



CITY OF YARRA

BICYCLE STRATEGY

2010–2015



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1. INTRODUCTION

Yarra already has an established and extensive on and off-road bicycle network which contributes to Yarra having the highest level of non-car use for travel to work in Melbourne. More than two in every five residents walk, cycle or catch public transport to go to work (42%), well above the Melbourne average (16%).

Large numbers of cyclists from other municipalities also pass through Yarra due to the existing cycling infrastructure and Yarra's proximity to the Melbourne Central Activity District (CAD).

Yarra City Council has not previously had a bicycle strategy, with improvements to the on and off-road bicycle network achieved through annual capital works allocations sitting under the Council Plan and other Council and State strategies.

This new Bicycle Strategy 2010-2015 establishes a long term vision for cycling.

It details the status on bicycle initiatives, lays out future plans for bicycle facilities and lists strategies and actions for stimulating greater bicycle use in the City of Yarra.

It aims to establish cycling as a legitimate first choice of transport by people of all ages and cycling abilities through providing cycling facilities that serve a broad range of social objectives.

The City of Yarra Bicycle Strategy 2010-2015 also provides:

- Council's plan for cycling in the future so that the Yarra community can understand where cycle planning is headed, what changes are likely to be proposed for their streets and parks, and to contribute to the development of the bicycle network

- Direction to Council for resource requirement planning to enable delivery of the strategy actions
- A strategic basis for internal capital works funding and applications for funding from external sources
- A clear understanding of the rationale for bicycle network project priorities, and
- Coordination between all stakeholders (other areas of council, the community, state government and adjoining municipalities) to ensure linking of facilities.

This Bicycle Strategy is a key component of Yarra's Council Plan 2009-2013, especially the Strategic Objective of *Making Yarra more liveable* which includes the strategy to:

"Increase bicycle use through improved access and infrastructure for bicycles and pedestrians."

The Council Plan establishes that progress of this Council Plan strategy will in part be measured by:

"Achievement of at least 5 separated on-road bike routes and 5 major off-road bike route upgrades by 2013."

The Bicycle Strategy is consistent with the City of Yarra's Strategic Transport Statement, Open Space Strategy and Inner Melbourne Action Plan (IMAP) and has links to the Encouraging and Increasing Walking Strategy.

The Bicycle Strategy recognises that there are different mobility needs within the Yarra community. It will ensure that its strategies and actions are responsive to these differing needs and promote Disability Access and Inclusion.



2. BACKGROUND

Bicycle planning in Australia is changing fast. The City of Yarra aims to provide the highest standard and safest on and off-road bicycle network to stimulate increased use of the bicycle as a realistic alternative means of transport for work, school, shopping and leisure activities.

Yarra City Council's on-road network is largely made up of bicycle lanes marked on the roads, including innovative designs that reduce the width of vehicle lanes to create space for cyclists.

There is international recognition that to significantly boost cycling levels, a much higher standard of on-road bicycle facility is required, particularly cycle lanes or paths that provide greater separation from motor vehicle traffic.

Developing these higher level on-road facilities is much more expensive and complex than simply marking white lines. They may also require changes to car parking and road layout, demanding greater consultation and close coordination with adjoining municipalities and other road authorities.

Yarra's off-road paths also form a significant part of the City of Yarra's bicycle network. The off-road network has developed over many years with path widths primarily established for recreational use by a mixture of pedestrians and low numbers of cyclists.

Sections of the off-road network can accommodate the commuter cyclists to a certain extent, but much of the off-road network is located in narrow stretches of land with spatial constraints limiting opportunities to widen paths to accommodate higher cycle volumes. It is therefore important that Council improve on-road bicycle facilities to attract riders away from the off-road routes and reduce the need for those paths to be widened.

Yarra City Council is regularly finding its shared pathways to be a source of considerable conflict between cyclists, walkers/runners and dogs and as the number of shared pathway users increases, it will be important that an educational program for all users be implemented to reduce the number and nature of conflicts.

2.1 Benefits of Cycling

The *Road Rules – Victoria* define a bicycle as a vehicle that is propelled by human power through a belt, chain or gears, and not any vehicle with an auxiliary motor capable of generating a power more than 200 watts.

There is a comprehensive and compelling rationale for Yarra City Council to be planning improvements to its bicycle infrastructure and encouraging more people to cycle.

Significant benefits accompany the choice of cycling as a mode of transport and for recreation including personal health, environmental, economic, improved road safety and a more vibrant urban lifestyle, as shown in the following table.

Yarra City Council is ideally positioned to increase the amount of cycling by its residents, workers and general community as it already has a strong base to build upon with some of the highest cycling levels in Australia.

Health

- Healthy weight and physical activity are major contributors to good health.
- Poor diet and inactivity directly contribute to chronic diseases including cardiovascular disease, diabetes and cancer.
- Access to good foot and bike paths supports more active populations.

Economic

- Cycling is relatively low cost for the initial purchase and to operate.
- Providing opportunities for people to cycle for their everyday transport needs does not impose on them the economic burden of having to use (or perhaps purchase and maintain) a motor vehicle or pay for public transport.
- Cycling reduces road congestion and associated costs caused by delays.
- Cycling encourages local shopping.
- Peak Oil will impact on the availability and price of petrol, further rendering cycling as an attractive and cost effective means of transport.

Urban Lifestyle

- Cycling is a mode of transport that takes up little space, is very flexible and enables riders to converse with each other and passers-by.
- Cycling is social and contributes to improved residential amenity.
- Cycling does not threaten the lives of pedestrians, pets or wildlife to the same extent as motor vehicles.
- Cycling is egalitarian, enjoyable and fun.

Environment

- Cycling emits no greenhouse gas or other pollutants. Cycling trips can replace short car trips, which are the most polluting.
- Cycling trips can replace public transport trips, freeing up space for others on public transport.
- While walking is the City's highest priority mode (as per Yarra's Strategic Transport Statement), cycling has arguably a greater potential to replace driving trips.
- Increasing the amount of cycling is the highest priority action that the Council can take to improve transport sustainability.
- Reduces need for parking spaces and frees up roads for alternative uses.

Road Safety

- Cycling poses a very low road safety threat to other road users, especially compared to motor vehicles.
- Converting driving trips to cycling trips will improve road safety outcomes.
- Studies worldwide¹ have shown that the higher the bicycle use, the safer it is for cyclists. This is due in part to: higher bicycle use leading to modified road user conduct as cyclists are more dominant and more drivers are also cyclists with a greater appreciation and respect for other road users, higher bicycle use leads to less car use and lower potential conflicts, and higher bicycle use creates more support so more is invested in a safer bicycling infrastructure.

¹ "Cycling in the Netherlands" – Ministerie van Verkeer en Waterstaat



3. YARRA BICYCLE VISION

3.1 Vision

Acknowledging the already high participation rate and growing levels of cycling by its community, a bold vision is established for the City of Yarra Bicycle Strategy 2010-15.

For Yarra City Council to continue to be a leader in cycling activity its vision is:

- For Yarra to be the best cycling city in Australia with the highest mode share for cycling to work, schools, shops of any city in Australia
- To have an effective interconnected, continuous and well maintained bicycle network that inexperienced and experienced riders feel safe and comfortable using
- To be a City where walking and cycling are the first choice of transport for all ages for short to medium trips (0- 5 km)
- To be a City where the community appreciates that cycling provides social, health and economic benefits along with improved environmental outcomes from reduced pollution, noise and congestion on the roads, and
- For Council's staff to continue to be a model of promoting cycling for transport and work.

3.2 Aims

To achieve the vision, the City of Yarra Bicycle Strategy 2010-15 maps out a series of actions that will stimulate the community to embrace and adopt the bicycle as a legitimate form of transport with the aim to:

- Ultimately establish the bicycle as being the first choice of transport for all short to medium distance trips
- Recruit and retain cyclists through provision of excellent infrastructure and programs
- Attract new cyclists of all ages, socio economic backgrounds and with different cycling skill levels, including beginners
- Improve the non-cyclist perception of cyclists as legitimate law-abiding road users
- Raise the mode share for cycling of the journey to work of City of Yarra residents from 6.4% (2006 Census) to 15% by 2015
- Triple participation in cycling to work in the southern portion (Richmond area) of Yarra from 1.4 % (2006 census) to 4.2% by 2015
- Construct 5 major separated on-road bicycle routes and 5 major off-road bike route upgrades by 2013, established as a guiding principle of the Inner Melbourne Action Plan bicycle network
- Construct five (5) major off-road route upgrades by 2015 identified by Council

- Construct 15 on-road bicycle parking installations by 2015 in places currently occupied by on-street car parking spaces to achieve both increased visitation (one car space is replaced by up to 10 bicycle parking spaces) and reduced footpath clutter
- Improve mode share of Council staff cycling to work from 14.2% in 2009 to 25% by 2015 and increase the number of Council's bicycle fleet from 25 to 50 bicycles by 2015
- Reduce by 10% the number of reported bicycle collisions and injuries from an average of 105 per annum (2005 – 2007 VicRoads CrashStats)
- Reduce conflict between cyclists, walkers/ runners and dogs on shared paths, and
- Report annually on the performance in improving Yarra's bicycle network by publishing an annual Bicycle Account in cooperation with the other IMAP Councils.



4. CYCLING IN YARRA STRATEGIC FRAMEWORK

Future cycling in Yarra is influenced by historic trends, current practices and new perspectives and developments. Thirteen of these influences are discussed, all which form the strategic framework for specific Strategies and Actions.

4.1 Growth in Bicycle Usage

On-road bicycle usage in Yarra has more than doubled between 2004 and 2009 with some of Yarra's roads experiencing very high numbers of cyclists.

Although off-road cyclist count information is not as readily available as on-road use, off-road cycling has also experienced significant growth. For example the Yarra trail at Swan Street Bridge grew by 12 % from 2006 to 2009. (Source: Bicycle Victoria Super Tuesday Bicycle Commuter Surveys)

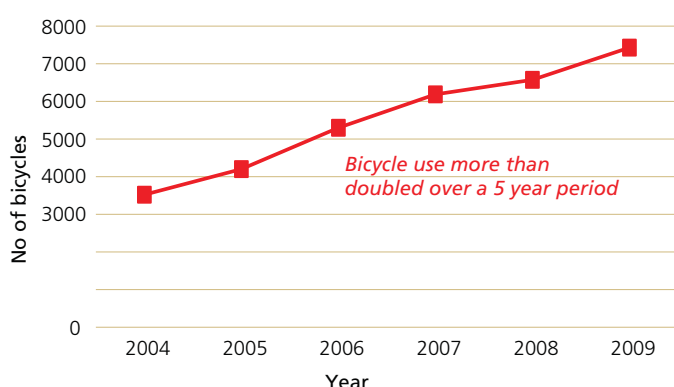
Between 7.00 and 9.00am on the same day, 733 cyclists passed through the intersection of Gertrude and Brunswick Streets and 849 passed through the intersection of Princes and Canning Street. (Data taken from the 2009 Annual Bicycle Count.)

4.2 Bicycles Increase as Mode of Travel to Work

There are a number of reasons why people use different modes of transport to get to work including:

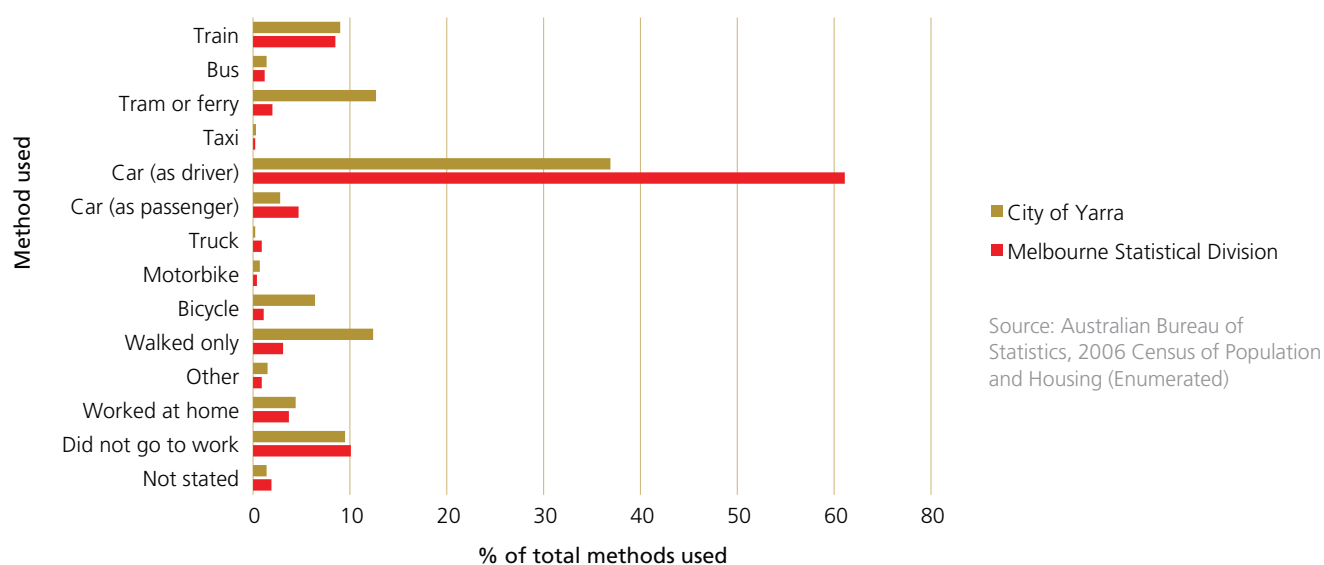
- the availability of affordable and effective public transport options
- the number of motor vehicles available within a household
- the travel distance to work, and
- end of trip facilities e.g parking.

Figure 4.1 Annual Bicycle Counts at 24 intersections 2004-2009



At 6.4% Yarra has a larger percentage of bicycle commuters compared to 1.1% for the Melbourne Statistical Division and at 36.9% a correspondingly smaller percentage of car commuters compared to 61.1% for the Melbourne Statistical Division. (Data taken from 2006 Census.)

Figure 4.2a Mode of Travel to work, City of Yarra and Melbourne Statistical Division. 2006

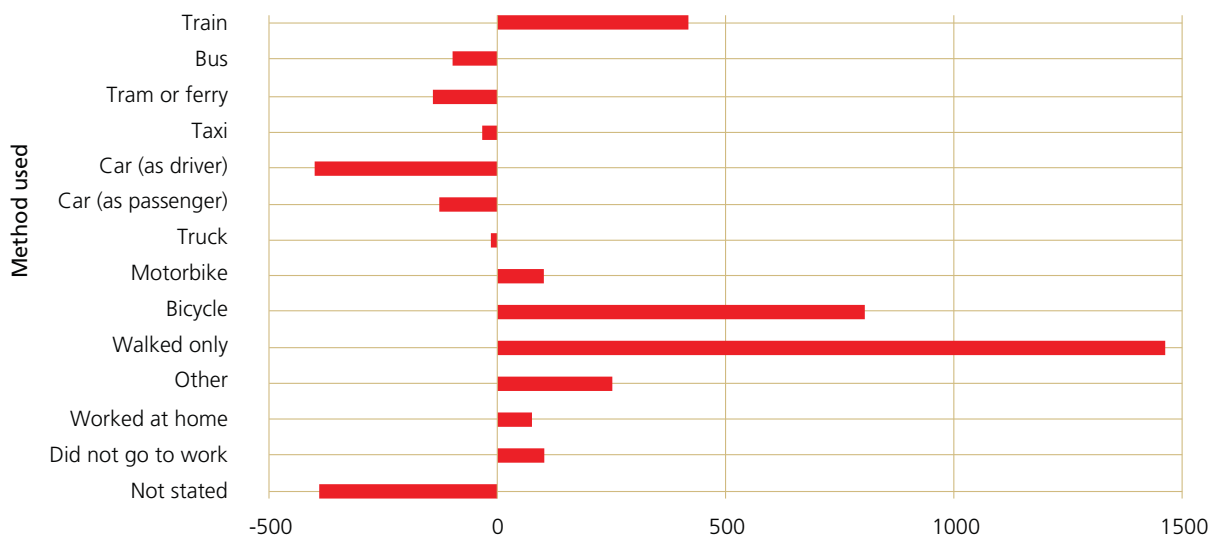


There has been an increase in the number of Yarra's working population who commute by bicycle and a reduction in car commuter trips.

The 2006 census data demonstrates the largest change in the method of commuter travel by City of Yarra's residents occurred between 2001 and 2006:

- Bicycle use went up by 805 persons – an increase from 4.9% of all modes in 2001 to 6.9% in 2006; and
- Car (as driver) went down by 400 persons.

Figure 4.2b Change in Mode of Travel to work, City of Yarra 2001-2006 (Enumerated data)



4.3 Cyclist trips to work from Yarra

While the City of Yarra as a whole had a relatively higher proportion of persons who cycled to work in 2006, it is important to note that this varied across the City.

The proportions ranged from a low of 3.5% in North Richmond to a high of 9.8% in Fitzroy North. The three areas with the highest percentages were:

- Fitzroy North (9.8%)
- North Carlton - Princes Hill (9.7%)
- Clifton Hill (8.0%)

It is evident from the Figure 4.3, which shows cycling mode share by Census Collection District (CCD), that some CCDs in Yarra (generally in the north) have extremely high cycling mode share (10.7 % to 15.4%), such as the CCD immediately

north of the Melbourne cemetery (bounded by Macpherson, Lygon, Paterson and Arnold Streets) and others in North Carlton and North Fitzroy.

In comparison, the southern parts of the municipality around Richmond and to the east around Alphington and Fairfield have comparatively low mode shares (1.0% to 5.4%), and some even have zero mode share. For example the Richmond CCD bounded by Barkly, Stawell, Swan and Burnley Streets has a mode share of 1.4%.

One suggested reason why the mode share is comparatively low in the south of the municipality is the undeveloped bicycle infrastructure in the area. The main feeder roads of Swan Street and Victoria Parade are heavily trafficked with motor vehicles and trams, making it undesirable for cycling, with little road space left to provide cycle lanes.

One of the challenges for the Strategy is to address the low mode share in these areas.

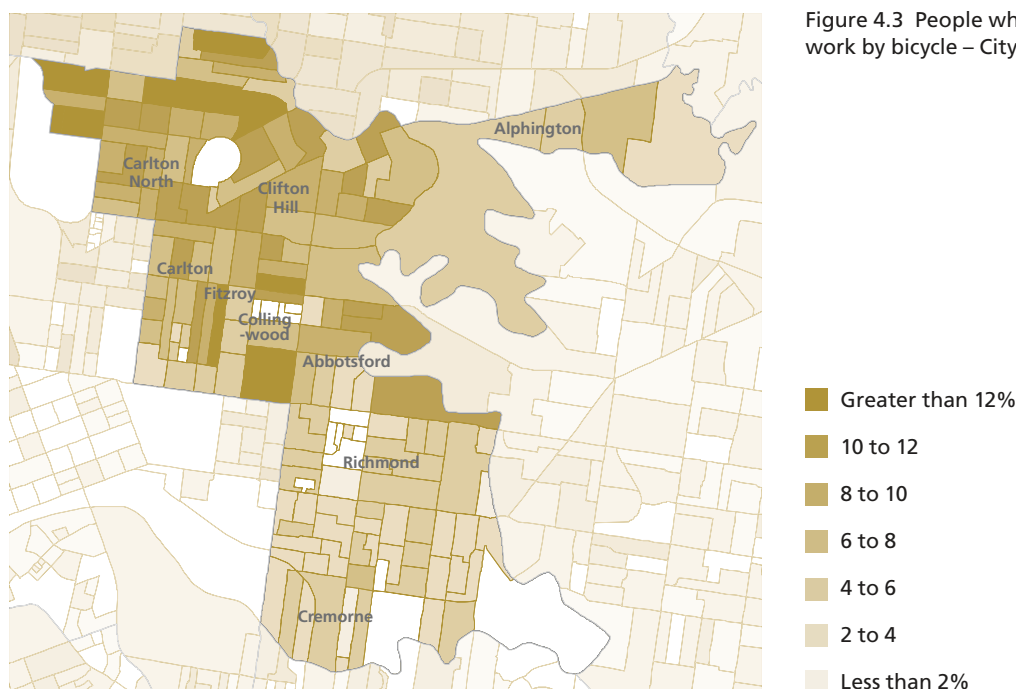


Figure 4.3 People who travelled to work by bicycle – City of Yarra 2006

4.4 Excellent Provision of Bicycle Facilities

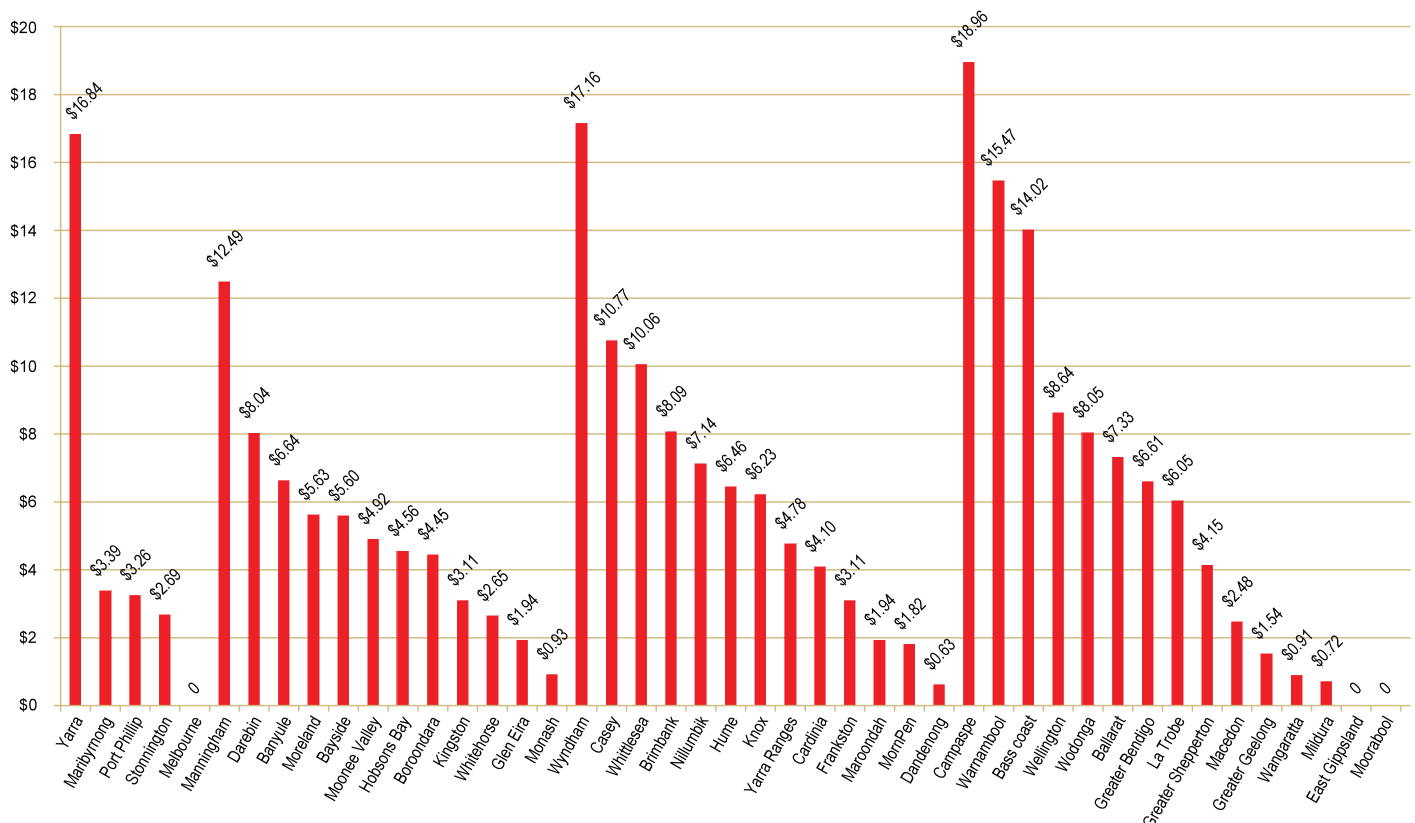
The term bicycle facilities refers to all the physical components which contribute to a better cycling experience - lanes, paths, ramps, bike parking, advanced signal starts, etc.

Yarra residents have a generally good opinion of Yarra Council's provision for cyclists. For example, 91% of residents had average or higher satisfaction with the condition, length and volume of Council's cycling and walking tracks (City of Yarra 2006 Community Survey).

BIXE is Bicycle Victoria's index of bicycle infrastructure expenditure per capita by local government authorities. In 2008/09, Yarra City Council rated highest for the inner and middle metropolitan Councils, with an index of \$16.84 per capita. Bicycle Victoria believes that \$5.00 per resident is a fair and responsible threshold for local government expenditure on bike riding infrastructure². Yarra's comparative high level of expenditure reflects the wide range of activities currently conducted by Council to improve the cycling experience.

² 'BiXE 2008. The Bicycle Expenditure Index' - Bicycle Victoria

Figure 4.4 BIXE 2008 – LGA Bike Expenditure per capita



4.5 Council Staff Cycling Trips

Yarra City Council has been extremely successful in promoting and enabling Council staff to use bicycles to commute and in encouraging use of bicycles during work for short trips to replace trips previously made using fleet motor vehicles.

In 2009, Yarra Council had a mode share of 14.2% for persons cycling to work and a fleet of 25 bicycles for use during work.

The Yarra Bicycle Strategy 2010-15 aims to increase the number in Council's bicycle fleet to 50 and the mode share of cycling to work to 25% by 2015.

4.6 Bicycle Parking Facilities

Bicycle parking facilities have traditionally been provided on the footpath with the installation of hoops for securing bikes. However, these installations can cause clutter on the footpaths, narrow the walkway available for pedestrians and can act as a trip hazard.

Use of a single on-road car parking space can provide bicycle parking for up to 14 bicycles. This means a potential increase in visitation to shopping strips and other attractions through the targeted replacement of car parking bays with banks of bicycle parking rails. This approach has been successfully used in the City of Melbourne, the City of Adelaide and several overseas cities including Portland, Oregon. Banks of bicycles parked in parking bays can also help create a street environment that is more interactive, visually stimulating and encourages shoppers to use bicycles.

Yarra is proposing to trial on street bicycle parking in Moor Street outside the Fitzroy library, converting a single on-road car parking bay to 14 bay bicycle parking spaces.



Issues of community acceptance, useability, design and maintenance will be assessed. Subject to a favourable outcome. Other suitable sites for further conversion will be examined. On-road bicycle parking will not be provided on roads designated as clearways and locations will be subject to consultation.

This strategy aims to achieve the construction of up to 5 on-road parking facilities each year, targeting activity centres and community facilities.

4.7 Crashes and Safety

With greater numbers of people cycling in Yarra, reported on-road crashes involving cyclists have also increased, although by a much smaller percentage than the growth in cycle use.

Year	Number of on road bike casualty crashes
2005	101
2006	100
2007	113

VicRoads CrashStats – on road cyclist crashes

Over the three year period 2005 – 2007 there was a total of 314 crashes:

- 92% were with vehicles and less than 1% with pedestrians
- 74% of all crashes occurred in daylight with 12% each at dusk and in the dark
- more crashes occur between the hours of 8-9 am and 5-6 pm than at any other time of day which is a reflection of the high number of commuter cyclists, and

- 50% of crashes occurred on roads with a speed limit of 60 kph, 25% with 50 kph and 15% with 40 kph, which supports Yarra's intention to apply for extended use of 40kph zones as a traffic calming device through its Local Area Traffic Management (LATM) process.

Speed limits of 60 kph apply to the VicRoads road network within Yarra. These roads are used by commuter cyclists and there is a need to work with VicRoads to provide better protection for cyclists using its road network.

Safer options for commuter cyclists are to use road networks with lower speed limits, however this is not always practical.

This Strategy aims to reduce crash risks through improvements to on-road bike path construction, delineation and community education.

4.8 Cycle Friendly Urban Neighbourhood

The City of Yarra is an inner metropolitan municipality which is home to a diverse community of around 73,500 people. Yarra is very accessible for bicycle travel, being one of Australia's smallest inner city municipalities at 19.5 square kilometres, with its village ambience featuring lively arts, entertainment precincts, vibrant shopping and café strips, and numerous sports and recreational facilities, all within close proximity.

Yarra also has a network of two-lane collector roads - such as Rathdowne Street, North Carlton and Wellington Street, Collingwood – which pose a significantly lower traffic threat to cyclists compared to main roads. These roads are wide enough to consider accommodating good quality separated bicycle facilities.

Yarra also has some streets which are suitable for bicycle boulevards, which are traffic calmed and can take riders relatively long distances in a quiet, less busy environment. Two of the best examples are Canning Street, North Carlton and Napier Street, Fitzroy. Each has road closures making them discontinuous for motor vehicles resulting in low motor traffic level, and traffic signals to help cyclists cross busy roads.

Yarra also has many quiet local streets that provide a good cycling environment.

This strategy aims to recommend infrastructure works that will build upon the current bicycle path network.



Figure 4.8 Canning Street, North Carlton

4.9 Cycle Transport Generators

With Yarra's shopping strips, emphasis on local living and close proximity to Melbourne's Central Activity District, traffic congestion is common place. Parking in Yarra is also difficult with most streets in the municipality – especially near popular destinations – having restrictions, paid parking or permit areas. Off-street parking is limited due to the high price of land and the development of much of the municipality before car parking was required. These factors contribute to making driving less attractive compared with cycling and walking.

The 2006 Census Data recorded that 20% of households in Yarra do not own a car, which is more than double the Melbourne average of 9.5%. Yarra residents also use more trams, trains and buses than the Melbourne averages. (refer Figure 4.2 (a))

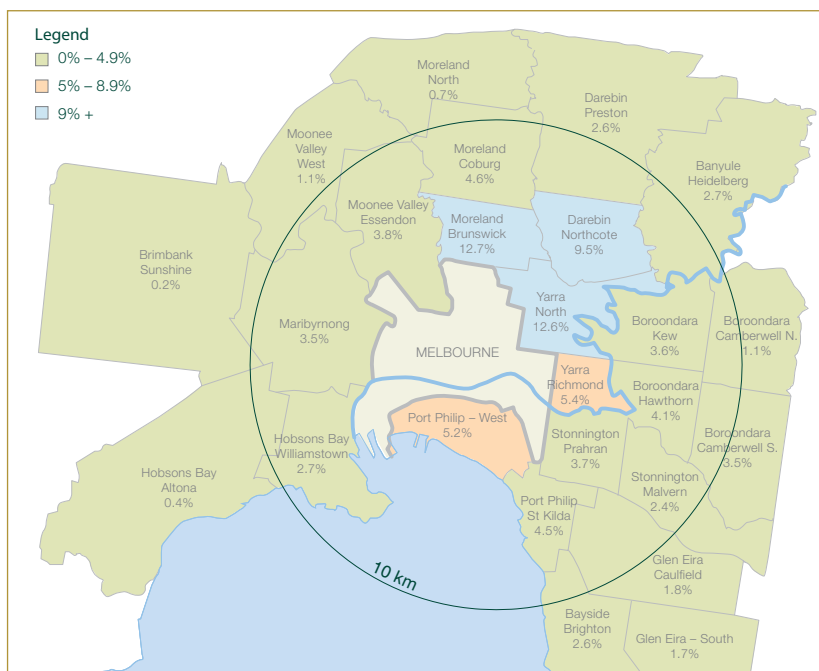
The City of Yarra is the second most popular destination for bicycle trips to work in the metropolitan area after the City of Melbourne. The period 1996 – 2001 saw a 60.8% increase in the number of bicycle work trips to destinations in Yarra.⁵

Between 2001 – 2006 there was a 3.7% growth³ in 'cycled only' journeys to work for the nine inner Melbourne Councils, including Yarra.

Figure 4.9 shows the local government area origins and mode share for those cycling into the City of Melbourne for work in 2006. The Statistical Local Areas of Moreland – Brunswick, Yarra and Darebin- Northcote have the highest cycling mode shares at 12.7%, 18%, and 9.5%, respectively.³

³ Victorian Cycling Strategy, March 2009

⁵ Cycling to Work in Melbourne 1976 – 2001, Vic Roads (Note: Vic Roads have not yet published data for the 2006 Census)



Source: ABS Journey to Work data, Census of Population and Housing, 2006

Figure 4.9 Bicycle journeys to City of Melbourne (percentage of total journeys to work destined for the City of Melbourne), 2006

The City of Yarra has the highest percentage cycling trips into the City of Melbourne with 18% of all cycling commuter trips originating from Yarra.

4.10 Influencing Demographic Factors

The City of Yarra has a high proportion of young residents with over 40.2 per cent of residents between 18 years old and 34 years old (in comparison to the Melbourne Statistical Division of 25.1%, 2006 Census data). As younger people generally ride more than older people, there is great potential for capturing additional cycle riding sections of the community.

Other forms of cycling are becoming available i.e electric bikes, which can service the needs of older cyclists.

Additionally, the City of Yarra has a strong tradition of cycling and a growing urban cycling culture. This culture is characterised by the kind of riders who wear their work clothes rather than lycra and for whom cycling is a way of life rather than a

recreational or sport pursuit. They are interested in the convenience of cycling for transport as well as living sustainably.

Other groups that could be encouraged to make greater use of the bicycle are public housing residents, university students and other low income renters.

Many public housing residents come from cultures where cycling is a normal means of transport, so cycling is both cultural as well as economic. Already several bike education programs such as “Access 3121 Travel Smart program” have been run through service providers working with public housing tenants with some success.

Similarly, university students and other low income renters in the community often have a keen interest in sustainability and may ride bicycles for both economic and environmental reasons.

4.11 New Trends to Attract Wider Range of Cyclists

4.11.1 On-Road Bicycle Lanes

Bicycle planning in Australia and particularly Melbourne is changing quickly. Until recently, it was generally accepted that best practice for on-road bicycle planning was the provision of generous on-road bicycle lanes – marked with white paint. This approach led to a small but significant increase in the number of cyclists on many roads in Melbourne and in Yarra, such as Swanston Street and Rathdowne Street. It is accepted that this approach was generally sufficient to provide enough road space for confident, experienced cyclists who are not deterred by the close proximity of motor vehicle traffic moving at up to 60 kph.

There has been an explosion of interest in cycling in response to congestion, parking pressures, health concerns and environmental concerns. Cities around the world are seeking ways to attract less-confident riders to cycle more and drive less.

It has become clear that while the “bicycle-lane approach” has created a base of cyclists on which to build, simply separating cycle ways from fast moving traffic by using white lines is less attractive for less confident riders or new, inexperienced cyclists to cycle on roads, and other approaches to bicycle lanes are required.

There is a clear consensus that the way to attract and retain a wider group of cyclists is to create physically separated cycle-ways which reduce the threat posed to cyclists by motor vehicles. There are many cities pursuing this approach including Copenhagen, Denmark, New York, USA, Groningen, Holland, Sydney and others.

Sydney is focusing significant research efforts into developing two-way separated paths for on-road routes into the city, creating space by various methods which also involves removing or moving vehicle parking.

Recent work in Melbourne by VicRoads, Department of Transport, Bicycle Victoria and the Inner Melbourne Action Plan Councils (Yarra, Melbourne, Stonnington and Port Phillip) has also reinforced that the best way to significantly increase the number of people cycling in Melbourne is to construct separated cycle-ways.

Different forms of separation include the following, listed in order of Increasing hierarchy of separation (least to most):

- White line
- White line and ‘lane makers’ with bollards
- Chevron white line
- Vibra-line (rumble strips)
- Raised rubber separator
- Island/kerb
- Landscaped island (Water Sensitive Urban Design (WSUD))
- Copenhagen – raised separation path, and
- Time separation – where cyclists are provided with an advanced start over motor vehicles at intersections. This measure can be used in conjunction with the other forms of separation.

Refer to **Appendix 1** for more information.

Impact on Yarra

The challenge of developing a new network of separated cycle ways is significant and will require a major investment of time, energy and money for:

- Trialling and evaluating a variety of separator types for different road environments
- Investigating approaches to improving traffic signal operation for cyclists while maintaining the existing bicycle network
- Allocating road space for cycle lanes, vehicle lanes, parking bays, public transport lanes suitable for all users, and
- Researching and investigating the establishment of 'shared zones' to prioritise cyclists and pedestrians over motor vehicles.

4.11.2 Off-Road Bicycle Paths

VicRoads has recognised that current design guidelines for off-road paths (last revised in 1999) are not adequate for the much larger volumes of cyclists currently using existing off-road paths. VicRoads is working on the development of new guidelines that will provide for much wider paths and conditions under which pedestrians and cyclists should be provided with separate facilities.

Impact on Yarra

Some Yarra off-road paths cannot be widened due to natural physical topographic constraints, environmental issues and narrow reserves e.g. Merri Creek. Guidelines recommending wider paths will require Yarra to direct commuter cyclists onto an improved on-road cycle path network to relieve the pressure to widen some off-road paths.

4.12 IMAP – Inner Melbourne Action Plan 'Making Melbourne More Liveable'

The Inner Melbourne Action Plan (IMAP) sets regional strategies and actions to make the Inner Melbourne Region more liveable.

Melbourne's inner metropolitan Councils, which comprise the Cities of Melbourne, Stonnington, Port Philip and Yarra have worked together to develop the IMAP to strengthen the liveability, sustainability, attractiveness and prosperity of the region and respond to the demands of Melbourne 2030, the State Government's blueprint for managing sustainable growth and change across metropolitan Melbourne and surrounding regions.

Key outcomes have been the development of a plan for an IMAP Principal Bicycle Network, which for the participating Councils complements the VicRoads Principal Bicycle Network and recognises the need to construct on-road separated bicycle lanes.

Impact on Yarra

In 2006, the City of Yarra led Task 2.3 of the Inner Melbourne Action Plan Task which was about improving the bicycle network in inner Melbourne. Participation in Task 2.5 of IMAP will require assessment of gaps in the Priority IMAP bicycle routes in Yarra, identification of work priorities, sourcing funds and implementing the priority actions.

4.13 Victorian Cycling Strategy (March 2009)

The Victorian Cycling Strategy (the Strategy) aims to increase cycling levels across Victoria and to position cycling alongside cars, trains, trams and buses as a viable and attractive transport option.

The Strategy builds on a wide range of achievements to date, and complements a number of Victorian Government policies, including:

- The Victorian Transport Plan, 2008
- Australian National Cycling Strategy 2005-2010
- Melbourne 2030, 2002
- Melbourne @ 5 Million, 2008
- Keeping Melbourne Moving, 2008
- 'arrive alive' 2008-2017, 2008
- The Victorian Planning Provisions on bicycle parking, and
- The Transport Integration Bill, to be introduced in 2009

The Strategy proposes to deliver a better cycling network, promote a culture of cycling, reduce conflicts between cyclists and other road users, better integrate cycling with public transport and integrate cycling with land use planning.

Priority actions in the Strategy include:

- Significantly improving the cycling network within 10km of the CBD
- Establishing a public bike hire scheme for Melbourne
- Installation of bike cages at 33 train stations by the end of 2009

- Completing cycling networks in central activities districts and regional centres
- Developing bicycle facilities as part of major transport projects
- Developing safe cycling programs in Victorian schools and launching a "look out for cyclists" campaign to educate road users about cyclist safety, and
- A review of cycling accident patterns to develop appropriate counter measures.

Impact on Yarra

A number of the cycling networks proposed to be improved in the Victorian Cycling Strategy, which are linked to IMAP priorities, pass through the City of Yarra.

The 'Public Bike Hire Scheme' is about to be launched in the City of Melbourne and is expected to be expanded into the City of Yarra as a second stage of the program.

- It will provide bicycle stations in key locations around inner Melbourne and give the public access to bikes 24 hours a day, 365 days a year.
- The bicycle stations are expected to be up and running in 2010 in inner-Melbourne with about 50 stations and 600 bicycles.
- The Public Bike Hire Scheme will provide a travel option that is faster than walking and more flexible than public transport, and encourage bikes as a healthy, green transport option.
- It will also help relieve pressure on transport systems in the inner-city.



5. YARRA CYCLING ACHIEVEMENTS

The City of Yarra in its pursuit of lifting resident participation in cycling as a preferred mode of transport has actively engaged itself in the provision of best practice bicycle facilities, in two distinct areas:

- Innovation, and
- Collaboration.

5.1 Innovation

An innovative approach by the City of Yarra to bicycle planning and provision of bicycle facilities both on and off-road over the last five years has been characterised by a number of bold actions which include:

5.1.1 On-Road

- Extensive and ongoing provision of on-road bicycle lanes
- Reduction of motor vehicle traffic lane widths to reduce vehicle speeds and create space for on-road bicycle lanes
- The transfer of road space from motor vehicle traffic to cyclists through the removal of lanes at intersections. (e.g. Langridge/Hoddle Streets)
- Contra-flow bicycle lanes, where space permits, which allow cyclists to ride against the direction of flow on some one-way streets
- The use of green coloured pavement at points where motor vehicle traffic movements may conflict with bicycle traffic
- Reduction of motor vehicle travel speeds to 40 kph to reduce the impact posed by motor vehicle traffic to cyclists. By March 2009 about 70% of the Council's roads were 40 kph limited with plans for several more



Figure 5.1.1 (a) Canning Street, North Carlton



Figure 5.1.1 (b) Langridge Street, Abbotsford

Appendix 2 contains a map showing the extent of current 40kph Speed Limit Zones.

- Construction of ramps and “cut-throughs” to provide bicycle access through road closures or traffic management devices and to link shared paths to on-road bicycle facilities
- Improvement of the quality of the riding surface in bicycle lanes
- The use of the Council’s Local Area Traffic Management program to deliver bicycle improvements as part of traffic calming
- Installation of on-street bicycle parking on demand, including extensive banks of bicycle parking such as at Princes Hill Secondary College
- Annual bicycle counts on 24 on-road locations in Yarra along with Super Tuesday bicycle counts conducted by Bicycle Victoria
- Working with VicRoads to facilitate construction of bicycle facilities on arterial roads which complement the local bicycle network, such as the new traffic signals on Johnston Street at Napier Street, and
- Inclusion of new bike lanes every time an existing local road is resheeted or reconstructed.

These results have been achieved through Council allocating about \$190,000 each year specifically towards bicycle projects as part of its annual capital works program, and complemented by the installation of bicycle facilities as part of other road and infrastructure projects and local area traffic management (LATM) solutions.



Figure 5.1.1 (c) Lennox Street, Richmond



Figure 5.1.1 (d) Miller Street, North Fitzroy

5.1.2 Off-Road

Improvements to the off-road cycle path network have included the following construction works in the period from 2005 to 2009:

- Reconstruction of the Mary Street, Richmond underpass
- Refurbishment of Collins Bridge, Gipps Street, Abbotsford
- Construction of 1040 lineal metres of asphalt and concrete path along Yarra Boulevard, Richmond
- Re-construction of 400 lineal metres of asphalt path in Darling Gardens, Clifton Hill
- Construction of 170 lineal metres of asphalt path in Edinburgh Gardens, North Fitzroy as part of the local off-road path network
- Re-development of Barkly Avenue as part of the Barkly Gardens, Richmond Master Plan
- Construction of a 50 lineal metres of asphalt path at Hardy Gallagher Reserve, Princes Hill as part of the Capital City Trail
- Construction of 320 lineal metres of asphalt path between Bennett Street and Rushall Station, North Fitzroy on the Capital City Trail
- Construction of 203 lineal metres of asphalt path between St Georges Rd and Bennett Street, North Fitzroy on the Capital City Trail, and
- Construction of 364 lineal metres of path of concrete path between Rushall Station and High Street, Clifton Hill on the Merri Creek Trail.

Council funding for development of off-road bicycle paths is subject to successful annual capital works bids.

5.2 Collaboration – IMAP

In 2006, the City of Yarra led Task 2.3 of the Inner Melbourne Action Plan. The Inner Melbourne Action Plan (IMAP) is a collaboration of the Cities of Melbourne, Port Phillip, Stonnington and Yarra along with the State Government in response to the State Government's major planning strategy, Melbourne 2030. Task 2.3 sought improving the bicycle network in inner Melbourne.

Improving cycling links and facilities in the Inner Melbourne Region has led to dramatic increases in bicycle use on some routes. The stronger the separation between bicycles and cars, the more people will cycle. Cities with the highest level of bicycle use provide fully separated bicycle lanes. In some European cities, bicycles account for up to 30% of journey to work trips. While a Principal Bicycle Network has been identified for Inner Melbourne, the challenge will be to implement it.⁴

At the conclusion of Action 2.3, the IMAP Committee endorsed a final report. The key aspect of this was that inner Melbourne needs to replace its "bicycle-lane network" with a separated, European-style bicycle network. This is seen to be the only way to significantly increase the numbers of cyclists in Melbourne.

The report also included a number of key principles for developing the network including the identification of "priority" and "economy" routes. This hierarchy of routes, high priority, priority and economy routes mirrors the hierarchy of routes provided for motor vehicle traffic (Freeways, main roads, collector roads, local roads etc). It also made clear the need for those building the network to focus most of their resources on continuously improving the priority routes which will carry the lion's share of riders in the future.

⁴ Inner Melbourne Action Plan (Dec 2005)



Figure 5.2 IMAP Cycle Path Network Priorities

Priority Bike Routes in the IMAP area have the following characteristics:

- they take users to particular destinations
- they are the main bike riding corridors
- they are attractive to novices by providing as much separation from motor vehicles as possible
- they cross Council boundaries
- they are long term investment projects
- in most cases, current usage is strong enough to suggest that further investment will further increase patronage
- they are the arterials of the network
- they can be on or off-road
- not every off-road route is a priority route, and
- they run to the IMAP boundary and are intended to be adopted by neighbouring municipalities.

There are a number of criteria which have governed the thinking when designating which routes are assigned Priority or Economy status. Generally Priority routes act as a network and as such connect well, not only to each other, but to the major trip generators in the IMAP area.

IMAP also highlighted the need for those building the network to coordinate investments across Council boundaries and State Government agencies to ensure that the new, higher-cost cycle ways are continuous and fit alongside other transport infrastructure such as bus lanes, tram stops etc.

IMAP also resolved that the inner Councils would work together to produce annual reports on cycling in inner Melbourne, modelled on the City of Melbourne's Bicycle Account.

Following the completion of IMAP Action 2.3, Yarra began planning separated treatments for some of the "highest" priority routes identified in IMAP.

These include Brunswick Street, Heidelberg Road, Wellington Street, Rathdowne Street, Gipps/Nicholson/Lennox/Elizabeth Streets and the Sandringham Rail line path through Richmond and Cremorne.

Refer to **Appendix 3** for a Map of the IMAP Regional Bicycle Network

Refer to **Appendix 4** for a Map of the Priority Network (high, priority and economy)

6. CHALLENGING PERIOD – FUTURE STRATEGIC DIRECTION

To further promote cycling as a legitimate form of transport and encourage growth in cycling for short destination trips, commuting and recreation in Yarra, this Strategy provides strategic direction in the areas of:

- Infrastructure, and
- Participation.

6.1 Infrastructure

The infrastructure challenge is to provide a safe network of cycle paths that reduce conflicts and risks to cyclists, are continuous and provide direct access to destinations.

The first response is to provide key on-road separated bicycle lanes and off-road cycle paths identified as priority routes by IMAP and Yarra's 2004 Trail Audit and Open Space Master Plans of Merri Ck, Linear Park, Barkly Gardens and others.

The second response is to provide a cycle network that is linked and continuous both within and external to the City of Yarra. Within the City of Yarra the network should connect internal communities, services and public transport nodes, and externally the network should allow access to a broader range of destinations outside of Yarra.

The third response is to develop an on and off-road bicycle paths inspection and maintenance works regime to ensure that the facilities provided remain in an acceptable condition.

The fourth response requires cooperation between Yarra, the State Government and other municipalities.

The fifth response requires the bicycle to be recognised as a legitimate form of transport by encouraging developers to provide more than minimum requirements to accommodate the bicycle at the planning stage in any redevelopment or new development projects.

6.2 Participation

The challenge for increasing participation is to promote and encourage a culture of cycling amongst all residents, not just commuters, as a legitimate alternative form of transport.

The first response is that potential users must have confidence in the cycle network and cycling facilities, their personal safety and have an awareness of the health, social, recreational and environmental benefits of cycling.

The second response is to have good participation across northern and southern Yarra.

7. CYCLING FORWARD – STRATEGIES AND ACTIONS

The following strategies, grouped into the two Strategic Direction categories of Infrastructure and Participation, must be addressed to achieve the vision for the City of Yarra Bicycle Strategy.

The actions required to achieve each strategy form the basis of a five-year Action Plan.

Successful delivery of the Action Plan is dependent upon availability of adequate funding and resources via the Council budgetary processes and the receipt of grants/funding from State and Federal Government sources.

Infrastructure

	Strategy 1 – Better On-Road Bicycle Network
	Strategy 2 – Better Local Streets for Cycling
	Strategy 3 – Better Off-Road Bicycle Network
	Strategy 4 – Better Bicycle Network Maintenance
	Strategy 5 – Better End of Trip Facilities - Bicycle Parking
	Strategy 6 – Better Bicycle Network Accountability
	Strategy 7 – Better Bicycle Safety by Reducing Conflict

Participation

	Strategy 8 – Better Council Use of Bicycles
	Strategy 9 – Better Recruitment and Retention of Cyclists
	Strategy 10 – Better Policies
	Strategy 11 – Better Innovation and Relationships

7.1 Infrastructure

Cyclists in the City of Yarra use a variety of on-road and off-road facilities. The on-road bicycle network is made up of several types of bicycle facilities on different road classifications. These include cycling in local streets, the local on-road bicycle network, the IMAP “Priority” and “Economy” bicycle network, and other major routes on roads owned and operated by the State road authority, VicRoads.

7.1.1 Strategy 1 – Better On-Road Bicycle Network

Cycle paths that separate cyclists from moving motor vehicles is a key for attracting more people to ride in Yarra and is also a guiding principle of the Inner Melbourne Action Plan.

IMAP contributes to the framework for improving the bicycle path network, but many millions of dollars will be required to complete each IMAP cycle route.

To assist in the prioritising of work, each cycle route has been assessed against a Star Rating System which comprises 5 criteria – explained below.

Figure 7.1.1(a) lists the routes and their star rating - 5 stars being the highest priority.



Star Rating Criteria

1. Recruitment

Will the proposed route attract new cyclists? Cyclists who over time may move through the spectrum – from novice to recreational rider, to on-road user to occasional commuter to regular commuter?

These routes will be in quiet streets, away from busy routes where learners or re-discoverers can gain confidence and families can begin teaching children road rules and road sense.

2. Retention

Will the proposed route keep more experienced cyclists riding, by ensuring that cyclists get preferential treatment over motorised road users?

These routes will be on identified local roads, and will allow for the carrying of higher numbers of confident, road-wise cyclists. These routes will allow for cyclists of differing ability to pass one another without discouraging slower riders.

3. Transport

Will this route serve as a corridor which will reduce commuters through Yarra?

Providing routes across and near the extremities of Yarra will allow cyclists who travel through Yarra to leave their cars at home, or to not take public transport seats. This will increase amenity for Yarra residents by reducing the demand on arterial roads, and by creating opportunities for Yarra residents to travel on public transport comfortably. The route should be an preferred alternative to a car trip.

4. Linked Up

Does the route connect well to other existing cycling facilities?

The proposed route should not be isolated from other cycle paths. It may connect to established cycle paths beyond Yarra.

5. Safety

Will the project improve cyclist safety and perception of safety?

All projects must deliver improved safety for cyclists. No project should result in reduced safety for cyclists. This is a threshold criterion.

Strategy Actions:

The IMAP Priority Routes (Connecting Routes) are considered to be part of the main connections on the IMAP Bicycle Network that already have high bicycle usage or have the potential to carry significantly increased bicycle volumes. They also require the most work to bring them up to a standard that could safely accommodate increasing bicycle volumes.

IMAP Economy Routes (Local Routes) are generally more localised routes that either feed into a connecting route or to a local destination only.

The following routes achieved the highest rating of five stars (refer to Figure 7.1.1):

- Wellington Street Route
- Clifton Hill - Abbotsford Route
- Richmond East - West Route
- Linear Park/Napier Street Route, and
- Canning Street (Pigdon Street to Princess Street)

Legend (Figure 7.1.1)

\$K = Council funded – committed

\$K = Council funded – not committed

\$K = External funding – committed

\$K = External funding – not committed

Figure 7.1.1 IMAP Routes - Star Rating Priorities

On-Road Routes	Recruitment	Retention	Safety	Transport	Linked Up	Star Rating	Preliminary Cost Estimate *
CONNECTING ROUTES							
1.1 Wellington Street Route	★	★	★	★	★	5	\$1000K
1.2 Clifton Hill/Abbotsford Route	★	★	★	★	★	5	\$2400K
1.3 Richmond East-West Route	★	★	★	★	★	5	\$820K
1.4 Heidelberg Road Route		★	★	★	★	4	<i>\$400K</i>
1.5 Brunswick Street/ St Georges Rd Route		★	★	★	★	4	<i>\$200K+</i> \$300K
1.6 Burnley Street Route		★	★	★	★	4	\$200K
1.7 Abbotsford/Richmond Route		★	★	★	★	4	\$500K
1.8 Rathdowne Street Route		★	★		★	3	\$1000K
1.9 Linear Park Route	★		★		★	3	\$150K
1.10 Sandringham Rail Line Path Route		★	★			2	<u>\$5000K</u>
1.11 Church Street Route		★	★			2	\$320K
1.12 Main Yarra Trail North Route		★	★			2	<i>\$20K</i>
1.13 Main Yarra Trail South Route	★		★			2	\$240K
LOCAL ROUTES							
1.14 Linear Park/Edinburgh Gardens/ Napier Street Route	★	★	★	★	★	5	<i>\$700K</i> <i>\$40K</i> \$710K <u>\$450K</u>
1.15 Canning Street Route	★	★	★	★	★	5	<i>\$250K</i> <u>\$20K</u>
1.16 Gertrude/Langridge Street Route			★		★	2	\$750K
1.17 North Fitzroy Route	★		★			2	\$230K
1.18 Bowen/Garton Route			★			1	\$70K

(a) Connecting Routes

The following lists both the current work in progress and the further work required to align to the star rating priorities - Connecting Routes. Each project needs further investigation and detailed design regarding the type of treatment best suited for the route.

Refer to **Appendix 5** for Maps of the Bicycle Routes **A B C D** denotes project phase

Figure 7.1.1 (b) Strategy 1 – Local Routes – Actions

No.	Location	Project	Stage	Council Priority & Resources
1.1	Wellington Street Route	• Separated bicycle lane. Possible DoT/VicRoads funding.		HIGH
1.1 A	Johnston St to Victoria St	• Separated treatment from Johnston Street to Victoria Parade including removal of parking on the east side of the road, possible raised pedestrian pavements at Vere/Stanley and Otter Streets.	Design being prepared. Consultation to commence 4/09. 'Shovel ready' May 10	\$500K (depending on design)
1.1 B	Alexandra Pde to Johnston St	• Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint at conflict points.		Est \$300K
1.1 C	Queens Pde to Alexandra Pde	• Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint at conflict points.		Est \$200K
1.2	Clifton Hill/ Abbotsford Route	• Separated/upgraded bicycle lane.		HIGH
1.2 A	Fenwick St/ Ramsden St/ Yambla St	• Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint at conflict points.	Concept development 10/11 Detailed Design 11/12 Construct 12/13	Est \$20K Est \$100K Est \$500K
1.2 B	Eastern Freeway under pass	• Widen shared path along Trenerry Crescent under freeway.		Est \$1m
1.2 C	Abbotsford Trenerry Cr/ Bath St/Rich St/ Nicholson St	• Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint at conflict points.	Concept development 10/11 Detailed Design 11/12 Construct 12/13	Est \$20K Est \$100K Est \$500K

No.	Location	Project	Stage	Council Priority & Resources
1.3	Richmond East-West Route (Coles/Hollick/ Baker/ Elizabeth St)			HIGH
1.3 A	Baker St: Johnson St to Church St	<ul style="list-style-type: none"> Remove parking on one side of the road to create fully separated treatment or reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint. 	Concept Planning Detailed Design Construct	\$20K \$20K \$200K
1.3 B	Elizabeth St: Church St to Lennox St	<ul style="list-style-type: none"> Remove parking on one side of the road to create fully separated treatment or reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint. <p>At Church Street:</p> <ul style="list-style-type: none"> Redesign intersection to provide bicycle access up to the stop line or remove a lane of traffic in the west approach to provide a separated bicycle lane. Advanced start for bicycles in both directions. Remove parking on one side of the road to create a fully separated treatment. 	Concept Planning Detailed Design Construct	\$20K \$20K \$300K
1.3 C	Hollick/Coles	<ul style="list-style-type: none"> Create informal shared zone from Burnley St to Johnson St. 	Concept Detailed design Construction	\$20K \$20K \$200K
1.4	Heidelberg Road Route (VicRoads)	<ul style="list-style-type: none"> Separated bicycle lane VicRoads funding. 	Design completed by Yarra/Darebin. Project included in Victorian Bicycle Strategy (Feb 2009)	MEDIUM VicRoads funded through VBS \$400K
1.5	Brunswick Street/ St Georges Rd/Route			MEDIUM

No.	Location	Project	Stage	Council Priority & Resources
1.5 A	Brunswick Street	<ul style="list-style-type: none"> Improve traffic signal operation.LAAP project with DoT at Alexandra, Johnston, Gertrude, Victoria (phase 1). 	Two-year traffic signal project	DoT Funded \$100K \$100K
1.5 B	Brunswick Street - phase 2	<ul style="list-style-type: none"> Remove a traffic lane southbound at Victoria Parade to bring bicycle lane up to intersection. Remove parking northbound immediately north of Victoria Parade to create a bicycle lane. 		Est \$200K
1.5 C	St Georges Road	<ul style="list-style-type: none"> Advance signal timing (phase 2) at Holden Street, Scotchmer Street. 		Est \$100K
1.6	Burnley Street Route: Victoria Street to Swan Street	<ul style="list-style-type: none"> Upgrade bicycle lane with vibriline or separators, green paint at conflict points. 	Construction	MED Est \$200K
1.7	Abbotsford/ Richmond Route		Concept complete	MEDIUM
1.7 A	Gipps St: Yarra River (Collins Bridge) to Nicholson St	<ul style="list-style-type: none"> Yarra River to Nicholson Street: Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint. Improve Gipps St at Victoria Cr to provide priority bicycle access in the am peak from Collins Bridge to Gipps St west of Victoria Crescent. Provide bicycle advance start at Gipps/ Nicholson to allow right turn from south to east. 	Detailed Design 10/11 Construct 11/12	Est \$10K Est \$50K
1.7 B	Nicholson St/ Lennox St: Gipps St to Victoria St to Elizabeth St	<ul style="list-style-type: none"> Reinforce bicycle lane with vibra-line or raised separators including at merge points and green paint. Remove left turn lane on north approach at Victoria or reinforce bicycle lane to prevent vehicles stopping over bicycle lane. Victoria to Elizabeth: Consider removal of on-street parking. Redesign Lennox/Elizabeth. 	Detailed Design 10/11 Construct 11/12	Est \$20K Est \$200K
1.7 C	Elizabeth St: Lennox St to Hoddle St	<ul style="list-style-type: none"> Remove parking on one side of the road to create fully separated treatment. 	Detailed Design 10/11 Construct 11/12	Est \$20K Est \$200K

No.	Location	Project	Stage	Council Priority & Resources
1.8	Rathdowne Street Route			MEDIUM
1.8 A	Park St to Princes St	<ul style="list-style-type: none"> Separated treatment from Park Street to Princes Street, integrated with bus lane in the approach to Princes Street. 	Design being prepared.	Possible DoT funding \$200K to \$1m (depending on design)
1.9	Linear Park Route Rushall Station to Bowen Crescent	<ul style="list-style-type: none"> Off-road components are discussed in the off-road Action Plan. Give priority to path users at all local road crossings through the use of zebra crossings, give way treatments or traffic signals. 	Construction	MED Est \$150K
1.10	Sandringham Rail Route	<ul style="list-style-type: none"> Redesign Green Street north of the railway line to cater for bicycles. Redesign Railway Place to cater for bicycles. Redesign rail underpass to cater for bicycles. Remove parking on one side of Green Street to create space for a two-way cycle way. Redesign Green/Balmain Sts intersection to cater for bicycles. 	Concept Planning Design & Construction	LOW \$200K Est \$5m
1.11	Church Street Route: Abbotsford to Cremorne	<ul style="list-style-type: none"> Off road works (bridge) see section 3.9. 		LOW
1.11 A	Proposed Church St bridge over Yarra at Abbotsford to Victoria Street (north section)	<ul style="list-style-type: none"> Upgrade bicycle lane with vibra-line or separators, green paint at conflict points. 	Detailed design Construction	Est \$10K Est \$50K
1.11 B	Victoria Street to CityLink (south section)	<ul style="list-style-type: none"> Remove parking to create bicycle parking and kerbside lane, separated bicycle lane near shopping precincts at Bridge Road, Swan Street, just north of the Yarra in Cremorne and other locations. 	Concept Detailed Design Construction	Est \$30K Est \$30K Est \$200K

No.	Location	Project	Stage	Council Priority & Resources
1.12	Main Yarra Trail North Route	<ul style="list-style-type: none"> Off-road components are discussed in the off-road Action Plan Section 3.10. 		LOW
1.12 A	Yarra Bend Road	<ul style="list-style-type: none"> Priority for cyclists and pedestrians at Yarra Bend Road. 	Detailed design & Construction	\$20K
1.13	Main Yarra Trail South Route			LOW
1.13 A	Yarra Gardiners Bridge	<ul style="list-style-type: none"> Construct ramp for access to on-road facility. 	Concept & detailed design Construction	Est \$20K Est \$100K
1.13 B	Yarra Boulevard	<ul style="list-style-type: none"> Construct on-road facility from Yarra Gardiners Bridge to MacRobertson Bridge. 	Concept & detailed design Construction	Est \$20K Est \$100K

(b) Local Routes

The following lists both the current work in progress and the further work required to align to the star rating priorities - Local Routes. Each project needs further investigation and detailed design regarding the type of treatment best suited for the route.

Figure 7.1.1 (b) Strategy 1 – Local Routes – Actions

No.	Location	Project	Stage	Council Priority & Resources
1.14	Linear Park/ Edinburgh Gardens/ Napier Street Route	<ul style="list-style-type: none"> Off-road components are discussed in the off-road Action Plan Section 3.8. 		HIGH
1.14 A	Merri Creek pipe bridge	<ul style="list-style-type: none"> Connect to St Georges Road commuter route. On-road connections to Edinburgh Gardens. Intersection improvements at Park and Apperly Sts. 	Construct 09/10	DoT/ Melb Water/ Darebin Yarra On-road component \$40K
1.14 B	Linear Park to Alexandra Parade	<ul style="list-style-type: none"> Priority for cyclists and pedestrians at Scotchmer Street. Priority for cyclists and pedestrians at Alfred Crescent. Reinforce bicycle lane (Freeman to Queens Parade) with vibra-line or raised separators including at merge points and green paint. Improved crossing of Queens Parade. Widen existing foot path and create shared path between Queens and Alexandra Parades. 	Concept Planning Detailed design Construction	Est \$20K Est \$50K Est \$350K
1.14 C	Napier/Gertrude Sts	<ul style="list-style-type: none"> Improved traffic signals on Napier Street at Gertrude Street. 	Concept 10/11 Design 11/12 Construct 12/13	Est \$20K Est \$50K Est \$200K

No.	Location	Project	Stage	Council Priority & Resources
1.14 D	Napier St/Victoria Parade (VicRoads)	<ul style="list-style-type: none"> • Linemark bicycle lane. • Improved traffic signals on Napier Street at Victoria Street to provide for southbound movement to Lansdowne Street (similar to Powlett St/Wellington). • Sign shared path on north side of Victoria Parade between Napier and Lansdowne Streets. 	Concept 11/12 Design 12/13 Construct 13/14	Est \$20K Est \$50K Est \$400K
1.15	Canning Street: Park Street to Princes Street			HIGH
1.15 A	Pigdon Street	<ul style="list-style-type: none"> • Improve intersection, to address high cyclist crash records. 	Concept/ Design 09/10 Construct 10/11	\$20K \$150K
1.15 B	Richardson Street	<ul style="list-style-type: none"> • Improve intersection to increase motor vehicle recognition of cyclist priority, raise intersection. 	Construct 09/10	\$80K
1.15 C	Princes Street (VicRoads)	<ul style="list-style-type: none"> • Upgrade crossing at Princes Street. Widen pram crossing on southern side (City of Melb). Install keep clear linemarking. 	Construct 11/12	Est \$20K VicRoads & City of Melb
1.16	Gertrude/Langridge Street Route			LOW
1.16 A	Langridge: Nicholson to Smith	<ul style="list-style-type: none"> • Reinforce bicycle lane (Nicholson to Wellington) with vibra-line or raised separators including at merge points. • Reinforce crossing points with green paint (Nicholson to Wellington). • Advanced bicycle lanterns at Hoddle Street, Wellington Street, Smith Street. • Reinforce bicycle lane (Nicholson to Wellington) with vibra-line or raised separators including at merge points and green paint. 	Concept Design Construct	\$20K \$30K \$150K
1.16 B	Gertrude: Smith to Nicholson	<ul style="list-style-type: none"> • Smith to Nicholson: cut back kerb extensions, widen footpaths and remove parking to create a kerbside running bicycle lane. • Advanced bicycle lanterns at Brunswick Street and Nicholson Street. 	Concept Design Construct	\$20K \$30K \$500K

No.	Location	Project	Stage	Council Priority & Resources
1.17	North Fitzroy Route: Pigdon St/ Scotchmer St/ Michael St	<ul style="list-style-type: none"> Reinforce bicycle lane (Bowen Cres to Queens Parade) with vibra-line or raised separators. Cut back kerb extension at Nicholson Street, convert angle parking to parallel to create bike lane. 	Concept Design Construct	LOW \$10K \$20K \$200K
1.18	Bowen/Garton Route Bowen Crescent at Park Street Princes Hill to Garton Street	<ul style="list-style-type: none"> Reinforce bicycle lane (Park St to McPherson St) with vibra-line or raised separators including at merge points. Consider removal of kerbside parking in Garton Street to create kerbside running bicycle lane or improve path in Princes Park (City of Melbourne). 	Concept Design Construct	LOW \$10K \$10K \$50K



(c) Shared Zones

Researching and investigating the establishment of 'shared zones' to create spaces that are equally shared by pedestrians, cyclists and motorists.

Figure 7.1.1 (c) Strategy 1 – Shared Zones – Actions

No.	Location	Project	Responsibility	Council Priority & Resources
1.19	Whole Municipality	Research, investigate and identify suitable low vehicle volume road for installing five informal 'Shared Zone' routes per annum for cyclists and pedestrians during a nominated time period.	Yarra City Council	Medium
1.20	Whole Municipality	Research, investigate and identify a suitable road for trialling a 'Car Free Day' to encourage cyclists and pedestrians only.	Yarra City Council	Medium

(d) Lighting

Cyclists riding at dusk and at night experience different intensities of street-lighting, and changes in lighting conditions particularly when transitioning from on-road paths to off-road paths.

Improvement in lighting conditions will provide safer bicycle paths and lessen the risk of cycling accidents. Provision of lighting must also be balanced against environmental concerns of energy use and overspilling of light.

Yarra should pursue the provision of adequate lighting on high priority (IMAP) routes and investigate transitioning lighting at interfaces between lit and unlit cycle paths.

Figure 7.1.1 (d) Strategy 1 – Lighting – Actions

No.	Location	Project	Responsibility	Council Priority & Resources
1.21	Priority Routes & Transition Interfaces	Develop principles for: <ul style="list-style-type: none"> Improving lighting conditions along priority cycling routes, and Transitioning changes in lighting conditions at the on-road and off-road interfaces. 	Yarra City Council	Low

7.1.2 Strategy 2 – Better Local Streets for Cycling

For cyclists who begin their journeys away from the bicycle network, the conditions on their local streets can have a significant impact on whether they are willing to cycle. Local streets take cyclists from their homes or other destinations to the bicycle network.

There are a variety of tools for making local streets in Yarra better for cycling. These include:

- marking bicycle lanes
- narrowing motor vehicle lanes
- reducing traffic speeds
- reducing the volume of traffic
- creating informal/formal shared zones
- providing better crossing facilities at intersections
- providing ramps and cut-throughs at road closures, tram barriers and traffic treatments, and
- improved lighting and route maintenance regimes.

Figure 7.1.2 Strategy 2 - Better Local Streets for Cycling – Actions

No.	Location	Project	Responsibility	Council Priority & Resources
2.1	Whole Municipality	Ramp/cut-through access through all road closures where feasible.	Yarra City Council	LOW
2.2	Whole Municipality	Assess bicycle routes to all schools in Yarra, prioritise for improvements and construct.	Yarra City Council	MEDIUM
2.3	Whole Municipality	Continue to publicise that cyclists may cycle against the one-way direction in low-speed local streets with adequate road space.	Yarra City Council	LOW
2.4	Whole Municipality	Increase number of informal/formal shared zones in City of Yarra.	Yarra City Council	LOW
2.5	Whole Municipality	Research and evaluate feasibility to turn all City of Yarra's local streets into 40 kph zones.	Yarra City Council	MEDIUM

7.1.3 Strategy 3 – Better Off-Road Bicycle Network

The City of Yarra has an extensive off-road bicycle network.

Off-road paths are a significant part of the City of Yarra's bicycle network. Council has identified several significant upgrades to the path network. Some of these will be delivered by Council, some by State Government agencies and some in partnership. The Bicycle Strategy 2010-15 aims to construct five major off-road route upgrades by 2015.

However, this network is experiencing significant pressure in many places. The cycle paths have been developed over many years and today's cycling volumes were never envisaged at the time many paths were built. Also, today's national path design guideline (Austroads Part 14 Guide to Traffic Engineering Practice – Bicycles) indicates many paths are no longer adequate for the volumes of cyclists using the paths.

The Austroads Guidelines are currently being reviewed by VicRoads with a view that they be developed to accommodate current and future bicycle traffic. These new criteria will guide future off-road designs, but are expected to encounter significant constraints within Yarra as much of the off-road network is located in narrow stretches of land bound by the Yarra River or Merri Creek.

It is also expected that the new document will address those off-road paths that experience large volumes of one-way (commuter) traffic. The initial advice from consultants working on behalf of VicRoads is that such paths require additional width that may be impossible to offer due to spatial constraints along many parts of Yarra's linear, off-road network.

Off-Road Routes	Recruitment	Retention	Safety	Transport	Linked Up	Star Rating	Preliminary Cost Estimate *
CONNECTING ROUTES							
3.1 New cycle bridge on Merri Creek Pipe Bridge	★	★	★	★	★	5	\$75K
3.2 Merri Creek Trail at Rushall Station	★	★	★	★	★	5	\$187.5K +\$187.5K
3.3 Darebin Creek Trail	★	★	★	★	★	5	\$850K + \$850K
3.4 Main Yarra Trail Upgrade (Gardiners Creek to Dights Falls)		★	★		★	3	\$2700K
3.5 Merri Creek Trail at Coulson Reserve		★	★		★	3	\$750K*
3.6 Clarke Street Bridge Abbotsford			★	★	★	3	<u>\$3,000K</u>
3.7 Linear Reserve, North Fitzroy/ North Carlton		★	★	★		3	\$400K
3.8 Bridge at Church Street, Abbotsford		★	★		★	3	<u>\$5,000K</u>
3.9 Merri Creek Trail (various)		★	★			2	\$500K

Legend

* funding split to be determined between Council and external source.

\$K = Council funded – committed

\$K = Council funded – not committed

\$K = External funding – committed

\$K = External funding – not committed

There may be opportunities for Council to improve on-road bicycle facilities to attract riders from the off-road routes and reduce the need for paths to be widened. Sections of the off-road network will prove to be vital links to the existing on-road network (e.g. proposed pipe bridge at Holden Street, North Fitzroy) but with considerable topographical constraints along much of the off-road network, it is important that the two networks be considered as complementary.

This is particularly true along the Merri Creek Trail which was identified as a recreational trail as part of the Merri Creek Trail Review (MCTR) undertaken by the Cities of Yarra, Darebin and Moreland and adopted by these Councils in 2007. The MCTR observed that while the Trail could accommodate commuter cyclists to a certain level, the spatial limitations meant that a complete reconfiguration of the Trail infrastructure was unlikely to be accommodated within the Creek corridor.

The circuitous nature of the Trail and the Creek's inherent environmental value did not support the transformation of the existing Trail into a commuter path and the needs of city-bound cyclists will still need to be met by improved on-road routes.

Similarly, the off-road network which is predominantly along waterway corridors is unlit and for environmental, ecological, public safety and cost reasons is unlikely to be fully lit. This places considerable limitations on the capacity of the off-road network to carry increasing numbers of commuter cyclists. To this end, it is critical that on-road alternatives complement current and future off-road infrastructure.



Strategy Actions – Based on 10 Year Works Program
Refer to **Appendix 5** for Maps of the Bicycle Routes

Figure 7.1.3(a) Strategy 3 - Better Off-Road Bicycle Network – Actions

No.	Location	Project	Responsibility	Council Priority & Resources
3.1	New cycle bridge on Merri Creek Pipe Bridge (in conjunction with on-road 1.14)	New shared pathway crossing of the Merri Creek. Shared pathway links between the bridge and St Georges Rd to the north and Park Street, Nth Fitzroy to the south. Project is consistent with the Merri Creek Trail Review.	Dept. Of Transport, Melbourne Water, Yarra City Council, City of Darebin	2009 \$75k Council contribution
3.2	Merri Creek Trail at Rushall Station	Construction of new path on the east of Rushall Station to ensure the Merri Creek Trail bypasses the station underpass. Project will link existing trail south of the station to Rushall Reserve and eventually, the new crossing identified in 3.1 above. Project is consistent with the Merri Creek Trail Review.	Yarra City Council with funding support of Parks Victoria	2010 \$375k (split 50/50)
3.3	Darebin Creek Trail between Heidelberg Road and Willemsmere Reserve	Construct new shared pathway along the Darebin Creek linking existing paths. Build new bridge crossings of the Darebin Creek and Yarra River.	Yarra City Council with funding support of Parks Victoria, Boroondara & Banyule	2010-2012 \$1.7m (split not determined)
3.4	Main Yarra Trail – Gardiners Creek Bridge to Dights Falls (in conjunction with on-road 1.13)	Path renewal/upgrade program improving existing infrastructure including paths, rails and boardwalks. Consolidation of paths where necessary to meet future needs.	Yarra City Council	Ongoing between 2009-2014 \$2.7million
3.5	Merri Creek Trail at Coulson Reserve	Construction of a ramp linking the Dept of Transport work at the railway bridge with the existing trail adjacent to Heidelberg Road. Project will remove the two low level bridges currently crossing the Merri Creek and the decline beneath Heidelberg Road from the Merri Creek Trail. Project is consistent with the Merri Creek Trail Review.	Yarra City Council	\$750k