City of
Bayswater

Bike Plan
2023

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Department of
Transport

CITY OF BAYSWATER
The Garden City - Quality Lifestyle

Acknowledgement of Country

Ngalla City of Bayswater kaatanginy baalapa Noongar Boodja baaranginy, Wadjuk moort Noongar moort, boordiar's koora, boordiar's ye yay ba boordiar's boordawyn wah.

The City of Bayswater acknowledges the Traditional Custodians of the land where the bicycle network is being developed on and is used by and will be used by people belonging to the Whadjuk people of the Noongar Nation. The City of Bayswater pays its respects to elders past present and emerging.

Department of Transport Funding

This project was jointly funded by the Department of Transport and the City of Bayswater.

Accessibility

This publication is available in alternative formats, including hard copy in large print or standard print, and electronic format. This publication can be found on the City's website.

Contents

What we're proposing

Bike Plan Review Community Engagement, Riverside Gardens.

Executive Summary

The Bayswater Bike Plan (BBP) 2023 provides a review and replacement of the previous 2014 Local Bike Plan (LBP).

The City of Bayswater's cycling network has been expanded since 2014 and serves a growing cycling community particularly prevalent in the southern parts of the City. The expansion has occurred primarily along the railway and highway reserve corridors, so many of the City's nearly 70,000 residents now live within a short 5-10 min cycling distance of these important routes. This presents an excellent opportunity for the creation of safer linkages to access these primary cycling routes. Together with enhanced education and promotion initiatives, this will hopefully lead to an increase in cycling levels, particularly in the north of the City where the present cycling uptake is about a quarter of the level in the south.

The BBP 2023 updates the direction for the City in terms of infrastructure development and promotional activities pertaining to cycling. The plan has sought to capitalise on the momentum of the primary cycling route implementation in recent years. By setting medium and long-term project priorities, an action plan for infrastructure projects can be developed for further consideration. A number of supporting recommendations have been suggested to promote the safety of cycling within the City.

At the same time, some dramatic changes to transport infrastructure have taken place associated with the State Government's METRONET project. There has been a major severance due to the closure of the Caledonian Avenue level crossing. It is expected with two additional train lines feeding into the existing Perth-Midland line at Bayswater Station there will be lengthy delays for movement.

This will mean a greater focus on separation from traffic where practical and feasible, with increased measures developed on streets where riders mixing with traffic is unavoidable. The potential for bike riders to make some journeys by bicycle throughout the week is expected to grow significantly.

Less than 10% of the population are likely to be confident "cyclists", those who ride at higher speeds and have greater experience dealing with traffic. These people are still the City's customers, but they are only a portion of the type of rider that exists under the "all ages and abilities" framework. For this reason, the terminology in this plan refers to 'people' who ride or cycle (bike riders), which also humanises the activity.

Office of Auditor General Review (2021)

A review into cycling activities in the City was undertaken by the Office of Auditor General (OAG) as part of its Viable Cycling in the Perth Area report prepared in 2021. The BBP 2023 has sought to action the shortcomings identified in the OAG report, within the priority action plan and supporting recommendations also included in this summary. Further details are available within Section 4 of the main report.

Implementation of the Long-Term Cycle Network (LTCN)

The OAG report has called for further improvements to how paths are planned and delivered within the City of Bayswater. The City has now agreed on its road/path network forming part of the LTCN for Perth and Peel with the Department of Transport (DoT). The BBP 2023 will be the first review the City has undertaken since the LTCN was agreed upon and the first of many stages to implement the network proposed for completion by 2050.

An action plan has been prepared to implement the highest priority sections of the LTCN and should be reviewed every year through the City's annual budget process. A more substantial review of the entire City cycling network is recommended within five years, being the commencement of the 2027/2028 financial year.

Changes to the LTCN routes are suggested in the recommendations of this plan. Agreement with the DoT makes it possible for projects on these routes to be eligible for grant funding through the Western Australian Bicycle Network (WABN) and led to the Maylands Station crossing.

The protected cycle lane on the Railway Parade local route which has been construction at the time of the review, is considered a priority project because of the closure of the level crossing at Caledonian Avenue in April 2022.

Increasing Path Widths

As of September 2022, there are currently 314 km of paths in the City. These paths are of a varied standard, but many are only 1.2m wide, particularly in older areas of the City. These paths were built for people walking and children cycling, not for the type of use that footpaths see today. With legislation changes effective from December 2021, it is now legal for adults to ride on these paths, using

e-Bicycles and e-Rideable devices, an emerging trend the City now has to consider.

One of the key recommendations of this review is to increase path width construction standards. The City will will be guided by the State Government's Shared and Separated Paths document prepared in September 2021, and the outcome of the OAG report.

The increased widths not only apply to new paths but will need to apply to path renewals. In some exceptional cases, existing paths - where the path is substandard in width and riding surface - may require early intervention.

Improving Data Collection Processes

The City will work with DoT to improve data collection, enabling the City to determine whether current infrastructure expenditure should be continued in the same manner or refined for the future. This would include best practice data collection such as Super Tuesday and Super Sunday counts coordinated by Bicycle Network[1].

Greater Focus on Separation and an Increased Focus on Safety

Consultation with the community, Mayor and Elected Members emphasised the need to focus on safety, with feedback showing that safety was a significant factor in community members choosing not to ride to destinations such as Bayswater Waves.

Protected intersection treatments were recommended as a general safety improvement, with the majority of crashes involving bicycles occurring at intersections. Protected intersection treatments will be considered as part of bike network improvement proposals.

Missing path links on the path network will be prioritised on busier distributor roads, including where a path exists on the other side of the road, to reduce the need for bike riders to cross roads to reach a path. Once these links are completed, existing paths that are too narrow will be recommended for widening (in the medium to longer term).

Safe Systems is now an accepted philosophy towards road design adopted at a national level. Bicycle safety improvements are to align with Safe System approaches to Road Safety.

Connections to Schools

There are 16 schools within the City of Bayswater, including one for children with special needs. Improvements in cycle routes to schools are considered as part of the BBP 2023, with a focus on continuing the roll out of the Safe Routes to Schools program over the next four years. It is suggested that this program be implemented in at least one school from each Ward per year. Education and behaviour change initiatives are recommended to be rolled out concurrently with the program and are centred on activating students' participation in Constable Care and Safety School programs.

Enhanced Promotion of the Benefits of Cycling

Promotion is one of the high priority areas requiring attention. A major focus will be to highlight to the community that the City's entire principal shared path (PSP) network is being completed.

The newly built 7km section of PSP on Reid Highway and Tonkin Highway, from Alexander Drive to Broun Avenue, provides excellent location accessibility for the people of Noranda and Morley. These locations include the new train stations, the Swan Valley, Muchea, the soon to be river foreshore areas of the City, and other areas south of the Central Business District (CBD).

As the suburbs of Noranda and Morley have the lowest uptake of cycling, the focus of the BBP 2023 is promotion of the network through wayfinding signage, events, and other communication channels in these areas. This will complement the priority of connectivity of infrastructure to the PSPs in these areas.

Supporting Priorities, Recommendations and Proposals

The City will focus on five priority areas for implementation, based on the analysis and findings of opportunities and deficiencies, as well as through the community engagement process. The five priority areas are:

1. **Path Widths** - to provide a safer environment.
2. **Schools** - where there is a focus of children safety and education of road rules.
3. **Train Stations** - to support public transport where there is a concentration of movement.
4. **PSP Access** - to encourage commuting to works and major activity centres.
5. **Green Network** - to make the City attractive, cooler, and more sustainable.

These are discussed in more detail in Section 11.

Table 1 lists a series of implementation recommendations. These recommendations complement the Action Plan and encourage and promote cycling throughout.

1. https://www.bicyclenetwork.com.au/our-services/transport-surveys-and-data/super-counts/

Table 1 | Summary Recommendations

#	Recommendation	Page Ref	Priority Term
1	Implement outstanding priority infrastructure projects from the 2014 Local Bike Plan: a. River Foreshore path – Katanning Street to Ashfield Parade. b. King William Street options – Whatley Crescent to Hill Street. c. Rudloc Road – Drake Street to Russell Street. d. Coode Street / Broun Avenue protected intersection. e. Collier Road path -Beechboro Road South to Walter Road West.	15	Medium
2	Improve wayfinding on the LTCN and supporting routes to major attractors.	15	Medium
3	a. Collect and collate more bicycle data through permanent bike counters, temporary bike counters and Super Tuesday counts. b. Consider permanent counters on the Tonkin Highway PSP between Morley and Noranda Stations and the Reid Highway PSP near intersection with Malaga Drive.	19	Medium
4	Incorporate the benefits of cycling into Public Health and Wellbeing Plan (future updates) to strengthen the case for investment in cycling to improve the health of City of Bayswater residents.	21	Short
5	Improve path width standards to align with Department of Transport and Office of Auditor General report recommendations.	23	Medium
6	Support the implementation of the Noranda Station cycling improvement plan by the Public Transport Authority.	28	Short
7	Support the implementation of the Morley Station cycling improvement plan by the Public Transport Authority and link with the Morley Shopping precinct.	28	Short
8	Review local area traffic management procedures to ensure they are adequately catering for cycling safety and are aligned with Department of Transport guidelines for safe cycling.	32	Medium
9	Review intersection treatments and standard designs to ensure they are adequately catering for cycling safety.	33	Medium
10	Consider reduced speed trials in parts of the City of Bayswater where there is congestion, pedestrian, and cycle movement, such as Bayswater Town Centre, Bedford North precinct, Maylands Town Centre, Morley Town Centre, and Maylands North. This could be an interim trial with view towards 30km/h or 40km/h zones.	33	Medium
11	Undertake a healthy streets assessment within each of the City of Bayswater neighbourhoods.	33	Long
12	Assess streets which are wide enough to have protected cycle lanes for longer-term works planning consideration.	34	Medium
13	Adopt a minimum width of path in all circumstances to be 1.8m, with a preference for 2.0m as a minimum standard where space permits.	34	Medium
14	Adopt 2.0m minimum path widths in parks and open space with consideration to 2.5m paths near schools and major activity centres and where warranted.	34	Short
15	Establish a Bike Plan Implementation Advisory Group, made up of staff and community members who support promoting cycling and safer improved paths and chaired by an elected member.	35	Short
16	Commence targeted behaviour change initiatives within the neighbourhoods and communities of the City of Bayswater.	36	Medium
17	Develop a Walkability Plan to assist pedestrians and other vulnerable path users.	39	Short
18	That a Walkability Plan be implemented to improve the path network and safety for pedestrian and path users with different abilities. Priority is proposed for town centres, main hubs and Noranda and Morley Regions where there are less paths and where new railway stations are proposed.	39	Short
19	Undertake additional engagement within neighbourhoods to determine cycling confidence levels and willingness to ride (Gellor classification).	40	Medium

Table 1 | Summary Recommendations

#	Recommendation	Page Ref	Priority Term
20	Collate counts and data usage of e-Bike and e-Rideable usage within popular areas (mapping routes can be a separate exercise).	40	Long
21	Work with lead agencies such as the RAC to manage safety of traditional users of path networks in the City of Bayswater due to the increased use of e-Rideables.	40	Long
22	In the medium term, the City of Bayswater should consider a review of planning networks for e-Rideables.	41	Long
23	Discuss with the City of Stirling, Main Roads WA and the Department of Transport the need for possible path alignment options and design criteria, such as preserving trees, for continuation of a cycle link along Railway Parade from Maylands Station to the Third Avenue railway crossing.	43	Medium
24	Request Main Roads WA to undertake a road safety audit of the Principal Shared Path detour on Whatley Crescent.	43	Short
25	Continue to monitor crash data annually and compare trends.	44	Medium
26	The City of Bayswater to identify Guildford Road crash locations with Main Roads WA.	45	Short
27	Develop a map of cycling and public transport facilities in the City of Bayswater ('Your Move' map).	47	Short
28	The City of Bayswater to consider potential initiatives and programs that could be used to promote cycling include: a. Support the Department of Transport Your Move Program for schools and the local community. b. Develop initiatives to educate students knowing the basic road rules and encourage School Safe Committees c. Utilise the Maylands Constable Care training facilities to enhance cycling skill training for students. d. Support Bike Week with initiatives that encourage the use of bike transport and include it in the City's calendar of events e. Promote the use of e-Bicycles for staff to use during work hours. f. Promote end of trip facilities at workplaces including showers, change rooms and locker storage for bike users. g. Consider a Workplace Travel Plan, including large businesses within the City, to be less reliant on the motor vehicle when traveling to work. h. Provide bike racks at locations such as coffee cafes, to support cycling. i. Install bike service centers to help maintain bikes. j. Encourage and support bike groups and families to explore the City. e.g. Discovery Circuits. k. Promote discovery bike trails with maps showing points of interest within the City of Bayswater. l. Hold an Elected Member bike ride with staff from the City, and State Government agencies m. Organise events that promote cycling throughout the City e.g.: sunset bike ride around the river. n. Support the Minimum Safe Passing laws.	47	Short
29	Implement Safe Routes to Schools programs in all schools within the City over a four-year period.	48	Short
30	Implement station access strategies for the Mount Lawley, Maylands, Meltham and Bayswater Stations, in conjunction with the Public Transport Authority.	50	Short/ Medium
31	Develop a green pathway network connecting recreation areas, utilising and aligning with water sensitive urban design principles.	51	Medium
32	Ensure the City's streetscape program considers cycle network priorities.	51	Short


Maylands Station
LEO'S

Table 2 provides a list of proposals provided to realign the LTCN in certain areas of the City.

Tables 3a and 3b provide a list of short-term priority projects to be implemented by the City. Prioritisation for the Action Plan has been based on:

- Safety (Compliance)
- People and communities (Community requests, known demand)
- Strategic (LTCN, Business Plan, Corporate Plan etc.)
- Connectivity (Missing links)
- Economic (Cost/value/feasibility).

Table 4 provides a list of locations for bike parking, derived from the community engagement process.

Table 2 | Proposals to Realign the Long-Term Cycle Network

Proposed Route Changes	Priority Term
Realign LTCN around the Maylands Town Centre with Caledonian crossing removal: ■ Add Seventh Avenue Bridge to local route.	Long
Add LTCN route to improve direct connectivity between Bayswater Town Centre and Bayswater Waves: ■ Add Priestley Street and Rothbury Road local route (via sections of McGregor, Sudlow and Maurice Streets).	Long
Consider realigning LTCN around Morley Town Centre: ■ Lennon Street and Thorpe Street from Russell Street to connect to Smith Street.	Long
Explore realignment of LTCN around Bayswater Town Centre ■ Add King William Street secondary route. ■ Add Murray Street local route ■ Change Slade Street to local route.	Long

Priorities for the above route changes were amended to 'long-term' as a result of community feedback. These changes will take time to investigate, and further community consultation is required by the City before inclusion into an implementation plan.

Table 3a: Short-term priority infrastructure projects

#	Project	Suburb	LTCN	Strategic Connections & Rationale
1	**Railway Parade protected cycle lanes or shared path:** Central Avenue to Maylands Station	Maylands	Local	To be discussed with City of Stirling to Third Avenue where an adequate crossing exists
2a	**Mephan Street shared path**: Kelvin Street to Ferguson Street	Maylands	Local	■ Primary school (MPPS)
2b	**Ferguson Street shared path**: Mephan Street to primary school	Maylands	Local	■ Primary school (MPPS)
3	**Whatley Crescent shared path upgrade (south):** Seventh Avenue to Sixth Avenue	Maylands	Primary	■ Primary route (rail line PSP)
4	**McGilvray Avenue shared path (east side):** Malaga Drive to Benara Road	Noranda	Secondary	■ Noranda Town Centre ■ Primary route (Reid Hwy PSP)
5	**Foreshore shared path:** Katanning Street to Moojebing	Bayswater	Secondary	■ Tonkin Hwy PSP ■ Rail Line PSP at Ashfield Station
6	**Hamersley Avenue shared path (south):** Abbey Street to Beechboro Road North	Noranda	Local	■ Primary School (Hampton Park) ■ Tonkin Hwy PSP
7	**Beechboro Road North shared path (east):** missing link from Wheatstone Drive to Turon Street	Morley	Secondary	■ Kiara College
8	**Drake Street shared path:** Beechboro Road South to Rothbury Road	Bayswater	Secondary	■ Bayswater Town Centre and Train Station ■ Bayswater Waves ■ Morley City Centre
9	**Demonstration Green living stream**	Bayswater	Non-LTCN	■ Neighbourhood link ■ Green network
10	**Walter Road shared path or protected cycle lanes:** Tonkin Hwy PSP to Collier Road	Morley	Secondary	■ Morley Train Station ■ Morley City Centre
11	**Swan View Terrace safe active street or protected cycle lanes**	Maylands	Secondary	■ Foreshore path
12	**Rothbury Street shared path (east):** Maurice Street to Drake Street	Bayswater	Local	■ Bayswater Town Centre and Train Station ■ Bayswater Waves
13	**McGregor Street shared path (west):** Collier Road to Sudlow Street	Bayswater	Local	■ Bayswater Town Centre and Train Station ■ Bayswater Waves
14	**Timms Place shared path (east side)**	Morley	Secondary	■ City centre (Morley) ■ Town centre (Noranda)
15	**Halvorson Road shared path (north):** Timms Place to Charnwood Street	Morley	Secondary	■ City centre (Morley) ■ Primary route (Tonkin Hwy PSP)
16	**Crimea Street shared path (east):** Halvorson Street to Fitzgerald Road including median island at Crimea Street	Morley	Local	■ Primary route (Tonkin Hwy PSP) ■ City centre (Morley)
17	**Bath Road shared path:** Luminescent lighting	Morley	Local	■ Neighbourhood link ■ Green network
18	**Russell Street shared path (north side)**	Morley	Local	■ City centre (Morley) ■ Primary route (Reid Hwy PSP)

Table 3b: Short-term priority infrastructure projects requiring further investigation

#	Project	Suburb	LTCN	Strategic Connections & Rationale
1	**Seventh Avenue bridge connection (south)** Investigate improvements and provide direct crossing	Maylands	Primary	■ Primary route (Rail Line PSP) ■ Maylands upgrade area due to Caledonian Ave closure
2	**East Street protected cycle lanes** Investigate providing separation including options for uphill separation (five comments)	Maylands	Secondary / Local	■ Foreshore path ■ Maylands Town Centre
3	**Crossings of Guildford Road** Investigate improvements between Caledonian Avenue and Grosvenor Road	Maylands / Bayswater	Local / Non-LTCN	■ Access to the Foreshore path ■ Primary School (MPPS) ■ Main Roads working group
4	**King William Street** Investigate improvements between Whatley Crescent and Guildford Road (include crossing of Guildford)	Bayswater	Secondary	■ Bayswater Town Centre
5	**Eighth Avenue pedestrianisation** Investigate options to pedestrianised and addition of cycling facilities	Maylands	Secondary	■ Maylands Town Centre
6	**Crossings of Guildford Road** Investigate improvements between Third Avenue and Eighth Avenue	Maylands	Secondary / Non-LTCN	■ Access
7	**Caledonian Avenue – Whatley Crescent to Swan View Road** Investigate LTCN secondary route options	Maylands	Secondary/ LTCN	■ Maylands Town Centre to the river foreshore

Table 4: Bicycle Parking priority projects proposed from community feedback

#	Location	Proposed Project	LTCN	Priority Term
1	Whatley Crescent between Eighth Avenue and Ninth Avenue	Investigate options for additional bike parking required at facility attractors.	-	Short
2	Riverside Gardens water fountain (extension of Leake Street)	This would be a convenient location for a bike repair station as it is close to facilities.	Secondary	Short
3	In front of primary schools for short term parking	The provision of public bike parking outside schools would make it easier for parents doing drop-off by bike.	-	Short
4	Walter Road south of Rosebery Street.	Many gyms in the area and no bike parking. I have to find a random pole to chain it to. (Gym: Body Mbrace).	-	Short
5	Bayswater Primary School	Secure bike parking required for students.	-	Short
6	Galleria Morley	Bike racks at every entrance at Galleria Morley.	-	Medium
7	Russell Street Rudloc Road to Catherine Street	There is no bike parking along Russell Street. If you are visiting any of these shops, your only option is to lock bikes to signs. Install one decent rack on the verge every 100m so nobody has to walk more than 50m from where they left their bike.	Local	Medium
8	Rudloc Road South of Russell Street	Should have some racks to lock bikes to here.	Local	Medium
9	Marchant Way Near Marchant Reserve	Bike parking would be good along here.	-	Medium

> **The ultimate goal of these initiatives, programs, recommendations, and proposals is to build on the work already undertaken with the 2014 Local Bike Plan. The items identified in this report will enable the City to continue to refine and develop its bicycle network into the future.**

The 2023 Bike Plan in detail

Photo by Jackie Alexander on Unsplash

Improving your cycle network

The Bayswater Bike Plan (BBP) 2023 provides an action plan for the City of Bayswater to coordinate improvements to its cycle network, building on the 2014 Local Bike Plan (LBP), as well as establishing a vision for continuing the development and promotion of cycling within the City.

The BBP 2023 was developed between March 2022 and January 2023 by GFG Consulting (Glen Flood Group Pty Ltd) on behalf of the City. The Plan incorporates substantial input from the community, Elected Members and City administrative staff.

Grant funding was made available from the Department of Transport (DoT) to assist the City in undertaking its development.

1.1 Background

The City last reviewed its cycle network in the 2014 LBP, which analysed the cycling network in considerable depth and provided a detailed engineering document to build upon. Of the 87 projects identified in the 2014 LBP, 38 were completed, with others in the construction phase during the development of the BBP 2023. The completed projects now form part of the City's existing cycling network, and the remaining outstanding projects have been considered in the review.

Since the development of the 2014 LBP, the City has upgraded its network and is going through a transformative phase due to METRONET projects. These include the Forrestfield Airport Link, the Bayswater Train Station redevelopment, and the Morley-Ellenbrook line. Each of these projects bring new cycling opportunities to the City, as well as some challenges. Tonkin Gap and NorthLink WA major projects have also occurred since 2014 and a substantial path network has been constructed adjacent to the Reid and Tonkin Highways.

The most problematic areas identified in the 2014 LBP are listed on the right. As part of the development of the BBP 2023, updated comments are listed below each outstanding matter.

2014 LBP PRIORITY PROBLEMS

1. Connectivity to the Morley City Centre
Major attractor requiring access improvements.

2. Guildford Road crossings
One crossing constructed 2015/2016 but overall presumed to still be an issue. Still outstanding, pending consultation but difficult to resolve.

3. Bayswater Station
Major transformation happening and opportunity to address.

4. Disjointed sections along the riverside shared path
Still outstanding.

5. Disjointed sections on the Midland Rail Line PSP
Updated and now under reconstruction as part of METRONET.

6. Discontinuity for north-south trips within Bayswater
Still appears to be some discontinuity. Tonkin Highway has addressed this movement on the eastern side of the City, and more east to west movement is expected with access to Tonkin Highway PSP, Morley and Noranda Train Stations, however no improvement on Coode Street, Beechboro Road South or Grand Promenade.

7. Maintenance issues
Need to develop an online mapping tool for the community to report on maintenance and engage with the City.

8. Lack of suitable signage to facilitate wayfinding
Still outstanding. The need to improve wayfinding is supported by elected members.

Recommendation 1

Implement outstanding priority infrastructure projects from the 2014 Local Bike Plan:

a. River Foreshore path – Katanning Street to Ashfield Parade.
b. King William Street options – Whatley Crescent to Hill Street.
c. Rudloc Road – Drake Street to Russell Street.
d. Coode Street / Broun Avenue protected intersection.
e. Collier Road path -Beechboro Road South to Walter Road West.

Note that Drake Street is now preferred to Coode Street since the release of the 2014 LBP.

Recommendation 2

Improve wayfinding on the Long-Term Cycle Network and supporting routes to major attractors.

The City has expanded its boundaries, and major changes to rules and regulations such as allowing people of all ages to cycle on footpaths, including the use of e-Rideables, has occurred. Information on e-Rideables can be found on the DoT website (eRideables (www.wa.gov.au)).

The BBP 2023 now considers the LTCN, which was adopted in June 2020 by the Department of Transport. New path standards to accommodate the growing number of people walking and cycling have been required, and the emergence of e-Rideables and e-Bicycles must also be taken into consideration.

Figure 1.1 | Railway Parade protected cycle lanes under construction (August 2022)

Originally intended to be updated in 2019, the DoT requested that local governments postpone completing a new bike plan until the LTCN across the metropolitan area was adopted.

No sooner had the LTCN been agreed, a major audit of cycling infrastructure across the metropolitan area was undertaken in 2021 by the Office of Auditor General (OAG) (the previous review was undertaken in 2015).

The OAG expanded their audit scope for 2021 to include local governments, and the City of Bayswater was selected together with three[2] other local governments in the metropolitan area.

It was deemed prudent to wait for this review to be completed before commencing a review of the 2014 LBP. These factors meant the City was unable to keep to its intended five-year timetable to update its bike plan.

The OAG report: Viable Cycling in Western Australia[3], was released in December 2021, and identified some key deficiencies in the City's approach to cycling that needed to be addressed. These deficiencies formed the catalyst for the City to commence a review of the 2014 LBP in 2022, and are outlined in Chapter 4.

Cycling to work data from the ABS 2021 Census shows that 1.2 % of people are cycling to work, with 10.6% using public transport on the day of the census in the City of Bayswater. This is slightly down from the Census in 2016, believed to be due to residents working from home (7.5%) and the effects of COVID-19. This demonstrated the importance for the 2023 Bike Plan review to tailor its analysis and recommendations based on the unique locality and facilities of the City.

1.2. Objectives of the BBP 2023

The objectives of the BBP 2023 include:

1. Address deficiencies identified in the OAG Report 'Viable Cycling in Western Australia' (December 2021).

2. Align infrastructure recommendations with the LTCN as agreed with the State Government in June 2020.

3. Rationalise infrastructure spending as the City comes out of the economic challenges associated with COVID-19.

4. Develop a prioritised schedule of works for implementing cycling infrastructure.

5. Develop education and promotion programs that are tailored for the different parts of the City.

2. https://www.bicyclenetwork.com.au/our-services/transport-surveys-and-data/super-counts/
3. https://audit.wa.gov.au/reports-and-publications/reports/viable-cycling-in-the-perth-area/

Overview of the City of Bayswater

The City of Bayswater is a Perth metropolitan local government authority located to the north-east and mostly within a 10km radius of the Perth CBD. The City covers an area of approximately 34.6km² and has population of 69,283 (2021 Census).

The City is home to four thriving town centres; Maylands, Bayswater, Morley, and Noranda. These town centres are unique in character and have their own Place Activation Plans. Ensuring the place centres are well connected to the cycling routes that surround the City is a large focus of the BBP 2023.

An additional 2km² was added to the City in July 2016 by the State Government when the northern portion of Noranda was transferred from the City of Swan. Reid Highway now forms the City's northern boundary (west of Tonkin Highway).

The City is set over a 10km stretch of the Swan River, with 177 parks, ovals and open spaces, plus 123 playgrounds (380ha of green open space in total). The City maintains 360km of local roads and there are 314km of paths.

There are six suburbs within the City of Bayswater: Maylands, Bayswater, Morley, Noranda, Bedford and Embleton. The City also contains a significant portion of Mount Lawley and 'minor portions' of Dianella.

Every suburb has its own features, characteristics, and proximity to destinations that influence the demand for cycling. The City of Bayswater is bounded by the City of Swan in the north, the Town of Bassendean in the east, the Swan River and the City of Belmont in the south, and the Cities of Stirling and Vincent in the west.

Demographics of the City

69,283 people in

32,142 dwellings

6.5% Primary School

5.3% Secondary School

8.7% Tertiary Education

6.6% of households have no car

30% renters

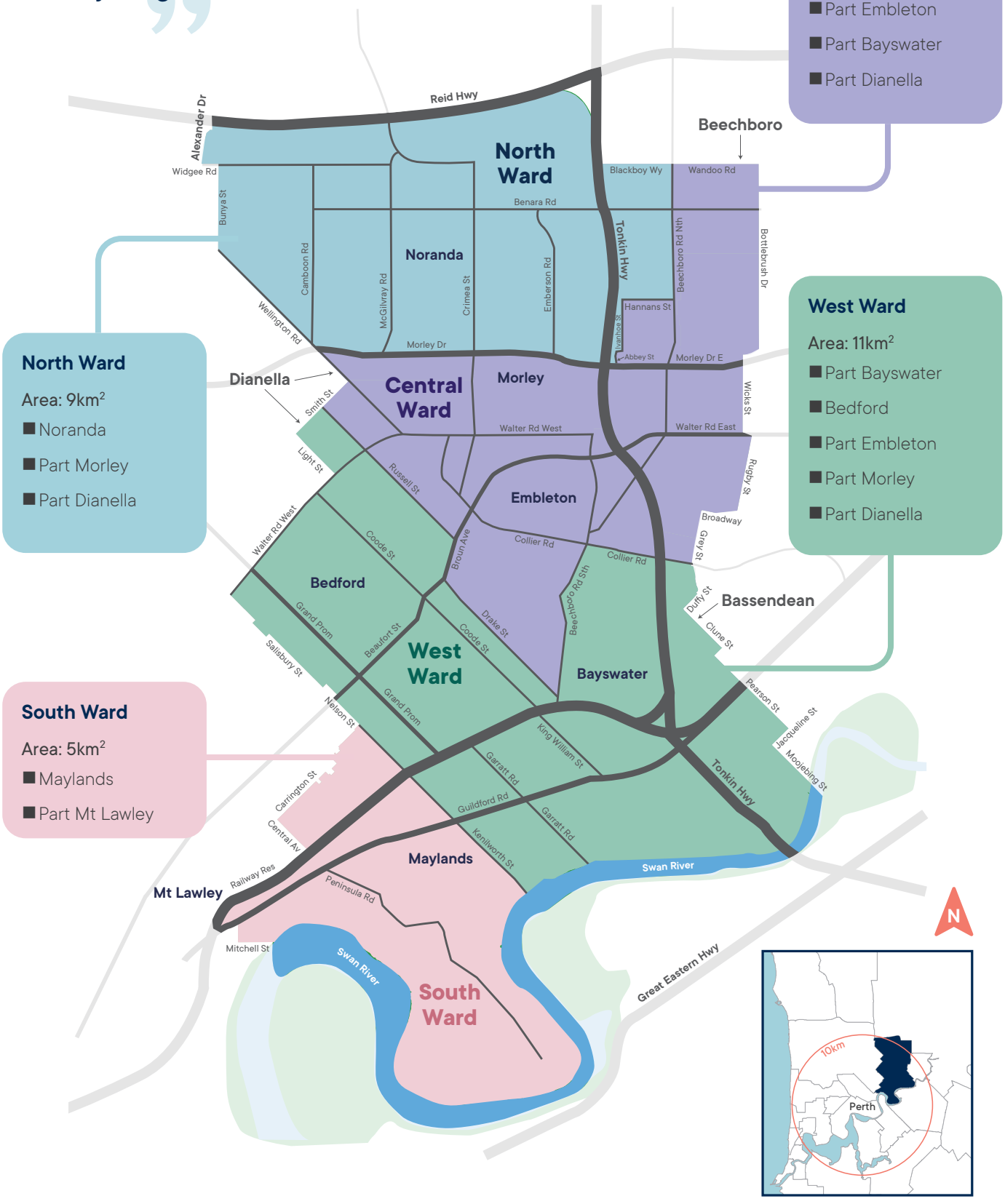
$340 median weekly rent

$1,739 median household weekly income

Table 2.1 | Suburb statistics

Suburb	Average age	Area in km2	# of people
Bayswater	39	9.83	15,288
Bedford	39	2.33	5,716
Embleton	37	1.71	3,600
Maylands	36	4.99	13,199
Morley	39	10.39	22,539
Noranda	45	4.93	8,002

Every suburb has its own features, characteristics, and proximity to destinations that influence the demand for cycling.



North Ward

Area: 9km²

- Noranda
- Part Morley
- Part Dianella

Central Ward

Area: 9km²

- Part Morley
- Part Embleton
- Part Bayswater
- Part Dianella

West Ward

Area: 11km²

- Part Bayswater
- Bedford
- Part Embleton
- Part Morley
- Part Dianella

South Ward

Area: 5km²

- Maylands
- Part Mt Lawley

Our vision for cycling in the City

The City now has a greater understanding of the benefits of cycling. An active community will result in better-connected, safer, healthier, and happier residents, and will make the communities of Bayswater a more vibrant place to live and visit.

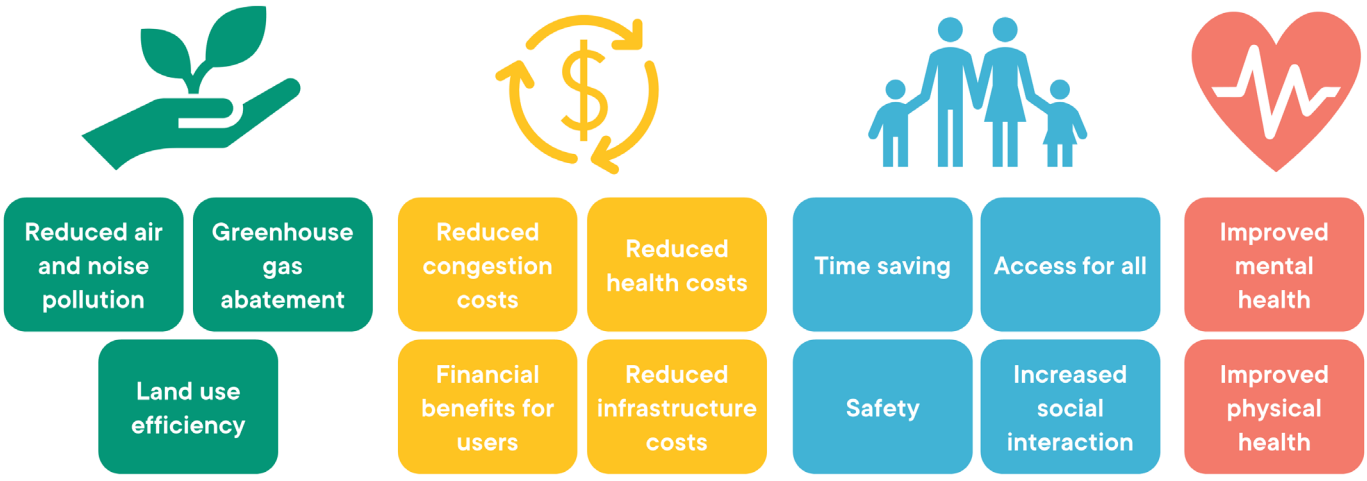
Increased cycling will provide environmental, health and economic benefits to the community, including:

- Reduced road vehicle use, resulting in less traffic congestion, demand for parking, carbon emissions, neighbourhood noise, and improvements in air quality
- Improved physical and mental wellbeing
- Reduced household travel costs
- Increased foot traffic around businesses.

VISION

To protect the safety of existing people who cycle in the City of Bayswater, and to make it so safe, attractive, and enjoyable that people want to ride around the City.

Figure 3.1 | Benefits of Cycling



Source: Western Australian Bicycle Network Plan (2017 update).

3.1 Improving Data Collection

More data is required to monitor increases in cycling use and to evaluate the success of investment in cycling infrastructure and cycling programs. There are more opportunities to monitor the levels of cycling within the City, than simply waiting for census data every five years. These include *Super Tuesday* and/or *Super Sunday* counts, coordinated by Bicycle Networks across the nation with the assistance of volunteers.

Permanent counters could also be installed, and these are recommended on the Tonkin Highway PSP between Morley and Noranda Stations, and along the Reid Highway PSP near the intersection with Malaga Drive.

Recommendation 3

a. Collect and collate more bicycle data through permanent bike counters, temporary bike counters and Super Tuesday counts.
b. Consider permanent counters on the Tonkin Highway PSP between Morley and Noranda Stations and the Reid Highway PSP near intersection with Malaga Drive.

Figure 3.2 | Super Tuesday Count Arrangement

Source: Bicycle Network

A strong foundation

The City has considered a vast number of plans and strategies that were necessary to inform the 2023 Bike Plan. These are a mixture of City prepared plans and external documents from the State Government and other agencies.

4.1 City of Bayswater Strategic Documents

Strategic Community Plan (SCP) 2021-2031

All of the City's strategies and activities sit within the SCP, which is updated every two years, and derived through extensive community consultation.

The SCP 2021-2031 stipulates the following:

- Our town centres are connected with cycleways and shaded footpaths.
- We have created truly inclusive neighbourhoods where people of all ages and abilities can gather, experience and live.

SCP themes and priorities that relate to cycling that were identified as part of a series of engagement activities:

- To create safer streets to improve the City's walking and cycling network.
- Activate the City's town and neighbourhood centres.
- Create safe and inviting places for people to come together.
- Maximise the use of the City's facilities and parks by all sections of the community.

Public Health and Wellbeing Plan (PHWP) 2019-2024

The City is committed to the health and wellbeing of its community and its PHWP aligns with the 2023 Bike Plan.

Specifically, the following PHWP strategies support and provide a context for the Bike Plan:

- Encourage the community to live sustainable lifestyles through participation in physical activity.
  - **Action:** continue to implement the local bicycle lane (this document).
  - **Action:** provide bicycle security areas and access to end of trip facilities.
- Encourage the community to live healthier lifestyles.
  - **Action:** deliver programs that promote exercise.
- Facilitate initiatives that maintain and improve safety.
  - **Action:** pursue opportunities for funding initiatives aimed at improving road safety.

Cycling brings health benefits to communities that embrace this mode of recreation and transport (refer to Section 3).

The PHWP outlines that diabetes, heart disease, respiratory illness, osteoporosis, and injury within adults is higher in the City than the State average[4]. A high percentage of people within the City tend to have a fair or poor self-assessment of their health.

These are priority areas for the City to address, and increased cycling participation will assist in this endeavour to improve community health.

Physical activity is important in maintaining good overall health and wellbeing; it helps us maintain a healthy weight as well as a healthy heart, mind and bones.

Inadequate levels of physical activity can increase the risk of developing some cancers, heart disease, other heart problems, arthritis, osteoporosis, diabetes, mental health problems, injury, kidney disease and obesity. Cycling is a physical activity going places while getting healthy.

35% of people within the City do not get enough physical activity according to Physical Activity Research. Approximately 9% of people within the City of Bayswater do not have access to a motor vehicle in comparison to 6% in Western Australia. This provides another opportunity for cycling to address mobility.

4. WA Department of Health, 2014

The City's PHWP will be regularly monitored to ensure that priorities are aligned with the City's strategic documents. The implementation of the 2023 Bike Plan should become a mechanism for the implementation of the PHWP.

Corporate Business Plan (CBP) 2019-2023

The CBP recommends the City to:

- Have a quality and connected built environment (aspiration)
- Have a connected community with sustainable and well-maintained transport (outcome)
- Advocate for safe and accessible public transport (strategy)
- Partner with the Department of Transport to deliver strategic bicycle routes (action).

The strategic bicycle routes have since been developed as part of the LTCN. The vision is to create a comprehensive, safe, and connected cycling infrastructure network throughout the City that compliments the LTCN.

Recommendation 4

Incorporate the benefits of cycling into the Public Health and Wellbeing Plan (future updates) to strengthen the case for investment in cycling to improve the health of City of Bayswater residents.

Environment and Liveability Framework (ELF)

The City is committed to the health and wellbeing of its community and its PHWP aligns with the 2023 Bike Plan.

Specifically, the following PHWP strategies support and The City of Bayswater is committed to being a liveable and sustainable City. In 2021 an ELF was prepared for the City, which provides an insight into how it can respond to the challenges and opportunities associated with climate change and growing urbanisation.

The ELF lists 12 themes and transformative actions.

Increasing the cycle network is aligned with the transformative actions outlined below.

- Increase the cycle network so residents can access a designated, continuous cycle way within a five-minute cycle of their home; and extend specified and marked bicycle routes to connect all schools in the City.
- Provide continuous footpath connections, inclusive of shade from trees, and safe pedestrian crossings within an 800m radius of all activity centres, aged care and schools.
- Provide a high frequency sustainable transport link between our train stations and town centres through advocacy to the State Government.
- Create '20-minute neighbourhoods' throughout the City, giving people the ability to meet most of their daily needs within a 20-minute walk from home.

4.2 Safe System

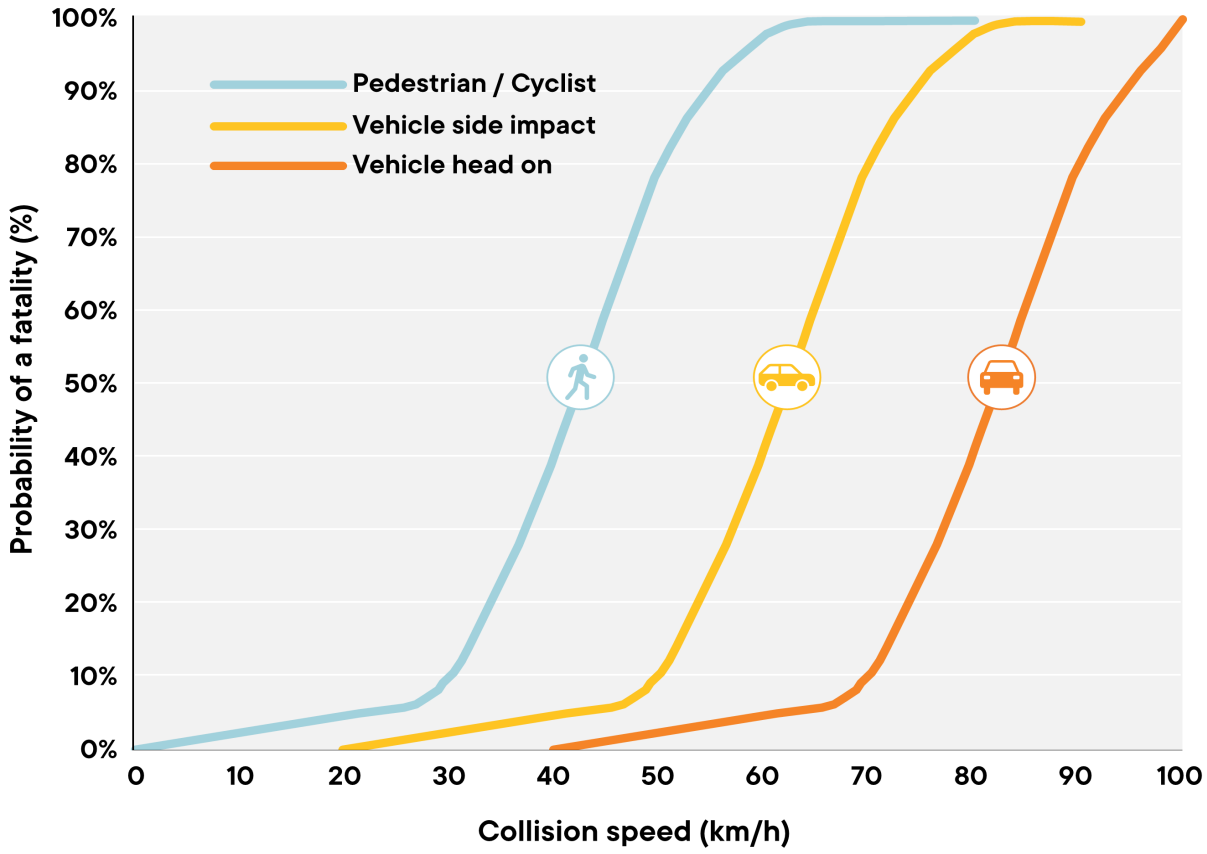
The safety of residents in the City is considered the paramount theme with which the 2023 Bike Plan aligns and therefore, improving cycling facilities to enhance user road safety is imperative.

Safety for people riding bicycles remains a major priority for road safety authorities within Western Australia[2]. Safety continues to be a reason that more people do not choose to cycle. Feedback from elected members and the community survey highlighted safety as one of the primary criteria to prioritise cycling infrastructure.

In the context of road safety, a person injured in a crash who requires hospital admission is defined as a serious injury, regardless of how quickly they recover. Across Western Australia in 2008, the Government set a target of a 40% reduction in serious injuries to achieve by the year 2020, however the target was 60% for people riding bicycles. In 2016 there were 138 people killed or seriously injured on bikes. This number exceeds the target by nearly 2.5 times. The risk of death for a person riding a bicycle is 4.5 times greater than a car occupant (Stevenson, et al 2014)[3]. This is represented in Figure 4.2.

5,6. https://www.wa.gov.au/system/files/2021-07/Cyclists-INFO-SHEET.pdf

Figure 4.2 | Comparison of collision speed v probability of a fatality



Source: The Wramborg (2005) model for fatality probability.

Common problems for people on bikes are interaction with fast-moving traffic; and lack of protection.

Vulnerable road user groups are treated as a distinct group of road users. A person riding a bike has a 90% chance of surviving a collision with a vehicle travelling at 30 km/h. However, the rate drops to less than 20% at 50km/h. Every 1.6 km/h reduction in speed on urban streets results in a 6% decrease in traffic fatalities (Sharpin, 2017).

4.3 Office of Auditor General (OAG) Report - City of Bayswater 2021

The following findings of the OAG report specific to City have substantially guided the direction of the 2023 Bike Plan:

1. The previous Bike Plan used cycling data from counters and community interaction.
2. The previous Bike Plan considered likely destinations, links to primary routes, evaluated existing paths and included cycling projects to be built.
3. The City has not continued to collect data to understand cycling changes in their communities and adjust priorities as needed.
4. Bayswater's Bike Plan has not been reviewed since it was developed in 2014 and does not consider changes to legislation that allow cycling on footpaths. In 2021, the City received funding to review its Bike Plan in the near future. If plans are not periodically reviewed, they may not reflect changes in road and path networks, or meet community needs.
5. The City's path widths of 2m were narrower than the better practice of 2.5m, outlined by Austroads as the desirable minimum width.
6. Shared path widths could not be assessed, as the City's asset register did not separate shared paths from footpaths (note: report referred to dual use paths).
7. Nearly one-third of footpaths in the City were 1.5m or less (Table 4.1). If the City does not appropriately consider path widths, footpaths may not be fit for purpose, which may reduce cycling as a transport or recreational option or increase the incidence of accidents.
8. The City did not actively promote cycling to their communities despite identifying the need to do so in their Bike Plans.

Table 4.1 | City of Bayswater path widths (total length in metres, City of Bayswater, 2022)

Type	<1.2m	1.3-1.9m	2.0-2.4m	2.5-2.9m	3.0-3.4m	>3.5m	Total
Asphalt	170	727	2,106	3,434	11,088	1,712	19,236
Concrete	89,458	31,110	131,097	9,051	4,913	1,920	267,550
Brick pave	3,974	1,177	4,894	3,733	6,191	6,180	26,150
Other	575	468	102	21	246	-	1,413
Sub-total	**94,178**	**33,482**	**138,200**	**16,239**	**22,438**	**9,812**	**314,348**
Main Roads ISP					22,195		22,195
TOTAL					**44,633**		**336,543**

Recommendation 5

Improve path width standards to align with Department of Transport and Office of Auditor General report recommendations.

4.4 Western Australian Bicycle Network (WABN) Plan

The Department of Transport (DoT) objective is to enable people of all ages and abilities to ride. The most pertinent actions of the WABN Plan latest update (2017) which are relevant to the Bike Plan are:

- Long-Term Cycle Strategy for Perth (LTCN)
- Connecting Schools
- Connecting Stations
- Perth Bicycle Network Grants Program (now referred to as WABN grants).

The Department of Transport promotes the Activation, Consultation and Evaluation (ACE) delivery model to ensure built environment projects consider engagement and evaluation components throughout the project life cycle.

4.5 The Long-Term Cycle Network (LTCN)

The vision for cycling described in the previous chapter is governed, to a large extent, by the LTCN which is the long-term cycling plan the City is working towards when implementing bicycle infrastructure.

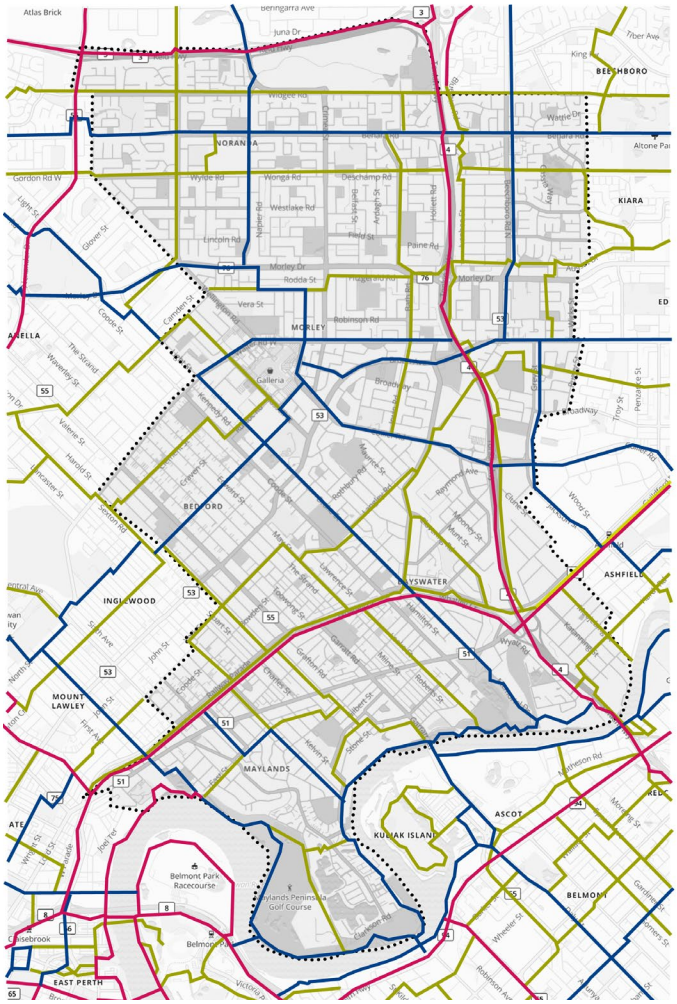
The introduction of the LTCN, a project led by the DoT in partnership with metropolitan local governments, was the first major cycle network review that the State Government had undertaken in 20 years and has had considerable influence on this Bike Plan.

The LTCN is an aspirational focus for the year 2050. It defines cycle routes that the City has prioritised for implementation. The LTCN is a metro-wide bicycle network and the City's component was developed through a series of conversations with the DoT from 2018 until it was adopted by Council at its Ordinary Meeting in June 2020.

Routes identified in the ultimate network map of the 2014 Local Bike Plan were considered by the City in the LTCN discussions but were not necessarily still part of the LTCN (e.g., Coode Street). The routes allow the State Government to release grant funding for cycling infrastructure at locations that have been determined to best realise their cycling potential.

The outcomes are now significantly geared towards implementation and activation of these routes.

Figure 4.3 | LTCN in the City of Bayswater



The anticipated order of implementation of LTCN routes in the short-term (5-10 years) is shown in Figures 4.4 and 4.5 (north and south of Morley City Centre respectively). This will depend on other City priorities and the availability of external funding.

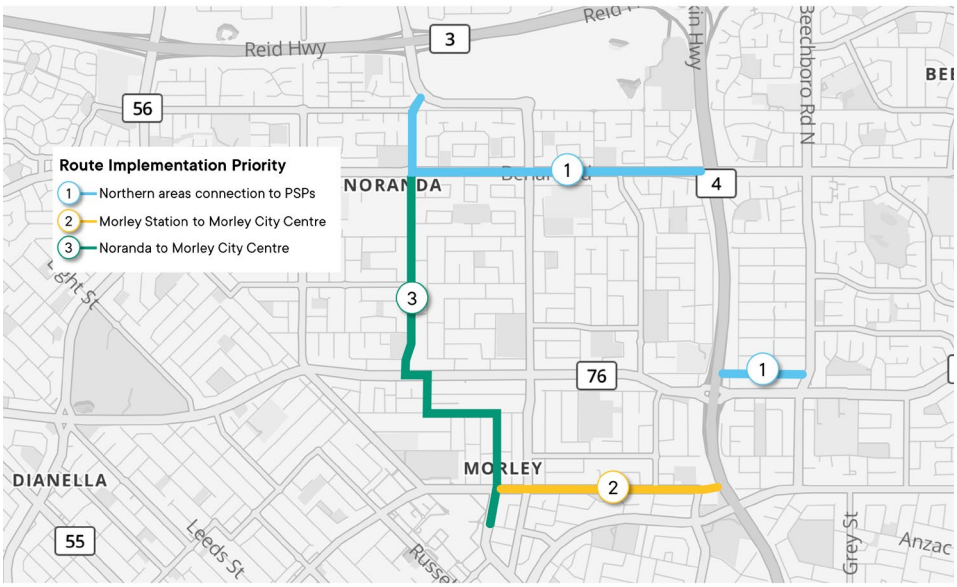
Priority routes in the North:

1. Connections to PSP network in northern areas (Noranda / North Morley):
McGilvray Avenue (east), Hamersley Road (south) and improvements to Benara Road path (north); additional routes to be considered as part of the movement network plan to the new Morley-Ellenbrook stations within the City (Flyt).

2. Morley Station to Morley Town Centre (TC):
Walter Road shared on road cycling facility.

3. Noranda to Morley TC:
Timms Place, Halverson Road and Charnwood Street.

Figure 4.4 | LTCN Route Implementation Priority in the City of Bayswater (North)



Priority routes in Central City of Bayswater are:

4. Bayswater TC to Bayswater Waves: Drake Street, Rothbury Road, Maurice Street, McGregor Street and Priestly Street (some of this direct route currently not classified as LTCN and recommended to be added).

5. Connections to the Railway PSP in Maylands: Railway Parade, Seventh Avenue, Charles Street and Grafton Road.

6. Bayswater TC to Bayswater Foreshore: King William Street and Riverside Gardens path network.

7. Bayswater TC to Morley TC: Drake Street and Rudloc Rd.

8. Maylands TC to Maylands Foreshore: Eighth Avenue and East Street to Bardon Park.

9. Maylands TC to Edith Cowan University (ECU) Mt Lawley: Railway Avenue and Sixth Avenue.

10. Completing Foreshore Path missing link: Complete path east of Katanning Street.

11. Bedford to Morley City Centre: Clement Street, Gummery Street and Catherine Street.

Figure 4.5 | LTCN Route Implementation Priority in the City of Bayswater (Central)

The action plan to implement the highest priority sections of the LTCN are to be reviewed every year through the City's annual budget process. A more substantial review of the entire City cycling network is expected to be undertaken before the commencement of the 2027/2028 financial year.

Changes to the LTCN routes are suggested in the supported recommendations. Agreement with DoT makes it possible for projects on these routes to be eligible for grant funding through the Western Australian Bicycle Network (WABN).

Protected cycle lanes on the Railway Parade local route were under construction at the time of the review and are considered the number one priority project for implementation from the 2023 Bike Plan, as a result of the closure of the level crossing at Caledonian Avenue in April 2022.

Some of the proposed changes to the LTCN that will be discussed with the DoT are listed in Table 4.2.

Table 4.2 | Proposals to Realign the LTCN

Proposed Route Change	Priority Term
Realign LTCN around the Maylands Town Centre with Caledonian crossing removal: ■ Add Seventh Avenue Bridge to local route.	Long
Add LTCN route to improve direct connectivity between Bayswater Town Centre and Bayswater Waves. ■ Add Priestly Street and Rothbury Road local route (via sections of McGregor, Sudlow and Maurice Streets).	Long
Consider realigning LTCN around Morley Town Centre: ■ Lennon Street and Thorpe Street from Russell Street to connect to Smith Street.	Long
Explore realignment of LTCN around Bayswater Town Centre ■ Add King William Street secondary route ■ Add Murray Street local route ■ Change Slade Street to local route.	Long

Function of Cycling Routes

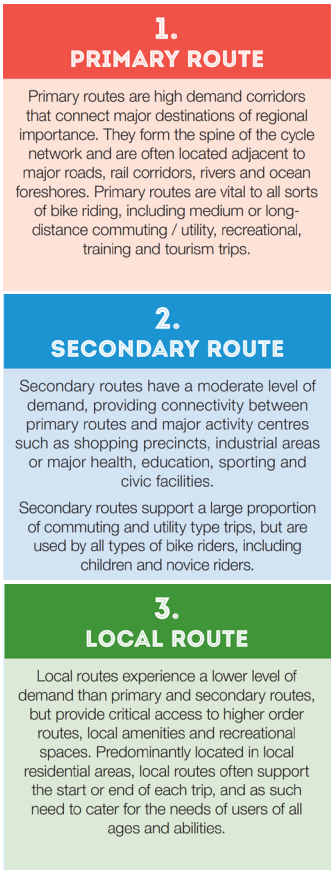
Routes are designated by their function, rather than built form. Function considers the type of activities that take place along a route, and the level of demand (existing and potential). The built form of a route is based on the characteristics of the environment, including space availability, topography, traffic conditions (speed, volumes), primary users, and so on.

The Form of Cycling Routes

The DoT has stipulated that regardless of the category of route, all routes can take a number of different forms and are designed to suit the environment in which they are located. These forms include:

- Bicycle only, shared and/or separated paths
- Protected bicycle lanes (single or bi-directional, depending on the environment)
- Safe active streets
- Quiet residential streets incorporating signage and wayfinding may be considered.

Principal Shared Paths (PSPs) are often built along primary routes. A PSP is a high-quality shared path built to the MRWA PSP standard, which generally means the path will be 4m wide, have adequate lighting, and be grade separated at intersections (where possible).



Source: Department of Transport

Road Cycling Routes

The DoT has added a complementary network, which includes a category known as Road Cycling Routes that are designated routes for bike riders undertaking long distance rides in (predominantly) on-road environments, for training, sports, or recreational purposes. It should be noted that the complementary network is largely under development, and this Bike Plan should be seen as a starting point to the discussion. .

4.6 METRONET Projects

External pressures have coincided with momentum and opportunities for cycling particularly with the announcement of and subsequent construction of METRONET Stage 1 in the heart of the City. METRONET projects are significantly transforming the Bayswater Town Centre. As part of the Morley to Ellenbrook Line, two new train stations are currently being built as the BBP 2023 is being developed. This will mean there will be six train stations in the City, by far the most of any local government in Western Australia. The works associated with METRONET, clearly form the major connectivity focus for commuter cycling.

Bayswater Station Upgrade

Bayswater Station will provide a connection point for three rail lines and is forecast to experience approximately 81% growth in patronage by 2031. METRONET will connect Bayswater Station through integrated bus services and improved cycling and pedestrian movements.

Cycling improvements as part of the station upgrade were identified during stakeholder and community consultation in March 2018. It is recognised these improvements will need to be balanced with a station that fits within and complements the town centre. Some of the cycling improvements include:

- An elevated PSP removing the pedestrian-cyclist interface, which is a cause of problems at train stations.
- A grade separated pedestrian connection to both sides of the town centre on Whatley Crescent – Beechboro Road South.
- Improved pedestrian phasing at the King William Street-Whatley Crescent intersection.
- An underpass between Railway Parade and Whatley Crescent at Leake Street.

Closure of Caledonian Avenue Level Crossing

On 15 April 2022, this important level crossing was closed to accommodate the commencement of the planned Forrestfield-Airport Link in late 2022. If the crossing had been retained, the boom gates would have needed to be down nearly four hours per day to accommodate the frequency of trains once the Airport Line and the Ellenbrook Line opened.

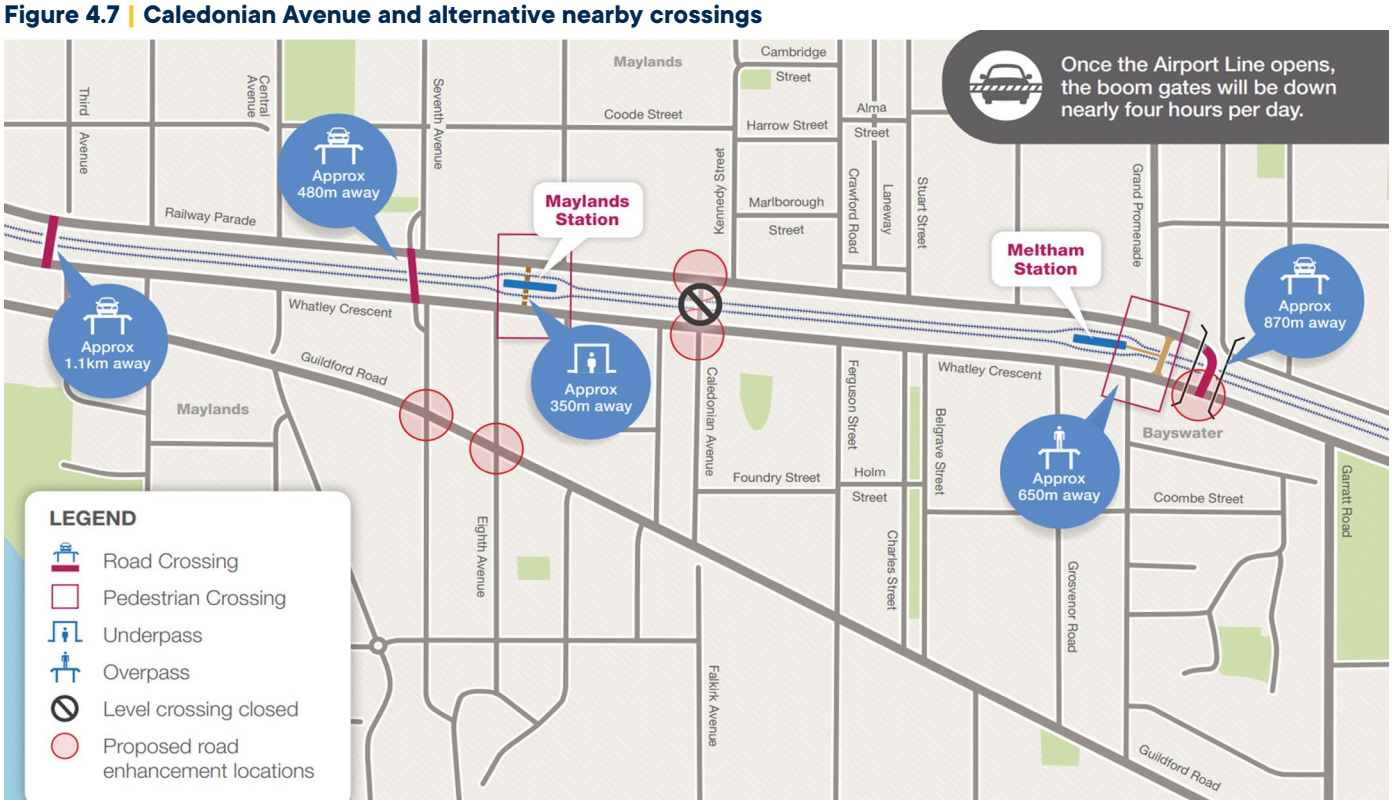
A budget of $15 million was earmarked for improvements to the surrounding road network as part of the closure, as other alternatives such as sinking the railway line or grade separating the intersection were deemed unfeasible. These improvements were made in consultation with the community and stakeholders and were particularly focused around access to Maylands Town Centre.

Closing the Caledonian Avenue railway crossing resulted in the following road improvements:

- Protected bike lanes on Railway Parade between Meltham Station and Maylands Station.
- Traffic signals at Railway Parade and Whatley Crescent intersection (Hotham Bridge), with a new dedicated right-turn enabling vehicles to head towards Maylands.
- Intersection improvement treatments at Whatley Crescent and Caledonian Avenue.
- Traffic signals at Guildford Rd and Seventh Ave intersection.
- Improved pedestrian facilities at Guildford Rd and Eighth Avenue.
- Speed restrictions and traffic calming in key town centre streets.
- Revitalisation planning for the Maylands town centre in partnership with the City of Bayswater (up to $250,000).

The improvements are represented in Figure 4.7 below, which shows Caledonian Avenue and alternative nearby crossings in the area.

Figure 4.7 | Caledonian Avenue and alternative nearby crossings



Source: Department of Transport

4.7 Morley to Ellenbrook Line (MEL) Stations

The Noranda and Morley Train Stations are being built within the City as part of the Morley to Ellenbrook Line (MEL). The State Government is considering connectivity to these stations to reduce dependence on private vehicles. Projects that enhance the cycling network around these stations should be implemented, and where possible, utilise funding opportunities outside of municipal funds.

Recommendation 6

Support the implementation of the Noranda Station cycling improvements by the Public Transport Authority.

Recommendation 7

Support the implementation of the Morley Station cycling improvements by the Public Transport Authority and link with the Morley Shopping precinct.

4.8 Tonkin Highway Gap Project and NorthLink WA

The Tonkin Highway Gap project as well as the recently completed NorthLink WA extension of Tonkin Highway have transformed the eastern part of the City. These recently constructed projects have provided best practice cycling facilities connecting the railway stations and extending access to the Perth CBD. Both highways provide improved transport to and from the City of Bayswater.

4.9 State Government Funding Priorities and Design Changes

Since the 2014 LBP was prepared, the DoT developed the Safe Active Street or Bicycle Boulevard program. The City was at the centre of the demonstration element of the program with the Leake Street Safe Active Street being one of the first trialled in the State.

The DoT has changed its approach from advocating for sealed shoulder type cycle lanes (i.e., edge line only). As a result, on-road cycling infrastructure is now geared towards protected on-road cycle lanes and bicycle boulevards. This change has major implications for funding of cycling infrastructure, as sealed shoulders, as well as minimum width shared paths, are no longer eligible for funding through its Western Australian Bicycle Network (WABN) grants program.

New guidance on the construction of shared and separated paths has been developed by the DoT (released 2020) which call for 2.5-3.0m path construction as a minimum. Individual local governments have discretion for path widths, but the new recommended path width is a requirement for eligibility for grant funding. Further information on City path widths is provided in Chapter 5.

4.10 State Government Legislation Changes

Change to the Road Traffic Code to allow cycling on footpaths

In 2016, the Road Traffic Code 2000 was amended to allow anyone to cycle on footpaths. Before this, only people under the age of 12 were permitted to ride on footpaths and they were designed to accommodate pedestrians not adult cyclists. In effect, the entire footpath network of the City of Bayswater has now become a part of the bike network and its capacity to carry bicycle trips needed to be assessed.

Safe Passing Distance Legislation

Western Australian road rules were amended in November 2017 to introduce specified minimum passing distance of a bicycle by a motorist. These distances are:

- 1.0m where speed limits are 60km/h or less; and
- 1.5m where speed limits are over 60km/h.[7]

4.11 Other Changes and Events

Other important changes since 2014 that are considered in the BBP 2023 are:

- Emergence of e-Bicycles and e-Rideables (ongoing)
- Release of PTA station access strategies for the City's existing stations (2016)
- A portion of Noranda transferred from City of Swan (2016)
- A new approach to 'Place' management adopted by the City (2017)
- Two further census periods have occurred providing updated context (2016, 2021).

Like many other organisations and agencies, the City is in the process of economic recovery following the Government's response to the COVID-19 pandemic. Therefore, investment into infrastructure will focus on what will bring about the best results for safer and increased cycling within the communities of the City.

The impact of the pandemic on travel behaviour is important, as it resulted in more people working from home, reducing demand on the transport network.

7. https://westcycle.org.au/minimum-passing-distance-announced-summary

Photo by Yiwen on Unsplash

City of Bayswater Cycling Environment

5.1 Journey to Work Mode Share

The following table shows the mode share of cycling to work within each of the main suburbs in the City of Bayswater from the 2021 Census.

Figure 5.1 | Journey to Work Mode Share

Suburb	Bikes	Total Trips	% (Mode Share)
Bayswater	159	6066	2.62%
Maylands	150	5632	2.66%
Morley	N/A	8696	N/A
Bedford	32	2200	1.45%
Embleton	N/A	1375	N/A
Noranda	N/A	3201	N/A
City ABS	436	28414	1.5%

Source: ABS Census 2021 Note bike riders were not included for some suburbs

Within the City, 21% were female bike riders and 79% male, which is the same as in 2014.

Comparing the proportion of bicycle riders versus car drivers provides an even greater understanding as to the current levels of cycling, as the objective is to transfer vehicle trips to cycling trips.

- Bayswater - 3.3%
- Maylands - 3.6%
- Morley
- Bedford - 1.8%
- Embleton
- Noranda
- City Average - 1.96%

These results show that there has been a decline in cycling since the Census 2014. Note: Some suburbs have not recorded any bike trips in the ABS 2021.

Currently, the proportion of cycling to car trips is significantly higher in Maylands and Bayswater than in Bedford. Morley and Noranda. Bedford, Morley and Noranda are therefore the areas requiring improvement, and significant investment. At the same time, the larger numbers of people riding in these southern areas require protection, and the deficiencies in the cycling network in these areas are more clearly understood.

5.2 City of Bayswater Path Program

Paths in older areas of the City were originally built as precast slabs. Slab displacement leads to potential danger for pedestrians and riders, particularly the elderly and those with a mobility impairment. Maintenance of these paths is a challenge for local governments, and the City implemented a footpath slab replacement program between 1999 - 2014 to replace the old slab network with in-situ concrete paths. This program is now completed.

The program aimed to reduce the liability associated with slab footpaths, as well as improving safety for pedestrians. The change to the Road Traffic Code meant that replacing slab paths would also benefit bike riders.

In 2015/16, City officers analysed roads and footpaths within the City and identified gaps in the network. In 2016, Council considered a five-year footpath construction program and its corresponding weighted scoring criteria. Council endorsed the program in September 2016 and $600k was allocated each year, expanding the path network by an approximately 1.5 km/year. This expenditure allocation has not been maintained due to budget pressures, especially during the COVID-19 pandemic.

5.3 Opportunities for the City of Bayswater

Proximity to the Perth CBD

A major opportunity for the City is its proximity to Perth, which at its closest point is just 5km or a 15-minute bike ride, at Mount Lawley subway. At its furthest point on Darwin Crescent in northeast Morley, the City is 14km or about a 45-minute bike ride from Perth CBD. Morley Galleria is about 10km or a 30-minute bike ride and Bayswater Town Centre 7km or a 20-minute bike ride. These distances are measured as a person on a bike would travel.

Figure 5.1 | Cycle distance to Perth CBD

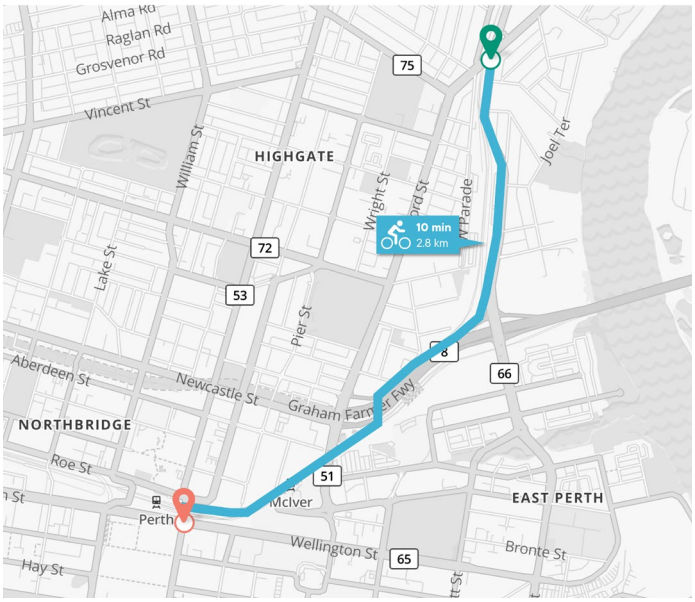


Figure 5.1 highlights that a large portion of the City's approximately 70,000 people live within a convenient cycle distance to / from the Perth CBD, particularly its southern and western areas.

Considering the recent transition to more people opting to work from home, this presents an excellent opportunity for cycle network development connecting the Perth CBD and public transport nodes along the way i.e. Train Stations.

Expansion of the Principal Shared Path (PSP) Network

High-quality PSPs already connect or are soon to connect the Perth CBD with the majority of the City.

Significant work over the last few years has completed the missing links of the PSP on the Perth to Midland Rail Line. In recent years, the remaining section of PSP through the City along the railway line, was completed from the Bayswater Train Station to the Perth CBD along this transport route corridor. A further section is now under construction to extend this PSP network as part of METRONET Stage One.

The Tonkin Highway Gap project, also under construction, will expand the PSP network on the western side of the highway by a further 2 km in the City and will be fully grade separated. This PSP project will link the paths constructed in the Gateway WA and NorthLink WA projects.

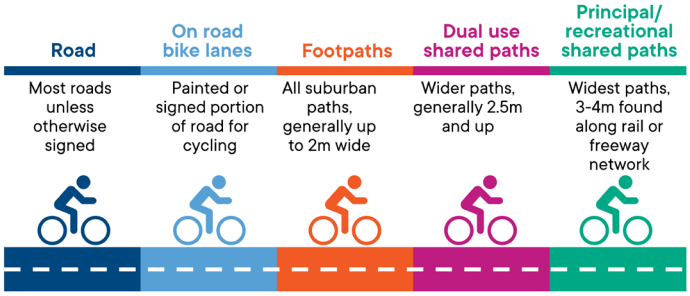
Some sections of the PSP have also been constructed along Tonkin Highway since the last Bike Plan, firstly as part of NorthLink, and then the Tonkin Highway Gap Project, effectively completing the path on the western side of the highway allowing for connectivity for City residents.

The border extension of Noranda to Reid Highway already has a PSP on the southern side, means the primary cycling network within the City is largely constructed and accessible to people throughout. A focus of the 2023 Bike Plan is therefore to connect residents and businesses in the City to the expanded PSP network.

5.4 Design Standards for Cycling Facilities in the City

This Bike Plan has been prepared with people of all ages and abilities in mind when it comes to riding a bike. The types of infrastructure where people of all ages and abilities ride are shown in Figure 5.2, which has been taken from the OAG Report.

Figure 5.1 | Road and path assets used for cycling



Source: OAG Report Viable Cycling in the Perth Area (2021).

Mixed Traffic

There are numerous streets within the City, where traffic volumes are low enough to facilitate safe cycling on the carriageway. The 'safe passing' legislation also mandates that overtaking vehicles provide at least a 1.0m clearance on streets at 60km/h or less. However, less experienced riders have reported discomfort where these streets intersect with busier roads, or at squeeze points in traffic that do not have adequate bypass facilities.

Recommendation 8

Review local area traffic management procedures to ensure they are adequately catering for cycling safety and are aligned with Department of Transport guidelines for safe cycling.

Recommendation 9

Review intersection upgrade treatments and standard designs to ensure they are adequately catering for cycling safety.

As a rule, streets with fewer than 1,500 vehicles per day (or 150 per hour in morning and afternoon peak periods), do not necessarily require separate cycling infrastructure. However, streets carrying more than 500 vehicles per day, and those around schools, should have at least one footpath, and streets with 1,500 or more vehicles per day, should have a path on both sides.

Recommendation 10

Consider reduced speed trials in areas of the City of Bayswater where there is congestion, pedestrian and cycle movement, such as Bayswater Town Centre, Bedford North precinct, Maylands Town Centre, Morley Town Centre and Maylands North. This could be an interim trial with a view towards 30km/h or 40km/h zones.

Recommendation 11

Undertake a healthy streets assessment within each of the City of Bayswater neighbourhoods.

> **"This Bike Plan has been prepared with people of all ages and abilities in mind when it comes to riding a bike."**

On road Bike Lanes

Bike lanes are typically applied where street traffic volumes are more than 1,500 per day and adequate space is available in the road reserve. In recent years, the State Government has indicated that sealed shoulders are considered inadequate for cycling, particularly with streets that have speeds of 60km/h or more. The City proposes to update its standard for cycling infrastructure on the road network from the 2014 LBP as outlined in Table 5.2 below.

Table 5.2 | Standard of Facilities 2014 vs Standard Proposed 2022

85th % Traffic Speed	Standard of Facilities 2014	Standard Proposed 2022
Less than 40km/h	Ride in mixed traffic.	Ride in mixed traffic. Still need to consider traffic volume per hour. Sealed shoulders may be required in heavier volumes, e.g., around Bayswater Town Centre.
Less than 50km/h	Sealed shoulders or cycle lanes may be desirable but are generally not required.	Still need to consider traffic volume per hour. Sealed shoulders may be required in heavier volumes, e.g., around Bayswater Town Centre.
50km/h	Sealed shoulders may be desirable.	To consider buffered lines for bicycle lanes if volumes and type of vehicle are significant and car parking is required on the street.
60-70km/h	Sealed shoulders should be provided with a minimum width of 1.5 m.	Depending on traffic volume and speed, cycling on these roads should be separated, either by a shared path, or protected on-road cycle lanes, potentially buffered lanes.
80km/h +	Sealed shoulders should be a minimum of 2.0m providing buffer for cyclists.	New standard should be shared path separated from the road (for 70km/h +).

Protected cycle lanes are to be explored in streets with speed limits of 60km/h or more. Adequate raised separation provides a better environment for people to cycle.

Recommendation 12

Assess streets that require protected cycle lanes.

As part of exploring the use of protected cycle lanes, the City will consider prioritising LTCN classified distributor roads, and also consider buffer strips at some locations as an interim measure (in lieu of no cycling provision).

Shared Paths and Separated Paths

Shared paths should be a minimum of 2.5m at all times and comply with the DoT's shared and separated path guidelines, which stipulates 3.0m is desirable for local and secondary routes and reinforces the importance that paths be constructed through driveways.

Separated paths are necessary in areas of high pedestrian use and are a longer-term consideration for the river foreshore. Widths of separated paths should also be in accordance with the DoT's guidelines for shared and separated paths which stipulate a 4.0m width (2.2m for bike riders and 1.8m for pedestrians). It should be noted that the desirable width of 4.5m (2.5m for bike riders and 2.0m for pedestrians) should be applied where practical through popular areas such as Riverside Gardens and Bardon Park. This comparison is detailed in Table 5.3.

Table 5.3 | Shared paths v Separated paths

Shared paths	
Minimum width	**Desirable width**
2.5m (local and secondary routes) **3.0m** (primary route)	**3.0m** (local and secondary routes) **4.0m** (primary route)
Separated paths	
Minimum width	**Desirable width**
4.0m, where: ■ 2.2m is provided for bike riders; and ■ 1.8m is provided for pedestrians	**4.5m+** where: ■ 2.5m+ is provided for bike riders; and ■ 2.0m is provided for pedestrians

Source: Planning and Designing for Bike Riding in Western Australia guide: Shared and Separated Paths (2021).

Footpaths

With the changes to the Road Traffic Code allowing people to cycle on footpaths, the City's footpath network now forms a component of the cycling infrastructure network and must be adequately designed to cater for the types of bike riders likely to use it, unless it is signposted to prohibit use.

The City presently builds footpaths anywhere between 1.2-2.0m wide. Some property owners believe that larger paths may negatively impact the aesthetics of property frontages. In addition, decisions to accommodate residents' requests may have compromised the safety of riders, particularly students wishing to cycle to school, and may have led to increased congestion of vehicles. Path assessment has shown widths of 1.2-1.5m to be inadequate and should therefore be made wider for all new infrastructure to improve safety for pedestrians, cyclists, wheelchairs, scooters, and people with a disability. This is expected to encourage greater and safer path usage.

Recommendation 13

Adopt a minimum width of path in all circumstances to be 1.8m, with a preference for 2.0m as a minimum standard where space permits and separated where possible.

Two-metre-wide footpaths will still mean a parent and child on a bicycle will likely have to ride single file when encountering another person walking or cycling on the same path, especially from the other direction. This can be problematic in a park where children can be expected to ride more freely as they develop new skills. The City will consider a minimum of 2.0m paths throughout recreational areas of parks and open spaces. In the vicinity of primary and secondary schools and where there is a major activity centre a path width of 2.5m be considered where a warrant is justified by the City.

This Bike Plan has been prepared with people of all ages and abilities in mind when it comes to riding a bike. The types of infrastructure where people of all ages and abilities ride are shown in Table 5.2, which has been taken from the OAG Report.

Recommendation 14

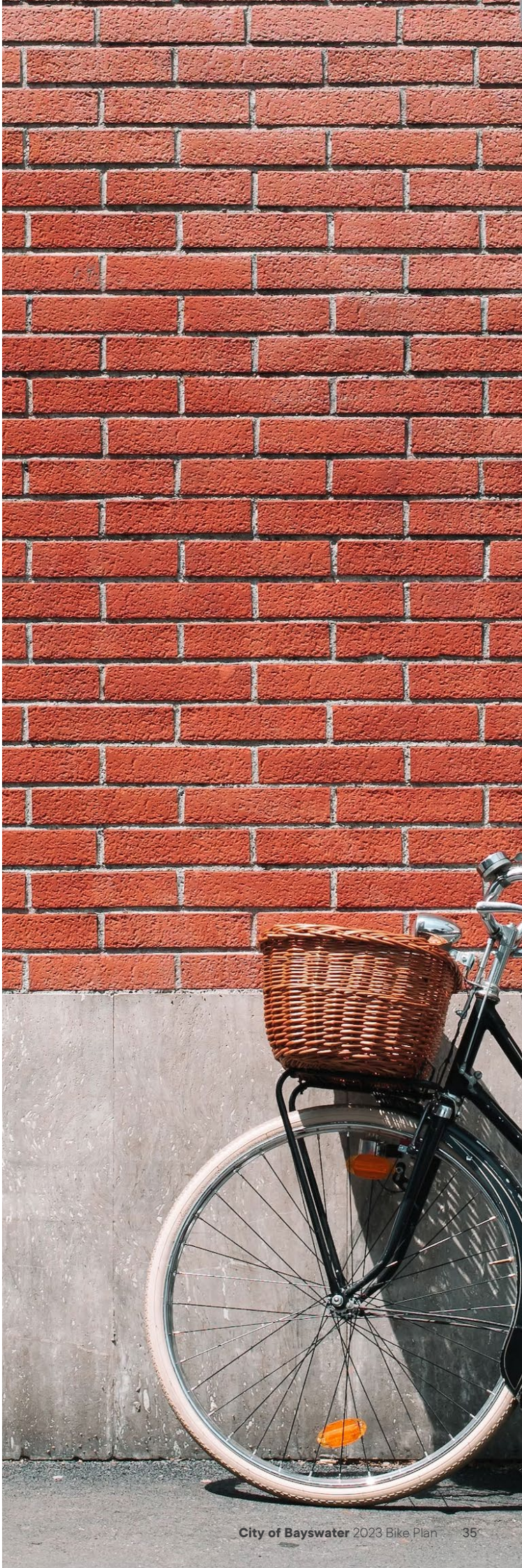
Adopt 2.0m minimum path widths in parks and open space with consideration to 2.5m paths near schools and major activity centres where warranted.

The focus will be on upgrading paths <1.5m to 2.5m in school or town centre areas or building an additional path on the other side of the road (2.5m). All new paths constructed by either the City, or by developers, are to be 2.0m minimum, or 2.5m in school or town centre areas (unless demand for wider paths is justified).

The City is in a unique position to directly communicate with communities to promote cycling growth. Implementing improvements associated with the 2023 Bike Plan, including crash data, would benefit from a committee made up of supporters for improving paths. These will be the "drivers", of the BBP 2023 within the City.

Recommendation 15

Establish a Bike Plan Implementation Advisory Group, made up of Elected Members, staff and community members who support promoting cycling and safer improved paths to be chaired by an Elected Member.



6. Cycling Neighbourhoods and Regions

The City is made up of numerous communities to which individuals, families, friends and interest groups identify. They are more likely to identify with these communities than the City of Bayswater as a whole.

Separating the City into localised regions is convenient, so cyclists can focus on areas they are more concerned about. Breaking down the associated tasks into manageable sizes ensures infrastructure recommendations are effective, in line with community expectations, and achievable and measurable. The City is 34.2km^2 and the ideal neighbourhood size is 1-2km^2, meaning there are approximately 20 neighbourhoods. More than half of the elderly population of the City resides in either Noranda or Morley.

The City has been separated into five regions for the purposes of the BBP 2023 (see Fig 6.1). They are:

- **North Region** (*Noranda* and North Morley) – all portions of the City north of Morley Drive
- **Central Region** (all portions of *Morley* between Broun Avenue, Coode Street and Morley Drive)
- **East Region** (*Bayswater* and Embleton, east of Coode Street)
- **South Region** (*Maylands* – south of the railway line)
- **West Region** (Bedford – all portions of the City, west of Coode Street and north of the railway line).

[Note: the 'Place' areas of the City have been italicised]

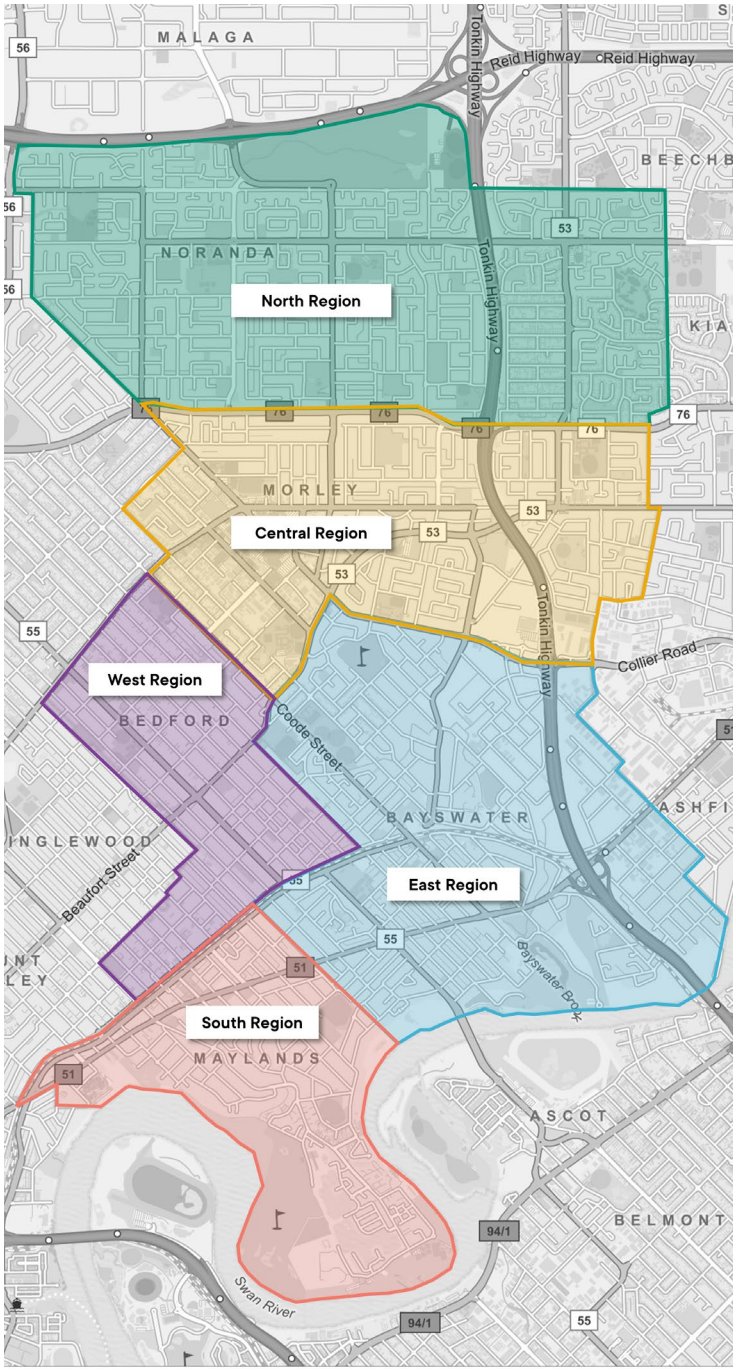
Education and behaviour change programs within these areas may be implemented to support cycling uptake. (approx. 1-2km^2 in area is preferable to focus on smaller length and more consistent trips).

Recommendation 16

Commence targeted behaviour change initiatives within the neighbourhoods and communities of the City of Bayswater.

The City will also consider submitting improvements for funding in the Low-Cost Urban Road Safety Program (Main Roads WA) and aligning selected neighbourhood boundaries.

Figure 6.1 | Cycling Regions of the City of Bayswater



6.1 North Region (Noranda)

This region has an area of 5.0 km^2; its population is approximately 8,002.

Priorities for the Northern Region are:

- Connections to primary routes: PSPs on Reid Highway and Tonkin Highway
- Wayfinding / removal of old local bike route signage
- Connection to schools: three senior high schools and six primary schools (note: some are just outside the region and in adjacent local government areas)
- Connections to Noranda Train Station
- Morley Drive crossings
- Priority footpath program
- Develop green network between parks and recreation areas to combat urban heat island effect.

6.2 Central Region (Morley and Embleton)

This region has an area of 12.21km^2; its population is approximately 26,139.

Priorities for the Central Region are:

- Connectivity between Morley Train Station and Morley City Centre
- Connectivity between Bedford and Morley
- Connectivity between Bayswater Waves and Bayswater Town Centre
- Wayfinding / removal of old local bike route signage
- Connection to schools: three senior high schools and five primary schools (note: some are just outside the region and in adjacent local government areas)
- Develop green network between parks and recreation areas to combat urban heat island effect.

6.3 East Region (Bayswater)

This region has an area of 9.83km^2; its population is approximately 15,288.

Priorities for the Eastern Region are:

- Connectivity to Bayswater Town Centre and River Foreshore
- Guildford Road crossings
- Bayswater Town Centre to Bayswater Waves (via Drake Street, Rothbury Road and McGregor Street
- Protected cycle lanes on distributor roads where practical
- Completion of foreshore path network
- End of trip facilities
- Development of green network to connect parks, schools and places of interest.

6.4 South Region (Maylands)

This region has an area of 10.5km^2; its population is approximately 22,539.

Priorities for the Southern Region are:

- Connections to Perth CBD
- Connectivity to Midland Rail Line PSP
- Connections to ECU Mount Lawley campus
- Connectivity to Maylands Town Centre and river foreshore
- Completion of Foreshore path network
- Upgrade of damaged surface.

6.5 West Region (Bedford)

This region has an area of 4.5km^2; its population is approximately 5,716.

Priorities for the West Region are:

- Connectivity to Midland Rail Line PSP
- Connections to ECU Mount Lawley campus
- Connections to Perth CBD
- Wayfinding / removal of old local bike route signage
- Connection to schools: one senior high school and two primary schools (note: some are just outside the region and in adjacent local government areas)
- Reduced vehicle speeds
- Ensure cycle friendly LATM
- Develop green network between parks and recreation areas to combat urban heat island effect.

Types of People Cyclists

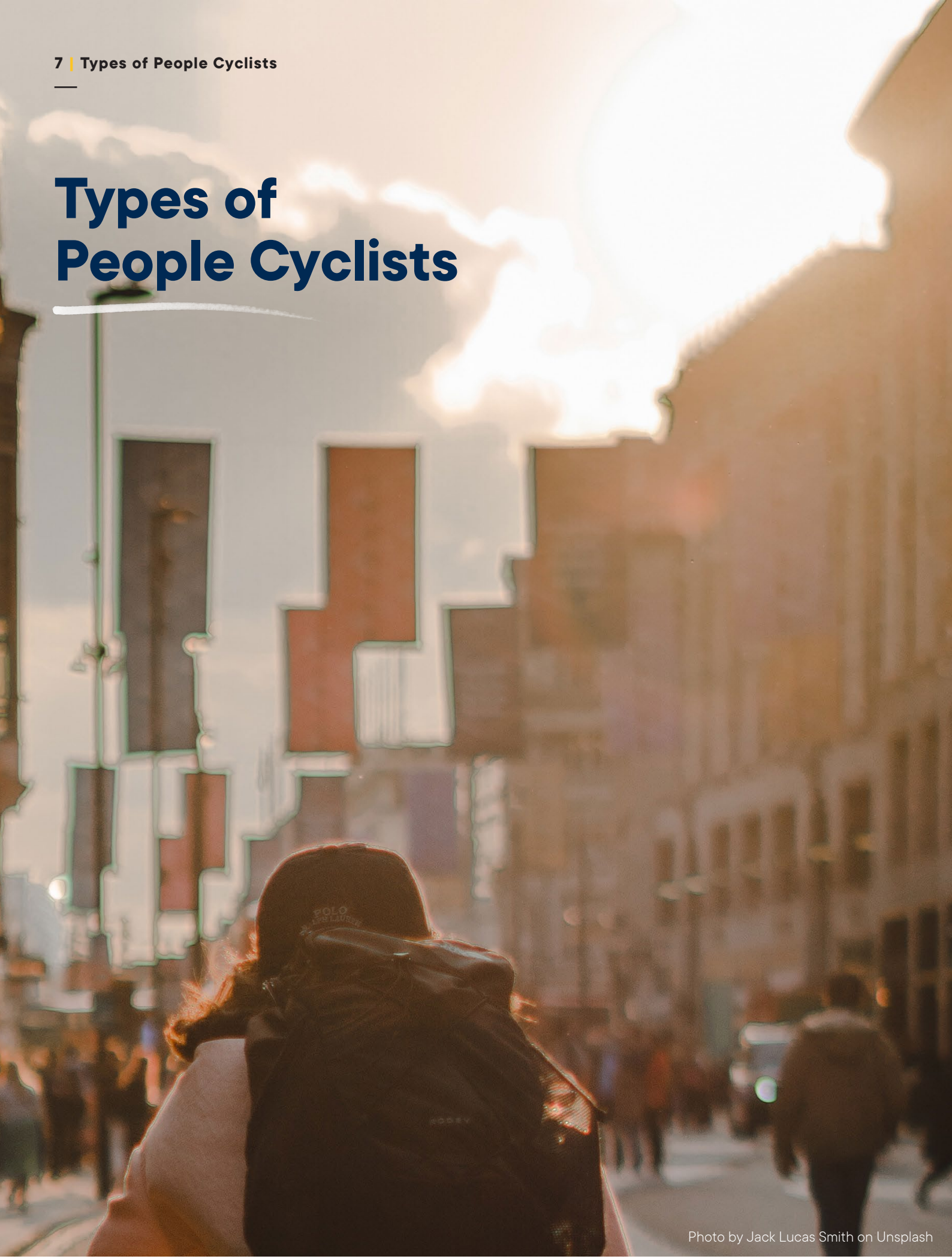


Photo by Jack Lucas Smith on Unsplash

No 'one size fits all'...

There are many ways in which people who ride bicycles can be categorised. More importantly than how they are categorised, is recognising the fact that they need to be categorised. The needs for vulnerable school children learning to cycle with traffic are vastly different to an adult with years of experience riding on the roads.

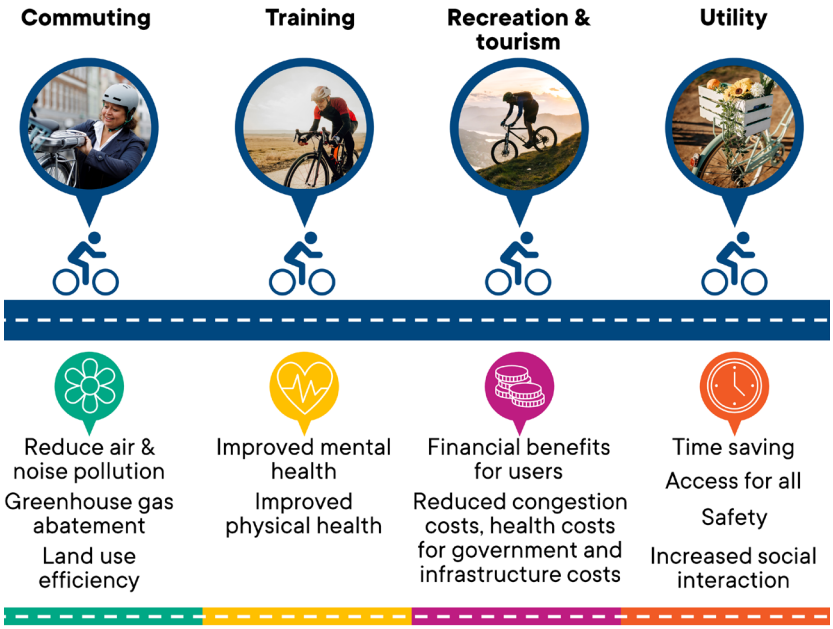
The purpose of categorising is to ensure the network is designed to meet the needs and requirements of all types of users ages and abilities. The four categories of rider outlined in the OAG Report are shown in Figure 7.1 (right).

School children are an important consideration and vary in confidence levels experience while cycling in the road network.

The scope of the Bayswater Bike Plan 2023 is focused on people cycling safely throughout the City.

While there are overlaps between walking and cycling sharing some of the same infrastructure network, it is recommended that walking be addressed in a separate report. A Walkability Plan would focus on the path network and crossings for pedestrian and path users of various abilities.

Figure 7.1 | Categories of bike riders trip purpose



Source: OAG Report 2021

Recommendation 17

Develop a Walkability Plan for pedestrians and vulnerable path users to improve paths and crossing facilities.

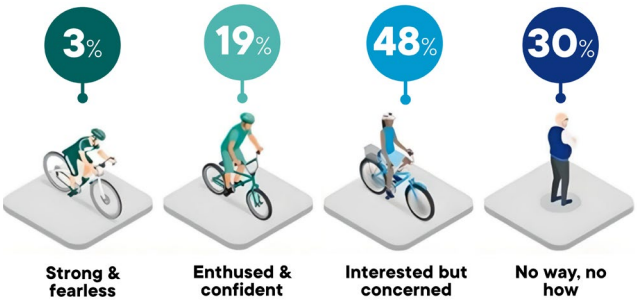
Recommendation 18

That a Walkability Plan be implemented to improve the path network and safety for pedestrian and path users with different abilities. Priority is suggested for town centres, main hubs and Noranda and Morley Regions where there are less paths and where new railway stations are proposed.

7.1 Cycling Segmentation

While categorising people who cycle has been occurring for over a century (Dill & McNeil, 2012), recent research has started to categorise communities by a cycling segmentation related to people's propensity to cycle. Roger Geller suggested a cycling segmentation during his work with the City of Portland in Oregon, USA that identified four types of bike rider, regardless of age. In actual fact, there are three categories that define a bike rider, with the fourth category representing those in the population who are against cycling. The point of recognising this is to note that no matter how much money is spent improving cycling facilities, the people in the fourth category are not going to cycle and will likely oppose it. The categories identified in Gellor's work are outlined below in Figure 7.2, using percentages calculated in North Sydney as an example.

Figure 7.2 | Geller's 'Cycling Segmentation' in Australia



Source: North Sydney Council

The actual percentages are quite subjective and need to be considered in a local context setting. However, the point of this study is to show the large proportion of people (about half the population) are interested in cycling but concerned about safety. Encouraging these people to ride will require a combination of additional investment in infrastructure and supporting promotional initiatives.

This approach is considered by bike practitioners as a best practice model for identifying the type and needs of existing and potential cyclists. This cycling segmentation should be explored in more detail within the City's neighbourhoods for furthering cycling development.

Recommendation 19

Undertake additional engagement within neighbourhoods to determine cycling confidence levels and willingness to ride (Geller classification).

7.2 Additional Riding Category Considerations

Important classifications within the City are as follows:

- School children – late primary school into high school
- University age (18-25)
- Commuter cyclists (work) – ranging from experienced, semi-experienced and novice
- Group riders – confident on the road network
- Casual riders – utility trips (non-work) e.g., shopping centres and community / sporting venues
- Casual riders – recreational trips (e.g., river)
- Elite riders
- Elderly riders.

Note: the above includes e-Bicycles, scooters, and e-Scooters, but not gophers, or people with a wheelchair. These modes are considered in Walkability Plans.

7.3 e-Bicycles and e-Rideable Devices

Electric bikes (e-Bicycles) and electric rideable devices (e-Rideables) are a significant growth area since the 2014 LBP was prepared. More people are using e-Rideables for commuting and recreational purposes.[8]

Observations show their use in the City has increased and are particularly notable along the river foreshore. However, empirical evidence is lacking, and it is recommended that more accurate data be gathered.

Recommendation 20

Collate counts and data usage of e-Bike and e-Rideable usage within popular areas (mapping routes can be a separate exercise).

e-Bicycles and e-Rideables are governed by separate State Government legislation. The laws that govern their use might differ, but their functionality on the path and road network is similar. Their impact on traditional bicycle and pedestrian users is important to consider.

Recommendation 21

Work with lead agencies such as the RAC to manage safety of traditional users of path networks in the City of Bayswater due to the increased use of e-Rideables.

8. https://www.wa.gov.au/organisation/road-safety-commission/erideables

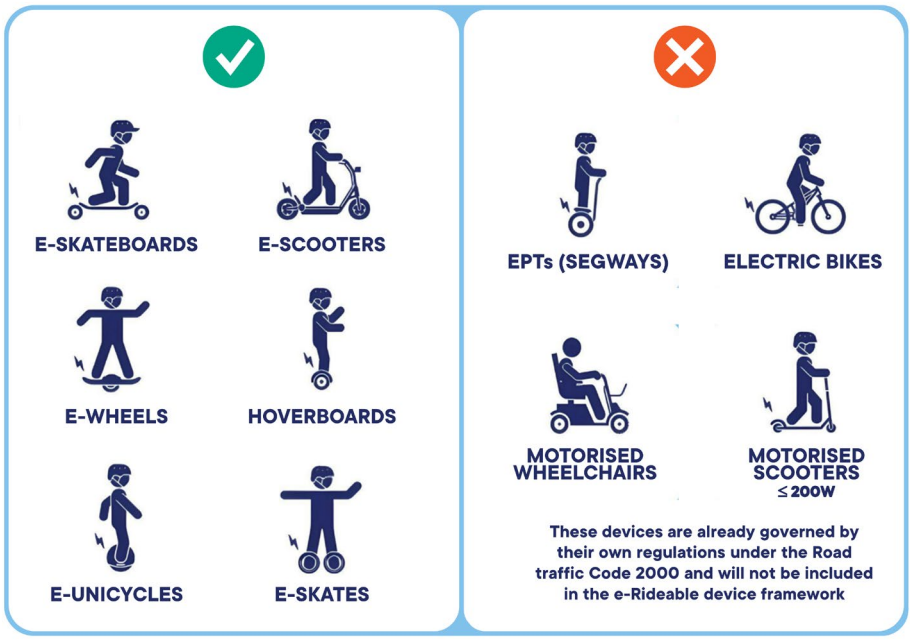
7.4 E-Rideables Definition

Much of what defines an electric rideable device (e-rideable) is its small size and its limit to speed (see Figure 7.3). An e-Rideable device is:

- Less than 125cm, 70cm wide and 135cm in height
- Less than 25kg in weight
- Not capable of travelling faster than 25km/h on level ground.[8]

e-Rideable laws were enacted in December 2021 in Western Australia following a period of consultation with the community. These State laws include who may ride them and what equipment is required, as well where they can be ridden and what speeds they can operate at in various scenarios. A person must be 16 or older to ride an e-Rideable.

Figure 7.3 | What is, and what isn't considered an e-Rideable



Source: Road Safety Commission

Table 7.1 | Where People can use e-Rideables

Type of infrastructure	e-Rideable requirement
Footpaths	Max of 10km/h[9]
Shared Paths (incl. bicycle only paths)	Max of 25km/h
Local Roads ≤50km/h without center lines	Max of 25km/h
Local Roads ≤50km/h with sealed shoulder	Max of 25km/h within the shoulder / bicycle lane
Local Roads ≤50km/h with a centre line without a sealed shoulder	Cannot ride (must seek alternative route)
Local roads >50km/h	Cannot ride
Road with multiple lane carriageways (incl. one-way roads)	Cannot ride

e-Rideable requirements are as follows:

- Helmets must be worn (similar to bicycles)
- Lights and reflectors are to be used at night
- Mobile phones must not be used or touched while riding
- e-Rideable device must have no sharp protrusions
- Bells or warning devices must be fitted and sounded when approaching pedestrians on footpaths.

Recommendation 22

In the medium term, the City of Bayswater should consider a review of planning networks for e-Rideables.

e-Rideables are subject to the same drink and drug driving laws as motor vehicles. Further information can be obtained from the Road Safety Commission at info@rsc.wa.gov.au.

e-Bicycles

An electric bike (e-Bike) has been fitted with a motor to aid in propelling the bike when in motion.

- Power assistance must cut out at 25km/h. e-Bicycles which exceed 25km/h are automatically categorised as motorcycles[10].
- Width requirements must not exceed 66cm including the rider and any load being carried (backpacks etc.).

9. Road Traffic Code 2000 – part 3; Regulation 15
10. https://acdcbikes.com.au/blogs/news/electric-bikes-law-a-comprehensive-legal-guide-to-e-bikes-in-australia-updated-for-2020

8. Community Engagement Analysis

The City provided an opportunity for the community to comment on the current bicycle network through its online platform, Engage Bayswater. The purpose was to ensure the community was able to provide input to the priorities for the City's investment in cycling improvements. This is in line with the City's Community Engagement Policy.

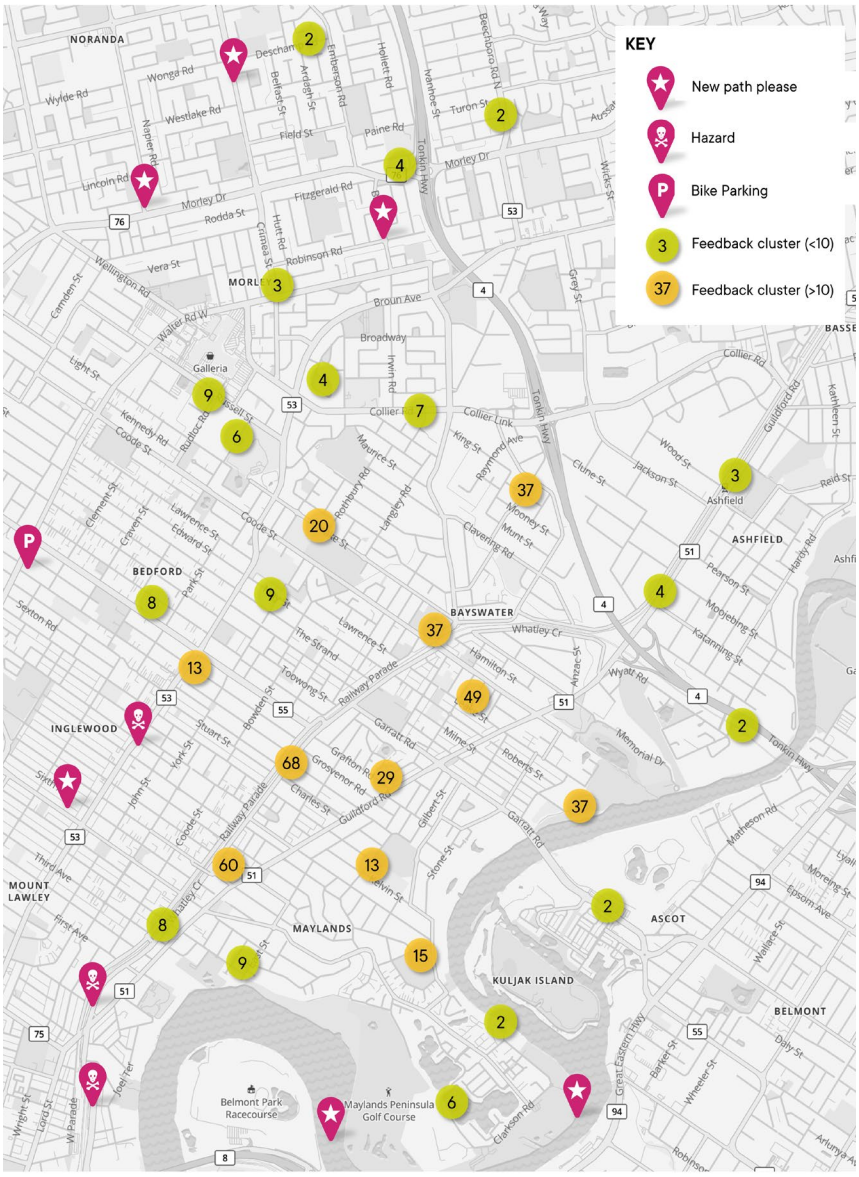
Community consultation was carried using the following methods:

1. An online survey through Engage Bayswater.
2. Hard copies were available at the City of Bayswater Civic Centre and at the City's libraries in Morley, Maylands, and Bayswater.
3. An interactive map was provided for the community regarding areas of concern, and/or to provide ideas for specific places.
4. An in-person event was held at Riverside Gardens (along Bellevue Street) in Bayswater on Saturday 7 May 2022 between 9:00am and 12:00noon, where many responses and worthwhile discussions were held with the City's consultant and administration staff.

The online survey opened on 6 May 2022 and closed on 21 June 2022. A total of 444 comments were received in the form of a 'pin-drop' on an interactive map as shown in Figure 8.1. In addition, 383 questionnaire surveys were completed.

Of the 444 pin locators, some were for locations outside the City of Bayswater, and others mentioned multiple projects within the same comment. Other submissions referred to the same project at multiple locations by the same respondent. The most significant concerns are indicated in Table 8.1 (multiple comments by the same person on the same issue were removed).

Figure 8.1 | Online Engagement Outcomes (pin on map exercise)



Source: Engage Bayswater

Table 8.1 | The most significant concerns raised in online community engagement

Item	# Separate Comments	Route(s)
Guildford Road crossings in Maylands	16	Various
Grade separated crossing at Caledonian Avenue	13	PSP Access
Limited access to PSP from southern side in Maylands	12	PSP Access
Protected cycle lane on King William Street	12	Bayswater TC to river foreshore
Protected cycle lane on Railway Pde through to Third Ave	8	PSP Access
Safety of Maylands Station underpass	8	-
Railway Parade crossing for temporary PSP detour	7	Perth-Midland Rail PSP
Protected cycle lane on Grand Promenade	6	Bedford to Meltham Station
Guildford Road crossing at King William Street	6	Bayswater TC to river foreshore
Protected cycle lane on East Street, Maylands	5	Maylands TC to river foreshore
Path separated from dog exercise area in Riverside Gardens	5	Foreshore path
New path on Mephan Street, Maylands (southern side)	4	Safe Routes to School (Maylands PPS)

A total of 18 comments were made for King William Street about the protected cycle lanes and crossing of Guildford Road. There were 150 comments in Maylands alone (including a portion of Bayswater west of Garratt Road) and 93 comments in Bayswater south of the railway line.

The biggest concerns raised were:

- Guildford Road crossings between Third Avenue and Grosvenor Road (16 comments)
- Closure of Caledonian Avenue level crossing and need to retain access for cycling via bridge or underpass (13 comments)
- Limited access onto PSP from southern side in Maylands (12 comments)
- Protected cycle lanes required on Railway Parade through to Third Avenue (8 comments)
- Safety of Maylands station underpass (8 comments)
- Protected cycle lane(s) required on East Street (5 comments)
- New path on Mephan Street needed to Maylands Peninsula primary school (4 comments).

Community engagement (5 comments) identified the need for an extension of the protected lanes in Railway Parade from Maylands Station to the railway crossing at Third Avenue. This provides access to the PSP that leads to the Perth CBD. Concern was raised that Railway Parade (60kph) does not have a cycle lane which makes it dangerous mixing with general traffic, especially when turning into side streets.

As half of the 750m cycle route is within the City of Stirling there is a need to investigate the feasibility together with MRWA and the DoT.

Recommendation 23

Discuss with the City of Stirling, Main Roads WA and the Department of Transport the need for possible path alignment options and design criteria, such as preserving trees, for continuation of a cycle link along Railway Parade from Maylands Station to the Third Avenue railway crossing.

Safety was mentioned by the community as being of a particular concern at the following locations:

1. The temporary PSP detour on Whatley Crescent – a road safety audit is recommended at this location.
2. The Hotham Street bridge connection onto Whatley Crescent (coming from Railway Parade and Grand Promenade).
3. Beechboro Road cycle lanes (no protection provided).
4. Crossing Railway Parade.
5. Crossing Guildford Road.
6. King William Street and Coode Street.

Recommendation 24

The City of Bayswater to request Main Roads WA to undertake a road safety audit of the Principal Shared Path detour on Whatley Crescent.

9. Annual Crash Review Trends

9.1 Crash Data Analysis

In regard to crash reporting for bicycles, it is widely known that crashes involving only minor property damage are not reported. Main Roads Western Australia (MRWA) crash data was utilised to identify the level of safety for existing facilities within the City of Bayswater. Table 9.1 shows a comparison of crash data from the most recent five years, together with the five years during the previous Bike Plan. There is a gap of three years, as described previously, when the Bike Plan had to be delayed to accommodate work on the long-term cycling network, and the OAG report.

Table 9.1 | Reported Crash Comparison Across Bike Plan Periods

Crash Data	Jan 2009 - Dec 2013	Jan 2017 - Dec 2021
Where Analysed:	2014 Bike Plan	2023 Bike Plan
Total crashes	~6,000	~5,000
Total crashes per year	1,200	1,000 (-200)
Reported bike crashes	94	86 (-8)
Reported Bike Crashes per year (RBC)	19	17 (-2)
% Cyclists	1.4%	1.7% (+0.3%)
Fatal	0	1 (+ 1)
Hospital RBC (persons /year)	3.5 pa (17)	2 pa (10) (-1.5)
Medical	5.5 pa (28)	4 pa (21) (-1.5)
PDO	10 pa (49)	11 pa (54) (+1)
Intersections	10.5 pa (53)	8 pa (39) (-2.5)
Day Time	13.5 pa (67)	13.5 pa (68) (0)
Night Time	4 pa (21)	1.5 pa (8) (-2.5)
Dusk / Dawn / Not indicated	1 pa (6)	2 pa (10) (+1)
Dry	18 pa (88)	16 pa (80) (-2)
Wet	<1 pa (4)	1 pa (6)

Source: Main Roads Western Australia

The number of reported crashes has reduced from 19 to 17 per year over the five-year average. This also coincides with an increase in the number of people cycling. However, the number of overall crashes has reduced even further by 200 per year. As a result, the percentage of overall crashes by people on bikes increased by 0.3% to 1.7%. This may indicate that the investment to improve the road network is resulting in a reduced number of crashes, but the investment on cycling infrastructure needs to be proportional.

It is encouraging to note that the number of severely injured (hospitalised) crashes reduced from 17 to 10 over the five-year timespan. Unfortunately, there has been one fatality in the last five years.

Recommendation 25

The City of Bayswater to continue to monitor crash data annually and compare trends.

The highest numbers of crashes continue to occur along Walter Road West and Beechboro Road, though the number of crashes is not statistically significant. This is detailed in Table 9.2 below.

Table 9.2 | Number of Bike Crashes

Location	Jan 2009 - Dec 2013	Jan 2017 - Dec 2021
	2014 Bike Plan	2023 Bike Plan
Walter Road West	**5** (1 per year)	**6** (>1 per year) **+1**
Beechboro Road South	**3** (<1 per year)	**4** (<1 per year) **+1**
Beechboro Road North	**3** (<1 per year)	**2** (<1 per year) **-1**
Railway Parade	**3** (<1 per year)	**4** (<1 per year) **+1**
Wellington Road	**3** (<1 per year)	**2** (<1 per year) **-1**
Guildford Road	**2**	**6** (>1 per year) **+4**
Walter Road East	**2**	**0**
Grand Prom	**2**	**1** (<1 per year) **-1**
McGilvray Avenue	**2**	**0**
Drake Street	**2**	**2** (<1 per year)

Recommendation 26

The City of Bayswater to identify Guildford Road crash locations with Main Roads WA.

"The number of reported crashes has reduced from 19 to 17 per year over the five-year average."

Behaviour and Education

10.1 Education Programs Available

The Road Safety Commission (RSC), School Drug Education and Road Aware (SDERA) and the Royal Automobile Club WA (RAC) are lead agencies in relation to road safety education in Western Australia. This chapter highlights some of the education programs available for the City to support, and resources to tap into.

Education schemes currently in place for children:

- *Road Safety Around Schools, Safe Routes to School* and *Walk Safely to School Day* are organised by the City and RoadWise, in partnership with the Road Safety Commission.
- *Smart Steps for Parents* run by School Drug Education and Road Aware (SDERA), aims to promote safe road use, and is for parents to use with their children. The program is focused on very young children and is based on an intuitive learning process of safe road behaviours and cycling awareness on roads, cycle paths and footpaths.
- *Around the Roads* is a program funded by the RAC to teach pre-primary to year 6 children about road safety. Children become involved in various interactive activities which impress upon them different road safety themes, such as bicycle safety and crash scene investigators.

Education schemes currently in place for young adults:

- *On the Roads* is a program funded by the RAC that teaches young adults about road safety from a driving perspective. Subjects include information about speeding, distractions, etc.
- The *Keys for Life* program run by SDERA aims to promote positive driving attitudes for young people and their parents as part of their pre-driver education program. As part of their road safety package, they are reminded of how to share the road and to be courteous to other road users.

Education schemes currently in place for seniors:

- Community group programs aimed at the senior community.
- *Towards Zero* focuses on explaining the government's road safety strategy, and what individuals can do as a road user to reduce trauma.

The RSC hosts a variety of cycling safety information and runs continuous road safety television advertising. Recent campaigns include:

- *Might be a Mate* – aimed at increasing awareness of cyclist safety across the community.
- *Must be a Metre* – aimed at reminding motorists of the recently introduced minimum passing distance law.

10.2 Initiatives to Promote Cycling

A recent survey of the number of students cycling showed a decline, however, there is still interest in sustainable transport and health benefits. Some schools are committed to making cycling safer, so their students can ride to school.

General promotion of cycling throughout the City is essential and aligns with the OAG report recommendations outlined in Chapter 4. These initiatives and programs complement the recommended infrastructure improvements and are necessary to improving the number of people cycling in the City.

The most important promotional initiative for the City to undertake is the development of a 'Your Move' map to be promoted on the City's website.

Recommendation 27

Develop a map of cycling and public transport facilities in the City of Bayswater ('Your Move' map).

Recommendation 28

The City of Bayswater to consider potential initiatives and programs that could be used to promote cycling include:

a. Support the Department of Transport Your Move Program for schools and the local community.
b. Develop initiatives to educate students knowing the basic road rules and encourage School Safe Committees
c. Utilise the Maylands Constable Care training facilities to enhance cycling skill training for students.
d. Support Bike Week with initiatives that encourage the use of bikes and include it in the City's calendar of events.
e. Promote the use of e-Bicycles for staff to use during work hours.
f. Promote end of trip facilities at workplaces including showers, change rooms and lockers for bike users.
g. Consider a Workplace Travel Plan, encouraging businesses to be less reliant on motor vehicle travel.
h. Provide additional bike racks (e.g at cafes).
i. Install bike service centers to help maintain bikes.
j. Encourage and support bike groups and families to explore the City. e.g. Discovery Circuits.
k. Promote discovery bike trails with maps showing points of interest within the City of Bayswater.
l. Hold an Elected Member bike ride with staff from the City, and State Government agencies.
m. Organise events that promote cycling throughout the City e.g., sunset bike ride around the river.
n. Support the Minimum Safe Passing laws.

10.3 Safe Routes to Schools

Consulting with schools within the City has identified genuine interest in increasing bicycle education. Safe Routes to Schools, utilising the Constable Care training centre in Maylands; and Your Move, with the Department of Transport, are initiatives that have school support.

Children walking and cycling are the most vulnerable road users. Safe Routes to School is an initiative to improve the safety of children and is supported by the Western Australian Local Government Association (WALGA) RoadWise branch[11].

The City's initiative for a City-wide Safe Routes to School Plan (Feb 2020) will improve path and crossing infrastructure and safety, and increase the number of families walking, cycling and 'scooting' to school.

Maylands Peninsula Primary School (MPPS) was selected as the pilot location, before rolling out the program across the City's remaining 12 primary schools and 4 high schools.

Recommendation 29

Implement a staged Safe Routes to Schools program in all schools in the City over a four-year period.

Feedback from the community was sought to provide comment on the routes, identify the hazards faced by parents and children alike during their commute to school and regarding additional infrastructure needed.

Engagement took place through an online survey opened to the community from Tuesday 5 April to Friday 20 May 2022.There were 565 visits to the online survey with 281 responses provided.

Of the responses:

- 157 suggested additional routes to be considered
- 105 identified hazards
- 19 requested new infrastructure.

There were 37 new requests added to the paths request register. Other requested items will be addressed via other funding programs such as the Low-Cost Urban Road Safety Program.

10.4 Behaviour Change Initiatives for Schools

Cycling training and education of the basic road rules for Primary School Students which includes:

- The opportunity for Students to know some of the road rules and be street wise.
- Learn to ride a bike. School feedback indicates the number of students that lack skills.
- Motivation of parents and students to be involved and the importance of the City as an enabler.
- For example, Safe Routes to School committee could be established comprising teacher(s), parents, head students, City staff and potentially a councillor to chair.
- Health and fitness can be also included as a side benefit.

Figure 10.1 | Online Engagement Results for Maylands Peninsula Primary School

11. https://www.roadwise.asn.au/road-safety-around-schools.aspx

Priority Areas

The City will focus on five priority areas for implementation based on the analysis and findings of the opportunities and deficiencies, as well as through the community engagement process. The five priority areas are:

1. **Path widths**
2. **Schools**
3. **Train stations**
4. **Principal Shared Path (PSP) access**
5. **Green Network**

11.1 Priority Area 1: Path Widths

A distinction between footpaths and shared use paths still exists. Design standards are included in chapter 5 and increasing infrastructure widths to these standards are the number one focus for City to address, particularly in response to the OAG Report.

In summary, the increases in path widths are to be:

- 2.5m min around schools (unless quiet streets not thoroughfare)
- 2.5m min on bus routes
- 2.5m min around town centres
- 2m min elsewhere
- Living stream widths
- 2.5-3.0m on routes on long-term cycle network routes.

11.2 Priority Area 2: Schools

The safety of children travelling to and from school is a priority consideration for the City. One of the priority areas for investment and promotion is the connection of people to schools in the City by bicycle. The City recognises that cycling begins at a young age. School students are not experienced cyclists with confidence gradually increases as children age and become more capable of cycling independently.

There are 16 schools in the City of Bayswater, (4 high schools, 12 primary, and one special needs) There are also high schools outside the City with local intake area of City residents.

This Bike Plan has approached the assessment based on the location of residents in the City and the school catchment areas within the City. This ensures every student's journey is catered for to school.

This section is for general information on schools; schools within each of the neighbourhoods will be considered in further detail.

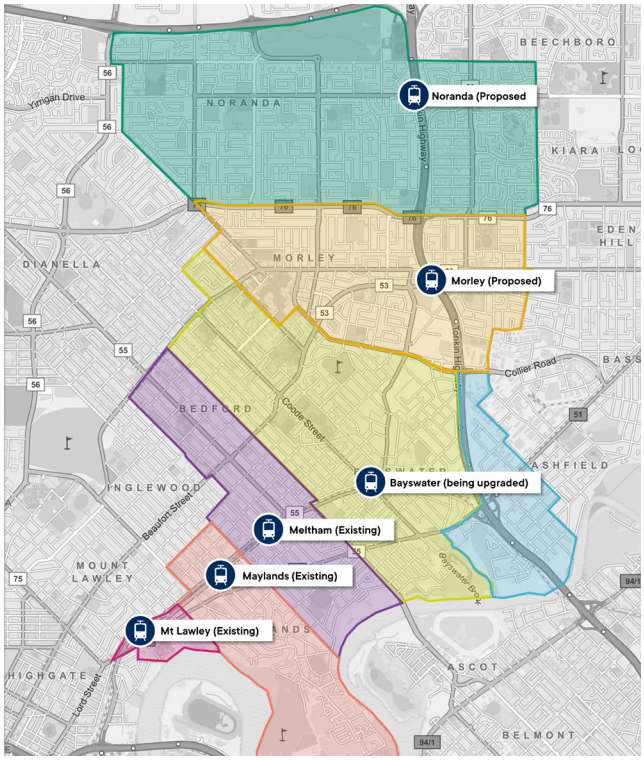
11.3 Priority Area 3: Train Station Access

Train stations form a major part of trip attractors within the City that have the potential to increase the number of trips made by bicycle through infrastructure investment and / or promotion. There are going to be six train stations in the City (four are operational at the time of preparing this report).

Train station connectivity for people to access on bikes has never been more important with the transformation coming to the area from METRONET Stage I, the Morley-Ellenbrook Line and Forrestfield-Airport Line.

Access to stations falls within the domain of the PTA who assess the travel behaviour patterns to each station, and monitor the demand for improved parking capacity either for private cars or bikes, as well as feeder bus services. The PTA initiated the development of Station Access Strategies in 2016 as part of an overall Rail Station Access Improvement Program in order to meet access demands.

Figure 11.1 | Indicative Train Station catchments



Noranda and Morley Stations

The expansion of the train services through the METRONET's Morley-Ellenbrook Line (MEL) has a significant impact on the landscape of transport within the City of Bayswater. The rail passes through the City to Perth airport with two new train stations constructed at Morley (Broun Avenue) and Noranda (Benara Road). Many movements will be made towards these two new train stations. A lot of these new movements will be east west across Morley and Noranda, potentially reducing north south travel demand across the entire City. The City has been working closely with the METRONET team for the implementation of the stations and surrounding land use planning and catchment areas.

Railway Station Access Strategies

The City of Bayswater also has four train stations on the Perth to Midland line in operation, with an additional station having its catchment area in the City of Bayswater. These stations are as follows:

- Mount Lawley
- Maylands
- Meltham
- Bayswater
- Ashfield (outside boundary).

The PTA has already prepared Station Access Strategies for each of these stations.

Recommendation 30

Implement station access strategies for the Mount Lawley, Maylands, Meltham and Bayswater Stations, in conjunction with the Public Transport Authority.

The stations in the City of Bayswater were the group one stations selected first across the whole metropolitan network for access assessment in 2017 and 2018. This is detailed in Table 11.1 below.

Large portions of the mode share are walking (60-80%). The intention is to transfer trips to the stations from car to bicycle trips, it is not necessary to transfer walking trips to bicycle, as walking is an active and sustainable mode.

Access Strategies for Ashfield Station were conducted the following year to those above. As some of the catchment and bicycle routes are within the City of Bayswater, they have been considered in Table 11.2 below.

Alighting numbers may differ slightly but Table 11.2 provides an indication and routes are the same. Further information is available in Appendix G and from the Station Access Strategies, which can be obtained from the Public Transport Authority.

Table 11.1 | Station Access Strategies for the Future

Station	Boardings (2016)	Cycling Boardings	Car access (2016)	Cycling Boardings (2031)	New Boardings (2031)	New Cycling Boardings	Time to Perth by Bike
Mt Lawley	345	3 (0.9%)	83 (24%)	20 (4.0%)	154	17* (11%)	9 min
Maylands	1,516	30 (2.0%)	410 (27%)	151 (6.0%)	999	121** (12%)	13 min
Meltham	524	5 (1.0%)	167 (32%)	54 (6.0%)	381	49** (12%)	16 min
Bayswater	1,833	18 (1.0%)	716 (39%)	254 (8.0%)	1,339	236** (17%)	20 min
Total	**4,218**	**56 (1.3%)**	**1,376 (33%)**	**479 (6.8%)**	**2,873**	**423** (14%)**	-

* Most of these are expected within the City of Stirling
** Many of these will be dispersed to MEL stations

Table 11.2 | Ashfield Station Access Strategies

Station	Boardings (2017)	Cycling Boardings	Car access (2016)	Cycling Boardings (2031)	New Boardings (2031)	New Cycling Boardings	Time to Perth by Bike
Mt Lawley	606	3 (0.5%)	92 (15%)	60 (5.7%)	443	57* (13%)	28 min
Total (5 stns)	**4,824**	**59 (1.2%)**	**1,468 (30%)**	**539 (6.6%)**	**3,316**	**480 (14.5%)**	-

* Many of these are expected within the Town of Bassendean

11.4 Priority Area 4: PSP Access

Consultation with the community through the engagement process revealed connections to the PSP along the rail line as one of the key deficiencies to be addressed.

An example is particularly evident around Seventh Avenue in Maylands. The closure of the Caledonian Avenue crossing has reduced the accessibility of the PSP but will be addressed in part by improved cycling infrastructure along Railway Parade.

The enhanced primary cycle network along Tonkin Highway will need to ensure adequate connectivity, to open up the accessibility for residents in Noranda, Morley and Bayswater in particular.

11.5 Priority Area 5: Green Network

The focus within the city is on recreation and physical activity for personal health.

Develop a green network connecting recreational areas, particularly local parks to residents. This will target families on bikes, casual riders and e-rideable device users.

This network is to connect with the City's Environment and Liveability Framework, Waterwise Strategies, and Urban Forest Strategy.

Recommendation 31

Develop a green pathway network connecting recreation areas utilising and aligning with water sensitive urban design principles.

Recommendation 32

Ensure the City's Streetscape program considers cycle network priorities.

Photo by Dan Russo on Unsplash

Conclusion

The City of Bayswater is a proud community with a built framework of homes and streetscapes that shape its open residential lifestyle. Open frontages and space throughout the City provide for a quality environment for cyclists.

Despite improvements made since the development of the 2014 Local Bike Plan, there remains a lack of dedicated and linked cycling infrastructure, continued reliance on motor vehicles and many major intersections that create an intimidating road environment. These are some of the major barriers that hinder cycling within the community.

The Bayswater Bike Plan 2023 establishes a strategic vision for the continued development and promotion of cycling within the City and an action plan for immediate and longer-term improvements to the cycling network.

During the development of the BBP 2023, consideration was given to improving cycling safety. This was by linking communities and facilities, as well as catering for the needs of all cyclists, regardless of their age, gender, experience, and reason for cycling. There is an opportunity for the City to contribute to the improvement in health and wellbeing of its community through identifying and developing safe cycle routes and promoting cycling opportunities to encourage the community to cycle more.

The City bicycle network will consist of five neighbourhood regions, which traverse the City and provide access to various activity centres such as shopping centres, schools and the existing four railway stations as well as the future two new stations. This will enable greater focus on local cycling issues.

The local cycle network is as important as the primary cycle network, in that it is where a culture of cycling develops by providing safe facilities for school children. Local routes must therefore provide the safest possible environment for cyclists by including safe off or on street facilities, safe road crossings, and intersections, and safe traffic speeds.

There is an opportunity to share spaces, and to dedicate a cycle network within City infrastructure as plans for infill redevelopment and streetscape upgrades progress. The networks range from local cycle and secondary networks to primary cycle networks aimed at providing efficient through movement for commuter and recreational cyclists, as well as providing for the less experienced cyclists. There is also an opportunity to promote long-distance primary cycle routes and use the existing local Maylands bicycle training centre.

Creating shared space environments is an option that can reinvigorate street spaces and lead to providing for increased pedestrian and cyclist activity. This will define the heart of the City of Bayswater as a liveable and enjoyable place that complements the open residential lifestyle it has to offer.

Increasing the awareness of cyclists on roads and providing safe infrastructure is a key objective. It is important that every street is considered as a bicycle route with the preservation of dedicated cycling routes and consideration of cycling needs with road improvements.

The City of Bayswater will, where possible, embrace the opportunity when road maintenance or resurfacing work is being planned, to install low-cost cycle facilities such as coloured sealed road shoulders and appropriate line markings. It is worth noting that the inclusion of cycle facilities within bigger works projects does not significantly increase project budgets and take advantage of shared project overheads.

City of
Bayswater

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