Walking and Cycling Plan 2022-2027

THE CITY of Unley

VERSION 3

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Prepared by the City Design Team for the City of Unley

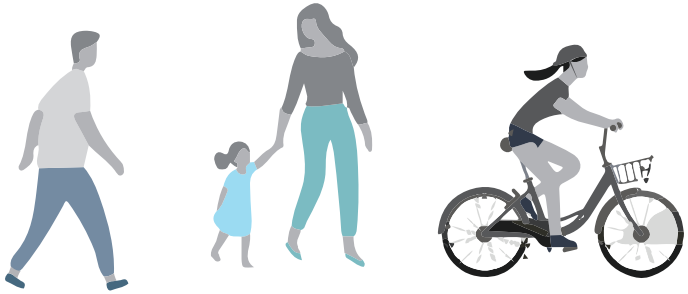
DOCUMENT HISTORY AND STATUS

REVISION	DATE	AUTHOR	REVIEW	DETAILS
V1	22/06/2022	T Bacic	B Willsmore	Draft for Council Report
V2	28/06/2022	T Bacic	B Willsmore	Draft for Consultation
V3	2/08/2022	T Bacic	B Willsmore	Final for Council Report

Kaurna Acknowledgment

We acknowledge the City of Unley is part of the traditional lands of the Kaurna people and we respect their spiritual relationship with their country. We acknowledge the Kaurna people as the traditional custodians of the Adelaide region and that their cultural and heritage beliefs are still as important to the living Kaurna people today.

Introduction



City of Unley's vision for walking and cycling:

"More people of all ages and abilities walking and bike riding for transport and recreation purposes"

In the City of Unley, 4.5% of residents ride a bike to work and 4.4% of residents walk to work (based on 2016 Census). Our uptake of active travel already exceeds that of Greater Adelaide (1.1% and 2.2% respectively) and is the highest of all metropolitan councils in Adelaide.

However, this is still well below the percentage of more bicycle-friendly cities such as the City of Yarra (which is directly adjacent the Melbourne City, similar to Unley) with 8.6% of residents riding a bike to work and 12.4% of residents walking to work. We need to continue making improvements to walking and cycling infrastructure to support the adoption of sustainable transport.

The Unley Integrated Transport Strategy sets ambitious targets:

- **to double the amount of active transport journeys to work by Unley residents (target of 7.4% cycling and 9.4% walking), and**
- **to record the highest number (percentage of population) of sustainable transport journeys undertaken by our local community, when compared to the rest of metropolitan Adelaide.**

The 2021 Census will be used to assess our progress towards this target, which will be available in late 2022.

A study undertaken in 2017 found that the most effective action that an individual can take to reduce greenhouse gas emissions within its cities is to live car free. A more recent European study showed that by choosing to walk or ride a bike over a car just once a day would reduce an average citizen's carbon emissions from transport by 67%[1] . This demonstrates that even if not all car trips can be substituted by walking or bike riding, the potential for decreasing emissions is still very high.

In Australia, transport-related emissions were responsible for more than 17.6 per cent of Australia's greenhouse gas emissions in 2020, representing the third largest source of emissions[2]. As greater focus is placed on limiting the impacts of climate change, supporting residents to make the daily choice to walk or ride, in particular for short trips within the City of Unley, will become an increasingly important factor towards achieving net zero emission.

This Walking and Cycling Plan 2022-2027 provides a review of the progress made over the last five years, and consolidates lessons learnt based on community feedback received and emerging best practice guidance.

It promotes a more robust planning, design and delivery approach to new infrastructure, as well as highlighting the important role behaviour change activities can play in engaging our local community over the next five years.

The Plan identifies and prioritises key initiatives that Council will focus on in the next five-year period. It builds upon an already established network of on-road bicycle routes and off-road shared paths in the Unley area, making existing routes safer, more efficient, more legible, and better connected.

The Plan also links with, and complements, the City of Unley's Community Plan 2033 and Four Year Delivery Plan 2021-2025, advancing the strategic key objectives for our community to be active, healthy and feel safe, and our City to be connected and accessible.

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1. The climate change mitigation effects of daily active travel in cities' (Brand, Dons, Bolg & Avila-Palencia), April 2021

2 National Greenhouse Gas Inventory Quarterly Update: December 2020

Strategic Alignment

The Walking and Cycling Plan 2022-2027 responds to a range of current strategic directions across a suite of Council strategies and plans.

The following is a summary of key strategic Council documents that promote and advocate for walking and cycling.

City of Unley Community Plan 2033

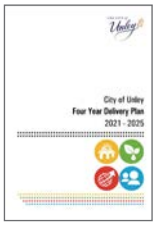
The Community Plan is the Council's leading strategic document and identifies priorities for the City to 2033. The Plan is underpinned by a shared vision for the City, which is 'recognised for its enviable lifestyle, environment, business strength and civic leadership.' The Community Plan provides the vision, strategies, and framework for the future of the City of Unley.

Two objectives in the Plan's Community Living theme that relate to walking and cycling (1.1 and 1.5) are:

Our community is active, healthy and feels safe

Our City is connected and accessible

City of Unley Four Year Delivery Plan 2021-2025



The Four Year Delivery Plan outlines how Council will deliver the vision, strategies and framework set-out in the City of Unley Community Plan 2033.

To achieve the key objective (1.5) 'our city is connected and accessible' it identifies as a key initiative/project:

The continued implementation of the Walking ad Cycling Plan.

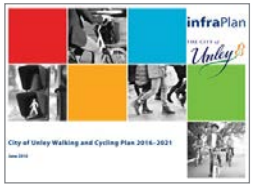
Unley Integrated Transport Strategy

Unley's Integrated Transport Strategy aims for a transport system that is safe, accessible, sustainable, and effective. A key focus area is 'Active Transport' with the following two targets:

Double the amount of active transport journeys to work by Unley residents (target of 9.4% walking and 7.4% cycling).

Record the highest number (percentage of population) of sustainable transport journeys undertaken by our local community, when compared to the rest of metropolitan Adelaide.

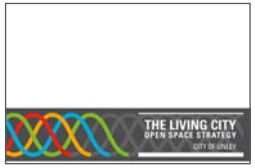
City of Unley Walking and Cycling Plan 2016-2021



The Walking and Cycling Plan 2016–2020 was the City of Unley's strategy for walking and cycling infrastructure and programs to make the City safer and more attractive for current and future users.

This Walking and Cycling Plan Update 2022-2027 is an update to this plan, and builds on the work undertaken over the last five years.

The Living City - Open Space Strategy



The Living City Open Space Strategy is an aspirational document that aims to maintain and enhance the quality of the City's open space network, recognising the changing needs of a growing residential and worker population, and changing climate.

The Strategy considers the role that local streets, public spaces and shared spaces can play in the expansion of the open space network, and can add to the quality of life of our residents. The Strategy seeks to respond to Council's forecast demands, including:

A high proportion of residents are active with a projected need for walking, bike tracks, BMX and skate facilities, fitness-based activities, and spaces for dog exercise.

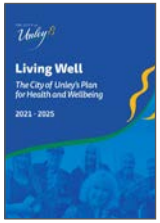
Economic Development Growth Strategy 2021-2025

The Economic Development Growth Strategy 2021–25 sets out a whole-of-city approach to economic growth to influence a vibrant and successful local economy that reflects the quality of life, environmental principles and values of the community.

A key focus for the strategy is a holistic approach to increase the population and number of jobs within the City and to support sustainable business growth. One of the key objectives of the strategy is:

Objective 5 - Connected and activated precincts.

Living Well, The City of Unley's Plan for Health and Wellbeing 2021-2025



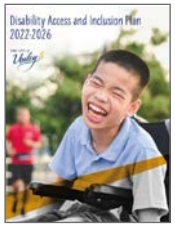
Living Well is a key Council document that guides the Council's work to maintain and improve the health and wellbeing of our community**.**

The Plan has four key focus areas:

1. An engaged and purposeful community
2. A healthy and active community inside and out
3. A safe community
4. An inclusive and connected community.

A key objective for focus area '2' is: **encourage the use of walking and cycling as regular modes of transport in the City of Unley.**

Disability Access and Inclusion Plan 2022-2026



The Disability Access and Inclusion Plan 2022–26 has been developed to ensure improved access and inclusion for citizens of all ages who are living with disability. The City of Unley will lead the way in creating a community that is accessible and inclusive for all who live, work, and visit the City of Unley.

Theme 3 'Accessible Communities' aims to increase accessibility to public and community infrastructure, transport, services, information, sport and recreation and the greater community.

All new Council streetscape infrastructure is designed using Universal Design Principles.

Transport Asset Management Plan

The Transport Asset Management Plan covers the transport assets serving Council's transportation needs by providing an effective transport network to support safe and efficient movement, and connect people and places.

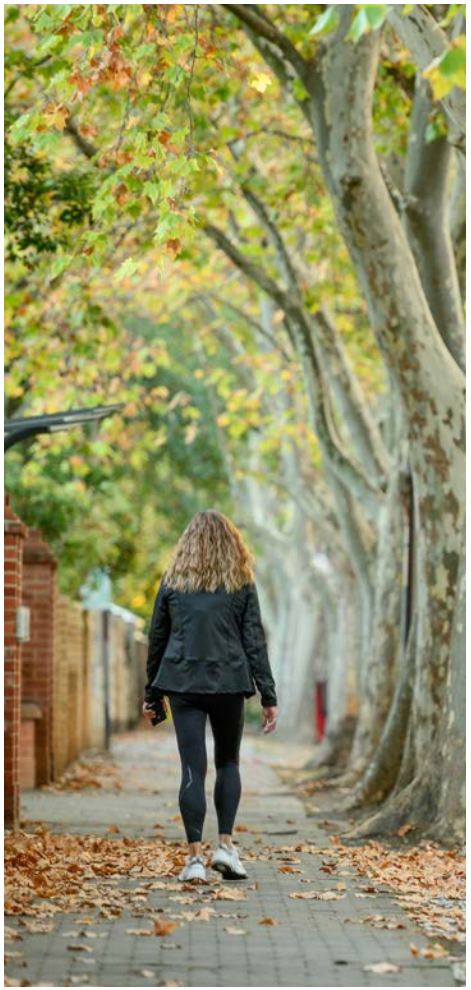
Aligning new walking and cycling projects with asset renewal will deliver better value for money and lead to higher quality design outcomes.

Active Ageing Strategy

The Active Ageing Strategy guides the Council's approach in all of its activities to promote active ageing by becoming an Age-friendly City and to meet the changing needs of our population throughout their lifetime.

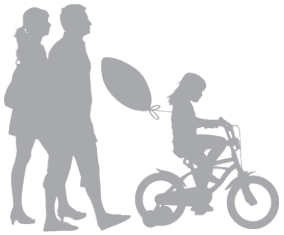
Focus Area 2 'Transportation' has a goal:

'Our residents are able to easily move about the city to participate in the community and have access to services'.




RUGBY PORTER
BIKEWAY
Unley
Central
300m
1min
Unley Oval
Bicycle Route
Upgrade

Benefits of Walking and Cycling



Walking and cycling have extensive benefits to individuals, communities and places where we live. [3]

Health and wellbeing

- Offer active and healthier lifestyle through incidental exercise
- Tackle chronic disease and obesity
- Improve mental wellbeing
- Improve our mood and happiness.

Placemaking

- Increase street vibrancy and sense of place
- Strengthen street identity by creating opportunities for social exchange
- Promote street art and culture.

Social equity

- Provide free (or almost free in the case of cycling) way of moving
- Accessible and inclusive means of movement
- Offer independence to all, from young to old
- Provide opportunities for public life (meeting, sharing, communicating)
- Build stronger communities.

Safety and security

- Increase passive surveillance i.e. more eyes on the street
- Improve street safety by encouraging slower speeds.

Economy

- Stimulate the local economy
- Lead to a higher number of visitations to local businesses
- Spend disposal income on the local economy from health and transport savings
- Stimulate higher levels of productivity and creative inspiration
- Strengthen resilience in cities.

Successful places

- Attract investment and reinvestment
- Promote tourism
- Attract talent and creative individuals.

[3] Based on 'Cities Alive: Towards a walking world', ARUP, 2016

Urban regeneration

- Increase business, land, and property values
- Decrease vacancy rates for shops, and promote active street frontages
- Increase local economic activity by actively engaging with the street.

Cost savings

- Reduce transport congestion
- Reduce road construction costs
- Reduce asset maintenance costs
- Reduce healthcare costs
- Reduce vehicle running costs
- Reduce the need for multiple vehicle ownership.

Virtuous cycles

- Decrease dependency on non-renewable resources
- Create more sustainable communities
- Promote an endless feedback loop of health, economy and environmental benefits.

Environment

- Improve air quality with less pollution
- Reduce noise pollution
- Reduce the need for paved surfaces, leading to an improved microclimate
- Encourage investment in landscaping, leading to ecology and biodiversity outcomes.

Transport efficiency

- Use land more efficiently (less space needed to walk or cycle than to drive)
- Create opportunities for better use of road space due to higher transport efficiency and lesser need for car parking
- Decrease car ownership
- Require less infrastructure, barriers, signals, line markings, etc.

Liveability

- Give rise to better public spaces
- Encourage recreational activities
- Encourage greater aesthetics of streets and neighbourhoods.

Leadership

- Encourage civic pride
- Encourage civic responsibility and pride in local neighbourhoods
- Create opportunities for engagement and decision-making.

Sustainability

- Promote sustainable behaviour
- Reduce global emissions
- Become less carbon dependent
- Provide reliable and independent forms of transport.

Walking Network

Footpaths and street crossings are essential infrastructure to enable people to walk from one destination to another.

Unley's historic street network is well established to support efficient and enjoyable walking activities.

Council manages more than 307 kilometres of footpaths of all types. Council regularly assesses footpath conditions to ensure they are meeting an appropriate level of service and Disability Discrimination Act (DDA) requirements.

The ongoing delivery of footpath improvements is critical to enhancing the safety and amenity of walking in Unley and creating a pedestrian-orientated environment that caters for people of all ages and abilities.

The walking network comprises of all the footpaths, kerb ramps and shared use paths in the Unley area. Designated pedestrian and/or shared crossing points have also been implemented across Unley to improve safety and connectivity, with a key focus on improving the walking network in mixed-use retail and business precincts, main streets, open space and community facilities, parks and around schools.

The types of pedestrian and shared crossings that have been applied in the Unley area include:

- Signalised Pedestrian Actuated Crossings (PAC) - where traffic is controlled by traffic signals and a pedestrian presses a button and waits for the green walk symbol before crossing
- Pedestrian protuberances and refuges
- Zebra crossing (at grade priority pedestrian crossing)
- Wombat crossing (raised priority pedestrian crossing with two alternating flashing yellow signals)
- Rail crossings (mazes)
- Children's crossings located within 25km/h school zones, including
  - Emu crossing - red and whites posts with orange 'children crossing' flags displayed and crosswalk lines, monitored at peak times
  - Koala crossing - red and white posts with two alternating flashing yellow signals and crosswalk lines.

Council is also committed to improving the walking experience through the continued introduction of street trees, creating shade, cooling and protection on inclement and extreme heat days.

As the Council's existing street infrastructure and street trees age, their replacement will consider opportunities to reposition new infrastructure or new trees, to improve accessibility along footpaths and remove of 'pinch points' as part of the Council's ongoing renewal programs.

Cycling Network

The City of Unley's bicycle network is shown on the map on the following page. The bicycle network is divided into several route types including:

- Designated bikeways that provide regional connections to neighbouring Councils, as well as local connections within Unley. These bikeway routes are typically designed to a higher design standard and comprise either separated bicycle facilities (for example shared use paths), or are along local streets with traffic calming measures to create a safe mixed traffic environment.
- Neighbourhood bicycle routes that provide connections across Unley to key destinations and precincts including designated bikeway routes. These bicycle routes are typically located on local streets with local area traffic calming measures to create a safe mixed traffic environment.
- Secondary on-road bicycle routes that are located on Unley's Major Collector Traffic Routes and provide a more direct alternative route for more confident bike riders. These bicycle routes typically comprise on-road bicycle lanes, with buffers where space permits.
- Main on-road bicycle routes that are located on the Department for Infrastructure and Transport arterial roads. These bicycle routes are typically used only by confident bike riders and often comprise part-time 'commuter peak' on-road bicycle lanes, meaning that the bicycle lane is only available during the AM and PM peak hours, and at times only in the direction of the commuter peak.

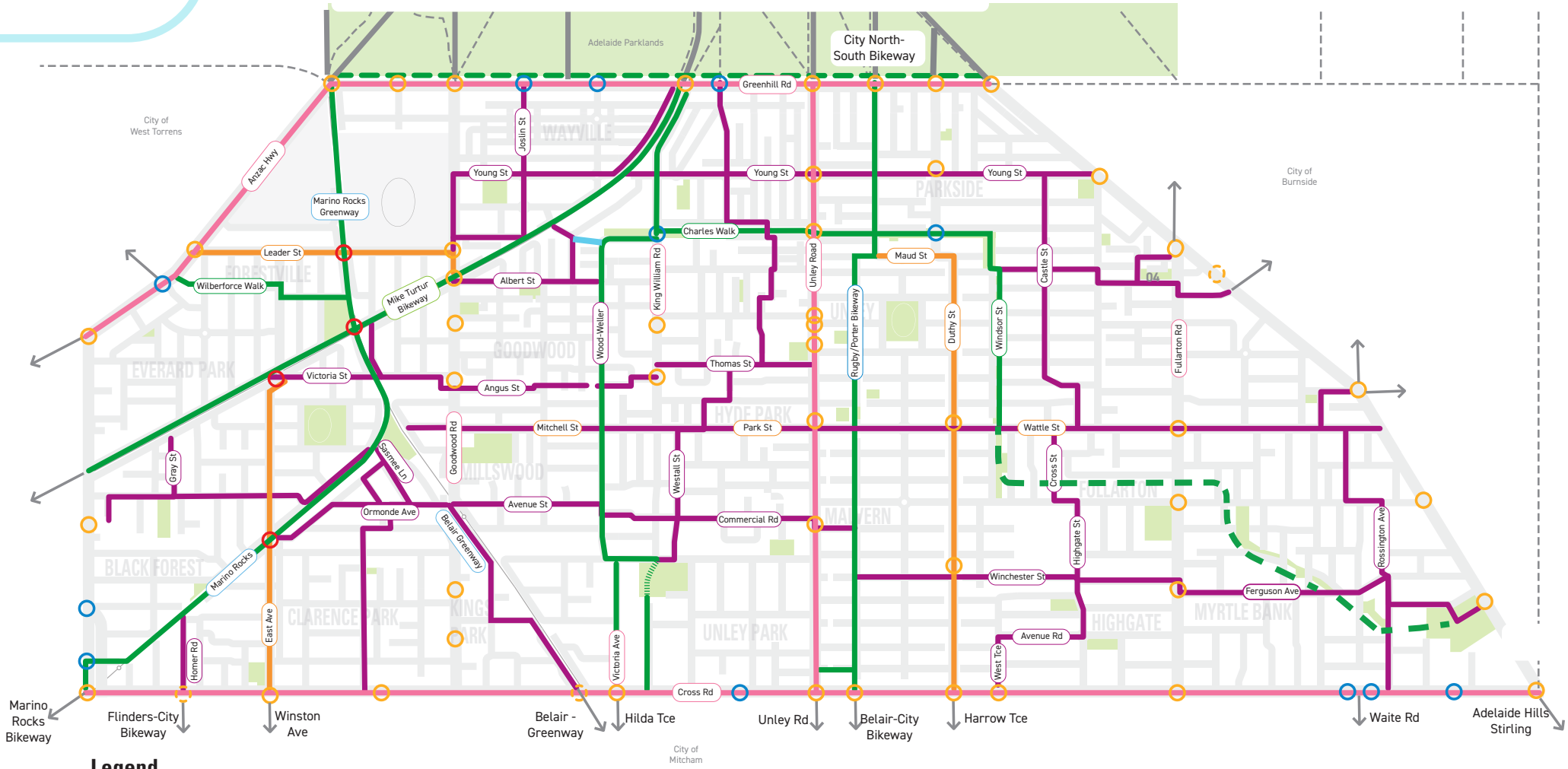
The key designated bicycle routes in the Unley area are listed below. The planning and delivery of these routes have been prioritised over the last 5 to 10 years and form the backbone of Unley's bicycle network.

- Mike Turtur Bikeway
- Marino Rocks Greenway
- Glen Osmond Trail (Charles Walk / Windsor Street)
- Rugby-Porter Bikeway
- Wood-Weller Bikeway
- Wilberforce Walk
- Greenhill Road Bikeway (proposed)

The overall walking and cycling network plan from 2016 has been updated to reflect the following strategic changes:

- **South Road:** removal of South Road main on-road bicycle route due to the lack of existing or planned future facilities.
- **Churchill Avenue:** extension of Churchill Avenue neighbourhood bicycle route linking to Marino Rocks Bikeway.
- **Forest Avenue:** addition of the Forest Avenue neighbourhood bicycle route linking to East Avenue secondary on-road bicycle route, Marino Rocks and Mike Turtur bikeways, Black Forest Primary School, and the proposed new pedestrian and bicycle overpass on South Road forming part the South Road Torrens to Darlington project.
- **Homer Road:** change of street from Gordon Road to Homer Road to improve the connection with City of Mitcham's proposed Flinders-City Bikeway.
- **Wood-Weller Bikeway:** reclassification from low traffic bikeway to designated bikeway linking between the City of Mitcham and the City of Adelaide. This reclassification supports the removal of King William Road between Simpson Parade and Northgate Street as a main on-road bicycle route.
- **Young Street:** reclassification and extension of Young Street from local cycling link to neighbourhood bicycle route extending between Glen Osmond Road and Mike Turtur Bikeway.
- **Wattle/Park/Mitchell Street:** reclassification and extension of Wattle, Park and Mitchell streets from higher traffic cycle corridor to neighbourhood bicycle route and extension up to Marino Rocks Bikeway.

Unley Walking and Cycling Network



Legend

- Designated bikeways
- Neighbourhood bicycle routes
- Main on-road bicycle routes
- Secondary on-road bicycle route
- Private property (27 Trevelyan) possible bicycle route connection
- Median refuge
- Rail crossing
- Pedestrian crossing

NORTH

* Dashed lines means possible bicycle route opportunity to be further investogated

How many People Walk and Cycle?

Pedestrian and cyclist count data is an essential tool to justify projects and related budget needs.

In order to make evidence-based decisions about where to strategically improve walking and bicycle infrastructure, data about how people get around by foot and bike, as well as data on barriers to walking and bike riding is needed.

Council's main source of cyclist count data is the Super Tuesday count, which is undertaken each 4 to 5 year period, with additional project specific counts undertaken throughout the year. Council acknowledges that currently its collection of pedestrian movement data is limited.

Council aims to improve its approach to pedestrian and cyclist data collection by considering opportunities to standardise the method for conducting counts, use of smart technology, and the implementation of permanent counters.

Super Tuesday Bike Counts

The Super Tuesday bike count is Australia's biggest visual bike count and originated in Melbourne in 2007.

The count takes place from 7am to 9am on the first Tuesday in March, where volunteers count people bike riding at particular locations.

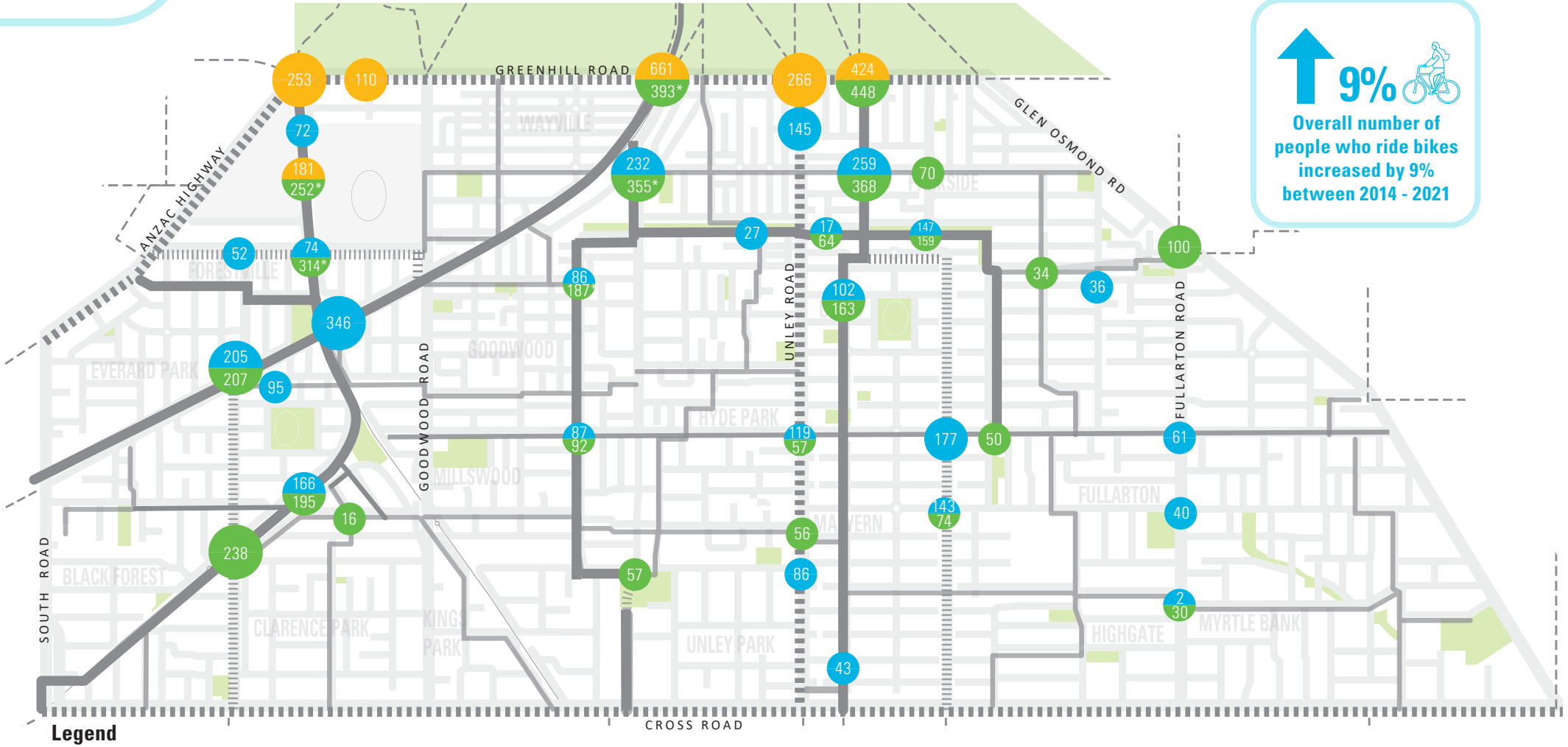
Nationally, the survey provides reliable, annual figures on bicycle commuters and their movements during morning peak-hours, how many riders there are, and which routes they use.

The Super Tuesday bike count helps track long-term patterns and identifies tangible results from network improvements. The count was undertaken in the Unley area in 2014 and was recounted in 2021. The results of the count are shown on the map on the following page.

Key observations from the count include:

- There has been a 9% increase in bike riders from 2014 to 2021 (based on total number of bike riders per site, as well as a direct comparison of individual sites from 2014 and 2021).
- Increases have been experienced on routes that have not been upgraded, suggesting that bike riding in general has increased, and that routes that have been upgraded have experienced larger increases.
- Sites along Rugby-Porter Bikeway increased by 40-60%, which coincided with a decrease of about 50% on both Unley Road and Duthy Street. This suggests that more confident riders will choose a safer bike route if the efficiency of the route is improved.
- The volumes at the King William Road/ Greenhill Road intersection have decreased significantly, but this is a result of the improved crossing of Greenhill Road at the Marino Rocks Greenway, and at the time of count, the Mike Turtur Bikeway being closed between Musgrave Street and King William Road due to upgrade works.

Cycling Count Data 2014, 2015 and 2021



9%

Overall number of people who ride bikes increased by 9% between 2014 - 2021

Legend

- 101 2014 Super Tuesday data 7-9am
- 101 2015 City of Adelaide data 7-9am
- 101 2021 Super Tuesday data 7-9am

* Affected by Mike Turtur Bikeway closure - bike riders detoured through these sites

NORTH

ABS Census Data

The Australian Bureau of Statistics (ABS) Census collects data on mode choice for journeys to work. The last census was published in 2016.

The Unley Integrated Transport Strategy sets an ambitious target to double the amount of active transport journeys to work by Unley residents (target of 7.4% cycling and 9.4% walking).

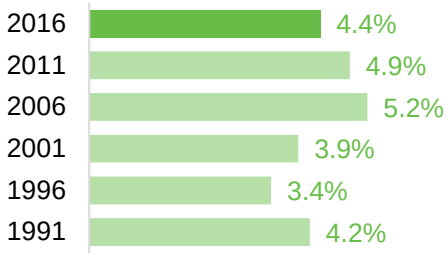
The 2021 Census will be used to assess our progress towards this target*. This target should be achievable, if Council continues to deliver safe and connected walking and cycling facilities both within Council and to its neighbouring Councils, particularly noting that based on 2016 census data, of the 18,441 working residents, 22% worked in the Unley area and 35% worked in Adelaide (i.e. within 5km area).

On the day of the last published 2016 census, 805 people (or 4.4%) walked to work (as a single mode of transport) in the Council area. A slightly higher number of people, 841 people (or 4.5%), rode a bike to work (as a single mode of transport), with 34% comprising of females, which is reflective of Unley's continued investment in safe streets and improved bicycle facilities/ connections, as well as its proximity to the City of Adelaide.

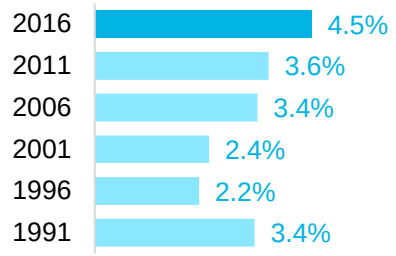
The proportions of people bike riding (4.5%) and walking (4.4%) to work in the City of Unley in 2016 were both higher than the Greater Adelaide averages of 1.1% and 2.2% respectively. The City of Unley has the highest bike riding journey to work mode share of all Adelaide Metropolitan Councils, including the City of Adelaide, which is 3.7%. The City of Norwood, Payneham and St Peters (5.1%) and the City of Adelaide (26.9%) both have higher proportions of people walking to work than the City of Unley.

[3] Data source: ABS statistics 2016
*Data source will be updated to reflect the 2021 ABS statistics when available.

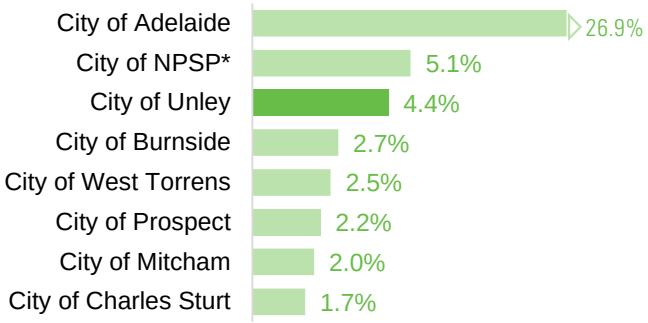
Annual trend for proportion of people who walked to work in the City of Unley



Annual trend for proportion of people who cycled to work in the City of Unley

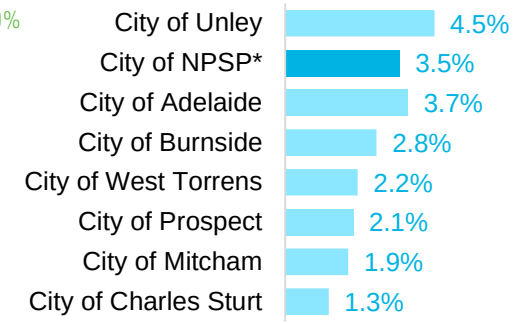


Proportions of people who walked to work in 2016 in Inner Rim Councils



*City of NSPS = City of Norwood, Payneham and St Peters

Proportions of people who cycled to work in 2016 in Inner Rim Councils



Walking and Cycling Achievements 2016 - 2021

The Walking and Cycling Plan 2016-2021 contained a 5-year Action Plan that proposed a range of infrastructure and advocacy/ education walking and cycling projects.

The Action Plan proposed projects based on a delivery timescale of 1-5 years (2016-2021) and 5+ years.

Starting from the 2015/2016 financial year, Council has committed, on average, about $200K each year to deliver these projects, and where possible, have aligned projects with asset renewal projects.

Council also successfully bid for funds from the State Government programs including:

- **State Bicycle Fund** - generally to be used for implementation of bicycle infrastructure, bike parking and promotion and education of bicycle routes.
- **Greenway Fund** - generally to be used for delivery and/or improvement of Greenways.
- **Way2Go Fund** - a partnership program promoting safer, greener and more active travel for primary school students and their communities.

The combined funding from Council and State Government has facilitated the delivery of 20 projects (as shown on the map overleaf) between 2016 and 2021.

Approximately 50% of year 1-5 projects in the Action Plan have been completed with a further 10% in progress.

Some Year 5+ projects have been completed or commenced (such as the Mike Turtur Bikeway). The balance of projects yet to be completed inform this Walking and Cycling Plan 2022 -2027.

Project highlights include:

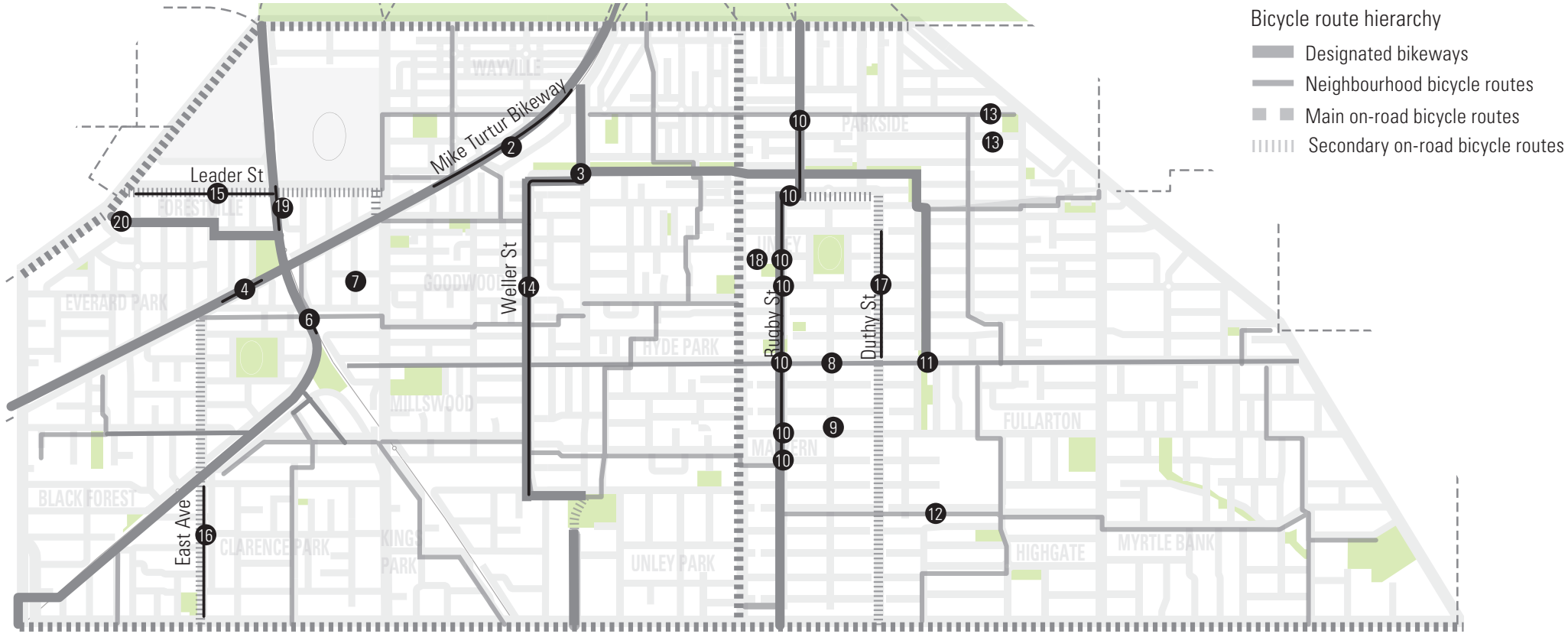
- Approximately 6.5km of bikeways established or improved (including Mike Turtur Bikeway and Marino Rocks Greenway).
- Ongoing transformation of Rugby-Porter Bikeway with upgrade of seven intersections that changed 'give way' priority to bike riders and other traffic moving along this north-south route.
- Construction of slow points along Wood/Weller Street to facilitate safer facilities for bike riders.
- Nine new pedestrian crossings/ refuges built with a focus on sites adjacent primary schools or other highly used crossing points.
- City-wide implementation of wayfinding signs and on-street bicycle symbols to establish a low-traffic bicycle route network across the council.
- Preparation of bicycle route maps to promote community knowledge of city-wide cycling opportunities.

During this period, Council also partnered with the Department for Infrastructure and Transport on seven Way2Go school programs with local schools (the most recent including Highgate, Glen Osmond and St Thomas primary schools).

Work has been aimed at promoting safer, greener, and more active travel for primary school students and their communities.

Council has also purchased four electric bikes for its staff to undertake site visits, and over the last two years has clocked up over 2,500km in trips, that previously would have been by car.

Completed projects 2016-2021



Projects completed between 2016 and 2021 listed on the map

1	Wayfinding signs and on-street bicycle symbols to establish low-traffic bicycle routes (city-wide)
2	Mike Turtur Bikeway - Bike path upgrade to 3-4m width and lighting improvements (section Musgrave to King William)
3	King William / Simpson Pde/ Glen Osmond Creek Path - Refuge to facilitate safe cyclist and pedestrian crossings of King William Road
4	Norman Terrace shared street
5	Prepare map of bikeways network (hard copy and online)
6	Arundel Ave / Railway - Improve pedestrian access
7	Goodwood Primary Emu Crossing
8	Wattle St / Cambridge St - Modify roundabout to radial design
9	Fisher St / Cambridge St - Modify roundabout to radial design
10	Rugby-Porter Stage 1 and 2 - Upgrade of seven intersections
11	Wattle St / Windsor St - Refuge Crossing
12	Concordia College Emu Crossing
13	Parkside Primary School Koala Crossings
14	Wood/Weller Street - Slow points with bicycle bypass (Simpson Pde to occur 2022)
15	Leader Street bike lanes
16	East Avenue - Upgrade to buffered bicycle lanes
17	Duthy Street - Upgrade to buffered bicycle lanes
18	Oxford Terrace - Pedestrian crossing point
19	Richards Terrace shared street
20	Wilberforce Walk (Stage 1)


Cafe. Restaurant.
CLOSED

Walking and Cycling Directions

Over the last 5 years Council staff have continuously improved its approach to the planning, design and delivery of walking and bicycle infrastructure, and based on these learnings have identified new directions that will form part of the Walking and Cycling Plan 2022-27.

These five key directions include:

- Designing for the target users
- Applying best practice design principles
- Enhancing neighbourhood character
- Staged project approach
- Reviewing projects on completion.

Designing for the target users

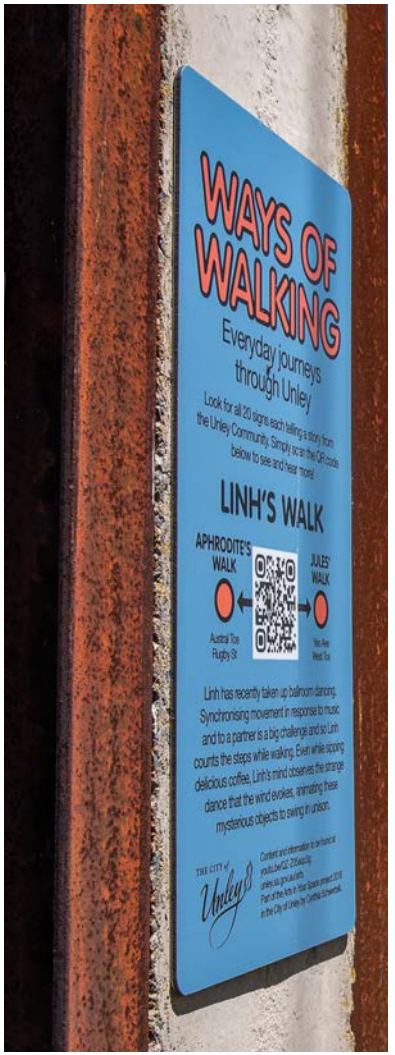
There is a generally an adopted set of four categories of bike rider or potential bike rider within an average community profile.

These were originally based on a report by the Portland Office of Transportation (USA) which categorised types of bike riders based on their perception of bike riding for transport (as opposed to recreation). These proportions vary from country to country, and to a lesser extent city to city.

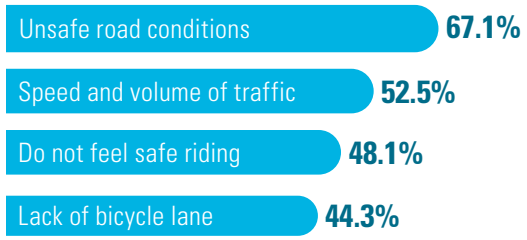
However, it represents a useful continuum to consider when planning for bicycle infrastructure to ensure that we focus on meeting the needs of the 60% 'Interested but concerned' bike riders, where there is the most potential for growth.

A cycling perception survey undertaken by We Ride Australia (2011) indicated that unsafe road conditions, speed / volume and driver behaviour are key factors as to why 60% of people surveyed do not ride more often for transport.

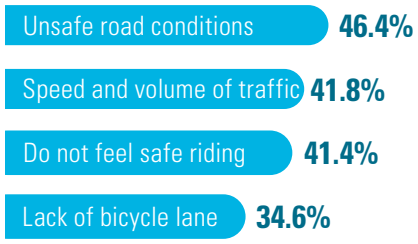
Engaging with the 60% 'Interested but concerned' bike riders, and creating safe street environments and improving driver behaviours will be the primary focus for the planning and delivery of new bicycle infrastructure to better enable a significant proportion of our community to ride more often.

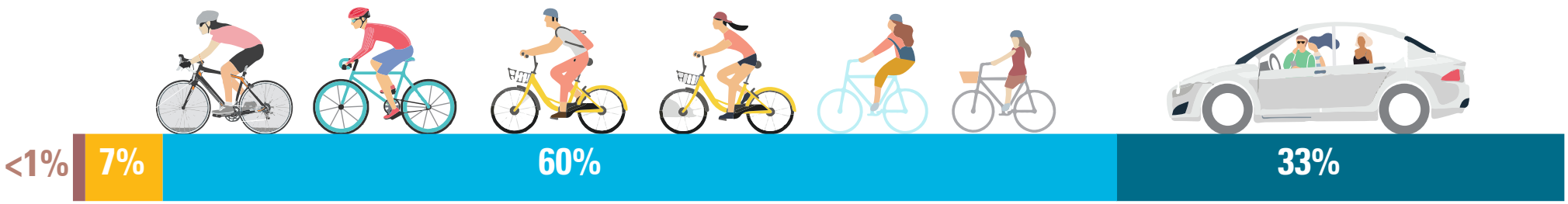


Reasons people who do ride, don't ride more often



Reasons people do not ride





Strong and Fearless (<1% of riders)

Confident in traffic on all types of streets

Improving bicycle facilities at intersections (signalised and unsignalised) and road surface.

- Unley Road
- Greenhill Road

Enthused and Confident (7% of riders)

Confident riders, recreational and sometimes to work, shops etc.

Preference for more separated bicycle facilities and comfortable riding in on-road bike lanes.

- Duthy Street
- East Avenue

Interested but concerned (60% of riders)

Weekend riders to the Park Lands, but generally do not feel safe riding in traffic or on-road bike lanes.

Preference for off-street or separated bicycle facilities or quiet traffic-calmed residential streets.

- Rugby/ Porter Street
- Mike Turtur Bikeway

No way, no how (33% of drivers)

Would not consider riding a bike under any circumstances.

Unlikely to use bicycle facilities and prefer no bikes on the road to improve vehicular movement.

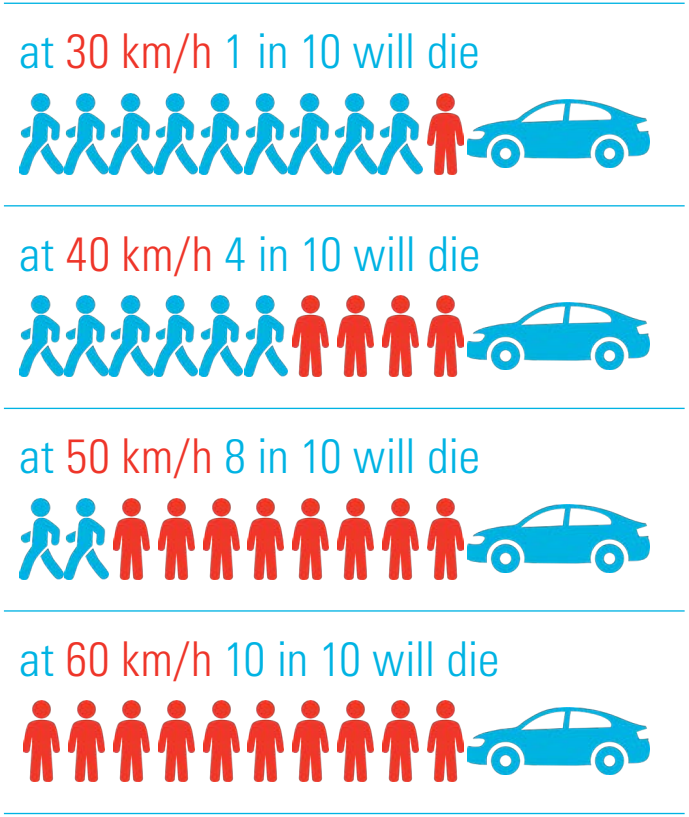
Traffic speeds and volumes are very important factors in deciding the appropriate design approach for implementing bicycle infrastructure, especially for the 60% of people who are 'Interested, but concerned'. The grid tool on this page, first established by the Walking and Cycling Plan 2016-2021, will continue to be applied in the delivery of new bicycle infrastructure.

This tool is also aligned with the Safe System approach that recommends that people bike riding should be separated from traffic when a street carries more than 3,000 vehicles per day with a speed more than 30 km/h. Although the tool does indicate less than 40 km/h for mixed traffic environments, 30km/h will be our targeted design speed.

Designing for a 30 km/h mixed traffic environment will improve the liveability of streets, improve the streets amenity and more importantly will significantly improve safety for all street users. Research shows that a fatal injury to a pedestrian or bike rider is at least five times as likely at 50km/h and twice as likely to occur at 40 km/h than at 30 km/h[4].

Facts about the risk of death if pedestrians are hit by a car

Based on World Health Organisation 'Speed Management Manual'



Guide for establishing the suitability of cycling infrastructure based on traffic speed and volume

Cyclist facility	Traffic volume (vehicles per day)			85th percentile traffic speed		
	<3,000	3,000-5,000	>5,000	<40 km/h	50-50 km/h	>50 km/h
Mixed traffic	✔			✔		
Consider separation		✔			✔	
Separation			✔			✔

[4] Safe-Street Neighbourhoods: the role of lower speed limits - 2019 Update WA & NSW (Dick van der Dool, Paul Tranter, Adrian Boss)

Applying Best Practice Design Principles

The CROW Design Manual for Bicycle Traffic, which has incrementally been developed since the 1970s in the Netherlands, sets out a series of bike-friendly design principles: cohesion, directness, safety, comfort and amenity.

These principles will be used when designing our walking and bicycle network and are important if we are to capture our target 'Interested but concerned' bike rider category and get more people walking for recreation and transport.

Cohesion

- Connect origins and destinations, walking and bike riding from anywhere to everywhere.
- Plan a cohesive network linking together walking and bicycle routes that are easy and safe to navigate.
- Build a walking and bicycle route may entail a separated bike path and footpath, a shared use path, and/or a quiet street.

Directness

- Create short and efficient routes, minimising detours and effort.
- Priorities directness for a pedestrian and bike rider, avoiding detours and reducing distance and time.

Safety

- Provide safe walking and bicycle infrastructure that avoids differences in speeds and obstacles, and where possible segregate different movement types.
- Ensure passive visibility both day and night with adequate lighting and clear of blind spots.
- Establish safe road crossings at intersections and directional signage.

Comfort

- Provide pleasant walking and bike riding experiences with minimal stops or nuisances and cater for people of all abilities.
- Provide smooth surfaces to reduce vibrations, reducing traffic and exposure to pollutants/noise.

Attractiveness

- Provide quality streetscapes that are green, open and well maintained.
- Improve local amenity with elements such as landscaping, street trees, lighting, areas for rest, water fountains and street art to make the route interesting.

Enhancing neighbourhood character

Across a range of projects, the Council has found greater community support for local change when the investment isn't limited to hard infrastructure, but include elements which add to the character and amenity of local streets.

Recent projects such as Norman Terrace and Richards Terrace Living Streets, Young Street driveway links, Rugby-Porter Bikeway intersection upgrades and Wood-Weller Bikeway slow points have all made positive impacts to create a greener local street, in conjunction with improved local road conditions for people walking, bike riding and driving.

The integration of design features, and where appropriate, the opportunity for the community to influence the final design outcome, help to elevate infrastructure projects that target ease of movement, connectivity, and reduction in vehicle speed or volume, into more appealing streetscape projects that shape the local neighbourhood.

Design features could include:

- New tree planting and garden beds
- Temporary or permanent street art
- Change in road widths and kerb profile
- Improved lighting and wayfinding signage
- Additional street furniture.

In addition to designated projects, the Council's annual streetscape renewal and response programs provides small scale opportunities to enhance neighbourhood connectivity by improving footpath conditions across the network.

Renewal should consider:

- Enhancements to footpath segments to achieve DDA compliance, including pram ramp / street corners
- Infill tree planting to extend shade canopy over footpaths (planting techniques to avoid future lifting of pavers by root systems)
- Opportunities for continuous footpaths.

The Council will review the asset assessment and renewal of footpaths, in conjunction with other streetscape assets, to establish improved standards of safety and comfort to inform future. investment.

Applying a staged project approach

The City of Unley, over the last five years, has had success delivering walking and cycling projects, such as the Rugby-Porter and Wood-Weller bikeways, when delivered in multiple stages and allowing for adequate time to consult with the community, develop a design and construct.

This staged approach (summarised in the diagram to the right) can extend a project over three to four years from start to finish, but it does assist in achieving better design and community outcomes by spreading expenditure over multiple financial years, improving residents' and/or business acceptance of a project after seeing the outcome of earlier stages, lessons learnt from prior stages can be applied and allows multiple priority projects to be implemented concurrently.

Concept design

- Pedestrian and bike rider data collection (before)
- Streetscape conditions assessment (before)
- Overall corridor master plan
- Concept design options and assessment (staged)
- Elected Member endorsement of preferred concept design option(s) for consultation

Consultation

- Community and key stakeholder consultation
- Analysis of consultation feedback
- Elected Member endorsement of preferred concept design option for detailed design
- 'Close the loop' with Community and key stakeholders

Detailed design

- 100% detailed design and documentation
- Prepare traffic impact assessment
- Prepare cost opinion
- Align staging with asset management plan renewal program of streetscape elements
- Prepare budget bid for Elected Member endorsement for construction

Construction

- Undertake tender to deliver works
- Community notification of works
- Construction of works

Project review

- Pedestrian and bike rider data collection (after)
- Undertake review of project after minimum 6 months post completion

Reviewing projects on completion

On completion of a project, it is considered important that a review is undertaken. Best practice suggests that a review should not take place until at least 6 to 12 months post project completion to provide adequate time for people to adjust to the new environment.

The aim of the review is to ensure that the project meets the design intent, and to establish a strong evidence base of what works and what doesn't work.

The project review outcomes will also improve residents' and/or businesses' acceptance of a project, and assist the delivery of projects that are staged, by using the evidence base for the consultation and delivery of future project stages and applying lessons learnt/ improvements to the design.

Case study: Wood-Weller Bikeway improvements

Background

The Wood-Weller Bikeway (the route) is a key north-south bicycle route with links to the City of Mitcham to the south, Charles Walk/Glen Osmond Trail to the east and the Mike Turtur Bikeway to the north. The route sits between Goodwood Road and King William Road.

The route has been progressively improved since 2016, commencing with Wood Street and most recently with Weller Street in 2020. This case study reviews the improvements made to Weller Street.

Need for improvement

The Council wants to encourage a greater bicycle mode share. Progressive improvement can be achieved with delivery of connected and safe routes where, for example, less confident bike riders and families with young children would feel safer and more comfortable to ride.

Weller Street is a mixed traffic environment with pre-project traffic volumes and speeds that did not meet desired safety goals for the route including traffic speeds up to 47 km/h and traffic volumes up to 2,300 vehicles per day.

Design

The new design incorporated an upgrade to the Mitchell Street intersection and connection to Wood Street, plus new traffic calming interventions along Weller Street, with the installation of seven single lane slow points set approximately 100 metres apart and new line marking and signage. Each slow point has a bypass for people bike riding.

Community consultation was undertaken with significant feedback received, including a petition opposed to the project. Potential for benefit compared to impact on local residents, on street parking loss (24 spaces) and traffic congestion were key concerns for the community.

Council, despite the mixed local community views, continued with the project as they identified the importance of the bicycle link in the context of Unley's bicycle network, and the need to provide a safer and low stress alternative to King William Road.

Review outcomes

Upgrade works were completed in 2020 and a post-construction review undertaken in 2021. Key review outcomes were:

- A 22% reduction in traffic speed to below 40km/h and 31% reduction in traffic volumes to below 1,500 vehicles per day (the general threshold points for a safe bicycle route).
- On street car parking occupancy between 20%-27%, despite the loss of 24 spaces.
- An average of more than 200 bike riders daily with up to 93% using the bicycle bypasses at the slow points.
- Observed good behaviour of drivers at slow points giving way to one another.
- Technical learnings were obtained on the siting of slow points, signage, landscaping and maintenance.

Due to the success of this project, Council will continue with the delivery of the Wood-Weller Bikeway, with the next section on Weller Street (north of Albert Street) and Simpson Parade planned to be delivered in 2022.

Walking and Cycling Priority Actions

To achieve the vision of more people walking and bike riding for transport and recreation purposes for people of all ages and abilities, and to maintain the Council's momentum for change, over the next five years Council will be focusing on three key priority areas:

A. Infrastructure

B. Promotion and education

C. Data collection, monitoring and evaluation

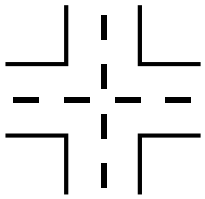
Funding will be sought each financial year through the Annual Business Plan to deliver on these priority areas and associated actions.

Where possible, projects will be aligned with asset renewal to achieve greater funding efficiencies and better design outcomes.

In addition, external funding sources will be pursued with the State and Federal Governments, as appropriate, to assist in offsetting costs to Council.

A

Infrastructure



A1. Improve and extend the walking and bicycle network

A2. Improve walking and bicycle facilities

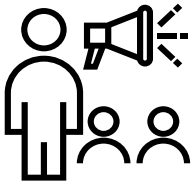
A3. Improve walking and bicycle infrastructure around schools and support active travel to schools

A4. Improve walking and bicycle connections to neighbouring councils

A5. Establish high quality street design standards

B

Promotion and Education



B1. Promote and encourage walking and bike riding

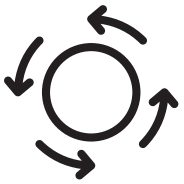
B2. Develop educational material to support walking and bike riding so that it becomes a daily activity

B3. Improve navigation of Unley's walking and bicycle network

B4. Support new emerging micro-mobility technologies

C

Data Collection, Monitoring and Evaluation



C1. Invest in data collection

C2. Invest in project reviews, monitoring, and continuous improvement

A Infrastructure

A1. Improve and extend the walking and bicycle network

A 1.1 Continue to improve and extend the walking and bicycle network

Over the last five years, the following, primary north-south walking and bicycle routes, have been improved:

- Rugby-Porter Bikeway
- Wood-Weller Bikeway
- East Avenue (buffered bicycle lanes)
- Duthy Street (buffered bicycle lanes)
- Mike Turtur Bikeway between Musgrave Street and King William Road.

These strategic walking and bicycle routes make it safer and easier for people moving through the City of Unley and beyond, and are popular for commuters and recreational walkers and bike riders.

Nine new pedestrian crossings/ refuges have also been built with a focus on sites adjacent to primary schools and along the key walking and bicycle routes.

The next five-year priority projects will focus on:

- Delivery of east-west walking and bicycle routes to help achieve a connected city-wide network.
- Improve connections to existing walking and bicycle routes that have received recent investment.
- Improve walking and bicycle connections, and quality of streetscape environment, to planned arterial road intersection upgrade projects led by the Department for Infrastructure and Transport (DIT) and neighbouring councils.

Pedestrian improvements to be considered for each project to create a safe, accessible and comfortable environment will include (but not limited to):

- Ease of pedestrian accessibility (universal access for all).
- Install safe pedestrian priority crossings at key locations and create good public transport connections.
- Install public seating, drinking fountains, and consistent wayfinding signage.
- Increase shade tree planting and landscaping (including WSUD opportunities).
- Identify opportunities for public art.

Improvements will also aim to remove obstacles and pinch points along footpaths, and widen footpaths where possible. This may include reclaiming underutilised street space, as well as alternate placement of street trees.

To support this action Council will advance the following priority infrastructure projects over the next five years (and as shown on the map overleaf):

P1 Mike Turtur Bikeway (King William Road and Railway Terrace South)

P2 Wood-Weller Bikeway

P3. Leader Street Secondary On-Road Bicycle Route

P4 Young Street Neighbourhood Bicycle Route

P5 Wilberforce Walk

P6 Jellicoe - Ningana Avenue Neighbourhood Bicycle Route

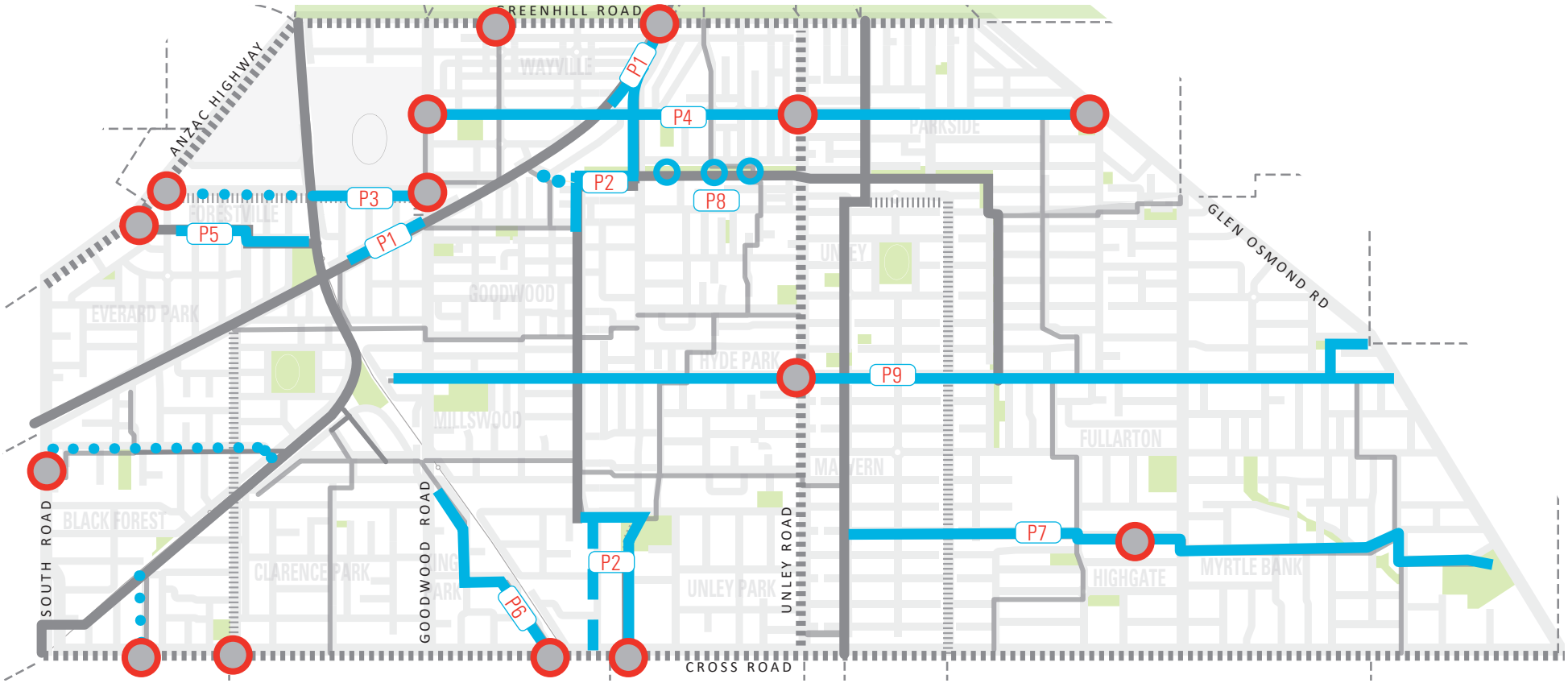
P7 Unley to Myrtle Bank Neighbourhood Bicycle Route

P8 Charles Walk intersection improvements

P9 Wattle - Park - Mitchell Street Neighbourhood Bicycle Route

A more detailed description for these projects is included in the **Appendix**.

Priority walking and cycling projects for 2022-2027



Priority walking and bicycle route upgrade projects

- P1 Mike Turtur Bikeway (King William Road, Railway Terrace South)
- P2 Wood-Weller Bikeway (Weller Street-Simpson Parade, King William Road, Wood Street to Cross Road connection)
- P3 Leader Street Secondary On-Road Bicycle Route
- P4 Young Street Neighbourhood Bicycle Route
- P5 Wilberforce Walk Stage 2 and Stage 3
- P6 Jellicoe Avenue - Ningana Avenue Neighbourhood Bicycle Route
- P7 Unley to Myrtle Bank Neighbourhood Bicycle Route
- P8 Charles Walk Intersection Improvements
- P9 Wattle-Park-Mitchell Street neighbourhood Bicycle Route

Identified priority arterial road crossing points and inter-regional connections for pedestrian and bicycle improvements

Possible additional priority projects subject to further investigation and/or State Government partnership funding opportunities.

A1.2 Continue to work with the asset management team to enhance footpath renewal projects

Although this Plan has identified nine key walking and cycling routes to focus on over the next five years (P1 to P9). It is acknowledged that every street should be safe and accessible for people to walk along.

Council will continue to be responsive to address local footpath issues as they arise, as well as identify opportunities to upgrade footpaths and crossing points as part of planned asset renewal works undertaken each year.

Council is currently undertaking a comprehensive audit of the City of Unley's footpath network to create a long-term plan on footpaths that require upgrading, and renewal, as well as maintenance improvements to make the pedestrian network safer and more accessible for all the community. The audit also includes an assessment of each path and associated kerb ramps for compliance with current accessibility standards.

The image shown to the right is an example of a footpath upgrade on Unley Road between Opey and Hart avenues, forming part of asset renewal works. The footpath was upgraded to meet a higher standard to improve the amenity of Unley Road and the walking experience.

A1.3 Advocate for lower speed limits on DIT arterial roads that experience high pedestrian activity

In the City of Unley area there are a number of main streets / activity zones located along high speed and high traffic arterial roads, such as Goodwood Road between Albert Street and Goodwood Road and Unley Road between Marion Street and Thomas Street.

Council will continue to advocate to DIT to lower the speed limit on these sections of roads to improve safety for pedestrians and support increased activation for local businesses and safer outdoor dining activity.

A1.4 Identify opportunities to improve on-street navigation of City of Unley's walking and bicycle network

As part of the delivery of the Walking and Cycling Plan 2016-2021 Council implemented city-wide wayfinding signs and on-street bicycle symbols to improve the navigation of its walking and cycling network.

Signs are key components in a legible public realm and can add to the character and identity of an area if applied in a consistent manner that aligns with the character of Unley streets and open spaces.

It is acknowledged that further work is required to improve our on-street signage and navigation of the City's walking and cycling network. Innovative and creative signage ideas will be explored.

A2. Improve walking and bicycle facilities

Improving the walking and bicycle network is a key element in increasing mode share, however, it is important to provide suitable facilities to aid comfort and enjoyment for people to help change their travel behaviour. Emerging practice in recent years has seen a greater need to provide mid-journey and end-of-trip facilities including bicycle parking, bicycle repair stations, bicycle pumps, seating/rest areas, and drinking fountains.

To support this action Council will:

A2.1 Develop and implement an annual bicycle parking program to better support key hubs, community facilities, and businesses

Design considerations for bicycle parking comprise:

- Connect to existing and proposed bicycle routes.
- Positioned in areas of high visibility for security and awareness.
- Avoid steep ramps, kerbs, conflict points with vehicles and pedestrians.
- Enough space for movement of bicycles.
- High quality materials, standardised forms and easy installation.
- Reduced footpath clutter.

Council will undertake a review of all of its community facilities, tram and train stops, and open spaces (as depicted in the 2015 City of Unley: Open Space Strategy) to review current provision, quality and condition, and to assess improvements to existing bicycle parks and the need for new bicycle parking facilities.

The Unley Bicycle User Group (Unley BUG) and business precinct groups will be consulted for their views on parking provision and design.

A trial will be considered in higher volume pedestrian areas (such as retail/entertainment/business precincts and/or main streets) with narrow footpaths to replace on-street car parking space(s) with bicycle parking. This was successful in several locations in the City of Adelaide (Pirie Street and Hyde Street) and in the City of Holdfast Bay (Colley Street). It will provide an effective demonstration to local businesses and the local community, like the Parklet Program, previously hosted on King William Road.

A2.2 Develop and implement an annual program for the installation of public seats/rest areas and water fountains

As part of the annual asset renewal/capital works program, a review of existing public seats and water fountains will be undertaken. Opportunities to relocate or provide new public seating and drinking fountains along key walking and bicycle routes will be identified as part of this program, as well as through new projects. A focus for new public seats/rest areas and drinking fountains will be for the priority infrastructure projects P1 – P9.

Opportunities to partner with SA Water's Bring Your Own Bottle (BYOB) Smart Drinking Water Fountain program will also be identified, to provide bottle refill stations.

A2.3 Identify opportunities to install public bicycle repair stations and pumps

Up to two locations will be identified to install a public bicycle repair station and pump to allow bike riders to easily complete on-the-go repairs. The locations will be on high volume and popular bicycle routes and located for good passive surveillance. The use of robust and replaceable materials and fixtures will be a key consideration to minimise maintenance requirements and costs, as well as ensure that the facilities are always accessible for bike riders.

A2.4 Advocate for the provision of safe, accessible, and well-designed end-of-trip facilities for visitors and workers in all new medium to high density developments

All new medium to high-density residential, commercial, or mixed-use developments should provide bicycle end-of-trip facilities for development users and visitors. It is often observed that the inclusion of these facilities is an afterthought, poorly located, and of poor quality. As part of future Planning Code Amendments, other strategic or statutory planning work and approval processes, Council staff will continue to advocate for best practice and high-quality end-of-trip facilities that incorporate secure lockers, secure and user-friendly bicycle parks, and showers. The potential for charging stations for e-scooters and e-bikes will also be investigated.

A2.5 Develop a set of guidelines to be incorporated into the Events Toolkit to better support people choosing to bike ride to community events and activities

A review of all Council run events and activities will be undertaken to identify the changes needed to better support people choosing to access these destinations by bike. Unley BUG and key event organisers will be consulted for their experiences, and requirements.

A2.6 Investigate and improve lighting along key routes and other higher night time demand walking and cycling areas

Undertake a review of existing lighting conditions along existing key routes to identify current conditions, and identify where further lighting would be beneficial. Based on the review outcomes, prepare a lighting improvement program that will improve personal and road safety.

A3. Improve walking and bicycle infrastructure around schools

Physical activity is important for the growth and development of children. Only 19.4% of Australian children aged 5 and 17 years achieve the recommended 60 minutes or more of physical activity each day[5]. Research indicates that incidental physical activity such as walking and bike riding to local destinations such as schools, play an important role in children meeting the recommended levels of physical activity.

In recent decades, rates of active travel by Australian children have declined markedly. In the 1970s the majority of children walked or rode a bike to school, but currently, most children are driven to school. This is predominately due to safety concerns.

To support more children to walk and bike ride to and from school, Council has consistently worked in collaboration with DIT and interested local schools on delivering the Way2Go program, with the aim to:

- Encourage children and the community to safely walk, bike ride or scooter, and use public transport for personal travel.
- Support students to be safe walkers, bike riders and passengers.
- Promote safe, people-friendly streets near schools to support independent personal travel.
- Support school road safety education practices.

The City of Unley has 14 schools, of which eight have participated in a Way2Go program, with seven of those having had some engagement in the program over the last five years.

To support this action Council will:

A3.1 Continue to partner with DIT and local schools to deliver the Way2Go program

Council will continue to partner with DIT to deliver at least one Way2Go program per year, and assess and fund localised safety infrastructure improvements to encourage more students and parents/ caregivers to walk and bike ride to/from school.

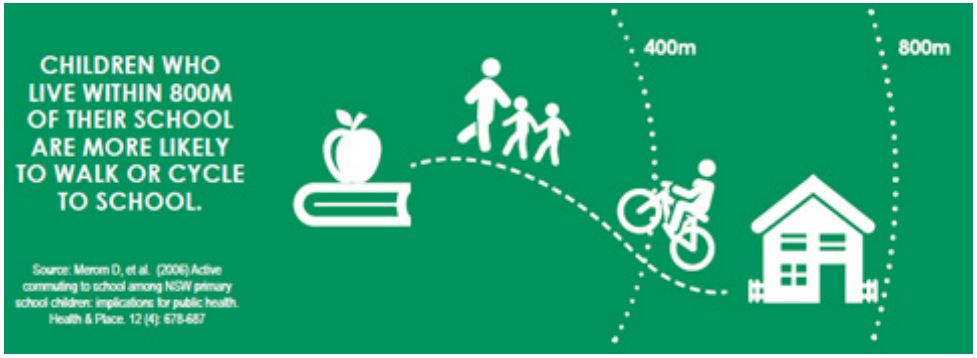
A3.2 Undertake an assessment of streets within an 800m catchment of Way2Go participating schools

When undertaking the Way2Go program with a school and assessing safety, typically a strong focus is on improving walking and bicycle facilities on the streets bounding the school only. If we want more people to walk and bike ride, we need to look beyond the streets bounding the school and assess all of the streets within a broader 800 metre catchment of the school.

An assessment will therefore include the identification of popular walking and bicycle routes taken daily to school, and identify a range of improvements that could be undertaken to increase the safety, efficiencies, and comfort of the journey to school. Improvements could include (but are not limited to):

- Install wayfinding signage.
- Improve footpath condition and removal of 'pinch points'.
- Increase shade tree planting.
- Upgrade pram ramps at intersections.
- Manage local speeds, traffic volumes and on-street parking.

The assessment will inform works to be undertaken as part of Council's future asset renewal scope of works and/or new capital projects.



Source: Draft South Australian Walking Strategy 2022-2032

Case study: Local street improvements at Highgate School

Background

This case study reviews local street improvements delivered as part of the Way2Go program for Highgate School. This was a collaboration between the City of Unley, Highgate School and DIT. Highgate School is a zoned Reception to Year 6 primary school with an enrolment of about 745 students. The school enrolment zone crosses Fullarton Road.

Way2Go is a State Government program promoting safe, green and more active travel for primary school students.

Need for improvement

As part of the early partnership work, the Highgate School community undertook a travel survey showing that 64% of students were driven, 21% rode/scooted and 17% walked to school. Walking and bike riding levels were good, however, it was considered active travel could be further increased through pedestrian safety improvements on local streets around the school.

The school is bordered by three local streets with a posted speed limit of 40km/h, plus 25km/h School Zones (with the busier Cross Road close to the south). Two local streets (Avenue Road and Hampstead Avenue) had average traffic speeds over 40km/h, with associated unsafe driving behaviour sometimes observed during school pick up and drop off times. Young children (in particular Reception to Grade 2) were observed crossing in an uncontrolled manner on Hampstead Avenue, with high safety risk in particular around the intersection with Euston Avenue.

Design

Council worked in collaboration with the school and DIT to identify, plan, and implement improvements.

The key improvements were the construction of kerb buildouts for a safer pedestrian crossing point on Hampstead Avenue (next to the early years entry), an upgrade to pedestrian fencing on Avenue Road, and amending the Left Turn Ban controls on Cross Road to Hampstead Avenue. Council also made changes to on-street parking controls.

Council undertook community consultation on recommended improvements. There was general support for the proposed works and changes to parking controls.

Review outcomes

The project was completed in mid-2021 and Council is waiting for an appropriate timeframe (around one year) to then undertake a formal review of the outcomes. Initial site observations indicate high use of the crossing on Hampstead Avenue with good behavioural change and cessation of young children crossing the road in an uncontrolled manner.

A4. Improve walking and bicycle connections to neighbouring councils

The Council is committed to improving the safety, efficiency, and amenity of the local street network to encourage more people to walk and bike ride. To realise the maximum benefit of our investment however, we need to build stronger strategic partnerships with the State Government and neighbouring Council's to ensure our bicycle routes can extend directly to surrounding neighbourhoods, Adelaide Park Lands and beyond.

The work of the State Government in the last five years to establish signalised crossing points on Greenhill Road, and on Cross Road, has provided critical infrastructure that has extended the impact of the Rugby-Porter Bikeway north and south, making it a popular regional designated bikeway route between the City of Mitcham and the City of Adelaide.

To support this action Council will:

A4.1 Advocate and identify partnerships with neighbouring Council's and State Government to establish safe and efficient crossing points on major arterial corridors

To extend the designated 'regional' walking and bicycle routes identified in the City of Unley area into neighbouring Council's and the Adelaide Park Lands, safe and efficient pedestrian and bicycle crossing points are required to be established on major arterial road corridors that frame the boundaries on all sides of the City of Unley, as well as the north/south arterial roads that cut through key quadrants of the City.

Without recognisable crossing points, the designated 'regional' walking and bicycle routes lack safe and effective connections that will get more people walking and bike riding for transport and recreation purposes. Partnerships are required with State Government, in coordination with neighbouring Council's to prioritise, and invest in major infrastructure associated with new designated pedestrian / bicycle crossing points. Within the City of Unley, this also includes crossing of train and tram lines.

The following are noted as priority locations over the next five years+ for State Government and Council investment in establishing regional connections:

- King William Road, Greenhill Road and Peacock Road intersection (forms part of Mike Turtur Bikeway)
- Cross Road and Victoria Avenue or Whistler Avenue intersection (forms part of Wood-Weller Bikeway)
- Leader Street and Goodwood Road intersection (forms part of Leader Street Secondary On-Road Bicycle Route)
- Leader Street and Anzac Highway intersection (forms part of Leader Street Secondary On-Road Bicycle Route)
- Glen Osmond Road and Young Street Intersection (forms part of Young Street Neighbourhood Bicycle Route)
- Unley Road and Young Street intersection (forms part of Young Street Neighbourhood Bicycle Route)
- Goodwood Road and Young Street intersection (forms part of Young Street Neighbourhood Bicycle Route)
- Anzac Highway and Wilberforce Walk connection (forms part of Wilberforce Walk)
- Cross Road and Jellicoe Avenue intersection (forms part of Jellicoe Ave - Ningana Ave Neighbourhood Bicycle Route)
- Fullarton Road, Ferguson Avenue and Winchester Avenue intersection (forms part of Unley to Myrtle Bank Neighbourhood Bicycle Route)
- Unley Road, Park Street and Wattle Street intersection (forms part of the Wattle-Park-Mitchell Street Neighbourhood Bicycle Route)
- Greenhill Road and Joslin Street intersection (connects with Adelaide Park Lands)
- Cross Road, East Avenue and Winston Avenue intersection (forming part of East Avenue Secondary On-Road Bicycle Route)
- Cross Road, Homer Road and Clovelly Avenue intersection (connects Flinders-City Bikeway to Marino Rocks)
- South Road at Black Forest Primary School (forms part of Forest Avenue Neighbourhood Bicycle Route)

In addition, the Council will continue to advocate for greater prioritisation of walking and bicycle facilities within major infrastructure projects planned for the City of Unley, including the North-South

Corridor, as well as changes to Fullarton Road and key intersections along its length or other projects identified as part of the Integrated Planning Partner Program (such as Corridor Plans).

A4.2 Advocate to State Government to reduce wait times at traffic signals

The extent of time that pedestrians and bike riders are required to wait at lights to cross at designated crossing points can have a significant impact on the competitiveness of the designated walking and bicycle routes across Unley and beyond. Currently, wait times during peak periods can be extended to the detriment of the effectiveness of those choosing to walk or ride in place of commuter vehicles.

Further collaboration with the State Government is required to better understand the phasing of traffic signals along key corridors to enable more responsive change, in order to achieve reduced wait times and safer crossing behaviours, without compromising peak traffic volumes.

In addition, greater consideration is required to support weekend movement patterns, which can differ from weekday (on and off-peak) times in programming and responsiveness.

A5. Establish high quality street design standards

Over the last several years, the City of Unley has undertaken a variety of improvements to local streets in support of safer walking and bike riding, and improved neighbourhood amenity.

These treatments have been tested over time to assess their effectiveness, and lessons have been learnt in the design, construction, and ongoing maintenance of various treatments.

Documenting these learnings into a street design standard will support the implementation of more consistent and cost-effective walking and bicycle infrastructure across Unley.

To support this action Council will:

A5.1 Develop street design standards that supports pedestrian and bicycle friendly street environments

The design standards will include:

- A suite of standard design treatments and approaches 'kit of parts' for different street types, traffic volumes and widths (including intersections).
- Best practice approaches that put people first (this includes installing separated bicycle facilities and priority pedestrian crossings that have shown great success locally, nationally, and internationally).
- Best practice approaches for traffic calming by integrating landscaping, street trees, Water Sensitive Urban Design (WSUD) etc.

Standardised treatments will help promote a cohesive character and a sense of place within the City of Unley, as well as instill community confidence that new treatments will meet functional requirements under demanding conditions.

Case study: New crossing on Oxford Terrace

Background

This case study reviews the installation of a new crossing point on Oxford Terrace adjacent to St Spyridon College and Church.

Need for improvement

Oxford Terrace is a local road that carries more than 2,400 vehicles per day and has a direct connection to Unley Road. There is a high parking demand and turnover along the street associated with people accessing the school, early learning centres, Unley Civic Centre, Town Hall, Library and local businesses and services. Some pedestrians have trouble safely crossing the road due to the high volume of traffic and parking.

A Local Area Traffic Management (LATM) Plan identified a need to provide safe walking facilities for children crossing Oxford Terrace between Unley Road and Rugby Street.

In 2019, St Spyridon College and its student community sought the installation of a crossing point adjacent their school to facilitate movement across Oxford Terrace to the Village Green, Unley Civic Centre, Library and car parking on the southern side of the street.

Design

To assist with safe pedestrian crossings of the street, the new treatment consisted of narrowing the road though the use of landscaped kerb build-outs. The width of the carriageway has been reduced from 12.0 metres to 6.5 metres and the build-outs provide improved visibility between people driving and walking.

Review outcomes

Upgrade works were completed in 2020 and a post-construction review was undertaken in 2021. This review identified that the highest number of crossings along Oxford Terrace were made at this new point (approximately 196 per day). Informal crossings were still undertaken along Oxford Terrace, although the focus of student movement was around this point.

The review also found that the new crossing and recent treatments at the Rugby Street intersection (as part of the Rugby-Porter Bikeway improvements) assisted in lowering traffic speed along this road section, providing additional benefit.

B Promotion and Education

B1 Promote and encourage walking and bike riding

A holistic approach is required to get more people walking and bike riding for transport and recreation purposes. Education, promotion, and encouragement programs will give the community the tools they need to take up walking and bike riding in greater numbers, particularly if supported by improved walking and bicycle infrastructure.

Council recognises that to deliver effective education and promotion programs, partnerships with key stakeholder groups will be required including schools, businesses, and advocacy groups, such as Unley BUG.

Council values the work of Unley BUG to encourage more people to bike ride across the Unley area, and their advocacy to improve bicycle conditions and infrastructure. Council aims to build on this relationship to engage more broadly with the community.

To support this action Council will:

B1.1 Develop a communications strategy to promote the value of walking and bike riding

Cars are a major source of greenhouse gas pollution in Australian cities. Transport is Australia's third largest source of greenhouse gas emissions per year, 17% of emissions. Transport emissions have grown more than any other sector, increasing nearly 60% since 1990[6]. More people walking and bike riding will significantly help to reduce greenhouse gas emissions in the Unley area, being net zero emission transport options.

In addition, South Australians, due to longer working hours and increasing sedentary work practices and hobbies are becoming less active, with only 47% of South Australian adults meeting the recommended activity levels of 30 minutes of moderate exercise most days[7].

Council will develop a set of key messages to promote the benefits of walking and bike riding including social, health and environmental factors, that can strategically and consistently be shared through a variety of print and digital initiatives, including Council's social media, articles within Unley Life and the Council website, as well as promoted on Council signage / banner and other infrastructure across the city.

The expectation would be that Council would undertake 1 to 2 campaigns per year promoting the value of walking and bike riding.

B1.2 Promote and encourage walking and bike riding to school

Through the Way2Go program Council will continue to work in partnership with schools and DIT to support the delivery of DIT led behaviour change programs, such as Way2Go Bike Ed and walking and cycling journey route planning. Way2Go Bike Ed provides bike education lessons for primary school students in years 4 to 6 with a priority target group in years 5 and 6 (10 -12 years). Through the program, students gain knowledge and understanding of bicycle road rules, and develop confidence and understanding to safely ride. Partnerships with Unley BUG and local bicycle businesses will also be explored to provide support to the school and parents/students with cycling journey planning and /or maintenance courses.

Council will also work with schools to encourage and support other school led initiatives such as 'walk bus' or 'ride bus', as well as proposals for 'car-free' zones adjacent to school drop-off areas. A 'walk bus' or 'ride-bus' is an organised group of school kids that walk or ride together to school, who join at organised 'bus' stops and are led by an adult 'driver' at the front and an adult 'conductor' at the rear. These are great initiatives, that not only get more students walking and bike riding to and from school, but they also support the school in creating a greater sense of community and safety,

Council will also actively continue promoting National Ride2School Day and Walk to School Week, which are annual initiatives to promote active travel by school students.

B1.3 Promote and encourage walking and bike riding to work

Council will identify opportunities to engage with interested local businesses on travel behaviour initiatives that encourage a greater number of workers to walk, bike ride, catch public transport and/or e-scoot to work.

This could include the establishment of incentive and/or promotional programs that businesses could use to encourage their workers to consider more sustainable and active transport choices. Based on 2016 ABS Census data 18.1% of people who work in Unley, also live in Unley, therefore there is significant opportunity to get more people commuting to work using active transport.

Partnerships with Unley BUG, Bike SA, Bike Adelaide and/or local bicycle businesses will also be considered to deliver bicycle user support programs to interested local businesses, such as bicycle maintenance and education classes.

Council will also actively continue promoting National Ride2Work Day.

B2 Develop education material to support safe walking and bike riding

To support this action Council will:

B2.1 Develop and implement shared use path etiquette signage

Council will continue to roll out shared use path etiquette signage to encourage good behaviours by all users. Messaging will be focused on 'share with care', 'slow down' and 'keep left'. Fun and interactive approaches will be considered to get people to engage with the messaging. Examples of current signage prepared for Mike Turtur Bikeway and Glen Osmond Trail is shown below.

B2.2 Develop communications on walking, cycling and e-scooter road rules

Council will promote cycling and e-scooter road rules to support 'good' behaviours by all road users and encourage people driving, riding, walking and / or e-scooting to be more considerate of one another, and have positive interactions. If all people using the road look out for one another, and are more respectful, people are more likely to consider active transport as a preferred way to get around.

State Government publish a Cycling & The Law handbook, which Council will use as a base to prepare materials that promote and educate on better behaviours between all users on the road and shared use paths.

Examples of signage prepared for Mike Turtur Bikeway and Glen Osmond Trail

B3 Improve navigation of Unley's walking and bicycle network

To support this action Council will:

B3.1 Continue to provide updated walking and bicycle network maps

Council regularly updates its walking and bicycle network map to ensure it is up to date and relevant. Council will continue to update the map as required to reflect changes to the network.

B3.2 Identify opportunities to implement smart / app-based wayfinding

Good wayfinding makes it easier to walk, bike ride and use public transport, resulting in more liveable and accessible communities. On-street signage plays an important role, however, other innovative and smart technology approaches to delivering wayfinding in Unley will be explored. For example, adding QR codes to bicycle racks or public seats located at key locations that links to a map of Unley's walking and cycling network.

B3.3 Collaborate with neighbouring Councils to highlight regional walking and bicycle routes

Council will collaborate with neighbouring councils to cross-promote regional walking and bicycle routes for commute and recreational purposes. This could be in the form of maps, social media and events.

B4 Support emerging 'micro-mobility' technologies

The emergence of new 'micro-mobility' technologies make active travel more attractive to a wider proportion of the community. E-bikes and e-scooters can address barriers such as topography, ability, and distance. These environmentally friendly technologies can make walking and bike riding more feasible to a more diverse community group.

To support this action Council will:

B4.1 Promote the benefits of e-bikes

Council will work with Unley BUG and local bike businesses to promote the benefits of e-bikes. E-bikes have many benefits, and are a great option for people who need to travel longer distances, do not consider themselves as 'fit' or feel confident to bike ride. It is important to demonstrate how everyday activities such as shopping and accessing community facilities can be cheaper and more efficient by bicycle than using a car.

B4.2 Undertake an e-scooter trial in the Unley area

Council commenced an e-scooter trial in February 2022 in the City of Unley area. The primary aims of the trial are to:

- Provide a sustainable, alternative, and competitive mode of transport to replace short vehicle trips in Unley and to/from the Adelaide CBD.
- Provide residents and workers with the opportunity to travel more easily east-west across Unley to/from key entertainment, business, and community precincts.
- Provide improved first mile/last mile connections to/from key public transport nodes and destinations.
- Provide greater transport choices to special events.
- Collect data to better understand movement patterns within Unley.
- Support DIT in the evaluation of e-scooters in an inner-rim suburb environment.
- Support increased opportunities for economic development and business partnerships.

The duration of the trial was initially for six months, with the option to extend for a longer period if successful.

Council, at its meeting held on the 25 July 2022, endorsed an extension of the e-scooter trial up to February 2023. As part of the trial extension the key aims will be to implement and test measures to improve e-scooter parking behaviours and increase education on good e-scooter riding behaviours and road rules.

Other current South Australian e-scooter trials include City of Adelaide, Norwood, Payneham and St Peters and Coast Park Trail Trial.

E-scooter law in South Australia prohibits personal electric scooters from riding in public.

C Data Collection, Monitoring and Evaluation

C1 Invest in data collection

Council has progressively sought to target local pedestrian and bicycle data associated with key projects, but has limited reliable city-wide data, with the exception of the Super Tuesday count that is collected on average every 4 to 5 years.

An increase in investment in the collection of consistent pedestrian and bicycle data will help better understand travel patterns by people walking and bike riding, and identifying what changes occur with delivery of new infrastructure, as well as the impact of other promotional and education initiatives to drive behaviour change.

Counts also help Council understand growth patterns and seasonal trends.

To support this action Council will:

C1.1 Identify funding opportunities in partnership with State Government to install permanent pedestrian and bicycle counters

There are currently no permanent pedestrian and bicycle counters located in the Unley area. Council staff will identify funding opportunities in partnership with State Government to install more permanent pedestrian and bicycle counters on key designated bikeway routes.

Opportunities to incorporate permanent counters with a real-time visible display will also be explored, similar to the bikeway counter installed on the City North-South Bikeway on Frome Street in 2018 (image below). This bikeway counter shows real-time data about the number of users per day, month, and annum, and helps track targets in a positive and transparent way.

C1.2 Increase the collection of local pedestrian and bicycle counts

Council will aim to collect pedestrian and bicycle counts at up to three locations annually in a consistent manner, to support project design development and the preparation of project reviews (before and after assessment).

In addition, Council will review its existing on-road data capture techniques to identify opportunities to expand the approach to include both pedestrian and bicycle movements.

C1.3 Continue to undertake the Super Tuesday bike count

Council will maintain its roles in the Super Tuesday bike count in partnership with Bicycle Network and Unley BUG, with the next whole of Council count scheduled for 2025 (four years from the last count). In addition to data capture, Council will report on changes in data and behaviours, from the comparison of every four-year count.

C1.4 Undertake research into practical smart mobility solutions to better understand walking and bike riding patterns in the Council area

Smart solutions are rapidly evolving with better use of individuals own private technology (e.g. mobile phones), as well as public smart city infrastructure to build a real-time walking and bicycle network.

In some main street and regional level open space, Council has invested in smart city infrastructure to support real-time user communication, behaviour change, and to better tailor Council services / maintenance. Lessons learnt from these early initiatives should encourage greater confidence to integrate smart technologies into the planning, data exchange, and investment in bicycle infrastructure across the City.

C.1.5 Incorporate walking and cycling questions into the Community Indicators Survey.

Council will incorporate walking and cycling questions into the Community Indicators Survey to better understand why people do and don't participate in walking and bike riding activities.

C2 Support project reviews, monitoring, and continuous improvement

To grow the walking and bicycle network, the Council will need innovation in the planning and design of its streetscapes to create an environment that encourages the 'Interested, but concerned' bike riders to feel confident to ride or walk in place of the car. A focus on continuous improvement will support innovation and the ability to test, adapt, and scale outcomes to manage risk and maximise greater community benefit.

To support this action Council will:

C2.1 Monitor and undertake a project review on completion of each project

On completion of a project, it is considered important that a review is undertaken. Best practice suggests that a review should not take place until a minimum of 6 to 12 months post project completion to provide adequate time for people to adjust to the new environment.

The aim of the review is to ensure that the project meets the design intent, and to establish a strong evidence base of what works and what doesn't work. The project review outcomes will also improve residents' and/or businesses' acceptance of a project, and assist the delivery of projects that are staged, by using the evidence base for future project stages consultations and applying lessons learnt/improvements to the design.

The review should consider:

- Quality of the built outcome.
- Behaviour change as a result of the built outcome.
- User perceptions, including adjacent residents and businesses.
- Review of wider network impact.

C2.2 Promote the completion of key projects through Council media

The project review process should provide a range of content that Council could utilise to promote local changes, as well as city-wide improvements and outcomes. Promotion should consider opportunities for further engagement with industry, government, and community engagement, to elevate the City of Unley as a leader in walking and bike riding.

The expectation would be that Council would highlight one to two key projects per year promoting change and the wider value of walking and bike riding.

Bikeway counter, Frome Street, City of Adelaide

Appendix

5 year infrastructure implementation Plan (2022 - 2027)

P1 Mike Turtur Bikeway

The Mike Turtur Bikeway is a shared use path along the Glenelg to City tram line and is one of the busiest walking and bicycle routes in South Australia with over 1,000 people (pedestrians and bike riders) using it daily. The Department for Infrastructure and Transport (DIT), in partnership with Council, have been progressively improving the route in the Unley area over the last several years to improve safety and access for existing users, as well as to support and encourage new users.

The aim over the next five years is to continue upgrading sections of the Mike Turtur Bikeway, with a focus on two key projects:

- Project 1: King William Road between the bend and Greenhill Road
- Project 2: Railway Terrace South between Devon Street South and Goodwood Road.

Design intent (Project 2)

Project 1 on King William Road is currently (21/22 FY) in detailed design phase. The design intent summarised below is for Project 2 on Railway Terrace South.

Cohesion

Wayfinding improvements on the bikeway route will be considered as part of the design to improve navigation and legibility of the Mike Turtur Bikeway and its key connections (including Leader Street Secondary On-Road Bicycle Route and Marino Rocks Bikeway).

Directness

Improvements at Devon Street South and Railway Terrace South bend, including the connection to the tramline underpass, will be considered as part of the design. Council staff will continue to advocate to DIT to widen / improve the tram line underpass and improve access for people walking and bike riding across the tram line between Hampton Street North and Hampton Street South. The design will ensure it connects with the proposed Mike Turtur Bikeway overpass.

Safety

The design focus will be on creating a low traffic and low speed, mixed traffic environment. Although the traffic volumes and speeds currently along the street are low, due to the proximity of Goodwood Primary School, further consideration is required to assess opportunities to improve safety at the Hampton Street South intersection and at the Devon Street bend, to better cater for primary school children walking and bike riding. A review of lighting will be undertaken as part of the design process to improve riding safety at dusk and night.

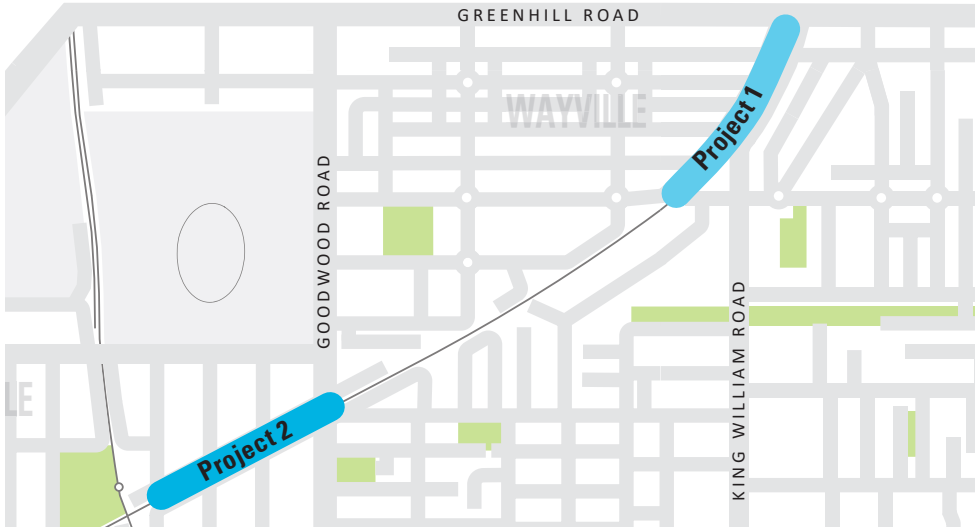
Comfort

Where possible the construction will be aligned with asset renewal works (footpath, kerbing, stormwater and road resurfacing) to improve the design outcomes and quality of infrastructure delivered. Street trees will be considered where possible to create shade, as well as the inclusion of seating and bike racks where appropriate.

Attractiveness

Opportunities to increase greening and landscaping will also be considered as part of the design, as well as opportunities to incorporate artworks e.g. on stobie pole(s), road mural(s) etc. Material selection will be aligned with the character of the neighbourhood.

Mike Turter Bikeway projects



Project 1: King William Road between the bend and Greenhill Road

The design options for the King William Road section between the bend and Greenhill Road was consulted on with the community in October/ November 2020 for a three week period. The preferred design option was Off-Road Shared Path (see figure to the left), which was endorsed by Council at its meeting held on the 27 April 2021.

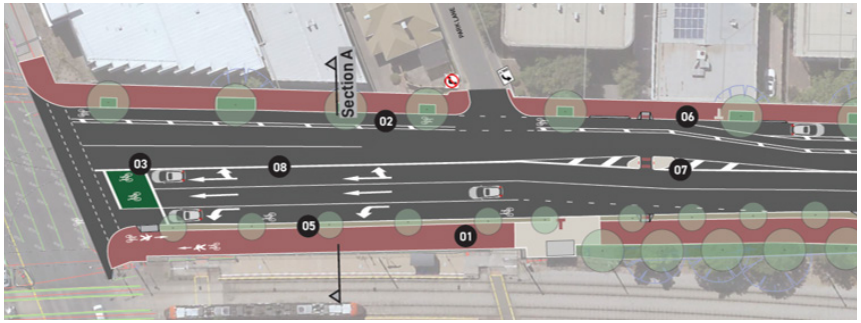
The detailed design and documentation for this project is planned for completion in early 2022 to inform future year budgets. This project will likely be considered a City Shaping Project, funded separately from the Walking and Cycling Plan budget, noting the desire for a high quality design outcome that recognises King William Road as a gateway into Unley. Alignment with asset renewal works will be considered where possible.

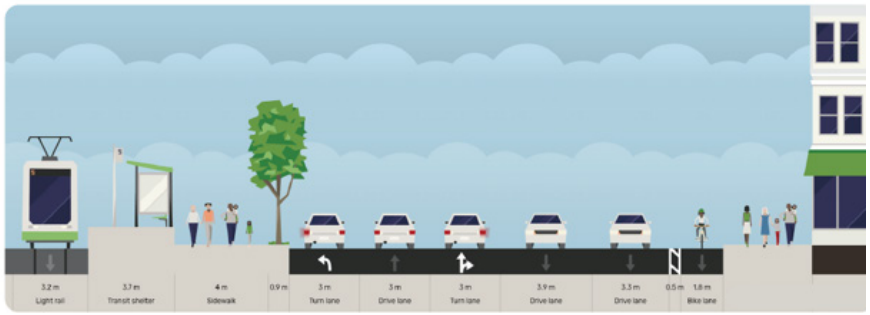
Project 2: Railway Terrace South between Devon Street South and Goodwood Road

Funding was allocated in the 2021/22 Annual Business Plan & Budget to develop concept design options to improve safety, access and amenity for people walking and bike riding along Railway Terrace South between Devon Street South and Goodwood Road.

This project aligns with the proposed Mike Turtur Bikeway Overpass project, which is a $25 million upgrade of the bikeway route at Goodwood Railway Station and Forestville Reserve (just north of Railway Terrace South) to improve safety and access for pedestrians and bike riders. The Mike Turtur Bikeway Overpass project is being managed by DIT.

Project 1 plan and cross-section, as presented to the community during consultation in October 2020





Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Project 1 King William Road	Detailed design		*Construction			
Project 2 Railway Terrace South	Concept design / Consultation	Detailed design	Construction	Project review		

**Timing of construction will depend on funding availability, and will likely be funded separately from the Walking and Cycling Plan Implementation Budget*

P2 Wood-Weller Bikeway

The Wood-Weller Bikeway is a strategic north-south walking and bicycle route within the Unley area linking:

- To the north: the Mike Turtur Bikeway and Charles Walk
- To the south: the City of Mitcham.

The bikeway route provides a parallel north-south alternative to the busy King William Road, and has been progressively delivered in stages. The Wood Street section (Stage 1) was delivered in 2017 and the Weller Street section (Stage 2) between Mitchell and Albert Street was delivered in July 2020. The Weller Street (north of Albert Street) and Simpson Parade section (Stage 3) will be constructed in 2022.

Staging

The final stages of the Wood-Weller Bikeway to be delivered over the next five years, include:

- Stage 4: King William Road (Simpson Parade to Mike Turtur Bikeway)
- Stage 5: Wood Street to Cross Road connection

Design intent

Cohesion

Wayfinding improvements on the walking and bicycle route, as well as to connecting routes (including Charles Walk, Mike Turtur Bikeway and Albert Street etc) has been, and will continue to be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

The walking and bicycle route is predominately comprised of linear and direct low traffic and low speed streets, with few deviations. The legibility of the route through the use of wayfinding, signage and materiality will be critical to ensure its success as a regional bikeway route.

Safety

On Wood and Weller Streets and Simpson Parade, the design focus has been on creating a mixed traffic environment with the goal to get traffic volumes to less than 1,500 vehicles per day (vpd) and traffic speeds to less than 40 km/h. For the final design stages, 4 and 5, the traffic volumes are higher along Northgate Street (about 7,500 vpd) and King William Road (about 11,000 vpd) and therefore separation between bike riders and vehicle movements will be required if we are to cater for the 'Interested, but concerned' bike rider category. A review of lighting will also need to be undertaken as part of the design process to improve riding safety at dusk and night, particularly at locations where traffic calming measures are installed to ensure that they are visible to all street users.

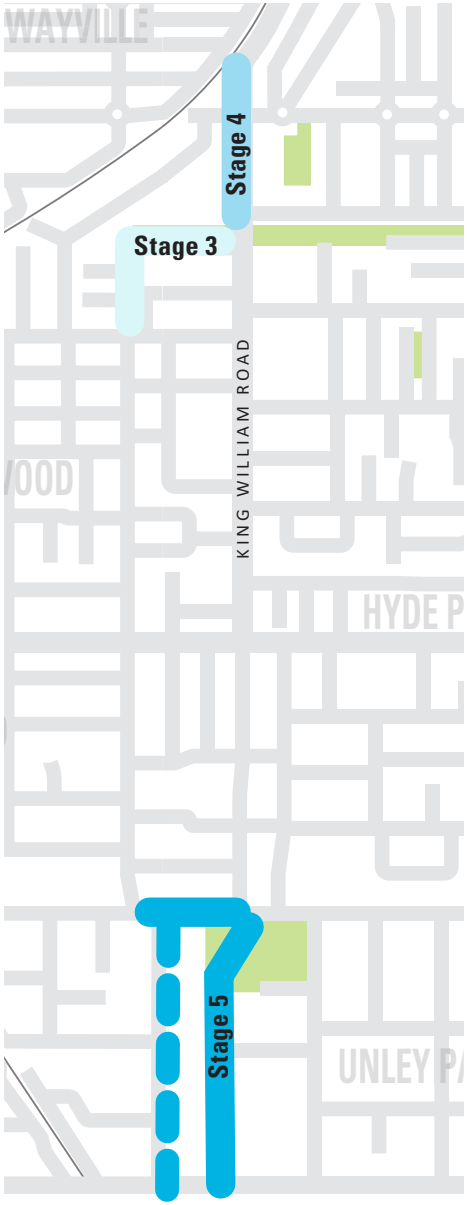
Comfort

Where possible the construction of Stages 4 and 5 will be aligned with asset renewal works (footpath, kerbing, stormwater and road resurfacing) to improve the design outcomes and quality of infrastructure delivered. Street trees will be considered where possible to create shade, as well as the inclusion of seating, bike racks, and drinking fountains.

Attractiveness

Opportunities to further increase greening and landscaping will be considered as part of the design. Stage 4 on King William Road may be considered a City Shaping project, funded separately from the Walking and Cycling Plan budget should a whole of street approach be supported that aims to strengthen King William Road as a gateway into Unley.

Wood-Weller Bikeway stages delivery approach



Implementation

Over the next five years, the City of Unley aims to complete the planning and design of the final stages (4 and 5), with construction of each stage subject to funding availability and planned asset renewal. The forecasted stages of work are shown to the right.

The 2021/22 financial year budget allocated funding to construct the Weller Street (north of Albert Street) and Simpson Parade section (Stage 3). State Bicycle Funding was also received to support the delivery of this project.

The 2021/22 financial year budget also allocated funding to commence the development of concept design options for the Stage 4 section on King William Road between Simpson Parade and Mike Turtur Bikeway.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Stage 3 Weller Street (north of Albert Street) and Simpson Parade	Construction	Project review				
Stage 4 King William Road (Simpson Parade to Mike Turtur Bikeway)	Concept design			Consultation		Detailed design
Stage 5 Wood Street to Cross Road connection		Concept design	Consultation	Detailed design	Construction	Project review

**Timing of construction will depend on funding availability, and will likely be funded separately from the Walking and Cycling Plan Implementation Budget*

Weller Street Slow Point

P3 Leader Street Secondary On-Road Bicycle Route

Leader Street Secondary On-Road Bicycle Route is an east-west route within the Unley area providing links to Anzac Highway, Goodwood Road, Marino Rocks Bikeway and the Mike Turtur Bikeway (via Hampton Street North and Goodwood Road). Leader Street also provides local connections to Ashford Hospital at Anzac Highway, and bounds the major mixed use 'Le Cornu' redevelopment site and the Wayville Showgrounds. The street currently experiences high levels of people movement, particularly on Showground event days, which will likely increase with the redevelopment of the Le Cornu site.

Staging

Leader Street is a secondary east /west street spanning over 1.1 km in length. The section of Leader Street between Anzac Highway and the rail corridor was recently upgraded in 2017. The focus over the next five years will be on Leader Street East (railway corridor to Goodwood Road).

As part of the major retail and residential redevelopment of the Le Cornu Site, Council staff will advocate for the value of Walkable Neighbourhoods in the site planning, as well as partnership opportunities to increase walking and cycling improvements along ANZAC Highway and Leader Street West and connections to nearby tram, train and bus stops.

Design intent

Cohesion

Wayfinding and improvements to north-south connections from intersecting bicycle routes will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

Intersection improvements for pedestrians and bike riders across DIT roads, including Anzac Highway and Goodwood Road will be investigated and advocated for, as well as at the Marino Rocks Bikeway connection across the rail corridor at Richards Terrace and Nairne Terrace. Any upgrades however, will be subject to DIT approval and funding. Improved connections to Mike Turtur Bikeway via Hampton Street North will also be investigated.

Safety

The design focus will be on creating greater separation between bike riders and traffic movements, noting the traffic volumes on Leader Street are about 6,500 vehicles per day (vpd) and the speed limit is 50 km/h. Due to the bicycle route being designated a secondary route the type of separation will be 'buffered bicycle lanes' similar to that recently installed on East Avenue and Duthy Street.

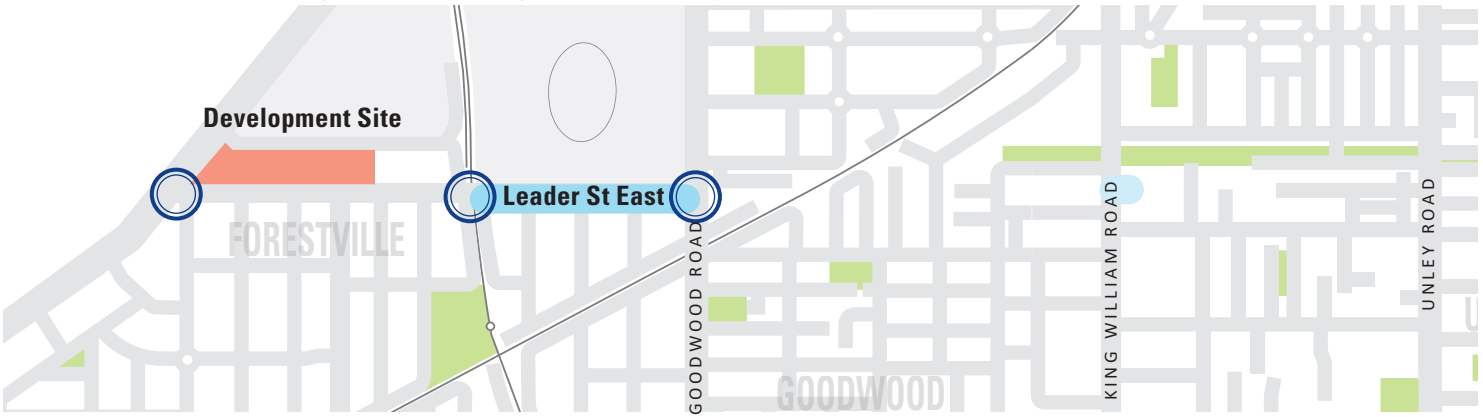
Comfort

Additional street trees will be considered where possible to create shade, as well as the inclusion of seats and bike racks along the route.

Attractiveness

Opportunities to further improve the amenity of the street will be considered as part of the major 'Le Cornu' redevelopment and other future development opportunities.

Leader Street Secondary On-Road Bicycle Route project



Implementation

The section of Leader Street between Anzac Highway and the railway corridor was upgraded in 2017 to include bicycle and pedestrian improvements including bicycle lanes, landscaped kerb protuberances and Disability Discrimination Act (DDA) compliant kerb ramps at intersections.

The 2021/22 financial year budget allocated funding to deliver buffered bicycle lanes along Leader Street between the railway corridor and Goodwood Road. State Bicycle Funding was also received to support the delivery of this project.

Improvements at Hampstead North and Leader Street intersection is planned for construction in 2022/23, subject to budget availability.

Over the next five years the aim is also to advocate and work with DIT to improve bicycle and pedestrian facilities at the arterial road crossing connections including Anzac Highway, Goodwood Road and the railway crossing.

The forecasted stages of work are shown to the right.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Leader St East Leader Street (railway corridor to Goodwood Road	Detailed design Construction of buffered bicycle lanes	Construction of intersection improvements	Project review			
Arterial road crossing connections advocacy and/or investigations	Council advocacy to DIT					

Example East Avenue Buffered Bicycle Lanes

P4 Young Street Neighbourhood Bicycle Route

Young Street Neighbourhood Bicycle Route is an east-west 'low traffic' walking and bicycle route within the Unley area linking

- To the east: the City of Burnside and Glen Osmond Road.
- To the west: the Wayville Showgrounds, Goodwood business and retail precinct and Mike Turtur Bikeway.

Young Street also provides local connections to the Parkside Primary School, Childcare and St Raphael's School.

Staging

Young Street is a feature east /west street spanning over 2.9km in length. To manage the planning and implementation, the route is broken up into five key stages, including:

- Stage 1: George Street and Young Street intersection
- Stage 2: Young Street (George Street to Unley Road)
- Stage 3: Young Street (Glen Osmond Road to George Street)
- Stage 4: Young Street (Unley Road to Mike Turtur Bikeway)
- Stage 5: Young Street (Mike Turtur Bikeway to Goodwood Road)

Design intent

Cohesion

Wayfinding and improvements to north-south connections from intersecting walking and bicycle routes will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

Intersection improvements for pedestrians and bike riders across George Street and King William Road will be included as part of the design, with the upgrade of George Street and Young Street intersection forming the first part of the planned works. Intersection improvements across DIT roads including Glen Osmond Road, Unley Road and Goodwood Road will be investigated and advocated for, as well as the connection across the tram corridor, however any upgrades will be subject to DIT approval and funding.

Safety

The design focus will be on creating a mixed traffic environment with the goal to get traffic volumes to less than 1,500 vehicles per day and traffic speeds to less than 40 km/h, similar to the Rugby-Porter and Wood-Weller bikeways. A review of lighting will be undertaken as part of the design process to improve walking and riding safety at dusk and night.

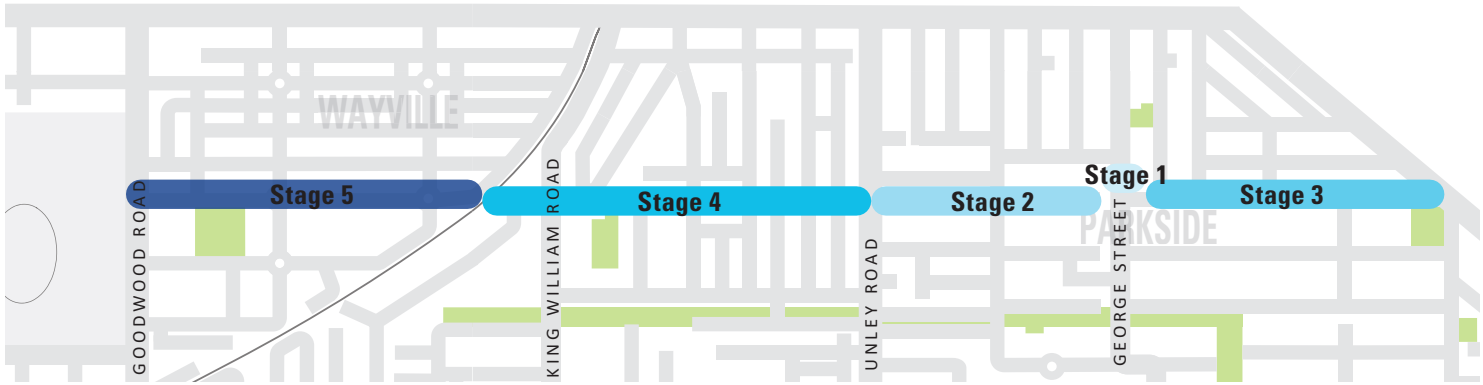
Comfort

Where possible the construction will be aligned with asset renewal (footpath, kerbing, stormwater and road resurfacing) works to improve the quality of the design and accessibility for pedestrians and bike riders. Street trees will be considered where possible to create shade, as well as the inclusion of seats, bike racks and drinking fountains.

Attractiveness

Opportunities to further increase greening and landscaping will also be considered as part of the design, as well as opportunities to incorporate artworks e.g. stobie poles, traffic controller boxes etc. Material selection will be aligned with the character of the neighbourhood.

Young Street Neighbourhood Bicycle Route stages delivery approach



Implementation

Over the next five years, the City of Unley aims to complete the planning and design of the route, with construction of each stage subject to funding availability and planned asset renewal. The forecasted stages of work are shown to the right.

In 2020/21 financial year budget was allocated to undertake detailed design and documentation for George Street and Young Street intersection walking and cycling improvements, which is referenced to as Stage 1 works.

In 2021/22 Greener Neighbourhoods Grant was also allocated to install up to 12 street trees on Young Street between Porter Street and Unley Road, which forms part of Stage 2 works. These works will be carried out in 2022/23.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Stage 1 George Street and Young Street intersection	Detailed design	Construction	Project review			
Stage 2 Young Street (George Street to Unley Road)			Concept design	Consultation	Detailed design	Construction
Stage 3 Young Street (Glen Osmond Road to George Street)					Consultation	Detailed design
Stage 4 Young Street (Unley Road to MTB)						Consultation
Stage 5 Young Street (Goodwood Rd to MTB)						

Intersection of George Street and Young Street: Artist's impression

P5 Wilberforce Walk

Wilberforce Walk follows the Brownhill Creek alignment providing an important off-road walking and bicycle connection. The Stage 1 upgrade between Anzac Highway and Third Avenue enclosed the former open channel to allow a new shared use path and landscaping to be established in partnership with the State Government.

Stage 2 between Third Avenue and Second Avenue is currently under construction in 2022.

Staging

The final stages of Wilberforce Walk to be delivered over the next five years, include:

- Stage 2: between Third Avenue and Second Avenue
- Stage 3: between Second Avenue and Leah Street.
- Stage 4: between Leah Street and Forestville Reserve

Design intent

Cohesion

Wayfinding and improvements to north-south connections from intersecting walking and bicycle routes will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

Improvements for pedestrians and bike riders crossing Third Avenue, Second Avenue, First Avenue, Leah Street and Ethel Street will be included as part of the design. Intersection improvements across Anzac Highway (DIT Road) will be investigated and advocated for, however any upgrades will be subject to DIT approval and funding.

Safety

A review of lighting will be undertaken as part of the design process to improve riding safety at dusk and night.

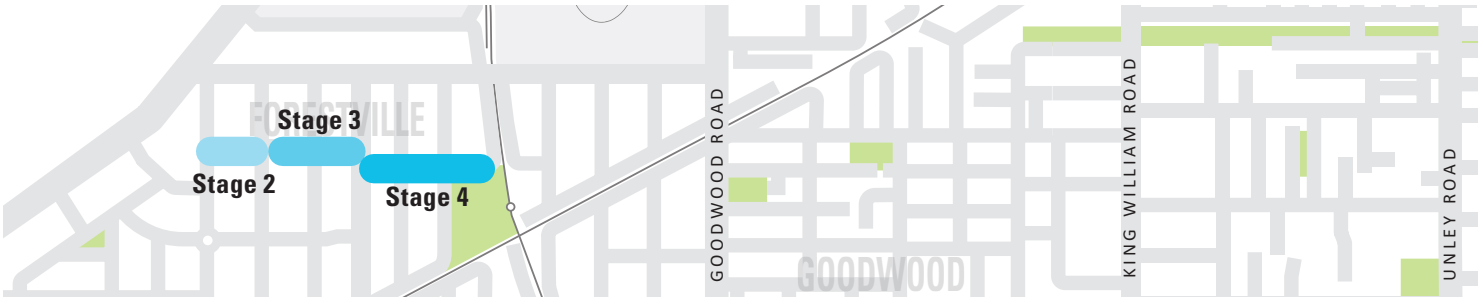
Comfort

New canopy tree and native understorey planting is included within the design to replace weed species and provide consistent landscape treatments. Bench seating and informal seating opportunities are also included within the landscaping.

Attractiveness

Greening and increased tree canopy forms a key component of the design to create an attractive public space for the community. Material selections are aligned with local character zones and provide consistency throughout the corridor.

Wilberforce Walk stages delivery approach



Implementation

Over the next five years the City of Unley aims to complete the planning and design of the route, with construction of each stage subject to funding availability and planned asset renewal. The forecasted stages of work are shown to the right.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Stage 2 Between Third Avenue and Second Avenue	Detailed design *Construction	Project review				
Stage 3 Between Second Avenue and Leah Street	Detailed design	*Construction	Project review			
Stage 4 Between Leah Street and Forestville Reserve			Concept design Consultation	Detailed design	*Construction	Project review

**Timing and extent of construction will depend on external funding availability, and will likely be funded separately from the Walking and Cycling Plan Implementation Budget*

Stage 1 Wilberforce Walk between Anzac Highway and Third Avenue

P6 Jellicoe - Ningana Avenue Neighbourhood Bicycle Route

Jellicoe – Ningana Avenue Neighbourhood Bicycle Route is a north-south 'low traffic' walking and bicycle route that runs adjacent to the Belair railway corridor and forms part of the Belair Greenway. The walking and bicycle route links:

- To the south: City of Mitcham, Cross Road and Unley Park Station.
- To the north: Goodwood Road, Millswood Station, Orphanage Park (via Vardon Terrace) and Millswood Bowling Club/SASMEE Park (via the Goodwood Road pedestrian overpass).

Staging

DIT has identified the need for walking and bicycle improvements at Jellicoe Avenue, Llanfair Terrace and Cross Road intersection as part of a priority project to improve public transport access between bus stops 173 north and south sides and Unley Park railway station. Designs are still to be developed and timing to be confirmed. This project will be led by DIT, while improvements along Jellicoe and Ningana Avenues will be led by Council. Improvements will include:

- Project 1: Jellicoe Avenue, Llanfair Terrace and Cross Road intersection (led by DIT)
- Project 2: Jellicoe and Ningana Avenue (led by Council)

Design intent

Cohesion

Wayfinding and signage improvements will be considered as part of the design to improve navigation and legibility of the Unley walking and cycling network, and to key destinations in the area.

Directness

Improvements for pedestrians and bike riders across DIT roads including Cross Road and the pedestrian overpass at Goodwood Road will be investigated and advocated for, as well as at the connections/pedestrian mazes across the rail corridor. Any upgrades however, will be subject to DIT approval and funding.

Safety

The design focus will be on creating a 'low traffic, low speed' mixed traffic environment, as well as improving connections at Cross Road and the pedestrian maze linking Ningana Avenue to Vardon Terrace. The traffic volumes and speeds currently along the streets are low (about 300-350 vehicles per day and 85th percentile speed of about 43km/h). Further traffic management measures however, will be explored with the aim to reduce speeds consistently to less than 40km/h. A review of lighting will be undertaken as part of the design process to improve riding safety at dusk and night.

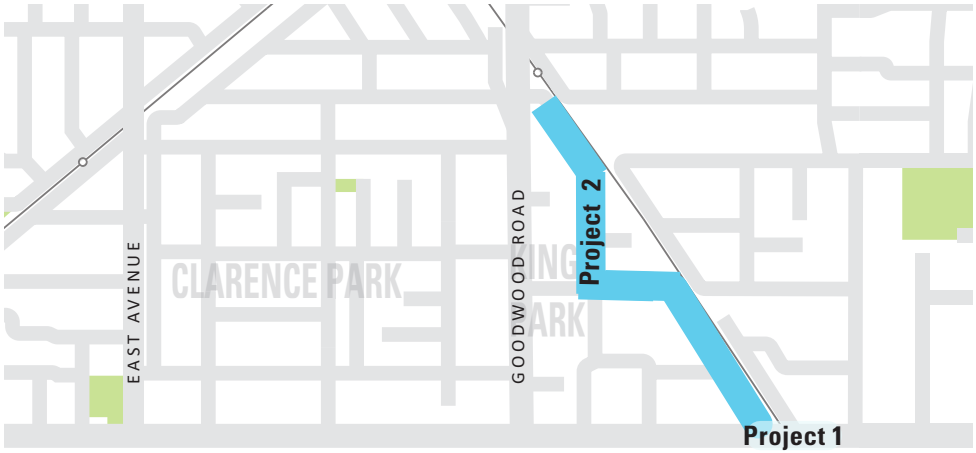
Comfort

Where possible the construction will be aligned with asset renewal (footpath, kerbing, stormwater and road resurfacing) works to improve the quality of the design and accessibility for pedestrians and bike riders. Street trees will be considered where possible to create shade, as well as the inclusion of seating and bike racks, particularly at the railway station (Millswood) and Kings Park Reserve.

Attractiveness

Opportunities to further increase greening and landscaping will also be considered as part of the design.

Jellicoe - Ningana Avenue Neighbourhood Bicycle Route projects



Implementation

Over the next five years, the City of Unley aims to complete the planning and design of the bicycle route, with construction subject to funding availability and planned asset renewal.

It is anticipated that walking and cycling improvements at Jellicoe Avenue, Llanfair Terrace and Cross Road intersection will be completed by DIT within the next two to three years.

The forecasted stages of work are shown to the right.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Project 1 Jellicoe Avenue, Llanfair Terrace and Cross Road intersection (led by DIT)	Subject to DIT					
Project 2 Jellicoe and Ningana Avenue (led by Council)			Concept design	Consultation	Detailed design	Construction

Existing Jellicoe Avenue adjacent to Kings Reserve

P7 Unley to Myrtle Bank Neighbourhood Bicycle Route

The Unley to Myrtle Bank Neighbourhood Bicycle Route is an east-west 'low traffic' walking and bicycle route within the Unley area linking:

- To the east: Ridge Park and Glen Osmond Road.
- To the west: Rugby-Porter Bikeway.

The route also provides local connections to Unley Road, Duthy Street and Fullarton Road business and retail precincts and Concordia College campuses.

Staging

The Unley to Myrtle Bank walking and bicycle route spans over 3.4km east/west along Ferguson Avenue, Carlton Street and Winchester Avenue. To manage the planning and implementation, the route is broken up into three key stages, including:

- Stage 1: Ridge Park Master Plan (shared path connections)
- Stage 2: Carlton / Winchester Street
- Stage 3: Ferguson Avenue

Design intent

Cohesion

Wayfinding and signage improvements to north-south connections from intersecting walking and bicycle routes and the Glen Osmond Creek Trail will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations.

Directness

Shared path connections between Ridge Park and Barr-Smith Avenue will be considered as part of the Ridge Park Master Plan. Intersection improvements for pedestrians and bike riders across Highgate Street and Duthy Street will be considered as part of the design. Intersection improvements at Fullarton Road (DIT Road) will also be investigated and advocated for, however any upgrade will be subject to DIT approval and funding.

Safety

The design focus on Winchester and Carlton streets will be on creating a mixed traffic environment with the goal to get traffic volumes to less than 1,500 vehicles per day and traffic speeds to less than 40km/h. Ferguson Avenue is identified as a local crossing collector road with a 50km/h speed limit, and experiences higher traffic volumes. A greater level of separation between bike riders and vehicle movements will need to be considered on this street to appropriately cater for the 'Interested, but concerned' bike rider category. Traffic management measures on Winchester Street will also need to be carefully considered adjacent to Concordia College campuses noting the busy drop-off and pick-up times. A review of lighting will be undertaken as part of the design process to improve riding safety at dusk and night.

Comfort

Where possible, the construction will be aligned with asset renewal (footpath, kerbing, stormwater and road resurfacing) works to improve the quality of the design. Street trees will be considered where possible to create shade.

Attractiveness

Opportunities to further increase greening and landscaping will also be considered as part of the design.

Unley to Myrtle Bank Neighbourhood Bicycle Route stages delivery approach

Implementation

Over the next five years, the City of Unley aims to complete the planning and design of the walking and bicycle route, with construction subject to funding availability and planned asset renewal.

The forecasted stages of work are shown to the right.

In 2020/21 financial year budget was allocated to undertake a master plan for Ridge Park, which will include consideration of a shared path network linking between Barr- Smith Avenue and the signalised pedestrian crossing on Glen Osmond Road.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Stage 1 Ridge Park Master Plan	Concept design		*Construction			
Stage 2 Carlton / Winchester Street				Concept design	Consultation	Detailed design
Stage 3 Ferguson Avenue					Concept design	Consultation

**Timing of construction will depend on funding availability, and will likely be funded separately from the Walking and Cycling Plan Implementation Budget*

P8 Charles Walk Intersection Improvements

Charles Walk is a shared path that runs from Clealand Avenue (200m east of King William Road) to Unley Road, and forms part of the Glen Osmond Creek Trail. The shared path is well utilised daily by people walking and bike riding. There are several minor intersections requiring path users to give way to motor vehicles. The frequent stopping/starting by people walking and bike riding reduces the efficiency of the route, and due to the minor nature of the intersecting streets safety along the path is reduced, as the number of vehicles crossing are infrequent and often unexpected. Considering that more pedestrians and bike riders use this route than cars cross at most of the intersections, it is considered appropriate that consideration is given to changing priority to path users. Intersections include:

1. Charles Walk and Cleland Avenue
2. Charles Walk and Driveway Access at B and M Glass
3. Charles Walk and Little Charles Street
4. Charles Walk and Mary Place

Design intent

Cohesion

Wayfinding and improvements to north-south connections from intersecting walking and bicycle routes will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

The design focus will be to prioritise people walking and bike riding along Charles Walk where it intersects with the minor streets including Cleland Avenue, Little Charles Street and Mary Place and the driveway access at B and M Glass.

Safety

The design will need to ensure that sight lines and lighting conditions meet Australian Standards to ensure that pedestrians and bike riders are visible by approaching vehicles (and vice versa) at all times of the day. Shared path etiquette decals will also be installed along the path to remind users to share with care, keep to the left and slow down. A review of lighting will be undertaken as part of the design process to improve riding safety at dusk and night.

Comfort

The inclusion of additional seats, bike racks and/or a drinking fountain will be considered along the route.

Attractiveness

The material selection associated with proposed improvements at intersections will be aligned with the character of the neighbourhood.

Charles Walk proposed intersection improvement locations

Implementation

Over the next five years, it is aimed to complete the planning and design of each intersection improvement location (1 to 4), with construction of each stage subject to funding availability and planned asset renewal. The forecasted program of work is shown to the right.

The installation of shared use path etiquette decals will also be installed along the path to remind users to share with care, keep to the left and slow down. This is planned to take place in 2022.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Charles Walk Intersection improvements (x 4)				Concept design	Consultation	Detailed design

Example West Terrace Shared Use Path priority intersection

P9 Wattle - Park - Mitchell Street Neighbourhood Bicycle Route

Wattle-Park-Mitchell Street Neighbourhood Bicycle Route is a strategic east-west walking and bicycle route within the Unley area linking:

- To the east: the City of Burnside at Glen Osmond Road
- To the west: the Marino Rocks Bikeway.

The walking and bicycle route connects a number of key north-south arterial / major collector roads and associated business precincts including Fullarton Road, Duthy Street, Unley Road, King William Road and Goodwood Road. The route also provides local connections to a number of schools and community facilities including Orphanage Park, Unley Primary School, Hyde Park Nursery School and ELC and Sunrise Christian School.

Staging

Wattle, Park and Mitchell streets are local collector east /west streets spanning over 4.2km in length. To manage the planning and implementation, the route is broken up into four key stages, including:

- Stage 1: Mitchell Street
- Stage 2:Park Street
- Stage 3: Wattle Street (Unley Road to Fullarton Road)
- Stage 4: Wattle Street (Fullarton Road to Glen Osmond Road)

Design intent

Cohesion

Wayfinding and improvements to north-south connections from intersecting walking and bicycle routes will be considered as part of the design to improve navigation and legibility of the Unley walking and bicycle network, and to key destinations in the area.

Directness

Intersection improvements for pedestrians and bike riders at all intersections (signalised and unsignalised) will be included as part of the design. Intersection improvements across DIT roads including Glen Osmond Road, Fullarton Road, Unley Road and Goodwood Road will be investigated and advocated for, however any upgrades will be subject to DIT approval and funding.

Safety

The design focus will be on creating greater separation between bike riders and traffic movements to accommodate the 'Interested, but concerned' bike rider category - noting that the traffic volumes along the route varies between 4,500 to 5,000 vehicles per day and the speed limit is 50 km/h. To achieve an appropriate level of separation there will be an impact to on-street parking. The level of impact will depend on the preferred design option and section of route, as the street width varies along the route. A review of lighting will also be undertaken as part of the design process to improve riding safety at dusk and night.

Comfort

Where possible, the construction will be aligned with asset renewal works (footpath, kerbing, stormwater and road resurfacing) to improve the design outcomes and the quality of infrastructure delivered. Street trees will be considered where possible to create shade, as well as the inclusion of seats, bike racks and drinking fountains.

Attractiveness

Opportunities to further increase greening and landscaping will be considered as part of the design. Material selection will be aligned with the character of the neighbourhood.

Wattle - Park - Mitchell Street stages delivery approach

Implementation

Over the next five years, it is aimed to complete the planning of each stage ready for consultation, detailed design and construction. The forecasted stages of work is shown to the right.

Guide to planned implementation

	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027
Stage 1 Mitchell Street						Concept design
Stage 2 Park Street						Concept design
Stage 3 Wattle Street (Unley Road to Fullarton Road)						
Stage 4 Mitchell Street (Fullarton Road to Glen Osmond Road)						

Mitchell Street and Weller Street Intersection Improvements (July 2020)