Cycling and Cycle Parking Discussion Paper

Introduction

A highly liveable, prosperous and resilient city is one where all people have a range of transport choices available to them each day and at each stage of their lives to undertake different activities.

Adelaide, like many modern cities, faces the challenge of managing urban mobility while promoting sustainable transport options. Bicycle transport presents a viable solution due to its low environmental impact, health benefits, and space efficiency.

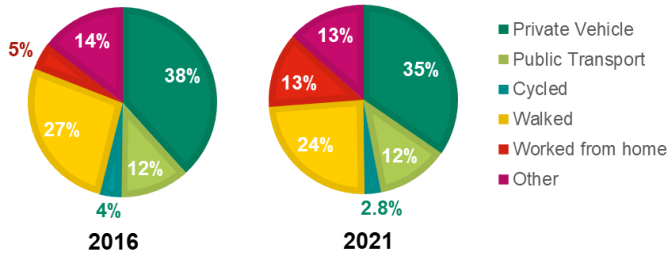
The City of Adelaide boasts some of the best weather and geography for cycling in Australia, with comfortable summer and winter temperatures, and minimal rainy days (Adelaide is the driest of all Australian capital cities). So, why do cycle trips represent only 3% of all (journey to work) trips into the City? [1]

Adelaide Snapshot

Summer Avg: 16.7-28.6°C
Winter Avg: 8-16°C
Avg rainy days per year: 82

Over 130,000 people work in the City of Adelaide. Of this, 5.3% also live in the area, around 6,800 people. Around 43% of workers live in suburbs directly surrounding the City, equating to over 55,000 people. A large proportion of these trips could be converted to cycling.

Journey to work, City of Adelaide residents, 2021-2016 Census



Greater Adelaide's average journey to work distance of 13.5km is comparable to the Netherlands (12.0km), a country renowned for cycling.

Increased cycling in Adelaide will bring numerous benefits, including reduced traffic congestion, lower greenhouse gas emissions, and decreased demand for car parking. It improves public health through increased physical activity, reduces transport costs for individuals, and promotes a more liveable urban environment.

This discussion paper is intended to inform the development of the City of Adelaide's Integrated Transport Strategy (ITS) to 2036. It seeks to gather input on these issues during our engagement process in 2024. As Adelaide grows, it must balance the needs of residents, businesses, and visitors. While the city faces these challenges, there are also many opportunities to create a more sustainable, efficient, and equitable transport system.

Strategic Context and Current Situation

Adelaide, like many modern cities, faces the challenge of moving an increasing number of people and goods within a confined urban environment. Space efficient and sustainable transport options are extremely useful to help address this challenge. Cycling presents a viable solution due to its low environmental impact, health benefits, and space efficiency.

The City of Adelaide boasts some of the best weather and geography for cycling in Australia, with comfortable summer and winter temperatures, and minimal rainy days (Adelaide is the driest of all Australian capital cities). This is proven by the popularity of recreational cycling clubs, criterion bike racing, and the Tour Down Under, which is set in South Australia. However, there is mixed feedback from residents and the wider community about how cycling-friendly the City of Adelaide is for recreational users and commuters. This creates an environment where confident cyclists feel comfortable, but existing conditions mean that people who are interested in cycling do not feel like they can safely.

The City of Adelaide's strategic documents and plans have increasingly focused on promoting cycling as a sustainable mode of transport. The recently endorsed Integrated Climate Strategy 2030 includes

[1] Method of Travel to Work, Census 2021, Australian Bureau of Statistics

increasing uptake of cycling and walking in the city as a key priority, and focuses on the creation of healthy streets for better outcomes for all modes. These documents have built on previous policies such as the *Smart Move Transport Strategy* (2012-22), which aimed to increase cycling uptake by improving infrastructure connectivity, safety, and integration with other modes.

Despite having great potential, the mode share of cycling has not increased. A number of issues and challenges have been identified. The city's current cycle network has the following characteristics:

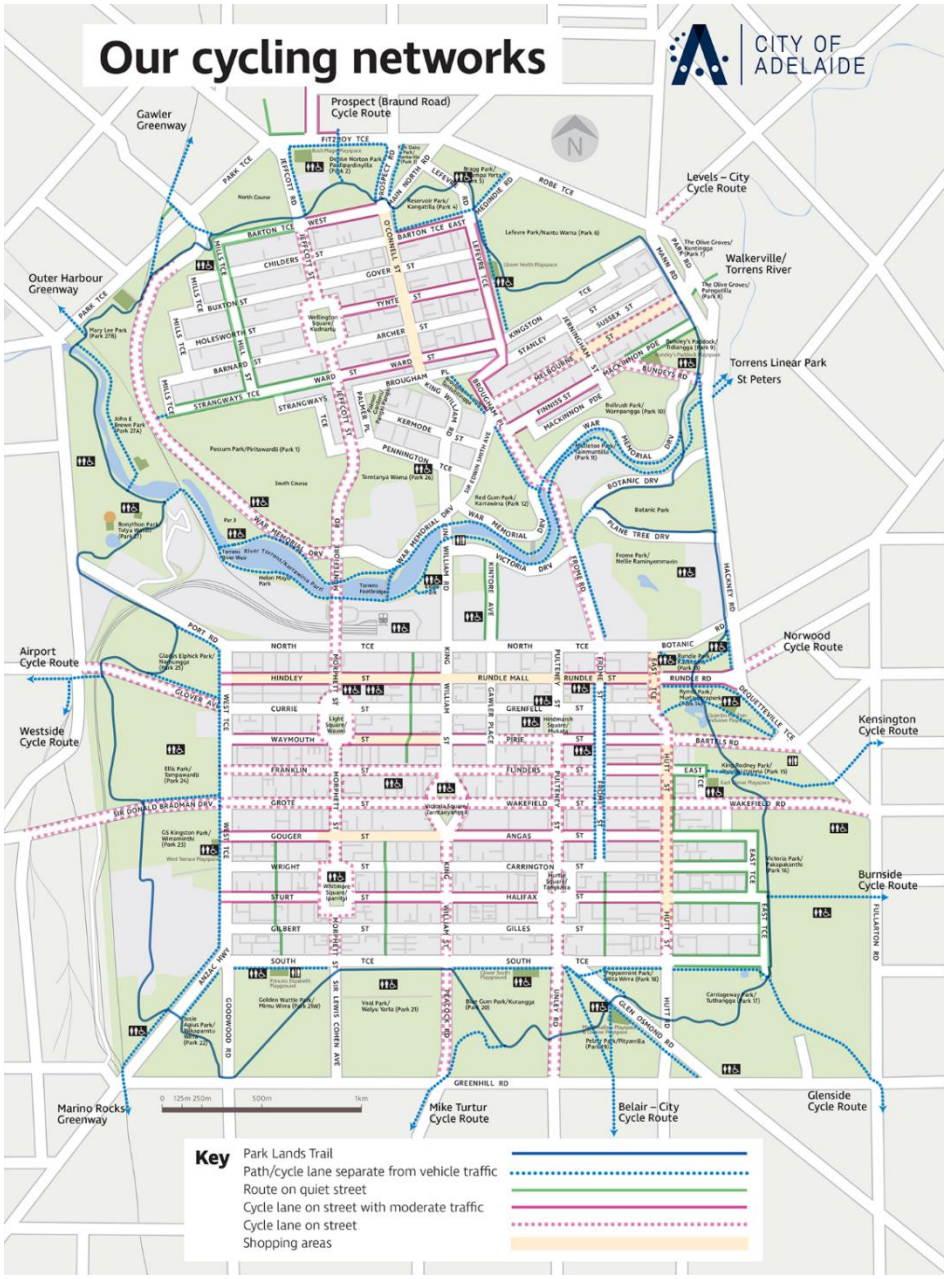
- Most on road cycle lanes are unprotected, creating safety issues on high speed and volume roads.
- Minimal CBD cycle routes resulting in a disconnected network.
- Higher-quality shared paths in surrounding parkland.

This creates a challenging and unsafe environment for people who cycle, and deters people who would otherwise be interested in cycling to/from and within the City of Adelaide. Figure 1, below, shows the current CoA cycling network, highlighting that most routes are on-street, shared with vehicles. This creates a challenging and unsafe environment for people who cycle, and deters people who would otherwise be interested in cycling to/from and within the City of Adelaide. Figure 1, below, shows the current CoA cycling network, highlighting that most routes are on-street, shared with vehicles.

The City's current cycle network includes on-road cycle lanes as well as off-road trails and paths within the Adelaide Park Lands. These routes are somewhat interconnected and offer a variety of route options for confident cyclists. However, there are gaps in this network and the infrastructure type and quality varies. This reduces the appeal and accessibility of routes for most users, and influences cycling take-up (modal shift). A 2023 Committee for Adelaide benchmarking report highlighted that Adelaide has an inefficient level of car dependence, which could become permanent without stronger alternatives and incentives.[2] This is a significant risk and highlights the need for a more sustainable mode split.

[2] Benchmarking Adelaide (2023), Committee for Adelaide

Figure 1 Existing CoA Cycling networks



Benefits of increased cycling

Increased cycling in Adelaide will bring numerous benefits, including reduced traffic congestion, lower greenhouse gas emissions, and decreased demand for car parking. It improves public health through increased physical activity[3], reduces transport costs for individuals, supports a decarbonised Adelaide, and promotes a more liveable urban environment.

The Urban Future Exchange South Australia has undertaken research into the benefits of cycling in urban environments, with particular focus on Adelaide.[4] Key outcomes were:

- Various surveys and studies have found places that have undertaken public realm improvement projects, including cycling improved infrastructure, are more likely to attract shoppers more often.

[3] E. Bird, J, Ige, P. Pilkington, A. Pinto, C. Petrokofsky & J. Burgess-Allen (2018), Built and natural environment planning principles for promoting health: an umbrella review
[4] Economic Benefits of Cycling in Urban Environments, Urban Future Exchange SA (2019)

- People that walk or ride to dense urban areas spend more per capita at local businesses. In addition, people cycling potentially spend more as they have spent less money on travelling and or car parking fees.
- Cycling reduces impacts on road infrastructure, therefore reducing costs for government, councils and therefore taxpayers.
- Cycling improves physical condition, mental health and wellbeing and promotes positive community interaction.

In addition, cycle infrastructure requires less space than motor vehicle traffic, allowing for more efficient use of public space and contributing to a more sustainable and resilient transport system. Cycling, a form of active transport, contributes to improved transport options for those unable to drive, such as children, the vision impaired, and the elderly.

What's the City of Adelaide's future direction?

Adelaide's transport policies have increasingly focused on promoting cycling as a sustainable mode of transport. The City's *Smart Move Transport Strategy 2012-2022* aimed to increase cycling participation by improving infrastructure and creating a safer environment for bicycles. Key initiatives included:



Improved connectivity of active transport routes. The plan recognised that existing linkages are not sufficient to support key bicycle and active transport targets.

Providing safe, accessible, and simple infrastructure for all users.

Integration with public transport, ensuring seamless connectivity between cycling and public transport networks to facilitate multimodal journeys.

The City of Adelaide recognises the criticality of reducing carbon emissions by creating healthier streets so more people choose to cycle rather than drive.

This is supported by the *Integrated Climate Strategy (2030)*, which states a key priority to triple the number of city workers who cycle to work. This would equate to around 10,000 workers (10% mode share), up from 3,400 currently (2.6% mode share). The strategy seeks to create step change by:

- Creating calmer, more pleasant and shady streets.
- Creating a network of protected cycle lanes and intersections.
- Increasing priority at intersections for pedestrians and cyclists.

The City of Adelaide City Plan 2036[5] highlights the importance of sustainable city growth, with reduced car dependency and more people choosing to cycle (and walk/wheel). City Plan outlines how this transport diversity will be achieved through greener streets, delivery of cycle networks, the return of street space for active travel and greening, and safer crossing points. The City Plan also has various cycling related place principles, including to:

- Support active transport use through protected cycle lanes along North Terrace.
- Explore the potential to reduce the number of car lanes on West Terrace, creating space for walking/wheeling and cycling with a green buffer.
- Create protected cycle paths along Morphett Street and an east-west cycle route along Waymouth Street, as part of a dense grid of quality cycle routes, to enable more people to cycle.
- Create protected cycle lanes along Wakefield Street as a key east-west route linking with major attractors such as schools and the Adelaide Central Market.

Ensuring that people who choose to cycle are supported with safe and connected infrastructure is important to support cycling within the City. This is reflected in the *City of Adelaide Wellbeing Plan 2020-25*, which prioritises the development of safe, affordable, accessible networks for all ages and abilities, and transport modes.

[5] City of Adelaide (2024), City Plan 2036.

Access & Connectivity has been recognised as a key component of the future of the Adelaide Park Lands in the *Adelaide Park Lands Management Strategy: Towards 2036* (July 2024)[6]. A priority action has been identified to improve pedestrian and cycling networks with regular and safe crossing points, amenity along the (trail) route and path lighting. Some of these upgrades are to be delivered as part of the Park Lands Trail Improvements, including the 19.5km loop of shared user trails (sections of bitumen, pavement and unsealed paths) within the Park Lands.

Compiling these key strategic documents, it is evident that a future cycling network in Adelaide must be interconnected, safe, and enabled by road space reallocation. This will support the creation of healthy streets within the city to benefit all city users, not just cyclists.

Best Practice Review

Road space optimisation and Healthy Streets can be achieved through temporary and permanent treatments. The highest-profile temporary intervention in Australia was the **Melbourne** pop-up bike lanes program[7]. As part of the Covid-19 response, the City of Melbourne and associated inner-city councils reallocated on-road parking space to deliver 94.6km of pop-up bicycle lanes. This resulted in an increase in rider diversity, bike volumes, and safer routes for cyclists. The program also found that reductions in vehicle speeds created safer environments for cyclists, and improvements to local networks resulted in more short trips (for groceries, errands etc.).

Austroads *'Prioritising Active Transport' (2024)*[8] provides insights into barriers and opportunities to achieving active transport priority in Australian cities. It highlights the following key barriers to active transport uptake safety, security, the need to carry items, weather, distance and topography (hills), and social and cultural factors. The barriers are broad, however, in an Adelaide context, these factors are likely to be the most influential in supporting cycle uptake. Recommendations have been considered in the development of this discussion paper.

The document suggests intervention categories, and associated interventions that can be used to support active transport uptake. Intervention categories are: special events, marketing, education, policies and strategies, shared micromobility, infrastructure, land use planning, and behaviour change programs. Maintaining this structure throughout issue and opportunity mapping will support alignment with national best practice.

Healthy Streets is an evidence-based approach to creating fairer, more sustainable and attractive urban spaces.[9] The approach is based on ten indicators, each describing an aspect of the human experience of being on streets:

- Everyone feels welcome
- Easy to cross
- Shade and shelter
- Places to stop and rest
- Not too noisy
- People choose to walk and cycle
- People feel safe
- Things to see and do
- People feel relaxed
- Clean air



These ten indicators must be prioritised and balanced improve social, economic and environmental sustainability through how streets are designed and managed.

[6] Kadaltilla Park Lands Authority (2024), Draft Adelaide Park Lands Management Strategy
[7] Department of transport and Planning Victoria, 2023, Pop-up bike lanes program reflections and lessons learned.
[8] Austroads (2024), Prioritising Active Transport
[9] Healthy Streets (2024), What is healthy streets?

Engagement: What We've Heard

Feedback received as part of the 2021 residents' survey indicates that a majority (57%) of surveyed residents found the City to be cyclist friendly overall. When asked about adopting a more active mode of travel, 45% of surveyed residents were interested in cycling.

However, the survey also highlighted that the two main barriers to using a more active method of travel were the lack of safe routes/infrastructure (24%) and rainy or hot weather (23%). Cyclist safety and theft were also outlined as some of the most common barriers amongst those who elaborated their responses.[10] Whilst cycling is seen as an accessible and achievable mode of transport, challenges to large-scale uptake remain.

Based on community engagement undertaken previously on a number of City of Adelaide projects, we have heard the following from you:

- The need for safe cycle lanes or paths, which are designed for use by people of all ages and abilities that are separated from other modes such as private vehicles by a physical barrier, that form a connected network with north – south and east – west corridors for travel to, from and within the City of Adelaide *(Key theme from City Plan Your Say Adelaide engagement, 2024).*
- Returning streets to people, including optimising street space for cycle lanes and providing priority at intersections to pedestrians and cyclists, as active transport is the most efficient mode for movement within the City.
- Connecting the cycling network with adjoining LGAs and through the Park Lands for improved accessibility[11] *(Key theme from park lands management strategy: what we heard, 2022).*
- Opportunities to investigate the role that cycling friendly and low speed streets play within a connected cycling network.
- The Park Lands are a barrier to safe access for women and gender diverse people, being considered too dark and dangerous at night. Cycling is one of the few transport options through the Park Lands, however the trails are not well lit.[12]
- Cycling provides significant health benefits and is a mode that can support the increase in population forecast for the city.
- The need for more secure and sheltered on-street / public realm cycle parking at key locations across the city. There are opportunities to investigate bike storage and parking with increased locking options for city residents, businesses and visitors.

In the development of this paper, the City's Access & Inclusion Panel and Project Steering Group has also been consulted. Key inputs related to cycling from these forums include:

- Ensuring that the city is accessible and inclusive for users of all genders, ages and abilities, with a connected network of protected and shaded cycle lanes to improve safety, comfort and overall, support more cycling to meet climate targets.
- Opportunities to achieve both urban greening and active transport outcomes by prioritising pedestrian and cyclists within the city; strategically delivering greening projects along active travel routes.
- Space on trails within the Adelaide Park Lands is congested, with both cyclists and pedestrians using them regularly.

[10] City of Adelaide Residents Survey, 2021
[11] Kadaltilla Park Lands Authority (2022), Adelaide Park Lands Management Strategy: What We Heard Report
[12] City of Adelaide (2023), Gender & Safety Focus Groups Summary Report

Summary of issues, barriers and opportunities

People's use of different transport modes varies significantly based on daily, weekly, and monthly needs, influenced by factors such as weather, life stages, and major life events like moving or economic changes. This variability underscores the necessity of providing diverse transport options to enhance accessibility and liveability.

The following table summarises issues, and associated opportunities for the City to investigate.

Issue	Theme (Factor)	Responsibility (State or CoA)	Issue / Barrier	Opportunity Potential Removal/Mitigation of Barrier
Low bicycle mode share	Car dependency	CoA, State	Low proportion of trips to work taken by bike.	Improve cycling infrastructure to make the mode more attractive.
Perceived safety risks	Safety	CoA, State	Cycling is perceived to be unsafe, especially for infrequent cyclists.	Focus on safety interventions and messaging to improve perceptions.
Limited secure cycle parking	Parking	CoA	Limited secure cycle parking within the city. Including for electric and cargo bikes.	Provide improved parking facilities throughout the city. Investigate 'cycle hubs' in high traffic areas.
Uneven gender split of people cycling	Safety	CoA, State	Cycling participation by men is nearly double that of women. Women are significantly less likely to feel comfortable riding at night time.	Targeted engagement resulting in specific behaviour change and personal safety improvements.
Bicycle network continuity within the City	Network	CoA	Many routes within the city are discontinuous, and do not serve desirable routes.	Prioritise cycle corridors within the City and invest in infrastructure, wayfinding and safety upgrades.
Intersections do not prioritise cyclist safety	Safety	CoA, State	Intersections to/within the city do not prioritise cycle movements, creating an unsafe cycling environment.	Undertake intersection upgrades to support cycle priority and separation along priority cycle corridors.
Existing cycle routes are stressful.	Safety	CoA	Many cycle routes within the City share road space with vehicles, creating a high stress environment for road users.	Invest in the separation of modes throughout the city, and upgrade cycle corridors to create low stress environments for all users, including the lowering of vehicle speeds.
Car dooring	Safety	CoA	The risk of car dooring deters cyclists.	Separate car parking and cycle lanes through infrastructure interventions.
End of trip facilities	Parking	CoA, State	Low-quality end of trip facilities deter cycling to work. Not all buildings have facilities.	Audit medium and large buildings in the CBD to determine quality of facilities. Consider investment in cycle hubs with public facilities for smaller buildings.
Public transport integration	Trip integration	CoA, State	Adelaide's existing public transport network does not easily support multi-modal trips (e.g. Cycling to public transport).	Invest in high-quality cycle parking at public transport stops/stations, and investigate cycle parking on vehicles.
Adelaide is not seen as a 'cycling city'	Car Dependency	CoA	People in Adelaide are highly car dependent	Undertake a travel behaviour change program alongside other investments to support a shift to cycling.
Bicycle ownership is low	Personal	CoA	Only about 50% of residents have at least one working bicycle in greater Adelaide.	Council leadership to encourage cycle use such as: Cycle sharing schemes, bike trials, free tune-ups.

What are the current issues?

Available data indicates a modest rise in cycle trips from 2016-2021, with a significant portion of these being short, local journeys. However, the proportion of trips remains low compared to car travel. With cycling conditions in Adelaide near perfect, why is only 2.8% of travel to work trips by City residents taken by bicycle?[13] Barriers such as perceived risk to safety, lack of infrastructure, limited cycle parking and end-of-trip facilities are significant deterrents. In addition, around 50% of households in greater Adelaide have a working bicycle, a significant barrier to uptake.[14]

The *National Walking and Cycling Participation Survey 2023* found that cycling participation (measured as people who have cycled in the last week) is significantly higher for males (16.8%) than females (8.6%).

Infrastructure gaps

Significant gaps in the bicycle network persist (see Figure 1). Many routes lack continuous, protected, or off-road lanes, leading to lower usage than would otherwise be possible. Additionally, intersections often lack proper cycle-friendly designs, increasing the risk of crashes and reducing the appeal of routes to most people.

This reduces the appeal of cycling to, from and within the city and is a primary reason why cycling rates remain quite low and there is a large participation gender gap.

The 2023 Committee for Adelaide Benchmarking report found that Adelaide ranks last among peers for the quality of its bike network. The current cycle network is characterised by separated infrastructure in the Park Lands surrounding the CBD, but very little connectivity within the CBD. This lack of interconnected infrastructure in urban areas does not support cycling as a mode for all users, and only caters to confident cyclists. The city's score is almost half of that of its peers, pointing to a real gap in its cycle network. It also ranks last among peers for access to people, jobs and educational institutions and shopping areas through low-stress biking routes (People for Bikes).

Bicycle user confidence

Safety remains the primary concern for potential bicycle users, especially women, children, and older adults. The fear of crashes, particularly in areas with heavy motor vehicle traffic and high speeds (greater than 40km/h), deters many from choosing cycling as a mode of transport. This is particularly prevalent in the CBD, with cyclists required to share high-traffic roads with vehicles and buses, reducing appeal of routes.

Providing continuity in routes and physical separation from motor vehicles, along routes with high speeds and volumes, especially at intersections, is essential to address these concerns.

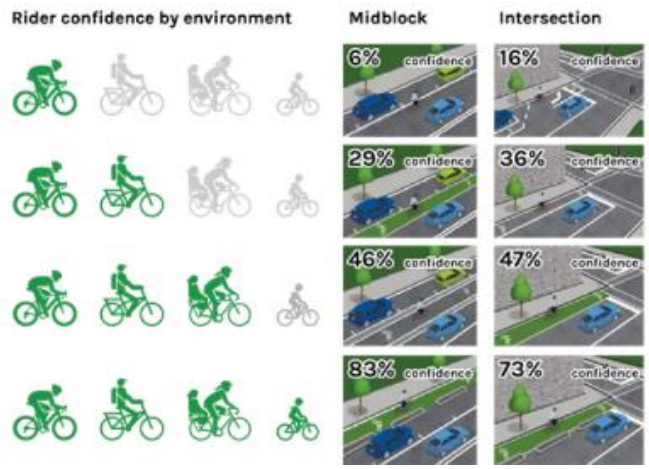


Figure 2 Bicycle user confidence

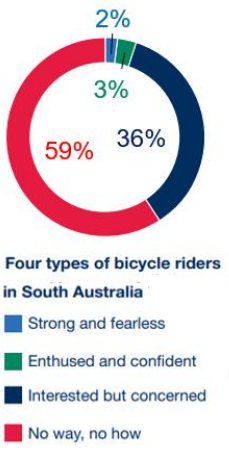


Figure 2.1 Cycling attitudes in South Australia [15]

[13] Method of Travel to Work, Census 2021, Australian Bureau of Statistics
[14] National walking and Cycling Participation Survey 2023: South Australia Report, Cycling & Walking ANZ.
[15] Department of Infrastructure & Transport, 2022, Cycling Strategy for South Australia

Bicycle user confidence research indicates[16] that people demonstrate a strong preference for protected cycle lanes, with 83% of respondents indicating they feel more confident using these lanes. Additionally, 73% of respondents highlighted the importance of bicycle lanes that continue through intersections, ensuring continuous protection and safety throughout their journey. Figure 2, below, shows examples of bicycle user midblock and intersection options.

BikeSpot data from 2023 indicates that of the most dangerous locations for cyclists in greater Adelaide, the top ten are all in the City.[17] This considers locations with high ridership, and riding corridors. The top safety issues along these corridors are narrow lanes, dangerous intersections, high risk of car dooring and infrastructure gaps.

This is shown in the figure below. The figure also shows the top five safest spots within greater Adelaide, two of which occur in the City. These locations generally are separated from traffic, have wide lanes, and lots of other bike riders, contributing to enhanced perceptions of safety.

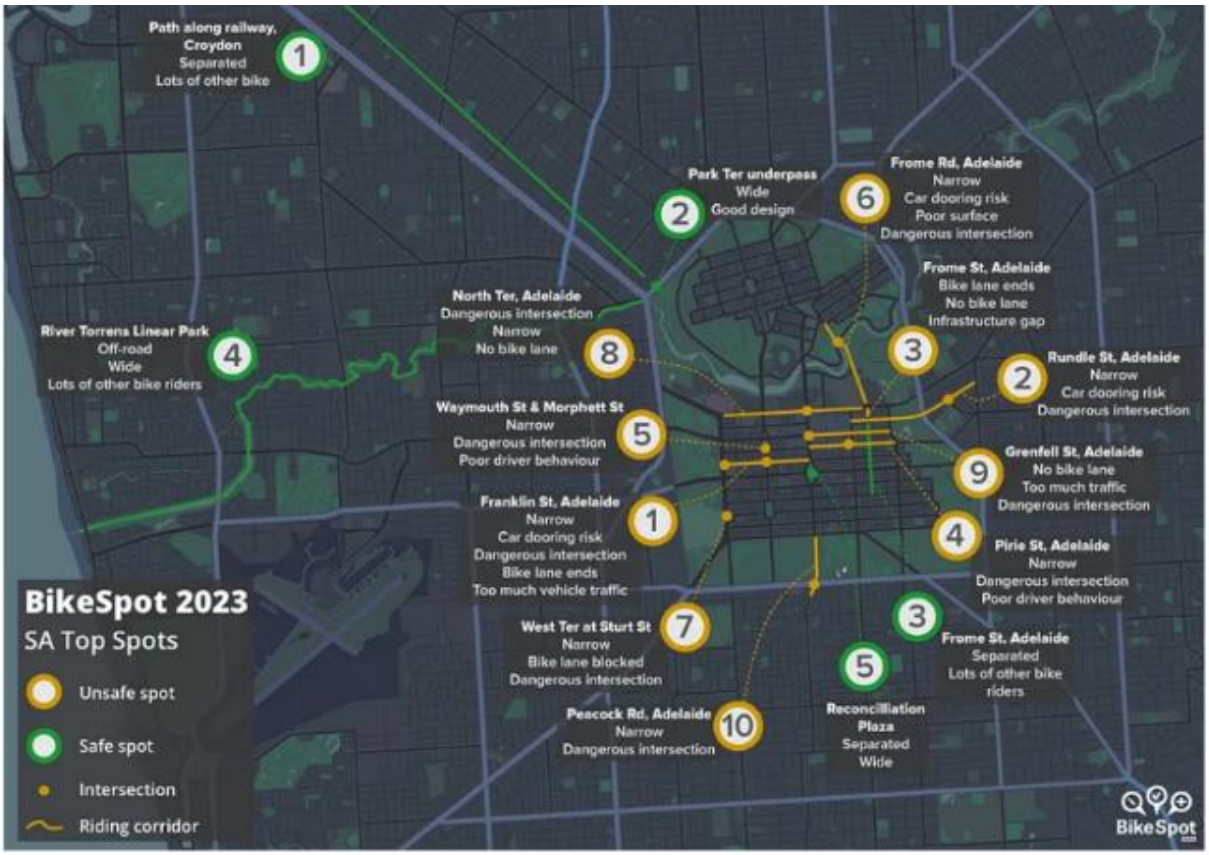


Figure 3 BikeSport Top Spots – South Australia (Source, Bikespot)

Many people would like to cycle more or start to cycle but a lack of safe cycling routes and the need to interact with motorised vehicles currently stops them from doing so[18].

Similarly, personal safety has an influence on cycling uptake, particularly in the Park Lands. The *2021 City Resident Survey* highlighted that women are significantly less likely to feel comfortable in the evening, regardless of proximity to their closest main street or square. In 2023, female cyclists represented 25% of all cyclists travelling to the city, on average. The lighting of cycling and shared paths is the most requested improvement.

Cycle parking

Additional cycle parking will be needed to support infrastructure upgrades suggested in this discussion paper.

Global case studies (such as **Paris**) show that infrastructure investment and expansion must be supported by additional cycle parking facilities to support true realisation of investment benefits. The

[16] City of Melbourne. (2017). *Bicycle User Confidence Study*.
[17] BikeSpot (2023), BikeSpot 2023 key findings. https://medium.com/crowdspot-blog/bikespot-2023-key-findings-178faf00cef9
[18] L. Pearson, B. Gabbe, S. Reeder & B. Beck (2023) Barriers and enablers of bike riding for transport and recreational purposes in Australia

Planning and Design Code outlines statutory requirements for cycle parking in new developments. This provision is more important in the central business district (CBD), where storage space is limited and convenient parking is crucial.

In addition, community engagement has highlighted the desire for upgraded cycle parking facilities at key destinations within the city such as near the Adelaide Central Market, Rundle Mall and the Festival Centre. Upgraded cycle parking offers improved safety outcomes, and includes charging facilities for electric bikes, and larger parking spaces for Cargo bikes and tricycles.

End-of-trip facilities

The availability of end-of-trip facilities, such as showers and lockers as part of secure parking locations, is critical for encouraging cycling, especially for commuting purposes. Current facilities are often inadequate or located in hostile and unappealing car parks, making it inconvenient for people to switch to this mode of transport.

Trip integration

Adelaide has an extensive public transport network, underpinned by bus services and the O-Bahn bus rapid transit system. Opportunities exist to further incentivise cycling as a last-mile mode by integrating bus and train networks with cycling. This can include:

- Improved cycle parking options at stops and stations.
- Opportunities for bicycle transport on buses and trains (see the images, below).
- Provision of hire schemes at stops and stations.
- Improved infrastructure surrounding stations (including priority at intersections with safe crossings).



Figure 4 Bike rack on a bus and bike space on a SkyTrain in Vancouver Canada Source: Translink & Streetfilms

Policies and strategies

The existing South Australian Planning & Design Code could be strengthened to support cycling more. Requirements for cycle parking in new developments and incentives for developers to include cycling facilities are minimal[19]. Motor vehicles are prioritised above active transport modes, such cycling, in the Code. The Code could be amended to not only reduce car parking rates but also enforce stricter requirements for the inclusion of bicycle parking and end-of-trip facilities. The Code does not consistently elevate cycling infrastructure to the same or greater importance than car parking and road design. Adjusting this could help reduce car dependency and support greener, more liveable communities. This imbalance hinders the efforts to increase the share of sustainable modes of transport. A re-evaluation of policies that favour motor vehicles could help to rebalance the transport hierarchy, promoting safer, more accessible cycling environments.

Social and cultural factors

The 2023 Committee for Adelaide benchmarking report highlighted Adelaide's high car dependence as a key factor in influencing take up of other modes, creating inefficient commuting patterns. The report notes that investment and innovation are critical to avoid Adelaide further slipping in this area.

[19] Bike Adelaide. (2023). *Car parking feedback: Planning and Design Code*.

What are other cities doing?

By fostering a strong cycling culture, investing in high-quality infrastructure, and implementing supportive programs, Adelaide can create a transport environment that is safe, efficient, sustainable and inclusive. The commitment to enhancing cycling and parking will not only improve the quality of life for residents but also increase transport choice and position Adelaide as a leading city in multimodal transport.

Cycling and cycle parking in Adelaide present both challenges and opportunities. By addressing infrastructure gaps, improving safety, enhancing end-of-trip facilities, and reforming policies to support cycling, Adelaide can significantly increase cycling participation. Learning from best practices in cities like Portland (USA) and Seville (Spain), in addition to domestic examples, can provide a strong basis for future cycle investment in CoA. Similarly, engaging the community in these efforts will be crucial for creating a cycle-friendly city. The benefits of such a shift extend beyond transportation, contributing to a healthier, more sustainable, and more vibrant urban environment.

Portland, Oregon (USA) (Population: 2.5M) is a city that has invested significantly to increase cycling through a combination of community engagement and infrastructure development. Investments in bicycle lanes, bike sharing, and e-bike programs are supported by educational initiatives and community events to encourage bicycle uptake. The Portland Bureau of Transportation offers the Portland By Cycle program including free guided bike rides, skill-building classes and online content to support people new to riding, new to Portland or those getting back on a bike. This has resulted in cycling mode share increasing by 5% in 2023 when compared to 2022.[20].



Source: The City of Portland

Seville, Spain (Population 700,000), has invested significantly to increase cycling uptake in recent years which has resulted in an increase from 0.5% mode share in 2007, to 7% in 2011[21]. This was achieved through the construction of an extensive network of cycle infrastructure, a bike sharing program, and an educational campaign aimed to support mode-shift in the community.

Seville has also worked to link bike riding with public transport. Passengers arriving at the city's main bus station can use their ticket to borrow one 200 rental bikes, free for the day.

Cities like **Melbourne** (Population: 5.2M) and **Hobart** (Population: 250,000) have successfully integrated bicycle transport and parking into their urban mobility frameworks. Melbourne's extensive network of cycle lanes and Hobart's focus on improving cycling infrastructure serve as exemplary models. These cities have demonstrated that continuous improvement of cycling infrastructure and strong stakeholder support can significantly boost cycling participation.

Perhaps the most widely publicised investment in bicycle infrastructure globally has occurred in **Paris, France** (Population: 11M). The *Plan Vélo* (Cycling Plan) 2021-26 is set to transform Paris into a fully cycle-friendly city, with new infrastructure, extensive development of secure parking solutions, and an enhanced cycling ecosystem. Key investments include:

- 180km of new secure routes in the City alone, and over 1000km in greater Paris. This includes cycle and public transport.
- Intersection safety and bridging the urban divide between greater Paris and the City centre by providing attractive cycle paths.
- Adding 60,000 bicycle racks and a trial of specialist racks for cargo bikes. Incentivising secure residential parking provisions and the construction of bicycle stations with electric bike charging.
- There are gender equality provisions in the Plan Velo. As streets have improved for cycling, more women and children have cycled.

This investment is already having a significant impact on ridership – October 2023 recorded double as many bicycle riders as the same month in 2022. About 30% of all trips in Paris

[20] News release, Biking in Portland grows by 5%, Portland.Gov, 2024.

[21] The Guardian: How Seville Transformed itself into the cycling capital of southern Europe, 2015.

are now being made by bicycle.[22] A 71% increase in cycling infrastructure use was recorded between 2019-2022.[23]



Source: Bloomberg

Closer to Adelaide, the City of **Chirstchurch**, New Zealand has invested significantly in cycling infrastructure, resulting in a significant increase in popularity. Investment in cycleways began in the aftermath of the 2011 earthquakes, with the City promising to build 13 arterial cycleways connecting the city's central suburbs. Cycleways are high-quality, separated, and direct. The council undertook significant engagement with stakeholders to:

- Mitigate reductions in car parking for local businesses,
- Ensure legibility of interfaces with other modes (pedestrians, vehicles etc.), and;
- Add seats/cycle repair kits to enable socialisation and provide opportunities to repair kits.

This has created a cycling environment that enables users who traditionally didn't cycle to feel comfortable on the high-quality cycleways.

Opportunities

How can Adelaide benefit?

Over 43% of people use a car to commute into the city, equivalent to over 56,000 people.[24] Around one quarter of these trips are from areas that could be cycled in less than a 30-minute one-way trip. This provides an opportunity to encourage mode shift, unlocking Adelaide's potential to become a cycling city.

People recognise that better outcomes for people cycling, and walking / wheeling, means people have more choices about how they travel, with safety and equity benefits.

The following key opportunities will support this shift:

Underpinning all future direction with an appreciation of Healthy Streets

Healthy Streets benefits everyone. The approach is underpinned by a desire to improve elements of everyone's experience of a street, no matter the user. From a cycling perspective, incorporating safe, connected cycleways into the city will:

- Ensure that everyone feels safe and welcome on the city's streets.
- Reduce general health issues stemming from emissions and noise.
- Enable short trips for tourists, between key destinations within the city.

It is recognised that the encouragement of mode-shift in cities must be a selective mix of infrastructure and policy initiatives that enable residents and users to ride at a level that suits them.

Improving connectivity

Adelaide has a low journey to work distance, and a comprehensive bus network, providing a strong basis for bicycle network investment. The average travel distance to the CBD is relatively short, at just over 13km compared to more than 18km for Sydney and Melbourne, 17km for Brisbane and 16km for Perth.

Developing a comprehensive network of protected cycle lanes and ensuring continuity of these lanes to/from and within the city is crucial. This is also critical at intersections, ensuring safety of movements and bicycle priority where possible. Lessons from cities like Melbourne and Paris, where investment in such infrastructure has led to significant increases in cycling, including in minority groups, can be applied in Adelaide.

Improving connectivity within the city also provides an opportunity to encourage the use of bicycles and cargo bicycles by residents for shorter trips, such as shopping. This will enable the city's nearly 25,000 residents[25] to reduce short private vehicle trips. A city spine has been

[22] Pettitt, B. (2024, June 3). *Paris doubled its cycling numbers in one year. Here's how*.
[23] Apur. (2023, October). *Cycling infrastructures in the Greater Paris - Grand Paris Metropolis*.

[24] City of Adelaide, Integrated Climate Strategy (2024)
[25] ProfileId, 2024, City of Adelaide Demographics

identified in City Plan as a city-wide strategy to improve active transport connectivity within the city, particularly with North Adelaide.

Figure 5, below, scores areas within the City of Adelaide based on their proximity to amenities that they need for their health and wellbeing. A high score shows that people are within a 15-minute walk/wheel/cycle from key amenities. It shows that the north, south-west and south-east of the city offer opportunities for improvement in connections.

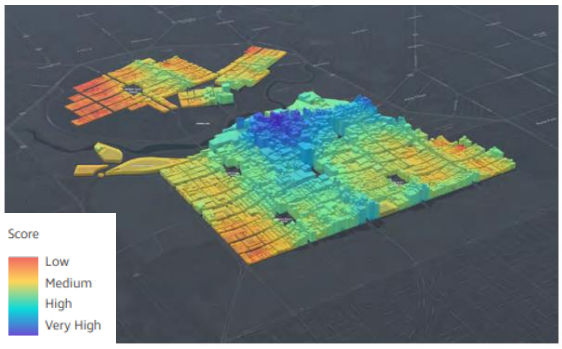
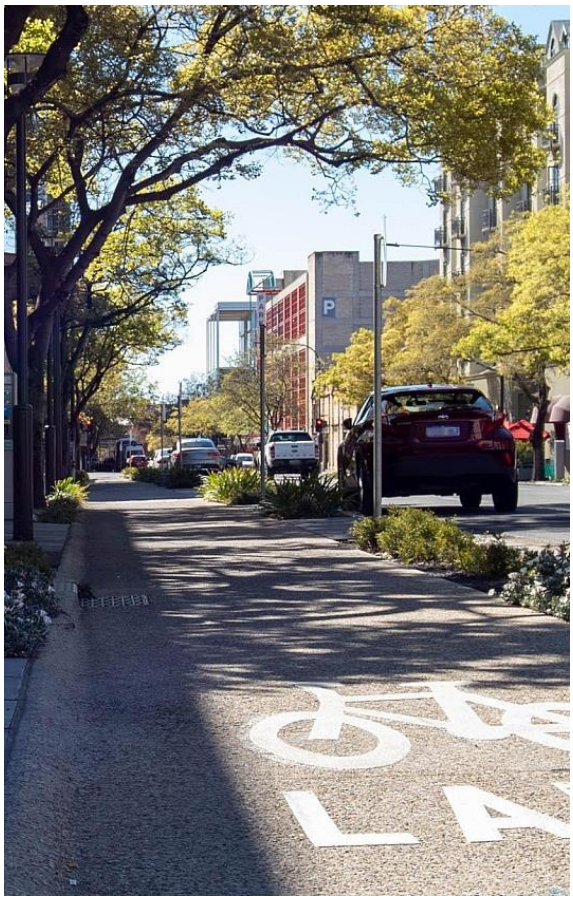


Figure 5 Proximity to amenities

Investing in high-quality cycle lanes that connect key destinations (such as schools, entertainment venues and transit facilities), and ensuring they are well-maintained will encourage more people to cycle.



Source: City of Adelaide

Improving cycle parking and end of trip facilities

Increasing the availability and quality of cycle parking is essential. This includes providing more secure parking options in the CBD and other high-demand areas. Encouraging developers to include ample cycle parking in new buildings through revised planning regulations and incentives can also help address this issue.

Different types of cycle parking are needed to cater to various needs:

1. On-Street Parking: Essential for short-term parking, particularly in commercial areas. On-street racks should accommodate standard bicycles, cargo bikes, and e-bikes, and be secure and sheltered. Additional opportunities exist to include e-bike charging facilities in selected locations within the city.

2. Residential Parking: Secure, long-term parking embedded within residential developments to encourage daily use. This includes provisions for cargo bikes and e-bikes with charging facilities.

3. Off-Street Parking: Located in buildings or dedicated bicycle hubs, providing secure and sheltered spaces for long-term parking. These facilities should cater to a variety of bicycle types and include charging points for e-bikes.

4. Public Transport Integration: Cycle parking at train stations and bus interchanges to facilitate seamless multimodal travel. These should include both short-term racks and secure long-term parking options.

Marketing and Education: Travel Behaviour Change

Encouraging mode shift through coordinated travel behaviour change programs, supported by infrastructure and parking initiatives, will support an increase in cycle mode share within the city. Behaviour change programs and their initiatives are most effective when tailored to the local transport and behavioural context. Learnings can be taken from successful travel behaviour change programs at a Local Council level throughout Australia:

- The City of Sydney[26] has guided rides throughout the LGA, and educational programs for bike care / maintenance and the use of separated cycleways, shared paths and low-traffic streets to build people's confidence in their cycling skills.
- Merri-bek City Council's Ride & Stride Program[27] and Sunshine Coast Council's RideScore Program[28] which target school aged children and support them to ride, walk and scoot to school; addressing key barriers to facilitate generational change for greater use of sustainable transport.

The City of Adelaide already has elements of behaviour change programs in place, including the rebates for active transport by supporting people financially with the purchase of e-bikes and cargo bikes. There is the opportunity to expand this program to include tailored initiatives in conjunction with the delivery of a connected network of safe cycling infrastructure.

Behaviour Change in Green Square[29]

A Travel Demand Management (TDM) Strategy was developed for Green Square, a brownfield development suburb in Sydney's inner-city, in 2021. Most residents reported that they chose to live in Green Square due to the proximity to the CBD – about 3.5km.

Walking and cycling were identified as modes to target for short trip due to the proximity of Green Square to destinations.

The City of Sydney and Transport for NSW collaborated on the implementation of the TDM Strategy in 2022, which included the delivery of a marketing campaign, distribution of bike network maps, cycling programs, free e-bike rental for residents, and activations like Share the Path and Try an E-Bike Day.

Through survey feedback, the initiatives contributed to an increase in people likely to ride more often, frequency that people ride their bike, levels of confidence for bike riding, bike maintenance and route selection and types of trips to ride for.

The e-bike rental program consisted of 160 e-bikes, with participants able to extend or purchase their e-bike at the end of the lease. This rental option allowed residents to trial e-bikes in their lifestyle.

The delivery of the TDM Strategy and its initiatives in Green Square complimented investment in infrastructure, both for bike riding and public transport services. There were also wider strategic outcomes of the Strategy which included health, community cohesiveness, alternatives to public transport and private vehicles, and place outcomes.

Key Strategic Moves

Despite long-standing objectives to reduce car use and increase the number of people walking, wheeling, and cycling, transport data shows that mode shift has not been occurring as desired[30]. To increase levels of sustainable modes of transport in line with strategic objectives of the City of Adelaide, it is vital to consider stronger incentives related to cycling. Governments globally have implemented similar approaches alongside the delivery of safe, protected and connected networks of walking, wheeling and cycling infrastructure.

The *Integrated Climate Strategy (2030)* recognises the benefits of cycling to achieving our goal to be a net zero city and estimates a tripling of city workers cycling into work (10,000 cyclists) each day is needed to help achieve that goal. Currently, mode share for commuting in Adelaide sits at around 3.6% (3,400 daily riders), with the strategy aiming to achieve at least a 10% (10,000 daily riders) mode share by 2030.



To support the growth of the city, facilitating greater transport choice, meeting mode share targets and our future strategic objectives, key strategic moves have been identified for the City of Adelaide:

Street optimisation

- Optimising street space within the city to provide opportunities for safe, efficient movement of all users is critical to enable the uptake of cycling. Ensuring legibility of movements, reducing conflicts between modes, and providing opportunities for rest

[26] City of Sydney, Cycling courses
[27] Merri-bek City Council, Ride & Stride
[28] Sunshine Coast Council, RideScore Active Schools

[29] Green Square Waterloo TDM Strategy Implementation Program – Evaluation Report, AECOM, 2022
[30] Australian Bureau of Statistics. "Australia's Journey to Work." 2021

are all critical considerations. This is a critical step to support other initiatives and programs.

Infrastructure upgrades

- **Cycle lanes**: The city lacks a continuous network of low stress (protected or off-road) cycle lanes. Prioritising strategic cycling corridors to, within and around the city will enable cycling uptake.
- **Cycle parking**: As cycling demand is created from other enabling projects (bike lane upgrades etc), additional cycle parking must be constructed to support uptake. Parking must be convenient, secure, and accessible.
- **Intersection priority and safety**: Conflicts between vehicles and bicycles are most prominent. Key intersections within and around the City, mapped to align with strategic corridors, must be upgraded to prioritise bicycle movements, particularly in peak periods.

Culture and education

- **Trip integration**: Opportunities exist to enhance connectivity between modes in Adelaide, by providing trip integration options for users. This will support mode shift and climate related targets, and enable mode choice for users.
- **Travel behaviour change**: Encouraging mode shift through enhancing existing City of Adelaide travel behaviour change programs, supported by infrastructure and parking initiatives, will support an increase in cycle mode share within the city.

Conclusion

The City of Adelaide benefits from short travel distances, surrounding high quality parklands, and near-perfect weather and topography to support increased cycling. Unfortunately, those wishing to cycle are faced with disjointed and low-quality cycle infrastructure, and a culture that does not support cycling uptake.

Increasing the number of people who cycle within our city leads to numerous benefits including higher economic output per capita, reduced infrastructure maintenance, improved physical health of communities, and reduced greenhouse gas emissions.

The following key strategic moves have been identified based on the objectives for our city:

- **Optimise our streets** to create appealing corridors for cycling movement, rest, and to improve safety for all users.
- Upgrade **infrastructure** to create a network of low stress bicycle lanes, intersection priority upgrades, and safe and secure parking for bikes and e-bikes, accessible for people of all ages and abilities.
- Improve cycling **culture** by building on existing travel behaviour change programs that encourage trying new modes, and by creating opportunities for trip integration between Adelaide's transport modes.

Basing our Integrated Transport Strategy around the above three key strategic moves will support the city in increasing the number of cyclists on our roads, creating a safe environment for all, and expanding the number of safe travel options for people of all ages and abilities.