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Introduction

Purpose of the Bike Plan

Bike riding is a healthy and eco-friendly means of transport. Since the City of Perth's Cycle Plan 2029 was adopted by Council in 2012, the City has been improving and extending bike infrastructure, to provide a mix of sustainable transport options.

This new plan aligns with the City's Sustainability Strategy and builds upon previous work. It provides a practical guide for planning, advocacy, and funding (including grants) to significantly boost cycling over the next 10 year.

How has the plan been developed?

The plan has been informed by findings from:

- A program of community and key stakeholder engagement;
- Review of the City's previous Cycle Plan 2029;
- Data collection and analysis, including bike counts across key city locations;
- A high-level review of current best practice.

Keeping it current

The plan will be reviewed every four years to incorporate community feedback and align with current best practices, state policies, and legislation.

Strategic context

The following high-level diagram outlines the relationship between various endorsed strategies which will underpin the Bike Plan:

Strategic Community Plan Liveable Sustainable Prosperous

Local Planning Strategy



Other Strategies

Sustainability Urban Greening Social Health & Wellbeing



Individual projects, design guidelines and programs

Figure 1: Integrated planning framework



Why is cycling important in the city?

Perth, as the capital city of Western Australia, is a hub of activity and employment, with more than a million people visiting each week. Converging key bike paths mean that the city attracts more cyclists than any other part of the State. The city's natural assets, such as the Swan River foreshore, offer superb recreational cycling opportunities.

According to the Main Roads Community Perceptions Congestion Report 2022, most of the 2.8 million car journeys undertaken in the Perth metropolitan area each year are no longer than 5km. Although the trips are short, they have a cumulative effect on public health, road safety, congestion and emissions. Improving conditions for bikes gives people more choice in how they travel around the City.

The City is committed to achieving net zero emissions, as outlined in its *Sustainability Strategy 2022-32*. Projections indicate that transport will be Australia's biggest source of carbon emissions before 2030. By offering a variety of sustainable travel options, the City aims to create a resilient urban environment, in which it is easy to move around.

Benefits of cycling in the city



Health

Regular cycling reduces the risk of chronic disease and obesity



Affordable transport

Costs are negligible compared to running a car.



Quieter streets

Bikes produce little noise.



Reduced carbon emissions and local air pollution

Bikes are a low-carbon transport option.



Street activity

Cyclists add to the vibrancy of the street



Economic impact

Walking and cycling improves retail spending.



Fun!

Riding a bike can be an enjoyable way to get around.

Background

Cycle Plan 2029

In 2012, Council adopted the Cycle Plan 2029 to encourage more people, particularly women and city residents, to cycle as part of their everyday trips. The plan included a program of bike infrastructure upgrades as well as promotions through support for events like Ride to Work Day.

The plan aimed at taking cycling from a recreational or sporting activity to an integral part of everyday city life.

As well as projects completed from the Cycle Plan 2029, the recent Perth City Deal - a partnership between Commonwealth, State and Local Governments - included \$157 million of active and public transport plans. Some of these have been delivered, while others, like the new Causeway Pedestrian and Cyclist Bridges, are still under construction. These new bridges will be a welcome addition to the network and will help support the growth of walking and cycling into the city.

Office of the Auditor General Report

In 2015, the Office of the Auditor General (OAG) tabled an audit report titled "Viable Cycling in the Perth Area". The audit assessed whether there is suitable support and infrastructure to enable cycling to be a safe and viable mode of transport in the Perth metropolitan area. The audit found that the State Government agencies (Department of Transport, Main Roads Western Australia and the Road Safety Commission) had played a role in the growth of cycling infrastructure, but more planning and funding was needed to complete the network and improve safety.

The OAG tabled a second audit report on cycling in 2021. The 2021 audit assessed whether the State Government had progressed recommendations from the 2015 audit. It also assessed whether State and Local Government effectively facilitate cycling for the community.

Four Local Governments were audited: The Cities of Perth, Bayswater, Cockburn and Kalamunda. These four Local Government Areas were chosen based on the length of their bike path networks and their importance in terms of network connectivity.

The audit found that while the City of Perth's Cycle Plan 2029 needed updating it had considered the following key elements:

- · Cycling data and community feedback
- · Consideration of key routes
- · Evaluated existing paths.
- Cycling projects to be built.

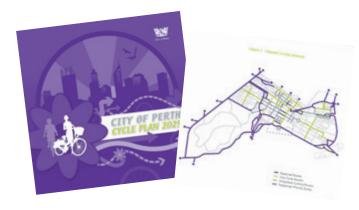


Figure 2: City of Perth Cycle Plan 2029

Key findings of the 2021 Audit for the City of Perth:



Study area

Since the Cycle Plan 2029 was adopted, the City has expanded to include Crawley-Nedlands.

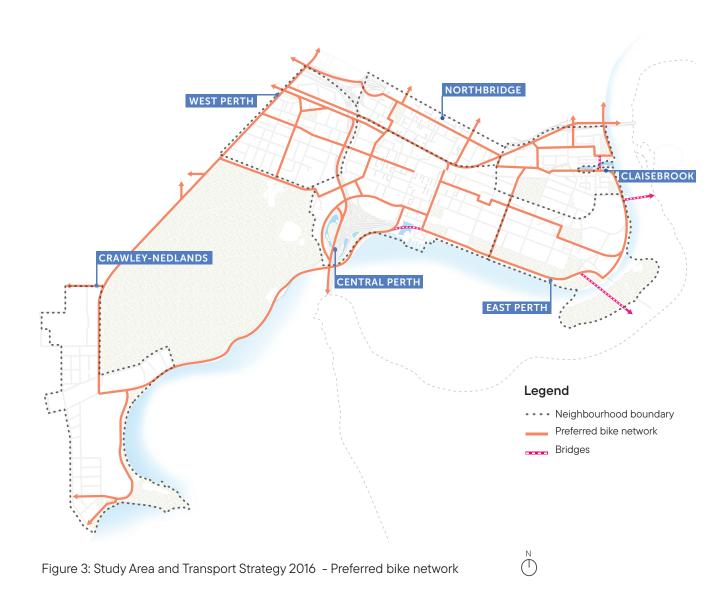
City of Perth Transport Strategy 2016

The 2016 Transport Strategy includes a chapter dedicated to cycling, and states an aspiration for the City to "continue to invest in cycling, so as to create a network of paths and streets where people of all ages and abilities feel comfortable and enjoy cycling."

The strategy mapped the City's then preferred priority cycle routes.

Between July 2018 and June 2020, the Department of Transport developed the Long Term Cycle Network (LTCN) for the Perth and Peel region, endorsed by most Local Governments, including the City of Perth. The LTCN serves as an aspirational plan to collaborate between State and Local Governments for a continuous network, enhancing transportation, recreation, tourism, and commercial activity.

The proposed network is adaptable, allowing Local Governments to adjust routes as needed due to changing circumstances, including new bike plans.



A Cycling City

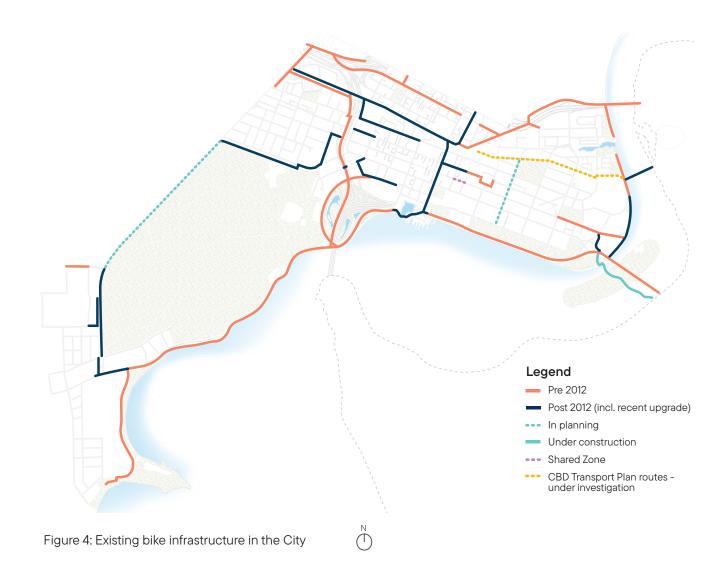
What has the City done for cycling so far?

Since 2012 the City has implemented various support measures for cyclists, including two-way street conversions to improve movement options, reduced traffic speed limits and enhanced bike infrastructure. This included the introduction of new shared paths, bike parking and on-road facilities.

Key projects include:

- The Roe Street Enhancement
- Spring Street and Mount Street bike lanes
- Winthrop Avenue, Kings Park Road and Harvest Trinity Shared Paths
- Stirling Street Enchancement
- Murray and Barrack Street bike lanes as part of the two way conversion
- Hay Street Shared Zone
- Active transport wayfinding signage

These projects form the beginnings of a strong bike network, which the City can build upon. The new bike plan will look to address missing links in these routes; establish the remaining priority east-west and north-south routes; and schedule incremental improvements to the existing cycle routes, where road space permits.



Two Way Streets Program

The Two-Way Streets Program was developed in the mid-2000s to address the negative impacts resulting from the city's one-way system.

The Two-Way Streets Program creates a more accessible city by offering additional route choices, improving legibility for all users, including pedestrians and cyclists, and enhancing safety by reducing traffic speeds.

The completion of this program is particularly important in West Perth where bike routes are disconnected by the existing one-way streets.

City living

The City has approximately 30,000 residents which is one of the lowest residential populations of Australian capital cities. However, the population grew by 2.35% in 2021, faster than the average for the metropolitan area.

It also attracts over 200,000 people on a typical workday including a workforce of over 145,000 people.

The City's Local Planning Strategy (2023) has set a target of 55,000 people by 2026 and 90,000 residents living in Perth City by 2050 to help activate and diversify the city, allowing it to meet its full economic and social potential.

City growth targets coupled with major new development projects such as the new ECU campus are also expected to contribute to higher worker, student, and visitor numbers overall.

To support this growth it is important to enable transport choices to ensure people can move freely around our city.

Lower speed limits

The City has a joint advocacy position with the Inner City Group of neighbouring Local Governments to implement a default speed limit of 40 km/h on residential roads and 30km/h for activity centres.











Where are people cycling?

In December 2023, the City conducted bike counts at key locations, to better understand city cyclists' movement patterns.

The data confirmed that the city is primarily accessed through shared path networks, with the main destination being the Central Perth office areas, to the west of William Street. It also revealed:

- East Perth and the eastern CBD saw lower cyclist numbers, except for the Riverside Drive shared path.
- The busiest area was the Fremantle Line Principal Shared Path (PSP), specifically at Thomas Street, which serves as the main entry to the city from the northwest. The Mounts Bay Road PSP also saw significant cyclist activity.
- Few cyclists exited the Fremantle Line PSP at West Perth. Instead, high numbers continued into the city. The intersection of Milligan and Wellington streets was the fourth-busiest site recorded and the busiest area off the shared path network.

Other data revealed that weather greatly influences cycling in Perth. In 2023, there were about half as many recreational rides recorded on Strava – a fitness tracking app - in June, compared to March or October.

Commuting patterns are also influenced by factors such as school holidays.

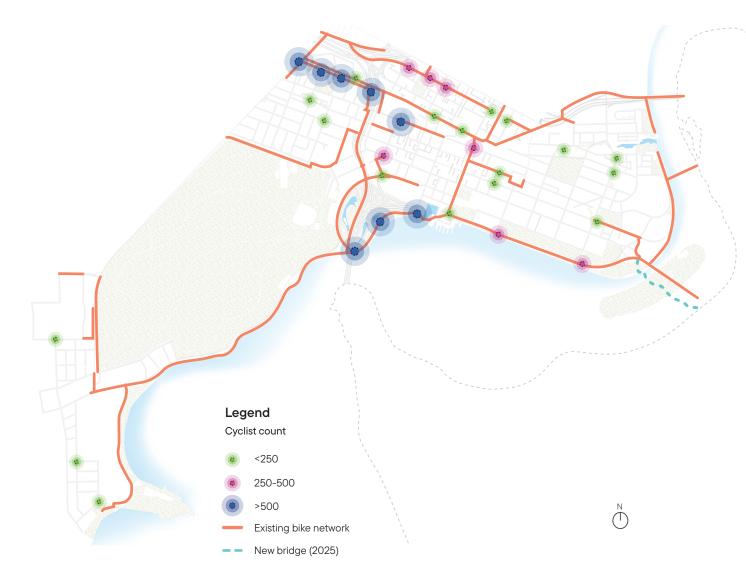


Figure 5: Cyclist count and existing bike network 2023

- · Counts of commuter riders collected on Tuesday 5 December 2023 from 7am to 9am. The weather was fine, with a recorded temperature of 23.2 degrees.
- · Counts on Roe Street collected in September 2023, further data will be collected once Edith Cowan University has opened.



The City's strengths and challenges

The City has many advantages to build on in further improving its bike network. These include projects delivered since Cycle Plan 2029 was adopted.

Despite these advantages, the City is highly constrained in what can be delivered, as its narrow streets must accommodate a wide range of functions. There are also gaps in the network of bike routes, some of which are difficult to fill.

Broader challenges also remain, such as climatic extremes and the difficulty in providing for a diverse range of people to cycle, not just the confident and athletic.

30km/h streets

Best practice planning for bikes is generally to physically separate them from motor vehicles. This is not always possible on the City's constrained streets, and alternatives means are needed to provide safe cycling routes.

Lower speeds significantly reduce the risk of accidents, and the severity of accidents when they do occur, especially for people on foot and on bikes. As a result, there is a growing movement internationally to lower speeds to 30 km/h on city streets.

New Bridges

Matagarup Bridge and the new Causeway Pedestrian and Cyclist Bridges create new opportunities to access the City.

Principal Shared Paths (PSPs)

The PSPs offer convenient bike access to the city, fully separated from vehicles.

Shared Space

The shared space on Hay Street is popular for its low traffic speed limits.



The City has delivered a number of high-quality bike facilities, including as part of the Perth Greater CBD Transport Plan.

Transportation Linkages

The City of Perth is at the centre of metropolitan-wide transport networks. The City relies on these wider networks to be complete and high quality.

Two-Way Streets Program

One-way streets limit connectivity. The Two-Way Streets Program creates new movement opportunities for all modes.

Urban Forest Program

The City's Urban Forest Plan aims to increase tree canopy coverage in the public realm to 30% by 2050.

Competing demands for street space

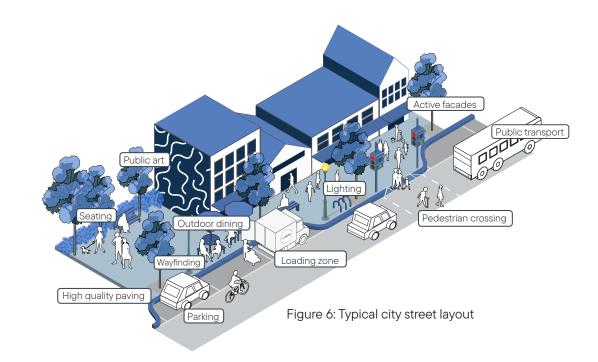
The Perth city layout of 1829-1930 remains largely unchanged. Streets are typically 16 – 20 metres wide, with the wider streets such as St Georges Terrace and Wellington Street anomalies in the grid.

The city's streets need to accommodate multiple modes of transport, while also meeting the service demands of the city, such as waste collection and goods delivery. These constraints pose challenges when competing with a pedestrian-focused environment in Central Perth, Northbridge and the Neighbourhood Town Centre streets.

As the city's population and visitor numbers grow, more people need to move around in the same amount of space. This requires the City to invest in sustainable transport options and optimise its infrastructure to balance competing demands for street space.

it difficult to introduce separated and

protected cycling lanes.



30 km/h applied in activity centres.

challenge for the city.



and disconnected. Linkages to the wider

metropolitan area also need improvement.

What are other cities doing?

Cities globally share challenges in promoting active transport. These global best practices and trends can help guide Perth in adopting the right approach.



E Bikes

E-bikes now outsell standard bicycles in the Netherlands and are gaining popularity in Australia. They can extend cycling range and reduce the necessity for post-ride showers. They also make cycling accessible for a wide range of ages.



30km/h streets

In early 2021, the World Health Organisation (WHO) launched a campaign to make 30 km/h streets the norm for cities worldwide. The push was to improve road safety and reduce noise pollution. Since the WHO's campaign was launched - Barcelona, Paris and London have implemented lower speeds. Streets with a 30 km/h speed limit create a safer and more inviting environment for cyclists without the need for additional infrastructure.



Low car streets

"Low car streets" typically refer to low speed urban streets that prioritise pedestrians, cyclists, and public transport over private car usage. These streets are designed to limit or minimise the presence of cars, creating a more pedestrian-friendly and sustainable urban environment. Low car streets also include Cycle Streets where bikes are the preferred mode of transport but local car access is retained.



Shared spaces

Shared spaces are low speed environments which aim to create an inclusive environment by reducing traffic control measures (such as traffic lights) and fostering a shared responsibility among all road users. This approach is ideal in narrow laneways and streets where space is a premium.



Ciclovia & Open Streets

Ciclovia and Open Streets are events that encourage people to cycle, walk, scoot or skate rather than drive. In Bogota, Colombia, roads are closed to traffic every Sunday. The City of Sydney has recently introduced a 'Sydney Streets' program which are recurring car-free days when pedestrians and cyclists can roam free and local businesses are encouraged to create a festival feel.



Investment in Cycling

Many cities are investing in dedicated bike paths and lanes to encourage more people to choose cycling as a transport mode. In streets, emphasis is often placed on providing protection at intersections. On city streets, uni-directional infrastructure is preferred given the improved legibility it provides, reducing conflict between cyclists and pedestrians. Bike-train connections are also prioritised to ensure good quality links to suburban stations with ample secure bike parking. Promotion and education is just as important as physical infrastructure.





Planning for bikes

What do we want to achieve?

The City's bike network should meet the needs of a broad range of potential riders. Logical and direct routes should enable all parts of the City to be accessed by bike safely and conveniently. Gaps in the network or circuitous routes should be avoided.

The safety implications of mixing bikes with high speed or high volume traffic are well known. Less often discussed is the effects of conflict between bikes and pedestrians. This is a critical issue for the City, with the busiest pedestrian environment in the State.

This plan will continue to expand the city's cycle network, enabling safe, convenient and enjoyable cycling. This includes:

- Addressing gaps in the existing network;
- The promotion of cycling as a transport option for everyone, especially for short trips.

Design guidelines in planning for cycling

In a bid to ensure continuous improvement of the city's cycling network, bike infrastructure guidelines will be developed, based on best practice. The guidelines will be updated regularly, to incorporate new research and innovations. Urban design and engineering solutions will be used, to reduce traffic speed and make cycling safer - particularly in neighbourhoods outside the city centre.

Bike facilities should be accessible, safe and comfortable for everyone, as per the widely accepted "8 to 80" design principle, which promote safe cycling for all age groups. They should be constructed with high-quality finishes and consistent treatments, reflecting Perth's role as the capital city and improving legibility.

"But bikes move just a bit faster and you have to solve a number of problems so that the slower pedestrians and the faster pedal users will not get into conflict with each other."

- Jan Gehl, Architect (2010)



Activation and engagement

Community engagement can encourage greater cycling participation. In Denmark, which has a high cycling mode share, campaigns are still used to motivate cyclists, promote safety, and encourage novices to take up cycling.

Public events can also act as catalysts for change, by encouraging people to try cycling. Positive experiences can lead many to continue with this new behaviour.

The City will use a number of different tools to promote cycling to a wider audience.

The City will also explore other initiatives to promote cycling, such as providing free bike repairs during Bike Month, encouraging cycling to premiere events, sponsoring community rides, organising "open streets" events and offering bike skills training.

"A long list of motivating and activating cycle campaigns has helped pave the way for the strong bicycle culture in Denmark"

- Cycling Embassy of Denmark, (2011)

Some notable cycling events which the City can support include:



World Bicycle Day 3 June







Future bike network

The City can capitalise on its existing infrastructure and improve the overall network by addressing the gaps.

Cycling is possible on every city street, but space constraints can hinder infrastructure installation. Local streets which serve as connectors to main bike routes are vital. To improve safety and appeal for cyclists on these streets, various measures can be implemented, including:

- · Shared spaces;
- Traffic signal adjustments;
- Lower speed limits;
- Traffic calming techniques, to encourage low car, low speed streets.

Completing the *Two-Way Streets Program* will create more freedom of movement for cyclists and slower speed environments.

Collaboration with State Government transport agencies is also essential to achieve the City's objectives. This collaboration will focus on improving the environment, including shade along Principal Shared Paths, implementing treatments at intersections and initiatives to further reduce speed limits on key city streets.

The City will employ the following design principles in planning its bike network:

Key design principles



Separate cyclists from pedestrians, where space allows

Bikes and pedestrians often come into conflict where required to share space. The safety and comfort of pedestrians should be the highest priority.



Treat bikes as vehicles, not pedestrians

Bikes travel faster than pedestrians and are best suited to longer distances than walking.



Separate bikes from high volume, high-speed traffic

Separating bikes from highspeed traffic enhances safety, comfort, and accessibility.



A connected network

Gaps in the network reduce safety and convenience, which is a disincentive to cycling, particularly for less confident or less experienced riders.



Uni-directional bike lanes and paths on city streets

Bi-directional bikes lanes are challenging for pedestrians and drivers to cross. Uni-directional (one-way) lanes in the same direction as traffic are preferred.



The pathway hierarchy is clear

The cycle route should be designed and developed in accordance with its hierarchy and order of priority in the strategic network.



Direct and logical riding routes

Routes should be intuitive and convenient, taking riders easily to their destination.



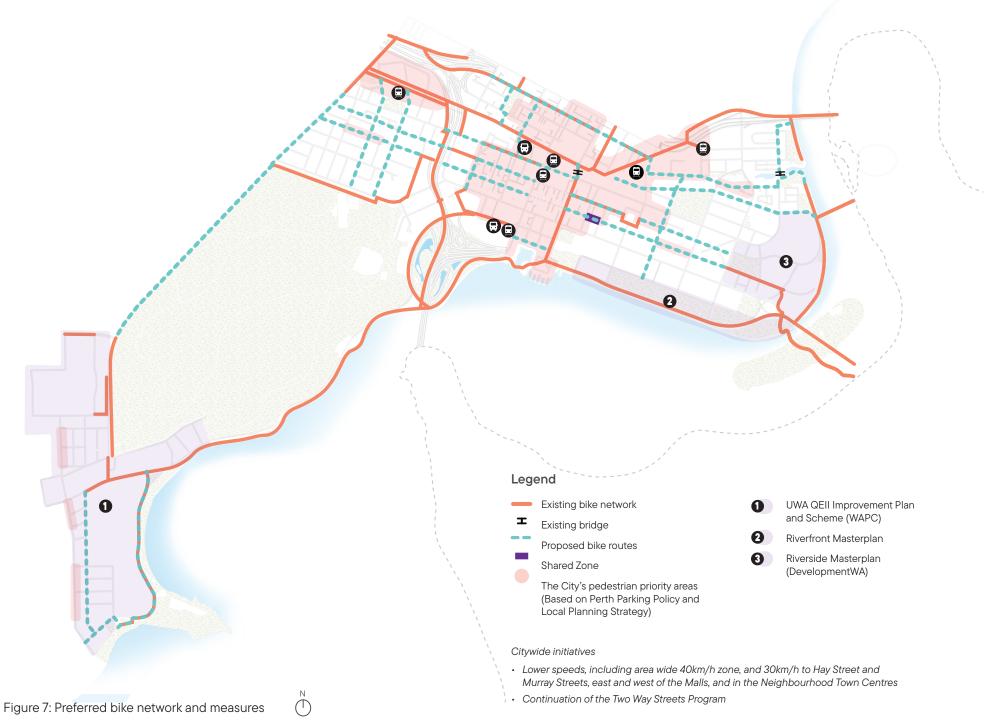
Design for street context

The existing and future functions of the street, including land use, must be considered when planning for bikes.



Ensure design matches rider behaviour

Bike facilities should cater to the needs of riders.



Proposed projects and initiatives for future consideration - 2025-2035

Capital works projects

Upgrade existing bike connections, including green surface treatment, lane dividers, intersection improvements, safe crossing points and lane widening, where space permits.

Create safe, low-speed on-road bike routes, for key links where separation from traffic is not feasible.

Create a shared path on Thomas Street between Kings Park Road and Wellington Street as part of road widening.

Continue a program of minor works to improve bike safety and install minor infrastructure such as bike racks, bike repair stations and wayfinding signage.

Planning

Develop a centralised approach to data collection, monitoring and analysis.

Create Bike Design Guidelines to provide consistent and high-quality treatments for use on future projects.

Ensure all master plans, precinct, structure plans and two-way street conversions support an enhanced bike network.

Promotion

Undertake promotional activity for all major bike projects to encourage behaviour change and education.

Advocacy

Advocate for Main Roads to:

- Finalise its Guidelines for Cycling Facilities at Traffic Signals.
- Upgrade conditions on its bike network, including lighting, shade and wayfinding.
- Construct a wider Barrack Street bridge with dedicated bike lanes.

Advocate for the Public Transport Authority to:

- Continue to improve bike access and parking at bus and train stations and ferry jetties outside the CBD.
- Expand secure bike parking at CBD train stations.

Advocate for the Department of Transport to complete the QEII Active Mobility Network Improvements Plan.

Advocate for the Road Safety Commission to develop a driver behaviour public awareness campaign.

Consult with the Department of Transport to align the Long Term Cycle Network (LTCN) routes with community needs and the feasibility of delivering bike facilities.



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Appendix A:

What did the community tell us?

The City conducted two community surveys: an initial one to understand where and why people cycle, and a second one to gather feedback on the draft plan.

The survey in July 2023 provided a snapshot of cycling in the city to inform the development of a new Bike Plan. A total number of 483 survey responses and 328 pins on the mapping tool were received.

86% of respondents were moderate to highly confident riders, with nearly half aged 25-54. Additionally, 61% identified as male, 36% as female, and 3% as other or preferred not to say. This gender gap in cycling rates is common worldwide - with some exceptions, such as Japan and parts of Europe, where numbers are more evenly spread. For many men in Australia, cycling as transport takes a back seat to personal fitness and sport. This is in direct contrast to cycling nations such as Denmark and Japan, where most people use bikes as transport first.

Most cycling in the city accounted for people riding to work or study, followed by recreation and fitness.

"Cycling for transport in Australia is characterised by several "missing" population groups: women, children, adolescents and older adults"

- Jan Garrard, Deakin University (2011)

Key themes from the mapping exercise



Greater network connectivity and completeness needed.



Conflict with other road users, especially driver behaviour.



Specific requests for improved infrastructure.

Top 5 reasons respondents would ride more often



Safer routes, separated from motor vehicles



Convenient, connected and direct routes



Consistent, high quality and well-maintained paths/routes



Well-lit riding routes and improved personal safety



Slow speed, shared environments, with shops and other amenities

Other feedback

Creating a bicycle-friendly City

More acknowledgement of bikes being able to share the space.

More direct routes into and through the city.

Separating cyclists, pedestrians and cars.

Enhanced infrastructure and safety

Driver education is severely lacking. Improved road surface, cleaned routs (glass, debris and rubbish) and at night better lighting.

30km/hr speed limits and low volume of motor vehicles when riding in mixed traffic situations.

How often respondents ride the following reasons



Consultation on the Draft Bike Plan

On the 1 July 2024, a second survey was launched to gather feedback on the draft to help shape the final Bike Plan. A total number of 946 responses were received from 1,030 visits to the Engage Perth platform.

Most respondents were male (71%) and regular riders (70%), with 26% identifying as female, 1% as non-binary, and 2% as 'other'. The respondents included 45% workers, 29% metro visitors, and 19% residents.

When asked about the City's 10-year bike environment improvement commitment, 95.5% were in support, 2% were not, and 2.5% were unsure.



Key themes from the feedback



Support for 30 and 40km/h streets



Separation from vehicles important



Need for secure bike parking



Address conflict with pedestrians



Request for more bike routes



Need for more shade and lighting

Other feedback

The capital works program seems low in ambition.

The 30km/ hour streets is a great idea.

Just get on with it.

Love the idea of lower traffic speed limits where cars and bikes can share the road. People are scared to ride because of drivers and only drivers.

There is no policy for reducing private motor vehicle use within the city.

Active transport is great for human health and will help encourage a vibrant city - keep up the good work!



This publication can be requested in alternative formats: audio, braille, Word or accessible PDF.



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