

**Report to the Future Melbourne Transport Committee**

**Agenda item 6.6**

**Bicycle Plan 2016-2020**

**15 March 2016**

**Presenter:** Geoff Robinson Manager Engineering Services

**Purpose and background**

1. At its meeting of 13 October 2015, the Future Melbourne Committee approved the release of the draft Bicycle Plan 2016-2020 for public comment.
2. Following a period of public engagement, this report presents the revised Bicycle Plan 2016-2020 (the Plan) for approval. The Plan is provided at Attachment 2 to this report.

**Key issues**

3. The Plan has a strong focus on connecting local neighbourhood routes between residential areas, schools, shops and community facilities. It outlines plans to complete major cycling corridors in collaboration with VicRoads and other agencies. It also supports actions to improve safety and the amount of available bicycle parking. An implementation plan is at Attachment 4.
4. 7000 contributions were received from the community on the Participate Melbourne platform in May 2015. These original comments shaped the draft Plan. Further community and stakeholder feedback on the draft Plan itself was received from 143 individuals and 11 agencies including the Victorian Government and the municipalities of Port Phillip and Yarra. The majority of respondents supported the Plan.
5. A summary of feedback is at Attachment 3. Based upon feedback received, the consequential changes made to the Plan are:
  - 5.1. A change to one of the targeted outcomes. The draft plan stated that the City of Melbourne would seek to reduce the number of fatalities and serious injury crashes achieved by 2020 by a total of 10 per cent. The revised target is zero fatalities and serious injury crashes.
  - 5.2. The investigation of a possible second bike friendly east-west connection through the central City. Complementing La Trobe Street, a second connection east would improve bicycle access and transit across the southern part of the central city.
  - 5.3. Extra bike parking spaces to be installed over the four years of the Plan. The draft Plan nominated a figure of 800. This has been increased to 2000.
  - 5.4. St. Kilda Road bicycle works. The investigation of separated bike lanes in St.Kilda Road (in conjunction with VicRoads) brought forward as an immediate priority.
  - 5.5. A change in terminology from 'preferred' routes to 'bicycle friendly' routes whilst making it clear within the Plan that whilst cyclists will be directed by signage to bicycle friendly routes, they are welcome to choose any another route.

**Recommendation from management**

6. That the Future Melbourne Committee:
  - 6.1. approves the City of Melbourne Bicycle Plan 2016-2020
  - 6.2. notes the community engagement summary at Attachment 3
  - 6.3. authorises the Director City Operations to make any further minor editorial changes to the Plan before publication.

**Attachments:**

1. Supporting Attachment (page 2 of 122)
2. Draft Bicycle Plan (page 4 of 122)
3. Summary of submissions (page 87 of 122)
4. Implementation plan (page 119 of 122)

## Supporting Attachment

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### Legal

1. There are no legal implications in the adoption of this report.

### Finance

2. Any costs associated with the implementation of the Bicycle Plan 2016-2020 (the Plan) will be subject to the annual budget prioritisation and approval process.
3. An Implementation plan is at Attachment 4 of this report and outlines the indicative costs of implementing measures in the Plan. An indicative cost of implementing the Plan is \$9,880,000 over four years with an estimated \$1,795,000 cost in the 2016-17 financial year.

### Conflict of interest

4. No member of Council staff, or other person engaged under a contract, involved in advising on or preparing this report has declared a direct or indirect interest in relation to the matter of the report.

### Stakeholder consultation

5. An extensive public engagement process was undertaken to inform the development of the draft Plan. This included 7000 contributions received from the community on the Participate Melbourne platform in May 2015. These comments shaped the draft Plan.
6. A further 154 individuals and agencies provided feedback on the draft Plan which was again made available through Participate Melbourne. Individual agencies were sent a copy of the Plan. Agencies that responded included The Victorian Government, RACV, Victoria Walks, Melbourne Bicycle Users Group, Bicycle Network Victoria and the Amy Gillett Foundation.
7. A summary of the main issues raised by organisations follows in the table below with further details of individual and organisation feedback at Attachment 3.

Organisation	Summary of Comment
City of Port Phillip	The City of Port Phillip feedback concentrated on improved bicycle connections between the two municipalities. This included connections through Moray Street, Dorcas Street and St. Kilda Road. It was noted in the feedback that the CoM is working to improve these connections.
Victoria Walks	Victoria Walks emphasised the need to improve safety in shared pedestrian/ bicycle zones. The limited access to cycling in parks was supported.
Melbourne Bicycle Users Group	This Group has sought clarification on the status of a number of individual bicycle routes and possible connections. Melbourne BUG supports the use of 'little streets' for bicycles and a robust level of service criteria. They were concerned that cycling may be prohibited in some streets and in the feedback assurances are given that whilst cyclists will be directed to bicycle friendly routes, no routes will be prohibited. They support the 'local routes' emphasis within the bicycle plan.

Organisation	Summary of Comment (Continued)
Amy Gillett Foundation (AGF)	The AGF would like to work closely with the City of Melbourne to obtain a safer cycling environment. One suggestion raised by the AGF is the possible introduction of new technologies to make trucks more bicycle aware.
Bicycle Network Victoria (BNV)	BNV raised concerns about the concept of 'preferred/non preferred routes articulated in the draft Bicycle Plan. They have a stated preference for a 30 kilometre speed limit within the Hoddle Grid and support another east-west bicycle link within the central city. A Bridge Road connection for cyclists is a priority for BNV.
Victorian Motorcycle Council	The VMC has provided in-principle support for the Bicycle Plan whilst seeking an understanding that bicycle safety should not be improved at the expense of any other transport user group.
Public Transport Victoria (PTV)	PTV sought minor changes relating to the promotion of bike share stations.
RACV	The RACV supports the installation of new bike lanes but believe that on-street parking spaces should be used for bike lanes in preference to reallocating vehicle travel lanes.
Dept. Economic Development, Jobs, Transport & Resources	This Government department were seeking alignment with Government policy regarding cycling corridors. Minor changes were made to the draft bicycle plan to accommodate this.
City of Yarra	The City of Yarra emphasised the role of IMAP to collaboratively manage issues and stated their support for further speed reductions to 30 kilometres per hour. They favour more signage and on-road markings to aid cyclists.
Yarra Trams	Yarra Trams feedback sought recognition that trams are an important part of any discussions relating to road space allocation. Their submission supports improved tram and bicycle separation as an important safety feature.

**Relation to Council policy**

- 8. The Plan is consistent with the Transport Strategy 2012.

**Environmental sustainability**

- 9. Cycling is a low cost, energy efficient, non-polluting form of transport. Where cycling is used to replace motor vehicles it assists in reducing greenhouse gas emissions.

# DRAFT BICYCLE PLAN

2016-2020

Attachment 2  
Agenda item 6.6  
Future Melbourne Committee  
15 March 2016



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**Disclaimer**

This report is provided for information and it does not purport to be complete. While care has been taken to ensure the content in the report is accurate, we cannot guarantee it without flaw of any kind. There may be errors and omissions or it may not be wholly appropriate for your particular purposes. In addition, the publication is a snapshot in time based on historic information which is liable to change. The City of Melbourne accepts no responsibility and disclaims all liability for any error, loss or other consequence which may arise from you relying on any information contained in this report.

## FOREWORD

(To be inserted in final plan)

[COM\\_SERVICE\\_PROD-#9538686-Draft Bicycle Plan Request for Foreword](#)

## EXECUTIVE SUMMARY

Cycling is an increasingly important choice of transport. It takes pressure off the public transport system, reduces congestion and noise and is non-polluting. Over 50 per cent of residents in the City of Melbourne own a bike, and for a relatively low investment in infrastructure and programs, all levels of government can encourage people to invest in their own mode of transport for a relatively low cost.

About 146,000<sup>1</sup> trips are taken by bike on a weekday within the municipality and we want to increase the mode share by bike to about 200,000 or seven per cent of total trips in the City of Melbourne by 2020 to meet our targets of 10 per cent cycling mode share by 2030.

This plan highlights the contribution that people riding bikes make to the municipality, while laying out a practical action plan to further interconnect the city's bicycle network and encourage even more people to ride a bike. The plan establishes principles for planning bicycle infrastructure in the city including safety, access for all abilities, planning for future growth, creating bicycle-friendly environments, and comfort and convenience for people to take up riding, or ride more frequently.

Any costs associated with the implementation of the Bicycle Plan 2016-2020 will be subject to the annual budget approval process. An indicative cost of implementing the Bicycle Plan 2016-2020 is \$9,880,000 over four years with an estimated \$1,795,000 cost in the 2016-17 financial year.

This plan supports our ongoing collaboration with the Victorian Government as a means of achieving our goals and targets. In particular, the Plan supports the development of strategic cycling corridors, routes in local suburbs, reducing speed limits and improving the separation from traffic and car doors to enhance safety outcomes for people riding bikes.

The draft Bicycle Plan 2016-2020 actions focus on:

### **Planning for people to ride bikes**

- working with government to incorporate cycling into future growth and transport projects
- advocating for amendments to the Melbourne Planning Scheme to make the municipality more bike-friendly

### **A connected bicycle network and facilities**

- supporting the Victorian Government to develop cycling corridors
- making it easier for people to ride in their local communities
- an increasing level of service for each bicycle project

### **A safe and encouraging environment**

- increasing separation, lowering speed limits and building safer intersections
- safety and education programs for children, parents, and new residents

### **Measuring outcomes**

- sharing evidence with the community to continuously improve the cycling environment.

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<sup>1</sup> City of Melbourne 2012

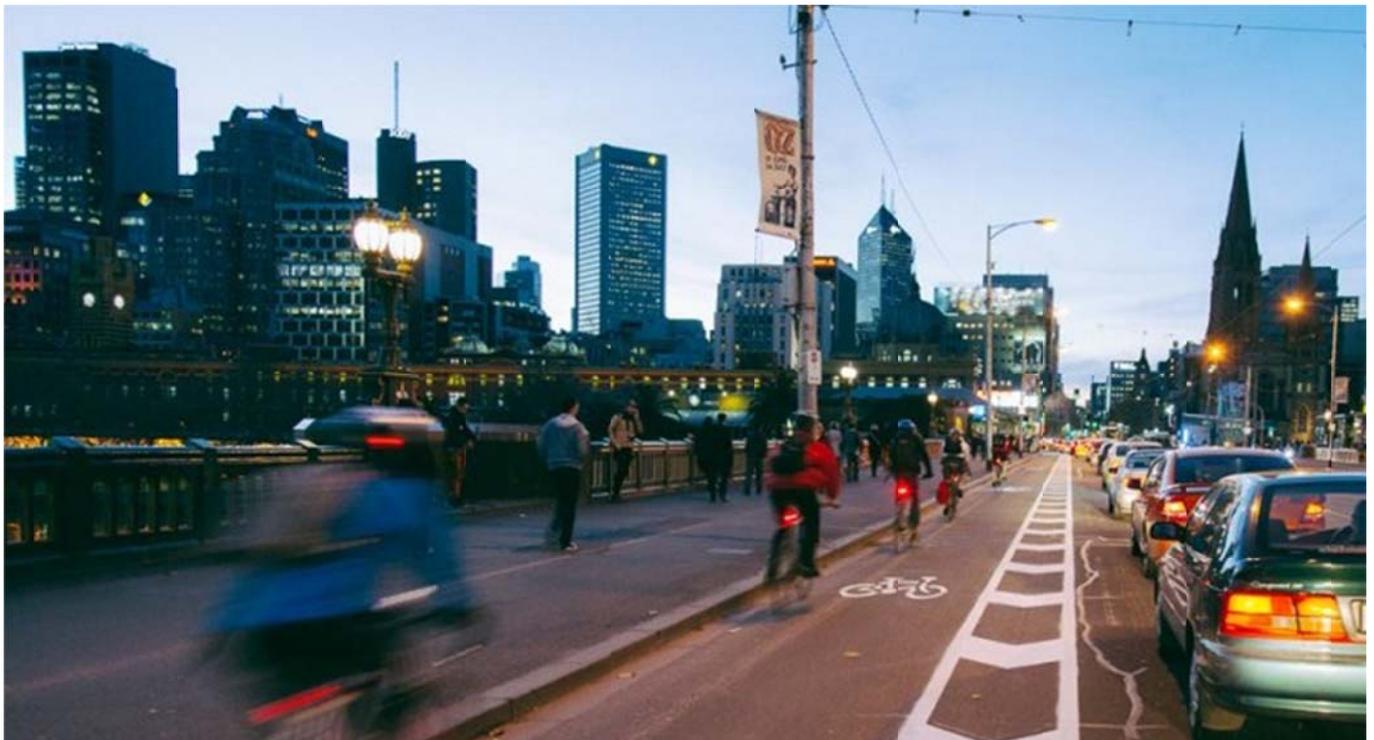
## A CYCLING CITY

### Introduction

More people in Melbourne are cycling than ever before. Building on the achievements of the previous bicycle plan, Bicycle Plan 2016-2020 aims to encourage more people to ride and to create a safe environment for them to do so. The Bicycle Plan 2016-2020 incorporates a comprehensive program of actions on many of Melbourne's busy bike routes and also provides a renewed focus on local bike routes to cater for neighbourhood-scale trips, such as those to schools and shops – making it possible for cycling to become a logical and easy choice for the community. More people on bikes means a more active and healthier population who are able to enjoy a cleaner and less congested city.

It is widely recognised that cycling has many benefits – ranging from social and economic to health and environmental. This plan is the next step in helping more people to enjoy those benefits. It sets out a series of actions that will help to deliver the targets for increased participation in cycling set out in Melbourne's Transport Strategy<sup>2</sup>. The actions in this plan also include a commitment to work with and support the Victorian Government to develop strategic cycling corridors linking central Melbourne.

**Figure 1: People on bikes crossing Princes Bridge at night (Photo by William Watt)**



We will continue to build and upgrade bicycle routes that complete the network. Priority will be given to addressing gaps that will provide an improved service for the greatest number of existing and potential riders. In collaboration with VicRoads, we will continue to develop innovative solutions to existing problem areas.

The key driver of this plan is to meet demand from existing cyclists and at the same time recognise that there is also latent demand. That is, more people would cycle more often if they were supported by high quality, safe infrastructure, improved facilities and route connectivity.

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<sup>2</sup> City of Melbourne 2012

### A connected city

The City of Melbourne is committed to creating a cycling city. A cycling city is one that embodies the principles and design philosophy espoused by this document and by the Council Plan. Any costs associated with the implementation of the Bicycle Plan 2016-2020 will be subject to the annual budget approval process.

The Council Plan 2013-2017 goal for a connected city states that:

*We manage movement in and around our growing city to help people trade, meet, participate and move about safely and easily, enabling our community to access all the services and opportunities the municipality offers<sup>3</sup>.*

Bicycle Plan 2016-2020 is an Action Plan for the implementation of the City's strategic vision and goals for a connected city.



## Vision

### Make Melbourne a cycling city<sup>4</sup>

## Goals

### The goals of the plan are to:

- plan for future growth that includes high quality bicycle infrastructure, security and parking
- deliver an interconnected network for people of all ages and ability to ride bikes for people of all abilities
- increase bicycle-friendly facilities, support stations, and parking to make it easy to travel by bike and park
- deliver a safer and well-lit environment for people to ride bikes
- reduce the risk of riding a bicycle in the city and to promote motorist's awareness of cyclists on the road
- encourage more people to take up riding or ride more frequently
- evaluate changes, manage data and continuously improve our performance.

## Targets

### By 2020:

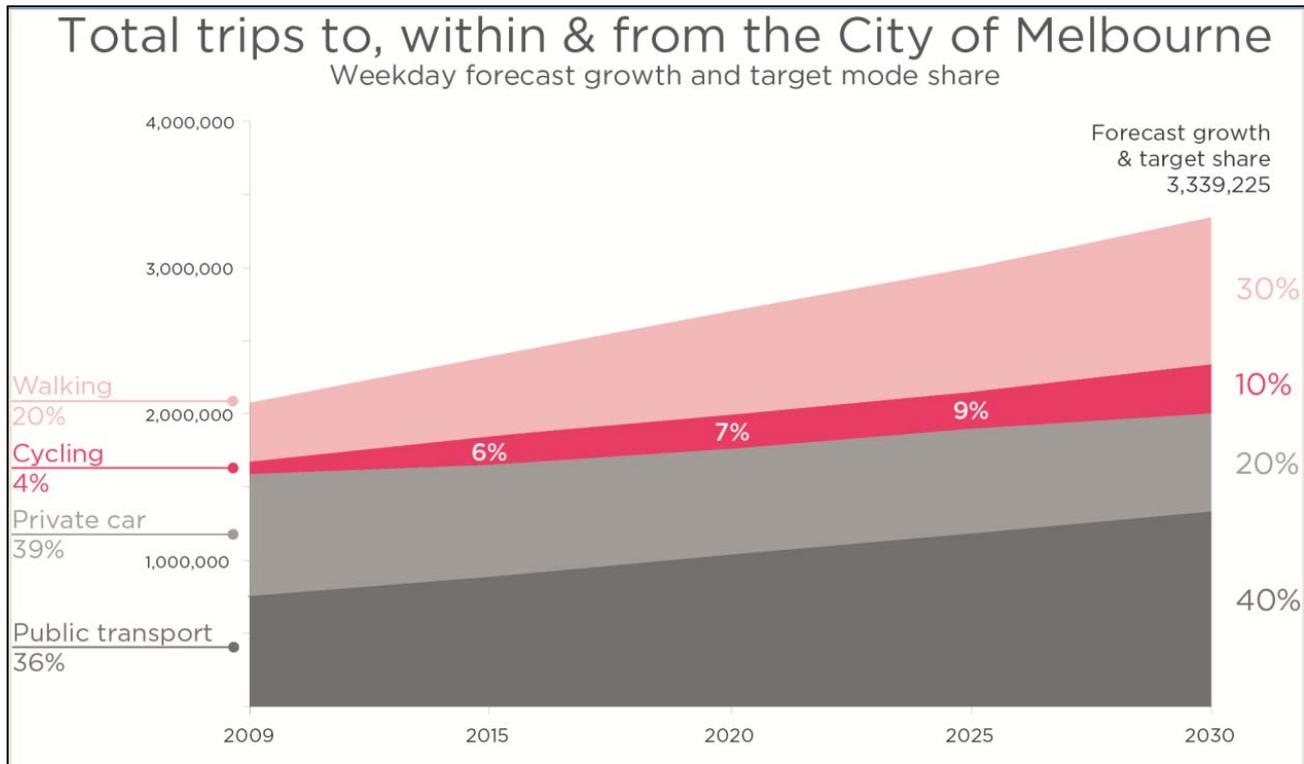
- transport infrastructure projects will include facilities or viable alternatives for people riding bikes
- Major bicycle routes north/south and east west will connect the community to schools, shops and community facilities by 2020
- On-street bicycle parking will be increased by 2000, concentrating on busy public areas. Planning for large scale, safe parking facilities at transport hubs will be progressed
- bicycle maintenance stations will be available at entrances to the city
- zero fatalities and serious injury crashes
- one in four vehicles entering the central city in the morning peak will be bicycles
- seven per cent of total trips to, within and from the City of Melbourne will be made by bike to meet our targets of 10 percent cycling mode share by 2030<sup>5</sup>.
- provide transparent data and complete a Bicycle Account in 2017 and 2019

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<sup>4</sup> Key direction of City of Melbourne Transport Strategy 2012

<sup>5</sup> Key direction of City of Melbourne Transport Strategy 2012

Figure 2: Mode share targets from City of Melbourne Transport Strategy



Summary of achievements

The Bicycle Plan 2012-2016 proposed connecting missing links in the bicycle network through the central city with a particular focus on increasing the separation on key bicycle routes to encourage people of all ages and abilities to ride.

Since the previous plan was endorsed in 2012, Council has strengthened links and provided safer on-road environments on La Trobe Street, Princes Bridge, St Kilda Road, Elizabeth, Exhibition, William and Clarendon streets. Council has worked with its partners to improve Melbourne’s key off-road route, the Capital City Trail at Morell Bridge, Jim Stynes Bridge and through improved way-finding and lighting. Bicycle parking has been increased in busy locations throughout the city with groups of bicycles hoops being strategically placed close to retail, public entertainment, community and education centres.

There has been a decrease in crashes per 10,000 cyclists by 20 percent and an increase in the total number of people riding bicycles. Over the life of the last plan, bicycles as a percentage of vehicles coming into the central city in the morning peak has grown from 11 per cent in March 2012 to 17 per cent in 2015. On key routes the percentages were even higher.

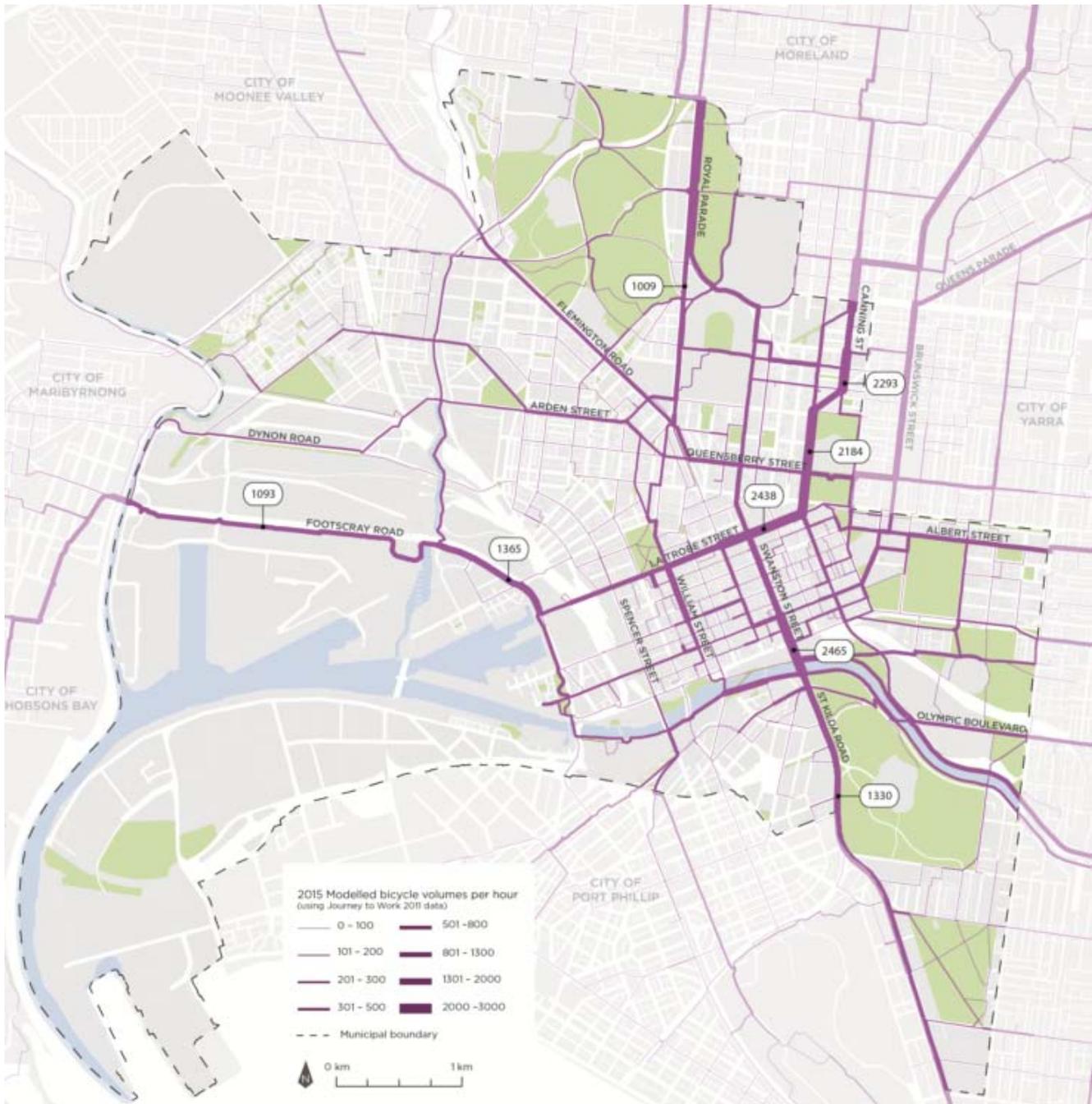
Table 1: Bicycles as a percentage of vehicles travelling to the central city in the morning peak (March 2015)

St Kilda Road	Royal Parade	Rathdowne Street	Footscray Road	Yarra Trail
30%	35%	31%	16%	Off-road
512 bikes an hour	891 bikes an hour	715 bikes an hour	534 bikes an hour	1147 bikes an hour

### Why and where people cycle

City of Melbourne Residents cite transport to a destination as being the primary reason for their cycling trips (68 per cent)<sup>6</sup>. Cycling is a preferred way to get to work and make quick and convenient trips around the city for many. RiderLog<sup>7</sup> data shows the routes for people traveling through the City of Melbourne for the purpose of transport. Popular routes include Royal Parade, Canning Street, Rathdowne Street, La Trobe Street Macarthur Street, Swanston Street, and St Kilda Road. Large numbers of people use off-road routes to access the city including Footscray Road and the Main Yarra Trail.

**Figure 3: Modeled trips by bicycle for journeys to work in the City of Melbourne 2015<sup>8</sup>**



<sup>6</sup> CDM Research, 2015

<sup>7</sup> RiderLog app, Bicycle Network Victoria

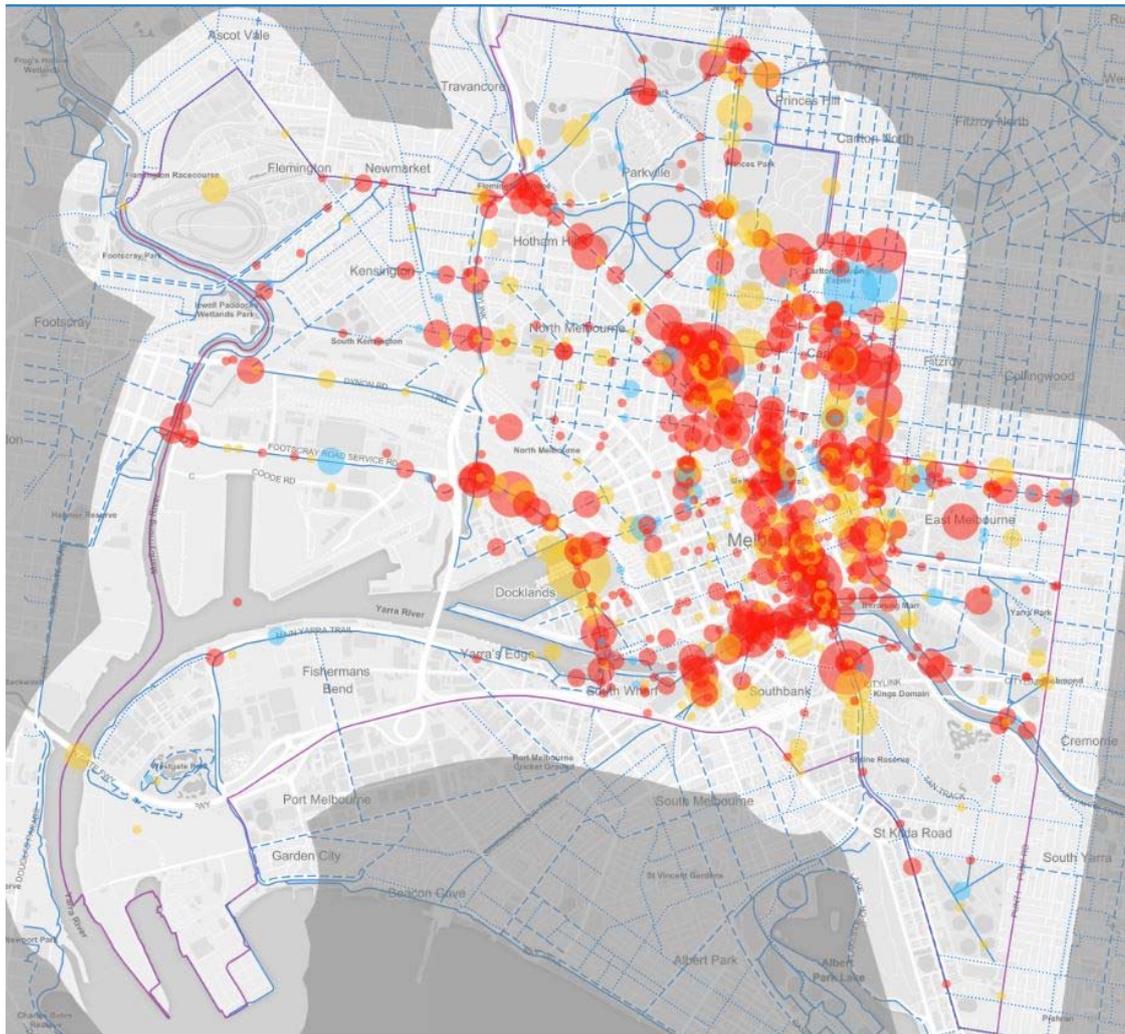
<sup>8</sup> Based on SGS modelling and analysis

## The cycling community

The City of Melbourne engages with the cycling community through twice yearly bicycle forums. Our constituent focused approach means that the community can always provide feedback about bicycle related projects and programs. Key community stakeholders Bicycle Network Victoria and the Melbourne Bicycle Users Group (MBUG) are active in discussing improvements in the municipality for their members.

Community input was sought to shape this draft Bicycle Plan 2016-2020. Over 7000 contributions were received that provided information on what people liked about riding a bike in Melbourne and issues and ideas that could be incorporated as actions into this plan. The circle size shows the amount of activity (spots, comments and supports) by spot type in Figure 4. The 20 locations that received the most comments and the top 10 locations people liked are listed in Appendix 1.

**Figure 4: Heat map of bike related issues, ideas and likes**



Circle size indicates level of activity

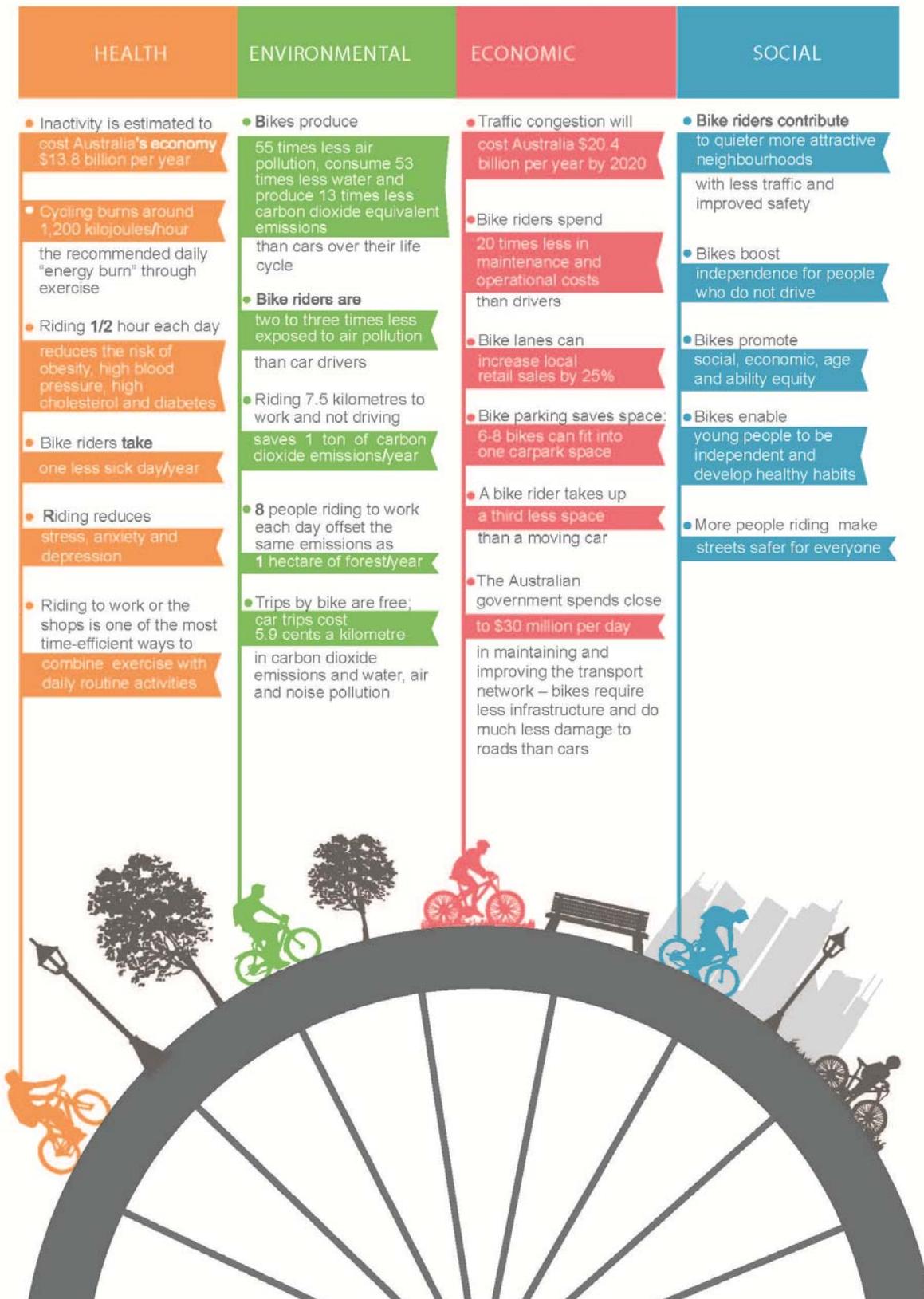
- ISSUE SPOTS
- IDEA SPOTS
- LIKE SPOTS

- Off-road Shared Path
- - - On-road Bike Lane
- ..... Informal Bike Route
- Council Boundary

Source: City of Melbourne, prepared by CrowdSpot

Benefits of cycling

Figure 5: Health, environmental, economic and social benefits of cycling



# 1. PLANNING FOR PEOPLE TO RIDE BIKES

**Goal: Planning for future growth includes high quality bicycle infrastructure**

**Target: Transport infrastructure projects include facilities or viable alternatives for people riding bikes**

## Cycling networks

The PBN is a network of existing and proposed cycle routes identified to help people ride to major destinations around metropolitan Melbourne. Complementing the PBN, the Victorian Government is finalising draft strategic cycling corridors in metropolitan Melbourne. The City of Melbourne strongly supports the development of cycling corridors .

The Inner Melbourne Action Plan (IMAP) is a collaborative partnership between the cities of Melbourne, Port Phillip, Stonnington, Yarra and Maribyrnong. The Action Plan guides a consistent approach to the future growth, development and enhancement of inner Melbourne including linking and improving transport routes. Together the councils have developed strategic directions covering cycling initiatives and a network for bicycles. The local area network is largely consistent with the PBN but includes more detail about local roads managed by Councils. We will continue to build and upgrade routes in line with this local area bicycle network as well as support the Victorian Government to complete the strategic cycling corridors. We will work with VicRoads to review and align the PBN and local area bicycle network.

## Growth areas and projected growth

The City of Melbourne, through the Municipal Strategic Statement (MSS) has set out the vision, objectives and strategies for managing land use change and development in the City of Melbourne. The MSS provides the basis for the application of local policies, zones, overlays and other provisions in the Melbourne Planning Scheme.

A priority for the city is maximising the use of sustainable modes of transport, in particular public transport, and supporting improved cycling and walking connections. Private motor vehicles will continue to be an important part of the mix of modes available but their use will become increasingly complementary to the other transport modes.

The MSS identifies cycling as one of the most effective means of mobility in the municipality and recognises the growth of cycling as a proportion of all commuter trips to the city, as well as of off-road cycling for leisure and recreation. It further highlights the significant opportunities to increase cycling take-up in the municipality.

More specifically, the MSS identifies an overarching objective for cycling: *to develop a comprehensive, safe and convenient cycling network throughout the Municipality*. In support of this objective, the MSS identifies seven strategies, as follows:

- Encourage improved connectivity of the city's bicycle network and support the extension of the existing system of dedicated cycle routes (including shared paths) to link all major parks and gardens in Melbourne.
- Support the extension of principal cycling routes into and through the city from surrounding municipalities.
- Ensure that new development provides bicycle access and high quality, safe and secure end of trip cycle facilities.
- Ensure a safer cycling environment by encouraging passive surveillance of the bike network and safe and secure end of trip facilities.
- Support the extension of the existing system of dedicated cycle routes (including shared paths) across the entire street network.
- Support the provision of public bike hire stations convenient to pedestrians and public transport.

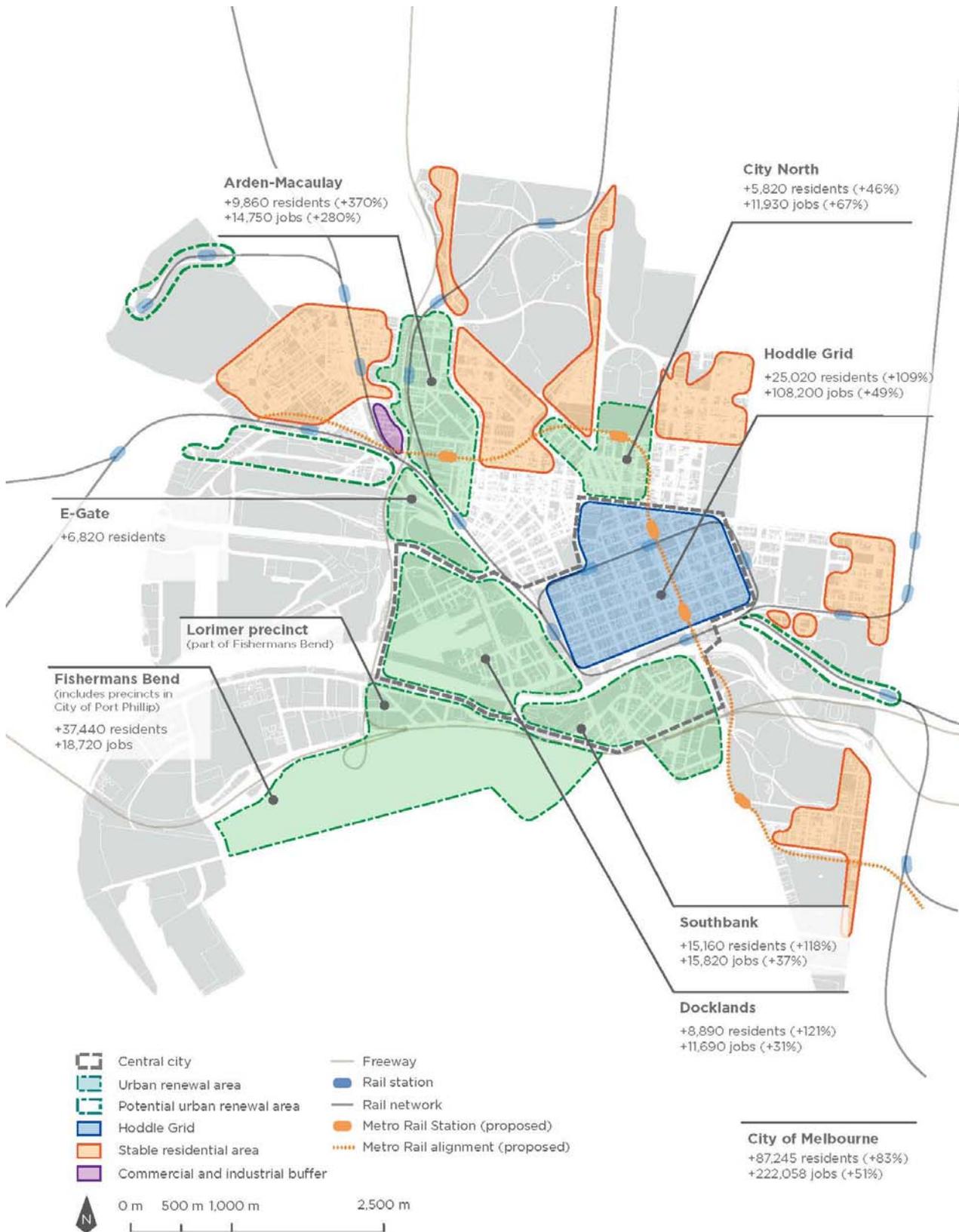
Minimise the impact of development, including vehicular crossings, on principal cycling routes.

In delivering the overarching objective, Council is ensuring that the cycling strategies are incorporated where relevant into all planning documents across the five types of areas identified in the MSS:

- the original city centre (the Hoddle Grid)
- existing urban renewal areas
- proposed urban renewal areas
- potential urban renewal areas
- stable residential areas.

The Growth Area map shown in Figure 6 identifies these areas.

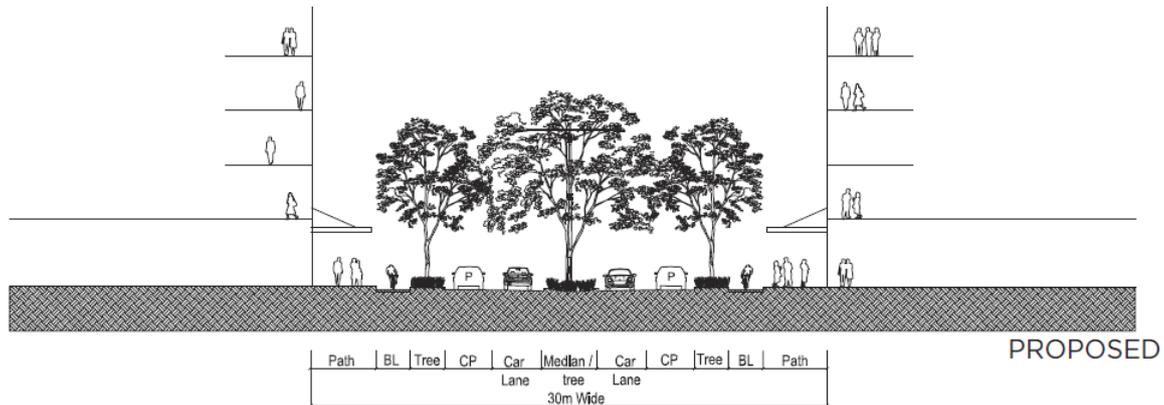
Figure 6: Growth Areas in the City of Melbourne 2012-2031



### Structure plans for local areas

Structure plans developed by the City of Melbourne run over a 10 to 20 year horizon. An important component of these plans is planning for bicycle and other sustainable transport routes. The City of Melbourne recently completed structure plans for Southbank, Arden-Macaulay and City North and is working on Lorimer and West Melbourne structure plans. In the longer term, development funds will go towards funding local level improvements to streets, including quality bicycle lanes. An example of long term planning for city streets is shown for Queensberry Street below.

**Figure 7: An example of local street design proposed by City North Structure Plan, including bicycle lanes**



STREET TYPE 2  
e.g. QUEENSBERRY STREET

### The Planning Scheme

With more people riding bicycles in Melbourne, it's important to make sure there are enough off-street bike parking spaces in both residential and commercial buildings. A study is underway to determine if the amount of parking currently available meets the needs of current and future building users. This information will help to determine how many, and what kind of parking spaces will be required in new and updated buildings. Based on the recommendations of this study, the City of Melbourne will advocate for changes to the Melbourne Planning Scheme..

### Actions

The City of Melbourne will work to:

- align cycling networks and priorities at all levels of government
- ensure planning for growth areas include connections and facilities for people riding bikes
- implement local area structure plans and include bicycle infrastructure through development funds
- ensure Melbourne Planning Scheme matches requirements for bicycle parking in new and existing buildings.

## 2. A CONNECTED BICYCLE NETWORK

**Goal:** Deliver a connected network for people of all ages and abilities to ride bikes

**Targets:** Planning and short and medium term actions for cycling corridors

**The community is connected to schools, shops and community facilities by local neighbourhood routes**

### SmartRoads and setting priorities

SmartRoads<sup>9</sup> is an approach that manages competing interests for limited road space by giving priority use of the road to different transport modes at particular times of the day. VicRoads through SmartRoads recognises the increasing importance of public transport, walking and cycling. Under SmartRoads, all road users continue to have access to all roads, but over time, changes are being made to how roads operate to encourage more bicycles through further development of the bicycle network. VicRoads provide maps that detail which transport modes have priority on roads. These are used as a guide only.

Roads may have several priority transport modes, may change at different times of the day and can even show priority at individual intersections. Consistent with most cities around the world the City of Melbourne is aiming to encourage private traffic to use routes circumnavigating the central city. The central city is prioritised for pedestrians, with the traffic routes being directed around the Hoddle Grid via Wurundjeri Way, Lansdowne Street and Yarra Bank Highway. Bus priority streets include Dudley Street, Queen Street, Lonsdale Street and Victoria Parade. Trams are prioritised on all the streets where they operate in the city. According to the current network operating plan, bicycles are prioritised on La Trobe Street, Collins Street, Flinders Street and off-road routes along the Yarra River. On north-south streets bicycles receive a level of priority on Spencer Street, William Street, Elizabeth Street, Swanston Street, Exhibition Street, Spring Street and St Kilda Road.

The City of Melbourne is encouraged by the increasing volumes of people walking and cycling. Initiatives in this Plan are designed to facilitate further growth in numbers by responding to an expressed community need for safe cycling routes. We will work with VicRoads to review priorities on streets where for example, tram and bus routes have limited the amount of space for people to ride bikes. Streets to review include Collins Street, Flinders Street and Spencer Street.

### Rider choices

Studies<sup>10</sup> complete for this plan have established 65 per cent of riders choose a route 15 per cent longer than the shortest route possible to access dedicated bicycle infrastructure. This suggests that riders plan their route to align to the existing infrastructure, looking for comfort or safety. The provision of bicycle infrastructure can have a significant influence on bike flows around the city. Recent bicycle infrastructure has changed rider patterns and analysis shows riders quickly shift their routes to access improved infrastructure.

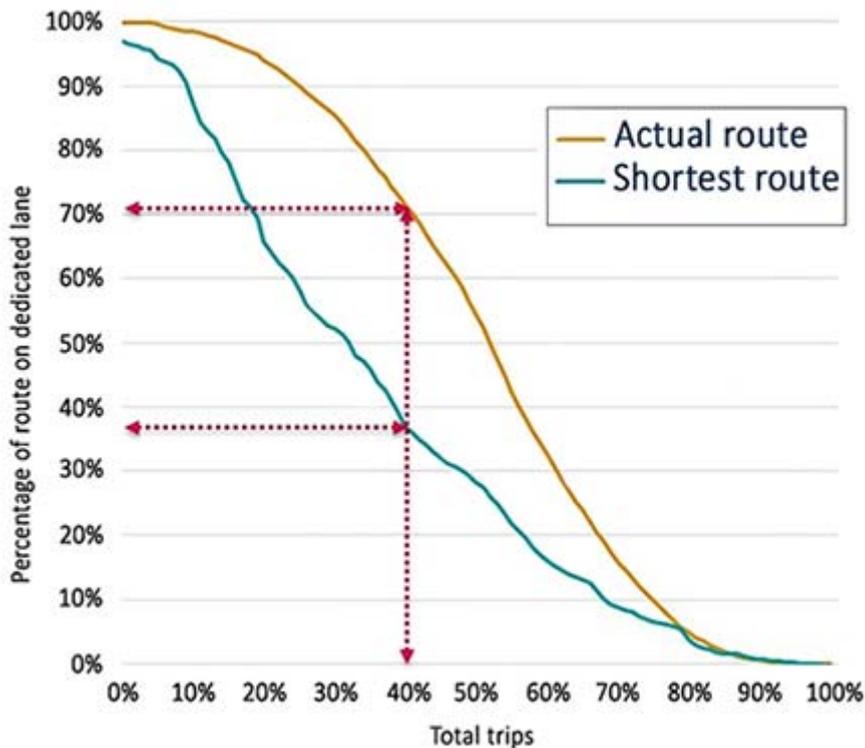
Figure 9 summarises the difference between the shortest routes and the actual routes. It shows that 40 per cent of riders included 70 per cent or more of their ride on a dedicated lane, whereas if they had chosen the shortest route, only 33 per cent of their ride would have been on a dedicated lane. This confirms that riders choose routes with access to longer sections of dedicated bike lanes than the shortest route option.

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<sup>9</sup> VicRoads 2011

<sup>10</sup> SGS Economics and Planning 2015

Figure 9: Proportion of route on dedicated lanes, actual vs shortest



### Gaps in the network

Rider data can be used to model rider behaviour and inform decisions. ABS Census Journey to Work data was combined with rider behaviours to model commuter rider flows. This is the first time rider behaviour has been modelled to this level of detail in the Melbourne context. This data can provide evidence to prioritise network gaps and it can model the impact of improvements (or removal) of key connections in the network.

The study<sup>11</sup> identified and ranked priority gaps in the network. It provides a platform to prioritise future investments and to model the impact of them. It will also be used to model the impact of competing infrastructure projects such as the changing distribution of bike riders on Swanston Street during the development of the Melbourne Metro.

The bicycle network modelling has shown locations in the network where there are high current and future volumes of people riding bikes, but a gap in the network. The locations have been ordered by the scale of the project compared to the potential benefits for the greatest number of riders.

Priority locations include:

- Exhibition Street between Little Bourke and Bourke streets
- Haymarket roundabout
- Albert Street between Nicholson Street and Gisborne Street
- Clarendon Street at the Melbourne Convention Centre
- Queens Bridge Street between the Yarra River and Flinders Street
- Victoria Street on southern edge of Carlton Gardens

<sup>11</sup> SGS Economics and Planning 2015

- Peel Street at the Queen Victoria Market
- College Crescent, north of the University of Melbourne.

Work on these gaps in the cycling network will improve access and the riding experience for large numbers of people at a relatively low cost.

Two additional gaps that will not be addressed as part of this draft plan are:

- Grattan Street, from Flemington Road to Royal Parade. This is due to proposed work on the Melbourne Metro at this location.
- the connection between Brunswick Street and Albert Street via Morrison Street. This will require further consultation with the hospitals and emergency services before progress can be made.

Appendix 2 sets out the existing local bicycle network and Appendix 3 overlays the proposed new and upgraded routes for the years 2016-2020. Although cyclists may choose to ride in any local street, the map at Appendix 3 illustrates that there are safe alternatives to streets that carry particularly large numbers of vehicles. The City of Melbourne actively supports road safety. The use of installed bicycle infrastructure is highly recommended.

### Planning and designing for people to ride bikes

The City of Melbourne plans and designs projects based upon Council Plan goals of a city for people and a connected city.

#### Plan

Principles will be applied by the City of Melbourne to plan for new and upgraded bicycle routes. The principles will take account of:

- a primary need for safety for all roads users
- the importance of a connected network of routes for ease of access. This includes the connected access for bike riders to high demand areas such as public facilities, retail and entertainment precincts
- the need to prioritise route development for the highest current and predicted volumes of cyclists
- requirements for service provision for new riders and riders from urban growth areas
- the need for the provision of a spread of high quality routes, wayfinding signage, surfaces and landscaping
- the need for compatibility with VicRoads SmartRoads principles and Network Operating Plans that give road priority to other transport uses (for example Lonsdale Street is a priority bus street).
- Well-lit, safe and accessible routes for people of all abilities.

#### Design

Designs for building or upgrading routes as part of the connected bicycle network will use the following hierarchy:

##### High quality

- physically-separated bicycle lane
- double chevron line marking

##### Medium quality

- single chevron line marking
- painted lanes
- peak period bike lane

- sharrows (pending inclusion in Austroad design guidelines)
- contra-flow lanes

### Minor improvements

- low-speed environments (<40km/h) with no specific lanes, but may have other bike-friendly features.

### Other bike-friendly measures

Opportunities will be taken to apply measures such as:

- green pavement and profiled-edge line at conflict points such as for turning movements, less than standard width lanes, and transitions from separated to non-separated facilities
- controlled right turns
- removal of slip lanes
- reduction of vehicle speeds at roundabouts and facilities for bikes where possible
- prioritising the signal phase time at intersections relative to mode share of pedestrians, bicycles, motor vehicles, trams etc.
- early start signals and bike boxes
- connections, to and through, intersections
- crossing points at intersecting streets, laneways and drive-ways
- high quality road surfaces
- adequate lighting for safety
- way-finding and consistency in signage and line marking
- adequate sight-lines and distances.

### Streets for cycling (level of service)

In future a quantifiable level of service measure is proposed to support people to assess the safety and attractiveness of streets for cycling. All projects in this bicycle plan will be assessed against the proposed level of service.

This assessment would:

- enable evaluation of potential bike projects by quantifying potential improvements in the route (a detailed before and after assessment)
- determine gaps in the cycling network where the level of service is low
- enable a map to be produced that illustrates the quality and safety of bike routes to assist cyclists choose bicycle friendly routes.

Currently, the VicRoads Network Fit Assessment process and Austroads have developed level of service techniques to attempt to quantify the quality of a bike route. Neither of these evaluation tools captures all of the factors which impact the quality and safety of a bike route, such as:

- width of the bike lane
- bike lane adjacent to on-street parking

- separation of the bike lane from parked vehicles (with painted chevron separators or physical separation islands used in kerbside bike lanes)
- separation of the bike lane from the moving traffic lane
- speed limit/speed environment
- volume of traffic using the street
- number of uncontrolled cross-traffic conflict points, such as laneways, driveways and side-streets
- presence of green pavement treatment at conflict points or approaches to intersections
- use of profile edge line treatment to increase motorists' awareness of the bike lane
- continuation of the bike lane entering and exiting intersections
- volume of left turning motorists at intersections – that conflict with cyclists traveling through
- controls and priorities at intersections
- delays experienced at signalised intersections.

The Technical Notes section contains a worked example of a bike route assessment that considers each of these factors. Table 2 gives examples of the level of service for existing bike lanes.

**Table 2: Examples of assessments of the quality of existing bike lanes**

Location	Level of service assessment
Capital City Trail – between Punt Road and Boathouse Drive	B+
La Trobe Street, Melbourne – physically separated bike lane	B-
Clarendon Street, East Melbourne – double chevron bike lane	C+
St Kilda Road – standard bike lane adjacent to parking	D

### Cycling corridors

Strategic cycling corridors have been identified in Plan Melbourne<sup>12</sup> to support walking and cycling in central Melbourne. Cycling corridors form critical links between and within:

- the central city and other activity centres including urban renewal areas
- major employment, education, health and recreation precincts
- major sport and entertainment precincts
- major public transport interchanges.

The Victorian Government is currently finalising the draft strategic cycling corridors as part of the update to Victoria's Cycling Strategy. The City of Melbourne will continue to work with the Victorian government to develop

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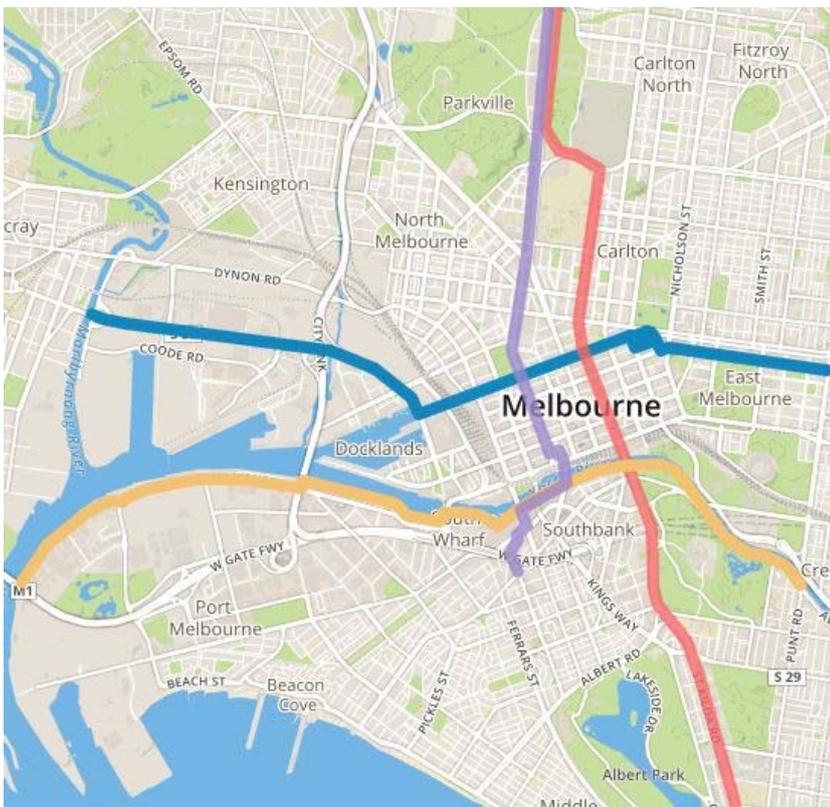
<sup>12</sup> Victorian Government, 2014

strategic cycling corridors through the municipality. As its first priority the City of Melbourne is working with VicRoads to investigate an improved bicycle lane on St Kilda Road.

The City of Melbourne strongly supports the development of cycling corridors, particularly::

- Sunshine to Box Hill
- River Corridor
- Batman to Elsternwick
- Coburg to St Kilda.

**Figure 10: Priority cycling corridors within the City of Melbourne**



Short, medium and longer term planning and funding will be required to complete these priority cycling corridors. Significant coordination and cooperation will be required between multiple agencies as outlined in Tables 3 to 6. All projects undertaken by the City of Melbourne will be subject to further community engagement and feedback. This proposal is subject to further engagement with VicRoads and other agencies.

Table 3: Planning and tasks to be completed for cycling corridor from Sunshine to Box Hill

Cycling Corridor Sunshine to Box Hill Blue	Description	Timing Short <2 years Medium 2-5 years Long >5 years	Agency
Footscray Road	<ul style="list-style-type: none"> <li>Off-road bicycle routes</li> <li>Improve continuity and reduce conflict points along the shared path on the south side of Footscray Road, between Shepherd Bridge and Citylink overpass</li> <li>Improve connection to Moonee Ponds Creek Trail</li> <li>Investigate feasibility of a dedicated bicycle lane underpass crossing Footscray Road</li> </ul>	<ul style="list-style-type: none"> <li>Existing</li> <li>Short</li> <li>Medium</li> <li>Long</li> </ul>	VicRoads
Harbour Esplanade	<ul style="list-style-type: none"> <li>Off-road bicycle route</li> <li>Improve connections from La Trobe Street to shared path on the west side of Harbour Esplanade including traffic signal adjustments</li> </ul>	<ul style="list-style-type: none"> <li>Existing</li> <li>Short</li> </ul>	City of Melbourne
La Trobe Street	<ul style="list-style-type: none"> <li>Kerb-side physically separated route from Spencer Street to Victoria Street</li> <li>Extend the outbound bike lane in La Trobe Street to the intersection of Harbour Esplanade</li> <li>Investigate separation from Spencer Street to Harbour Esplanade</li> <li>Improve intersection design to protected intersections</li> </ul>	<ul style="list-style-type: none"> <li>Existing</li> <li>Short</li> <li>Medium</li> <li>Various</li> </ul>	City of Melbourne
Exhibition, Little Lonsdale, Spring, Victoria streets	<ul style="list-style-type: none"> <li>Investigate full time bicycle lanes and improved intersection designs</li> </ul>	<ul style="list-style-type: none"> <li>Medium</li> </ul>	City of Melbourne
Albert Street	<ul style="list-style-type: none"> <li>Chevron kerb-side separated bicycle lanes</li> <li>Install full-time bicycle lanes from Powlett Street to Hoddle Street</li> <li>Investigate green wave traffic signals for bikes to reduce delays and encourage slower speeds</li> <li>Install full-time bicycle lanes from Spring Street to Gisborne Street</li> <li>Upgrade existing chevron to permanent physically-separated bike lanes on complete length of street</li> </ul>	<ul style="list-style-type: none"> <li>Existing</li> <li>Short</li> <li>Short</li> <li>Medium</li> <li>Medium</li> </ul>	City of Melbourne

Table 4: Planning and tasks to be completed for cycling corridor along the Yarra River Corridor

Cycling Corridor River Corridor Orange	Description	Timing Short <2 years Medium 2-5 years Long >5 years	Agency
Lorimer Street	<ul style="list-style-type: none"> <li>• Mix of on- and off-road bicycle lanes</li> <li>• Connect Lorimer Street to a future extended promenade under Bolte Bridge</li> <li>• Investigate redevelopment of the redundant rail reserve to include off-road path</li> <li>• Investigate separated on-road bike lane along Lorimer Street as an alternative to large cycling volumes along the waterfront (include - off-road path from Bolte Bridge to Westgate Freeway/connects to Westgate Punt)</li> </ul>	<ul style="list-style-type: none"> <li>• Existing</li> <li>• Short</li> <li>• Medium</li> <li>• Long</li> </ul>	VicRoads  VicTrack
River Esplanade	<ul style="list-style-type: none"> <li>• Investigate making wooden deck more bike-friendly</li> <li>• Provide a wider shared path adjacent to Point Park</li> </ul>	<ul style="list-style-type: none"> <li>• Medium</li> <li>• Medium</li> </ul>	Docklands Coordination Committee City of Melbourne
Yarra River Corridor	<ul style="list-style-type: none"> <li>• Install improved lighting to assist way-finding at night</li> <li>• Upgrade Southbank Boulevard, Kavanagh Street, Balston Street, and investigate connections on City Road and Clarendon Street</li> <li>• Investigate floating bike path on the south side of the river from Spencer Street to Princes Bridge</li> </ul>	<ul style="list-style-type: none"> <li>• Short</li> <li>• Medium</li> <li>• Long</li> </ul>	Multiple land managers

Table 5: Planning and tasks to be completed for cycling corridor from Batman to Elsternwick

Cycling Corridor Batman to Elsternwick Red	Description	Timing Short <2 years Medium 2-5 years Long >5 years	Agency
Royal Parade	<ul style="list-style-type: none"> <li>• On-road bicycle lane</li> <li>• Investigate reduced speed limit to 40km/h</li> <li>• Install physically-separated kerbside bike lanes or viable alternatives off-road or via Bowen Crescent, Garton Street and Princes Park Drive</li> </ul>	<ul style="list-style-type: none"> <li>• Existing</li> <li>• Medium</li> <li>• Long</li> </ul>	VicRoads
Cemetery Road and College Crescent	<ul style="list-style-type: none"> <li>• Investigate on- or off-road improvements to connect cyclists on Swanston Street to Royal Parade and Princes Park Drive</li> </ul>	<ul style="list-style-type: none"> <li>• Medium</li> </ul>	VicRoads
Swanston Street	<ul style="list-style-type: none"> <li>• Improve connection to College Crescent roundabout</li> <li>• Reduce speed limit to 40km/h for northern section</li> <li>• Install bike lane from Mason Road to Tin Alley for people riding north</li> <li>• Redesign area of joint use between Flinders Street and Flinders Lane</li> <li>• Upgrade southbound lane on Princes Bridge</li> </ul>	<ul style="list-style-type: none"> <li>• Medium</li> <li>• Medium</li> <li>• Medium</li> <li>• Medium</li> <li>• Medium</li> </ul>	City of Melbourne
St Kilda Road	<ul style="list-style-type: none"> <li>• Physically-separated bike lane from Princes Bridge to Linlithgow Avenue southbound</li> <li>• On-road bicycle lanes</li> <li>• Improve safety to cross Southbank Boulevard for people riding north</li> <li>• Investigate physically-separated kerbside bike lanes along the full length of St Kilda Road</li> <li>• Install bike lanes on St Kilda Road</li> </ul>	<ul style="list-style-type: none"> <li>• Existing</li> <li>• Existing</li> <li>• Short</li> <li>• Short</li> <li>• Medium</li> </ul>	VicRoads

Table 6: Planning and tasks to be completed for cycling corridor from Coburg to St Kilda East

Priority Corridor Coburg to St Kilda East Purple	Description	Timing Short <2 years Medium 2-5 years Long >5 years	Agency
Royal Parade	<ul style="list-style-type: none"> <li>• On-road bicycle lanes</li> <li>• Install traffic calming at College Crescent intersection</li> <li>• Investigate reduced speed limit to 40km/h</li> <li>• Upgrade intersection at Cemetery Road West to remove one vehicle lane</li> <li>• Investigate physically-separated kerbside bike lanes from Park Street to Flemington Road</li> </ul>	<ul style="list-style-type: none"> <li>• Existing</li> <li>• Short</li> <li>• Medium</li> <li>• Medium</li> <li>• Long</li> </ul>	VicRoads
Haymarket roundabout	<ul style="list-style-type: none"> <li>• Investigate and install head-start traffic signal phasing, bike boxes and way-finding</li> <li>• Investigate redesign of intersection in conjunction with Melbourne Metro construction</li> </ul>	<ul style="list-style-type: none"> <li>• Short</li> <li>• Long</li> </ul>	VicRoads
Peel Street	<ul style="list-style-type: none"> <li>• Install full time bike lanes from Victoria Street to Franklin Street</li> <li>• Investigate physically-separated kerbside bike lanes</li> </ul>	<ul style="list-style-type: none"> <li>• Short</li> <li>• Long</li> </ul>	VicRoads
William Street	<ul style="list-style-type: none"> <li>• Investigate narrowing space between tram tracks to allow for upgrade of bicycle lanes</li> <li>• Maintain integrity of bike lanes when tram stops are upgraded</li> </ul>	<ul style="list-style-type: none"> <li>• Medium</li> <li>• Medium</li> </ul>	City of Melbourne/PTV
Collins Street	<ul style="list-style-type: none"> <li>• Investigate options for route via Collins Street to Market Street.</li> </ul>	<ul style="list-style-type: none"> <li>• Medium</li> </ul>	City of Melbourne
Queens Bridge Street	<ul style="list-style-type: none"> <li>• Investigate options for route <ul style="list-style-type: none"> <li>○ Via Main Yarra Trail and Clarendon Street, Normanby Street, Whiteman Street</li> <li>○ Via City Road</li> <li>○ Via Whiteman Street</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Long</li> </ul>	City of Melbourne
Cecil Street	Separated bicycle route	<ul style="list-style-type: none"> <li>• Existing</li> </ul>	City of Port Phillip

### Arterial roads

Arterial roads are managed by VicRoads on behalf of the Victorian Government. They carry the majority of traffic and link activity centres providing a safe, efficient and integrated road transport system for the economic and social benefit of the community.

In addition to work on the four cycling corridors we will collaborate with VicRoads to complete the following projects on, or adjacent to, arterial roads.

**Table 6: Projects on arterial roads**

Project	Location	Description
1.	Commercial Road	Investigate a bicycle-friendly link between Punt Road and St Kilda Road for people to ride to Fawkner Park and Albert Park
2.	Elizabeth Street north	Install bicycle lane from Queensberry Street to Victoria Street
3.	Main Yarra Trail (northbank)	Work to widen under Swan Street Bridge to ease congestion and investigate potential flooding under the west end of the bridge.
4.	Smithfield Road	Upgrade to Smithfield Road between Epsom and Racecourse roads

### Other major projects

Further projects that have been suggested by stakeholders and the community that would require the funding support of the Australian or Victorian Governments to implement include:

- Arden Street Rail Bridge over Upfield railway line
- Upgrade of Dynon Road bridge width or alternative routes as part of Victorian Government Western Distributor project
- Collins Street, Docklands to Yarra's Edge bridge connecting to Fishermans Bend
- Southbank floating pontoon as an alternative to Southbank Promenade
- Flinders Street Station re-development. Bridge at elevation from Flinders Street Station to Southbank
- Bicycle facilities on pedestrian bridge from Birrarung Marr to Alexandra Gardens
- Bridges over Upfield Rail Line in Royal Park
- Connect off-road paths in and around Westgate Park.

All of these projects are subject to further investigation, funding applications and community engagement and feedback.

### Routes in local areas

The City of Melbourne will create more local bike routes to cater for neighbourhood-scale trips, such as those to schools, shops and community facilities. Local routes will make it possible for cycling to become an easy choice for people as an alternative to car travel, particularly for journeys of fewer than five kilometres.

The neighbourhood routes are planned on low speed, low volume streets. The objective will be to improve the level of service for bicycles on these streets so over time they provide safe and convenient routes for people of all ages and abilities. We will also support local schools to promote active travel and improve the connectivity for children under 12 to walk or cycle to school on local footpaths where road space does not allow for physically-separated bicycle lanes.

The routes will provide opportunities to leverage the benefits of cycling to improve health and wellbeing, environmental sustainability, provide economic benefits to local shops and businesses and assist with social connectedness and safety at a neighbourhood level.

**Figure 11: Good Wheel Program in North Melbourne, helping local people to ride bikes**



Local routes have been adopted to enable travel to and from existing City of Melbourne community facilities and neighbourhood development programs. We are currently working with the Kensington Community Centre, North Melbourne Community Centre, Carlton Family Resource Centre and Boyd Community Hub, public housing estates and schools to support active cycling as a sustainable, healthy and affordable way of travelling.

Given the small number of issues highlighted in the crowd spotting data for South Yarra, improvement items will be considered on a case by case basis in this area. In the longer term this model is likely to be applied to other locations.

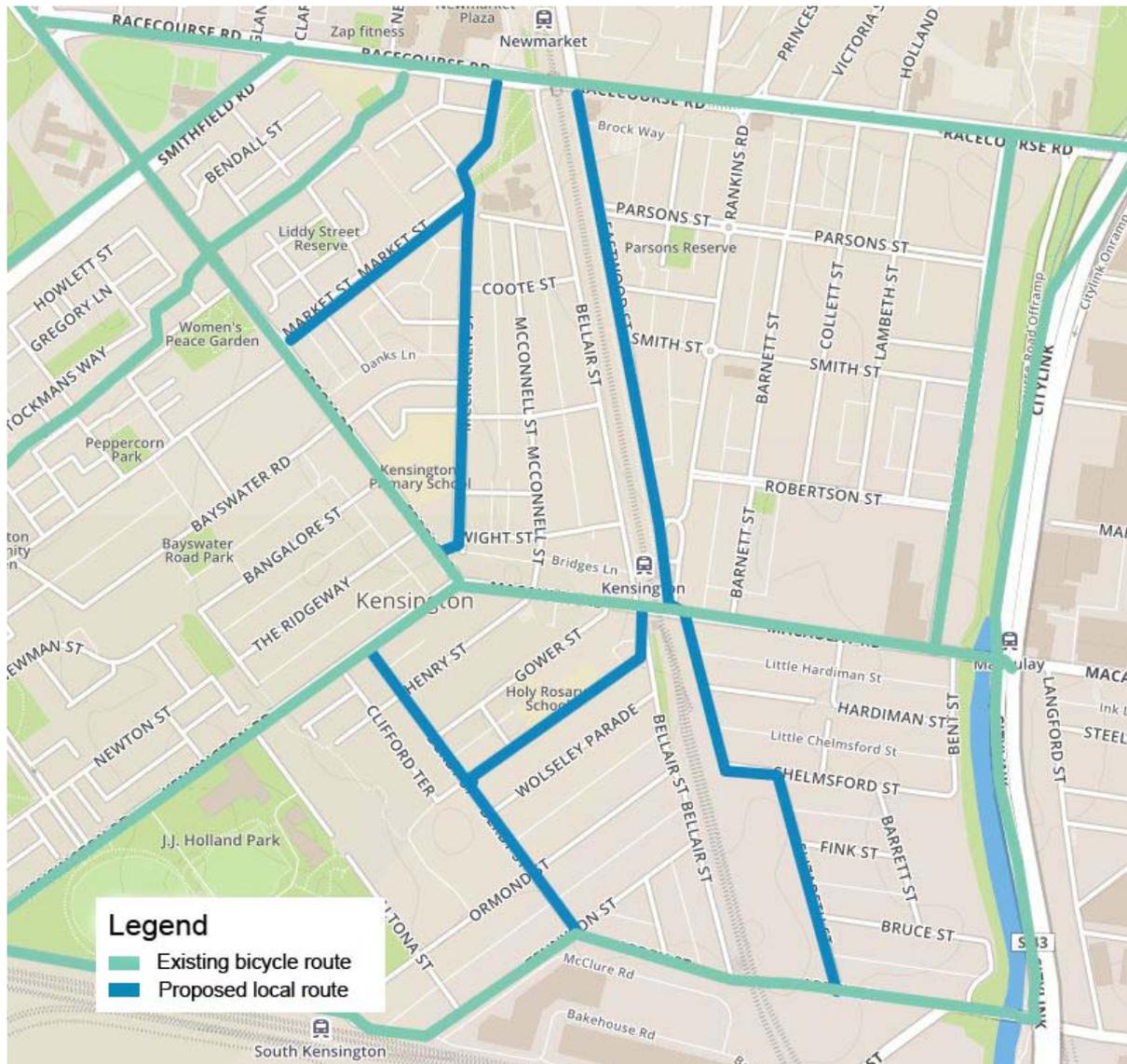
### Kensington

Existing bike lanes connect to JJ Holland Park and community facilities and assist commuters travelling to the city and home again along Racecourse, Epsom, and Macaulay Roads and Arden Street. Many local streets are traffic calmed with speed humps and the City of Melbourne is in the process of applying to VicRoads for an area-wide 40km/h speed limit.

The main local need is for family households (54 per cent of the suburbs' population<sup>13</sup>) to access local schools and shops by bike. The proposed improvements include:

- connections to Kensington Primary School and between Macaulay Road and shops in Racecourse Road along Market Street and McCracken Street
- connecting existing routes on Kensington Road and Arden Street through Derby Street
- connecting Derby Street to the Macaulay Road shops with linkages to Holy Rosary Primary School on Hampden Street
- connecting Eastwood Street to new lanes on Chelmsford Street and then Elizabeth Street to the existing bicycle route on Arden Street.

Figure 12: Map of existing and proposed local routes in Kensington



<sup>13</sup> City of Melbourne 2013

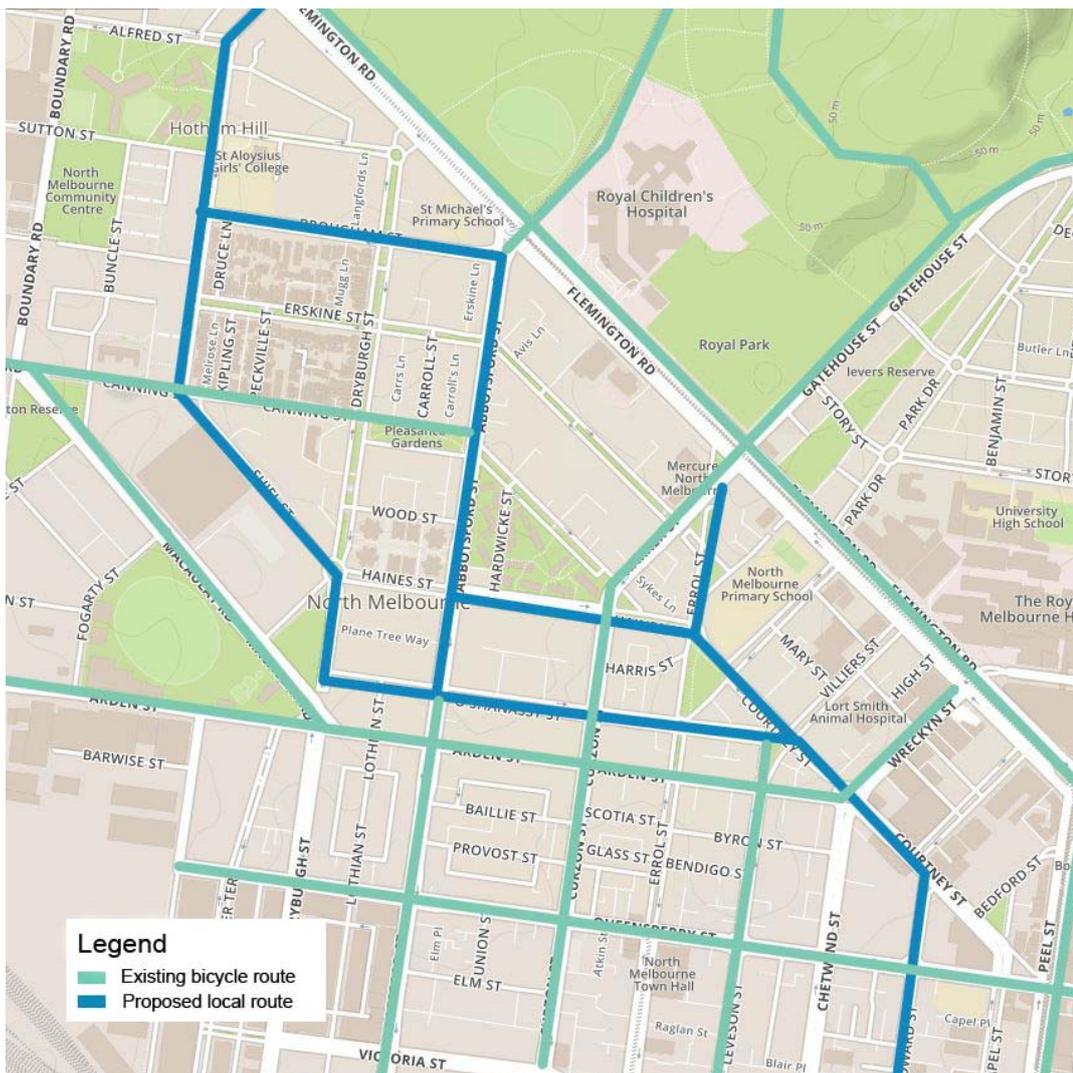
**North Melbourne**

Existing bike lanes operate on Macaulay Road, Arden Street and Flemington Road with a high quality route on Queensberry Street connecting to the city. Sixty per cent of the suburbs' population live in apartments. The high proportion of people living in apartments makes owning a bike and cycling an ideal mode of transport. North of Arden Street the bicycle network is less well developed. There are three schools, strip shopping centres and public housing. The local routes would be established to encourage active travel between these locations. The local routes would also assist less confident cyclists to take a series of local streets in a lower speed, lower volume environments, as an alternative to the high speed, high volume environment on Flemington Road. The routes may also assist workers to access the major hospitals and universities in Parkville from transport hubs in North Melbourne.

The proposed improvements include:

- providing local routes on Melrose, Shiel, Dryburgh, O'Shannassy, Courtney and Howard streets as an alternative to riding on Flemington Road with clear way-finding signage
- connecting residential areas to Melrose Street and the shops
- providing improved connections to St Aloysius Girls School and St Michael's Primary School on Brougham Street
- connecting residential areas to Haines Street shops and North Melbourne Primary School on Haines, Courtney and O'Shannassy streets.

**Figure 13: Map of existing and proposed local routes in North Melbourne**

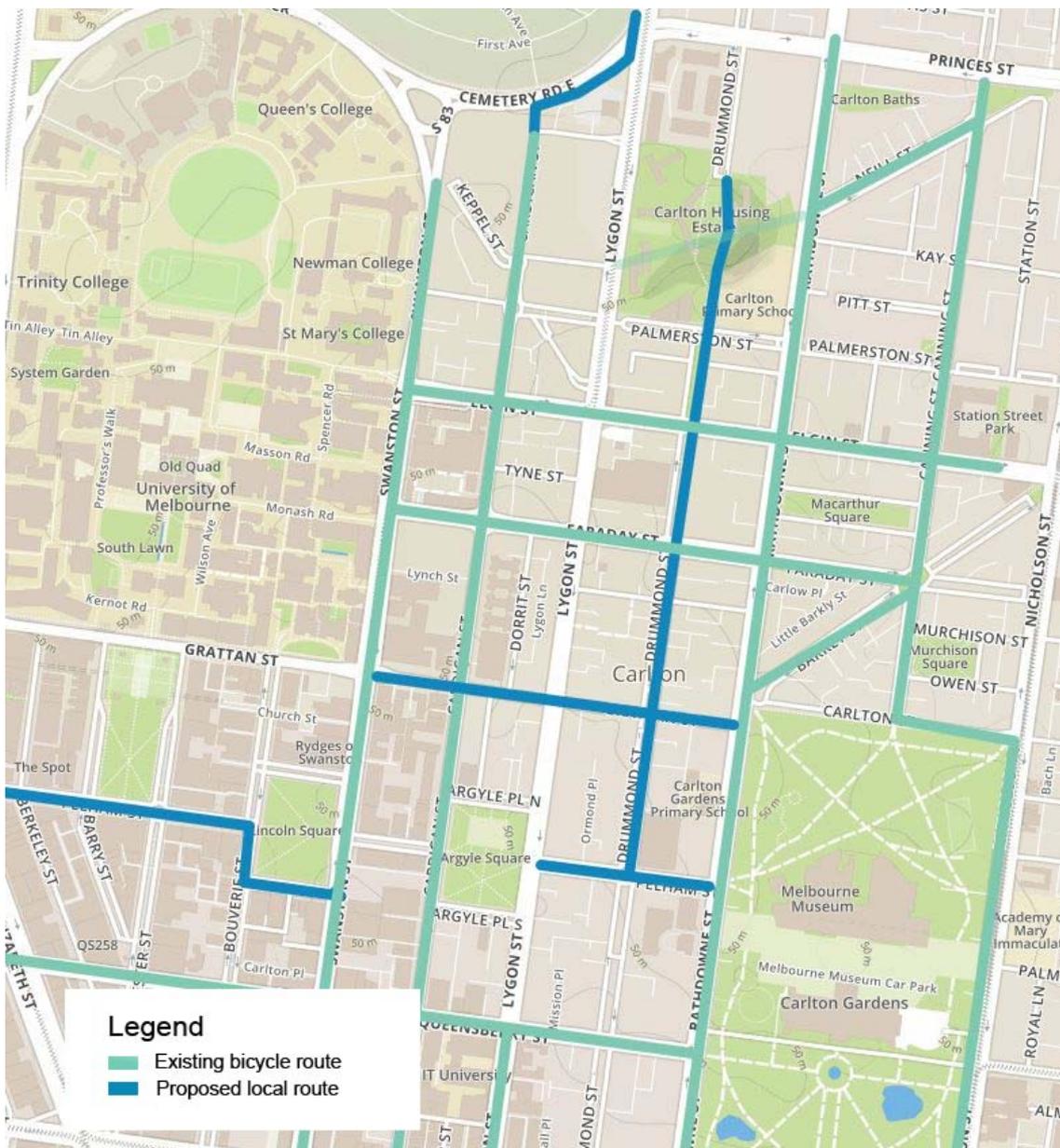


**Carlton**

Carlton’s population of 14,109 is made up of people with a median age of 25, and 56 per cent of people are born overseas, largely from Asia. Most people live in apartments (61 per cent) and a majority are single person households (43 per cent). Six per cent of workers coming into the area travel by bike compared to 45 per cent driving a car. Carlton is well serviced by existing bike routes but routes for families travelling between home and school could be strengthened. We are currently working with Carlton Gardens Primary School and Bicycle Network to establish active travel routes to the school. Proposed improvements include:

- connecting residential areas to Carlton Primary School
- connecting residential areas to local shops, dining and entertainment via Drummond Street as an alternative to Lygon Street
- providing bicycle facilities from Lygon Street shared path to Cardigan Street and Swanston Street
- connecting residential areas with Carlton Gardens Primary School on Grattan and Pelham streets
- connecting the University of Melbourne with the Swanston Street bike route on Leicester, Pelham and Bouverie streets and Lincoln Square South.

**Figure 14: Map of existing and proposed local routes in Carlton**

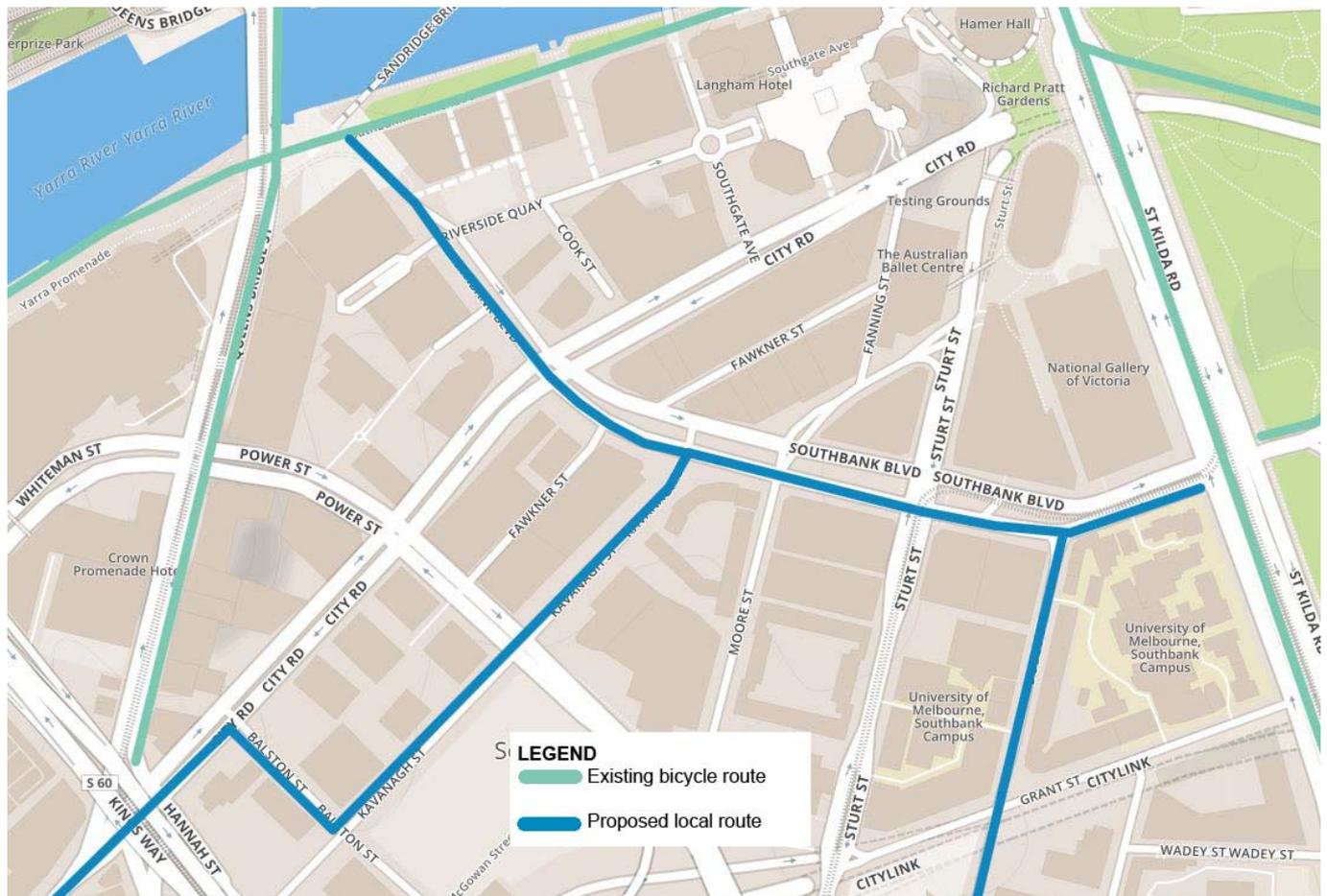


### Southbank

There are few existing bicycle routes through Southbank as an alternative to the busy shared space on Southbank Promenade. The City Road Masterplan highlights a need for strengthening links from areas of high density living in Southbank into the central city and to local community facilities. Proposed improvements include:

- connecting the Capital City Trail and off-road bicycle routes to University of Melbourne campus on Southbank Boulevard
- connecting residents to Boyd Community Centre on Kavanagh and Balston streets
- connecting bicycle route on Dodds Street to link Coventry Street to University of Melbourne Southbank Campus

**Figure 15: Map of existing and proposed local routes in Southbank**



## Local roads

In addition to the routes in local areas the following projects have been suggested by stakeholders and community members.

**Table 7: Projects on local roads**

Project	Location	Description
1.	Anderson Street	Install bicycle lane as link to Morrel Street Bridge
2.	Arden Street	Upgrade Macaulay Road to Howard Street
3.	Barkly Street	Improve connections from Rathdowne Street and Barkly Street to assist riders travelling to and from Canning Street
4.	Cardigan Street	Upgrade bicycle lane, particularly access to bike hub near Victoria Street
5.	Clarendon Street, East Melbourne	Improve link from Clarendon Street to encourage riders to use Jolimont Terrace to access Yarra Park and Melbourne Park
6.	Dorcas Street	Work with City of Port Phillip to complete Dorcas Street connection from St Kilda Road to Kings Way. Investigate hook-turn from St Kilda Road once route is complete
7.	Elizabeth Street	Investigate upgraded bicycle route from Victoria Street to La Trobe Street as part of Queen Victoria Market Precinct Renewal Master Plan development
8.	Elizabeth Street	Investigate bicycle-friendly environment between La Trobe Street and Flinders Street
9.	Exhibition Street	Investigate options for full-time bicycle lanes by completing traffic modeling studies
10.	Franklin Street and New Franklin Street	Prioritise bicycle-friendly route as part of Queen Victoria Market Precinct Renewal Master Plan development
11.	Grattan Street	Investigate potential to improve bicycle route from Flemington Road to Swanston Street in conjunction with Melbourne Metro project and potential changes to bus route
12.	Nicholson Street	Investigate transition from Gertrude Street to Museum Road with other partners
13.	Queensberry Street	Complete link to Rathdowne Street intersection on north side

## Off-road routes

The City of Melbourne's off-road network consists of various types of cycling environments. They include

- shared zones (walkers, riders and other vehicles in a low speed environment)
- shared paths (stencils and signs for walkers and riders to share)
- segregated paths (line marking for separate areas for walkers and riders)
- unsigned public spaces.

The following off-road routes have been suggested by stakeholders and community members.

**Table 8: Projects in off-road locations**

Project	Location	Description
1.	Carlton Gardens	Investigate improvements to the shared path including lighting and other safety measures. Improve connections between Spring Street and Canning, including crossings at Gertrude and Carlton streets
2.	Chapman Street Reserve	Upgrade connections for people riding bikes from Harker Street to Courtney Street as part of any greening opportunities in this area
3.	Fawkner Park	Construct a cross-over on Commercial Road and improve entry to park
4.	Harbour Esplanade	Investigate alternate options for slowing bicycles at pedestrian crossing points. Review existing speed humps
5.	Northbank	Investigate options for bicycle-friendly infrastructure in Banana Alley section and improve wayfinding, crossings, shared path signage, linemarking and lighting between Jim Stynes Bridge and Birrarung Marr
6.	Railway Place and Miller Street Reserve	Complete underpass and park upgrade which will enhance cyclist safety between Laurens Street and Railway Place
7.	Ron Barassi Senior Park	Provide connections for people riding bikes to Docklands Drive and existing bike paths
8.	Royal Park	Upgrade links through Royal Park to provide access from West Brunswick to Capital City Trail
9.	Royal Park	Construct new path on west side of tram track to provide access to Abbotsford Street
10.	Royal Park	Work with the Victorian Government over the longer term to construct new bridges over Upfield Railway Line near Ryder Oval and State Netball and Hockey Centre.

## Gardens and parks

Gardens focus on the presentation and enjoyment of horticultural features and passive recreation activities.

Gardens in the City of Melbourne such as Fitzroy Gardens, Carlton Gardens and Flagstaff Gardens are visited by thousands of international tourists, who are not familiar with the environment, and are not alert to cyclists. For these

reasons, cycling is usually restricted within gardens. Families with children under 12 are permitted to cycle in gardens, acknowledging that children need somewhere safe to practice riding that is not on a street. It is a resolution of Council that riding is not permitted in gardens, but is generally allowed in parks.

Parks are used for a broader range of recreational activities, including organised sport. Although there are restrictions on cycling in some parks, cycling is consistent with the broader active use objectives of Melbourne's parks. Cycling is permitted in Royal Park, some paths in Fawkner Park, and in Yarra Park. Masterplans for these parks detail where cycling facilities are provided for example the jogging track around Princes Park and the Tan Track in Kings Domain are not a shared path in order to help manage conflict with the thousands of walkers and joggers who use the track. At Princes Park bicycle facilities include an asphalt shared path along Royal Parade to the west of Princes Park and on-road bike lanes on Princes Park Drive to the east of Princes Park.

In many areas of the off-road environment, such as in Fawkner Park and Royal Park the space is shared, and walkers and cyclists are required to be mindful of each other. People riding bikes are often traveling at high speed and do not warn walkers of their approach. Walkers often do not take the most direct route and can be distracted by others or mobile or music devices. City of Melbourne programs to Share Our Streets seeks to remind people of the etiquette of sharing. This program will also be applied to shared spaces in parks in the municipality.

### Shared zones and spaces

Many shared zones and spaces exist across the municipality. These are integral to the bicycle network and provide connectivity and safe travel alternatives for people to ride bikes.

Shared zones and spaces are categorised into four main types:

- **formal shared zones** – pedestrians, cyclists and vehicles share the roadway. The typical speed limit in Melbourne's shared zones is 10 km/h. The beginning and end of shared zones is defined by signs and motorists and cyclists must give way to pedestrians at all times throughout the zone. Most shared zones are found in the laneways and smaller streets of the central city. Examples of shared zones include Hardware Lane and Degraeves Street. We are progressively expanding the shared zone network to meet council goals of a city for people and a connected city.
- **formal shared paths** – are public spaces designated for use by both walkers and bike riders. They are identified by the image of a pedestrian and a bike on pavement stencils and signs. People riding bikes must give way to walkers on shared paths and must keep to the left unless it is impractical to do so. An example of a shared path is the eastern footpath of Royal Parade, adjacent to Princes Park.
- **segregated paths** – have separate spaces for people walking and riding. They are normally found in areas where sufficiently wide footpaths or promenades exist. The separation of people walking and riding bikes helps to optimise safety in busy environments. Examples of these facilities include the western promenade in Harbour Esplanade at Docklands and the eastern footpath of Princes Bridge.
- **unsigned spaces** - the main example of this is the Southbank Promenade space on the south side of the Yarra River. This area is popular with cyclists, both as a commuter and recreational route. It is also a very busy pedestrian area and major tourist attraction. The space is occasionally used by motorised vehicles for servicing and deliveries. Advisory signs of 10 km/h have been installed to promote the safe sharing of the space by all users.

The City of Melbourne continues to manage these areas to minimise potential conflict between cyclists, vehicles and walkers. The City of Melbourne has received considerable community comment on the discomfort and perceived danger of walkers sharing with people riding bikes. People with disabilities, the young and the elderly are particularly vulnerable, and some report avoiding these areas.

On busy shared spaces it is desirable to separate facilities wherever possible. This is a preference of both walkers and people riding bikes. Where feasible, alternatives for commuter cyclists will be investigated. Alternatives that are being developed for commuter cyclists on Southbank Promenade are Southbank Boulevard, Kavanagh Street, Balston Street and City Road. In the longer term a floating pontoon path will be investigated for the narrow sections

of the Yarra Corridor. This is a design that has been successful applied upstream at Burnley. In other areas lowering speed limits on adjacent roads to encourage faster cyclists to move away from walkers will be considered.

We will also implement physical infrastructure measures such as advisory signage, linemarking, colour/texture, speed humps and design meandering, rather than straight paths, so people can intuitively assess the appropriate speed based on the environment. This is a similar principle to the way roads are now being designed.

The City of Melbourne will continue its Share Our Streets safety program to establish a stronger culture of sharing between walkers and people riding bikes. The engagement is consistent with Victoria Walks<sup>14</sup> recommendations for shared paths. Cyclists should be encouraged to ride at slow speeds, notify walkers of passing by calling out or ringing a bell and giving way to people walking. For walkers emphasis should be to keep to the left, be alert to surroundings and being aware when changing direction.

**Figure 16: Share our Streets program at Southbank**



Together with the Victorian Government, the City of Melbourne will continue to provide shared zones and spaces as safe routes for people to ride bikes in an off-road environment. These environments are particularly suitable for visitors not familiar with Australian roads, families and cautious cyclists, but care should be taken to also support vulnerable walkers.

<sup>14</sup> Victoria Walks 2015

## **Actions**

The City of Melbourne will:

- **work with VicRoads to update and align the network operating plan for 2016-2020**
- **implement guidelines and level of service in the planning and design of the bicycle network**
- **apply a level of service assessment to determine streets in the central city that most are most preferred by cyclists**
- **work with VicRoads to have new level of service criteria used in Network Fit Assessments to provide a more accurate representation of the benefits of bike lane improvements**
- **work with VicRoads to plan and implement cycling corridors and upgrades to arterial roads, as listed**
- **seek external funding for major bicycle projects, as listed**
- **plan and implement local neighbourhood routes and upgrades on local roads, as listed**
- **plan and implement off-road paths, as listed**
- **continue to develop alternatives to busy shared zones and spaces and implement physical and behavioural measures to increase safety**
- **continue to raise awareness of the rules of shared spaces and the etiquette of bicycling amongst others.**

### 3. FACILITIES FOR BICYCLES

**Goal:** Bicycle-friendly facilities to make it easy to travel by bike and park

**Targets:** Increase bicycle parking by 2000 in key public locations and planning for large scale, safe parking facilities at transport hubs will be progressed

**Construct bicycle maintenance stations at entrances to the city**

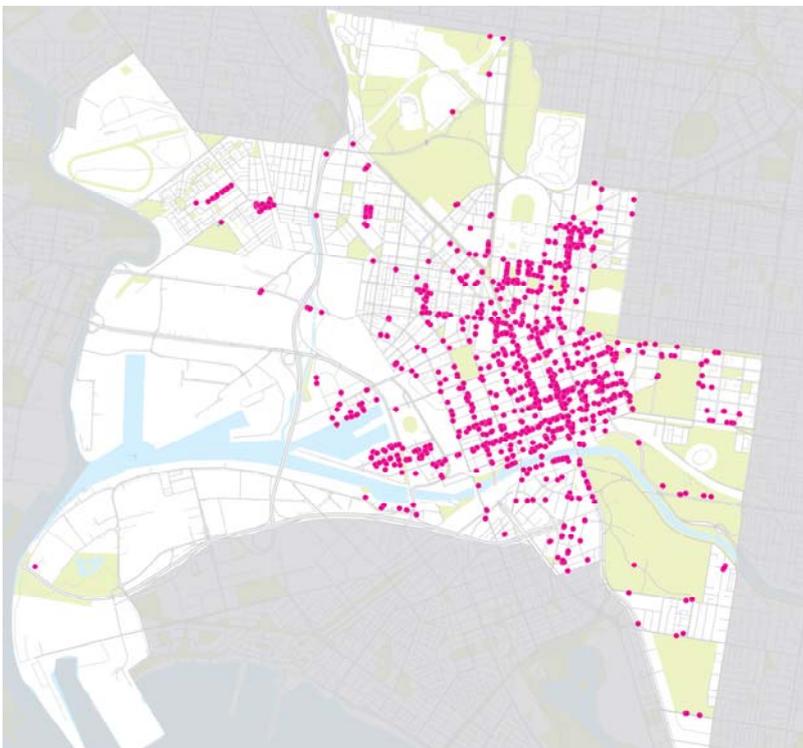
A recent study<sup>15</sup> provides strong evidence that access to appropriate bicycle parking and end-of-trip facilities, such as change rooms, showers and lockers, play an important role in whether people decide to ride. More than half of respondents said the availability of end-of-trip facilities affected their decision to ride to work in difficult or unpredictable weather conditions. Visible, secure, well-located and easy to access bicycle parking can remind and inspire people of the convenience to ride to many destinations.

#### On-street bicycle facilities

Bicycle parking complements the investment in the on-road and off-road cycle network. Visible and convenient parking highlights the choice to ride a bike as a cheap and sustainable transport option and a viable alternative to private car travel.

The City of Melbourne has continued to respond to the high demand for bicycle parking space in popular destinations, such as public places, entertainment and retail precincts, by installing approximately 200 on-street bicycle hoops each year. Over 3,000 on-street bicycle hoops in the municipality cater primarily to cyclists engaging in short trips to shopping and entertainment destinations, many of these double as protection for trees. Higher numbers of available hoops has seen a slight reduction in people locking their bikes to posts and street furniture.

**Figure 17: Bicycle parking hoops in the municipality**



<sup>15</sup> Ahmed et. al. 2012

Large scale bicycle parking facilities close to public facilities and tertiary education precincts attract a high number of bikes. Secure locks and natural or security camera surveillance are crucial for on-street locations.

**Figure 18: Bicycle parking in Pelham Street, Carlton to service University of Melbourne buildings**



Opportunities exist to increase bicycle parking throughout the municipality in selected high usage locations. Evidence from a site near Lygon Court in Carlton and international studies, suggests that replacing on-street car parking with bicycle facilities has had a positive impact on local businesses. While cyclists tend to spend less per shopping trip than drivers, they also make more trips, increasing expenditure in the local economy over time. The larger number of cyclists accommodated by the space previously allocated to a single car parking space results in higher overall spending. The City of Melbourne will undertake an economic study to evaluate the success of any new on-street parking initiatives. Repair facilities and stations should be included at regular intervals in networks (within 1km of each point) to provide support for cyclists using the networks. The following locations for on-street bicycle parking have been suggested by stakeholders and community members.

**Table 9: Potential new locations for on-street bike parking**

Project	Location	Description
1.	A'Beckett Street	Bike corral near RMIT Building 80 to support student population
2.	Bourke Street	Hoops at end of tram stop near Royal Lane to encourage people to dismount and near Spring Street
3.	Domain Road	Bike corral in front of cafes to support retail and entertainment
4.	Federation Square	Work with property manager to increase hoops to support public events, retail and entertainment
5.	Flinders Street	Bike corral near public toilet to support Degraeves Street and station
6.	Therry Street	Bike corrals at Queen Victoria Market
7.	University of Melbourne	At entrances and in South Carlton precinct to support active travel

Project	Location	Description
8.	Little streets in the city	Bike corrals in association with streetscaping and kerb extensions
9.	Exhibition Street	Bike corrals to support park and walk outside times of bike lane operation

In determining the location for additional bicycle parking hoops, the City of Melbourne will undertake an annual review of requests for more bicycle hoops via the City of Melbourne's Pathway system and will ensure that new hoops are located close to public facilities and retail and entertainment centres, as well as popular destinations that provide stronger natural surveillance.

There are opportunities to install more bicycle hoops adjacent to parks and gardens. Placing bicycle parking facilities on streets or the edge of parks makes them visible to people who want to cycle and identifies a consistent approach to the entrances to parks and gardens. Increasing their visibility makes them easy to locate, reduces the opportunity for theft and makes them easily accessible. It also helps to reinforce the pedestrian priority use of gardens as spaces. In parks the provision of bicycle hoops near pavilions and clubs encourages people to ride bikes to these destinations. Suggested locations include Royal Park, Princes Park and Fawkner Park. These actions will be included in park Masterplans wherever possible.

### Bicycle hubs

The City of Melbourne has supported the installation of bike hubs at City Square Car Park and RMIT. Hubs feature secure parking, showers and change facilities. Private hubs are also located in Building 80 at RMIT and have previously operated along the Yarra River. We will continue to support building managers and commercial car park operators to provide secure parking facilities for people riding bikes.

Provision of more bicycle parking at railway stations will facilitate riding to or from train stations. We will work actively with the Department of Economic Development, Jobs, Transport and Resources (DEDJTR), and Public Transport Victoria (PTV) to improve bicycle facilities at stations, including planning for secure, undercover parking and connecting lanes at new Melbourne Metro stations

### End-of-trip facilities

End-of-trip facilities such as change rooms, showers and lockers are primarily the responsibility of businesses, workplaces and other major organisations. A recent survey of 280 tenants by commercial real estate company Colliers International found that tenants considered bicycle parking and end-of-trip facilities to be more important in retaining staff than car parking – in contrast, in 2008 tenants considered car parking to be the more important factor.

Studies by government agencies around the world have found significant benefits for employers, schools, universities and other organisations who provide best-practice end-of-trip facilities, including: a healthier, happier workforce or student body; higher productivity and better attitudes towards work; reductions in absenteeism; reduced car parking demands and associated costs; reduced work/study time lost from traffic congestion; and an improved environmental and healthy image for the organisation.

We will continue to work with business associations and companies to provide their workers with end-of-trip facilities within their buildings.

## Bicycle security

Bicycle theft in Victoria is at a five-year high<sup>16</sup> representing a significant cost to the community. Over the last five years 3,442 bikes have been reported stolen within the City of Melbourne<sup>17</sup>, up 70 per cent from the previous period, with many more cases unreported. Victoria Police suggest many thefts would be preventable through basic knowledge of security. An audit of city streets identified that a large per centage of bikes locked up within the central city were secured using ineffective locks. Particularly vulnerable is the international student community accounting for one in every five residents of the City of Melbourne. International students' lack of local knowledge and perceptions of community safety can increase their vulnerability and exposure to theft and educational institutions are a major target for thieves. The 20-29 year old age group report more instances of bike theft than any other<sup>18</sup>.

Joint programs with the City of Melbourne, Victoria Police and Bicycle Network have directly engaged with international students and tertiary institutions to raise awareness of bike theft and subsequently influence behaviour. Tags were placed on these bikes with a message about securing bikes and directing people to secure parking such as those provided by RMIT Building 80 secure bike room with key card entry.

Issues of bicycle theft have also been identified by City of Melbourne in public housing estates<sup>19</sup>, and progress is being made through the Public Space Improvement Project (PSIP) to advocate for secure bike storage facilities on public housing estates and around community facilities. Secure parking, combined with community activities such as the Wheelie Good Day at Melrose Street, assist to raise awareness of bike security, maintenance and personal safety in these locations.

## Signage, signals and other support for cyclists

The installation of way-finding signage, signal priority treatments, maintenance stations and other support measures for cyclists is aimed at creating a holistic support system for people to ride bikes. It will help bike riders find their way around Melbourne safely, efficiently and intuitively and direct and support them on main routes. The City of Melbourne's objective is to deliver a comprehensive system that enables cyclists to confidently navigate without the need to read a map or use mobile devices on a bike, which can be difficult, distracting and hazardous.

### Way-finding

The City of Melbourne has directional signage on most main bicycle routes. These comprise mainly of fingerpost-style directional signs. Recently VicRoads has developed consistent statewide standards. The City of Melbourne is installing and replacing signs according to this standard.

**Figure 19: Wayfinding signage design**



<sup>16</sup> Butt and Dow 2014

<sup>17</sup> Crime Statistics Agency Victoria 2015

<sup>18</sup> Crime Statistics Agency Victoria 2015

<sup>19</sup> Capire 2015

On off-road routes such as the Capital City Trail, a review of way-finding was undertaken and directional signage with distances to major destinations have been installed. These are complemented by pavement decals that are in an easier sightline for moving cyclists.

More way-finding options can be put in place to assist new and existing cyclists to feel more confident to ride a bike. Consideration will be given to strategies to guide people to popular destinations, update them on their progress and give an indication of the level of service or quality of the route. Way-finding will also be used to assist new cyclists to find bicycle friendly roads and streets (should it be their preference).

We will work with adjoining municipalities and tourism, business and retail associations to include way-finding for bicycles as part of a city-wide way-finding strategy. This will include links to the bike share. The following way-finding projects have been suggested by stakeholders and community members.

**Table 10: Priority way-finding projects**

Project	Location	Description
1.	Between bike share stations	Sign key routes between stations and destinations (also noted previously under 'wayfaring')
2.	Birrarung Marr	Signage to navigate from Swanston Street to Exhibition Street as an alternative to Flinders Street
3.	Capital City Trail	Continue to work with adjoining municipalities and land managers in Southbank, Northbank and Docklands on consistent way-finding and advisory signs
4.	Cycling corridors	Signage and decals consistent with way-finding strategy
5.	La Trobe Street – Albert Street connection	Signage and decals to navigate between quality routes on La Trobe Street and Albert Street and avoid Lonsdale Street bus route
6.	North Melbourne shimmy	Install way-finding for route through local streets of North Melbourne to the city as an alternative to Flemington Road
7.	Northbank	Develop improved way-finding from Jim Stynes Bridge to Birrarung Marr
8.	William Street	Signage to navigate to William Street as an alternative to King and Spencer streets

### Signals

Bicycle traffic signal lanterns are provided on key bicycle routes such as Swanston Street and Canning Street. All traffic signals are managed by VicRoads. Lanterns showing a bicycle symbol, combined with bike boxes at intersections, allow people riding bikes to start early at traffic lights. This arrangement assists to make people on bikes more visible to motor traffic, reduce the potential for conflict with vehicles and allows safer progress through busy intersections.

So as to complement priorities for pedestrians and public transport, there is potential to install more early start bicycle lanterns at signalised intersections on priority bicycle routes.

The following signal projects have been suggested by stakeholders and community members.

**Table 11: Priority early start signal projects to be developed in collaboration with VicRoads**

Project	Location	Description
1.	Albert Street	Establish green wave signal timing coordination reduce travel times for cyclists riding at approx. 15-20km/h to moderate cyclist speeds on downhill sections.
2.	Collins Street	Early starts for people walking and riding bikes at all intersections
3.	Collins Street and Macarthur Street	Early start westbound for bikes to enter narrow Collins Street carriageway ahead of other vehicles
4.	Haymarket roundabout	Investigate early starts for bikes to establish themselves in existing lanes in front of motor vehicles, particularly for northbound cyclist travelling between Elizabeth Street and Royal Parade.
5.	Haynes Street and Curzon Street	Install early start to assist people riding on North Melbourne local route and for children to get to school
6.	Southbank Boulevard	Investigate green wave signal timing coordination for cyclists as part of redevelopment
7.	Swanston Street north	Investigate changes to sequences to give walkers, cyclists and trams priority

### **Bicycle pumps and maintenance stations**

The City of Melbourne's Share Our Streets road safety program offered bicycle checks to promote bicycle safety to people riding bikes. Mobile mechanics operated during the morning peak to engage with cyclists and ensure their bike was in good working order. Mandatory fittings such as bike bells and lights were given away.

To promote bicycle safety, encourage people to ride and provide a relaxed stopping point, it is proposed several pumps and maintenance stations are installed at key entrances to the city and on highly utilised routes.

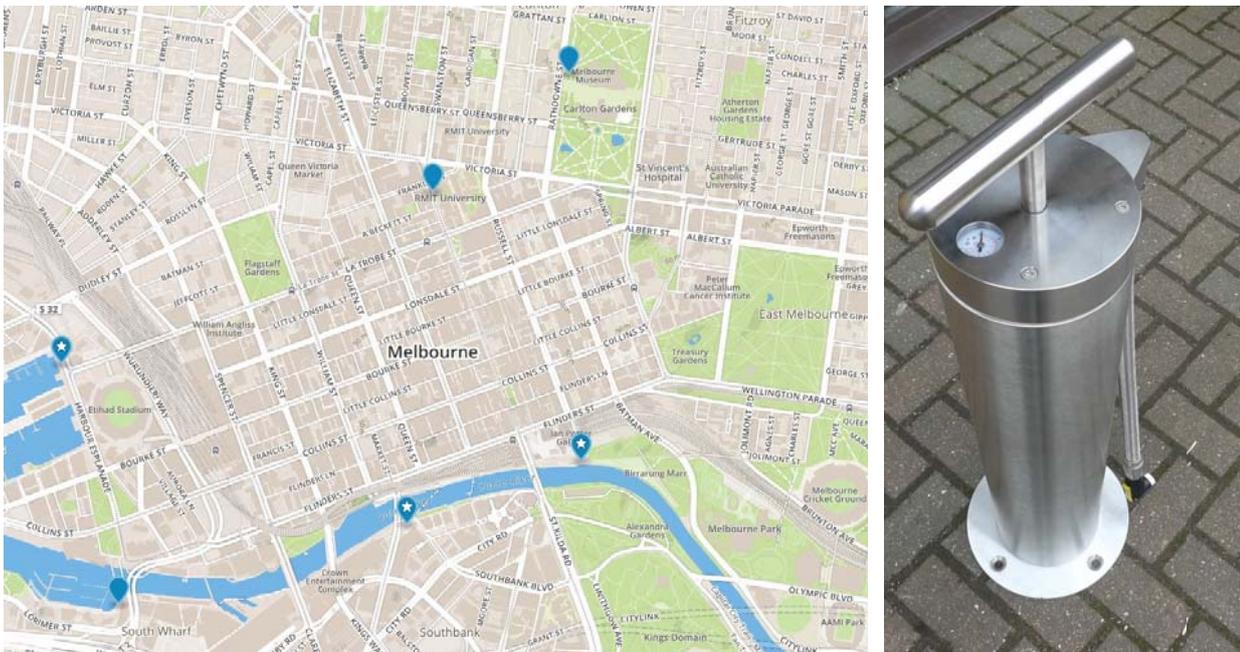
Subject to further investigations relating to services and surveillance, public bike pumps are proposed at:

- Queensbridge Square near public bikes
- Yarra's Edge near Webb Bridge
- Harbour Esplanade near La Trobe Street
- Birrarung Marr, Art Play near public toilets
- Swanston Street, RMIT near public bikes
- Rathdowne Street, Melbourne Museum near public bikes
- Bike maintenance stations at:
- Harbour Esplanade
- Birrarung Marr

- Queensbridge Square.

Sites in the vicinity of Moonee Ponds Creek will also be examined for possible bike pump placement. Where possible the stations will be combined with drinking fountains to create a hub where people can stop, chat, relax and “refuel” before progressing at a slower speed. At times bicycle mechanics could be present to engage with cyclists and give them tips on maintenance and tips on slowing down and sharing public spaces. A maintenance schedule will be established for the bike pump stations.

**Figure 20: Proposed locations for bicycle pumps and maintenance stations**



**Other support**

The City of Melbourne has installed green pavement, bicycle boxes and vibra-line rumble strips on quality bicycle routes. Green pavement with white bicycle stencils has been installed at conflict points where driveways, laneways or streets intersect with a bicycle lane or on the approach to intersections and where motorists may be changing lanes or preparing to turn left.

Pavement stencils could also be used as effective complementary aids to the new way-finding signage, particularly to encourage cyclists to choose bicycle friendly routes.

**Figure 21: Example of pavement stencil designs**





### Melbourne Bike Share

The Melbourne Bike Share scheme, an initiative of the Victorian Government commenced in May 2010. The City of Melbourne works in collaboration with the contractor Royal Automobile Club of Victoria (RACV) and the Victorian Governments' agent Public Transport Victoria (PTV) to manage existing sites and identify future sites for bike share stations within municipality.

There are 51 bicycle stations with over 600 bicycles operating in the inner city. The stations are mostly located within the City of Melbourne with some in adjoining municipalities.

The City of Melbourne will continue its strong support for the Bike Share scheme working with PTV and other stakeholders to facilitate and encourage further expansion of multi-modal transport opportunities including greater use of Bike Share for commuting within the central city.

### Actions

The City of Melbourne will:

- increase on-street bicycle parking by 2000 hoops in key locations
- provide bicycle parking facilities at the entrances and key destinations in parks including at park entrances and pavilions and clubs
- work with the Victorian Government to provide end of trip facilities at major transport hubs especially planned Melbourne Metro stations
- encourage businesses to provide secure bike parking and end-of-trip facilities in buildings
- locate on-street bicycle parking in areas with active or passive surveillance
- remove abandoned bicycles as a deterrent to theft
- advocate for secure bike storage facilities on public housing estates and, in and around, community facilities
- work with Victoria Police to raise awareness of safe parking facilities and practices for locking bikes

- support targeted awareness and educational programs to raise awareness of bike theft and security particularly around tertiary institutions
- develop a way-finding strategy in consultation with business and tourism stakeholders
- provide green wave, early starts and bike boxes for bike riders on cycling corridors
- install maintenance stations and bicycle pumps at key entrances to the city
- support Melbourne Bike Share.

## 4. A SAFER ENVIRONMENT TO RIDE BIKES

**Goal: A safer environment for people to ride bikes**

**Target: Zero fatalities or serious injuries.**

The Australian and Victorian Government Safe Systems approach states that no death or serious injury is acceptable on our roads. The City of Melbourne continues to work in partnership with all levels of government and key stakeholders to make this statement a reality. Our Road Safety Plan 2013-17 outlines actions to welcome and support vulnerable roads users including people riding bikes, through world leading road safety practices. We use evidence from research and statistical information such as VicRoads CrashStats to identify physical and behavioural issues and partner with VicRoads and the Traffic Accident Commission (TAC) to develop road safety programs to support people to ride bikes.

### Crash statistics

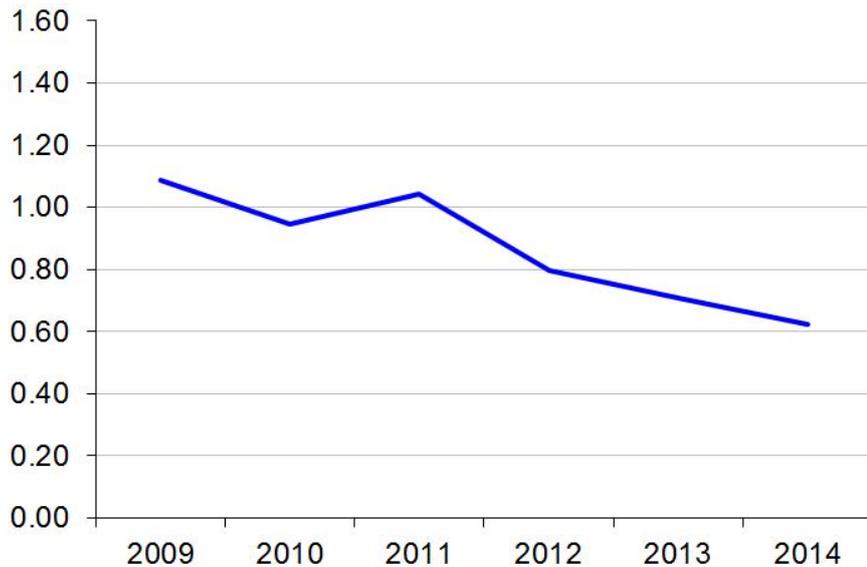
The total number of reported crashes involving people riding bikes in the municipality has been fairly consistent since 2009 (Table 13). Over the same period, the population and number of people visiting the city has grown to a point where almost a million people come into the central city each week day. The number of people cycling in the city has almost doubled since the beginning of this period.

**Table 13: Crashes involving injury to cyclists in the City of Melbourne by year (Source: VicRoads CrashStats)**

Year	Fatal	Serious injury	Other injury	Total
2009	0	68	153	221
2010	1	58	181	240
2011	1	72	206	279
2012	0	57	161	218
2013	1	69	175	245
2014	0	68	164	232

Bike crashes per cyclist have reduced consistently and significantly by almost 50 per cent since 2009. This reduction has been significant since 2012 when bicycle-friendly projects such as the Swanston Street redevelopment and La Trobe Street, St Kilda Road, and Princes Bridge separated bicycle lanes were completed.

**Figure 22: Bicycle crashes per cyclist (indexed per 10,000 cyclists recorded in the morning peak)**



*Note: Cyclist volumes are based on City of Melbourne surveys conducted at 19 locations in March during the morning peak (7-10am), crash numbers are per calendar year from VicRoads CrashStats database. As the cyclist volumes only include a sample of cyclists riding in the municipality, the graph provides only a comparison of improvement in regards to crashes per cyclist. The graph does not indicate the actual percentage likelihood of a cyclist actually being involved in a crash.*

Table 14 shows the most frequent type of crash involving people riding bikes in the municipality is when a cyclist collides with an open door of a vehicle, commonly known as car-dooring. The proportion of car-dooring crashes is lower for 2012-14 (20%) than it was for the previous bike plan period 2007-11 (23%). Despite bike numbers increasing significantly, the total number of car-dooring crashes per year is lower for 2012-14 (46 per year) than it was for 2007-11 (52 per year). Bike lane projects which have increased separation between cyclists and parked vehicles and complementary education programs are likely to have contributed to the drop. They include kerbside separated bike lanes, such as La Trobe Street, Albert Street, Elizabeth Street North and St Kilda Road southbound and also chevron separated bike lanes such as Clarendon Street, William Street, Victoria Street, Swanston Street North and Princes Bridge.

**Table 14: Type of bicycle crashes in the City of Melbourne**

<b>Description</b> (CrashStats identification number)	<b>2007-2011</b> Number per year	<b>2007-2011</b> Per cent	<b>2012-2014</b> Number per year	<b>2012-2014</b> Per cent
Collision with an open door of a vehicle (163)	52	23%	46	20%
Right-through (121)	23	10%	33	14%
Left-turn sideswipe at intersection (137)	22	10%	26	11%
Lane side swipe in parallel lanes (133)	14	6%	11	5%
Cross traffic and far and near at intersections (110,111,112,113,116)	25	11%	26	11%
Out of control on carriageway (174)	15	7%	15	6%
Vehicles off footpath strikes vehicle on carriageway (148)	9	4%	11	5%
Vehicle emerging from driveway (147)	4	2%	3	1%
Other	59	26%	59	26%
<b>Total</b>	<b>224</b>	<b>100%</b>	<b>229</b>	<b>100%</b>

Crashes at intersections, including right-through and left-turn sideswipe crashes, have increased over time as shown in Table 15. Mid-block crashes involving car-dooring and side-swiping have decreased over the same period.

**Table 15: Intersection and mid-block crashes per year**

<b>Description</b> (CrashStats identification number)	<b>2007-2011</b> Crashes per year	<b>2012-2014</b> Crashes per year
Intersection crashes (per year) (110, 111, 112, 113, 116, 121, 137)	70	85
Mid-block crashes (per year) (133, 163)	65	57

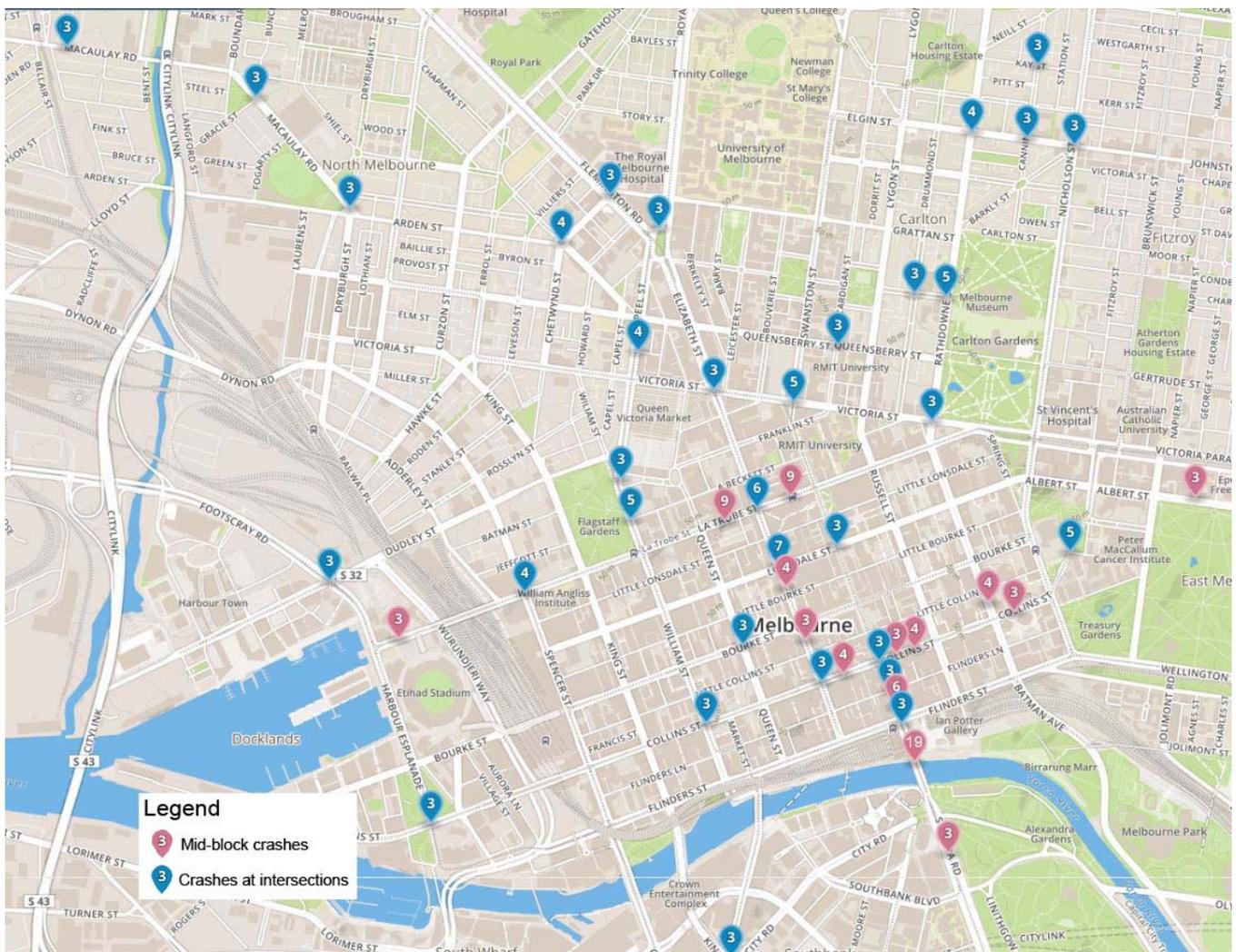
Figure 23 shows the most common crash locations for bicycles in the City of Melbourne during the period of the last bicycle plan.

Crashes remain high in the street section of Swanston Street between Princes Bridge and the vicinity of Flinders Street Station. The number of car dooring crashes involving people riding into the city on Princes Bridge has decreased significantly since the separated bike lane was installed on the bridge in June 2013. There were eight crashes involving opening car doors before the lane and one car dooring since June 2013. Bike volumes have increased significantly in this location in recent years.

Nine crashes have been recorded on La Trobe Street between Queen and Swanston streets since 2012. This section of La Trobe Street is steep and the majority of bike crashes involved cyclists travelling downhill towards Elizabeth Street. The crashes are likely to be attributable to motorists misjudging the high speeds of people riding bikes in these sections of La Trobe Street (30-35km/h for the 85<sup>th</sup> percentile).

High crash locations will be regularly audited to identify road safety improvements.

**Figure 23: Location of bicycle crashes in the City of Melbourne 2012-14 (Source: VicRoads CrashStats)**

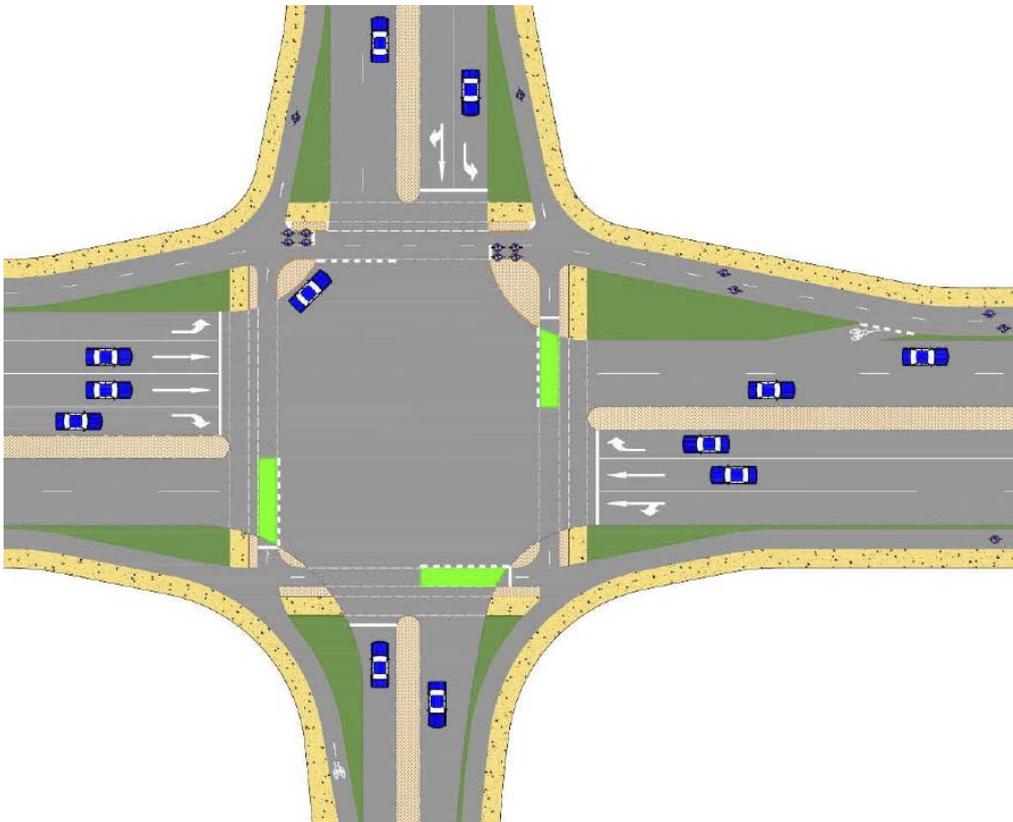


## Intersections

Evidence showing an increasing number of crashes at intersections is consistent with community feedback about people's perception of safety around intersections, particularly where bike lanes narrow or disappear on the approach to intersections. Constantly improving intersection design and safety is one way actual and perceived safety for people riding bikes can be improved.

The City of Melbourne will work with VicRoads to provide a better level of service for bicycles at intersections particularly on cycling corridors. Controlled turns (traffic signal arrows), advanced head-start bike lanterns and protected intersection designs, such as those illustrated in Figure 24, will be investigated and trialled subject to VicRoads approval. The protected intersection design aims to reduce motorists' turning speeds to less than 20km/h and improve turning motorists' vision of cyclists and pedestrians by 'squaring up' left turning vehicles at the point of potential conflicts with motorists. All movements are intended to be signalised.

**Figure 24: Protected intersection design**



### Mid-block crashes - car-dooring, side-swiping, driveways

The reduction of mid-block and car-dooring crashes shown in Table 15 can be partially attributed to the physically-separated bike lanes which were installed between 2007 and 2014 in:

- Albert Street;
- La Trobe Street;
- St Kilda Road - southbound; and
- Elizabeth Street.

Other bike lane improvements that have assisted to reduce car dooring include:

- Princes Bridge - northbound (chevron line marking, to address car-dooring where passengers were alighting from vehicles when stopped in traffic)
- Clarendon Street, East Melbourne (double chevron)
- Swanston Street north (double chevron)
- William Street, Melbourne (mixture of single and double chevron)
- Victoria Street, West Melbourne (double chevron).

Studies<sup>20</sup> have proven that the double chevron bike lane designs which include painted chevrons adjacent to parked cars assist people to ride outside the car-dooring zone more often.

The City of Melbourne has worked on both physical and behavioural initiatives to reduce car-dooring. The Share our Streets road safety program has quantified driver awareness of car-dooring and provided tips to avoid opening a door into the path of a person riding a bike, such as encouraging people driving cars to open the door with their left hand to assist them to look out for people riding bikes motorists look for approaching cyclists. Work is continuing, particularly with frequent drivers such as taxi drivers and couriers, to end car-dooring.

Awareness of drivers to keep a safe distance when driving past bike riders has been raised through the Amy Gillett Foundation's, a metre matters campaign. This awareness may have contributed to the reduction in side-swipe mid-block crashes. Queensland's' two-year trial requiring motorists to leave a metre when overtaking bike riders at speeds of up to 60km/h and similar measures in the Australian Capital Territory and South Australia assist to raise awareness of side-swiping.

Mid-block crashes remain high where there are driveways with a high volume of people crossing bike lanes. This issue seems to occur where there are car parks and people on bikes travelling downhill on the improved physically-separated bike lanes where they have a perceived feeling of safety. La Trobe Street and Albert Street have a high number of recorded mid-block crashes on downhill stretches and conditions could be improved through video detection with a warning or no right turn or controlled right turns at exits. These aids are in the process of being installed in other locations such as the Melbourne Museum car park in Rathdowne Street, Carlton.

There are a high number of mid-block crashes where vehicles are parked close to tram tracks in Swanston Street between Flinders Street and Flinders Lane. This location should be investigated further and recommendations implemented.

### Speed limits

Research<sup>21</sup> indicates that lower speeds, especially those below 30km/h, drastically lessen the risk of fatalities. The fatality risk for people involved in crashes with vehicles traveling at 50km/h is more than twice as high as the risk at 40km/h and more than five times higher than the risk at 30km/h. Recent speed limit reductions for streets and suburbs in the municipality are shown in Table 16.

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<sup>20</sup> CDM Research 2012

<sup>21</sup> Rosen and Sander 2009

**Table 16: Streets and areas with recent speed reductions**

Location	Previous limit	New limit
Hoddle grid, Melbourne central business district	50km/h	40km/h
Rathdowne Street, Carlton	60km/h	40km/h
Kensington, all local streets	50km/h	40km/h
Parkville South, all local streets	50km/h	40km/h
Errol and Queensberry streets, North Melbourne (part)	60km/h	40km/h
Elgin and Faraday streets, Carlton (part)	60km/h and 50km/h	40km/h

We will work to reduce speed limits to reduce speed differentials where people riding bikes and other vulnerable road users mix with motorised vehicle traffic. Speed reductions are being investigated for Melbourne's boulevards including Royal Parade and Elizabeth Street. We will continue to investigate these and other opportunities recommend speed reductions to VicRoads across the municipality to improve safety for people riding bikes and other road users.

### Perception of safety

Analysis of CrashStats provides information about the actual safety of people riding bikes, but peoples' perception of how safe it feels to cycle has an impact on their willingness and frequency to cycle. Community feedback suggests that people can be put off cycling by the perception of danger. One in four respondents from our survey in May 2015 said safety was the main concern for them to take up cycling or cycle more frequently. Councils' Perception of Risk survey (2013)<sup>22</sup> in relation to risk of accidental injury cites the highest proportion of respondent's perceived they were at most risk of accidental injury when using bike lanes (18 per cent never or rarely feel safe). People felt that the main issues were drivers endangering cyclists, there being too much traffic and drivers not giving way. Peoples' gender and age can also affect their perception of safety. To meet our objectives of improving health and mobility of our residents and visitors both actual and perceived safety issues must be addressed.

Studies<sup>23</sup> have found that even people happy to ride on busy roads themselves are generally not keen to ride there with their children. Education is required in support of the introduction of minimum passing distances when motorists are overtaking cyclists. The City of Melbourne will also investigate possible support for legislation in this area. A network of routes that are both safe and perceived to be safe, will maximise the number of riders, and should be our aim. Measures that increase actual and perceived safety are:

- substantial separation from motor traffic
- separation from parked vehicles
- off-road routes
- streets closed to through motor traffic
- minimum distances for motorists overtaking bike riders.

<sup>22</sup> City of Melbourne 2015

<sup>23</sup> Aldred 2015

## Safety programs and safer behaviour

The Share our Streets program, an initiative of the Road Safety Plan 2013-17 worked to change the behaviour of drivers to look out for people riding bikes and avoid car-dooring crashes. The program also worked to raise awareness of safety issues in shared spaces where our Perceptions of Risk report highlights people, especially the elderly, feel unsafe when walking in areas with a high number of people riding bikes. Areas where issues have been raised are adjacent to Federation Square, Birrarung Marr, Southbank, Harbour Esplanade and Fawkner Park.

We will continue to deliver programs that encourage all people to show courtesy and respect to make their journey around the city safer and more enjoyable. The programs will be run to address issues specific locations on roads and streets, in shared spaces and parks.

## Actions

### The City of Melbourne will:

- **deliver best practice bicycle infrastructure using planning and design hierarchy and guidelines (Chapter 3) with an aim to maximise separation from vehicles especially on high volume routes**
- **work with Victorian Government agencies such as VicRoads and the Traffic Accident Commission to research and analyse crash data and make this information available to the community**
- **undertake road safety investigations of all roads with five or more bicycle crashes in the last three years**
- **trial protected intersection designs on intersecting bicycle routes such as the intersection of Swanston and Queensberry Streets or the intersection of Canning and Elgin Streets**
- **work with car park operators to improve visibility and awareness of people riding bikes**
- **investigate measures to reduce high cyclist speeds on downhill street sections, particularly along physically-separated bike lanes such as traffic calming devices or traffic signal timing**
- **work with the community and the Victorian Government to review speed limits in the municipality. Investigate possible reductions as part of a review of boulevards and Elizabeth Street**
- **continue to complete actions of the Road Safety Plan 2013-17 relating to safety for people riding bikes including continuing the Share Our Streets program focusing on etiquette and speeds in shared spaces, car-dooring, and awareness of new street environments.**

## 5. ENCOURAGING MORE PEOPLE TO RIDE

**Goal:** Encourage more people of all abilities, genders, ages and or from diverse cultural backgrounds to take up riding or ride more frequently

**Targets:** One in four vehicles entering the central city in the morning peak will be bicycles

**Seven per cent of total trips to, within and from the City of Melbourne will be made by bike**

### Counting people riding bicycles

The City of Melbourne takes part in the National Cycling Participation Survey (NCPS) to provide data on cycling to feed into the Melbourne Bicycle Account (Chapter 7). It is a telephone-based survey of residents in the City of Melbourne including mobile-only households. It also tries to capture cycling participation among children. Participation is defined as the number of individuals who have cycled for any journey or purpose and in any location.

The Victorian Government has invested in 24-hour continuous loop counters at key locations in Melbourne. There are 12 counters located in the municipality. Data is currently available on open data platforms<sup>24</sup>.

The Victorian Integrated Survey of Travel and Activity (VISTA) surveys were conducted in the 2007-08 and 2009-10 financial years. The surveys capture detailed data on the number and route of every trip of the sampled participants that help governments make better transport and land-use planning decisions. Information is collected infrequently due to the time and expense of logging individual trips. The current VISTA survey started in July 2012 and will end in July 2016.

City of Melbourne has conducted seasonal counts of bicycles relative to other vehicles entering the central city in the morning peak since 2007. The counts are completed in March and September at 19 on and off-road locations entering the Hoddle Grid.

Super Tuesday, Super Sunday are annual counts conducted by Bicycle Network volunteers to monitor trends in cycling. Super Tuesday is conducted in March during the morning peak period to monitor people travelling to work. Super Sunday gives a snapshot of recreational riders. RiderLog is the Bicycle Network smartphone app that logs users bike rides. Recently, gender data has been recorded. The organisations RiderLog app records details of riders' trips all of the travel logs are then aggregated to show when, where and why people are riding. RiderLog records spatial data on actual routes that can then be used for before and after evaluation and to model future scenarios.

The City of Melbourne utilise all these data sources to understand the numbers, demographics and routes of people who ride a bike and to plan and design bicycle routes and programs to encourage more people to cycle.

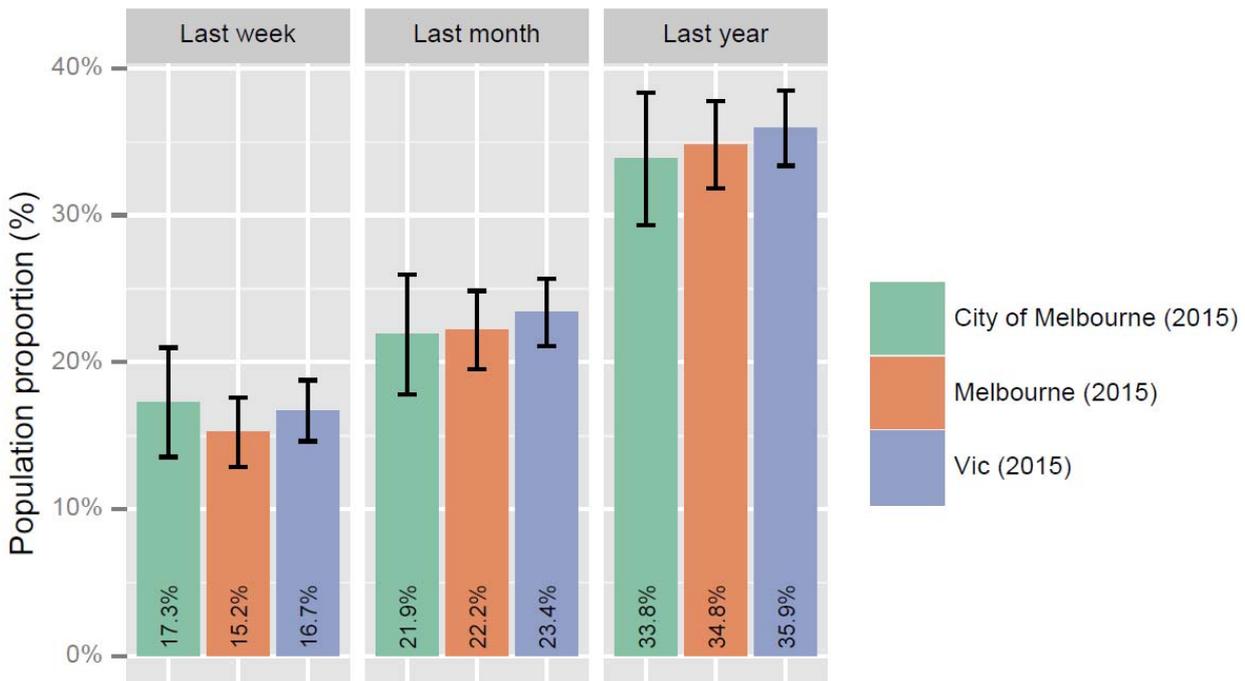
### Participation by residents and bicycle ownership

In the City of Melbourne about 17 per cent of City of Melbourne residents ride a bicycle in a typical week. Around one third (34 per cent) had done so in the past year (Figure 25). There have been statistically significant decreases in cycling participation between 2013 and 2015 possibly due to a growth of population in the central city where walking is the predominant mode of transport. These participation rates translate to approximately 21,100 residents riding in a typical week and 41,400 residents riding at least once in a typical year.

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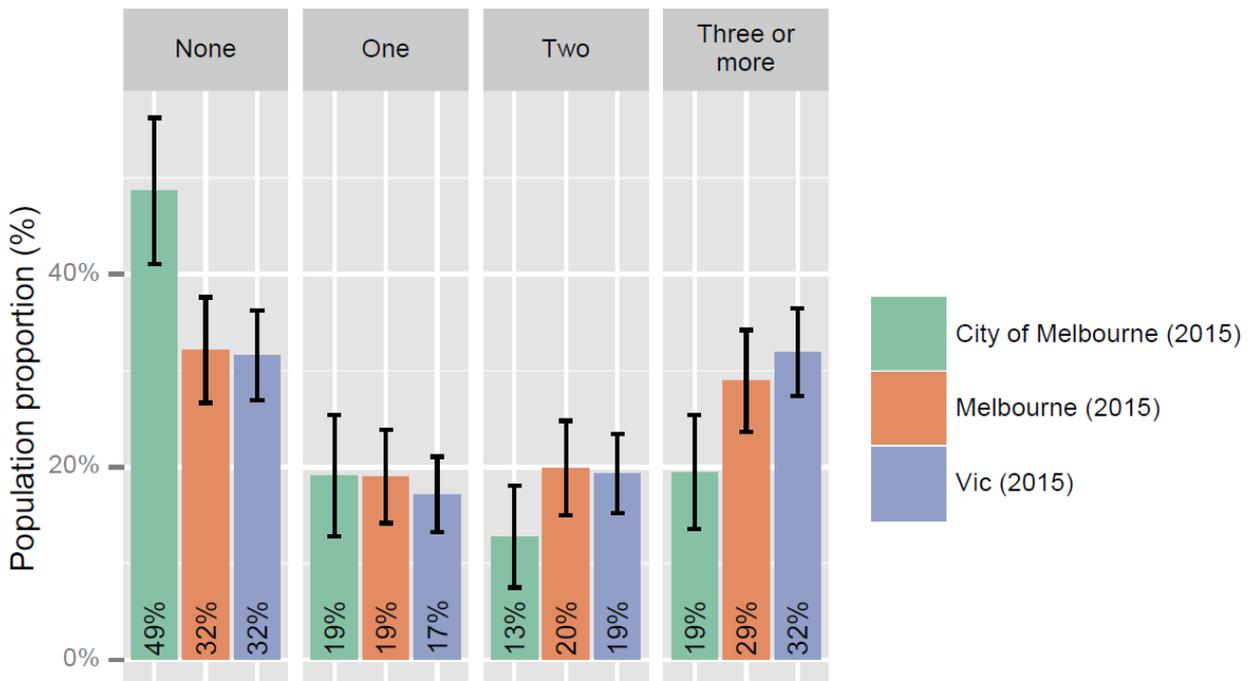
<sup>24</sup> [VicRoads counters](#)

Figure 25: Cycling participation



Just over half of households (51 per cent) have access to at least one working bicycle. About one in five households have access to three or more bicycles. Bicycle ownership is lower than the Melbourne average and may relate to walking and public transport being the dominant modes of transport and a smaller number of households with children.

Figure 26: Bicycle ownership by household



Participation by gender and age

In the City of Melbourne 20 per cent of males and 15 per cent of females ride in a typical week. The proportion of males is lower than the pattern across Victoria whereas the participation by females is significantly higher than for greater Melbourne and Victoria.

Figure 27: Participation by gender in a typical week

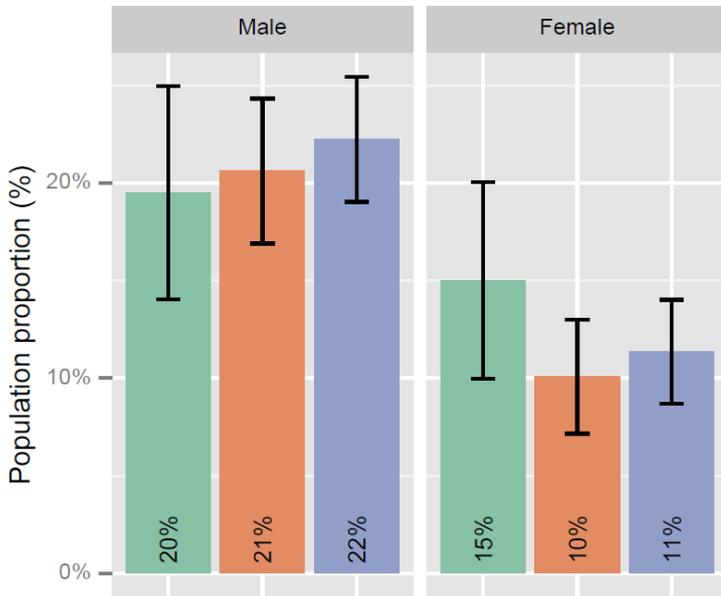
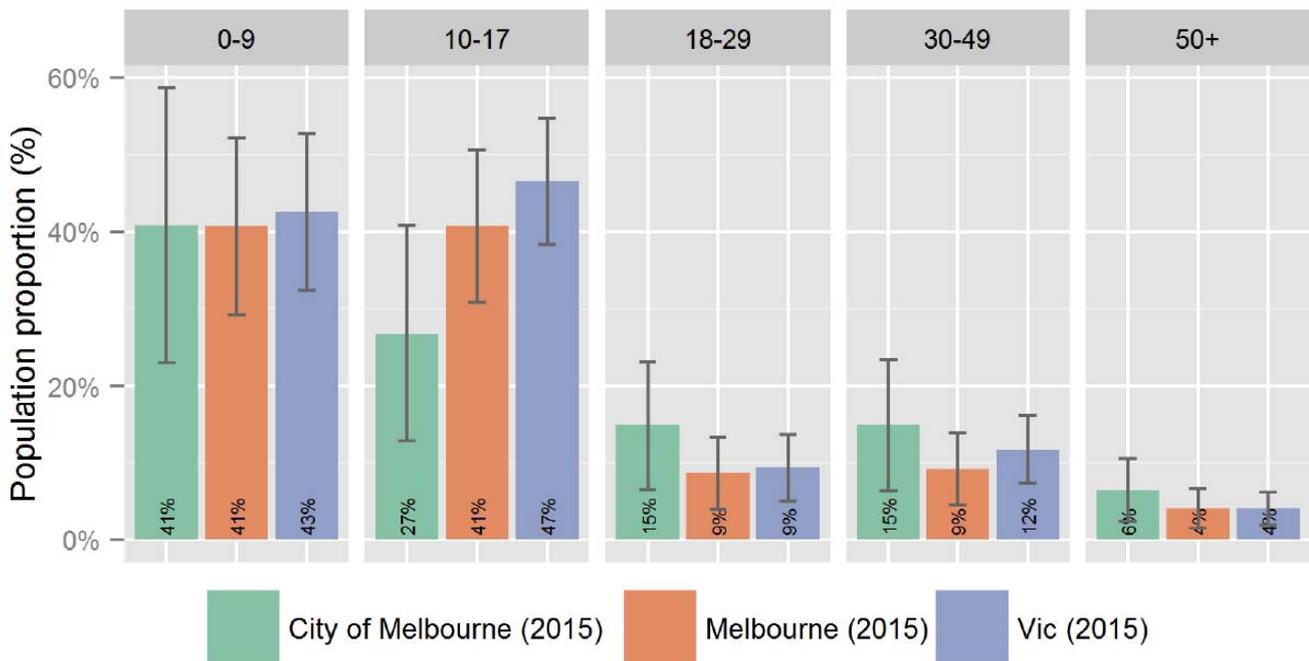
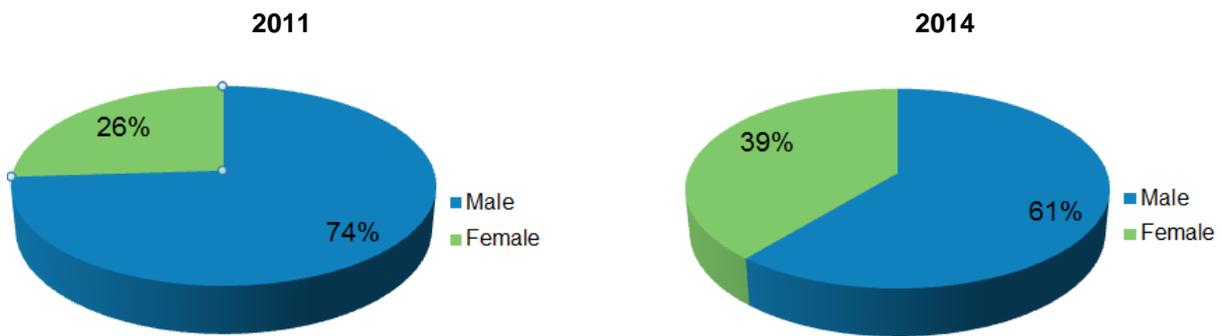


Figure 28: Participation by age in a typical week



Gender trends can be observed depending on the actual and perceived safety of bicycle routes. Observational studies undertaken by Bicycle Network indicate there is a higher proportion of females travelling south on Swanston Street in the morning peak. The higher proportion of females riding from the north correlates to greater continuity of separated bike lanes in La Trobe Street and Swanston Street (north) and the Swanston Street redevelopment between Franklin and Flinders streets.

Figure 29: Participation by gender on Swanston Street



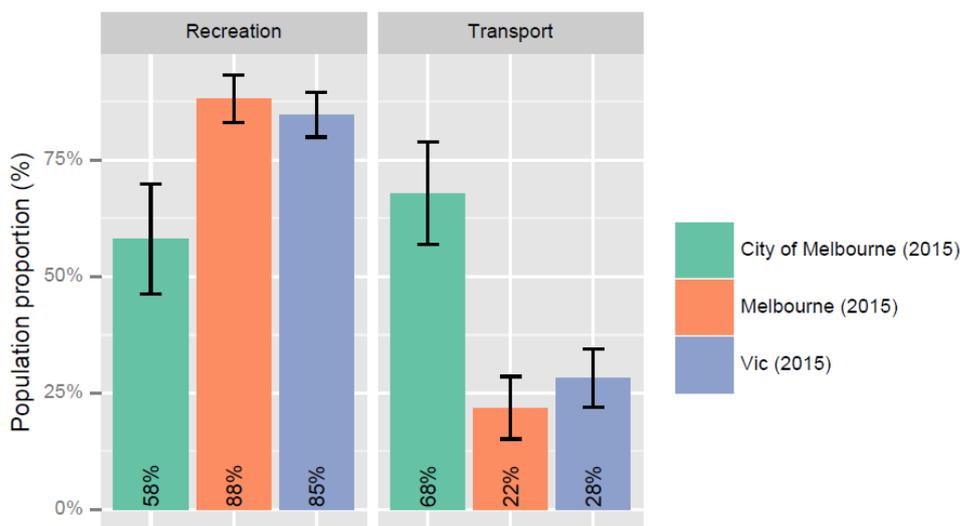
Women and children riding bikes are interlinked. The data shows much lower participation rates for women, but where safer facilities can help to support those to ride, proportions increase substantially. A study<sup>25</sup> of the impact of infrastructure and adults’ attitudes towards child cycling supported substantial separation from motor traffic. Separation by kerb or by car parking was desirable, as were park routes and streets closed to through motor traffic such as the Canning Street design, at Princes Street. As part of the complete cycling network we have suggested local routes that will assist people of all ages and abilities to be active in riding bike around their suburb, to schools, shops and community facilities.

**Cycling for transport and recreation**

Of the people who cycled in the City of Melbourne in the last month, 58 per cent cycled for recreation and 68 per cent used a bicycle for transport (Figure 30). The proportion of people who ride for recreation is lower than the Melbourne average, and the proportion riding for transport is much higher than the Melbourne average.

The City of Melbourne has a key role to play in supporting people to get to and from work by bike and take pressure off the road and public transport network. We will support Ride to Work Day and other community initiatives that encourage people to ride to work as a viable mode of transport.

Figure 30: Cycling for transport and recreation

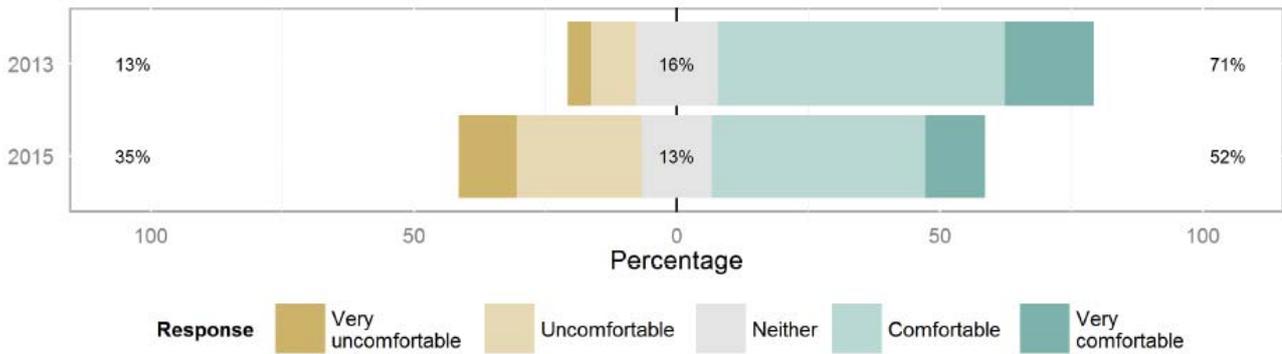


<sup>25</sup> Aldred 2015

### Perception indicators

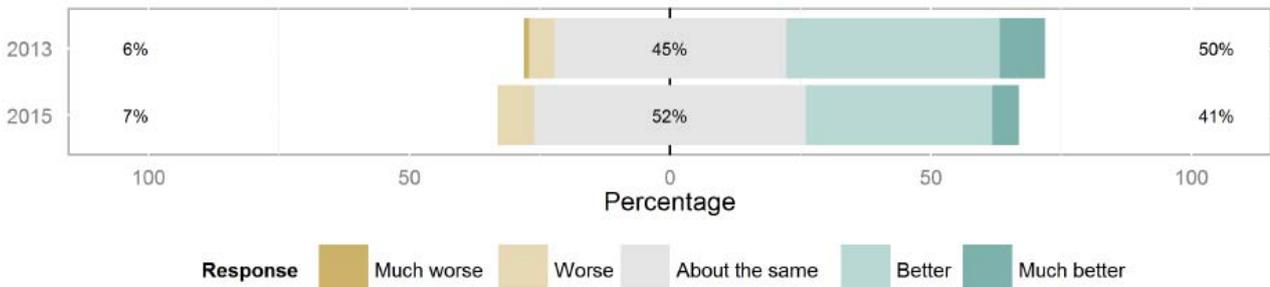
Rider perceptions are monitored in the Copenhagen Bicycle Account and the Melbourne Bicycle Account. Both accounts have seen a decline in rider perceptions of comfort and conditions over time. When asked how comfortable people feel riding in their area the percentage feeling comfortable and very comfortable has decreased significantly since 2013 despite the investment in new and improved bicycle routes in the City of Melbourne. The hypothesis is that as conditions improve, expectations are raised. For example as physically-separated bicycle routes are built, people expect to use this type of facility on all their journeys. If people are riding on routes that are not separated from traffic they report that they feel uncomfortable or very uncomfortable. The long responses of residents surveyed indicate they often feel uncomfortable if bike lanes or separated lanes end where there is not enough room. An increase in the number of other road users particularly people walking is reported as making people feel more uncomfortable riding a bike.

**Figure 31: Perception of comfort of people have ridden in the past year**



Sample: Persons aged 15+ who had ridden in the past year.

**Figure 32: Perception of conditions for riding of people that have ridden in the past year**



Sample: Persons aged 15+ who had ridden in the past year.

## Bicycle counters

VicRoads collects information from 14 bicycle counters located in the municipality. The bicycle counters are located in a closed box and the counts are not visible to the public although data can be accessed online<sup>26</sup>.

**Table 17: Location of VicRoads continuous loop counters in City of Melbourne**

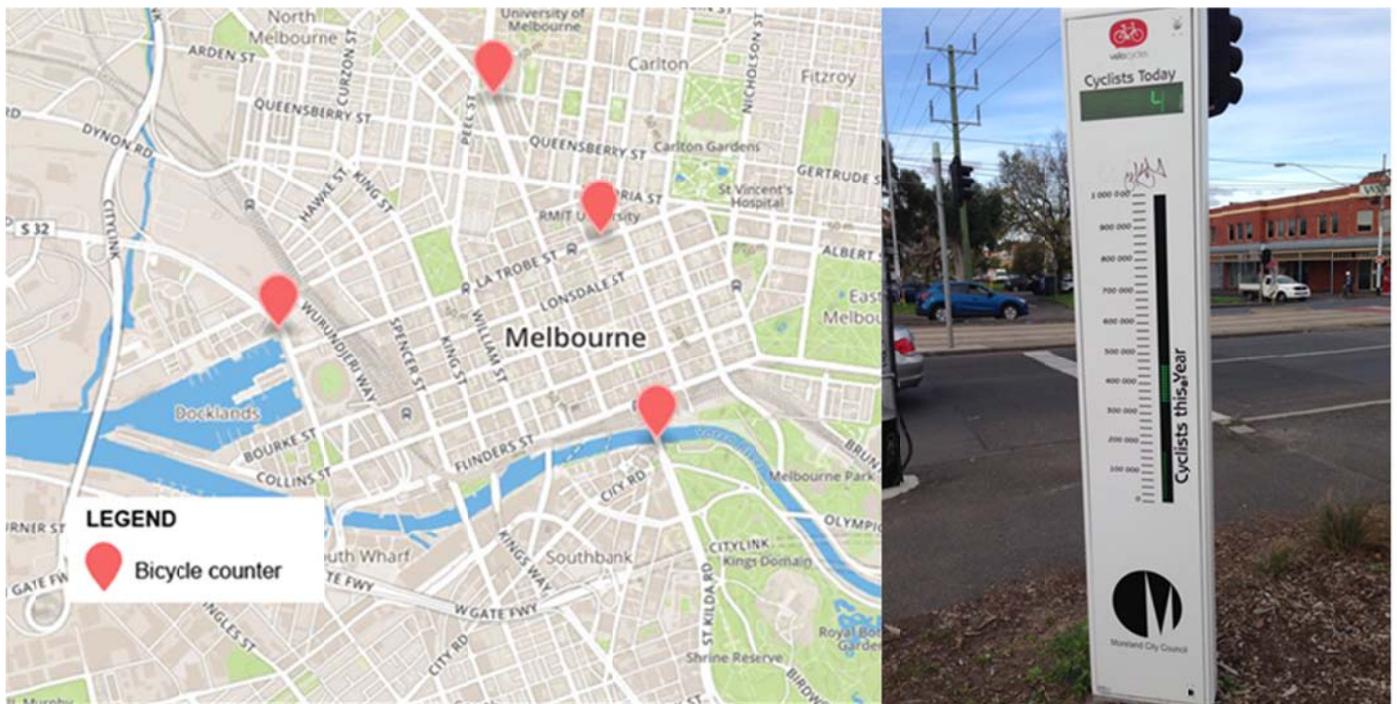
1.	Main Yarra Trail	South Yarra Under Punt Road Bridge
2.	Canning Street	Carlton South side of Princes Street
3.	Upfield Bike Path	Parkville 10m south of Park Street
4.	Capital City Trail	Princes Hill 25m west of Bowen Crescent
5.	Capital City Trail	West Melbourne 250m south east of Citylink exit ramp
6.	Flemington Road	North Melbourne 25m north west of Abbotsford Street
7.	Flemington Road	North Melbourne 10m south east of Dryburgh Street
8.	Royal Parade	Parkville South bound 20m south of Gatehouse Street
9.	Royal Parade	Parkville North bound 10m north of Gatehouse Street
10.	St. Kilda Road	Southbank South bound 30m south of Anzac Avenue
11.	St. Kilda Road	Southbank North bound 25m north of Coventry Street
12.	North Bank	75m west of Morell Bridge
13.	Albert Street	Melbourne 50m east of Morrison Place
14.	Albert Street	Melbourne 50m west of Lansdowne Street

The City of Melbourne has a comprehensive network of pedestrian counters and opportunities exist to install a similar system of bicycle counters at key entrances to the city to continuously monitor the number of people riding bikes and supplement current vehicle counts that are conducted twice a year by the City of Melbourne and Bicycle Network's Super Tuesday and Super Sunday counts.

Barometer style counters displaying the number of people riding bikes daily and over a year can assist to encourage more trips by bike and if they are placed close to roadways, promote to people in cars the opportunity to join large numbers of people riding bikes. The counters would provide an evidence base for future investment in bicycle infrastructure.

<sup>26</sup> [VicRoads counters](#)

Figure 33: Proposed location for bicycle counters



### Community and school programs

The City of Melbourne works with community groups and schools to support their active travel and cycling programs. We work with groups that are location and interest based, such as cycling groups for women. The Good Wheels program works with a number of partners to source unwanted bikes and work with unemployed people to refurbish them. The bikes are then used as part of program to help people from culturally diverse backgrounds to access cycling as a safe means of getting around the city. The training includes learning to ride, maintenance, road safety and navigation and importantly gives participants a set of wheels.

Programs have been run with local schools to support parent and carers to gain confidence in riding so they can in turn support their children to ride, choose safe routes, adopt safe riding behaviour and maintain their bikes.

We will continue to work with groups and provide them support to apply for funding and become more active in supporting locally based bicycle education and safety programs. We will also partner with Bicycle Network to plan active travel options in the municipality and participate in Ride to School Day and support the bike bus concept of children travelling to school.

The City of Melbourne has provided safety and navigational information to international students in booklets and at the student welcome desk at Melbourne Airport. Opportunities have been provided for students to participate in bicycle tours that educate them about basic road rules and safety. The tours help students to navigate to key student services and city landmarks and provide a practical demonstration of Melbourne Bike Share. We will continue to support International students to ride a bike by providing safety information and orientation tours.

### Active Melbourne

The City of Melbourne's Active Melbourne Strategy aims to provide opportunities for all members of the community to participate in physical activities that contribute positively to their health and wellbeing.

The City of Melbourne has been working in partnership with the Victorian Department of Health and VicHealth to conduct a range of health, fitness and well-being programs for residents, city workers and visitors. The Active

Melbourne Strategy encourages people to take part in physical activity and enjoy the benefits that exercise provides regardless of age, gender, culture or ability.

Under Active Melbourne council also manages recreational facilities including Carlton Baths, Kensington Community Centre, North Melbourne Recreation Centre and Melbourne City Baths, coordinates the management of 70 community sporting clubs and provides information on bike polo, bicycle hire, shops and tours that can help people to keep active by riding a bike. The 100 Ways to Move it Melbourne program, incorporated biking activities, taking city residents and visitors on bike tours of Melbourne during their lunchbreak.

As well as being proactive in providing facilities and information, opportunities also exist to further develop bike riding programs at recreational and community centres throughout the municipality to encourage people to start riding and navigate safely around the city.

## Events

The City of Melbourne runs premier events, issues events permits and sponsors events under the Event Partnership Program. The aim is to encourage people attending events to use sustainable transport modes to meet eco-city goals. Many events such as the Sustainable Living Festival, Moomba, Spring Fashion Week and Run Melbourne and encourage people to come by bike and provide bicycle parking and end of trip facilities.

Other events such as the Look, Stop, Shop and the Melbourne Design Festival have offered bike tours to explore the city. Bike tours were also run as part of the Lord Mayors welcome to international students to assist students to navigate around the city using cheap and sustainable transport and become aware of their new environment and conventions such as road rules and etiquette.

Permits are given to organisations to promote cycling and include MS Melbourne Cycle, Herald Sun Tour, Around the Bay and Tweed Ride. Community activation events such as a Wheelie Good Day in Melrose Street, North Melbourne encouraged local residents to start riding by offering a closed road environment to learn to ride, bike tours, bicycle maintenance sessions and bike related information.

As part of activities and events run by City of Melbourne we will continue to be proactive in encouraging sustainable travel and provide bicycle parking and end of trip facilities where possible. Community riding events and tours will be encouraged and we will support other organisations to promote bike riding and tours by bike.

## Navigation, maps and apps

TravelSmart maps are supplied to Visitor Information Centres and bicycle shops by the City of Melbourne to support active travel. The maps provide information on routes and road safety. Third party providers offer a range of options for navigating around the city by bike. Hard copy maps are produced by some organisations but commonly information on getting around is provided through an app on a smartphone.

We will support app developers such as Ride the City to update accurate spatial information and provide information on direct and safe or safe routes to assist people to navigate around the municipality on a bike.

As with all apps, it is only as good as the information it is based on. City of Melbourne will work to provide open data with accurate spatial information about the most bicycle friendly routes. It could assist people plan their trip to use safer routes and avoid high volume car and bus routes.

## Workplace and business support and programs

The City of Melbourne operates a fleet of electric bicycles to help transport staff to meetings and conduct their work in places remote from the office such as parks and gardens and maternal and child health centres. Staff have access to discounted Bicycle Network membership and participate in Ride to Work Day. Showers, change facilities, parking and a maintenance cupboard are provided to assist staff to commute to and from work. Bicycle mechanics from a local social enterprise visit regularly to assist staff to keep their bicycles well maintained and safe.

Some private enterprises in Melbourne offer bicycle lease programs similar to traditional car lease arrangement for executives, safe cycling courses, bicycle maintenance and route planning services. City of Melbourne will work with organisations and workplaces on programs that encourage workers to ride such as incentive programs, bike buddy, safety or maintenance initiatives.

An increasing number of logistics companies are using cargo bikes to assist with deliveries for clients. Other businesses own delivery bikes to transport goods to their customers. We will also support businesses to receive deliveries and services by bike as part of our Last Kilometre of Freight Plan. The plan supports efficient urban freight through increased innovative and low-impact freight. Cargo bikes are a low impact way to deliver goods. They emit no pollution. They are quieter, smaller and more transparent than trucks and so pose less of a safety threat, do not block city views and require less space in which to park. Cargo bike riders can have a strong connection to other city users because they are travelling at eye level and not inside an enclosed vehicle. Cargo bikes can be electrically assisted so they can move heavier loads. There is an emerging cargo bike delivery sector in Melbourne and cargo bike use is growing around the world, especially in the busiest parts of cities. Because of their flexibility and relatively quick delivery times in crowded places, cargo bikes have also helped stimulate and facilitate new ways of doing business. Consistent with the Last Kilometre of Freight Plan, we will support initiatives that increase the use of cargo bikes for business in the municipality.

### **Actions**

**The City of Melbourne will:**

- **continue to support people to ride to work and take pressure off the road and public transport systems through Ride to Work Day and community activities throughout the year**
- **install counters with visible displays to encourage people in cars to start riding a bike or for existing riders to achieve target numbers**
- **actively work with schools to educate and encourage children to ride to school and in their local community. Conduct sessions with both children and their parents and carers**
- **support people to ride bikes using the bike bus concept of encouraging people to join a group cycle to work or school**
- **provide active travel advice as part of City of Melbourne activities and events. Provide bicycle parking and end of trip facilities at all major events**
- **encourage community riding by holding events in local communities**
- **support organisations to conduct events encouraging people to ride bikes such as MS Melbourne Cycle, Herald Sun Tour, Around the Bay and Tweed Ride**
- **provide programs at recreational and community centres to encourage people to start riding that promote safe cycling and get the message across that cycling is fun.**
- **support International students to ride a bike by providing safety information and orientation tours**
- **work with businesses to offer incentives for workers to ride bikes as an alternative to executive car packages**
- **provide open data with accurate spatial information about bike routes and their safety**
- **support staff to ride a bike to, from and for work by providing motivation and convenient end-of-trip facilities.**
- **support initiatives that increase the use of cargo bikes for goods movement in the central city.**

## 6. MEASURING OUTCOMES

**Goal:** Evaluate changes, manage data and continuously improve our performance

**Target:** Provide open data and complete a Bicycle Account in 2017 and 2019.

### Bicycle Account

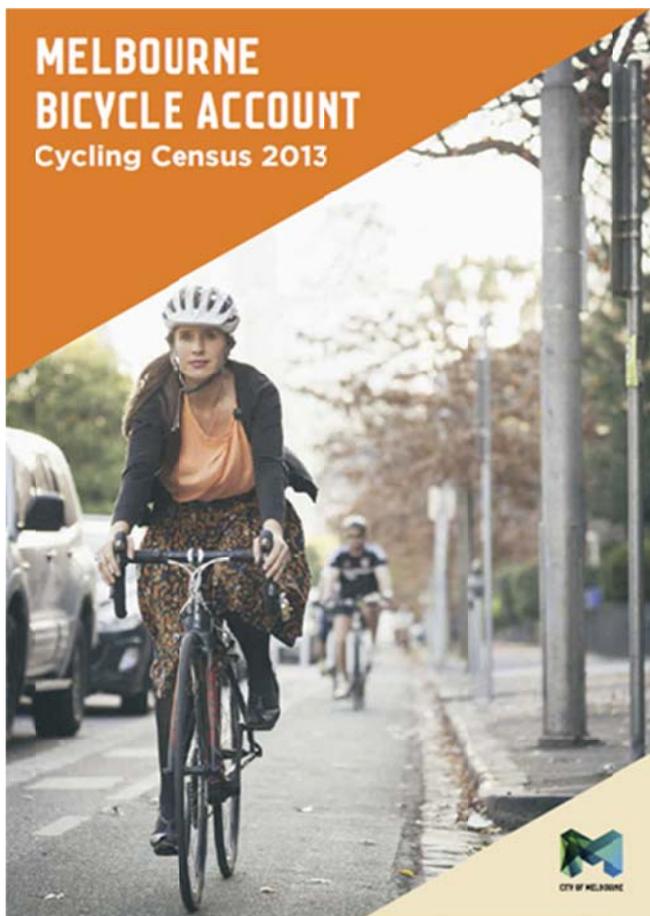
The Melbourne Bicycle Account provides snapshot of cycling activity and trends in the municipality every two years. Participation and perception data collected by the Australian Bicycle Council feeds into the account. By subscribing to a standardised national system, changes are able to be monitored regularly and consistently and national comparisons can be made.

The data set comes from a randomly selected group of residents within the local government area. It provides valuable data on bike ownership, participation by age and gender, and perceptions of comfort and conditions, from people who are often not captured in counts or intercept surveys.

The account highlights what we do well and what needs to be worked on in future. It includes a summary of city cycling and documents the City of Melbourne actions in improving cycling infrastructure and safety and reflects the targets of the Bicycle Plan.

The Bicycle Account is collated and made available to the community and stakeholders online every two years. The data representing the cycling census for 2015 is documented in this plan. The next account will be completed in 2017.

**Figure 34: Melbourne Bicycle Account**



## Counts and monitoring

The City of Melbourne has been conducting counts of bicycles relative to other vehicles on key routes entering the central city since March 2007. The cordon counts are conducted in March and September during the morning peak from 7am to 10am. The length and consistency the counts provide reliable trend data.

There are currently 14 loop counters (9 on-road sites and 5 off-road sites) recording cycling flows in the municipality. These 24 hour counters are located on the Principal Bicycle Network and are managed by VicRoads. The data shows average daily and monthly bicycle volumes and the spread across the day. Short-term counts can be corrected against this continuous data.

Super Tuesday counts by Bicycle Network provide an annual snapshot in March each year of commuter cycling patterns. Super Sunday counts relate to recreational riders, active on weekends particularly on off-road routes. Observations have also been made of the gender profile on key routes such as Swanston Street.

Bicycle Networks' RiderLog phone app provides a log of actual routes people have chosen. Information can be gathered on distance, speed and ride purpose (transport or recreation) The RiderLog dataset is useful for planning and prioritisation, road safety (exposure), before- and after evaluation, and demand forecasting and route choice modeling. Other apps such as Strava can also be crowd sourced to give information on routes and speed.

City of Melbourne regularly conducts before and after counts and observations for key projects. For example monitoring the movement people walking, riding, driving and using public transport, and travel times before, during and after the Princes Bridge bicycle lane trial provided valuable information. This information was shared with Council and the community in order to evaluate the trial.

## Data management

Counts and monitoring are generally available online. The Victorian Government and City of Melbourne provide open data platforms where data can be downloaded.

Spatial records are available but quickly become outdated as new routes are developed and upgraded. A robust method of keeping bicycle routes up to date is to record all new and upgraded routes as assets in councils AssetMaster system. This information would then be available and accurate on open data platforms and can be used by the community or third parties such as Google Maps.

## Actions

**The City of Melbourne will:**

- **complete a Bicycle Account every two years using Australian Bicycle Council participation and perceptions surveys and local data to demonstrate changes and achievements**
- **share data online from bi-annual bicycle and vehicle counts**
- **investigate additional locations based on bicycle network modeling for continuous loop counters and continuous monitoring to accurately record changes to cycling corridors and high volume routes and plan for the future**
- **continue to collect before and after counts and observations for key projects**
- **keep updated spatial records of all bicycle routes and attributes.**

# TECHNICAL NOTES AND APPENDICES

## Technical notes 1: Example Level of service assessment for La Trobe Street

		Approach to Intersections Bike Route Quality	C-	8.9		
		AVERAGE	B-	12.0		
<b>MIDBLOCK LEVEL OF SERVICE</b>					<b>Bike Quality Scoring</b>	
On Road	Midblock			Comment	Value	LOS
		No formally marked bike lane	0		0	F-
		Wide kerbside lane (marked)	1		1	F
		0.6m painted (refuge lane)	1		2	F+
		1.0m paint	3		3	E-
		1.2m paint	5		4	E
		1.5m paint	8		5	E+
		1.8m paint	9.5		6	D-
		2.0m paint	11	11	7	D
		Separated by profiled edge line (rumblestrip)	0.5		8	D+
		Green treatment for full length of bike lane	1		9	C-
		Chevron painted separation from parking lane: 0.4m, 0.5m, 0.6m, 0.7m, 0.8m	10, 12, 14, 16, 18		10	C
		Chevron painted separation from bike lane: 0.4m, 0.5m, 0.6m, 0.7m, 0.8m	10, 12, 14, 16, 18		11	C+
		LEFT OF PARKING: Physical separated by parking (physical island): 0.6m, 0.8m, 1.0m	3, 4, 5, 5.2, 5.4	5	12	B-
		LEFT OF PARKING: Painted separation from parking (chevron): 0.6m, 0.8m, 1.0m, 1.2m	2, 3, 4, 4.2, 4.5		13	B
		Bike Lane shared with Bus Lane: <10, <20, 20+ buses/hr	-2, -3, -4		14	B+
		Speed: 60kph, 50kph, 40kph, 30kph	0, 1, 3, 4	3	15	A-
		Speed: 70kph, 80kph, 90+kph	-3, -10, -15		16	A
		Traffic Volume (per weekday): One Direction of Flow: None, <500, 500-2000, 2000+	1.0, +0.7, +0.4, 0, -0.3, -0.7	0		
		No green pavement at conflict points (driveways, laneways, side-streets)	-2			
		On-Street Parking	-3	-3		
		No Conflict Points (driveways, laneways, side-streets):	2			
		Some Conflict Points (driveways, laneways, side-streets): Per 200m block: <3, 3-8	0, -1, -2	-1		
		Cyclists required to give way at Tram Platforms: Frequency: 20min, 10min, 5min, 2min	-1, -2, -3, -4, -5			
		Uneven surface	-3			
<b>Total</b>					<b>15</b>	<b>A-</b>
<b>APPROACH TO INTERSECTION - LEVEL OF SERVICE</b>						
On Road	Intersectio					
		2 lane roundabout approach	-3			
		1 lane roundabout approach	-1			
		Width of bike lane on approach to intersection: 0.5m, 0.8m, 1.0m, 1.2m, 1.5m, 1.8m, 2.0m	1, 2, 3, 4, 5, 6, 7	3.5		
		Width of Adjacent Traffic Lane (if no separation from bike lane): 2.5m, 2.8m, 3.0m, 3.5m	-2, -1, 0, 0.5, 1.0, 1.5	0		
		Bike Lane provided between left turn lane and through lane (bike lane straight on approach)	2			
		Bike Lane adjacent to kerb - as a continuation from kerbside bike lane (no deviation)	1.5	1.5		
		Bike Lane provided adjacent to kerb on approach to intersection (deviated on approach)	0			
		Bike Lane area available through intersection	2	2		
		Bike Lane provided on immediate departure side of intersection	2	2		
		Storage box (in front of through or left traffic lanes)	1	1		
		Early start signal phase	3			
		Separated Mid-Block treatment provided all the way to intersection	3			
		Green treatment on bike lane on approach to intersection	1.5	1.5		
		Length of non-mid-block treatment: 20m, 20-40m, 40-60m, 60-100m, >100m	0, -1, -2, -3, -4	-2		
		Speed: 60kph, 50kph, 40kph, 30kph	0, 1, 3, 4	3		
		Speed: 70kph, 80kph, 90+kph	-3, -10, -15			
		Left turn volume (<20 per hour, 20-50 per hour, 50-100 per hour, 100-200 per hour, >200 per hour)	1, 0, -1, -2, -3	0		
		Motorists merge from two traffic lanes to one traffic lane on departure of intersection	-1	-1		
		Bike Lane to Left of Double left turn for motorists	-3			
		Bike Lane transitions to right of double left turn for motorists	-1.5			
		Delay at Intersection Signals	Fill in Info to right	-2.6		
<b>Total</b>					<b>8.9</b>	<b>C-</b>
					Cycle Time	90
					Phase %	50%
					Amber/Red	5

## APPENDIX 1

### Community feedback

The first phase of community engagement about the draft Bicycle Plan 2016-2020 was completed in May 2015. A high number of responses including comments with photos were attached to the interactive Crowdsport map. Over 7000 contributions including, 1000 individual spots, 1460 comments, 4700 supports were received from everyday Melburnians. The top 20 priority spots are summarised below.

Community priority	Location	Spot	Summary of comment
1.	Intersection of Royal Parade, Flemington Road and Elizabeth Street (Haymarket roundabout)	Issue	Unsafe bicycle lanes. Better guidance for people to travel from Elizabeth Street to Royal Parade
2.	Exhibition Street	Issue	Unsafe due to temporary bicycle lanes and number of taxis. Need permanent protected bicycle lanes.
3.	Carlton Gardens	Issue	Riding in the gardens banned for cyclists over 12 years old. There are few walkers and high numbers of people riding bikes. Establish north - south routes to support cyclists at peak hours.
4.	Flemington Road Between Royal Parade and Elliot Avenue	Issue	High risk of car-dooring from parked cars and lots of traffic. The parking should be removed, or cars separated from the bike lane on this major bike route.
5.	Southbank Promenade	Issue	Highly congested. Improve priority for people to cross roads.
6.	Rathdowne Street to Barkly Street	Issue	Unsafe bicycle lanes. It is very difficult and illegal to cycle from Rathdowne to Barkly Street. Improve connection.
7.	St Kilda Road	Idea	Better cycle lanes. St Kilda Rd needs wide separated cycle lanes on this busy route.
8.	Harbour Esplanade from Docklands Drive to Bourke Street	Idea	Remove rumble strips and keep the zebra crossings and signage
9.	Collins Street	Issue	Unsafe bicycle environment. Given the large number of cyclists it is a dangerous environment with taxis and loading vehicles. Improve facilities.
10.	Elizabeth Street	Issue	High risk of car-dooring. It is extremely dangerous with no space for bicycles especially at junctions. Improve facilities.
11.	Bike Polo Court, Neill Street Reserve, Carlton	Like	Opportunities to play bike polo on the multi-purpose court as part of the redevelopment

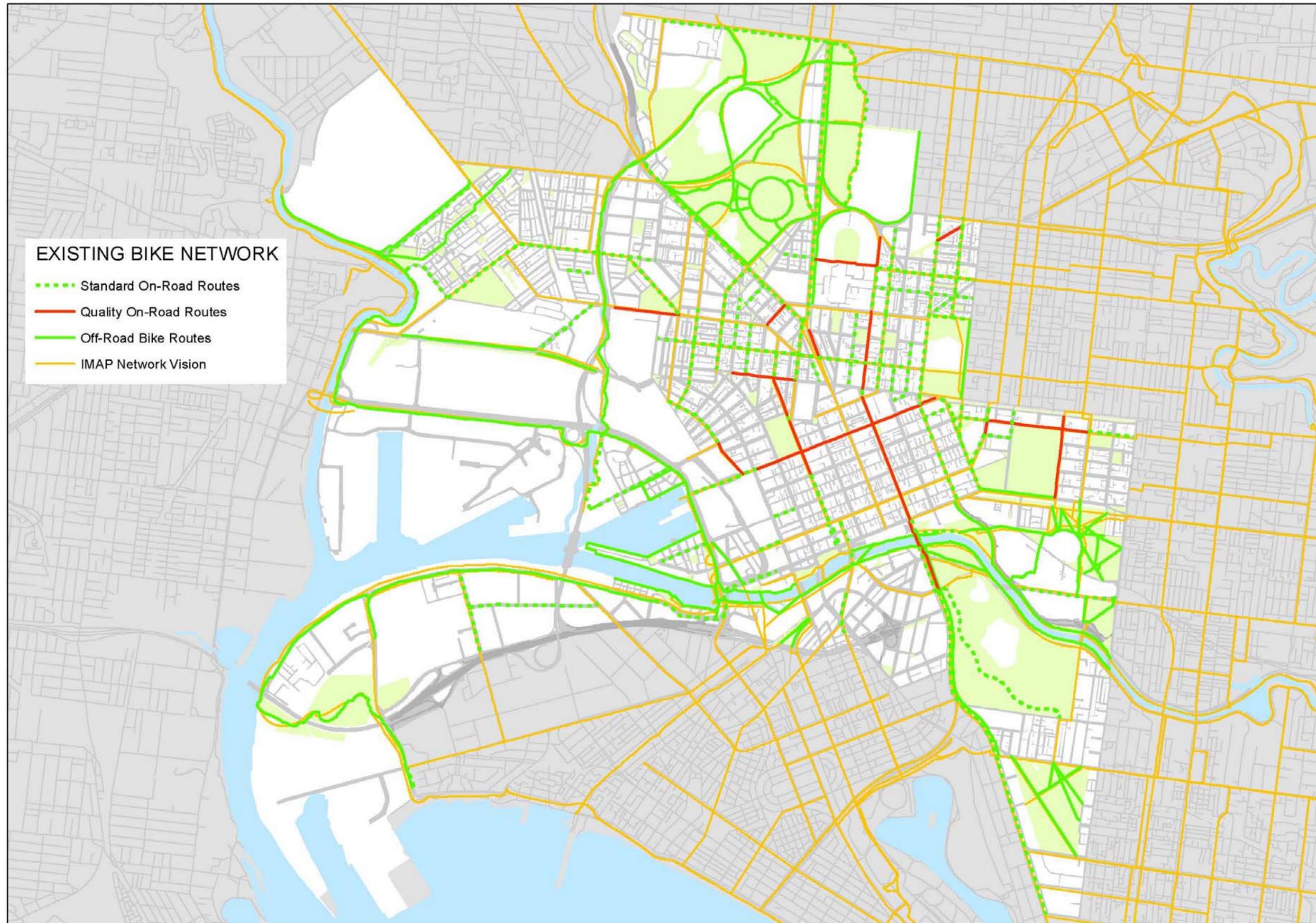
12.	Swanston Street	Issue	Blockage for bike riders with police cars are parked too far from the curb putting cyclists at risk of passing trams or getting stuck in tram lines. Also blocked by horse drawn carriages. Police should be encouraged to park close to the curb or on side street and that carriages are prohibited from stopping.
13.	Swanston Street and College Crescent roundabout	Issue	Bicycle lanes end unexpectedly and there is no clear connection or path from Swanston Street to the bike path on the north side of Cemetery Road. Improve connections.
14.	St Kilda Road at Southbank Boulevard	Issue	On approach to Southbank Boulevard bike riders are expected to merge into the right lane to travel to the city. Bike riders need to move across cars trying to turning left into Southbank Boulevard. Safer intersection design.
15.	La Trobe Street	Like	The separated bike lanes are fantastic for cycling and particularly for parents cycling with children.
16.	Royal Parade	Idea	Royal Parade needs wide, separated cycle lanes.
17.	Queens Bridge Street crossing	Issue	Pedestrians congregate on the bike crossing because it is in their desire line. Move bike crossing further south.
18.	Nicholson Street and Gertrude Street intersection	Issue	This intersection is very popular but has no cycle facilities to get to Gertrude Street. Cyclists need a place to wait similar to Queensberry Street hook-turn refuge.
19.	Grattan Street	Idea	This is a key road providing east-west access to the University of Melbourne and the hospital precinct. The current shared-path next to the university is inadequate for cyclists and pedestrians. The Street needs separated cycle lanes
20.	Footscray Road and Waterfront Way intersection	Issue	The traffic light sequence needs adjusting to make it more bicycle-friendly.

The community reported that the top 10 locations they liked to ride a bike were:

1.	Bike Polo Court at Neill Street reserve, Carlton
2.	La Trobe Street separated bike lane
3.	Swanston Street bike lights at Flinders Street
4.	Rathdowne Street bike hook turn at Queensberry Street
5.	Canning Street bike lane
6.	Princes Bridge bike lane
7.	Albert Street separated bike lane
8.	Elizabeth Street separated bike lane
9.	Footscray Road bike path
10.	Royal Parade bike lane

## APPENDIX 2

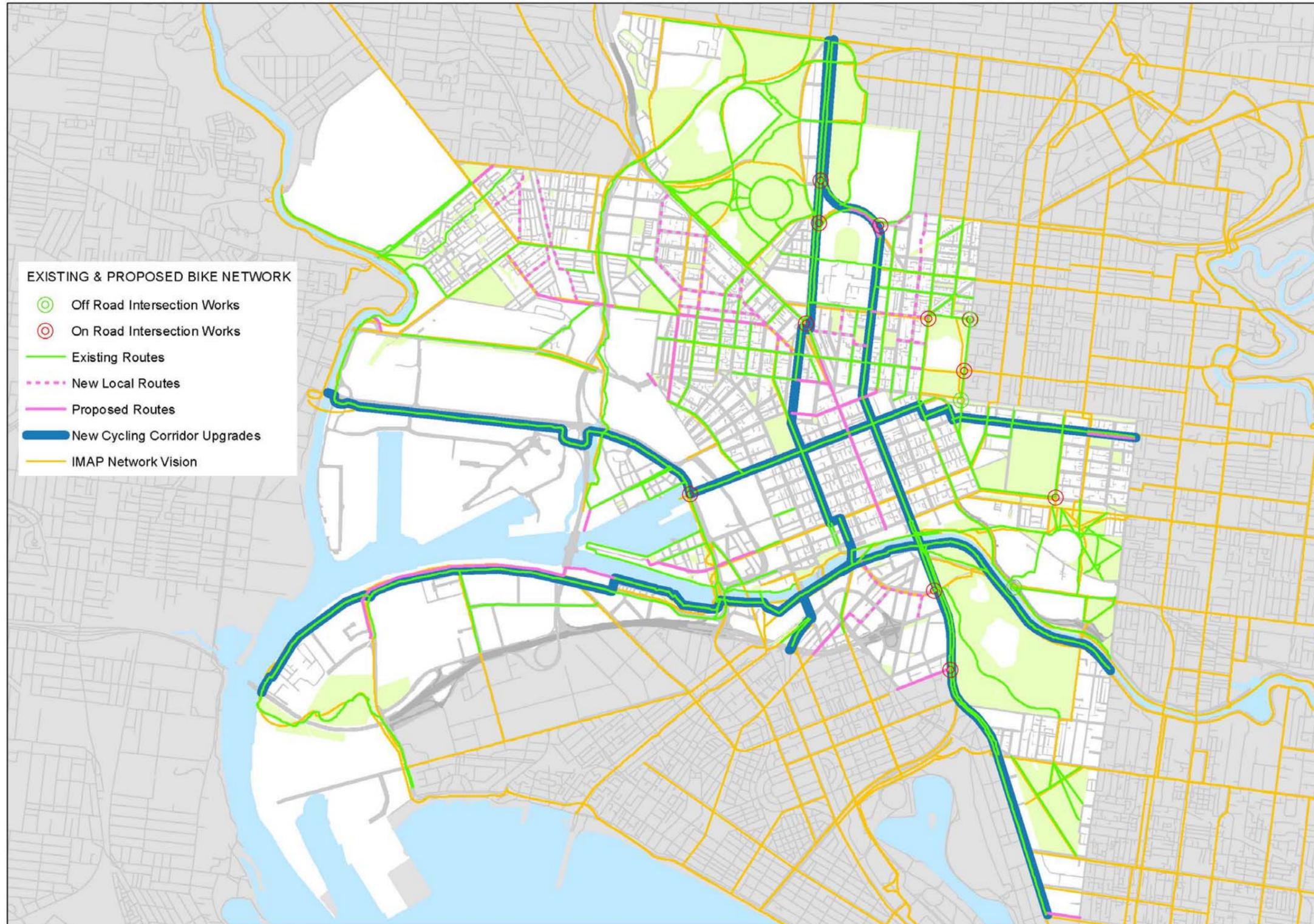
Local bicycle network and bicycle routes (existing)



**Note:** Quality on-road bicycle routes include: (a) Physically-separated kerbside bike lanes, (b) Double-chevron separated bike lanes, and (c) Low car volume bike-friendly streets (eg. Swanston Street)

### APPENDIX 3

Bicycle routes (existing) and proposed new and upgraded routes 2016-2020



**Note:** New cycling corridor upgrades to be completed in collaboration with Victorian Government.

## APPENDIX 4

### Summary of actions

#### Actions – Planning for people to ride

- align cycling networks and priorities at all levels of government
- ensure planning for growth areas include connections and facilities for people riding bikes
- implement local area structure plans and include bicycle infrastructure through development funds
- ensure Melbourne Planning Scheme matches requirements for bicycle parking in new and existing buildings.

#### Actions – A connected bicycle network

- work with VicRoads to update and align the network operating plan for 2016-2020
- implement guidelines and level of service in the planning and design of the bicycle network
- apply a level of service assessment to determine streets in the central city that most preferred for cycling
- work with VicRoads to have new level of service criteria used in Network Fit Assessments to provide a more accurate representation of the benefits of bike lane improvements
- work with VicRoads to plan and implement cycling corridors and upgrades to arterial roads, as listed
- seek external funding for major bicycle projects, as listed
- plan and implement local neighbourhood routes and upgrades on local roads, as listed
- plan and implement off-road paths, as listed
- continue to develop alternatives to busy shared zones and spaces and implement physical and behavioural measures to increase safety
- continue to raise awareness of the rules of shared spaces and the etiquette of bicycling amongst others.

#### Actions – Facilities for bicycles

- increase bicycle parking by 2000 hoops in key locations
- The City of Melbourne will undertake an economic study to evaluate the success of any new on-street parking initiatives.
- provide bicycle parking facilities at the entrances and key destinations in parks including at park entrances and pavilions and clubs
- work with the Victorian Government to provide end of trip facilities at major transport hubs especially planned Melbourne Metro stations
- encourage businesses to provide secure bike parking facilities in buildings
- locate on-street bicycle parking in areas with active or passive surveillance
- remove abandoned bicycles as a deterrent to theft
- advocate for secure bike storage facilities on public housing estates and, in and around, community facilities
- work with Victoria Police to raise awareness of safe parking facilities and practices for locking bikes

- support targeted awareness and educational programs to raise awareness of bike theft and security particularly around tertiary institutions
- develop a way-finding strategy in consultation business and tourism stakeholders
- provide green wave, early starts and bike boxes for bike riders on cycling corridors
- install maintenance stations and bicycle pumps at key entrances to the city
- support Melbourne Bike Share.

#### **Actions – A safer cycling environment**

- deliver best practice bicycle infrastructure using planning and design hierarchy and guidelines (Chapter 3) with an aim to maximise separation from vehicles especially on high volume routes
- work with Victorian Government agencies such as VicRoads and the Traffic Accident Commission to research and analyse crash data and make this information available to the community
- undertake road safety investigations of all roads with five or more bicycle crashes in the last three years
- trial protected intersection designs on intersecting bicycle routes such as the intersection of Swanston and Queensberry Streets or the intersection of Canning and Elgin Streets
- work with car park operators to improve visibility and awareness of people riding bikes
- investigate measures to reduce high cyclist speeds on downhill street sections, particularly along physically-separated bike lanes such as traffic calming devices or traffic signal timing
- work with the community and the Victorian Government to review speed limits in the municipality. Investigate possible reductions as part of a review of boulevards and Elizabeth Street
- continue to complete actions of the Road Safety Plan 2013-17 relating to safety for people riding bikes including continuing the Share Our Streets program focusing on etiquette and speeds in shared spaces, car-dooring, and awareness of new street environments.

#### **Actions – Encouraging more people to ride**

- continue to support people to ride to work and take pressure off the road and public transport systems through Ride to Work Day and community activities throughout the year
- install counters with visible displays to encourage people in cars to start riding a bike or for existing riders to achieve target numbers
- actively work with schools to educate and encourage children to ride to school and in their local community. Conduct sessions with both children and their parents and carers
- support people to ride bike using the bike bus concept of encouraging people to join a group cycle to work or school
- provide sustainable travel advice as part of City of Melbourne activities and events. Provide bicycle parking and end of trip facilities at events
- encourage community riding by holding events in local communities
- support organisations to conduct events encouraging people to ride bikes such as MS Melbourne Cycle, Herald Sun Tour, Around the Bay and Tweed Ride
- provide programs at recreational and community centres to encourage people to start riding
- support International students to ride a bike by providing safety information and orientation tours

- work with businesses to offer incentives for workers to ride bikes as an alternative to executive car packages
- provide open data with accurate spatial information about bike routes and their safety
- support staff to ride a bike to, from and for work by providing motivation and convenient end-of-trip facilities.
- support initiatives that increase the use of cargo bikes for goods movement in the central city.

**Actions – Measuring our success**

- complete a Bicycle Account every two years using Australian Bicycle Council participation and perceptions surveys and local data to demonstrate changes and achievements
- share data online from bi-annual bicycle and vehicle counts
- investigate additional locations based on bicycle network modeling for continuous loop counters and continuous monitoring to accurately record changes to cycling corridors and high volume routes and plan for the future
- continue to collect before and after counts and observations for key projects
- keep updated spatial records of all bicycle routes and attributes.

## APPENDIX 5

### Summary of projects

Projects on arterial roads	Location	Description
1.	Cemetery Road and College Crescent (Cycling corridor)	Investigate on-road or off-road improvements to connect cyclists on Swanston Street to Royal Parade and Princes Park Drive
2.	Commercial Road	Investigate a bicycle-friendly link between Punt Road and St Kilda Road for people to ride to Fawkner Park and Albert Park
3.	Elizabeth Street north	Install bicycle lane from Queensberry Street to Victoria Street
4.	Footscray Road (Cycling corridor)	Improve continuity and reduce conflict points along the shared path on the south side of Footscray Road, between Shepherd Bridge and Citylink overpass
5.	Footscray Road (Cycling corridor)	Improve connection to Moonee Ponds Creek Trail at Pearl River Road
6.	Haymarket roundabout (Cycling corridor)	Investigate early start traffic signal phasing, way-finding and bicycle boxes particularly for easy navigation between Elizabeth Street and Royal Parade northbound
7.	Lorimer Street (Cycling corridor)	Connect Lorimer Street to a future extended promenade under Bolte Bridge
8.	Lorimer Street (Cycling corridor)	Investigate redevelopment of the redundant rail reserve to include off-road path
9.	Main Yarra Trail (northbank)	Work to widen under Swan Street Bridge to ease congestion
10.	Peel Street (Cycling corridor)	Install full-time bike lanes from Victoria Street to Franklin Street
11.	Royal Parade (Cycling corridor)	Investigate reduced speed limit to 40km/h
12.	Royal Parade (Cycling corridor)	Upgrade intersection at Cemetery Road West to remove one vehicle lane
13.	Royal Parade (Cycling corridor)	Install traffic calming at College Crescent intersection
14.	Smithfield Road	Upgrade to Smithfield Road between Epsom and Racecourse roads
15.	St Kilda Road (Cycling corridor)	Improve safety to cross Southbank Boulevard for people riding north

Projects on local roads	Location	Description
14.	Anderson Street	Install bicycle lane as link to Morrel Street Bridge
16.	Albert Street (Cycling corridor)	Install full-time bicycle lanes from Powlett Street to Hoddle Street

Projects on local roads	Location	Description
17.	Albert Street (Cycling corridor)	Investigate green wave traffic signals for bikes to reduce delays and encourage slower speeds
18.	Albert Street (Cycling corridor)	Install full-time bicycle lanes from Gisborne to Spring streets
19.	Albert Street (Cycling corridor)	Upgrade existing chevron to permanent physically-separated bike lanes on complete length of street
20.	Arden Street	Upgrade Macaulay Road to Howard Street
21.	Barkly Street	Improve connection from Rathdowne Street (northbound) to Barkly Street and Canning Street
22	Cardigan Street	Upgrade bicycle lane, particularly access to bike hub near Victoria Street
23	Brougham Street (Local route North Melbourne)	Investigate connections to St Aloysius Girls School and St Michael's Primary School
24	Clarendon Street, East Melbourne	Improve connection from Clarendon Street to encourage riders to use Jolimont Terrace to access Yarra Park and Melbourne Park
25	Collins Street (Cycling corridor)	Investigate options for route via Collins Street to Market Street
26	Derby Street (Local route Kensington)	Investigate improving connections to Holy Rosary Primary School and Macaulay Road shops
27	Dodds Street (Local route Southbank)	Investigate local route on Dodds Street to connect Coventry Street to University of Melbourne Southbank Campus
28	Dorcas Street	Work with City of Port Phillip to complete Dorcas Street connection from St Kilda Road to Kings Way. Investigate hook turn from St Kilda Road once route is complete
29	Drummond Street (Local route Carlton)	Provide a local route to link residential areas to local shops, dining and entertainment as an alternative to Lygon Street
30	Eastwood Street and Elizabeth Street (Local route Kensington)	Investigate linkages to Racecourse Road and Macaulay Road shops through to existing bicycle route on Arden Street
31	Elizabeth Street	Investigate upgraded bicycle route from Victoria Street to La Trobe Street as part of Queen Victoria Market Master Plan
32	Elizabeth Street	Investigate bicycle-friendly environment between La Trobe Street and Flinders Street
33	Exhibition Street	Investigate options for full time bicycle lanes by completing traffic modeling studies
34	Exhibition, Little Lonsdale, Spring, Victoria streets (Cycling corridor)	Investigate full time bicycle lanes and improved intersection designs
35	Southern end of the central city.	Investigate options for an alternate E-W route to Collins Street
36	Franklin Street and New Franklin Street	Prioritise bicycle-friendly route as part of Queen Victoria Market Precinct Renewal Master Plan development

Projects on local roads	Location	Description
37	Grattan Street (Local route Carlton)	Investigate bicycle route from Swanston Street to Rathdowne Street to connect residential areas to Carlton Primary School
38	Grattan Street	Investigate potential to improve bicycle route from Flemington Road to Swanston Street in conjunction with Melbourne Metro project and potential changes to bus route
39	Haines Street (Local route North Melbourne)	Investigate improvements to link residential areas to Haines Street shops and North Melbourne Primary School (including Chapman Street Reserve area)
40	Hampden Street (Local route Kensington)	Investigate linkages to Holy Rosary Primary School Macaulay Road shops
41	Harbour Esplanade (Cycling corridor)	Improve connections from La Trobe Street to shared path on the west side of Harbour Esplanade including traffic signal adjustment
42	Kavanagh and Balston streets (Local route Southbank)	Investigate local connection to Boyd Community Centre
43	La Trobe Street (Cycling corridor)	Extend the outbound bike lane in La Trobe Street to the intersection of Harbour Esplanade
44	La Trobe Street (Cycling corridor)	Investigate separation from Spencer Street to Harbour Esplanade
45	Leicester, Pelham and Bouverie streets and Lincoln Square South	Investigate linkages from the University of Melbourne (south) with the Swanston Street bike route consistent with the City North Structure Plan
46	Market Street (Local route Kensington)	Local connections to Kensington Primary School and between Macaulay Road and shops in Racecourse Road
47	McCracken Street (Local route Kensington)	Local connections to Kensington Primary School and between Macaulay Road and shops in Racecourse Road
48	Melrose Street (Local route North Melbourne)	Investigate connections from residential areas to the shops and through to the central city
49	Nicholson Street	Investigate transition from Gertrude Street to Museum Road with other partners
50	Northbank	Investigate options for bicycle-friendly infrastructure in Banana Alley section
51	Pelham Street (Local route Carlton)	Investigate local route to connect residential areas to Carlton Primary School
52	Queensberry Street	Complete link to Rathdowne Street intersection on north side
53	Shiel, O'Shannesy, Courtney and Howard streets	Create shimmy route from Flemington Road to Queensberry Street as a low speed, low volume alternative
54	Sims Street	Upgrade existing off-road path and crossings from Maribyrnong River Trail to Dynon Road
55	Southbank Boulevard (Local route Southbank)	Upgrade as part of City Road Master Plan route from Capital City Trail to Southbank Promenade
56	Swanston Street (Cycling corridor)	Improve connection to College Crescent roundabout

<b>Projects on local roads</b>	<b>Location</b>	<b>Description</b>
57	Swanston Street (Cycling corridor)	Reduce speed limit to 40km/h for northern section
58	Swanston Street (Cycling corridor)	Install bike lane from Mason Road to Tin Alley for people riding north
59	Swanston Street (Cycling corridor)	Redesign area of joint use between Flinders Street and Flinders Lane
60	Swanston Street (Cycling corridor)	Upgrade southbound lane on Princes Bridge
61	William Street (Cycling corridor)	Investigate narrowing space between tram tracks to allow for redesign of street for physically separated kerbside bicycle lanes
62	William Street (Cycling corridor)	Work with PTV to maintain integrity of bike lanes when tram stops are upgraded
63	Yarra River Corridor (Cycling corridor)	Install improved lighting to assist way-finding at night

<b>Projects off-road</b>	<b>Location</b>	<b>Description</b>
64	Carlton Gardens	Investigate improvements to the shared path including lighting and other safety measures. Improve connections between Spring Street and Canning Street, including crossings at Gertrude and Carlton streets
65	Chapman Street Reserve (Local route North Melbourne)	Upgrade connections for people riding bikes from Harker Street to Courtney Street
66	Fawkner Park	Improve crossing on Commercial Road
67	Harbour Esplanade	Investigate alternate options for slowing bicycles at pedestrian crossing points. Review existing speed humps
68	Northbank	Investigate options for bicycle-friendly infrastructure in Banana Alley section and improve wayfinding, crossings, shared path signage, linemarking and lighting between Jim Stynes Bridge and Birrarung Marr
69	Railway Place and Miller Street Reserve	Complete underpass upgrade
70	River Esplanade (Cycling corridor)	Investigate making wooden deck more bike-friendly
71	River Esplanade (Cycling corridor)	Provide a wider shared path adjacent to Point Park
72	Ron Barassi Senior Park	Provide connections for people riding bike to Docklands Drive and existing bike paths
73	Royal Park	Upgrade links through Royal Park to provide access from West Brunswick to Capital City Trail

Projects off-road	Location	Description
74	Royal Park	Construct new path on west side of tram track to provide access to Abbotsford Street
75	Royal Park	Work with the Victorian Government over the longer term to construct new bridges over Upfield Railway Line near Ryder Oval and State Netball and Hockey Centre
76	Royal Park	Upgrade way-finding for people riding bikes and signage of shared paths

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Bikes for Business, Bicycle Network Victoria, City of Moonee Valley, City of Moreland, City of Port Phillip, City of Yarra, City of Darebin, Department of Economic Development, Jobs, Transport and Resources, Good Cycles, ICLEI Australia, Melbourne Bicycle Users Group, Melbourne by Bike, RACV, Retail Association, TAC, The Squeaky Wheel, VECCI, VicRoads, Victoria Police, Victoria Walks, Wheel Women.

Thanks also to the Melbourne community for over 7000 contributions including, 1000 individual spots, 1460 comments, 4700 supports on the Participate Melbourne platform in May 2015. Key themes, topics and suggestions have been incorporated into this draft plan.

Thank-you also to Fleur Maidment.

## You can contact us in the following ways:

### Online

[participatemelbourne.vic.gov.au/bikeplan](http://participatemelbourne.vic.gov.au/bikeplan)  
Internet relay users connect to the National Relay Service then ask for 03 9658 9658.

### By phone

Our Customer Service representatives are available 7.30am to 6pm, Monday to Friday on +61 3 9658 9658.

### The City of Melbourne is now National Relay Service-friendly.

The TTY number (03 9658 9461) advertised on existing City of Melbourne publications is now no longer available. If you are deaf, hearing-impaired, or speech-impaired, we ask that you call us via the National Relay Service:

**Teletypewriter (TTY)** users phone 133 677 then ask for 03 9658 9658.

**Speak & Listen users** phone 1300 555 727 then ask for 03 9658 9658.

Our Multilingual Information lines telephone service offers assistance to people from a non-English speaking background. Visit Translation services.

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We are open from 7.30am to 5pm, Monday to Friday (public holidays excluded).



<b>(a) Feedback from Individuals</b>		<b>Response</b>
<b>No</b>	<b>Comment Precis</b>	<b>Response</b>
1	1. Another east/west route required in the Hoddle Grid – prefer Collins Street.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. Modify painted bike lanes so as they do not place cyclists too close to parked vehicles.	Painted lines are placed a safe distance from parked vehicles wherever possible.
	3. Place more off-road bike lanterns where people are required to cross roads – eg. Docklands Blvd.	CoM has written to VicRoads seeking improved priority for cyclists at locations along Harbour Esplanade and Footscray Road where bike lanterns are already provided. CoM will investigate additional crossings along off-road paths where new bike lanterns could be installed.
2	1. There should be a mandated 30 km. speed limit in the central city to improve safety.	Speed limits are set by other authorities. CoM will work with other government agencies to reduce speed limits where appropriate.
3	1. Concerned about pedestrian safety. Support for Bike Plan dependent upon measures to separate cyclists from pedestrians and vehicles.	Bicycle Plan includes investigation of new initiatives that would separate bikes from vehicles and pedestrians.
4	1. Bike Plan should include measures to separate cyclists from pedestrians and vehicles.	Bicycle Plan includes the investigation of several new initiatives that separate bikes from vehicles and pedestrians.
5	1. Mentions Birrarung Marr, Swan St. Bridge, Princes Bridge and Exhibition Street extension as areas where there can be conflict between cyclists and pedestrians.	These areas are listed in the Bicycle Plan as areas where improvements are needed.
	2. There is insufficient space on parts of the Yarra River pathway for cyclists and pedestrians to navigate safely.	Table 4 includes actions to widen the Yarra River pathway. These actions will include an audit of the pathway for other pinch points.
6	1. Supports a bike lane in Little Lonsdale Street providing it contra-flow – rather than two-way within this narrow street.	‘Contra-flow’ will form part of the investigation of Little Lonsdale Street as a possible future bicycle lane although nearby La Trobe Street is already a bike friendly street.
7	1. Promote that cycling is fun.	‘Fun’ has been added as a point of promotion in the Bicycle Plan.
	2. Concerned that the Bike Plan is not totally consistent with ‘Plan Melbourne’. For example, ‘vision zero’ in Plan Melbourne for fatalities and 10 percent reduction in Bike Plan.	The target for fatalities will be changed to zero.
	3. Need to capture off-road injuries from cycling – not just on-road and measurement of safety perceptions.	This is difficult because data from hospitals does not report location of bike injury – just name and address for the person injured.

No	Comment Precis	Response
8	1. Concerned that La Trobe Street bike lanes are not safe due to the number of motorists and pedestrians that are causing a hazard.	CoM has removed 1-4 spaces on the approach to all laneways, driveways and commercial carparks to improve sightlines between left turning motorists and cyclists using the bike lanes. Some cyclists need to travel at a slower speed here especially in downhill sections.
	2. Suggestion that bike cameras be installed on handlebars of bikes to give CoM a clear understanding of safety issues.	CoM has received a lot of feedback about safety issues already – especially at pinch points so it may not provide much more data than we already have.
	3. Cycle paths out of CoM into other municipalities don't have a strong enough connection.	CoM recognises that improvement is needed. The CoM is continuing to work with surrounding municipalities to improve connections. Examples of soon to be improved connections include: Elizabeth Street Richmond into Albert Street, East Melbourne and Princes Park across Bowen Crescent into the City of Yarra. A cross-Council working group has been established to make further improvements.
9	1. There is a lack of route connectivity in the southern part of the central city. Eg. La Trobe Street lanes only useful if you are travelling in the north of the city.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. A need for more bike parking in Little Bourke Street between Elizabeth Street and Queen Street.	If space permits, more bike parking will be installed in this block.
10	1. There is a lack of east/west bike lanes – ie. there needs to be another option in the southern part of the central city.	The Bicycle Plan commits to investigate an alternative east-west route. Upgrade options may include removal of car-parking, reduced speed limits and counter-flow lanes.
11	1. Need to address the flooding of the Main Yarra Trail under the west end of the Swan Street bridge.	Plan includes widening of this area to ease bicycle congestion. Potential 'flooding' issues in this area has also been added to the Plan.
12	1. Need to widen the off-road bike trails. In peak commute times they are not wide enough to manage the amount of traffic.	There is a lot of emphasis on widening and making other improvements to off-road bike trails. In the last bike plan CoM widened Footscray Road. CoM will investigate improvements at pinch points such as under bridges.
13	1. There is a need for another east/west bike lane in the southern part of the central city. Flinders Street route is not safe enough.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. Would like safer routes to get from South Melbourne and North Melbourne to the central city.	CoM will improve local routes through North Melbourne and improve the connection from North Melbourne to William Street. CoM will continue to investigate alternative bike routes to Clarendon Street where the installation of tram platforms makes this too difficult.

No	Comment Precis	Response
14	1. Would like the bike plan targets to be more measurable as a means of strengthening the plan.	Targets have been reviewed following the feedback - but are considered to be measurable and strong.
	2. Melbourne's cycling infrastructure a major factor in choice to move to Melbourne.	Thank-you for the feedback.
	3. We should indicate how much cycling indirectly benefits international students.	Section 3 of the Bicycle Plan notes the benefits of cycling to students generally and Section 5 implicitly refers to benefits of cycling for international students.
15	1. There are dangerous routes within the municipality that should be fixed. Eg. parts of the network are fine but may lead to another part of the network that is unsafe.	The Bicycle Plan has measures to improve connectivity for cyclists but recognises that some parts of the network are more bicycle friendly than others.
16	1. Cyclists northbound from Princes Bridge wanting to ride N/E do not have a viable route – neither Collins nor Flinders satisfactory.	The CoM is already supportive of cyclists connecting between Princes Bridge and Exhibition Street via existing shared paths provided through Birrarung Marr and along the westside footpath of Batman Ave. Other options will be examined.
	2. The CoM should make Flinders Lane or Little Collins Street a viable cycling option.	The Bicycle Plan commits to investigate an alternative east-west route.
17	1. An east/west route through the southern part of the central city is required. Flinders Street is considered an option.	Tram platform stops in Flinders Street and vehicle access limit the amount of road space for bikes.
18	1. Cycling participation would be increased if 'driver at fault' legislation was introduced.	Thank-you for your feedback.
19	1. Supports the complete separation of bike lanes from other traffic.	Thank-you for the feedback.
20	1. Remove mandatory helmet laws	This is a matter for the Victorian Government but the City of Melbourne supports current helmet laws because they improve safety and reduce likelihood of injury if cyclists fall from their bike.
	2. Replace on-street parking in busy streets and with full separated bike lanes.	On-street parking is necessary to maintain the economic viability of local businesses that require loading and servicing. On-street parking also caters for taxis, buses, disabled parking.
21	1. Separated bike lanes need to be installed throughout the central city due to safety concerns.	Separated bike lanes are acknowledged in the Bicycle Plan as very important to safety. There are other road priorities that prevent them being installed throughout the central city.

No	Comment Precis	Response
22	1. Supports cycling– but not at the expense of pedestrians.	Thank-you for your feedback. The Bicycle Plan details measures designed to reduce conflict between cyclists and pedestrians in shared zones.
23	1. Bikes are causing safety problems for pedestrians especially beside the Yarra River and in front of the Casino and Southbank. Would like to see bikes banned in this area.	Southbank provides an important east/west cycling connection and the CoM continues to attempt to improve safety via behaviour change campaigns such as Share our Streets and the installation of advisory signage and pavement markings specifically targeted at reducing cyclist speeds and giving way to pedestrians.
24	1. CoM should install bike pumps along routes not near bike shops – eg. along Moonee Ponds Creek and Southbank.	One of the sites being investigated is Birrarung Marr. Moonee Ponds creek has been added to the Plan as a possible site.
	2. There should be extra bike racks at festivals and public events.	CoM supports this measure and will discuss with at CoM to see if more temporary facilities are needed.
	3. Peel Street is very unsafe for cyclists.	The need to maintain on-street parking to service abutting residents and businesses and VicRoads requirement to maintain two traffic lanes in each direction makes the upgrade of bike lanes here difficult. CoM will investigate signal priority improvements for cyclists (head starts) and will improve alternative connections through North Melbourne such as the William/Howard/Courtney Street connection.
	4. Install highly visible bike counters on busy cycling routes so as motorists can see the signs and take extra care on busy routes.	The concern is that visible bike counters can also be a distraction to road users.
25	1. Supports ending mandatory bike helmets.	The City of Melbourne supports current helmet laws because they improve safety and reduce likelihood of serious injury.
26	1. Supports a ‘floating pontoon’ as an alternative to Southbank and Flinders Street Bridge.	The idea of a floating pontoon has been included in the plan for further investigation.
27	1. The concept of a ‘safe bike routes’ will not be successful because cyclists are motivated to get to their destination using the quickest route possible.	Thank-you for your feedback.
28	1. Promote safe bike helmets.	Helmets are required to meet safety standards.
29	1. Older residents are fearful of walking along the Yarra due to speeding cyclists. The ‘no cycling’ sign on Evan Walker Bridge is being ignored.	The signage is clear and therefore CoM will speak with Victoria Police about this issue.

No	Comment Precis	Response
30	1. There is a lack of connectivity between Albert Street and La Trobe Street for cyclists – this leads to cyclists using Lonsdale. Would rather have Little Lonsdale or Little Bourke for bikes.	CoM has implemented measures to improve this connection. (via Spring St and Victoria St westbound and via Exhibition St, Little Lonsdale St and Spring St eastbound). These improvements will be monitored.
	2. In the longer term would like to see elevated 'bike freeways' leading out from the central city.	Thank-you for the feedback.
31	1. Seeking improvements at the Haymarket Roundabout as per 'floating cycle-roundabout' concept.	The re-design of the Haymarket Roundabout is an action of the Bicycle Plan.
32	1. A need to better understand the network gaps. Sometimes a safe cycling path leads directly to a route that favours vehicle traffic.	The Bicycle Plan has a stronger concentration on local routes and every effort is being made to link cycling paths.
33	1. Supports improved cyclist safety.	Thank-you for the feedback.
34	1. Favours more bike lanes through the closure of vehicle lanes.	The Bicycle Plan tries to strike a balance recognising that there are a number of competing priorities for road space.
35	1. Sydney Road needs to be made safer for cyclists.	Thank-you for the feedback. Most of Sydney Road is located within the City of Moreland.
36	1. Connection for bikes from Canning Street to Hoddle Grid is poor.	A lot of cyclists use this connection and improvements have been made.
	2. The Nicholson Street shared pathway requires an upgrade.	CoM will investigate further enhancements including potential lighting and behaviour change messaging improvements.
37	1. Concerned that bike lanes don't always provide good connectivity – ie. they can run out all of a sudden into a poor cycling environment.	The Bicycle Plan has a stronger concentration on local routes and every effort is being made to link cycling paths.
	2. Very concerned about a perceived lack of safety for bikes especially in commercial areas.	The Bicycle Plan includes a chapter on safety where the CoM addresses these concerns.

No	Comment Precis	Response
	3. Street parking in commercial areas should be removed to make more room for bikes and cars.	The CoM is constantly reviewing the mix of road use. Street parking is used for vehicle trader access including for delivery vehicles. It is often not feasible to remove it.
	4. More bike hoops for parking are required.	The Bicycle Plan now commits to increasing bike parking by 2000 places by 2020.
38	1. Cycling infrastructure standards are different in CoM parks and streets.	Cycling infrastructure is more problematic in parks where paths are often narrower and pedestrian movement is prioritised.
	2. Safety hazards are being fixed long after they are reported.	Thank-you for the feedback. CoM will investigate how we can do this better.
	3. The main Yarra Trail should be managed as a public transport corridor – instead of a recreational path – and CoM should have overarching management authority for the path.	The main Yarra Trail is also for use by pedestrians and for recreational cycling.
	4. The bike connection between the Batman Ave shared path and Exhibition Street requires improvement.	CoM and Transurban has provided an on-road bike connection for citybound cyclists. Measures to improve the outbound connection will be investigated.
	5. Shared paths require auditing against statutory guidelines to identify safety hazards.	CoM will investigate this further.
39	1. A bike path should be built in South Road Moorabbin.	Thank-you for the feedback. Moorabbin is in a different municipality.
40	1. CoM should ensure they are developing new bike routes – as opposed to just adding bikes to routes already used by other transport users.	Thank-you for the feedback.
41	1. Add bike routes as a part of new Melbourne Metro works and other major upgrade works.	The Bicycle Plan has been linked to Melbourne Metro works and CoM will be alert to new opportunities as they arise.
42	1. In future bike promotional campaigns, work needs to be done to highlight the sometimes fraught relationship between elderly pedestrians and cyclists on shared pathways.	Elderly pedestrians have also voiced this concern. Noted for future campaigns and CoM is considering the relationship between elderly people and cyclists as part of this plan. CoM is particularly concerned to reduce cyclist speed on downhill street sections.

No	Comment Precis	Response
43	1. Bike riders should be allocated a specific compartment on trains.	This would be a decision for Metro Trains but may be difficult given increasing train patronage numbers.
44	1. There is a lack of hoops and other bike infrastructure in and around the MCG and Yarra Park.	In increasing the number of bike hoops, we will examine both of these busy areas as options.
45	1. The bike route network needs to be more comprehensive to overcome safety concerns.	There is a section on safety in the Bicycle Plan and CoM understands that we need more secure bike lanes to overcome safety concerns.
46	1. There needs to be more communication with the wider public about cycling benefits.	CoM has tried to address this in the Plan. The Plan includes the placement of counters with visible displays that are aimed at encouraging motorists to cycle.
47	1. Better bike lanes are required - especially at Rathdowne near La Trobe and at Collins Street.	A better bike link at Rathdowne Street will be investigated as part of the Bicycle Plan. Enhanced tram stops make it difficult to improve Collins Street for cyclists.
48	1. 800 bike parking facilities over the time of the Plan is grossly inadequate.	Bicycle parking will now be increased by 2000 over the life of the Plan.
49	1. More separated bike lanes are required.	The Bicycle Plan attempts to address this need wherever possible.
	2. Pedestrians around Crown Promenade continually cluster around the bike crossing areas.	CoM has approved new messaging to improve pedestrians awareness of the segregated bike and pedestrian crossing spaces provided across Queensbridge St.
50	1. Work with Melbourne Metro project to plan for bike friendly Grattan Street.	The Bicycle Plan signals the need for bike lanes in Grattan Street and CoM will investigate and see if it is possible.
	2. More separated bike lanes are required.	The Bicycle Plan attempts to address this need wherever possible.
51	1. Pedestrian traffic along the north bank of the Yarra continues to grow. The Plan should include alternative east/west links across the central city.	The Bicycle Plan commits to investigate an alternative east-west route.
52	1. Cyclists who are over 18 years and ride often should have to install identification plates as part of free registration.	This is a matter for the Victorian Government. It is opposed by major bicycle groups such as Bicycle Network Victoria.
53	1. Put bike hoops and a bike parking area outside the Emporium shopping centre.	CoM will investigate this area as a possible site for new bike hoops.

No	Comment Precis	Response
56	1. There is friction between bikes and pedestrians at the Swanston Street tram stops. The area should be re-designed.	This area was only recently re-designed. It requires both cyclists and pedestrians to use common sense especially when trams are approaching.
57	1. Bike lanes should be installed in Flinders Street.	Tram platform stops in Flinders Street and vehicle access limit the amount of road space for bikes.
	2. There should be a cycling route that connects the Main Yarra Trail with the Moonee Ponds Creek Trail.	There are shared paths on Footscray Rd, Harbour Esplanade and Jim Stynes Bridge and Seafarers Bridge which provide a complete connection between the main Yarra Trail and Moonee Ponds Creek Trail.
58	1. There should not be a 5 year+ wait for separated bike lanes in St. Kilda Road. Due to safety concerns, these are required sooner.	Work that aims to realise this route will be more highly prioritised.
59	1. Police on bikes should target poor vehicle behaviour rather than concentrate on cyclist riding behaviour.	Thank-you for the feedback.
60	1. Cycling safety in Sydney Road is a major concern.	Most of Sydney Road is located within the City of Moreland.
61	1. Biggest priorities are improved connectivity and separation of vehicles and bikes.	These are priorities within the new Bicycle Plan.
62	1. Vehicle parking in bike lanes should be banned.	Thank-you for your feedback. Sometimes off-peak bike lanes are preferred given the needs of different road users.
	2. Improved coordination with neighbouring Council's required. Eg. Albert Street after Baker St. and Elgin Street into Johnston St.	The continuation of a bike route beyond Baker St is a matter for City of Yarra. The CoM will continue to work with surrounding municipalities to improve cycling connections at the boundaries.
	3. Bike corridor to the West Gate Bridge is supported.	Thank-you for your feedback.
	4. The Haymarket Roundabout is confusing and dangerous for cyclists.	The re-design of the Haymarket Roundabout is an action of the Bicycle Plan.
	5. The Idaho Stop should be used at tram stops so as cyclists don't have to come to a full stop for pedestrians.	CoM's concern is that adopting this method may compromise pedestrian safety.

No	Comment Precis	Response
63	1. Improved east/west connections are required in the central city – especially close to Flinders Street.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. Pleased that Elizabeth Street is being examined.	Thank-you for your feedback.
64	1. Concerned about safety for cyclists.	Thank-you for your feedback.
65	1. There is no safe way to ride from Footscray into the central city – the approach to Dynon Road, Footscray Rd and Ballarat Rd are noted as unsafe.	Harbour Esplanade/ La Trobe Street connect directly to Footscray Road and provide a connection to and from the central city. Cyclists can filter into the central city via premium bike lane facilities provided on William Street and Swanston Street which connect directly to La Trobe Street.
66	1. More bike lanes are required.	Thank-you for your feedback.
67	1. Respondent would ride to work if there was a safe, dedicated bike lane.	CoM has received this kind of feedback before and the Bicycle Plan is geared towards meeting this need – whilst recognising that there are other road priorities on some routes.
68	1. A bike lane is required at Toorak Rd West to join up with existing bike lanes on St. Kilda Rd. and Toorak Rd east of Punt Rd.	Toorak Rd east of Punt Road is the City of Stonnington. The installation of a bike lane connection between Toorak Road and St. Kilda Road has been investigated, but not viewed as feasible due to proposed Melbourne Metro works.
69	1. A bike connection between LaTrobe St. and Albert St. should be prioritised.	CoM has implemented measures to improve this connection. (via Spring St and Victoria St westbound and via Exhibition St, Little Lonsdale St and Spring St eastbound). These improvements will be monitored.
	2. Better signage and road education is required to help other road users look out for cyclists riding on separated bike lanes.	The need for better signage is referenced in the Bicycle Plan. The Plan commits the CoM to becoming more active in the area of road education.
70	1. Bike safety at the Haymarket Roundabout, Royal Parade and St. Kilda Road is a concern and the CoM needs robust engagement with VicRoads if this situation is to be improved.	Noted. The re-design of the Haymarket Roundabout is an action of the Bicycle Plan.
71	1. Cyclists should be able to ride through Carlton Gardens from Canning Street. Dedicated narrow bike paths should be installed through parks and gardens.	Links around the Carlton Gardens will be upgraded as part of the Bicycle Plan. Riding is generally permitted in parks in the municipality, but not gardens.
72	1. Plan is not ambitious enough. CoM should install treatments that more fully share the road with vehicles (Lennox Street in Richmond is given as an example).	Thank-you for your feedback.

No	Comment Precis	Response
	2. The Melbourne Planning Scheme should be reviewed to make sure that end of trip facilities in business properties are more extensive.	A study is underway to determine if the amount of parking currently available meets the needs of current and future building users. This information will help to determine how many, and what kind of parking spaces will be required in new and updated buildings. The Melbourne Planning Scheme will be amended based on the recommendations of this study.
73	1. The tram stops along Swanston Street should include green painted paving for bikes to encourage pedestrians to pay more attention to cyclists.	Green painted paving in Swanston Street is not ideal for a shared zone because it could send a message to cyclists that this area has bicycle priority only.
74	1. More separated bike lanes are required.	Thank-you for your feedback
75	1. There needs to be more secure bike parking.	Bicycle parking will now be increased by 2000 over the life of the Bicycle Plan.
	2. Workshops should be organised that educate people to ride safely.	Thank-you for the suggestion. Other behavioural and educational measures to improve safety are in the Plan already.
76	1. Concerned about a lack of safety for cyclists in Swanston Street (between Flinders St. and Little Collins St.), Princes Bridge (due to horse drawn vehicles and taxis), Spencer Street at Flinders Street and Southbank.	Thank-you for your feedback. The CoM is particularly concerned about safety in Southbank.
	2. There needs to be more bike hoops. Some of these are occupied by bikes with advertising hoardings attached. This further reduces parking for cyclists.	Bicycle parking will now be increased by 2000 over the life of the Plan.
77	1. A frequent cyclist who plans his journey and prefers to ride on fully segregated paths.	Thank-you for the feedback.
78	1. Remove more car parking on central city smaller streets.	On-street parking is necessary to maintain the economic viability of local businesses that require loading and servicing. On-street parking also caters for taxis, buses, disabled parking.
79	1. Plan should reference car-dooring accident research.	Thank-you for the feedback. Studies regarding car-dooring have been read and some are referenced in the plan.
	2. Car manufacturers should develop technology to slow door opening speed so as to lessen the chance of car-dooring of bikes.	Thank-you for the suggestion.

No	Comment Precis	Response
80	1. Bikes should carry identification to enable vehicles to trace them in the case of accidents.	This is a matter for the Victorian Government. It is opposed by major bicycle groups such as Bicycle Network Victoria.
81	1. There needs to be an alternative east-west link for cyclists across the central city. A shared path at Flinders St. between Swanston St. and Batman Bridge would assist. Speed calming measures would also need to be introduced.	The Bicycle Plan commits to investigate an alternative east-west route.
82	1. Bikes offer a positive alternative to the pollution of cars.	Thank-you for your feedback.
83	1. At Harker Street, a bike lane should be provided for cyclists turning left into Flemington Road.	Bike lane already exists in Harker Street connecting to Flemington Road. The bike lane is also meant to service left turning cyclists who are feel unsafe using the left turn slip lane which is too narrow to provide formal bicycle lanes.
84	1. A median strip is needed along St. Kilda Rd. to separate cyclists and motorists due to safety issues.	St.Kilda Road is a popular route for cyclists. The CoM has committed to engaging with VicRoads to make this route safer and more accessible.
85	1. Supports targets and actions and that the Plan includes evaluative measures.	Thank-you for the feedback.
86	1. Appreciate cycling improvements to Queensberry and Arden Sts.	Thank-you for the feedback.
	2. Signage and a map that helps cyclists to use preferred routes would be helpful.	The Bicycle Plan stresses the need for new signage and the CoM provides Travel maps for use by cyclists.
87	1. The Capital City Trail Southbank and the link from Sandridge Rail Trail to the Capital City Trail need to be improved.	There is a safe bike link between the Sandridge Rail Trail and the Southbank/ Capital City Trail through Melbourne Exhibition Centre. The connection via Clarendon St cannot be improved due to the desire to maintain traffic capacity along this route.
	2. A bike path is needed along the Capital City Trail from the boat sheds to South Wharf.	Southbank Promenade is a pedestrian priority area and a dedicated bike lane is not supported for safety reasons.
88	1. The use of bikes helps the environment.	Thank-you for the feedback
89	1. Cyclists using shared paths are often inconsiderate of pedestrians and don't ride safely.	Thank-you for the feedback. We have received feedback about cyclist and pedestrian conflict.
90	1. Improved bike paths will hopefully lead to better wheelchair access.	Thank-you for the feedback.

No	Comment Precis	Response
91	1. Safety for cyclists needs to be addressed if more people are to ride bikes – especially in the central city.	Thank-you for the feedback.
92	1. The quality of bike paths needs to be addressed. For example, the Dockland Hwy bike path which is a concrete path with many rough joins.	Noted. It is unclear whether this refers to ramp connections across side streets or simply joints in the footpath slabs. CoM has in the past made improvements to the smoothness of ramp connections.
93	1. Bike infrastructure should co-exist with public transport infrastructure. Eg. could bike racks be added to the front of buses and trams?	This proposal would likely result in increased travel times for many tram and bus passengers for only a few cyclists. PTV have the authority to make this decision.
94	1. For safety and environmental reasons, there should be four roads for cyclists travelling east, north, south and west which cars are not allowed to use.	Thank-you for your feedback. The CoM will continue to actively work to secure new bike routes in the Central City.
95	1. Concerned that implementing the plan won't be possible because of the financial cost involved.	Thank-you for your feedback. An implementation plan is being prepared for the Bicycle Plan which will include costings.
96	1. Cycling should be supported because it has health benefits and reduces the strain on roads and public transport.	Thank-you for your feedback.
97	1. More cyclists would ride further if there were secure, wide bike lanes. Currently, many bike lanes are not wide enough.	Thank-you for your feedback. The new Bicycle Plan acknowledges preference for wide separated bike lanes.
	2. Bike trails should be connected as much as possible to allow for longer journeys.	Thank-you for your feedback. The Bicycle Plan aims to improve connections between off and on-road paths.
98	1. Support works that improve cycling safety and enjoyment.	Thank-you for your feedback.
99	1. There is a need for more off street secure bike parking and inexpensive change facilities	The Bicycle Plan acknowledges how important this issue is and the importance of working with the private sector to achieve it.
100	1. Instead of creating bike lanes for a small minority who cycle, funds should be injected into our public transport system.	Thank-you for your feedback.
101	1. Rescind compulsory helmet laws.	Thank-you. This is a matter for the Victorian Government but the City of Melbourne supports current helmet laws because they improve safety and reduce likelihood of injury if cyclists fall from their bike.

No	Comment Precis	Response
	2. Cycling should be prioritised on roads such as Canning Street where there is less conflict with vehicles.	The Bicycle Plan acknowledges the importance of Canning Street and includes an investigation as to how this route into the central city can be improved.
	3. Another east-west link for cyclists is required at the southern end of the central city.	The Bicycle Plan commits to investigate an alternative east-west route.
	4. Make better use of little streets and laneways for cyclists.	Opportunities to establish bike lanes in 'little streets' will be examined.
	5. The intersection of Clarendon St with Whiteman and Normanby Sts. need to be redesigned to make them more cycle friendly.	Recent tramworks on Clarendon St have removed the opportunity to install a narrow city bound bike lane immediately north of Normanby Rd and VicRoads is not supportive of reducing traffic lane capacity on Clarendon St.
102	1. A large secure bike parking facility including showers is required in the central city.	Thank-you for your feedback. The Plan concentrates on the provision of smaller, on-street parking hubs. This recognises the difficulties of finding a venue and finances that would be required for a large, single facility.
103	1. Supports the development of more protected bicycle lanes and protected intersections proposals.	Thank-you. There is an action in the Plan to trial protected intersections
104	1. Bike parking should be installed in Flinders Street at Elizabeth Street intersection.	The Plan includes Flinders St and Degraeves St as a potential new location.
	2. 'Little' streets should be used more to connect the central city for cyclists.	Opportunities to establish bike routes in 'little streets' will be examined.
	3. Support protected intersection proposals.	Thank-you for your feedback.
105	1. More on-street bike parking is required.	Bicycle parking will now be increased by 2000 over the life of the Plan.
	2. Advanced signals are helpful because they allow cyclists to get out of the way of vehicles at intersections.	Thank-you for your feedback.
106	1. Cyclists are speeding and riding on the wrong side of the street at Exhibition Street heading south towards the Yarra River.	Thank-you for your feedback.

No	Comment Precis	Response
107	1. St. Kilda Rd. is very unsafe and needs to be redesigned.	The enhancement of safety for cyclists and pedestrians along St. Kilda Rd is being investigated by VicRoads, the City of Port Phillip and CoM and may lead to separated bike lane facilities being installed along the full length of St. Kilda Rd.
108	1. Changes to bike paths in St. Kilda Rd. need to be synchronised with the likely Metro Tunnel work.	Thank-you for your feedback.
109	1. On p.25 a diagram is incomplete.	Thank-you for letting us know. Diagram to be checked.
	2. The arguments for not allowing cycling in some CoM gardens is flawed and cyclists and pedestrians should both be allowed in them.	It is CoM policy that gardens are for passive recreation. We will continue to work to improve routes around Carlton Gardens.
	3. Flinders St. should be re-designed to remove street car parking from the southern side and a two-way bike lane should be installed instead.	Thank-you. On-street parking is necessary to maintain the economic viability of local businesses that require loading, servicing and short term visitors. On-street parking also caters for taxis, buses, disabled parking.
110	1. A balance between pedestrians, cyclists and motorists is required if the road space is to be safe for every user.	Thank-you for your feedback.
111	1. More wayfinding signage is required to redirect cyclists to safe bike paths.	The Bicycle Plan places a heavy emphasis on the need for more directional signage – including road signage.
112	1. It is disappointing that the CoM only aims to decrease accidents and fatalities by only 10%.	The target for fatalities will be changed to zero.
113	1. A viable solution needs to be found for cyclists travelling east/west through the southern part of the city.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. Funding for bicycle initiatives should be expanded beyond the Victorian congestion levy funding.	Thank-you for your feedback.
114	1. Cyclists are riding in the bus lane in Victoria Street between Hoddle and Spring Sts. This slows down buses. Cyclists should move to dedicated lanes in Albert Street for this kind of service.	Shared bus/ bike lane arrangements were approved for short connecting lengths of Victoria Rd as part of the Victoria Pde bus upgrade project. Cyclists should not be riding for long distances along Victoria Pde.
115	1. Cycling fatalities are best reduced by introducing new laws that entail ‘motorists at fault’.	Thank-you for your feedback.

No	Comment Precis	Response
116	1. Separated bike lanes in St. Kilda Road need to be a higher priority because it is dangerous for cyclists.	Thank-you for your feedback. More work ins required on what is possible here. The priority has been changed to medium term.
117	1. More bike parking is required outside of the Melbourne Town Hall and the Department of Environment Land Water & Planning (DELWP) at 1 Spring Street.	If space allows, more bike parking will be installed at these locations.
	2. Street sweeping in bike lanes needs to improve (eg. Lloyd Street between Dynon and Arden St.	Thank-you for your feedback. CoM also relies on people calling in issues such as broken glass.
	3. A bike route is required from Dynon Rd to Maribyrnong River.	The CoM has developed designs to establish a bike connection on Sims St to connect the Maribyrnong River to Dynon Rd.
118	1. A greater focus on separated lanes through Southbank is needed as a way of dealing with perception of danger.	The CoM recognises the degree of conflict at Southbank between cyclists and pedestrians. A floating pontoon is among the options being considered.
119	1. Disappointed that the Plan isn't more ambitious.	Thank-you for your feedback.
	2. Creating 'non-preferred' routes is not supported.	Thank-you for your feedback.
	3. Little Streets in the central city should be converted to contra-flow bike lanes by removing on-street parking.	Thank-you for your feedback.
	4. More east/west bicycling routes are required.	The Bicycle Plan commits to investigate an alternative east-west route.
120	1. There is poor cycling connectivity between Kensington, North Melbourne and the central city.	The revised Bicycle Plan includes a number of local route improvements through North Melbourne particularly to improve connections to William Street and Queensberry St.
	2. Racecourse Rd. has clusters of unlinked bike lanes.	Racecourse Rd is an arterial roadway under the authority of VicRoads and is located partially within CoM. Wherever feasible, bike lanes have been installed.
121	1. Vehicles and bikes should share streets and roads – not separated through bike lanes.	Thank-you. Our feedback from cyclists is that separated bike lanes are safer and encourage them to cycle more.
	2. Walking and cycling need to be the highest priorities on the transport hierarchy.	Thank-you for your feedback.

No	Comment Precis	Response
122	1. Grattan St. between Rathdowne and Swanston Sts. is used a lot more by cyclists than acknowledged in the plan.	Noted. The Bicycle Plan does include an action of investigating a new bike lane from Swanston to Rathdowne St. This recognises the importance of the Street.
123	1. There are not enough east/west options travelling through the central city.	The Bicycle Plan commits to investigate an alternative east-west route.
125	1. The Plan to direct bike traffic to specified routes is supported but needs these paths to connect properly. Eg. Peel Street in front of Victoria Market which is not safe for cycling.	The need to maintain on-street parking to service abutting residents and businesses and VicRoads requirement to maintain two traffic lanes in each direction makes the upgrade of bike lanes here difficult. CoM will investigate signal priority improvements for cyclists (head starts) and will improve alternative connections through North Melbourne such as the William/Howard/Courtney Street connection.
126	1. Goal of reducing cycling fatalities by 10% is too modest.	The target for fatalities will be changed to zero.
	2. Cars should be charged a toll to enter the central city and cycling and pedestrian infrastructure should be substantially upgraded.	Thank-you for your feedback.
127	1. People will not ride long distances unless high quality paths exist.	Thank-you for your feedback.
128	1. The Yarra Trail – north side through Birrarung Marr needs to be connected to Swanston Street. (It ends at Swanston).	The north side of the Yarra Trail already connects to Swanston Street via shared paths along Batman Ave, through Birrarung Marr and adjacent to Federation Square. This includes a diversion away from the waterfront. A more direct route is not possible because CoM does not support the installation of more paved areas through Birrarung Marr.
129	1. More enforcement is required in separated bike lanes to stop delivery vehicles blocking the lanes illegally.	Include reference to enforcement of road and parking rules where behaviour increases risks and convenience for bike riders.
	2. Vehicles including delivery vans constantly block bicycle paths. In Franklin Street, left turn vehicles turn in front of bike lane and wait for pedestrians. Trams delay cyclists by waiting with doors open when no pedestrians are approaching.	Victorian Road Rules state bikes must not overtake a vehicle on the left if it is turning left and indicating left. Tram door openings to be discussed at regular meetings with Yarra Trams. Older trams do not have automated door operation.
	3. There should be more action items in the Bicycle Plan for Swanston Street.	Five projects relate to improvements on Swanston Street. The street is a low speed, low volume traffic environment in the central city.
130	1. The protected intersection design (figure 24) should be trialled at the Queensberry St/ Howard St intersection.	Include Queensberry and Howards street as possible trial location.

No	Comment Precis	Response
	2. The provision of a map of safe, high quality bike routes is a good idea.	Thank-you for the feedback.
	3. More separated cycling routes need to be introduced to make cycling safer.	Emphasise need of key bicycle routes/corridors to be separated eg St Kilda Road priority
	4. A trial should be undertaken to allow cyclists to ride through Carlton Gardens.	Links around the gardens will be upgraded as part of the plan. Riding is permitted in parks in the municipality, but not gardens
	5. The Bicycle Plan has too many actions that require further investigation or consultation. The actions should be made more concrete.	Tighten actions in the plan. All bicycle projects will be subject to further input from the community in the design and construction phase. Many projects require input and approval from other authorities such as VicRoads.
	6. Northbank does not receive a lot of attention but could still be an excellent alternative to Southbank for cyclists.	There is scope for minor cycling improvements on Northbank only.
131	1. 'Green wave' treatments should not be installed at the expense of free movement of other transport friendly modes of transport.	Any implementation of green waves would be modelled and trialled based on VicRoads network operating plan and priority modes. However, green waves will only be considered along routes with peak directional bike and traffic volumes and where there are not competing demands by trams along intersecting streets. Therefore CoM will not be supporting the implementing of any green wave signal priority within the central city. Albert Street will be the first route trialled for green wave implementation.
	2. Traffic calming measures are required at La Trobe Street bike lanes due to some cyclists riding too fast.	We will investigate design options to reduce speeds
	3. Addressing gaps in cycling routes is supported but not at the expense of current traffic arrangements for vehicles.	Thank-you for your feedback.
	4. I'm not sure if there is any need for a cycle lane on Victoria Street between Peel and Elizabeth Street because the relatively slow speed of traffic along this stretch of road means cars and bikes can easily share the road.	Thank-you for your feedback.
	5. There should be more signs encouraging cyclists to hook turn on major intersections.	We will install hook turns where practical.
	6. Bicycle counters are supported but they should also count the number of cars and the estimated number of people on trams.	Further enhancement outside the scope of bicycle plan. Refer to Transport Strategy

No	Comment Precis	Response
	7. There should be 'honesty boxes' established to help pay for bike repair stations.	Idea noted for detailed design.
	8. There should be fuller public consultation before each cycle lane is established.	Consistent with Chapter 2. All projects undertaken will be subject to further community engagement and feedback.
132	1. Adult cyclists should not be banned from riding through Carlton Gardens.	There is a policy that gardens are for passive recreation. We will continue to work to improve routes around Carlton Gardens
	2. Road space should not be prioritised in a way that discourages cyclists from using certain routes	Bikes will not be prohibited on streets but rather guided to routes based on level of service. Include statement that destinations will be accessible
	3. East/west little streets in the central city should be geared towards cyclists.	The Bicycle Plan commits to investigate an alternative east-west route.
	4. Full time bike lanes are required in Exhibition Street.	Plan includes investigation of full-time bicycle lanes
	5. There should be a higher commitment to installing bike parking hoops.	Bicycle parking will now be increased by 2000 over the life of the Plan.
	6. Parking facilities specifically for cargo bicycles require investigation.	Noted, add to Chapter 3 to investigate design and locations for cargo bike parking
	7. Swanston Street is supported as a bike friendly street but horse drawn vehicles and illegally parked vehicles still present a problem.	Work to investigate high incidence of crashes in Swanston Street near Flinders Street is consistent with Chapter 4. Include action to enforce illegal behaviour that impacts on safety and comfort of people riding bikes
	8. There should not be mandatory helmet laws for users of Bike Share.	Thank-you. This is a matter for the Victorian Government but the City of Melbourne supports current helmet laws because they improve safety and reduce likelihood of injury if cyclists fall from their bike.
	9. Concerned that shopping strips such as Lygon and Errol Street prioritise vehicle access only.	<p>Repeat research conducted in Lygon Street into economic benefits of providing bicycle parking and expand to other locations and benefits.</p> <p>CoM will continue to remove car parking spaces in strip shopping centres where supported by abutting businesses to enable the construction of bike parking corrals.</p> <p>The removal of traffic lanes in strip shopping centres will be investigated but may be difficult given constraints, such as Errol Street only providing one traffic lane and Lygon Street accommodating buses.</p>
	10. Improved bicycle paths should be established in Grattan Street – without waiting for the Melbourne Metro project.	Grattan Street improvements with be investigated in conjunction with Melbourne Metro work between Flemington Road and Swanston Street consistent with Table 7. East of Swanston Street we will work with the local school to make improvements to this local route

No	Comment Precis	Response
133	1. Lonsdale/ Exhibition Streets are not safe due to interaction with buses. There should priority traffic signalling for bikes to avoid this problem.	Lonsdale Street is a priority bus street and CoM has implemented measures to provide alternative connections between La Trobe St and Albert St. Directional pavement markers will be installed to guide cyclists to these connections.
	2. Complete the bike lane between Albert St and Latrobe St.	CoM has implemented measures to improve this connection. (via Spring St and Victoria St westbound and via Exhibition St, Little Lonsdale St and Spring St eastbound). Directional pavement markings will be installed to direct cyclists along these connections. The revised Bicycle Plan will investigate improving the existing peak period bike lanes on Albert St between Nicolson and Gisborne Sts.
	3. To make cycling safer and more convenient, there should be reductions in on- street parking, the banning trucks during certain times of the day, reduced speed limits, pedestrian, and more safety campaigns to encourage vehicles to be more bike aware.	Thank-you. Helmet laws are a matter for the Victorian Government but the City of Melbourne supports current helmet laws because they improve safety and reduce likelihood of injury if cyclists fall from their bike.
134	1. The Canning Street to Collins Street route requires better connectivity. Cyclists should be able to ride through the Carlton gardens.	Links around the Carlton Gardens will be upgraded as part of the Bicycle Plan. Riding is generally permitted in parks in the municipality, but not gardens.
135	1. Respondent cannot activate any traffic lights on carbon fibre bike. He has been told by VicRoads that there is not enough metal in the bike to activate the sensors.	VicRoads manages all signalised intersections and CoM cannot add to the feedback received.
136	1. Safer cycling facilities from Whiteman Street to the Southern Cross Station are required.	Spencer Street is an arterial road managed by VicRoads. We have asked for a review of its operation in order to give greater priority and facilities for people to ride bikes.
137	1.The path under Olympic Boulevard bridge at the beginning of Batman Avenue needs widening to make it safer for cyclists and pedestrians.	VicRoads manages this land and funding has been allocated to complete this project. It is listed under projects on arterial roads.
138	1.Southey St should be designated as a residential area on maps.	This is standard information taken from the Municipal Strategic Statement growth areas.
	2.The bike plan 2012-2016 bike strategy includes "upgrade Arden St route and bridge over Upfield railway line." This has not occurred and although listed in the new Plan it now requires Government support to go ahead.	The project is a complex one that requires funding and agreement from numerous land managers. Unfortunately it is not progressing as quickly as we would have wished.

No	Comment Precis	Response
139	1. Safer and wider east-west links are required through the central city. Respondent would like Collins Street widened.	The Bicycle Plan commits to investigate an alternative east-west route.
	2. More east-west and north-south protected cycling routes through the central city are required.	As above
140	1. Southbank crossing at Queensbridge Street is confusing and should be redesigned.	Surveys have been completed and a new design will be put in place in early 2016
	2. A floating pontoon (similar to that along the Yarra in Richmond) is the best idea to separate cyclists and pedestrians on Southbank.	Noted. Consistent with Chapter 2 major projects
142	1. The draft refers to discussions with RACV to extend Bike Share instead of PTV.	Change made in the Bicycle Plan from RACV to PTV.
	2. More bike parking at railway station is supported.	Thank-you for your feedback.
	3. Vehicle speed within the central city should be further reduced to 30 km/h.	Thank-you for the feedback. Speed limits are set by other authorities. CoM will work with other government agencies to reduce speed limits where appropriate.
143	1. Road space should not be prioritised in a way that discourages cyclists from using certain routes	Thank-you for your feedback.

Name	Comment Precis	Response
<b>City of Yarra</b>	1. Implementation of way finding signage is strongly supported, especially through inner Melbourne and through liaison with Yarra.	Thank-you for your feedback.
	2. More markings for cyclists are required at intersections.	Noted. There is an action in the Bicycle Plan to trial protected intersections.
	3. Where tram head start signals are installed, head start signals for cyclists should coincide with the timing of the signals for trams (such as on Bridge Road at the Church Street intersection).	CoM will add an action to provide green wave, early starts and bike boxes on cycling corridors in the Bicycle Plan as a priority.
	4. Where there are head start signals for pedestrians, these should also apply to head start for cyclists proceeding ahead along La Trobe Street parallel to the pedestrian crossing.	CoM will add action to provide green wave, early starts and bike boxes on cycling corridors in the Bicycle Plan as a priority.
	5. Installation of cyclist turn boxes delineating left and right turns by cyclists, especially at vehicle hook turn intersections where there is uncertainty whether cyclists pass vehicles waiting to turn, on the right or left side of the waiting vehicle.	Noted, CoM will continue to roll out line marking for bicycles at hook turn intersections (eg. La Trobe Street).
	6. Sharrow markings for bicycles on roundabouts should be included, to indicate to motorists that they need to share the road space with cyclists.	CoM will include trials with evaluation of sharrows.
	7. Further reduction to 30 km/h in inner Melbourne is supported by City of Yarra concurrent with inter-Council road safety projects.	Thank-you for the feedback. Speed limits are set by other authorities. CoM will work with other government agencies to reduce speed limits where appropriate.
	8. There is scope for IMAP to tackle many of the issues jointly.	Bicycle Plan amended to include IMAP strategic direction.
	9. Bicycle parking racks need to be adjusted to accommodate parking for cargo bikes. We would be pleased to be involved in discussions on inner city freight transport by cargo bike and on freight hubs and parking associated with cargo bike transport.	Noted, add to Chapter 3 to investigate design and locations for cargo bike parking. Further discussion welcome.

Name	Comment Precis	Response
<b>Yarra Trams</b>	1. Supports improved tram and bicycle separation as an important safety feature.	Thank-you for your feedback. The CoM looks forward to continuing discussions about road space allocation with Yarra Trams.
<b>City of Port Phillip</b>	1. Support the plan's recognition that Clarendon Street at the Melbourne Convention Centre is a gap in the network that needs to be prioritised. 2. The gap between Whiteman Street and the 109 Sandridge Trail should also be addressed as this provides a connection to Cecil Street.	Recent tramworks on Clarendon St have removed the opportunity to install a narrow city bound bike lane immediately north of Normanby Rd and VicRoads is not supportive of reducing traffic lane capacity on Clarendon St.  The construction of the port junction tram platform has improved the connection between the shared paths on Normanby Rd and Whiteman St. This represents a circuitous route for cyclists connecting between the 109 Sandridge Trail and Cecil St but it is unlikely that a more direct crossing of multiple tram reserves is feasible.
	3. The timeframes for the installation of bike lanes on City Road and connections to Moray Street and southwest should be included. City Road Master Plan should include safer speed limits and recognition that the Melbourne Metro Rail Project will have impacts on City Road.	Timeframes to be included in the Bicycle Plan implementation plan as soon as they are available.
	4. Bay St to city bike route – Continuation of route to central city from Buckhurst St through Normanby Road and Spencer Street. This route links to the Fishermans Bend Urban Renewal Area. DEDJTR are currently leading on this project. This has been identified as a Strategic Cycling Corridor in Plan Melbourne 2014.	CoM will continue to work in collaboration with DEDJTR on this issue.
	5. Queensbridge St bike lanes – continuity and linkages to Moray St route and continuation into central city are important.	The CoM will soon install improved bike connections at Queens Bridge St and Market St to improve connections to and from the central city. The CoM is investigating options to improve the provision of bike facilities on Queens Bridge St between Power St and the bridge.

Name	Comment Precs	Response
<b>City of Port Phillip Cont.</b>	<p>6. Dorcas St – Advocacy to DEDJTR and VicRoads is required for implementation of this strategic cycling corridor, including a crossing over Kings Way, as identified in Plan Melbourne 2014.</p> <p>7. Investigations within the draft Bicycle Plan 2016-2020 should include option identification and preliminary analysis for realising a shared walking and bike riding crossing of Kings Way.</p>	<p>The option of a bike connection across Kings Way, along Dorcas Street is being investigated by the City of Port Phillip. If this connection is established, the CoM will investigate options to enhance the bike lane connection between St.Kilda Road and Kings Way including the installation of a bike hook turn signal lantern at St.Kilda Road.</p>
	<p>8. Connections to Westgate Punt and Westgate Park - Continued work is required associated with the Port Capacity Project in order to improve bike connections to the Westgate Punt and along Todd Road to connect to Lorimer Street.</p>	<p>The shared path along the Yarra's Edge promenade will be extended beneath Bolte Bridge in conjunction with current development. The CoM has requested VicTrack approval for the continuation of a shared path along the north side of Lorimer Street utilising the redundant rail reserve. This would improve the connection along Lorimer Street to the Westgate Punt.</p>
	<p>9. Bike improvements are required at Montague Interchange – Creating a continuous link from Docklands to Lorimer and Montague Precincts. This route links to the Fishermans Bend Urban Renewal Area.</p>	<p>The CoM and VicRoads are investigating options to improve cycling connections in the vicinity of the intersection of Montague St/ Lorimer St/Westgate Freeway.</p>
	<p>10. Ingles Street bike improvements are required to provide a connection between the Fishermans Bend Urban Renewal Area and the central city.</p>	<p>The CoM has recently implemented measures to improve the cycling connection between Lorimer and Turner Sts. via Rogers and Ingles Sts. Further bike lane improvements on Ingles St are mainly outside of the CoM boundaries.</p>
	<p>11. High Street bike improvements are required to provide good links to St Kilda Road and Albert Park Lake. This would also provide an alternative to St Kilda Junction and support local schools. It is requested that this be progressed in tandem with the St Kilda Road Corridor Safety project being led by VicRoads.</p>	<p>The CoM will investigate various improvements in connections to and from St.Kilda Rd, mainly concentrating on the connection to Commercial Rd to improve connections through Fawkner Park.</p>

Name	Comment Precis	Response
City of Port Phillip Cont.	12. Collins Street Extension. Request that long term actions include advocacy for the extension of Collins Street as a green transport link to Fishermans Bend Urban Renewal Area. Consideration will need to be given to how cyclists will continue to their destinations from Collins Street in and through Docklands.	Noted. Consistent with major projects paragraph within the Bicycle Plan.
	13. Bike parking. We support the addition of 800 new bicycle parking places including those near Flinders Street station but note that no bike parking is marked for installation on St Kilda Road.	Noted. With proposed extension to the number of bicycle places added to the Bicycle Plan, St.Kilda Rd will be investigated as a place for further installations.
	14. Request that a bike maintenance station be considered for St Kilda Road.	The CoM will work with Melbourne Metro to provide bike hub and maintenance at Domain Station and investigate shorter term measures.
	15. Integration with other modes of transport in particular public transport is not addressed in the report. Although yet unclear Melbourne Metro Rail Project presents opportunities to provide high capacity and high quality end-of –trip facilities, including secure, weather protected bike parking. Council officers are open to advocating for this inclusion.	Bicycle parking will now be increased by 2000 over the life of the Bicycle Plan.
	16. Install bike barometer on St Kilda Road, in conjunction protected bike lanes as part of the St Kilda Road Corridor Safety Project. Is it likely to only capture the numbers of cyclists moving in one direction?	This location is proposed in the plan. It is likely the barometer will only give a reading for people traveling into the city.
	17. Clarity is sought over the design of the counters in terms of publicly visible. Are new bike counters proposed or are the bike barometers going to publicise data which is already being collected?	Yes, all counters will have displays visible to people riding bikes and in cars.

Name	Comment Precis	Response
<b>City of Port Phillip Cont.</b>	18. We would like to see collaboration within inner city councils on behaviour change and promotional programs as well as events to increase consistency of messages and impact. Some examples include: Co-existence campaigns including for on-street as well as shared paths; Anti-car dooring campaigns; Active transport for schools; and recruiting workplaces along St Kilda Road for Ride 2 Work Day.	Noted. CoM will have contact with other local government areas about possible shared campaigns.
<b>Victoria Walks</b>	1. The city needs to be planning high quality, safe infrastructure and environments for a future where walking and cycling are major transport modes. Well designed, low speed, shared space street environments, where all forms of transport can mix together are required. Victoria Walks supports the description of the issues with shared paths.	Thank you for your feedback.
	2. Emphasise that cyclists are required to give way to pedestrians on shared paths and spaces in education, communication and signage.	Noted, this is included in 'Share Our Streets' discussions and materials.
	3. Investigate measures to reduce high cyclist speeds to 20 km/h or less on shared paths and spaces, including signage, communication and enforcement.	The Bicycle Plan is explicit in the link between speed and injury. The Plan commits CoM to continue to work with VicRoads on speed limits.
	4. Victoria Walks supports the description of issues and the City of Melbourne's approach to cycling in parks and gardens.	Thank-you for your feedback.
	5. Victoria Walks supports the priority early start projects in Table 11 giving cyclists and in some instances walkers and trams a head start over vehicles. This reinforces the give way rules and improves safety for road users.	Thank-you for your feedback.

Name	Comment Precis	Response
<b>Victoria Walks Cont.</b>	6. The City of Melbourne should advocate for a change to VicRoads' Speed Zoning Guidelines to allow application of 30km/h speed limits where appropriate.	Thank-you for the feedback. CoM will discuss this issue with VicRoads.
	7. There should be some policing of illegal bike riding on footpaths and on crossings to discourage this behaviour. Include an action to advocate for enforcement in response to illegal cycling on footpaths.	Noted. Enforcement of existing rules to improve safety for people riding bikes and other road users will be discussed with the police. Victoria Walks may wish to collaborate with CoM on this action.
<b>Melbourne Bicycle Users Group</b>	1. There is concern about a suggestion in the Bicycle Plan that bikes on some CBD streets will be prohibited.	Thank-you for the feedback. Bikes will not be prohibited on streets but signage will inform them of bicycle friendly routes which they may or may not choose to use.
	2. The idea of focusing on local routes is supported especially as a means of encouraging children to cycle. The traffic environment around schools needs to support this.	Thank-you for your feedback.
	3. Support use of 'little streets' for use by bicycles. This would include the removal of car parking, a 30km/h speed limit and a counter-flow lane.	The Bicycle Plan commits to investigate an alternative east-west route.
	4. Green phases on many traffic lights are too long – for example, St.Kilda Road.	CoM will work with VicRoads to suggest efficiencies in signal phasing to support people to ride bikes.
	5. Strongly opposed to 'peak period' bicycle lanes.	Noted. Plan includes investigation of full-time bicycle lanes wherever possible.
	6. Elevation differences between different routes should be taken into account because they are an important driver for route choice.	Elevation was not considered in the study but it has been noted and further studies will include it.
	7. It is not understood why the half-block between Lt Bourke and Bourke on Exhibition is a high priority.	The action would add another city block to the existing bicycle route and is based on cyclist volumes.
	8. Concerned that there appears to be no actions in the Plan related to the two gaps in the Bicycle Plan.	It is anticipated that these locations will be added to the next bicycle plan once Melbourne Metro and further consultation is complete.

Name	Comment Precis	Response
<b>Melbourne Bicycle Users Group Cont</b>	<p>9. The target level of service for the different kinds of infrastructure should be an integral part of the design process, and not only measured afterwards e.g., high-quality means designing to a rating equal to B or higher. High-quality separated lanes should include “Connections to and through intersections.” Why is a single chevron line marking, which implies at least some buffer, put on equal footing with painted lanes, sharrows etc., none of which imply any buffer?</p>	<p>The CoM acknowledges that the provision of any chevron separation adjacent to the bike lane improves safety and attempts to provide such designs whenever possible.</p> <p>The technical note in the Bicycle Plan includes an example that illustrates the range of criteria considered when evaluating level of service.</p> <p>Agree that target level of service should be an important part of the design process. A discussion with Melbourne BUG would be useful on these points.</p>
	<p>10. Concerned that VicRoads will not adopt the same planning horizons as CoM.</p>	<p>There has been collaboration with VicRoads on the Bicycle Plan and it is recognised that this collaborative work will need to be strong for many of these changes to be implemented.</p>
	<p>11. The respondent is seeking improvements in bicycle infrastructure concurrent with the construction of the Parkville station.</p>	<p>Discussions will need to be held with Melbourne Metro. No designs have not been finalised.</p>
	<p>12. Respondent is disappointed that the southbound lanes on Princes Bridge and separated infrastructure on St Kilda Road are not a higher priority.</p>	<p>An upgrade is expected in conjunction with tram stop upgrade in the next 2-5 years.</p>
	<p>13. If separated bike lanes will be installed on Royal Parade that would reduce the need for a 40km/h speed limit, so should the horizons for those two items be swapped?</p>	<p>A review of the speed limit on Royal Parade will progress. A speed limit reduction is possible, but work on Melbourne Metro may delay separated bike lane project</p>
	<p>14. Respondent is unclear why Commercial Road been chosen for bicycle lanes ahead of Toorak and Domain Roads.</p>	<p>Commercial Road is a wide road that we believe can be upgraded to provide better access and safety for riders. Toorak and Domain roads are likely to be the location of Melbourne Metro construction until at least 2020.</p>
	<p>15. Separated bike lanes in Flemington Road are favoured.</p>	<p>Noted. This road is managed by VicRoads. City of Melbourne has completed some upgrades to the road and is developing alternate routes on local roads that we manage in North Melbourne.</p>

Name	Comment Precis	Response
<b>Melbourne Bicycle Users Group cont</b>	16. Segregated paths for cyclists need to be supported by different pavement textures and colours.	Formal shared zones are always signed. Consideration of pavement texture and colour changes to delineate areas will be considered.
	17. Concerned that 'shared paths' do not work well for cyclists when they are being also used for cycling connectivity. It is proposed that the CoM engage with stakeholders like Parks Victoria and VicRoads to rethink the infrastructure needed to fulfil the cycling corridor function of these paths.	Noted. CoM to review off-road path capacity and apply guidelines.
	18. A green wave on Swanston St between Flinders and Victoria Sts is supported to further support cyclists prioritising this route.	Strong cross-movements for trams, buses and walking in the central city means it is unlikely to be feasible to create a green wave on Swanston Street in Hoddle Grid.
	19. Funds will be required to maintain bicycle stations.	Note and amend to include maintenance.
	20. Can the process for approvals for intersection design treatments be explained and the likely locations for a trial.	We will propose a design and submit to VicRoads for approval. Chapter 4 actions suggest Swanston and Queensberry streets or Canning and Elgin streets as options for investigation.
	21. Concerned about the number of crashes involving horse drawn vehicles in Swanston Street.	Consistent with Chapter 4 we have committed to investigating details of these crashes in order to improve safety.
	22. Concerned to know if the speed of vehicles has dropped since speed limits were introduced in the central city.	In the months after the 40km/h central city speed limit was introduced, the percentage of cars exceeding 40km/h in the central city had dropped from 37 per cent to 27 per cent.
	23. the danger with using counter data to inform policy is that it does not account for latent demand, so that would have to somehow be factored in as well.	Change text to reflect that counts are only one source of evidence used to determine priorities.

Name	Comment Precis	Response
Amy Gillett Foundation (AGF)	1. Aim for zero deaths and serious injuries from bike rider crashes by 2020.	Thank-you for the feedback. This change has been made.
	2. Work with the Amy Gillett Foundation to provide 'learning to drive with bike riders' training for all drivers of City of Melbourne vehicles and City of Melbourne contractors such as Citywide.	Thank-you. CoM will discuss this further with the Amy Gillett Foundation.
	3. Investigate new technologies for roll out to City of Melbourne and contractor vehicles, such as the 'Rider Reminder' door handle prompts, produced by the TAC, and 'Cycle Safety Shield' being fitted to refuse collection vehicles in the UK.	Thank-you, further discussions will be held with the Amy Gillett Foundation.
	4. Support the amendment of Victoria's road rules (RR 144 and 139) to mandate minimum distance when drivers overtake bike riders including 1 metre in speed zones up to and including 60kph and 1.5 metres in speed zones over 60kph	Noted. The investigation of the need for legislation on this issue is noted in the Plan.
	5. Add 'education and legislation for a minimum distance when drivers overtake bike riders' to the list of factors that increase actual and perceived safety (section 4, page 56)	Add point about minimum distances for overtaking
	6. AGF support a safer cycling environment by pursuing speed limit reductions in the City of Melbourne.	Thank you for your feedback.

Name	Comment Precis	Response
<b>Amy Gillett Foundation (AGF) cont</b>	7. Conduct further analysis of biker rider crashes, fatalities and serious injuries.	Consistent with Chapter 4 action to work with the Victorian Government to research and analyse CrashStats and further investigate high bicycle crash locations in the municipality.
	8. Work with TAC to assess existing online approaches for the self-reporting of bike rider crashes available in other Australian jurisdictions and consider if implementing something similar in the City of Melbourne would provide a better understanding of bike rider crashes.	Amend action to work with the Victorian Government to develop online self-reporting to overcome under reporting of crashes involving bicycles.
<b>Bicycle Network Victoria</b>	1. 'Preferred/non-preferred' language implies that bike riding is welcome on some routes but not on others. 'More work is required by the City of Melbourne to re-conceptualise the preferred/non-preferred bicycle route concept so that it does not legitimise the negative views towards cycling of some members of the public.	Bikes will not be prohibited on streets but guided to bike friendly routes. The text has been changed to reflect this meaning more clearly.
	2. Bicycle Network is disappointed that the bike plan does not include any action to introduce a 30 km/h speed limit across the Hoddle Grid.	Thank-you for the feedback. Speed limits are set by other authorities. CoM will work with other government agencies to reduce speed limits where appropriate.
	3. The need for a high quality east-west bicycle route in the southern section of the CBD is still required. The City of Melbourne should use this four year period to plan for this corridor in preparation of a future upgrade.	The Bicycle Plan commits to investigate an alternative east-west route.
	4. Provide southbound bike lane up the hill on Anderson Street, South Yarra. Due to the crossing point of the Yarra at Morrell Bridge there is considerable demand for riding on Anderson Street.	CoM will investigate this option depending upon road width. Included in the revised Bicycle Plan.

Name	Comment Precis	Response
<b>Bicycle Network Victoria Cont.</b>	5. Work with City of Yarra to improve the gateway to the City of Melbourne at Bridge Road. Establish cut through to off-road path and widening of footpath at Weedon Reserve. This is a proposed project from the 2012-2016 bike plan that has not been completed).	Yes, this was an action of the current Bicycle Plan and on-going discussions are being held with the East Melbourne Group and local residents about the draft designs.
<b>Victorian Motorcycle Council</b>	1. The VMC supports the draft Bicycle Plan 2016 – 2020 in principle providing that: <ul style="list-style-type: none"> <li>- it is recognised that increasing the safety of one road user group should never be at the expense of another</li> <li>- designs need to consider that motorcycles cannot filter against the kerb but bicycles can.</li> </ul>	It is consistent with Road Safety plan improvements for one road user should not compromise safety of another user. Further discussion with the VMC will be undertaken to better understand the second point.
<b>Public Transport Victoria (PTV)</b>	1. Under the wayfinding section (pg -41) - there is mention of improving bike share stations and destinations. Can a point on wayfinding be noted on the bike share section (page 45), so to connect readers back to this action?	Noted. Reference added to the revised Bicycle Plan.
	2. Under Chapter 5 - "Encourage more people to ride" - please note that council will work with PTV, RACV to promote greater use of bike share for commute within the CBD (as alternative transport choice or leisure).	Noted. This reference has been added into the revised Bicycle Plan (at Chapter Three).

Name	Comment Precis	Response
<b>PTV Cont</b>	3. Under Events - another opportunity to note that Council will work with PTV to promote bike share for during events or from one event to another (previously bike share were provided during the Melbourne open house event & for the international students tours).	Noted. To be further discussed with PTV.
<b>RACV</b>	1. Support new bike lanes but believes that these should be installed as an alternative to on-road vehicle parking in areas of the central city.	Noted. Removal of on-street parking is one option for the placement of new bike lanes and will be examined as an option when new lanes are being considered.
<b>Department of Economic Development, Jobs, Transport &amp; Resources</b>	1. Review strategic cycling corridors in line with Government policy	1. Bike Plan reviewed and changes to ensure consistency with Government Policy.

**Implementation Plan - Bicycle Plan 2016-2020 ATTACHMENT FOUR**

Projects/action	Description	2016/2017	2017/2018	2018/2019	2019/2020
<b>Chapter 1 - Planning for people to ride bikes</b>					
Align cycling networks and priorities at all levels of government	Staff time				
Ensure planning for growth areas include connections and facilities for people riding bikes	Staff time				
Implement local area structure plans and include bicycle infrastructure through development funds	Staff time				
Ensure Melbourne Planning Scheme matches requirements for bicycle parking in new and existing buildings.	Staff time				
<b>Chapter 2 - A connected bicycle network</b>					
Work with VicRoads to update and align the network operating plan for 2016-2020	Staff time				
Implement guidelines and level of service in the planning and design of the bicycle network	Staff time				
Apply a level of service assessment to determine streets in the central city that most preferred and least preferred for cycling	Contract	\$ 20,000	\$ 20,000		
Work with VicRoads to have new level of service criteria used in Network Fit Assessments to provide a more accurate representation of the benefits of bike lane improvements	Staff time				
Work with VicRoads to plan and implement four cycling corridors and upgrades to arterial roads, as listed	Staff time	As below			
Seek external funding for major bicycle projects, as listed	Staff time	As below			
Plan and implement local neighbourhood routes and upgrades on local roads, as listed	Staff time	As below			
Plan and implement off-road paths, as listed	Staff time	As below			
Continue to develop alternatives to busy shared zones and spaces and implement physical and behavioural measures to increase safety	Staff time				
Continue to raise awareness of the rules of shared spaces and the etiquette of bicycling amongst others	Share Our Streets	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
<b>Arterial Roads</b>					
Commercial Road	Investigate a bicycle-friendly link between Punt Road and St Kilda Road for people to ride to Fawkner Park and Albert Park	\$ 10,000			
Elizabeth Street north	Complete installation of bicycle lane from Queensberry Street to Victoria Street	\$ 70,000			
Main Yarra Trail (northbank)	Work to widen under Swan Street Bridge to ease congestion				
<b>Cycling Corridor</b>					
Harbour Esplanade	Improve connections from La Trobe Street to shared path on the west side of Harbour Esplanade including traffic signal adjustments			\$ 60,000	
La Trobe Street	Extend the outbound bike lane in La Trobe Street to the intersection of Harbour Esplanade		\$ 30,000		
La Trobe Street	Investigate separation from Spencer Street to Harbour Esplanade		\$ 10,000		
La Trobe Street	Improve intersection design to protected intersections			\$ 200,000	
Exhibition, Little Lonsdale, Spring, Victoria streets	Investigate full time bicycle lanes and improved intersection designs			\$ 20,000	
Albert Street	Install full-time bicycle lanes from Powlett Street to Hoddle Street	\$ 40,000			
Albert Street	Install full-time bicycle lanes from Spring Street to Gisborne Street		\$ 100,000		
Albert Street	Upgrade existing chevron to permanent physically-separated bike lanes on complete length of street			\$ 600,000	\$ 600,000
<b>Cycling Corridor</b>					
Lorimer Street	Investigate redevelopment of the redundant rail reserve		\$ 200,000		
River Esplanade	Investigate making wooden deck more bike-friendly	\$ 10,000			
River Esplanade	Provide a wider shared path adjacent to Point Park		\$ 50,000		
Yarra River Corridor	Install improved lighting to assist way-finding at night		\$ 100,000		
Yarra River Corridor	Upgrade Southbank Boulevard, Kavanagh Street, Balston Street, and investigate connections on City Road and Clarendon Street	tbc			
Yarra River Corridor	Investigate floating bike path on the south side of the river from Spencer Street to Princes Bridge		\$ 100,000		
<b>Cycling Corridor</b>					
Swanston Street	Improve connection to College Crescent roundabout			\$ 50,000	
Swanston Street	Reduce speed limit to 40km/h for northern section			\$ 20,000	
Swanston Street	Install bike lane from Mason Road to Tin Alley for people riding north			\$ 20,000	
Swanston Street	Redesign area of joint use between Flinders Street and Flinders Lane		\$ 100,000		
Swanston Street	Upgrade southbound lane on Princes Bridge				\$ 50,000
St Kilda Road	Work with VicRoads to investigate road safety and bicycle infrastructure improvements				
<b>Cycling Corridor</b>					
William Street	Investigate narrowing space between tram tracks to allow for redesign of street for physically-separated kerbside bicycle lanes	\$ 20,000			
William Street	Maintain integrity of bike lanes when tram stops are upgraded	\$ 10,000			
Collins Street	Investigate options for route via Collins Street to Market Street	\$ 10,000			
	Investigate options for route:-				

Queens Bridge Street	Via Main Yarra Trail and Clarendon Street, Normanby Street, Whiteman Street Via City Road			\$ 20,000	
Queens Bridge Street	Via Whiteman Street	\$ 10,000			
<b>Major Project Investigations</b>					
Arden Street	Arden Street Rail Bridge over Upfield railway line				\$ 1,000,000
Dynon Road Bridge	Advocate for Upgrade of Dynon Road bridge width or alternative routes as part of Victorian Government Western Distributor project			\$ 20,000	
Collins Street (west)	Advocate/investigate Collins Street, Docklands to Yarra's Edge bridge Connecting to Fishermans Bend	\$ 20,000			
Southbank	Investigate Southbank floating pontoon as an alternative to Southbank Promenade		\$ 20,000		
Flinders Street (Yarra River Crossing)	Advocate/investigate Flinders Street Station re-development. Bridge at elevation from Flinders Street Station to Southbank			\$ 20,000	
Pedestrian Bridge	Advocate/investigate Bicycle facilities on pedestrian bridge from Birrarung Marr to Alexandra Gardens				\$ 20,000
Upfield Railway Line	Investigate Bridges over Upfield Rail Line in Royal Park	\$ 20,000			
Westgate Park	Advocate/investigate to connect off-road paths in and around Westgate Park.		\$ 20,000		
<b>Local Roads On-Road</b>					
Barkly Street	Improve link from Rathdowne Street (northbound) to Barkly Street and Canning Street			\$ 250,000	
Clarendon Street, East Melbourne	Improve link from Clarendon Street to encourage riders to use Jolimont Terrace to access Yarra Park and Melbourne Park		\$ 100,000		
Dorcas Street	Work with City of Port Phillip to complete Dorcas Street connection from St Kilda Road to Kings Way. Investigate hook-turn from St Kilda Road once route is complete			\$ 50,000	
Elizabeth Street	Investigate upgraded bicycle route from Victoria Street to La Trobe Street as part of Queen Victoria Market Precinct Renewal Master Plan development	\$ 10,000			
Elizabeth Street	Investigate bicycle-friendly environment between La Trobe Street and Flinders Street				\$ 10,000
Exhibition Street	Investigate options for full-time bicycle lanes by completing traffic modeling studies		\$ 100,000		
Franklin Street and New Franklin Street	Prioritise bicycle-friendly route as part of Queen Victoria Market Precinct Renewal Master Plan development	\$ 10,000			
Grattan Street	Investigate potential to improve bicycle route from Flemington Road to Swanston Street in conjunction with Melbourne Metro project and potential changes to bus route				\$ 20,000
Nicholson Street	Investigate transition from Gertrude Street to Museum Road with other partners			\$ 10,000	
Northbank	Investigate options for bicycle-friendly infrastructure in Banana Alley section				\$ 10,000
Cardigan Street	New bicycle link between Victoria and Queensberry Streets to connect to Royal Melbourne Institute of Technology	\$ 150,000			
Anderson Street	Formalise bicycle route (connecting to Morrel Bridge)		\$ 60,000		
Queensberry Street	Complete link to Rathdowne Street intersection on north side		\$ 30,000		
<b>Local Roads Off-Road</b>					
Carlton Gardens	Investigate improvements to the shared path including lighting and other safety measures. Improve connections between Spring Street and Canning, including crossings at Gertrude and Carlton streets				\$ 20,000
Chapman Street Reserve	Upgrade connections for people riding bikes from Harker Street to Courtney Street as part of any greening opportunities in this area				\$ 20,000
Fawkner Park	Construct a cross-over on Commercial Road and improve entry to park	\$ 20,000			
Harbour Esplanade	Investigate alternate options for slowing bicycles at pedestrian crossing points. Review existing speed humps			\$ 10,000	
Ron Barassi Senior Park	Provide connections for people riding bikes to Docklands Drive and existing bike paths				
Royal Park	Upgrade links through Royal Park to provide access from West Brunswick to Capital City Trail	\$ 75,000			
Royal Park	Construct new path on west side of tram track to provide access to Abbotsford Street	\$ 50,000	\$ 75,000		
Royal Park	Work with the Victorian Government over the longer term to construct new bridges over Upfield Railway Line near Ryder Oval and State Netball and Hockey Centre.		\$ 50,000		
<b>Kensington Local Route Upgrades</b>					
Kensington Local Route Upgrades	Connections to Kensington Primary School and between Macaulay Road and shops in Racecourse Road along Market Street and McCracken Street	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Kensington Local Route Upgrades	Connecting existing routes on Kensington Road and Arden Street through Derby Street		\$ 20,000		
Kensington Local Route Upgrades	Connecting Derby Street to the Macaulay Road shops with linkages to Holy Rosary Primary School on Hampden Street				\$ 20,000

Kensington Local Route Upgrades	Connecting Eastwood Street to new lanes on Chelmsford Street and then Elizabeth Street to the existing bicycle route on Arden Street.				\$ 100,000
<b>North Melbourne Local Route Upgrades</b>					
North Melbourne Local Route Upgrades	Providing local routes on Melrose, Shiel, Dryburgh, O'Shannassy, Courtney and Howard streets as an alternative to riding on Flemington Road with clear way-finding signage	\$ 140,000			
North Melbourne Local Route Upgrades	Connecting residential areas to Melrose Street and the shops		\$ 20,000		
North Melbourne Local Route Upgrades	Providing improved connections to St Aloysius Girls School and St Michael's Primary School on Brougham Street			\$ 20,000	
North Melbourne Local Route Upgrades	Connecting residential areas to Haines Street shops and North Melbourne Primary School on Haines, Courtney and O'Shannassy streets.				\$ 20,000
<b>Carlton Local Route Upgrades</b>					
Carlton Local Route Upgrades	Connecting residential areas to Carlton Primary School	\$ 20,000			
Carlton Local Route Upgrades	Connecting residential areas to local shops, dining and entertainment via Drummond Street as an alternative to Lygon Street		\$ 20,000		
Carlton Local Route Upgrades	Providing bicycle facilities from Lygon Street shared path to Cardigan Street and Swanston Street			\$ 20,000	
Carlton Local Route Upgrades	Connecting residential areas with Carlton Gardens Primary School on Grattan and Pelham streets				\$ 20,000
Carlton Local Route Upgrades	Connecting the University of Melbourne with the Swanston Street bike route on Leicester, Pelham and Bouverie streets and Lincoln Square South.				\$ 120,000
<b>Southbank Local Route Upgrades</b>					
Southbank Local Route Upgrades	Connecting the Capital City Trail and off-road bicycle routes to University of Melbourne campus on Southbank Boulevard		\$ 20,000		
Southbank Local Route Upgrades	Connecting residents to Boyd Community Centre on Kavanagh and Balston streets			\$ 120,000	
Southbank Local Route Upgrades	Connecting bicycle route on Dodds Street to link Coventry Street to University of Melbourne Southbank Campus				\$ 20,000
<b>Chapter 3 - Facilities for bicycles</b>					
Increase bicycle parking by 2000 spaces in key locations		\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
Provide bicycle parking facilities at the entrances and key destinations in parks including at park entrances and pavilions and clubs					
Work with the Victorian Government to provide end of trip facilities at major transport hubs especially planned Melbourne Metro stations	Staff time				
Encourage businesses to provide secure bike parking facilities in buildings	Staff time				
Locate on-street bicycle parking in areas with active or passive surveillance	Staff time				
Remove abandoned bicycles as a deterrent to theft	Staff time				
Advocate for secure bike storage facilities on public housing estates and in and around, community facilities	Staff time				
Work with Victoria Police to raise awareness of safe parking facilities and practices for locking bikes	Staff time				
Support targeted awareness and educational programs to raise awareness of bike theft and security particularly around tertiary institutions	Staff time				
Develop a way-finding strategy in consultation business and tourism stakeholders	Consultant				
Install maintenance stations and bicycle pumps at key entrances to the city	Bicycle pumps and maintenance stations at 10 sites throughout the central city	\$ 45,000	\$ 50,000	\$ 50,000	\$ 50,000
Support Melbourne Bike Share	Staff time				
A'Beckett Street	Bike corral near RMIT Building 80 to support student population	\$ 50,000			
Bourke Street	Hoops at end of tram stop near Royal Lane to encourage people to dismount and near Spring Street	\$ 10,000			
Domain Road	Bike corral in front of cafes to support retail and entertainment	\$ 50,000			
Federation Square	Work with property manager to increase hoops to support public events, retail and entertainment	\$ 20,000			
Flinders Street	Bike corral near public toilet to support Degraes Street and station	\$ 100,000			
Therry Street	Bike corrals at Queen Victoria Market			\$ 50,000	
University of Melbourne	At entrances and in South Carlton precinct to support active travel	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Little streets in the city	Bike corrals in association with streetscaping and kerb extensions	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Exhibition Street	Bike corrals to support park and walk outside times of bike lane operation	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
<b>Traffic Signals</b>					
Albert Street	Establish green wave signal timing coordination reduce travel times for cyclists riding at approx. 15-20km/h to moderate cyclist speeds on downhill sections.			\$ 100,000	
Collins Street	Early starts for people walking and riding bikes at all intersections		\$ 60,000	\$ 60,000	\$ 60,000
Collins Street and Macarthur Street	Early start westbound for bikes to enter narrow Collins Street carriageway ahead of other vehicles			\$ 20,000	

Haymarket roundabout	Investigate early starts for bikes to establish themselves in existing lanes in front of motor vehicles, particularly for northbound cyclist travelling between Elizabeth Street and Royal Parade. Further improvements to be investigated.	\$ 10,000				
Southbank Boulevard	Investigate green wave signal timing coordination for cyclists as part of redevelopment		\$ 15,000			
Swanston Street north	Investigate changes to sequences to give walkers, cyclists and trams priority				\$ 10,000	
<b>Chapter 4 - A safer cycling environment</b>						
Deliver best practice bicycle infrastructure using planning and design hierarchy and guidelines (Chapter 3) with an aim to maximise separation from vehicles especially on high volume routes	Staff time					
Work with Victorian Government agencies such as VicRoads and the Traffic Accident Commission to research and analyse crash data and make this information available to the community	Staff time					
Undertake road safety investigations of all roads with five or more bicycle crashes in the last three years	Consultant					
Trial protected intersection designs	On intersecting bicycle routes such as the intersection of Swanston and Queensberry Streets or the intersection of Canning and Elgin Streets				\$ 300,000	
Work with car park operators to improve visibility and awareness of people riding bikes	Staff time					
Investigate measures to reduce high cyclist speeds on downhill street sections, particularly along physically-separated bike lanes such as traffic calming devices or traffic signal timing	Staff time					
Work with the community and the Victorian Government to review speed limits in the municipality. Investigate possible reductions as part of a review of boulevards and Elizabeth Street	Staff time					
Continue to complete actions of the Road Safety Plan 2013-17 relating to safety for people riding bikes including continuing the Share Our Streets program focusing on etiquette and speeds in shared spaces, car-dooring, and awareness of new street environments. (This will include collaboration with other agencies such as Amy Gillett Foundation.)	Share Our Streets	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	
<b>Chapter 5 - Encouraging more people to ride</b>						
Continue to support people to ride to work and take pressure off the road and public transport systems through Ride to Work Day and community activities throughout the year	Consultant	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	
Actively work with schools to educate and encourage children to ride to school and in their local community. Conduct sessions with both children and their parents and carers	Consultant	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Support people to ride bike using the bike bus concept of encouraging people to join a group cycle to work or school	Consultant	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	
Provide sustainable travel advice as part of City of Melbourne activities and events. Provide bicycle parking and end of trip facilities at events						
Encourage community riding by holding events in local communities	Consultant	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Support organisations to conduct events encouraging people to ride bikes such as MS Melbourne Cycle, Herald Sun Tour, Around the Bay and Tweed Ride	CoM sponsorship					
Provide programs at recreational and community centres to encourage people to start riding	Consultant		\$ 10,000	\$ 10,000		
Support International students to ride a bike by providing safety information and orientation tours		\$ 5,000	\$ 5,000			
Work with businesses to offer incentives for workers to ride bikes as an alternative to executive car packages	Staff time					
Provide open data with accurate spatial information about bike routes and their safety	Staff time					
Support staff to ride a bike to, from and for work by providing motivation and convenient end-of-trip facilities.	Staff time					
Support initiatives that increase the use of cargo bikes for goods movement in the central city	Staff time					
Install counters with visible displays to encourage people in cars to start riding a bike or for existing riders to achieve target numbers	Bicycle counters at four locations in the central city	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	
<b>Chapter 6 - Measuring outcomes</b>						
Complete a Bicycle Account every two years using Australian Bicycle Council participation and perceptions surveys and local data to demonstrate changes and achievements	Consultant/ Staff Time		\$ 30,000		\$ 30,000	
Share data online from bi-annual bicycle and vehicle counts	Staff time					
Investigate additional locations based on bicycle network modeling for continuous loop counters and continuous monitoring to accurately record changes to cycling corridors and high volume routes and plan for the future	Staff time					
Continue to collect before and after counts and observations for key projects	Staff time					
Keep updated spatial records of all bicycle routes and attributes.	Bicycle lane attributes to AssetMaster and Compass					
		\$ 1,795,000	\$ 2,205,000	\$ 2,590,000	\$ 3,290,000	

TOTAL 4 YEAR \$ 9,880,000