Low priority	High priority

It is recommended that the Frankston Bicycle Strategy Working Group review and agree on these priorities.

6.5 Summary

This report has identified a number of routes that should be implemented across Frankston City. The primary routes have been scored against various categories including strategic importance, connectivity and safety and have identified improvements along the following routes to be of the highest priorities:

On-Road:

- Nepean Highway
- Seaford Road / Ballarto Road
- Dandenong Road / Dandenong Frankston Road
- Cranbourne Road / Cranbourne Frankston Road

Off-Road:

- Bay Trail (including linking existing Seaford Wetlands and Frankston - Baxter Trails)
- Dandenong-Frankston Trail
- Skye Trail
- Cranbourne Frankston Trail

It is important to note that many of the proposed routes include the completion of many of the missing links in Frankston City bicycle network.

In addition, a number of secondary routes have been identified throughout Frankston City. Whilst secondary routes in Frankston CAD and Frankston South have been identified as having a higher priority, it is recommended that the Frankston Bicycle Strategy Working Group review and agree on these priorities.

In addition, the cost of implementing all of the recommended paths equates to approximately $40 million, as summarised in Table 6.42.

		Length (km)	Cost $ million
Primary	**On-road**	65.5	10.5
	Off-road	39.4	9.4
Secondary	**On-road**	47.5	3.6
	Off-road	80.2	16.4
	Total	**232.6**	**39.9**

This equates to a significant investment, which may be partly attributed to the fact that a comprehensive network has been recommended, but also due to the fact that minimal investment has appeared to be put into bicycle paths since the last bicycle strategy was developed.

Whilst Council is not the only authority responsible for implementing the recommended paths, this would require a considerable increase in expenditure by Council to fulfil many of the recommended improvements.

7. Maintenance and renewal

Following discussions with Frankston City Council, it is apparent that no current program for the maintenance and monitoring of bicycle facilities is active. A maintenance program is essential to ensure that the most is gained from the large capital investment made in bicycle infrastructure. In addition, such a program would significantly improve cyclist safety. This is pertinent as the characteristics of bicycles mean that minor defects are likely to present a greater safety issue to cyclists when compared with motorists. This is because their narrow tyres mean that cyclists may more easily lose control as result of issues such as pavement cracking, gaps between road joints and debris build-up. Proper maintenance is also critical as liability issues may arise if a cyclist is injured due to inadequate maintenance.

Council is responsible for the maintenance of all bicycle facilities that do not fall under the responsibility of VicRoads or Parks Victoria. This includes bicycle lanes on non-VicRoads roads and bicycle paths that are not on Parks Victoria land.

It is therefore recommended that for the bicycle facilities under its responsibility, Council implement a maintenance program with sufficient funds to ensure adequate maintenance.

7.1 Maintenance program

7.1.1 Risk assessment

A risk assessment program is essential to identify any defects or hazards that may pose a risk to cyclists and addressing them proactively. Such a risk assessment program should include the following elements:

Monitoring

Bicycle facilities should be monitored in order to obtain information of the volumes of cyclists using them. This allows maintenance activities to prioritised by level of use. This data may be collected using a variety of means, such as permanent detector loop counters, temporary tube counters or manual counts.

Detector loop counters have the advantage of operating 24 hours a day for every day of the year. The data they obtain can then be analysed further, as it can be broken down by time, day or month. When loops are used to count bicycles on-roads, they need to be positioned in a location such as a bicycle lane, such that they only record bicycle movements and not motor vehicle movements. These loops have been used in other locations in Melbourne, such as on Royal Parade.

Figure 7.1 Bicycle detector loops on Royal Parade
Source: Bicycle Victoria

Bicycle detector loops can also be used on off-road paths, of which there are currently 17 permanent detector loops installed around inner Melbourne.

Figure 7.2 Bicycle detector loops on an off-road path in Melbourne
Source: Bicycle Victoria

It is recommended that the use of these loops be extended to Frankston City and that they be installed on the most heavily used bicycle routes in the municipality. In the short-term, it is recommended that bicycle counts are implemented on the key bicycle corridors serving the Frankston CAD, including:

- Nepean Highway
- Bay Trail
- Cranbourne - Frankston Road

Other sources of data that may be monitored include:

- Census data (in particular journey-to-work)
- Crash statistics

Bicycle facilities auditing

A bicycle facilities audit program is important to keep abreast of any maintenance issues that may arise on the bicycle network. This program should ensure that each bicycle facility is physically inspected by a Council officer at least once a year. This could be undertaken in conjunction with road and/or footpath inspection programs.

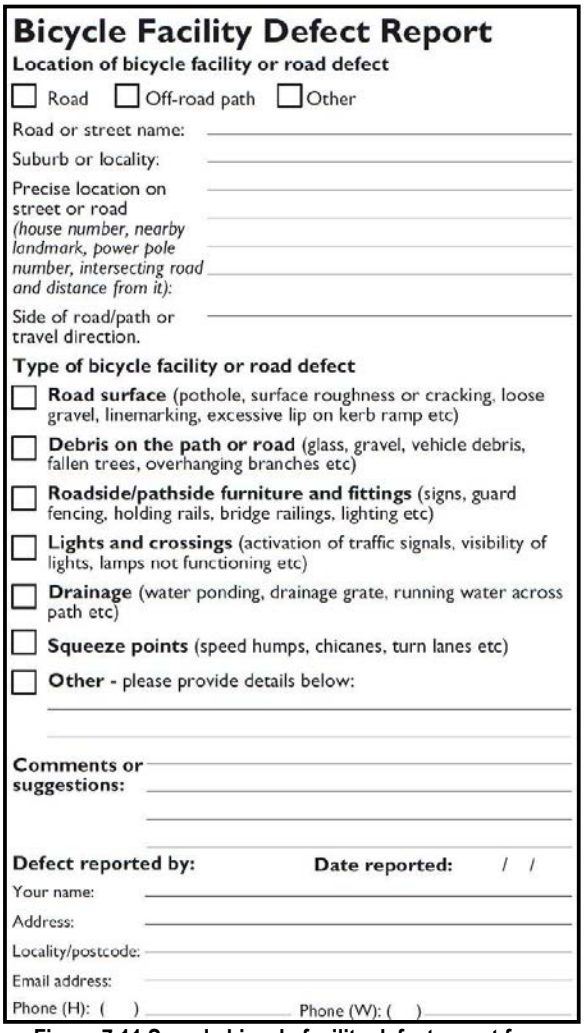
Figure 7.10 Hazards identified during site inspections

As shown in Figure 7.10, a number of hazards were identified whilst undertaking field work for this Strategy. These included open drains, a garden bed along a path and over hanging branches. This demonstrates the importance of undertaking regular audits in order to identify such issues so that they may be rectified.

User defect reporting

In addition to the regular inspections undertaken as described above, day-to-day users of bicycle facilities are also a valuable source of information on the condition of bicycle facilities. A mechanism should be established to ensure that feedback from bicycle facilities can be collected, analysed and any appropriate action taken.

An example of the type of form that may be used to collect information on defects from users is shown in Figure 7.11. Information could also be collected using a web-based form, or through a telephone hotline. This service may be provided in conjunction with a general road hazard reporting service. Issues raised regarding bicycle facilities that are not Council's responsibility should be followed up with the relevant authority.



Bicycle Facility Defect Report

Location of bicycle facility or road defect

☐ Road ☐ Off-road path ☐ Other

Road or street name: _____

Suburb or locality: _____

Precise location on street or road *(house number, nearby landmark, power pole number, intersecting road and distance from it)*: _____

Side of road/path or travel direction. _____

Type of bicycle facility or road defect

☐ **Road surface** (pothole, surface roughness or cracking, loose gravel, linemarking, excessive lip on kerb ramp etc)

☐ **Debris on the path or road** (glass, gravel, vehicle debris, fallen trees, overhanging branches etc)

☐ **Roadside/pathside furniture and fittings** (signs, guard fencing, holding rails, bridge railings, lighting etc)

☐ **Lights and crossings** (activation of traffic signals, visibility of lights, lamps not functioning etc)

☐ **Drainage** (water ponding, drainage grate, running water across path etc)

☐ **Squeeze points** (speed humps, chicanes, turn lanes etc)

☐ **Other** - please provide details below: _____

Comments or suggestions: _____

Defect reported by: **Date reported:** / /

Your name: _____

Address: _____

Locality/postcode: _____

Email address: _____

Phone (H): ( ) _____ Phone (W): ( ) _____

Figure 7.11 Sample bicycle facility defect report form
Source: NSW Bicycle Guidelines

Assessment and prioritisation

Any defects or areas for improvement need to be systematically addressed and possible mitigating measures prioritised. This may be done through the use of a basic risk management approach, scoring each risk by both potential consequence and likely occurrence. The most serious risks would then warrant more immediate action, but prioritisation would also need to take into account funding and resource availability.

7.1.2 Maintenance activities

Sweeping

It is important that a build-up of debris on bicycle facilities is prevented from occurring. Bicycle lanes are particularly prone to the accumulation of debris as they fall outside the swept path of motorised vehicles. This means that the sweeping action of passing motor vehicles tends to push debris from general traffic lanes into bicycle lanes, where it collects. Shared paths can also suffer from the same problem as motor vehicles do not travel along them on a regular basis.

Regular sweeping is therefore essential to ensure that bicycle facilities remain free from a build-up of debris. On-road bicycle lanes may be swept as part of regular road sweeping operations, but it is recommended that roads with bicycle lanes be swept more often relative to other roads. Off-road

shared paths also require regular sweeping. This could be done by using a small mechanical sweeping machine, such as that shown in Figure 7.12 below. This machine is less than 2.0m wide and is designed for use on off-road paths. The use of such a machine would require that path terminal treatments are conducive to access by it.

Figure 7.12 Bicycle path sweeping machine as used in NSW
Source: NSW Bicycle Guidelines

Other activities

Other maintenance activities that should be undertaken regularly include:

- Pavement crack filling
- Trimming of overhanging vegetation to maintain sight distances and clearances
- Grass cutting to prevent encroachment onto paths, including weed management
- Repainting of pavement markings
- Sign cleaning
- Addressing gaps which may develop between service covers or drainage grates and the path or bicycle lane surface
- Addressing any potholes that may develop
- Cleaning (and re-painting as required) of benches, rubbish bins and drinking fountains
- Drain cleaning
- Proper maintenance of crossings of railway tracks, as bicycle wheels are prone to being trapped in the gap between that pavement and the rail (however, this is the responsibility of VicTrack)

7.1.3 Maintenance schedule

A proposed maintenance schedule is shown below in Table 7.7.

Table 7.7 Bicycle facility maintenance schedule

Task	Frequency
Bicycle lane sweeping	Once a month Twice a month in areas prone to debris accumulation
Path sweeping	Once a month Twice a month in areas prone to debris accumulation
Pavement crack filling	Once every three to four months
Vegetation trimming	Once every three to four months
Grass cutting	Once a month (more often during summer months, less often during winter months)
Sign cleaning	Once a year
Gaps with service covers	Once every three to four months
Addressing potholes	Once every three to four months
Cleaning of benches, rubbish bins and drinking fountains	Once every three months
Drain cleaning	Once every three months
Adhoc maintenance activities	As required

7.2 Renewal program

In the long-term, renewal works will also be required. The estimated average life-span of various assets is listed in Table 7.8 below.

Table 7.8 Bicycle facility renewal schedule

Task	Frequency
Repainting of pavement markings	Once every three years
Replacement of signage and other installations	Once every five years
Resealing of shared paths and bicycle lanes	Once every ten years

7.3 Maintenance and renewal costs

7.3.1 Maintenance

Maintenance of on-road bicycle facilities should be undertaken in conjunction with regular road maintenance activities. As this would be taking place regardless of the existence of bicycle lanes on a road, the additional maintenance cost due to the presence of bicycle lanes is likely to be minimal.

Maintenance of off-road shared paths that run alongside a road could be integrated regular footpath maintenance activities. Again, as footpaths need to be maintained in any case, the additional cost to maintain a shared path as opposed to a regular footpath is not likely to be large.

For off-road shared paths that do not run alongside a road, it is estimated that maintenance of these paths would cost in the order of $5/linear metre per annum.

7.3.2 Renewal

The cost of repainting pavement markings will be similar to the cost of initially marking them. Also, the cost of replacing signage and other installations is likely to be in the same range as for their initial construction.

7.4 Summary

In order to minimise risks associated with Frankston City's bicycle network, it is recommended that Council:

- Undertake an inspection of all facilities for which Council is responsible for annually
- Develop a process by which defects can be reported and recorded
- Develop assessment criteria in relation to potential risks with types and levels of defects
- Develop a bicycle facilities maintenance schedule

8 Implementation

This section details a number of matters that should be considered when implementing bicycle facilities throughout Frankston City.

As this is a strategic document, detailed design issues have not been considered comprehensively. These issues would need to be addressed at the implementation stage of each proposal. Nevertheless, it is essential that new bicycle facilities are designed to provide high-quality routes, in order to maximise their benefits and utility to cyclists. Therefore, some suggestions regarding best-practice for bicycle facilities have been provided below, to assist in this regard.

8.1 Typical cross-sections

Some typical existing and proposed cross-sections are shown in Appendix C. These cross-sections are not intended to be definitive; rather, they demonstrate possible ways to include bicycle facilities within a variety of carriageway and road reserve widths that exist within Frankston City. These may be used as a starting point when proceeding to the detailed design stage of implementing proposed bicycle facilities.

In addition to these, it is important to note that Section 4.4 of Austroads Guide to Traffic Engineering Part 14 – Bicycles provides consideration and guidance in respect to implementing on-road bicycle lanes, including the following table in respect to the width of bicycle lanes.

Table 8.1 Austroads recommended on road bicycle lane widths

	Lane Width (m)		
Road Speed (km/h)	60	80	100
Desirable	1.5	2.0	2.5
Acceptable range	1.2 - 2.5	1.8 - 2.7	3.0

Sections 6.6.1, 6.6.2 also provide guidance and recommendations on shared paths, separated paths and exclusive bicycle paths respectively, including the following path widths:

Table 8.2 Austroads recommended shared path widths

	Path Width (m)		
Shared Path	Local Access Path	Commuter Path	Recreational Path
Desirable	2.5	3.0	3.5
Acceptable range	2.5	3.5	3.0 - 4.0

Table 8.3 Austroads recommended separate path widths

	Path Width (m)		
Separated Path	Bicycle Path	Footpath	Total
2-Way Desirable	2.5	2.0	4.5
2-Way Acceptable range	3.0	1.5+	3.5+
1-Way Desirable	1.5	1.5	3.0
1-Way Acceptable range	1.2 - 2.0	1.2+	2.4+

Table 8.4 Austroads recommended exclusive bicycle path widths

	Path Width (m)	
Shared Path	Local Access Path	Main Path
Desirable	2.5	3.0
Acceptable range	3.0	3.0

8.2 On-road bicycle lanes

8.2.1 Green coloured surface treatment

The use of a green surface for bicycle lanes helps to improve safety, by improving the visibility of the bicycle lane and also drawing motorists' attention to the presence of bicycles. The use of this type of treatment is covered in VicRoads *Cycle Notes No 14 - Coloured Surface Treatments for Bicycle Lanes*.

This type of treatment should not be used indiscriminately, in order to maintain its effectiveness. The aforementioned *Cycle Notes* provides guidance on appropriate locations to consider application of a green surface. These include busy or higher-speed locations and areas where the road layout is complex or unusual.

8.2.2 Profiled edge lining

A tool that is now being used to define the edge of on-road bicycle lanes is profiled edge lining, also known as tactile edge lining or a rumble strip. This treatment has recently been installed along the bicycle lanes on Rathdowne Street in the City of Melbourne. This treatment consists of a series of raised bars, which creates an audible sound when run over by a vehicle wheel. It helps to prevent cars and other vehicles from drifting into bicycle lanes.

Figure 8.1 Profiled edge lining as applied to a bicycle lane on Rathdowne Street in the City of Melbourne
Source: Bicycle Victoria

As using this type of edge treatment for bicycle lanes is relatively new, there is a lack of guidelines on where it is appropriate to apply it. Profiled edge lining is mentioned in section 16.4.4 of VicRoads *Traffic Engineering Manual Volume 2 - Signs and Markings*, however this is relevant to treating 'run off the road' type casualty crashes rather than for bicycle lanes. Further, indiscriminate use of this treatment on all bicycle lanes is undesirable because of its higher cost relative to standard linemarking and also to maintain its effectiveness. Therefore, it is suggested that profiled edge lining be considered where both the following criteria are met:

- Roads where the traffic volume (as measured by AADT) is relatively high (>20 000vpd)
- Where the lane adjacent to the bicycle lane is narrow (<3.3m)

Accordingly, this may be used along Nepean Highway or Frankston-Dandenong Road.

8.2.3 Intersection treatments

Guidance on this matter is provided in VicRoads *Cycle Notes No 8 - Providing for Cyclists at Signalised Intersections* and *Cycle Notes No 15 - Providing for Cyclists at Roundabouts*. Additional guidance can also be found in Section 7 of the RTA *NSW bicycle guidelines*. In particular, it is important that bicycle lanes do not abruptly end prior to an intersection. Further, provision of advance waiting areas for bicycle ahead of general traffic helps to improve safety by making cyclists more visible to other road users.

8.2.4 Directional signage

Typical directional signage on-roads is designed to guide motorised traffic and may not cater for cyclists. This is because a separate or parallel network of bicycle routes may exist. Therefore, it is desirable to have a separate directional signage system to guide cyclists.

One such system is described in section 9.1.3 of the RTA's *NSW Bicycle Guidelines*. Of note is the fact that the signage for cyclists is designed to be easily identifiable as such. Directional signs are particularly important at intersections and the exact form of the signs would depend on the importance of the intersection. In all cases, though, the signage should inform a cyclist of the direction and distance to key destinations. The destinations referred to on signs should be consistent across the bicycle networks. In addition, directional signage should inform a cyclist of the name of a cycle route, if one exists. An example of this type of signage is shown in Figure 8.2 below.

Figure 8.2 Directional signage for cyclists

It is recommended that such a system be implemented in Frankston City. Signs should be installed proposed bicycle routes are implemented. They should also be progressively installed on existing on-road bicycle routes.

8.3 Off-Road Paths

8.3.1 Off-road path surfacing

There are a number of factors that need to be considered when choosing an appropriate surface for an off-road shared use path. Cost is one factor that will influence the choice of surface. Hard surfaces have relatively high construction costs, but may have lower maintenance requirements. In particular, concrete paths tend to be the most expensive to install, but are the most durable. On the other hand, soft surfaces are cheaper to construct, but may require regular maintenance.

Site conditions will also affect the design of a path. In particular, any soft areas in the sub-grade need to be addressed. If the path is located on a riverbank where it may be subject to inundation, a concrete path may be more suitable. Other considerations include:

- Protecting the path from damage by tree roots.
- Avoiding soft surfaces where gradients are >3%.

On the other hand, soft surfaces help to preserve the environmental amenity of an area, as they are more natural in appearance.

Paths may also need to support motor vehicles, both travelling along and across them. These vehicles are likely to access paths for purposes such as maintenance and emergencies. In particular, the design of paths needs to take into account the position of the wheels of motor vehicles travelling along them. Due to the relatively narrow width of a path compared with an ordinary roadway, the wheel-paths

of a motor vehicle are likely to be very close to the edge of the path. Edge-support of the path is therefore critical to prevent edge damage.

A synopsis of the advantages and disadvantages of different surface materials for off-road bicycle paths is contained in Table 8.5 and typical life cycle costs for different surfaces are shown in Table 8.6.

Table 8.5 Trail surface synopsis

Surface material	Advantages	Disadvantages
Soil cement	Uses natural materials, more durable than native soils, smoother surface, low cost.	Surface wears unevenly, not a stable all-weather surface, erodes, difficult to achieve correct mix.
Granular stone	Soft but firm surface, natural material, moderate cost, smooth surface, accommodates multiple use.	Surface can rut or erode with heavy rainfall, regular maintenance to keep consistent surface, replenishing stones may be a long-term expense, not for steep slopes.
Asphalt	Hard surface, supports most types of use, all weather, does not erode, accommodates most users simultaneously, low maintenance.	High installation cost, costly to repair, not a natural surface, freeze/thaw can crack surface, heavy construction vehicles need access.
Concrete	Hardest surface, easy to form to site conditions, supports multiple use, lowest maintenance, resists freeze/thaw, best cold weather surface.	High installation cost, costly to repair, not a natural looking surface, construction vehicles will need access to the trail corridor.
Native soil	Natural material, lowest cost, low maintenance, can be altered for future improvements, easiest for volunteers to build and maintain.	Dusty, ruts when wet, not an all-weather surface, can be uneven and bumpy, limited use, not accessible.
Wood chips	Soft, spongy surface - good for walking, moderate cost, natural material.	Decomposes under high temperature and moisture, requires constant replenishment, not typically accessible, limited availability.
Recycled materials	Good use of recyclable materials, surface can vary depending on materials.	High purchase and installation cost, life expectancy unknown.

Source: NJDOT Bicycle Compatible Roadways and Bikeways - Planning and Design Guidelines

Table 8.6 Life cycle costs for path surface materials

Material	Construction cost ($)[1]	Annual maintenance costs ($)[2]	Life cycle costs ($)[3]	Environmental impacts
Decomposed granite	105 000	27 000	391 000	Reduce run-off and visual intrusion
Asphalt / bitumen	120 000	3 000	152 000	Visual intrusion due to path width
Concrete	195 000	1 500	210 000	Visual intrusion due to path width and colour
Boardwalk[4]	1 200 000	2 000	1 221 000	Visual intrusion varies depending on location
Fibreglass reinforced plastics[5]	900 000	2 000	921 000	Reduced visual intrusion depending on colour and width, minimal run-off

Source: RTA NSW Bicycle Guidelines
Notes:

1. *Assuming a 20 year period, 3.0m wide path, 1km, no structures.*
2. *Assuming regular periods of significant rain or flooding requiring 30% replacement of surface annually.*
3. *Alternatives such as bluestone and limestone were also considered but there were concerns about leeching effects; shellgrit is widely used in the Netherlands as a surface material for pathways through forested areas but is not commonly used in Australia.*
4. *For use in special areas where constraints exist.*
5. *For an example of this material used as decking over disused rail tracks on the Meadowbank Rail Trail bridge see Photo 8.3 in the RTA NSW Bicycle Guidelines.*

8.3.2 Off-road shared path construction

There are a number of types of pathway construction material with various different characteristics and appearances, with examples shown in Figure 8.3 to Figure 8.6.

Figure 8.3 Granitic sand

Figure 8.4 Bitumen

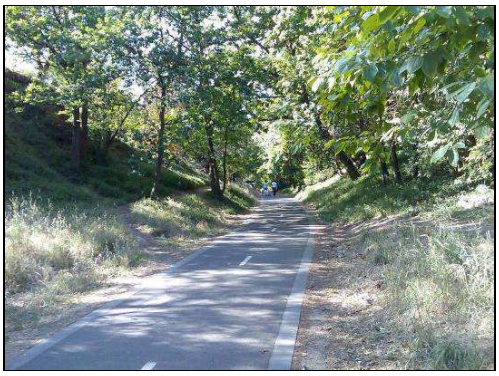


Figure 8.5 Bitumen with concrete edges

Figure 8.6 Concrete

8.3.3 Off-road shared path intersections

Intersections between paths require consideration to ensure that collisions between users of the two paths are minimised. Figure 8.7 and Figure 8.8 indicate various intersection treatments.

Figure 8.7 Intersection linemarking

Figure 8.8 Intersection signage

8.3.4 Motorised mobility devices

Consideration should be given to ensuring the off-road paths are accessible to all, including mobility impaired users who may rely on scooters or wheelchairs. In particular, paths should be smooth and avoid steep gradients. Where there are sustained gradients, intermediate flat resting areas, that may include the provision of a bench, assist mobility impaired users ascending or descending along the path. The path should also be of adequate width to facilitate easy passing between wheelchairs and other users of the path.

People using motorised mobility devices are considered pedestrians and must obey the same road rules as pedestrians.

Given the ageing population of Frankston City and the likely growing demand for motorised mobility devices, in implementing bicycle paths (and in particular shared paths) across the City and particularly in residential areas, due consideration should be given to measures (i.e. dropped kerbs, surface, gradient and width) to allow motorised mobility users to use the path and for any associated overtaking.

Furthermore, in developing facilities for motorised mobility devices, consideration must be given to implementing charging points in town centres.

8.3.5 Directional signage

Directional signage is also important for off-road cycling routes. Useful guidance on this topic is given by *Cycle Notes 11*. This signage serves to guide cyclists on surrounding roads to and from off-road paths and also to destinations that can be reached along that path. In addition, signage informs cyclists of the name of the path they are on. Such signage is particularly important at path intersections and it is recommended that this system is applied to off-road cycling routes in Frankston City. In addition, a name for each off-road cycling route should be adopted in order to ensure consistency. An example of off-road directional signage is shown in Figure 8.9 below.

Figure 8.9 Off-road directional signage

8.3.6 Lighting

To increase both actual and perceived safety along bicycle paths, in particular off-road bicycle paths, it is recommended that adequate lighting be provided. As many bicycles are fitted with modern lighting equipment and as it may be not cost effective to provide lighting through out the entire bicycle path network, it is important to take into account the following:

- Paths near or linked to predominant night time activity (such as promenades and seaside areas) should be lit to increase amenity;
- Designated work or school commuter bicycle paths should be lit, as it becomes dark relatively early during a significant portion of the year;
- It may not be cost effective to provide lighting along a recreational path that will not be used significantly after dark.

In particular, if the level of use of a path does not justify providing lighting along its entire length, consideration should be given to providing lighting at locations of increased hazards, such as at intersections, locations with constrained geometry, challenging topography and places where there are security problems. Austroads' *Guide to Traffic Engineering Practice Part 14* provides further guidance on specific lighting levels that are appropriate for off-road paths.

As paths may run through locations that are isolated from existing electricity networks, there is the potential to use solar powered lighting, which obviates the cost of connecting an isolated light to an electricity source.

8.3.7 Emergency reference markers

Along off-road routes, emergency reference posts located at 250m – 500m intervals could be installed beside trails to identify to emergency services a position along the route should users require emergency assistance.

Emergency markers are uniquely identifiable signs that enable the exact location of a triple-zero (000) caller to be ascertained in the event of an emergency. They are particularly valuable in places where a street address is not available to readily identify a location, such as in parks or along trails. These markers are coordinated by the Emergency Services Telecommunications Authority (ESTA), in partnership with Victoria Police, Victoria State Emergency Service and Life Saving Victoria.

Additional information such as distance to local townships could also be implemented on these markers.

Figure 8.10 A typical emergency marker

In Melbourne, emergency markers have been installed along many trails, such as the Main Yarra Trail and the Federation Trail. It is the land owner or manager's responsibility to install and maintain emergency markers. It is recommended that emergency markers be progressively installed along all off-road trails in Frankston City that do not run adjacent to roads.

8.7 End of trip facilities

As well as providing high quality bicycle routes, adequate end-of-trip facilities are essential in encouraging more people to cycle.

8.7.1 Bicycle racks

Suitable located bicycle racks in areas with good visibility for passers by, CCTV surveillance and bright lighting can promote local trips to convenience stores, supermarkets, shopping malls and video stores.

Secure and safe parking provides cyclists with reassurance that their bicycle will be present upon their return.

Figure 8.11 An example of a bicycle rack

It is recommended that bicycle racks are provided at all shopping centres and shopping strips across Frankston City as a matter of priority. A secondary priority is to provide bike racks at individual local stores and supermarkets.

The locations of the racks after installation should also be monitored to ensure that occurrences of stolen bikes are noted and that actions are put in place to improve security in the area or relocate the facility to a better location. Incidents of theft can deem the facility useless as users will lose confidence in the facility.

Bicycle racks are considered an effective and low cost method of providing short to medium term parking.

8.7.2 Bicycle enclosures

Bicycle enclosures can consist of a room, compound or even a purpose built area, with a roof for increased security and weather protection. Enclosures can hold a large group of bicycles and can provide a high level of security.

They are suitable for private long term bicycle parking associated with workplaces, schools and other education establishments. It is recommended that Council works together with stakeholders to encourage property owners to install bicycle enclosures where needed.

The operation of a 'Parkiteer Bicycle Cage' at Frankston Station, needs to be actively supported by Council as a cost effective means of reducing traffic congestion in Young St, and reducing the demand for car parking sites at Frankston, Kananook and Seaford stations.

Figure 8.12 An example of a bicycle enclosure

8.7.3 Bicycle lockers

Bicycle lockers are a short term asset, however they are also be ideal for long-term users at train, bus stations, or areas where public presence could be removed for a short space of time, i.e. stadiums.

Figure 8.13 An example of a bicycle locker

8.7.4 Showers and toilet facilities

The installation of public showers has never been a success, owing to the problems of vandalism and security. Therefore, employers may consider installing showers and lockers to encourage employees to ride to work, and this would have the added benefit of also encouraging employees to undertake other active pursuits, for example during their lunch break.

Alternatively, employers could form an alliance with a local gym, where for a premium, employees could use that venue's shower and locker facilities.

8.8 Summary

Austroads Guide to Traffic Engineering Part 14 – Bicycles provides easy to follow standards for the implementation of bicycle facilities. VicRoads Cycle Notes is a series of information bulletins on design

standards for cycling infrastructure, intended for engineers, planners and cycling enthusiasts. Cycle Notes provide guidance on topics not covered in the Austroads Guide.

In implementing bicycle facilities, it is important that Council is familiar with these and other documents, to ensure that the appropriate standards are met. In doing so, it is recommended that Council develops a consistent documented approach (i.e. surfaces and lane widths used) in implementing such facilities.

9 Town planning

This section highlights a number of town planning policies and considerations that impact on bicycle facilities across Frankston City.

9.1 Planning scheme

Clause 52.34 of the Frankston Planning Scheme places planning requirements on developers in relation to the provision of end-of-trip bicycle facilities, including bicycle spaces, lockers, showers and change rooms. In considering planning applications, due consideration shall be given to any development that provides Green Travel Plans and additional infrastructure for cycling and whether this can be provided as a reduction in the planning scheme parking requirements as detailed in 52.06.1, 'any other relevant considerations'.

9.2 Outline Development Plans

Outline Development Plans (ODPs) provide a framework to guide the development of growth areas, ensuring that Council and the community have an agreed vision.

An ODP is a high level plan which provides a clear, long-term framework to guide future development and will provide certainty for Council, residents and developers.

The Frankston Planning scheme includes an ODP for Carrum Downs, Langwarrin and Baxter. As this Strategy identifies routes and planning principles that impact on these areas, Council may wish to consider reviewing and potentially updating the ODPs for these areas.

9.3 Developer contributions

9.3.1 Development Contributions Plans

When people develop land for any use, they often contribute to, or cause the need for new or upgraded infrastructure. Development contributions are payments or works-in-kind towards the provision of infrastructure made by the proponent of a new development. Development contributions are one of a number of options for funding infrastructure available to Local and State Governments. The Planning and Environment Act 1987 allows for development contributions to be provided through the:

- Planning scheme amendment process;
- Planning permit process; or
- Building permit process.

A Development Contributions Plan (DCP) is a mechanism used to levy new development for contributions to planned infrastructure needed by the future community. A council collects development contribution levies from new development through an approved DCP, which has been adopted by means of amendment to the Planning Scheme. In approving an amendment to incorporate a DCP in the planning scheme, the Minister for Planning approves the DCP. The types of projects in a DCP can include the following:

- A new item of infrastructure;
- An upgrade in the standard of provision of an existing infrastructure item;
- An extension to an existing facility; or
- The total replacement of an infrastructure item after it has reached the end of its economic life.

A DCP cannot be used to fund the total replacement of an infrastructure item, if the replacement is necessary as a result of poor maintenance. It is not appropriate to include existing infrastructure in a DCP that was funded through general taxes or rates. A DCP provides developers with certainty that the money that they contribute will be accounted for separately and spent on the infrastructure it was collected to provide. An approved DCP requires a planning scheme amendment involving public consultation through the exhibition process. This provides opportunities for:

- The community to influence the type, location and standard of infrastructure provided through the DCP
- Developers to examine the costs, staging, timeframes, and standard of provision
- The council to justify the infrastructure projects and the apportionment of costs

9.3.2 Section 173 Agreements

Section 173 of the Planning and Environment Act 1987 provides authorities with the power to negotiate an agreement with a developer / land owner to set out conditions or restrictions on the use or development of the land, or to achieve other planning objectives in relation to the land.

This effectively provides Council and VicRoads the opportunity to negotiate a requirement that developers implement certain improvements within or adjacent to there land as part of their planning approval.

As this Strategy provides a blueprint of bicycle facilities across Frankston City, it provides Council and VicRoads a greater opportunity to have developers implement sections of the paths identified and any additional facilities required within the site.

9.3.3 Special Charge Schemes

The Local Government Act 1989 and subsequent amendments provide Council with the power to raise funds from property owners who receive special benefit from new or improved infrastructure works and services. Amendments to the Act in 2004 provide that Council may declare a Special Rate or Charge Scheme for any purpose, provided that it is in relation to the performance of a Council power or function (such as roads). Amongst other things, the Act requires that Council can only declare a Special Rate or Charge Scheme for an amount greater than 2/3 of the total costs if the majority of property owners do not object.

If the minimum level of support is not achieved then the works will not be reconsidered by Council for a minimum of three (3) years or until the property owners can demonstrate to Council that the minimum level of support has been achieved (whichever is shorter). Council will determine the apportionment of cost to contributing owners.

Footpath construction (which can also be a shared path) is generally based on a 50% contribution from the adjoining owners. In certain commercial zones, Council will fully fund the construction of footpaths in recognition of the benefit the footpath provides to the general community. Where Council determines that the construction of the footpath will primarily benefit community facilities and access to these facilities, Council will fully fund the construction of these footpaths.

9.4 Green Travel Plans

Green Travel Plans are a tool that can be used to encourage sustainable transport choices, including increased cycling, at the organisational level. They may be drawn up by all types of organisations, including businesses, local government, hospitals, universities and schools. Green Travel Plans generally include initiatives, activities and actions to encourage travel behaviour change, by providing people with information on sustainable transport options.

There are several initiatives that may be included in a Green Travel Plan that may help to increase cycling within an organisation. These include:

- Making cycling information available (e.g. bicycle maps)
- Provision of infrastructure, such as end-of-trip facilities
- Providing incentives to bicycle, such as financial assistance towards the purchase of bicycles
- Running skills development workshops
- Establishing a workplace bicycle pool
- Identifying cycling champions, who can encourage others to take up cycling
- Organising group rides
- Holding events, such as a 'Ride to Work Day'

It is recommended that Council work with organisations within Frankston City to develop Green Travel Plans.

10 Other initiatives

This section details a number that will help to promote cycling and improve safety across Frankston City.

10.1 Promoting cycling

Promoting cycling is integral to raising community awareness of cycling, its benefits and improving the perception of cycling in general. It is also important to increase public awareness of the bicycle facilities that exist within Frankston City, so that cyclists may take advantage of them.

10.1.1 Sustainable Transport Officer and Bicycle Marketing Program

One of the keys to success of this Bicycle Strategy is for there to be a champion for cycling within Council. Ideally, this role would be fulfilled by a designated Sustainable Transport Officer (STO), who would also be responsible for overseeing activities associated with other sustainable transport modes, namely walking and public transport.

This STO would be responsible for advocating for the implementation of sustainable transport facilities, such as those detailed in this report and for developing programs and relationships with other government agencies, businesses, developers and the community.

It is further recommended that a Bicycle Marketing Program (BMP) be established by Council, which would ideally be managed and/or overseen by the STO. Such a program would include actions designed to promote cycling, improve cycling safety and provide end-of-trip facilities, as discussed further in the sections below. The BMP would also include continued engagement with key segments of the community (schools and key employers) and tailored events, education (including safety training) and promotional activities to the specific needs of these markets.

This program could include a Council cycling webpage that is easy to find, serving as a one-stop shop for cycling in Frankston City for residents, tourists, schools and employees. This could include:

- A calendar of events
- Detailed maps of paths and potential tourist routes
- Links to Bicycle Victoria, VicRoads and other relevant internet sites
- Bike hiring locations
- Opportunity to undertake surveys
- Location of facilities (i.e. amenities, shops, bike stands and lockers)

Marketing and public relations can play an important role for the BMP and the STO in addressing certain issues. Opportunities to increase awareness of cycling include:

- Information in bicycle shops
- Cards distributed to schools
- Information at cycling events
- Advertising in bicycle publications
- School newsletters
- Classroom activities

Furthermore, the role of the STO could include media relations, which will assist with:

- Advertising events and promoting general cycling and other sustainable transport modes
- Highlighting the need for facilities and associated funding
- Promoting existing and new facilities

10.1.2 Events

There are many bicycle rides and races that are regularly held within Frankston City, including events such as Around the Bay in a Day. These events should be used as opportunities to promote cycling within the broader community in Frankston City.

In addition, Council also has an opportunity to promote cycling by being involved with or organising:

- Triathlon events
- City bicycle rides
- Family cycling days
- Bike wise events
- Bike to work days
- Time to Ride
- Bicycle skills courses
- University orientation events
- Tertiary education enrolment days

Furthermore, all major events promoted or supported by Council should actively promote all sustainable transport options including cycling. Events without Council involvement should also be encouraged to provide for and support cyclists.

10.1.3 Ride2School

Ride2School is a behavioural change program coordinated by Bicycle Victoria, which aims to encourage school students to cycle more often. In its first year of operation, a quarter of Victorian schools registered to be involved with the Ride2School program. In most cases, schools self-manage their participation in this program, but there are also Ride2School Schools Coordinators available to coach a smaller number of schools.

There are five main components to this program. These are:

- Hand Up! Surveys, which monitor the numbers of students who walk and cycle to school;
- Improving riding skills, such as through the Bike Ed program (see below);
- Events, such as Ride2School Day, when an estimated 40,000 Victorian students cycled to school;
- Facilities, including assistance in providing bike sheds; and
- School coordinator consultation.

It is recommended that Council encourage schools to participate in this program, especially if a new bicycle facility is provided near a school.

10.1.4 Bike and Ride

An initiative that would enhance the cycling in Frankston City and the surrounding municipalities would be to install bike racks on buses. As distances between some of the key centres and tourist destinations in the outer south eastern suburbs of Melbourne can be relatively large, this initiative would make cycling attractive for a wider range of trips. This is because bike racks extend the range of a cycling trip by enabling cyclists to ride to a bus stop, catch a bus and then alight and cycle to their destination

Providing bike racks to services which currently service Dandenong, Cranbourne and Mornington Peninsula, in particular, would assist anyone wanting to combine a cycle trip to these destinations with a public transport trip, in the same manner that cyclists can currently combine a trip with a train to (or en route to) the City.

Bike racks on buses have been implemented in many places around the world and are now installed on some buses in Canberra and Brisbane. The bike racks are attached to the front of the bus and generally hold two bicycles. It is the responsibility of the passenger to load and unload their bicycle onto the rack, which has a spring-loaded bar to secure the bicycle, as Figure 10.1 highlights. The racks are designed so that the loading and unloading process is fast and straightforward.

It is worth noting that the provision of bikes on buses was raised during the Frankston and Mornington Peninsula Bus Review Stakeholder Workshops, undertaken by Aurecon in 2007. It is recommended that the feasibility of such a system on buses in Frankston City be investigated.

Figure 10.1 A bike rack on a bus in Canberra
Source: ACTION

10.1.5 Bicycle facilities map

In order to allow cyclists to adequately plan their trips, it is important to provide maps of trails and locality plans of amenities, such as lockers and storage facilities, throughout Frankston City. This will provide clarity on what is available and how possible origins and destinations are connected via bicycle paths.

Other useful information to include on maps includes:

- Bicycle path difficulty,
- Distances or approximate travel time between locations,
- Path surfaces,
- Whether or not the path is lit,
- Availability of drinking water, and
- Contact details for more information.

It is recommended that Council develop such a map and keep it updated. It is envisaged that these maps will be available at information or tourist centres and displayed on a large scale at strategic locations.

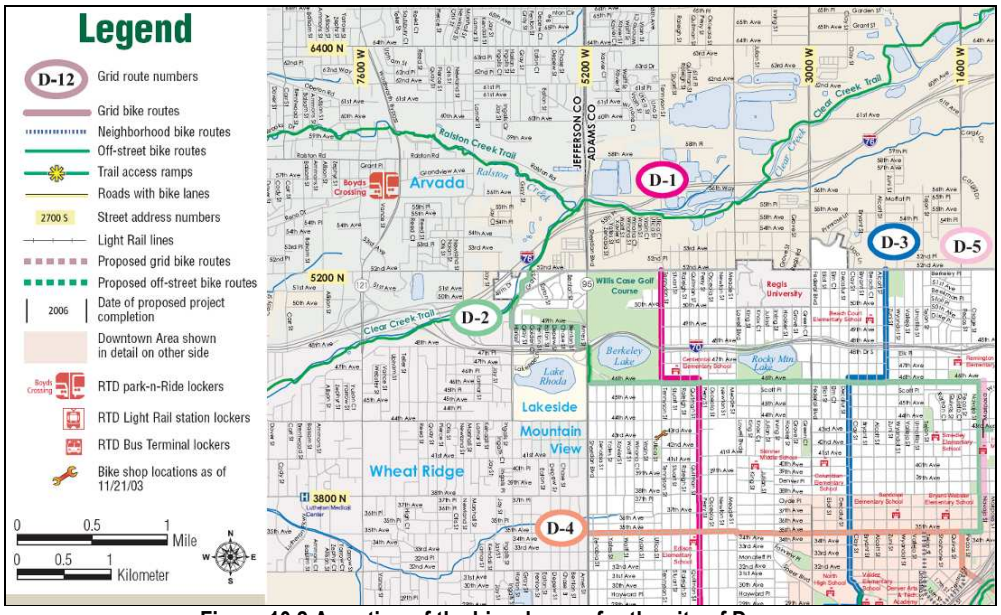


Figure 10.2 A portion of the bicycle map for the city of Denver
Source: www.bikedenver.org/maps

10.1.6 Public bike hire

The Victorian Transport Plan details the State Government's planned investment of $5 million in a public bike hire scheme within central Melbourne, similar to successful bike hire schemes in Paris, Lyon and Barcelona.

The document states that 'around 50 bike hire stations with about 600 bikes will be located at major attractions in the CBD, Parkville, Docklands, Southbank and St Kilda Road' and highlights the opportunity for the City of Melbourne and the private sector participate in delivering the scheme.

Given that Frankston City is a popular tourist destination for families, a similar scheme could potentially be successful. It is recommended that the feasibility of this be investigated.

10.2 Improving safety

Apart from improved infrastructure, there are a number of other actions which can be effective in improving safety for cyclists in Frankston City. These are described in the sections below.

10.2.1 BikeEd

BikeEd is a program conducted at schools throughout Frankston City each year for grades 4, 5 and 6. This is a VicRoads program that requires the teachers to be trained and accredited by VicRoads before running the program at the school.

RoadSafe Frankston and Mornington Peninsula Shire annually offers support to schools who send staff to an accredited Bike Education training course and also offers for hire a Bike Education Trailer that contains 25 well maintained road worthy bicycles, helmets and other relevant teacher support resources.

It is recommended that Frankston City support the running of BikeEd programs at primary schools within the municipality.

10.2.2 Safe Routes to School

Safe Routes to School (SRTS) is a program that focuses on safe and active travel to schools. SRTS has two key objectives:

- To improve the level of safety for children travelling to school, and
- To encourage active travel to school using identified safe routes.

SRTS programs area a partnership between schools, local government and state government agencies. They consist of investigating issues and needs related to travel to a particular school and then developing and implementing an action plan. This action plan may comprise measures based on the 'four Es', being:

- Engineering
- Education
- Enforcement
- Encouragement

SRTS can help encourage increased cycling to schools by firstly identifying and improving safe cycling routes to schools and then encouraging children to bicycle to school along these identified safe routes.

It is however important to note that the Victorian Government Schools Reference Guide (Section 4.4.7.1.2) states that *'the responsibility for children riding bicycles to and from school lies with the parents/carers. Road safety authorities recommend that before the age of nine or ten years children should not ride a bicycle in traffic without adult supervision. Depending on their cycling skills and experience, some children over this age may still require supervision.'*

It is recommended that this program be implemented when new bicycle facilities are provided in the vicinity of a school.

10.2.3 Motorist awareness

Many accidents are the result of motorists and cyclists not being aware of each other. Motorists having poor attitudes towards cyclists in Frankston City has been raised as an issue by many stakeholders.

A publicity campaign aimed at increasing awareness of cyclists and improving the behaviour of both motorists and cyclists would help to counter these problems and improve cyclist safety. Tools that can be used include street advertisements, billboards and advertisements on the back of vehicles. An example of a poster that has been used in the 'Look NYC 'campaign to improve bicycle safety in New York City is shown in Figure 10.3 below.

As part of the *Victorian Cycling Strategy*, it is proposed to implement a 'Look out for cyclists' campaign. It is recommended that Frankston City conduct a local campaign that ties in with and complements the state-wide campaign.

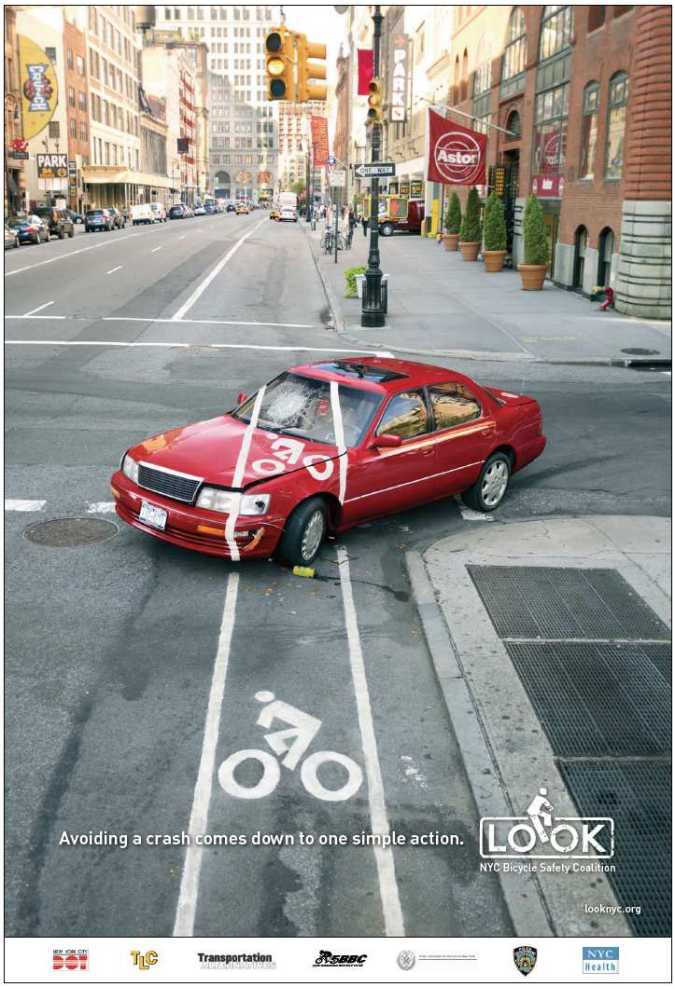


Figure 10.3 A poster used in New York City as part of a campaign to improve bicycle safety
Source: New York City Bicycle Safety Coalition

10.3 Destination Facilities for Cyclists

The Frankston BUG state that the toilet block at the corner of Playne St and Nepean Highway and the BP Service Station at the corner of Beach St and Nepean are both important end of trip facilities for hundreds of Experienced Cyclists (increasing to thousands in the lead up to 'Around the Bay in a Day' every weekend).

The BUG group feels that these facilities are very limited and that Frankston has failed to capitalise on these regular visitors, in the same way venues such as Café Racer in St Kilda, Kennedy's at Black Rock and Tour de Café in Mordialloc, which specifically cater for cyclists.

In each of these instances these venues have received support from their local councils to remove car parks, establish significant numbers of bicycle racks (in excess of 30 in the instance of Kennedy's) and outside dining areas. In response the strategy recommends that Council support the development of destination facilities which would serve to re-invigorate the Nepean Highway retail precinct, inject additional revenue into the area and assist in raising the profile of cyclists in Frankston.

11 Funding

11.1 Responsibilities

This report identifies a number of opportunities to improve bicycle facilities and to promote the use bicycles in and around Frankston City. With this, a number of organisations have been identified as being the responsible authority for funding these initiatives, whether they are programmes, events or facilities. These organisations include:

VicRoads are responsible for managing Victoria's arterial road network, which includes all associated bicycle facilities. Whilst VicRoads receives a high proportion of the State Government's allocation of bicycle funding, this is predominately associated with the PBN.

Bicycle Victoria is a self-funded Australian bicycle advocacy organisation with over 40,000 members. Bicycle Victoria works to promote cycling in several ways, including campaigns and partnerships with government to improve cycling facilities, programs to encourage riding to school and to work, design and installation of bicycle parking facilities and large cycling events.

Parks Victoria is the custodian of a diverse estate of significant parks in Victoria and of the recreational management of Port Phillip Bay, Western Port and the Yarra and Maribyrnong rivers. This includes the development, implementation and maintenance of the MTN within parks it manages.

Other State Government agencies with invested interest in bicycle facilities and programmes include the Department of Transport, VicHealth, go for your life and TravelSmart.

Whilst **Frankston City Council** can rely on the support and initiatives created by these organisations, Council is ultimately responsible for actively pursuing the opportunities these organisations create for the residents of Frankston City. This includes applying for the funding of initiatives and schemes, lobbying and working in partnership with the organisations above wherever possible.

Given the competition for funding across metropolitan Melbourne's 31 municipal councils, a council which actively promotes the use of cycling and invests in its own infrastructure is more likely to reap the benefits for its residents.

11.2 Funding opportunities

Although the Frankston Bicycle Strategy identifies a number of initiatives, securing adequate ongoing funding is essential to long term success of the Strategy.

There are a number of funding sources for on-road improvements available to Frankston City Council, however this is mostly dependant on the type and location of the bicycle route / facilities.

The Victorian Government has identified the importance of extending and improving cycling and pedestrian facilities within Section 5 of the Victorian Transport Plan (VTP), in that it is a sustainable mode of transport. Therefore funding of cycling and pedestrian schemes has been allocated to a number of government agencies, of which a high proportion is reserved for schemes in 'metropolitan Melbourne'. A summary of this funding is provided in Table 11.1[1].

[1] Estimated funding figures provided by VicRoads

Table 11.1 Bicycle state government funding summary

Program	Agency	Estimated Funding
VicRoads Bicycle and Pedestrian Program.	VicRoads	$10 million (including VTP)
Bicycle Projects as part of Major Road Projects.	VicRoads	$5 million
TravelSmart and Local Area Access Program.	DoT	$4 million
Metropolitan Trail Network	Parks Victoria	$3 million (including VTP)
Provincial Pathways Program.	Regional Development Victoria	$2 million
Active Transport for Cycling and Walking to Schools.	VicHealth and Department of Victorian Communities	$1 million
	Total	**$25 million**

11.2.1 VicRoads funding

Principal Bicycle Network

As stated previously, VicRoads is responsible for implementing the PBN on the arterial network whilst local municipalities are responsible for sections of the PBN on the local network.

VicRoads will consider funding bicycle facilities on the PBN on the following basis:

- Projects include the provision of on-road bicycle lanes, off-road shared user paths, signalised and unsignalised crossings and traffic signal priority treatments;
- All projects must maintain appropriate levels of priority for cyclists at intersections with local streets and state roads;
- Projects must comply with the relevant requirements:
  - Austroads guide to Traffic Engineering Practice – Part 14 Bicycles;
  - VicRoads Traffic Engineering Manual, Volumes 1 and 2;
  - VicRoads Bicycle Notes; and
  - Applicable Australian Standards.

In assessing its funding allocation, VicRoads appears to give priority to:

- Projects that complete critical PBN gaps within a 10km radius of the Melbourne CBD; and
- Projects that have been identified as part of a bicycle strategy.

However, as detailed in Section 2.2, as Frankston is one of the 6 Melbourne CADs identified in Melbourne @ 5 Million, it is likely that VicRoads would consider any funding for projects that improve cycling within and to the Frankston CAD.

Municipal Bicycle Network

Whilst Council are the responsible authority for implementing and maintaining bicycle facilities on local roads, VicRoads will consider funding of bicycle facilities on the 'Municipal Bicycle Network' which

serve activity centres, rail stations or other public transport interchanges, or provide strategic connections to the PBN. Such funding will be considered for:

- Up to 100% funding if they substitute a critical PBN link that cannot be achieved in the foreseeable future; or
- Up to 50% funding if they connect to and complement existing proposed PBN links.

Funding for planning and design of projects

Applications for planning and design work only may be considered by VicRoads (up to 100%) for more complex projects that:

- Close gaps or address strategic deficiencies on the PBN; or
- Are precinct / area wide network of bicycle facilities, which may include sections of route not on the PBN, which provide improved arterial cycling facilities in areas of high bicycle use.

11.2.2 Other VicRoads funding

Although a high proportion of VicRoads funding of bicycle projects is provided directly via PBN funding, there are opportunities to obtain funding as part of other programs. This includes:

- Statewide Blackspot and Greyspot Program - Any location which has a demonstrated crash history involving cyclists could be funded under these programs. Furthermore, road lengths which have a demonstrated history (or potential for) off-carriageway crashes, may warrant widening or sealing of shoulders which could be used by cyclists.
- State Impacted Local Roads Program ($2.4 million in 2008/09) – Any bicycle improvements would likely be as part of other strategic objectives for the road (i.e. freight movements);
- Major Projects – Proposed government funded projects are in the pipeline, such as Peninsula Link.
- Victoria's Road Maintenance Strategy – Funding is used to maintain existing infrastructure and therefore it is unlikely to provide opportunities to fund new improvements.

TravelSmart and Local Area Access Program

TravelSmart and Local Area Access Program (LAAP) grants provide funding for projects showing the way forward in addressing the attitudinal, physical, and institutional barriers to walking, cycling and public transport. The projects are administered by the Sustainable Transport Programs Branch at the Department of Transport.

Nearly $5 million has been awarded in the 2008-09 round of grants to local councils and organisations to deliver projects in partnership with the Department of Transport. This brings the total for the past three rounds to nearly $13 million for over 90 projects across Victoria.

TravelSmart

TravelSmart is a travel behaviour change program which has been effective in encouraging people to choose to substitute some of their car trips with sustainable travel alternatives. Since 2002, the program has been run at a number of localities across Victoria with projects varying in size and scale reaching out to over 700,000 Victorians.

TravelSmart is a national travel behaviour change program using a variety of methodologies. In Victoria, the TravelSmart approach is to develop and implement travel plans using a five step travel planning approach. Travel plans are flexible and site-specific; they can be applied across schools, workplaces, universities and communities.

The grants program funds travel planning projects that also increase the capacity of organisations to deliver and sustain travel behaviour change projects.

Local Area Access Program (LAAP)

The LAAP is a four year program that aims to demonstrate how local access by walking, cycling or public transport can be improved, or increased, through practical, place-based initiatives.

LAAP supports local governments and organisations to deliver small-scale infrastructure projects to improve access within local areas. The program also supports projects that seek innovative solutions to local access issues and encourage the use of sustainable transport options.

Projects are typically for:

- Building or improving walking and bicycle links such as paths to activity centres, educational facilities, employment and the public transport network;
- Infrastructure works to overcome local obstacles, either physical or perceived, that impede cycling, walking or access to public transport;
- Other improvements to walking and cycling networks that encourage their use; and
- Improving the understanding of local access needs.

11.2.3 Metropolitan Trail Network

Parks Victoria funds bicycle facilities on the MTN within parks it manages and provides funding assistance to local government through its Grants Program. VicRoads may fund bicycle facilities as part of major road projects that are also on the MTN.

The priorities for the construction of various sections of the MTN can be viewed in Parks Victoria's Strategy for Melbourne's Open Space Network, Linking People and Spaces (2002).

11.2.4 Provincial Pathways Program

The Victorian Government is providing $7.6 million in funding assistance over four years for the development of pathways/trail networks to generate economic, social and recreational benefits.

Funding is available for infrastructure works to develop rail trails, pathways and walking track projects that demonstrate the potential to deliver on the Government's stated objectives for provincial Victoria by:

- Stimulating tourism and other economic activity by attracting more people, jobs and investment to regional Victoria;
- Delivering the right balance of skills and industry needed to drive future growth; and
- Promoting sustainable development and better land management.

Priority will be given to projects which:

- Demonstrate demand and viability;
- Are accessible to a large number of users;
- Demonstrate scenic, historical and conservation values;
- Have support from local community and local government;
- Have significant tourism potential; and/or enhance and compliment existing tourism infrastructure;
- Demonstrate sound project management;
- Are ready to implement;
- Leverage funding from other sources; and/or
- Have appropriate management arrangements in place for project delivery, ongoing management and maintenance of the asset.

A Pathways Working Group comprising representatives of Regional Development Victoria (RDV) , Tourism Victoria and DSE/Parks Victoria will provide technical and policy advice to assist the delivery of the Pathways Program's objectives.

The Government also works with Bicycle Victoria and local government to prioritise rail trail projects, to promote the benefits of bicycle touring and recreation in Victoria.

For small pathway projects, grants of up to $250,000 per project will continue to be available through the Small Town Development Fund.

Victoria's Road Maintenance Strategy – Funding is used to maintain existing infrastructure and therefore it is unlikely to provide opportunities to fund new improvements.

12 References

- Australian Bicycle Council, Prioritisation of Bicycle Infrastructure Proposals
- Austroads Guide to Traffic Engineering Practice, Part 14 - Bicycles
- AS 1742.9 Manual of Uniform Traffic Control Devices, Part 9 Bicycle Facilities
- New York City Bicycle Safety Coalition - http://looknyc.org/
- RTA NSW Bicycle Guidelines
- VicRoads Cycle Notes

Appendix A

Bicycle crash maps

Appendix A

Appendix B

Bicycle route maps

Appendix B

Appendix C

Typical cross-sections

The cross sections shown in the Strategy demonstrate what can be achieved on existing roads to cater for bikes as an example only. Therefore, individual site conditions will need to be taken into account during the detail design phase for any path/road development. The Nepean Hwy Frankston South cross section needs to state Nepean Highway service road, Hopes Rise.

Appendix C

Appendix D

Frankston Bicycle User group Submission

Appendix D

THE DRAFT FRANKSTON BICYCLE STRATEGY – REF37691-002

COMMENTS BY THE FRANKSTON BICYCLE USERS GROUP

15 November 2009

Summary

This document details the response of the Frankston Bicycle Users Group (BUG) to the Draft Frankston Bicycle Strategy.

In broad terms the Frankston BUG:

- Endorses the extensive **Consultation** process that has resulted in this document.
- Acknowledges that the Frankston's Council has an extensive history of commissioning reports relating to cycling and cycling infrastructure that provide valuable **Strategic Input,** but differs slightly from the authors of this document in respect to the assessment of the Peninsular Link and its relationship to proposed improvements to Nepean Highway.
    - The Bug firmly believes that the Peninsula Link has the potential to create a significant tourist attraction for Frankston if issues relating terminus can be resolved. Evidence drawn from similar trails is presented to substantiate this.
    - The Bug disagrees with the argument that implies that completion of the gap in the on road bicycle path on Nepean Highway can wait until traffic volumes are reduced as a result of Peninsula link is completed in 2013.
- Recognises that the **Crash Statistics** point to greater attention needed as a matter of urgency to improve safety for school-aged cyclists, and cyclists on the Nepean Highway on the fringe of the CAD.
- Supports the **Proposed Bicycle Network,** emphasizing that cycling has a role in reducing CAD congestion, and presenting evidence to support that increased CAD cycling has the potential to increase retail revenue. However it is noted that the proposed Bay Trail route still has a gap between Mile Bridge and Seaford Rd.
- Supports the **Maintenance and Renewal** proposal, whilst noting that an active review of street sweeping on Nepean Highway between Fletch Rd and Davey St is required, paying particular attention to weekend mornings.
- Acknowledges that Frankston's Councils **Funding** of bicycle infrastructure has for a number of years fallen significantly below accepted benchmarks and has left the majority of high priority projects that were identified in 1997 uncompleted.

Introduction

The Frankston Bicycle Users Group

The Frankston Bicycle Users Group (BUG) was created with the support of the Frankston Council and was a direct result of the broad consultative process that was adopted to create the Draft Frankston Bicycle Strategy.

The BUG has over 60 members, who represent a broad cross section of the local community and businesses. The BUG has formal links with Bicycle Victoria.

Approach taken Specific comments on the Strategy are contained the in the following pages. The feedback follows the same headings and section numbering of that document.

Comments on the Frankston Bicycle Strategy

2.0 Strategic Inputs

The Strategy omits referencing the years of effort by the Council to agree on a route for the Bay Trail.

3.0 Crash Analysis

3.3 Crash location

The Frankston Bug recognises that the frequency of crashed on the fringes of the CAD required a greater focus on traffic planning for the CAD – and would seek Council to facilitate a dialogue between pedestrians, cyclists, car drivers etc and retailers to reduce the incidence of accidents.

3.6 Summary

The Frankston Bug agrees that education of school children in cycle safety should be undertaken, but it recommended that such an initiative be supported by council through building awareness in the community of where cyclists are likely to be encountered and reviewing existing road treatments and signage near schools to improve pedestrian and cyclist safely

4.0 Existing Bicycle Network

The Frankston Bug acknowledges the lack of connectivity of cycling routes with in Frankston and between Frankston and other municipalities and considers this to represent a significant opportunity for the Council to address with the next three years.

5.0 Stakeholder Consultation

The Frankston Bug is very supportive on the consultation process that has been followed. However some aspects of the behavioral change program, Ride2School, and its implications for assessing the potential cycling population and supporting cycling infrastructure have been missed.

5.4 School Survey - Council and 5.5 School Travel Smart Surveys

No mention is made in either of the participation of 13 schools in Frankston in the Ride2School program that is managed by Bicycle Victoria. This number includes three schools who have been privileged to achieve partner status in this program, (Carrum Primary School, Carrum Downs Primary School and the Belvedere Park Primary School)

The report authors are encourage to obtain further information to consolidate the argument they make to encourage and support great participation levels in riding to school though contacting the Bicycle Victoria's Ride2School Operations Manager - Marissa Dewan on (03) 8636 8888.

6.0 Recommended Bicycle Network

6.1.1 Peninsula Link

Based on meetings held with representatives of Linking Melbourne Authority and members of the Frankston BUG, we are of a firm belief that this project represents a significant opportunity to serve a cycling "backbone" for Frankston providing for a significant off road north south route that would easily justify the further improvement of east –west cycling routes as recommending in this report.

Currently the peninsula link cycling path is planned to terminate like the Baxter Trail – in the middle of nowhere at Bungower Rd, Somerville. The Frankston Council is encouraged to lobby both the Stage Government and the Mornington Peninsula Council to ensure that links from the southern end of this path link to a destination such as Safety Beach, Hastings and/or Mornington.

Provision of such a link would enable this path to adopt many of the same characteristics of successful rail trails elsewhere in Victoria, as it could be readily accessed via public transport, and provide links to beaches, wineries and other asp. Based on a study conducted in 2003 by Dr Sue Beeton the potential economic returns to the region from cycling based tourism are considerable with an average of $51.10 being spent per visitor day on rail trails. (ref: *ww.latrobe.edu.au/bus/**Rail**%20**Trails**%20Report.pdf -)*

There is only one rail trail that is readily accessible acceptable by Melbourne's public transport network, which is the Lilydale - *Warburton Trail*, which over a three year

period increased its patronage from an average of 30 cyclists per day to a total of 286 per day.

Whilst there are significant differences between these paths, the above analysis would suggest that there is significant potential to realise multi-million dollar return to Frankston and the Mornington Peninsula, if the Peninsula Link cycling path is provided with the appropriate east-west connections at its northern and southern ends.

6.1.1- Nepean Highway, Frankston

It is not disputed that the completion of Peninsula Link will provide further opportunity improve on-road cycling routs in Frankston – which is an objective supported by the Frankston BUG,

However, the high number of cycling accidents along this stretch of road, combined with the absence of a safer north-south route that meets the needs of commuters, riders to the CAD and experienced riders, leads the Frankston BUG to reject the implied recommendation that this issue can wait until the completion of the Peninsula Link in 2013.

Given, that the Nepean Highway only a six lane highway from Pier Promenade to Fletcher Road, The Frankston BUG would argue that irrespective current and projected traffic volumes, that, just as in the 1997 Frankston Bicycle Strategy, the completion of on road bicycle lanes between O'Grady Avenue to Bay St South remains a key gap to complete.

Equally, the Frankston Bug, whilst supportive of completion of the Bay Trail, does not see this trail as being in any way a suitable "temporary solution" to meeting the requirement to complete the on road bicycle lanes on this section of the Nepean Highway. As written, this proposal confuses the requirements of Leisure and Recreational Riders with those of Experienced Riders, who in this instance visit this stretch of Frankston in their hundreds (and in their thousands in the peak of the season) every weekend.

Accordingly, it would be the preference of the Frankston Bug to have the last paragraph of this section removed

6.1.2 Road Improvements

The Frankston BUG endorses the recommendation.

6.1.3 Development

The Frankston BUG endorses the recommendation.

6.1.4 Oliver's Hill

The Frankston BUG endorses the recommendation.

On Road Routes

6.3 Nepean Highway

The Frankston BUG endorses the recommendation.

6.5 Thompson's road

The Frankston BUG endorses the recommendation.

6.7 Latham's Road

The Frankston BUG endorses the recommendation.

6.9 Seaford Rd

The Frankston BUG endorses the recommendation.

6.11 Dandenong rd

The Frankston BUG endorses the recommendation.

6.13 Cranbourne Rd

The Frankston BUG endorses the recommendation.

6.15 Golflinks Rd

The Frankston BUG endorses the recommendation.

6.17 Humphries Rd

The Frankston BUG endorses the recommendation.

6.19 Dandenong – Hasting Road

The Frankston BUG endorses the recommendation.

6.4.2 Primary off-road routes

6.21 Bay Trail

If the Bay trail is to follow this route then further consideration is recommended to the problem of mixed pedestrian and cycling traffic, in addition it is noted that the proposed Bay Trail route still has a gap -between Mile Bridge and Seaford Rd. Further clarification is required.

6.23 Dandenong – Frankston Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.25 Ballarto Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.27 Skye Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.29 Cranbourne – Frankston Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.31 McClelland Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.33 Moorooduc Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.35 Golf Links Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.37 Boggy Creek Trail

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.39 Secondary Routes

Frankston Central

The Frankston BUG endorses the recommendations, noting that;

- recent research by Alison Lee, a Senior Consultant with Booz & Company, (525 Collins St, ph 92211900 ref http://www.bv.com.au/change-the-

world/90585/) highlights that a car parking space can produce 3.6 times more retail expenditure in a retail area if it was used for bike parking.

- The operation of a Parkiteer Bicycle Cage at Frankston Station, needs to be actively supported by Council as a cost effective means of reducing traffic congestion in Young St, and reducing the demand for car parking sites at Frankston, Kananook and Seaford Stations

Seaford

The Frankston BUG endorses the recommendations, noting that no recommendation has been mane for a bicycle lane on Railway Pde from McKenzie St to Eel Race Rd, which would have the benefit of servicing Seaford Station, and the Seaford Shops,

Frankston North

The Frankston BUG endorses the recommendations,

Carrum Downs and Skye

The Frankston BUG endorses the recommendations,

Karingal

The Frankston BUG endorses the recommendations,

Langwarrin

The Frankston BUG endorses the recommendations,

Frankston Heights

The Frankston BUG endorses the recommendations,

Frankston South

The Frankston BUG endorses the recommendations,

6.40 Proposed secondary off road bicycle Facilities

Frankston Central

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Seaford

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Frankston North

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Carrum Downs

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Karingal

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Langwarrin

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Frankston Heights

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

Frankston South

The Frankston BUG endorses the recommendation on the assumption that all sections of this path are sealed.

6.4.1 Prioritisation Details

The Frankston Bug broadly agrees with the prioritisation of the secondary routes. The existence of the Frankston Bicycle Strategy Working Group is noted, and clarification of its membership, and terms of reference is requested.

7.0 Maintenance and Renewal

7.1 Maintenance Program

The Frankston BUG endorses the recommendations, noting that the Bug would be happy support the maintenance responsibilities of the council work with the council in reporting on the state of the Councils cycling infrastructure.

The Bug is currently in the process of completing reports on the Baxter Trail, cycling infrastructure in Carrum Downs, and Seaford wetlands.

7.1.2 Maintenance Activities

The Frankston BUG endorses the recommendations, noting that it is a common observation amongst experienced weekend riders that Frankston starts with the broken glass, that is reliably found on Saturday and Sunday mornings in Nepean Highway between Fletcher and Davey sts,

7.1.3 Maintenance Schedule

With the exception of the are noted above, where sweeping may be justified at greater frequency, and that bicycle lane sweeping at a frequency of once or twice a month is unlikely to be sufficient.

8.0 Implementation

The Frankston BUG endorses the recommendations

9.0 Town planning

The Frankston BUG endorses the recommendations

10 Other Initiatives

The Frankston BUG endorses the recommendations, noting that the toilet block at the corner of Playne St and Nepean Highway and the BP Service Station at the corner of Beach St and Nepean are both important end of trip facilities for hundreds of Experienced Cyclists (increasing to thousands in the lead up to Around the Bay in a Day every weekend.

Beyond these very limited facilities Frankston has failed to capitalise on these regular visitors, in the same way venues such as Café Racer in St Kilda, Kennedy's at Black Rock and Tour de Café in Mordialloc, which specifically cater for cyclists. In each of these instances these venues have receive support from their local councils to remove car parks, establish significant numbers of bicycle racks (in excess of 30 in the instance of Kennedy's) and outside dining areas.

Councils support for similar initiative would serve to re-invigorate the Nepean Highway retail precinct, inject additional revenue into the area and assist in raising the profile of cyclists in Frankston.