CITY OF PLAYFORD
CYCLING AND WALKING STRATEGY

FINAL | FEBRUARY 2014

oxigen
URBAN DESIGN
LANDSCAPE ARCHITECTURE
URBAN PLANNING

CITY OF Playford

ACKNOWLEDGEMENTS

This Cycling and Walking Strategy was commissioned by the City of Playford (CoP) under the direction of the Project Steering Group:

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COVER IMAGE: COURTESY OF OPAL, SA HEALTH

CONTENTS

OVERVIEW

Cycling and walking are fundamental everyday modes of transport and central to active living and supporting healthy lifestyles.

Despite this, many of our urban environments are not conducive to walking or cycling. Getting around the City of Playford on foot or bike can be a challenge. Like many parts of Australia, the City of Playford has been planned and designed predominantly for motor vehicle transport. The car-dominant environment and focus on infrastructure and budgets supporting this mode of transport makes the simple task of getting from place to place difficult for those who do not have a car, or who wish to travel by other modes.

In the context of rising levels of obesity, growing concern for climate change, dependency on car-based transport and increasing congestion, the City of Playford is focusing on sustainable transport planning and a clear implementation strategy for cycling and walking as a means to redress the hierarchy and balance towards connected and healthy communities.

This strategy explores how the City of Playford will encourage and support cycling and walking as part of the local transport system.

IMAGE SOURCE: RENEWAL SA

STRUCTURE OF THIS DOCUMENT

PART 1. Benefits of Cycling and Walking

Describes the range of benefits from cycling and walking.

PART 2. Vision for Cycling and Walking

Sets a clear vision for cycling and walking in the City of Playford.

PART 3. Existing Conditions

Summarises the City of Playford's character, destinations, key routes, demographics, major projects and policy context.

Evaluates the existing cycling and walking network including key assets, how it performs and barriers to cycling and walking.

PART 4. Consultation

Describes the consultation process and summarises key findings.

PART 5. Best Practice

Provides a 'tool-box' of best practice solutions that may be applied within the City of Playford.

PART 6. Recommendations

Sets strategies to improve cycling and walking in the City of Playford.

PART 7. Implementation

Summarises the actions and priorities for delivering an improved cycling and walking environment.

IMAGE SOURCE: RENEWAL SA

This Strategy uses the terms cycling and walking in their broadest sense. They are inclusive of wheelchairs, prams, mobility scooters and other similar devices, as well as skateboards, kick scooters, rollerblades and the like. It also includes cycling and walking for recreation, fitness and commuting purposes.

ABOUT THE STRATEGY

Physical activity is widely recognised as being beneficial to our health and well-being. However, 6 in 10 Australian adults and 1 in 4 children are overweight or obese (2011, ABS). In response, active living is being promoted to integrate physical activity into our daily routine. As well as improving health and well-being, cycling and walking support environmental sustainability, safe communities, robust economies and reduce vehicular traffic congestion.

The preparation of this Cycling and Walking Strategy provides a clear direction for achieving this in the City of Playford. As the City of Playford continues to grow and evolve it is vital that cycling and walking are key components in the planning and implementation of new developments and integrated into existing suburbs and transport networks.

This Strategy contains the "building blocks" for cycling and walking delivery across the City of Playford. The Strategy helps inform future developments, strategic planning decisions and also acts as a commitment to embed cycling and walking initiatives into all Council processes, projects and budget considerations.

In implementing this Strategy, it is advantageous for the City of Playford to make the most of current opportunities considering current and future projects in the City of Playford and to work with other Councils and the State Government, to argue for an integrated and effective Greater Adelaide cycling and walking network.

IMAGE SOURCE: CITY OF PLAYFORD

PURPOSE OF THE STRATEGY

This Cycling and Walking Strategy will be used by the City of Playford in collaboration with the State Government, developers and the community to:

- Provide an appreciation of the benefits of cycling and walking and their value in Council's strategic direction towards creating physically and socially connected communities.
- Evaluate existing cycling and walking networks and conditions to assess their adequacy in operation and connectivity, safety, comfort and amenity.
- Plan for an integrated and sustainable transport network that supports cycling and walking as sustainable transport alternatives to the car.
- Provide Council with information which may assist when commenting on existing and future State Government-led transport strategies and plans.
- Deliver strategies for improving the function and amenity of cycling and walking so they become a viable connected transport and recreation option for all City of Playford residents and visitors.
- Coordinate planning and delivery of cycling and walking infrastructure in existing urban areas and future growth areas (e.g. Buckland Park), including assisting in directing capital works expenditure. Capital works may be funded by Council themselves, or in partnership with the State Government and private developers.
- Develop long-term management plans for renewing and upgrading of Council roads, and pathways to support cycle and walking provision.
- Plan for maintenance and management of cycling and walking networks.
- Continue to develop strategies for promotion, education and advocacy of cycling and walking, working with the OPAL (Obesity Prevention and Lifestyle) program to create a culture within the City of Playford which respects and embraces cycling and walking both at a strategic, decision-making level and at local community level.

Refer also Part 2 'Vision' of this report.

Council's Strategic Plan promotes the creation of 'Sustainable Trails' to 'physically and socially connected communities'. The tree lined networks of people movement corridors that provide non-car transport, community health and recreation, and natural environment will become a feature of the City.

CITY OF PLAYFORD STRATEGIC PLAN 2013

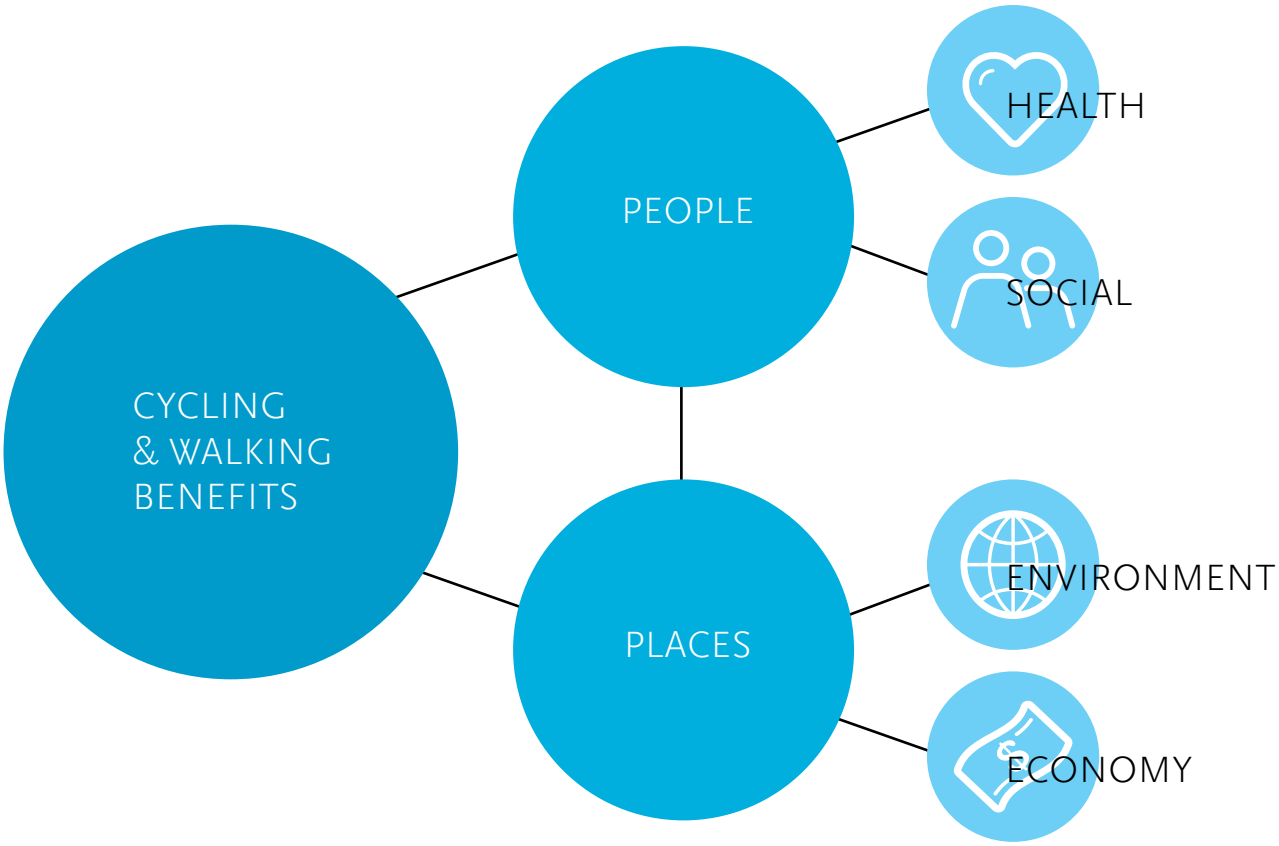
CYCLE TRACK ON HORNBY STREET, VANCOUVER, CANADA

IMAGE: 'RIDE A BIKE RIGHT' ROAD SAFETY EDUCATION (SOURCE: CITY OF PLAYFORD)

PART 01
BENEFITS OF CYCLING & WALKING

1. BENEFITS OF CYCLING AND WALKING

Walking and cycling benefits people and places. People who participate in walking and cycling are rewarded through improved health and social well-being. Places that offer good walking and cycling conditions benefit from a more active public realm environment and resulting more robust economies.



Cycling and walking can save lives

- Around 6 out 10 Australian adults do not meet the recommended guidelines for physical activity.[1]
- The national health cost of physical inactivity is estimated at $13.8 billion dollars annually.[2]
- Nearly 1 in 5 four-year-olds in South Australia is overweight or obese. More than half of adults are overweight or obese.[3]

1 2011, AUSTRALIAN BUREAU OF STATISTICS
2 2007, ECONTECH
3 OPAL WEBSITE

HEALTH

The health benefits of physical activity are well known. Research estimates about 80% of the overall benefits of cycling and walking are related to health (2011 Queensland Department of Transport and Main Roads, Benefits of inclusion of active transport in infrastructure projects).

In Australia, walking is by far the most popular form of regular exercise. Cycling is also popular and is the fastest growing mode of transport in Adelaide (2013 DPTI). However, Australians are increasingly becoming less active and more overweight, posing significant health risks and increased pressure on public health services.

Providing supportive urban environments is pivotal in encouraging cycling and walking in the community. This means overcoming the barriers that discourage cycling and walking.

Improving public transport (trains and buses) is also important as it nearly always involves walking or cycling to and from bus stops and stations.

Cycling and walking:

- *Improves general health;*
- *Lowers blood pressure and improves heart health;*
- *Reduces weight and obesity levels;*
- *Improves mental health and wellbeing;*
- *Improves fitness;*
- *Increases life expectancy through reducing the risk of heart disease and stroke through improving conditions like high blood pressure, high cholesterol and diabetes;*
- *Reduces joint and muscular stiffness and pain;*
- *Increases happiness through giving your body all the right chemicals such as endorphins;*
- *Reduces stress and depression.*

SOCIAL

Cycling and walking help build and support communities through activating our streets and encouraging social interactions.

Cycling and walking increases our knowledge of the area and the people in the community. Pedestrian and cycle movements are conducive to making connections with people through a nod, smile or greeting – much more so then zooming past in a car.

Connected communities through cycling and walking, increase neighbourhood safety through having people out and about for passive surveillance of our streets and parks.

The inclusive nature of cycling and walking means that everyone receives the rewards of improved health and social well-being. In particular, children and the elderly can gain greater independence through cycling and walking rather than being reliant on cars.

Cycling and walking:

- *Increases social interactions;*
- *Supports community life and more active and interesting streets;*
- *Reduces crime through passive surveillance;*
- *Increases road safety with research showing increased street activity slows drivers down and increases alertness;*
- *Reduces traffic congestion;*
- *Enhances community pride through tactile experiences of place; and*
- *Creates a positive cycle. As people cycling and walking make environments safer and more enjoyable it also encourages more people to walk and cycle as well.*

ENVIRONMENT

The environmental benefits of cycling and walking are largely related to shifts away from other transport modes. Moving away from car-based transport reduces congestion, carbon emissions, improves air quality and local amenity.

Cycling and walking can effectively link with public transport for longer journeys normally taken by car. This is particularly important for the City of Playford given its distance from Adelaide City.

Cycling and walking:

- *Are sustainable transport options;*
- *Do not produce air pollutants, noise pollution or carbon emissions; and*
- *Enhances local amenity through reducing the number of vehicles.*

Associated infrastructure such as appropriate street trees provide shade, biodiversity and amenity.

ECONOMY

Cycling and walking have many economic benefits and help alleviate the significant societal and economic costs related to poor community health and traffic congestion.

At an individual level, cycling and walking are also financially rewarding – being a low-cost alternative to car-based transport.

Research demonstrates that connected communities which are pedestrian -and cycle-friendly boost local businesses. The findings show that people who walk and cycle to shops are more likely stay longer, visit more often and spend more money (Refer 2011: Heart Foundation, Good for Business). People who walk and cycle are more likely to shop in their local area, contributing to the local economy and supporting jobs and revenue.

Investments in cycling and walking infrastructure are also shown to increase the value of nearby residential and commercial properties, and sustain local retail areas and attract new businesses. For example, a study in the US showed that houses with above average levels of walkability command a premium of US$4,000 to US$34,000 over houses with just average levels of walkability (2009, CEOs for Cities: Walking the Walk).

Cycling and walking:

- *Reduces economic costs related to poor health including fewer sick days and reduced pressure on public health budgets and services;*
- *Reduces congestion for quicker travel times and reduces the number of road accidents;*
- *Improves urban quality;*
- *Improves local retail trade;*
- *Infrastructure is more efficient to maintain compared to roads;*
- *Has no parking, petrol, car repair and insurance costs; and*
- *Infrastructure can increase the value of residential and commercial properties nearby.*

BENEFITS PER KILOMETRE TRAVELLED FOR WALKING OR CYCLING, FOR AN AVERAGE PROJECT

Benefit		Value ($/km)	Lower bound	Upper bound
	Health (walking)	$1.680	$1.230	$2.500
	Health (cycling)	$1.120	$0.820	$1.670
	Injury costs (walking)	-$0.240		
	Injury costs (cycling)	-$0.370		
	Decongestion	$0.207	$0.060	$0.340
	Noise reduction	$0.009	$0.007	$0.012
	Air quality	$0.028	$0.028	$0.029
	Greenhouse gas emissions	$0.022	$0.020	$0.025
	Infrastructure provision	$0.052		
	Parking cost savings	$0.016		
	Vehicle operating costs	$0.350		
Total benefit (walking)		**$2.12**		
Total benefit (cycling)		**$1.43**		

SOURCE: QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS 2011, BENEFITS OF INCLUSION OF ACTIVE TRANSPORT IN INFRASTRUCTURE PROJECTS, PREPARED BY SKM AND PWC, TABLE EX.1: BENEFITS SUMMARY.

COVER IMAGE: STEBONHEATH PARK (SOURCE: CITY OF PLAYFORD)

PART 02
VISION FOR CYCLING & WALKING IN THE CITY OF PLAYFORD

2. THE VISION

Provide the infrastructure, amenity and education to support cycling and walking as an attractive, safe and viable option for recreation and transport within the City of Playford.

The Vision means the City of Playford is:

A Safe City – where space is provided for cycling and walking and cars do not dominate. It is a place where cycling and walking are inclusive and viable transport options available for all. It is a place where children are safe and comfortable cycling and walking, and where the elderly have good accessibility.

A Connected City – where a continuous and integrated network of cycling and walking routes and wayfinding connects people and places both within and beyond the City of Playford.

A Healthy City – where coordinated promotion, education and advocacy encourages and increases participation in cycling and walking with resulting benefits to community health and well-being.

A Livable City – where walking and cycling environments offer amenity and comfort through the provision of shady street trees, planting, lighting and signage, and where streets function as places that contribute towards community-life.

A Sustainable City – where increases in cycling and walking reduces carbon emissions, and improves air-quality and local amenity.

PHILOSOPHY

COUNCIL'S ROLE

This section outlines the number of roles Council has in the planning and provision of cycling and walking infrastructure. State and Federal Governments also play important roles in leadership, regulation and funding of cycling and walking initiatives - refer Part 3.8).

Local Government Role	Role in Cycling and Walking Projects
Leader – Leading the community or local government sector by example – Setting directions to meet current and future needs	– Promote walking and cycling across Council departments, strategies and policies. Lead the community by getting out and about on foot and bikes. – Strategically planning for walking and cycling routes.
Owner/Custodian – Fulfilling Council's obligations to manage the community's assets and those of the natural environment	– Council is the owner or custodian of most walking and cycling infrastructure in the City of Playford. – Maintain routes and supporting infrastructure (e.g. paving, planting, furniture).
Regulator – Undertaking a particular role in response to legislation (direct/specific or general duty of care)	– Ensure new developments appropriately plan and provide for cycling and walking.
Information Provider – Distributing or displaying information produced by other agencies – Providing information to the public that Council has commissioned – Developing resources to promote a common understanding and to inform decision-making	– Council has a role in providing data collection, information provision and promotion which focuses on the benefits of cycling and walking. – Collaborate with other organisations (e.g OPAL, Heart Foundation, Bike SA etc) in community promotion and education (e.g. Council programs, publications and social media).
Advocate – Making representations on behalf of the community	– Advocacy is an important role of Council in the planning and provision of cycling and walking infrastructure. This includes commenting and advocating for good cycling and walking provision in projects led by others (e.g. State Government road, rail, housing developments).
Facilitator/Initiator – Bringing together stakeholders to collectively pursue a shared interest or service or to resolve an issue	– Creator of walking and cycling events and programs in collaboration with other organisations (OPAL etc). – Work with stakeholders including government agencies, developers, businesses and the community to encourage collaboration in the provision of cycling and walking infrastructure. This is key to achieving the vision of an integrated cycling and walking network in the City of Playford.
Part Funder – Contributing funds or resources, as one of a number of parties that contribute funds	– Providing funds for delivering walking and cycling projects. Also seeking to partner with others (e.g. DPTI, Office of Sport and Recreation, adjoining Councils) in funding. – Recognise the economic as well as the social, environmental, health and well-being benefits of walking and cycle friendly environments.
Direct Service Provider – Fully funding and providing a service	– Deliver on-ground infrastructure including cycling and walking routes as well as supporting infrastructure - e.g. trees, planting, furniture, lighting, signage.

IMAGE: CURTIS ROAD

PART 03
EXISTING CONDITIONS

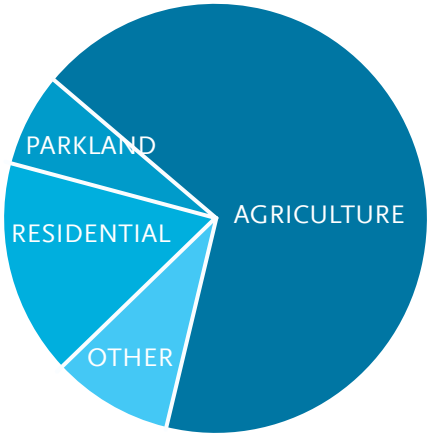
EXISTING CONDITIONS

This part of the Strategy 'sets the scene' for the City of Playford, including description of its character, demographics, policy context and major projects.

It also reviews and evaluates the existing cycling and walking network within the City of Playford. It assesses the general performance of infrastructure and streets and also includes a summary of the barriers to cycling and walking.


LIGHT REGIONAL COUNCIL
TOWN OF GAWLER
BAROSSA COUNCIL
CITY OF PLAYFORD
ADELAIDE HILLS COUNCIL
CITY OF SALISBURY
CITY OF TEA TREE GULLY

LAND USE



SOURCE: 2013: PROFILE.ID, COMMUNITY PROFILE

3.1 DESCRIPTION

The City of Playford is located in Adelaide's outer northern suburbs, about 30 kilometres from the Adelaide CBD. The original inhabitants of the Playford area were the Kaurna Aboriginal people.

The City of Playford is named after Sir Thomas Playford, former Premier of South Australia.

The City is bounded by the District Council of Mallala, the Light Regional Council, the Town of Gawler and the Barossa Council in the north, the Adelaide Hills Council in the east, the Cities of Salisbury and Tea Tree Gully in the south, and Gulf St Vincent in the west. The Gawler River and the South Para Rivers form part of the northern boundary and the Little Para River part of the southern boundary.

European settlement dates from 1847, with several townships established in the 1850s. Land was used mainly for wheat farming and hay growing. Significant development did not occur until the post-war years, when the South Australian government established a new satellite settlement at Elizabeth. The growth of Elizabeth was associated with substantial industrial expansion and considerable European migration. Rapid growth took place in and around Elizabeth during the late 1950s and 1960s. From the 1970s growth took place in the suburbs surrounding Elizabeth.

The population of the City increased from 61,000 in 1991 to 79,000 in 2011. Much of the growth in the last two decades has been in Andrews Farm, Blakeview, Craigmore and Hillbank, and more recently in Munno Para and Munno Para West.

The City of Playford is a mix of rural and growing urban area, with some industrial and commercial areas. The City encompasses a total land area of 346 square kilometres. Rural land is located mainly in the east (hills area), north and west, and is used largely for market gardens, orchards, vineyards, horse studs and hobby farms.

The City of Playford is served by major routes of the Northern Expressway, Main North Road, Port Wakefield Road, Gawler Scenic Route and the Gawler railway line.

The City of Playford includes the suburbs and localities of Andrews Farm, Angle Vale, Bibaringa, Blakeview, Buckland Park, Craigmore, Davoren Park, Elizabeth, Elizabeth Downs, Elizabeth East, Elizabeth Grove, Elizabeth North, Elizabeth Park, Elizabeth South, Elizabeth Vale (part), Edinburgh North, Evanston Park (part), Gould Creek (part), Hillbank, Hillier (part), Humbug Scrub (part), MacDonald Park, Munno Para, Munno Para Downs, Munno Para West, One Tree Hill, Penfield, Penfield Gardens, Port Gawler (part), Sampson Flat, Smithfield, Smithfield Plains, Uleybury (part), Virginia, Waterloo Corner (part) and Yattalunga.

SOURCE: 2013: PROFILE.ID, COMMUNITY PROFILE

VIEW OF BLAKEVIEW AREA

3.2 CHARACTER

The City of Playford's geographical area has distinct characters as a result of different topography and land use.

East (Hills): The eastern portion is hilly topography and rural in character, comprising part of the Mount Lofty Ranges and includes the township of One Tree Hill.

Central (Suburban): The central portion comprises suburban development. Suburban development was established at Elizabeth after World War 2 and then expanding to the north and west. This has created a mix of older and more recent suburbs, with new development areas continuing to be built today.

Typical characteristics of the suburban area include:

- Clear road hierarchy of local streets, collectors and arterial roads.
- Curved road layout including collector circuits and some cul-de-sacs.
- Considerable area of parks and reserves (often along drainage corridors).
- Wide road-reserves along arterial roads.

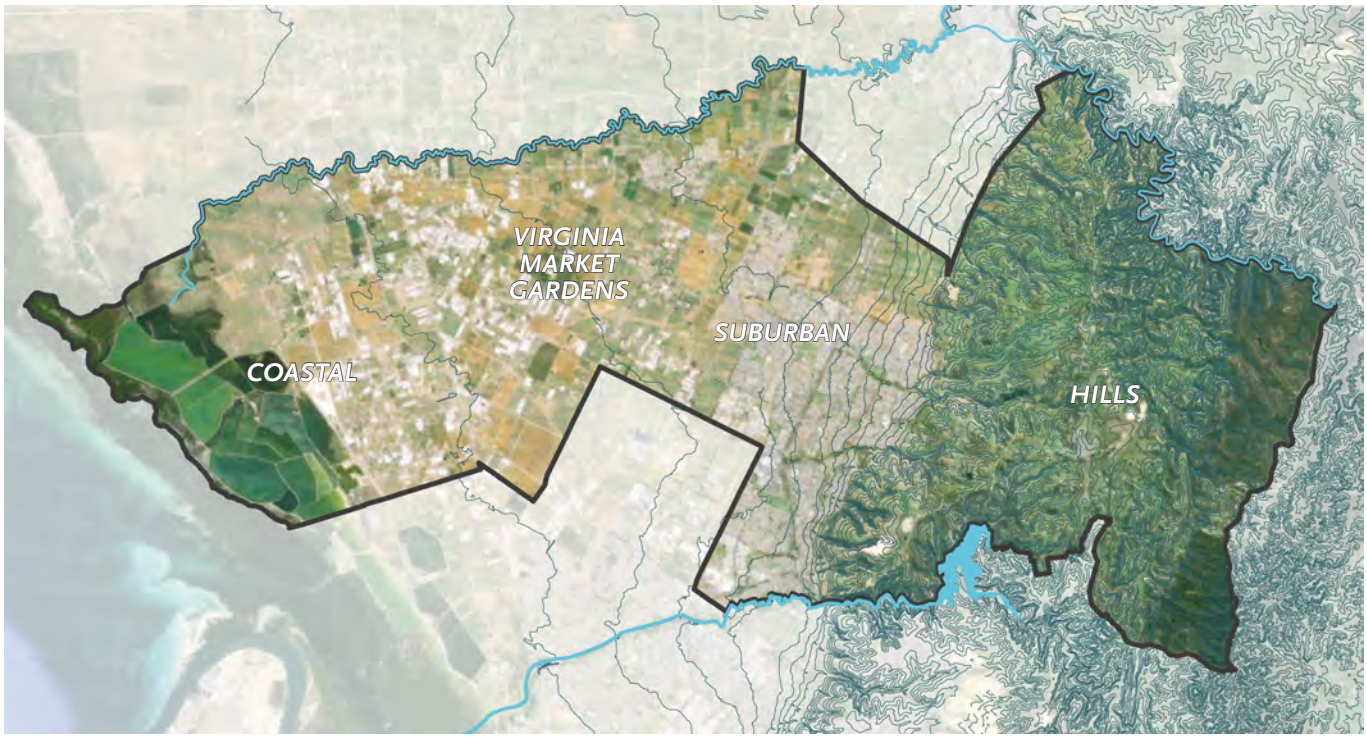
Western (Coastal + market gardens): The western portion comprises the Virginia market gardens, coastal area (predominately salt pans) and future growth area of Buckland Park.

In developing the Cycling and Walking Strategy, different solutions are needed to respond to the different character environments. For example, the typical suburban character features considerable open space and wide road corridors that are suited to the provision of off-road shared paths. A 'tool-box' of solutions are outlined in Part 05.

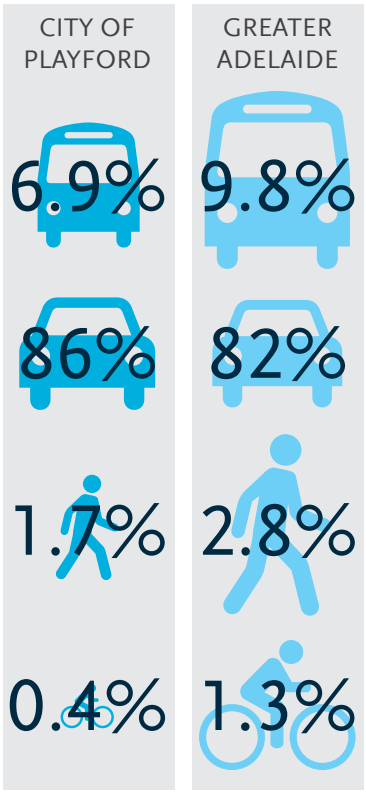
TYPICAL LAYOUT OF SUBURBAN AREA

MIX OF OLDER + MORE RECENT DEVELOPMENT

CHARACTER

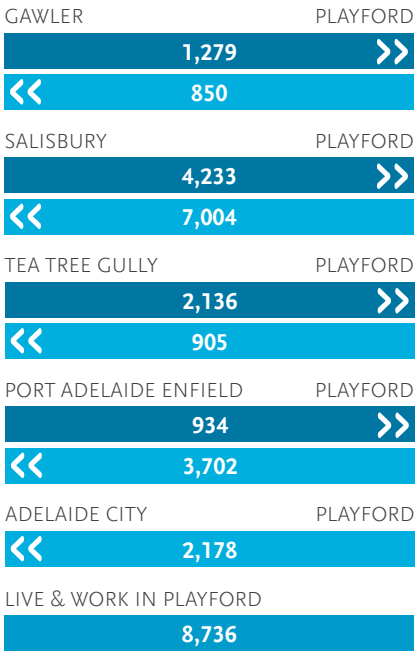


JOURNEY TO WORK



DATA SOURCE: PROFILE ID COMMUNITY PROFILE

COMMUTING PATTERN



DATA SOURCE: PROFILE ID COMMUNITY PROFILE

3.3 DEMOGRAPHICS

Key demographic data relating to walking and cycling from the Australian Bureau of Statistics (ABS) and Profile.Id is described below:

GENERAL

The City of Playford has an Estimated Residential Population of 83,067 (2012, ABS). The population has increased from 69,273 in the ten-year period from 2002.

The median age is 32 compared with 39 for Greater Adelaide.

JOURNEY TO WORK

The method of travel to work data for residents living within the City of Playford (2011, ABS) indicates that the most common transport method was private car (86%). This figure is slightly more than for Greater Adelaide (82%).

In 2011 (ABS) in the City of Playford:

- 1.6% walked only* to work;
- 0.5% cycled to work;
- 6.8% used public transport; and
- 11.8% (3,532) of households in the City of Playford did not have a car. This figure is slightly more than for Greater Adelaide (9.2%).

* The walk to work figure should be treated with some caution. It counts those that walk only and does not include those that walk to access public transport (estimated at approximately 80-90% of public transport passengers) and other forms of transport.

Key points in developing the Cycling and Walking Strategy:

- *With 86% of journeys to work by car there is significant scope for shifting towards other modes of commuting.*
- *The increasing understanding of the benefits of cycling and walking and with continuing improvements to cycling and walking infrastructure, it is anticipated that future figures will show an increase in numbers of persons walking, cycling and using public transport for commuting.*

COMMUTING PATTERN

Journey to Work (workers) data shows:

– where City of Playford's residents are travelling to access employment, and

– where people are travelling from to work in the City of Playford area.

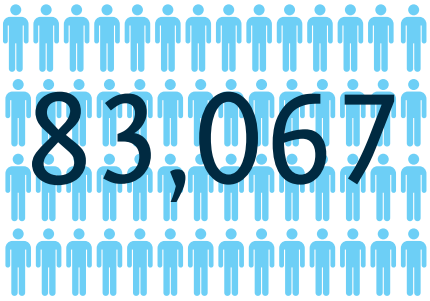
In 2011:

- 40% of City of Playford residents worked in the City of Playford area.
- 23% of City of Playford residents worked in the City of Salisbury area.
- 7% of City of Playford residents worked in the Adelaide City Council area.

Key points in developing the Cycling and Walking Strategy:

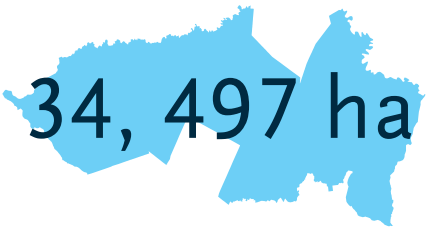
- *A large proportion of City of Playford residents (40%) work within the City of Playford area. This provides good opportunity to encourage commuting by walking and cycling for shorter journeys.*
- *Cycling and walking needs to effectively link with public transport for longer journeys.*
- *Public transport is seen as a leg of a walking or cycling trip. For example, providing cycling and walking facilities at the start and end of public transport journeys will help achieve greater participation.*
- *People who take public transport are 3.42 times more likely to meet the recommended physical activity levels for healthy lifestyles.*

2012 POPULATION



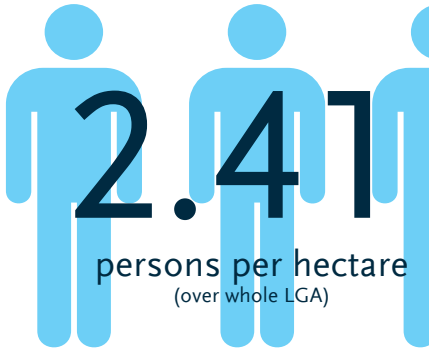
DATA SOURCE: PROFILE ID COMMUNITY PROFILE

LAND AREA



DATA SOURCE: PROFILE ID COMMUNITY PROFILE

POPULATION DENSITY



NOTE CITY OF PLAYFORD SUBURBAN AREAS ARE TYPICALLY 15-20 PERSONS PER HECTARE.

DATA SOURCE: PROFILE ID COMMUNITY PROFILE

Key points in developing the Cycling and Walking Strategy:

- *City of Playford has a younger population compared with other metropolitan Adelaide LGAs (higher proportion of people under 18 years).*
- *City of Playford is the second fastest growing metropolitan LGA in the state (behind Adelaide City Council) with an increase of 10,000 people from 2007-2012.*
- *Over 3,500 households in the City of Playford do not have a car.*

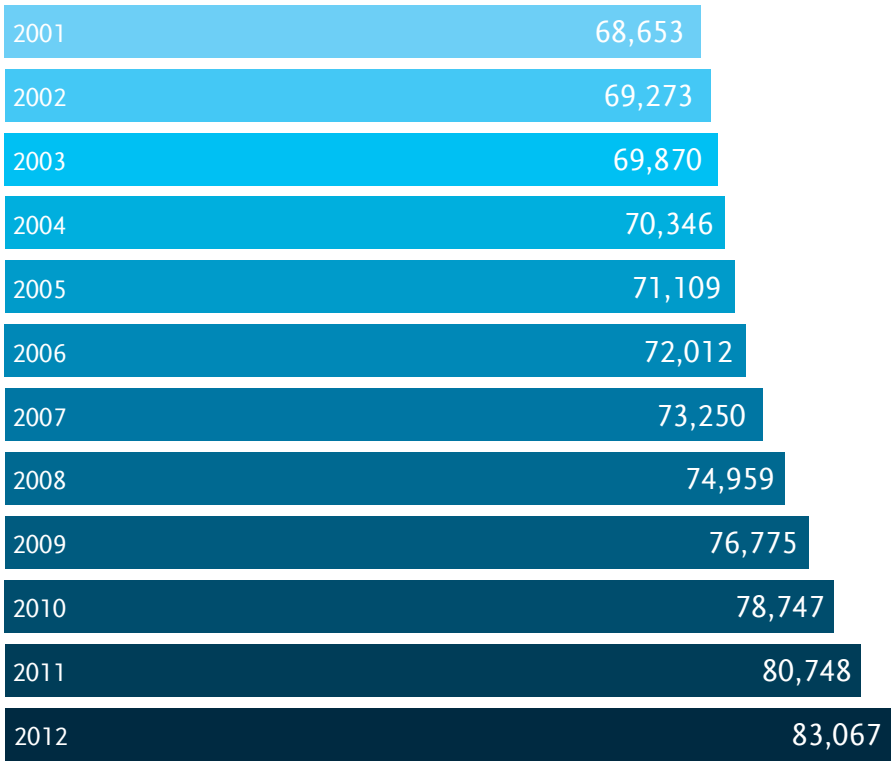
DATA SOURCE: PROFILE ID COMMUNITY PROFILE

2011 MEDIAN AGE + HOUSING DENSITY

	CITY OF PLAYFORD	GREATER ADELAIDE	SOUTH AUSTRALIA	AUSTRALIA
MEDIAN AGE	32	39	39	37
MEDIUM + HIGH DENSITY HOUSING	19%	24%	20%	25%

DATA SOURCE: PROFILE ID COMMUNITY PROFILE

CITY OF PLAYFORD ESTIMATED RESIDENT POPULATION



DATA SOURCE: PROFILE ID COMMUNITY PROFILE

2011 HOUSEHOLDS WITHOUT CARS

DATA SOURCE: PROFILE ID COMMUNITY PROFILE

3.4 DESTINATIONS

Key destinations within the City of Playford include:

1. Elizabeth Centre (including GP Plus Elizabeth, Civic Centre, Library, Grenville Centre, Aquadome)
2. Munno Para Centre (including Munno Para Library)
3. Virginia
4. Angle Vale
5. One Tree Hill

Key future (growth area) destinations include:

6. Buckland Park
7. Curtis Road Town Centre (including Stretton Centre

Other destinations include:

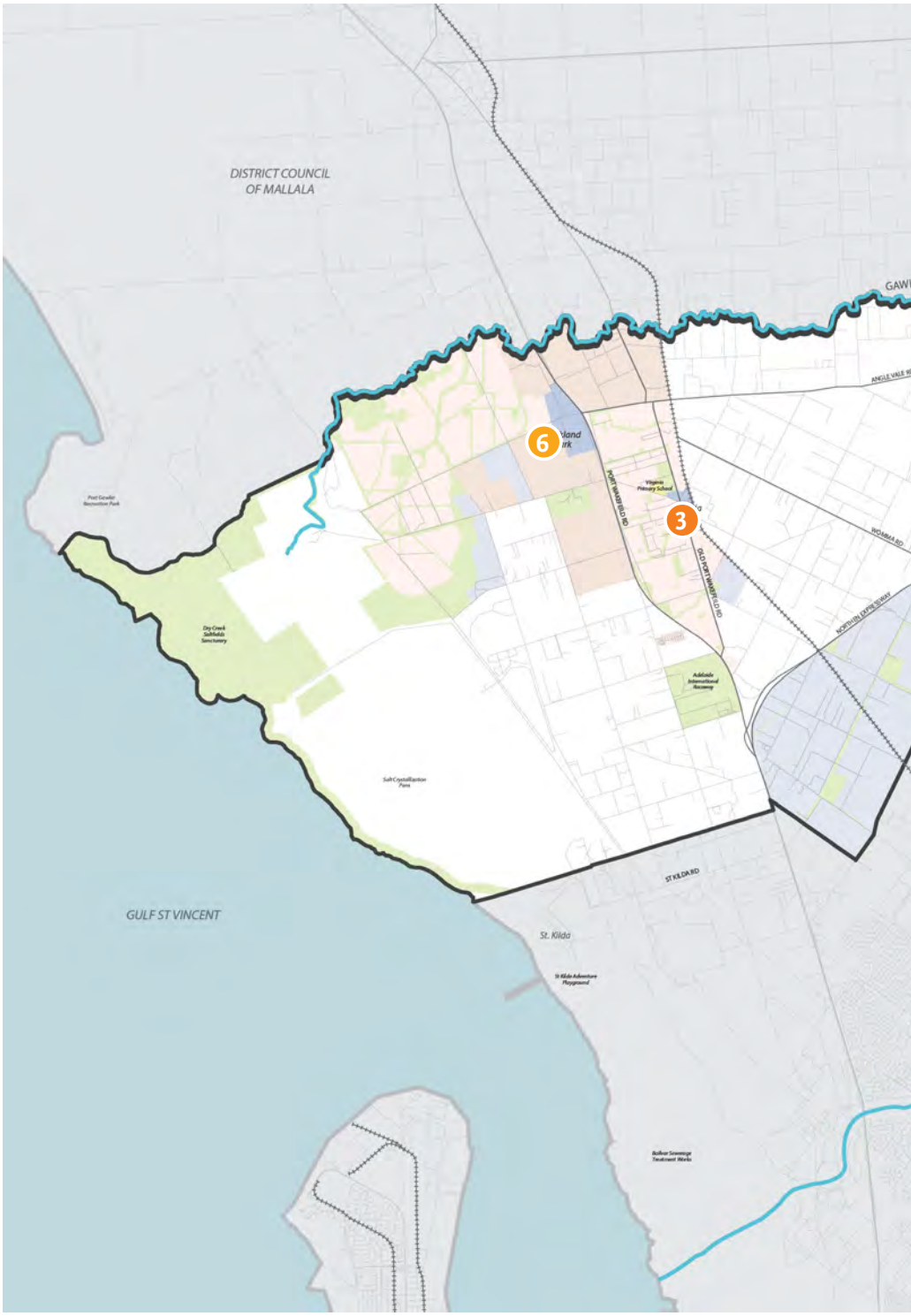
- Commercial centres
- Schools / education
- Parks, wetlands and recreation areas
- Train stations

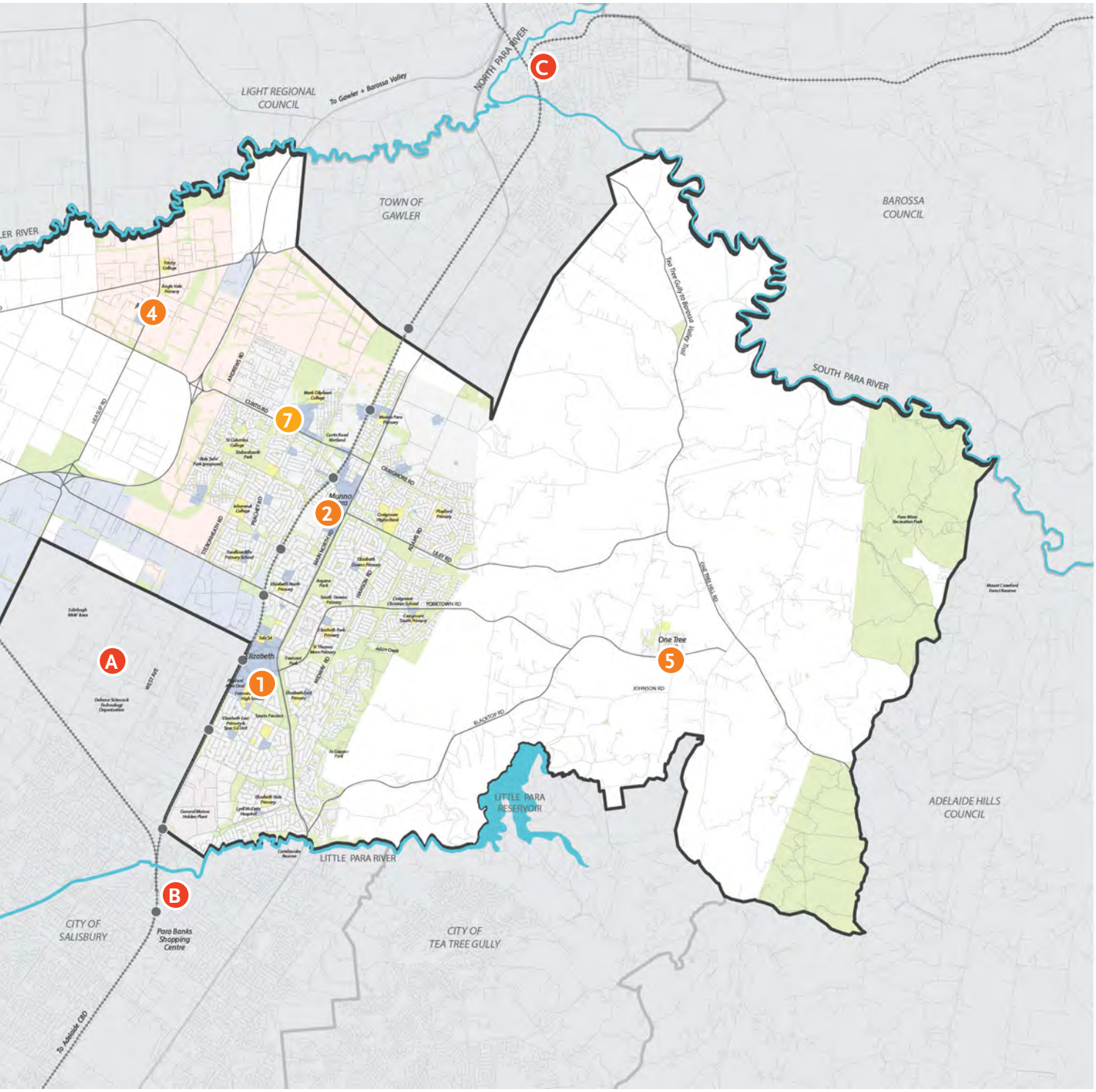
While located outside the City of Playford, the following destinations also influence movement patterns:

A. Greater Edinburgh Parks employment area
B. Salisbury Centre
C. Gawler

Key points in developing the Cycling and Walking Strategy:

- *Commercial centres and schools are dispersed across the urban area.*
- *Some clustering of destinations around Elizabeth Centre.*
- *Need to provide a good-quality path network to schools.*
- *Need to link key destinations by cycling and walking paths, including train stations for longer journeys.*
- *Destinations need to invite arrival by cycling and walking. For example providing pedestrian and cycle friendly entries, cycle parking, safe link to footpaths, etc*




LIGHT REGIONAL COUNCIL
To Gawler + Barossa Valley
NORTH PARA RIVER
TOWN OF GAWLER
BAROSSA COUNCIL
SOUTH PARA RIVER
Munno Para
Elizabeth
One Tree
LITTLE PARA RESERVOIR
LITTLE PARA RIVER
ADELAIDE HILLS COUNCIL
CITY OF SALISBURY
Para Banks Shopping Centre
CITY OF TEA TREE GULLY
To Adelaide CBD
A
B
C
1
2
4
5
7

3.5 MAJOR ROUTES

The City of Playford is located in Adelaide's outer northern suburbs.

It has four-major north-south vehicle routes:

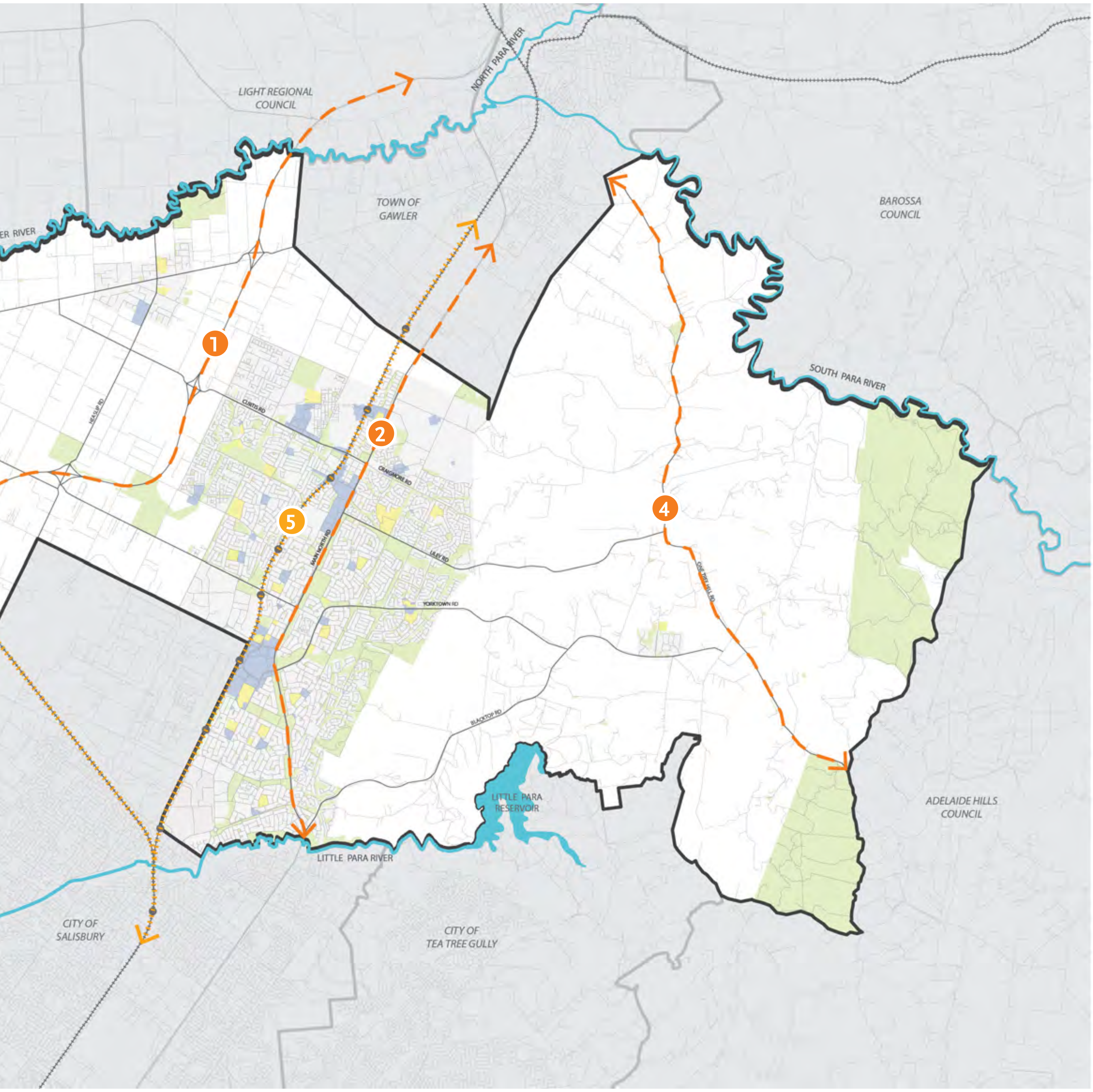
1. Northern Expressway
2. Main North Road
3. Port Wakefield Road
4. Gawler-One Tree Hill Road

The following railway lines also traverse the City of Playford:

5. Gawler line
6. Port Pirie line

Key points in developing the Cycling and Walking Strategy:

– *Need for safe pedestrian and cycle crossing of major roads and railways.*


LIGHT REGIONAL COUNCIL
NORTH PARA RIVER
TOWN OF GAWLER
BAROSSA COUNCIL
SOUTH PARA RIVER
ADELAIDE HILLS COUNCIL
LITTLE PARA RESERVOIR
LITTLE PARA RIVER
CITY OF SALISBURY
CITY OF TEA TREE GULLY
1
2
4
5

3.6 ACCIDENT DATA

Locations and severity of pedestrian and cycle crashes (reported 2008-2012, DPTI) are illustrated right.

Cycling incidents:

- Serious Injury
- Minor Injury

Pedestrian incidents:

- Fatal
- Serious Injury
- Minor Injury

2008-2012 REPORTED PEDESTRIAN + CYCLE CRASHES (DPTI DATA)

	Pedestrian crashes	Cycle crashes
Fatal	4	0
Serious Injury	28	8
Minor Injury	33	40

The majority of pedestrian and cycle crashes have occurred along major roads (e.g. Main North Road, Phillip Highway, John Rice Road, Yorktown Road).

Pedestrian crashes in particular are focused around Elizabeth Shopping Centre, Main North Road and near the intersection of Coventry Road and Anderson Walk.

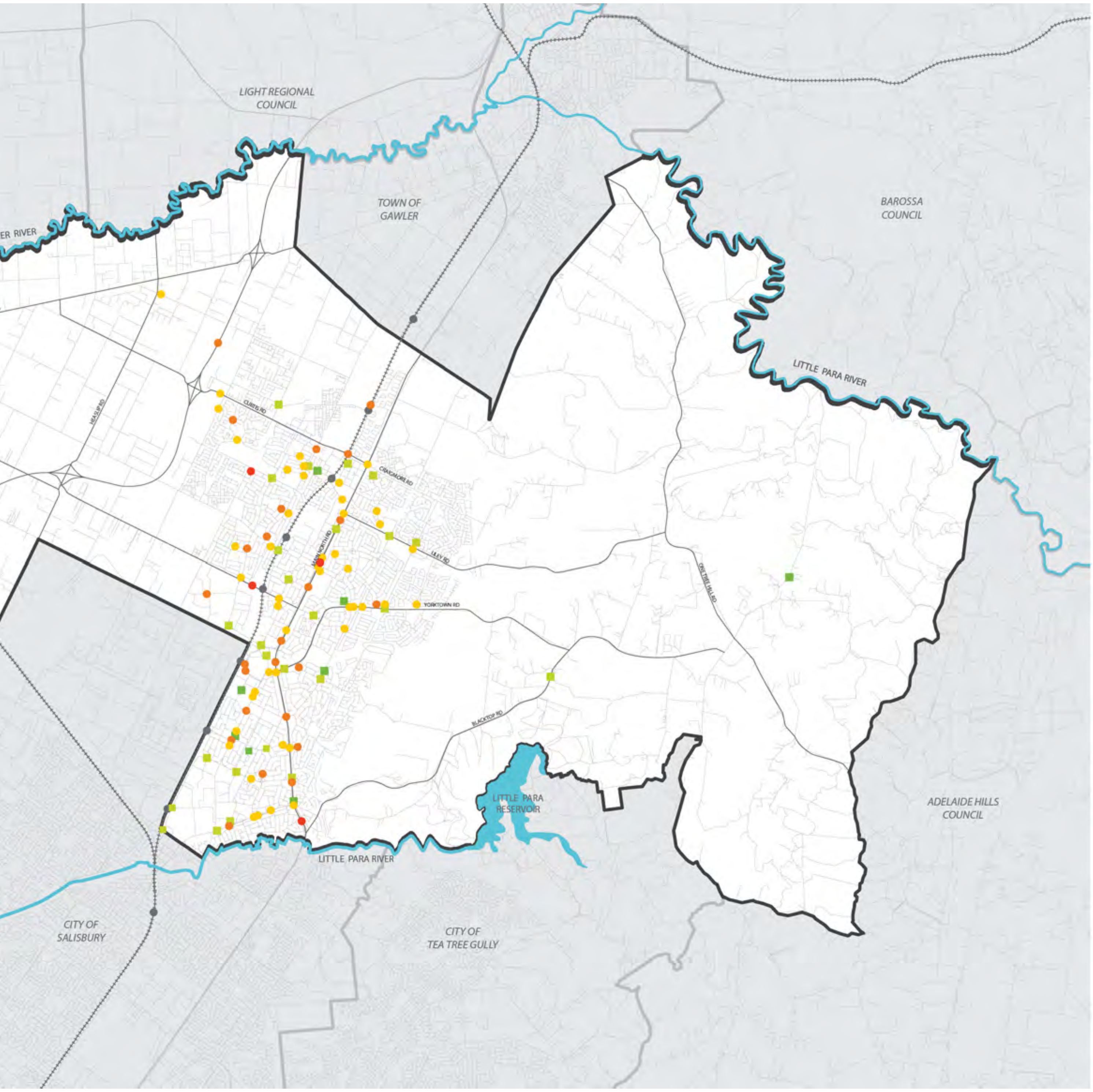
The City of Playford Cycling and Walking Strategy seeks to improve the safety of cyclists and pedestrians through:

- *improving walking and cycling environments;*
- *upgrading and providing additional arterial road crossings; and*
- *improving community education.*

Accident clusters may be eligible for 'Black spot' funding.

2008-2012 CITY OF PLAYFORD REPORTED PEDESTRIAN + CYCLE CRASHES

DATA SOURCE: DEPARTMENT OF PLANNING, TRANSPORT AND INFRASTRUCTURE. PROVIDED AS AN INFORMATION RESOURCE ONLY


LIGHT REGIONAL COUNCIL
TOWN OF GAWLER
BAROSSA COUNCIL
LITTLE PARA RIVER
ADELAIDE HILLS COUNCIL
LITTLE PARA RESERVOIR
LITTLE PARA RIVER
CITY OF SALISBURY
CITY OF TEA TREE GULLY
YORKTOWN RD
BLACKTOP RD

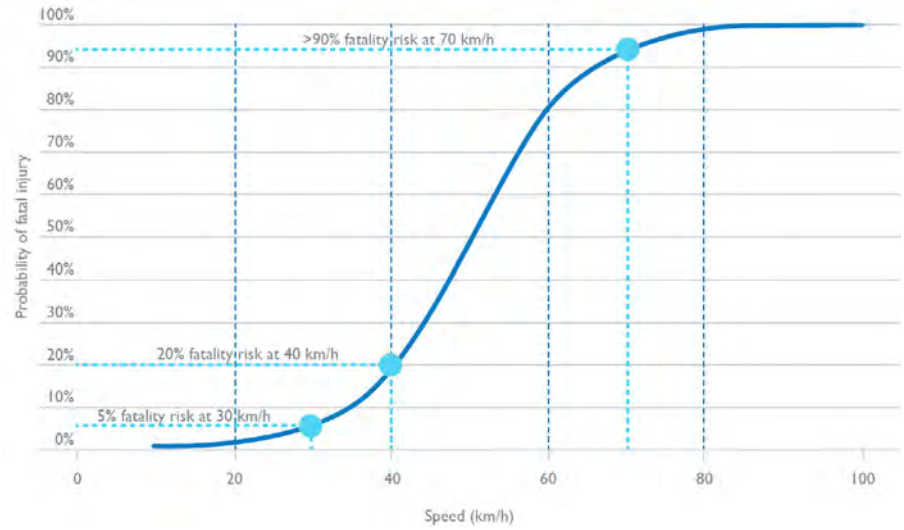
3.7 SPEEDS

The City of Playford has a number of roads with speed limits greater than 60km/hr (refer map below). The risk of pedestrian (and cycle) fatality increases significantly with higher vehicle speeds.

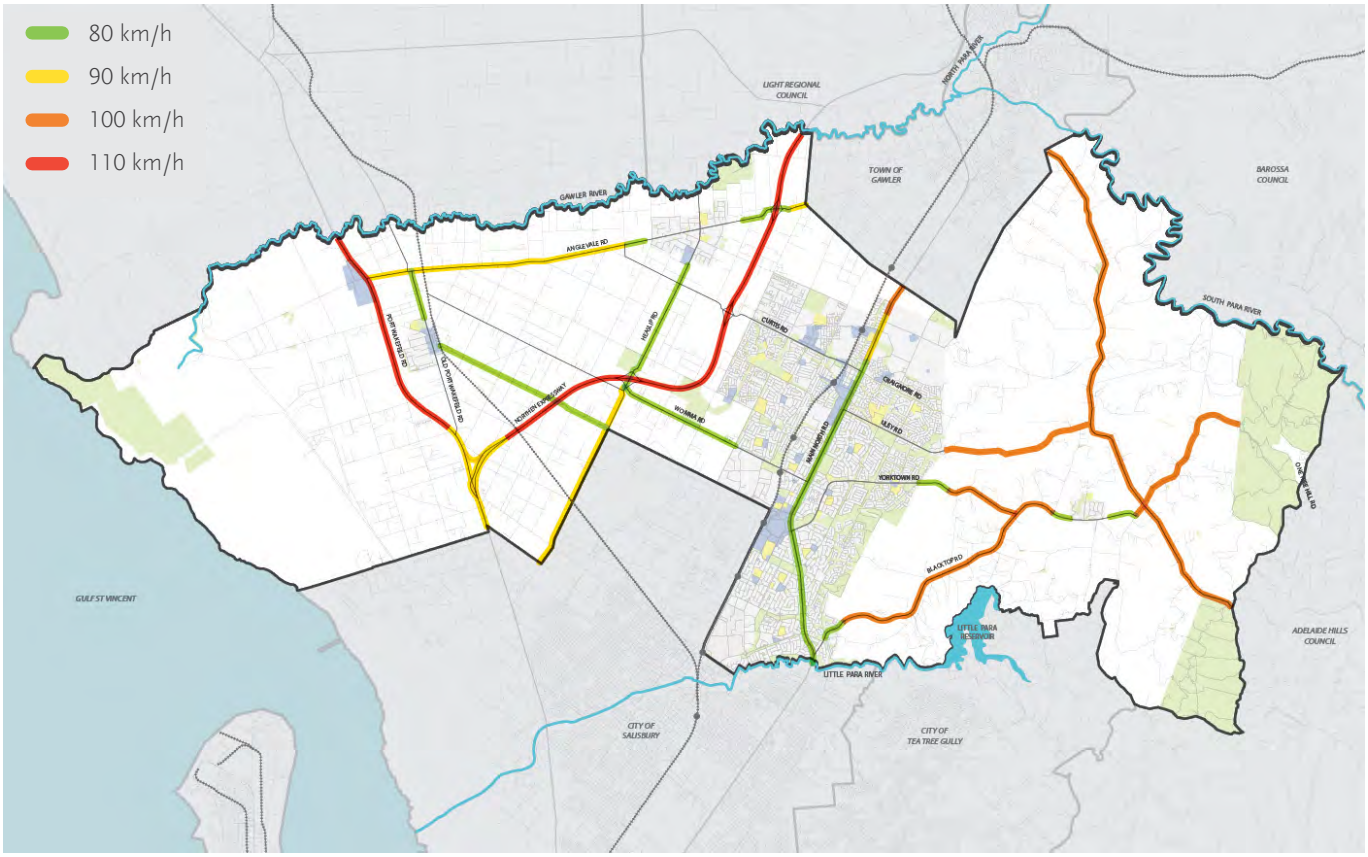
The City of Playford Cycling and Walking Strategy seeks to:

- *provide off-road routes separated from high speed roads; and*
- *upgrade and provide additional arterial road crossings.*

IMPACT OF VEHICLE SPEED ON PEDESTRIAN FATALITY RATES



SOURCE: AUSTROADS 2012, ON ROAD CYCLING ON HIGHER SPEED ROADS



ROADS WITH SPEEDS OVER 60KM/HR - FOR ILLUSTRATION ONLY - NOT ALL ROADS SHOWN

3.8 POLICY CONTEXT

3.8.1 NATIONAL POLICIES

NATIONAL CYCLING STRATEGY (2011-2016)

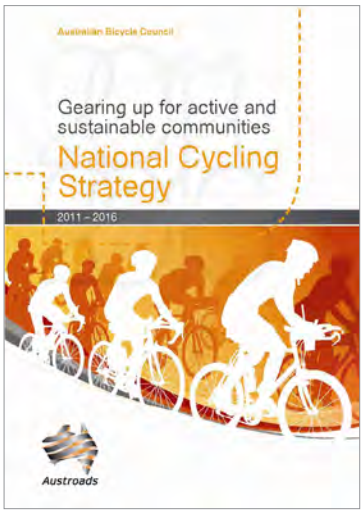
The National Cycling Strategy 2011-16 provides a framework that identifies the responsibilities of government, community and industry stakeholders to encourage more people to cycle.

'The vision for the National Cycling Strategy is to double the number of people cycling in Australia by 2016.'

To measure performance towards this target, the Australian Bicycle Council commissioned research to obtain baseline data on cycling participation in Australia.

The Strategy's goal is underpinned by six key priorities and objectives:

1. Cycling promotion.
2. Infrastructure and facilities.
3. Integrated planning.
4. Safety.
5. Monitoring and evaluation.
6. Guidance and best practice.



NATIONAL CYCLING STRATEGY 2011-2016

WALKING, RIDING AND ACCESS TO PUBLIC TRANSPORT (2013)

The Commonwealth Government Ministerial Statement sets out how the Australian Government will work to increase the proportion of people walking and riding for short trips, and accessing public transport, in our communities.

It outlines a national approach, for the Australian Government to work with other levels of government, the community and business, to add to and further current policies and programs supporting active travel in Australian communities.

BLUEPRINT FOR AN ACTIVE AUSTRALIA (HEART FOUNDATION)

'Blueprint for an Active Australia' provides the information for a national physical activity plan.

The aim of the national physical activity plan is to achieve increased population levels of physical activity, leading to community-wide benefits in health, the environment, social policy and the economy.

Implementation will require Federal, State and Local Governments to give priority to physical activity and supporting the community.

BLUEPRINT FOR AN ACTIVE AUSTRALIA (HEART FOUNDATION)

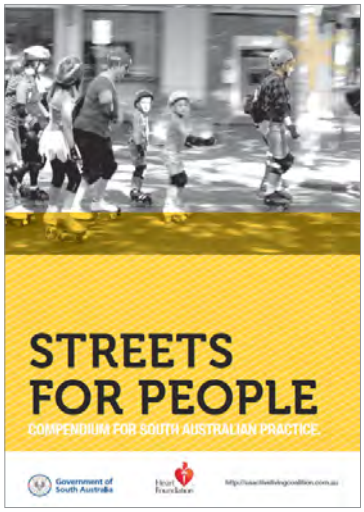
HEALTHY SPACES AND PLACES (HEART FOUNDATION)

Healthy Spaces and Places provides practical information on how to create environments that support physical activity – walking, cycling and using public transport.

It includes design principles, different development types, Australian case studies and links to the health and planning research and resources that support planning for active living.

SOUTH AUSTRALIA'S STRATEGIC PLAN 2011

Double the number of people cycling in South Australia by 2020



STREETS FOR PEOPLE COMPENDIUM

3.8.2 STATE POLICIES

SOUTH AUSTRALIA'S STRATEGIC PLAN (SASP)

South Australia's Strategic Plan includes targets relevant to cycling and walking. These relate to increasing the use of public spaces, connecting developments with public transport and bikeways, and increasing physical activity numbers. A target of the SASP is to 'double the number of people cycling in South Australia by 2020'.

GREENWAYS PROGRAM

The State Government's Policy is to promote greenways (cycling and walking paths) that provide links across Metropolitan Adelaide. Eight Greenway Priority Projects are identified, with the Adelaide to Gawler Greenway passing through the City of Playford. Refer also 'The Integrate Transport and Land Use Plan' below.

STREETS FOR PEOPLE: COMPENDIUM FOR SOUTH AUSTRALIAN PRACTICE

The Compendium supports the designing of people-friendly streets that promote cycling and walking. It aims to make easier the design and approval of innovative pedestrian and cycling friendly designs such as 'shared streets'.

The Compendium:

- Identifies appropriate approaches to designing people-friendly streets;
- Discusses the Link and Place street design approach;
- Clarifies the approval process, and seeks to address common barriers such as risk and liability issues for street design in South Australia; and
- Addresses standards and guidelines, and their applicability.

THE INTEGRATED TRANSPORT + LAND USE PLAN (2013)

This Document outlines the Government of South Australian's plan for transport in Greater Adelaide and regional South Australia. Relevant actions include:

- Completing the Gawler Greenway by 2025.
- Constructing the Smith Creek Trail and expanding the cycling and walking catchment of Munno Para.
- Providing bicycle lanes on Main North Road between Munno Para and the City.
- Improving transport infrastructure associated with the Playford growth area project.
- Extending the Bike*direct* network, including upgrades to the surface and width of existing bike lanes and extensions of bike lanes to intersections.
- Providing clearly separated and well lit cycling and walking routes along arterial roads which are well connected to surrounding neighbourhoods.
- Providing safe and convenient crossings of arterial roads.
- Improving walking and cycling facilities in catchment areas for schools.
- Improving protection for pedestrians at at-grade railway crossings.
- Developing more walkable and vibrant main streets.
- Preserving and constructing, as necessary, potential future road duplications at Womma Road and Curtis Road.
- Road widening and shoulder sealing at freight and major traffic routes in outer areas.
- In line with growth, extending bus services as required to service growth areas of Buckland Park, Playford North, Angle Vale, Virginia/Virginia North and Two Wells.
- Increasing public transport station catchment areas by removing barriers to walk-up and ride-up patronage.
- Supporting the Way2Go program – a community program seeking to increase the adoption of active transport. This program targets primary schools and local councils in identifying preferred routes for parents and children to travel to and from school.

THE 30 YEAR PLAN FOR GREATER ADELAIDE

The 30 Year Plan for Greater Adelaide promotes a balanced built form structure that focuses Adelaide's growth along transport corridors and nodes as well as some 'greenfield' areas.

Key aims of the 30 Year Plan relevant to the this project are to:

- Reduce car dependency;
- Facilitate jobs close to home; and
- Create liveable and accessible communities that have lifestyle and health benefits.

The 30 Year Plan identifies future urban growth and new areas for industry/ employment in the City of Playford area. This is now detailed further in the Playford Growth Area project (refer image right).

The 30 Year Plan also identifies potential urban regeneration areas adjacent to the Gawler rail corridor. Higher residential densities are planned for these areas. For example, replacing an older dwellings with 2 or 3 townhouses is one means to achieve increased densities.

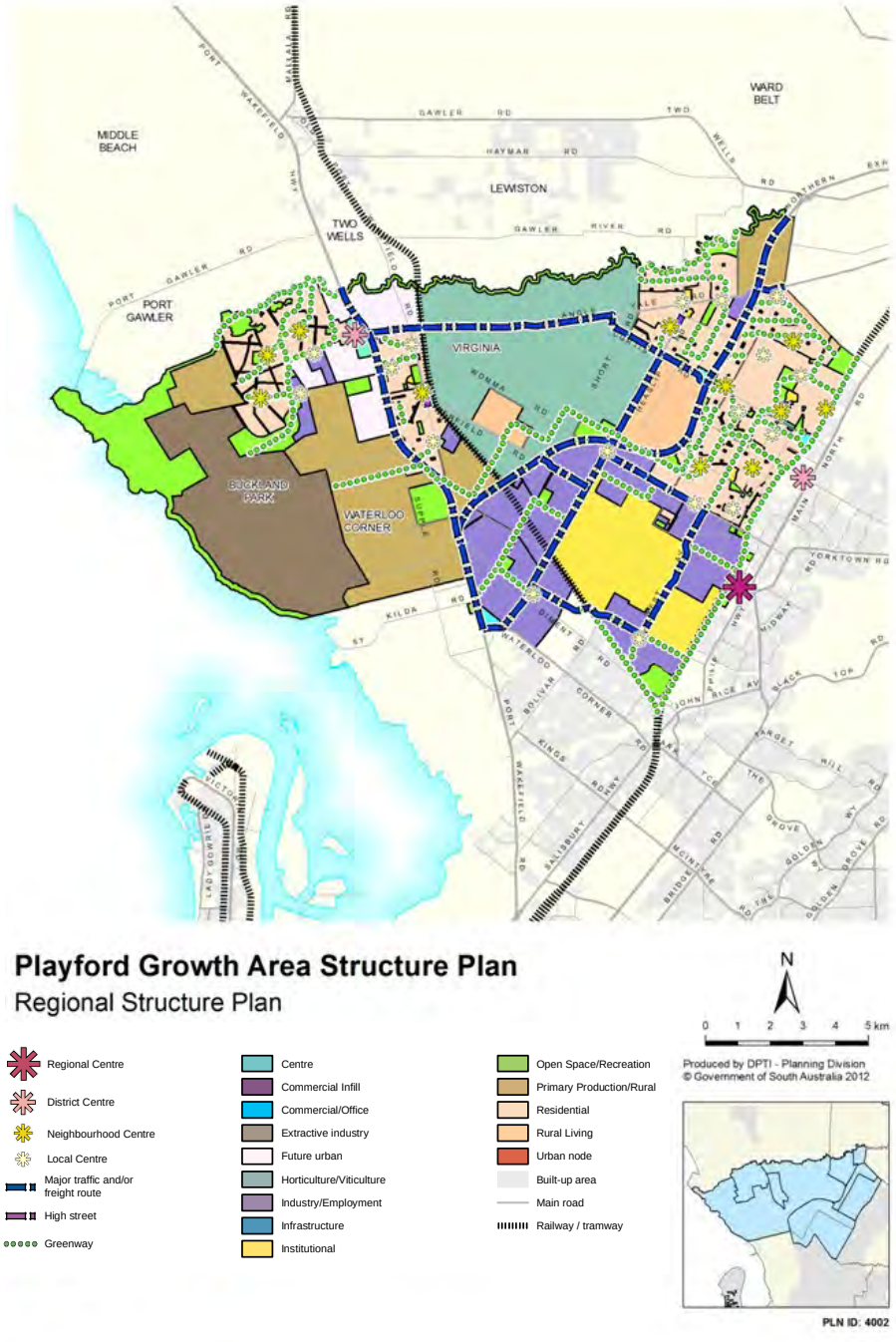
The 30 Year Plan also identifies 'Greenways' (walking and cycle routes) along rail corridors and key watercourses.

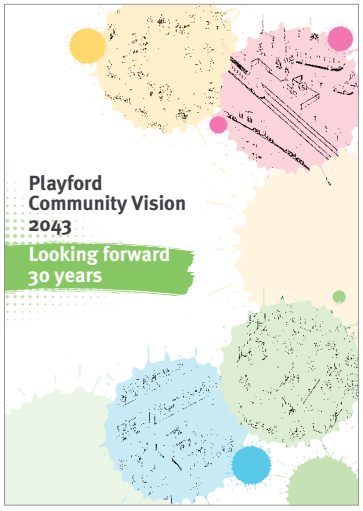
PLAYFORD GROWTH AREA STRUCTURE PLAN

The Playford Growth Area Structure Plan builds on the direction of the 30 Year Plan and provides additional detail for the future development of growth areas in the cities of Playford and Salisbury.

The plan identifies the urban growth areas (residential, employment and commercial) and appropriate infrastructure to support these. This include key traffic routes and greenways (walking and cycling links). Growth areas are extend west from the Gawler Rail corridor to Buckland Park.

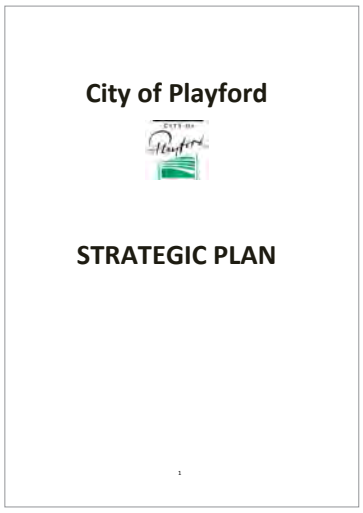
The proposed Greenways are incorporated (with other additional routes) into the City of Playford Cycling Walking Strategy as 'Future Growth' routes.





PLAYFORD COMMUNITY VISION 2043

Wide footpaths to be a feature, encouraging social interaction



STRATEGIC PLAN

'Sustainable Trails' – "a tree lined network of people movement corridors providing non-car transport, community health and recreation, and natural environment as a feature of the City"

3.8.3 LOCAL POLICIES

PLAYFORD COMMUNITY VISION 2043

The Playford Community Vision 2043 developed by the Playford community outlines the long-term vision for the city.

It responds to existing opportunities and seeks new directions to guide the city's future. Key aspects of the Community Vision relating to cycling and walking include:

- Desire for physically and socially connected communities and 'walkable communities'.
- A vibrant CBD for the North: an integrated retail, commercial and entertainment hub.
- Wide footpaths to be a feature, encouraging social interaction. There will be high quality transport links into the centre, with bicycle paths further easing access to the vibrant and bustling CBD area.
- A healthy lifestyle will be the norm with open space, walking, nearby shops, public transport, and access to social and recreational infrastructure, cycle paths, trail networks and fresh food availability being key characteristics of our communities.
- Sets a target for implementation of the 20-minute neighbourhood concept. The 20-minute neighbourhood concept is one in which residents can get to most of their essential services or activities within 20 minutes by walking, biking or taking public transport.

CITY OF PLAYFORD STRATEGIC PLAN 2013

The Strategic Plan is driven by the aspirations of the Playford Community Vision 2043 and sets down what the Council needs to do in the next five years and beyond to bring this vision to fruition.

Key aspects of the Community Vision relating to cycling and walking include:

- A focus on Elizabeth Centre – Elizabeth has been identified as the 'northern CBD' with plans being developed to achieve this, including an upgraded Regional Centre, Sports Precinct, Lyell McEwin Health Precinct and Education and Training Precinct.
- 'Sustainable Trails' – "a tree lined network of people movement corridors providing non-car transport, community health and recreation, and natural environment as a feature of the City"
- Specific trail connections identified:
  - Between the Elizabeth train station, Elizabeth shopping centre and Fremont Park.
  - Between the Elizabeth Regional Centre, the Regional Sports Precinct and the Health Precinct.
  - Alongside Main North Road.
  - Smith Creek Trail upgrade.

The City of Playford Cycling and Walking Strategy relates to and informs a number of Council plans, strategies and programs (refer below).

CITY OF PLAYFORD CYCLING & WALKING STRATEGY

Relates

⟷

Informs

- Community Vision + Strategic Plan
- Strategic Passenger Transport Plan
- Development Plan and assessment of development applications
- Strategic Planning Reviews (eg. Strategic Directions Review)
- Land Division Guidelines
- Urban Design Guidelines
- Strategic Projects
- Capital Work Programs
- Asset Management
- Council Plan
- Regional Public Health Plan
- Healthy Aging in Playford
- Street Tree Policy and Strategy
- Bicycle Network Audit
- OPAL projects
- Open Space Strategy
- Reserve and Park Management
- Gawler River Open Space Strategy
- Social Infrastructure Plan

KEY CITY OF PLAYFORD PLANS, STRATEGIES AND PROGRAMS

Summary

This Cycling and Walking Strategy:

- Coordinates and directs pedestrian and cycle movement in the City of Playford in support of the strategic goals of Council, in particular the development of 'Sustainable Trails'.
- Aligns with key planning documents of the South Australian Government including the 30 Year Plan and Integrated Transport and Land Use Plan.
- Informs the development of local policies as well as future capital and recurring work's budgets and transport strategies.
- Links with the initiatives promoted by the City of Playford like the Obesity Prevention and Lifestyle (OPAL) program.

3.9 MAJOR PROJECTS

The City of Playford is undergoing change with a number of major projects currently being planned and developed. A strategic approach is needed to ensure cycling and walking connections are efficiently planned, integrated and implemented.

Relevant key projects (refer map next page) currently influencing the City of Playford include:

1. Proposed rail electrification and Greenways program for cycling and walking.
2. Proposed Smith Creek Trail upgrades
3. Peachey Road upgrade
4. Curtis Road Town Centre
5. Main North Road Windbreak Trails
6. Elizabeth Regional Sports Precinct Master Plan
7. Lyell McEwin Health Precinct Master Plan
8. Elizabeth CBD of the North Project
9. Fremont Park Master Plan
10. Proposed 'Ride-safe' park at Mayfair Park
11. Playford Growth Area Structure Plan including Buckland Park (refer 3.8.2).

Also refer to Local Policies (Part 3.8)

Key cycling and walking considerations include:

- *Ensuring new projects connect and integrate with the surrounding community and cycling and walking network.*
- *Ensuring the level of connection is appropriate – details matter. For example, connection requires more than simply providing end-of-trip bicycle parking facilities.*
- *Ensuring cycling and walking are considered upfront rather than being an after thought. This includes developing more detailed cycling and walking plans for complex precincts such as the CBD of the North project.*

CBD OF THE NORTH PROJECT. SOURCE CITY OF PLAYFORD


11
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3.10 EXISTING KEY CYCLING & WALKING ASSETS (OFF-ROAD NETWORK)

The following key assets form the 'backbone' of the City of Playford Cycling and Walking Network.

Stuart O'Grady Bikeway

The Stuart O'Grady Bikeway is located alongside the Northern Expressway. It is a 3m-wide shared path extending the 23km length of the Northern Expressway from Taylors Road at Virginia through to Gawler. The route is mainly flat with signage, shelters and marked road crossings (to assist crossing the major roads that feed into the Northern Expressway). There is no tree planting along the route and walking and cycling links to the local network are limited.

Munno Para Bikeway

The Munno Para Bikeway extends approximately 2km north-south in Munno Para. The 3m-wide shared path is located in a linear reserve and travels past Munno Para Primary school. The path surface is sealed but in poor condition. There is some lighting along the route.

Smith Creek Trails

The Smith Creek Trails are a series of paths extending along Smith Creek. Paths are generally:

- unsealed, compacted rubble surface east of the Gawler Railway line.
- sealed, hotmix surface west of the Gawler Railway line.

The Smith Creek Trails include Elephant Walk which starts at the intersection of Anderson Walk & Morialta Drive, Smithfield. Main North Road and Gawler rail line are barriers along the route.

Little Para River Trails

The Little Para River Trails follow the Little Para River along the southern boundary of the City of Playford. The trails extend 10km from approximately 1km east of Main North Road to White's Road Wetland (to the west of Port Wakefield Road).

The trail features large gums and passes through several parks, playgrounds and historic sites. The trail surface is generally unsealed, compacted rubble.

West Avenue Path, Edinburgh

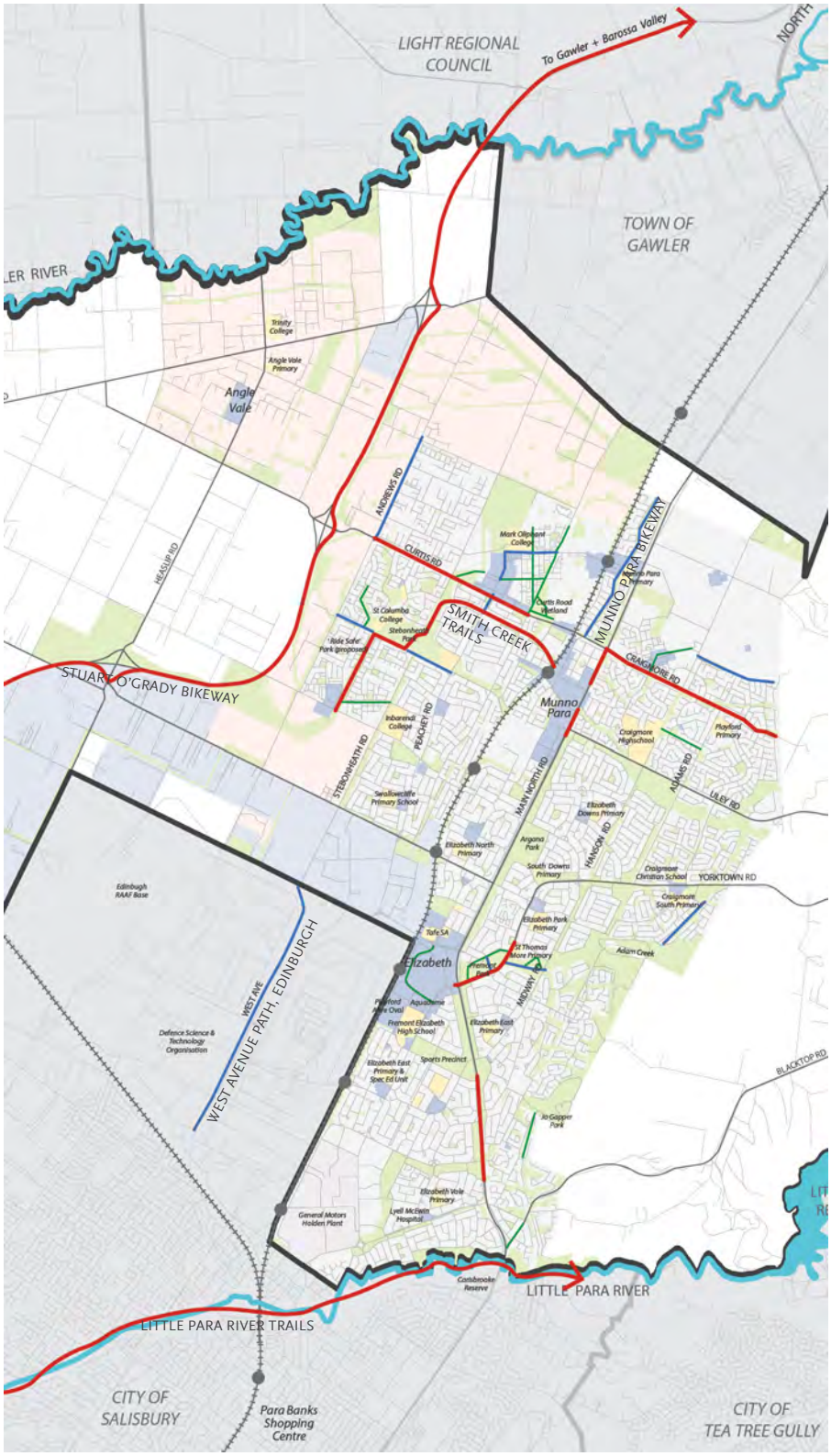
A 3m-wide shared-use path is located in the eastern road reserve of West Avenue in Edinburgh. While located outside the City of Playford boundary it forms an important link through Edinburgh to Salisbury.

The trail surface is sealed and generally in good condition.

Various off-road paths: Davoren, Curtis, Craigmore and Bentley Roads

Considerably large segments of off-road shared-use path are located along Davoren Road (pictured above), Curtis Road, Craigmore Road and Bentley Road.

These paths are generally, 2.5-3m-wide, sealed (hotmix) and in good condition.



LEGEND

- Train station
- School / education
- Reserve / park
- Commercial
- Built up areas

Existing routes

- Primary
- Secondary
- Tertiary

KEY CYCLING WALKING + ASSETS

SUMMARY

The City of Playford has an existing network of established off-road cycling and walking assets. Most routes follow arterial roads or drainage corridors.

This network generally provides good walking and cycling facilities, although its distribution is mostly limited to the northern areas. The existing network also lacks connectivity between routes (e.g. between Curtis Road to Craigmore Road).

Existing paths vary from poor to good condition. Investment to better maintain and upgrade these assets (particularly high-use unsealed sections) would be beneficial. The adoption of a Service Standards Policy would also improve infrastructure provision and provide greater consistency.

Key moves to better integrate and enhance key off-road assets include:

- *Connecting existing gaps in the network.*
- *Increasing the number of connections to the Stuart O'Grady Bikeway, particularly as residential growth increases nearby.*
- *Developing a Service Standards Policy within Council.*
- *Enhancing off-road path entries and connections to the street network.*
- *Improving cycling and walking on the street network - particularly the streets that lead to major off-road routes.*
- *Facing developments and active edges onto off-road shared paths to improve passive surveillance.*
- *Improving planting to provide shade and amenity.*
- *Improving signage to clearly identify routes, destinations and travel distances.*
- *Enhancing lighting along key routes to improve safety.*
- *Increasing recognition of cycling and walking assets in long-term budgets to adequately fund on-going maintenance.*

The Strategies to achieve these actions are identified in Part 06 of this report.

3.11 EVALUATING EXISTING STREETS

Major Road: Main North Road, Elizabeth

- Divided roadway with high vehicle speeds and volume.
- Generally, no walking and cycling infrastructure.
- Wide verges with a mix of informally arranged trees.
- Limited pedestrian crossings points.
- 'Goat tracks' in verge to bus stops and informal road crossings.
- Is a major north-south vehicle link and a focus for commercial and retail activity.

Collector Road: Midway Road, Elizabeth Park

- Narrow footpath one side only.
- No separate cycle provision.
- Wide verge on east side.
- Above ground water pipe creates a barrier.
- No overhead wires – opportunity for improved street tree planting.

Collector Road: Chellaston Road, Munno Para West

- Narrow footpath on one side only and located against kerb.
- Wide road encourages higher vehicle speeds.
- No street trees.

Arterial Road: Black Top Road, Hillbank

- Bike lanes (1.4m-wide) ending before intersection.
- Narrow footpaths.
- Limited street trees.
- Potential conflicts between parallel parked cars and cyclists (e.g. 'dooring').

Local Street: Cartwright Drive, Munno Para West

- No footpaths.
- No street trees.
- Cul-de-sac street – no connectivity (no pedestrian /cycle link at end).

Local Street: Kosmina Crescent, Hillbank

- Narrow footpath adjacent to the road edge.
- Driveway priority over footpaths.
- No street trees.
- Parked cars and wheelie bins can disrupt footpath access when present.

Local Street: Butler Street, Elizabeth Park

- Narrow (1.2m-wide) concrete footpaths.
- Small trees that provide only limited shade and amenity shade.
- No overhead wires - opportunity for improved street tree planting.

Summary

Most roads and streets in the City of Playford are car-focused providing little amenity for pedestrians or cyclists. These streets usually have a wide-carriageway, overhead wires and lack larger street trees.

There are very few on-road bicycle lanes in the City of Playford. They are often only provided along short sections of road and lack connectivity.

Footpaths are often narrow and in poor-average condition. In some streets footpaths are only located on one-side of the street or located adjacent to the road edge.

3.12 EXISTING BICYCLE NETWORK

BIKEDIRECT

The Government of South Australia has developed Bike*direct* maps locating bicycle routes across the Adelaide metropolitan area. The Bike*direct* maps provide options for people with different abilities, illustrating main roads, bicycle lanes, local streets and off-road paths. The Bike*direct* program has helped develop key routes, road crossings, and integrated facilities across different local government areas.

The Government of South Australia has also developed the Cycle Instead Journey Planner. It uses the Bike*direct* network to generate cycling routes along main roads, bike lanes, local streets, off-road paths. The Journey Planner allows users to choose different options considering topography, experience, road conditions and travel speed.

BIKEDIRECT - CITY OF PLAYFORD

The Bike*direct* plan (refer right) illustrates the existing bicycle network in the City of Playford. The bicycle network comprises off-road paths, on-road bicycle lanes and 'bicycle-friendly 'streets.

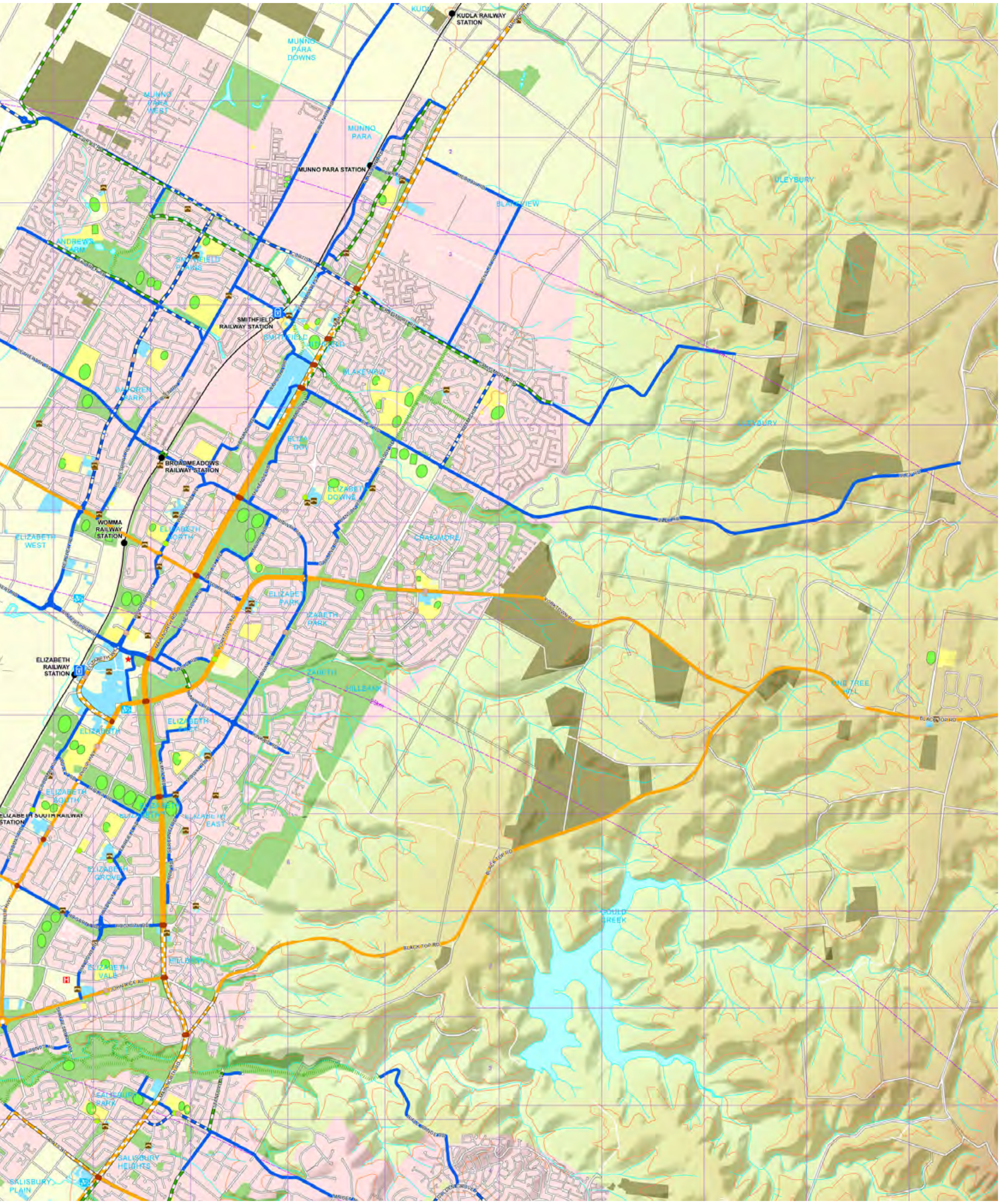
Compared to other parts of Greater Adelaide there appears to be fewer roads with on-road cycle lanes or cycle shoulders.

Roads with on-road lanes or cycle shoulders include:

- Adams Road, Craigmore
- Main North Road
  - Sealed shoulder in Blakeview
  - On-road lane – south-bound in Hillbank
  - On-road lane – north-bound in Elizabeth Vale
- Angle Vale Road
- Andrews Road
- Commercial Road, Elizabeth South
- Blacktop Road – short section in Hillbank
- Elizabeth Way, Elizabeth
- Peachey Road
- Curtis Road

On-road bicycle lanes are generally:

- A marked lane at the road edge;
- Narrow (~1.2m wide);
- Discontinuous - often disrupted by roundabouts or major intersections.


KUDLA RAILWAY STATION
MUNNO PARA DOWNS
MUNNO PARA WEST
MUNNO PARA
MUNNO PARA STATION
BLAKEVIEW
ULEYBURY
ANDREWS FARM
SMITHFIELD PLAINS
SMITHFIELD RAILWAY STATION
SMITHFIELD
BROADMEADOWS RAILWAY STATION
WOMMA RAILWAY STATION
ELIZABETH WEST
ELIZABETH NORTH
ELIZABETH DOWNS
CRAIGMORE
ELIZABETH PARK
ELIZABETH RAILWAY STATION
ELIZABETH
ELIZABETH EAST
ELIZABETH SOUTH
ELIZABETH SOUTH RAILWAY STATION
ELIZABETH GROVE
ELIZABETH VALE
HILLBANK
ONE TREE HILL
GOULD CREEK
BLACKTOP RD
SALISBURY PARK
SALISBURY HEIGHTS
SALISBURY PLAIN

3.13 BARRIERS TO CYCLING & WALKING IN THE CITY OF PLAYFORD

There are a number of barriers that discourage pedestrians and bike riders using the cycling and walking network. A shift in focus and funding to plan and design out these barriers and encourage walking- and cycling-friendly environments is needed.

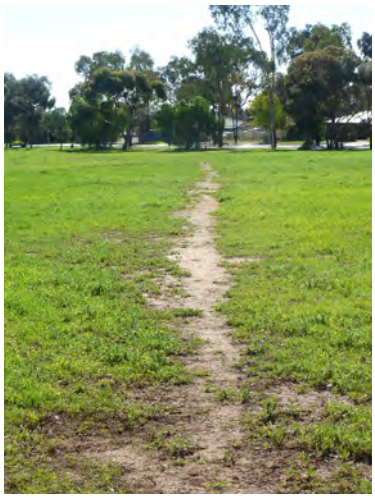
Refer also to Part 04 Consultation – Stage 1 for Community attitudes.

	Barriers	Issues	Response
1	**Poor cycling and walking routes**	– Footpaths are: • often narrow (~1.2m-wide) and in poor condition (cracking pavements); • sometimes not provided or only located on one-side of the street; • sometimes located adjacent to the road edge; and • not suitable for wheel-chair and gopher access. – Bicycle lanes are: • generally narrow (1.0-1.2m-wide) and often with little separation from parked cars and fast moving vehicles; and • discontinuous, particularly intersections.	*Provide connected cycling and walking routes that allow the physical space to walk and cycle safely and comfortably. This requires a shift from the minimum provision and adoption of a Service Standards policy that encourages cycling and walking as viable transport options. This includes new routes and retro-fitting existing.* REFER PART 6: STRATEGY 1.
2	**Car-dominance in streets**	– Lack of safety (and feeling vulnerable) from fast moving vehicles and higher numbers of vehicles. – Lack of pedestrian priority at traffic lights (long waits and distances to cross). – Vehicle noise and air pollution. – Lack of safe crossing points and often many vehicle lanes to cross. – Left-turn vehicle slip lanes supporting higher speeds at intersections.	*Work with the requirements for safe and efficient traffic flow to balance the needs of pedestrians and cyclists. This requires a shift in the thinking from cars to people.* REFER PART 6: STRATEGY 2.
3	**Poor details and supporting infrastructure**	– Lack of large street trees for comfort and amenity (shade). – Limited rest spots such as seats. – Poor lighting provided along routes. – Lack of priority for walking. For example, vehicle slip-lanes which disrupt access and driveway paving over footpaths that indicate priority is for vehicles. – Limited crossing of major roads.	*In developing routes for cycling and walking provide details and supporting infrastructure, such as street trees and furniture for comfort and amenity.* REFER PART 6: STRATEGY 3.

BARRIERS TO CYCLING AND WALKING

STREETS WITH NO LARGE STREET TREES FOR SHADE

NO FORMAL PATH



POOR CONSTRUCTION OF ROUTES

	Barriers	Issues	Response
4	**Car-focused planning and layout**	– Low-density and single land-use environments (as opposed to mixed-use) means residents often have large distances to travel to work or shops. – Indirect routes created by cul-de-sacs. – Uninteresting environments (e.g. carpark, single land-use, no shop fronts). – Main transport routes (e.g. Main North Road, Gawler rail line) disrupt and limit movement, particularly east-west links. – Roundabouts (especially large ones with heavy traffic and higher speeds) are difficult for pedestrians and cyclists.	*Shift to plan for pedestrians and cyclists as well as cars. Integrate cycling and walking with planning and the built form.* REFER PART 6: STRATEGY 4.
5	**Lack of maintenance**	– Walking and cycle paths can have cracks, holes, raised paving, overgrown vegetation, etc. – Rough surfaces and broken glass on road edges.	*Develop plans for maintenance and management of cycling and walking infrastructure. Provide adequate maintenance budgets.* REFER PART 6: STRATEGY 5.
6	**Promotion and Education**	– Lack of information (e.g. signage, maps) on cycling and walking routes and facilities. – Some lack of understanding of cycle safety and benefits.	*Develop strategies for promotion, education, advocacy and support to encourage cycling and walking, including social media and smartphone applications.* REFER PART 6: STRATEGY 6.

CAR-FOCUSED ARRIVAL AT SHOPS

GAPS IN PATH NETWORK (E.G. CURTIS ROAD TO STUART O'GRADY BIKEWAY)

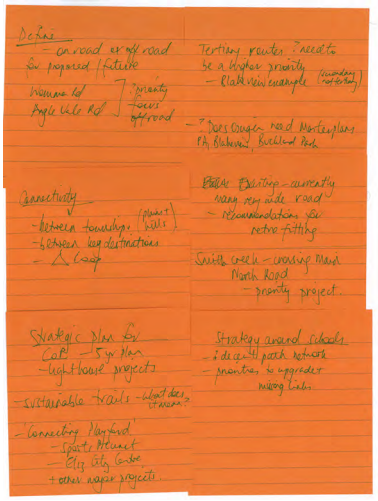
IMAGE: OPAL FESTIVAL SOURCE: CITY OF PLAYFORD

PART 04
CONSULTATION

IMAGE: INFORMAL RESERVE PATH. SOURCE: CITY OF PLAYFORD

CONSULTATION

The following section describes the consultation process and summarises key findings.



PURPOSE

The consultation program was conducted to:

- Advise stakeholders and the wider community about the project.
- Seek information and insights that will inform the Strategy.
- Build confidence in the process and outcomes for the client, Government agencies, stakeholders and the community.
- Inform and increase appreciation about the project by collecting feedback.

STAGING

The consultation included the following stages:

STAGE 1 – ACTIVE TRAVEL RESEARCH

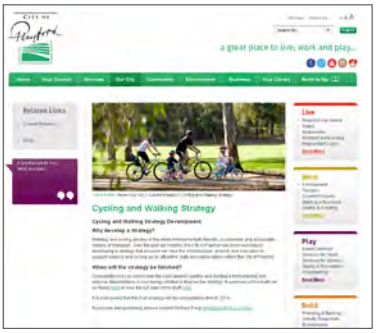
Stage 1 of the consultation program comprised research prepared for the City of Playford and OPAL by Harrison Research in 2011 titled, 'Understanding Behaviours + Attitudes'

Outcomes of the research are summarised overleaf.

STAGE 2 – STAKEHOLDERS

Stage 2 presented the Draft Cycling and Walking Strategy to stakeholders within the City of Playford. This included staff from Asset Management, Land Development Engineering, Landscape Architecture, Policy Planning, Urban Planning, Social Planning, Infrastructure Planning, Transport Planning, Traffic Engineering, Strategic Planning, OPAL, Asset Maintenance and Recreational Planning.

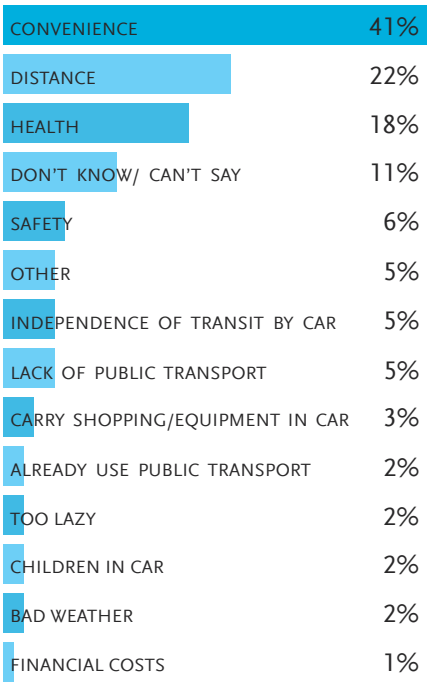
The Draft Strategy was also provided to external stakeholders for consideration.



STAGE 3 – COMMUNITY

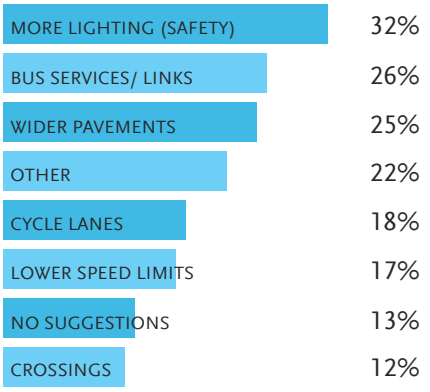
Stage 3 provided the Draft Cycling and Walking Strategy to the community via Council's website. Further consultation will be undertaken for specific projects that includes details on specific route locations and type of path, etc.

BARRIERS TO USING ALTERNATE MODES OF TRANSPORT (WALKING, CYCLING OR PUBLIC TRANSPORT)



SOURCE: OPAL ACTIVE TRAVEL PROJECT, HARRISON RESEARCH, 2011

SUGGESTIONS TO ASSIST RESIDENTS WALK OR CYCLE MORE OFTEN



SOURCE: OPAL ACTIVE TRAVEL PROJECT, HARRISON RESEARCH, 2011

STAGE 1
UNDERSTANDING COMMUNITY BEHAVIOURS & ATTITUDES (ACTIVE TRAVEL PROJECT RESEARCH)

Stage 1 of the consultation program comprised research prepared for the City of Playford by Harrison Research in 2011. The information gathered from the community provided their current travel behaviours as well as motivators and barriers to active travel. Data was collected from 400 households in the suburbs of Davoren Park, Smithfield, Smithfield Plains, Munno Para, Munno Para West, Andrews Farm and Elizabeth North. Two focus group sessions were also conducted.

KEY FINDINGS

Behaviours

- 3 in 4 residents use private car for regular travel and 1 in 5 residents use public transport.
- 9% of residents walk to a regular destination and 2% cycle (regular destination was defined as travel at least three times a week to the same destination).
- Residents were more likely to use active modes of travel for irregular trips.
- Residents in the Playford Alive catchment overwhelmingly make use of both Munno Para Centre and Elizabeth City Centre (95% and 80% respectively).
- Over 80% of respondents indicated that they had not even thought of an alternative mode of transport (e.g. walking, cycling) to access shopping centres or educational facilities.
- 1 in 4 residents had used public transport to access major shopping centres (such as Elizabeth City Centre and Tea Tree Plaza).
- The majority (88%) of respondents have used at least one method to reduce private car use. The most common were combining purposes (trip-chaining) (51%), walking to local shops (37%) and walking to public transport (27%).

Barriers

- The main barriers to using more active travel modes were convenience, distance and health reasons (refer graph top left).

Suggestions for overcoming the barriers (refer graph left) focused on:

- Improving personal safety e.g. lighting (raised by 1 in 3 residents).
- Having bus links / increased bus services (1 in 4).
- Improving pavements / footpaths (also raised by 1 in 4 residents).
- Improving cycle lanes (1 in 5).
- Slowing vehicles (1 in 6).
- Improving crossings.

Adequate footpaths, off-road walking trails and dog exercise areas were considered important in encouraging behavioural change to a more active, healthy lifestyle. These suggestions echoed those raised by residents in seeking feedback on other Council strategies (e.g. Vision 2043). They were also confirmed during the more in-depth group discussions, where participants found it difficult to overcome these barriers and perceive themselves making positive changes to their travel choices.

Attitudes

- Personal safety whilst on foot, using public transport or cycling was a key consideration in considering active travel. This particularly related to the safety of children when cycling, walking or catching the bus to school.
- Road and footpath infrastructure, including off-road shared use trails, were considered by the majority of participants to be inadequate to safely ride bicycles or walk to specific destinations.
- Participants recognised the benefits to their health and their children's health of being more physically active.
- Travel choices were focused on convenience first and foremost, with cost also identified as becoming increasingly important and a possible driver of change to more active travel modes.

Safety concerns

- Roads and footpaths – e.g. poor or non-existent footpaths, poor road surfaces for cycling (e.g. potholes, no proper gutter, no footpaths on many roads in the area etc.).
- Fast moving traffic on some roads, congested traffic, buses on narrow roads and "hoon drivers" speeding on certain sections.
- "Undesirable elements" - bottles and needles and "undesirable people".
- Safety at train stations.
- Unrestrained dogs.

Recommendations

- Easily accessible, off-road, shared use paths as the most effective way to encourage more active travel in the area among both adults and their children.
- "Activity Hubs" around shopping centres, with walking and cycle paths.

Summary

This consultation provides insights into the behaviours, barriers and attitudes of the City of Playford community regarding walking and cycling. It identifies key areas to be addressed towards improving cycling and walking environments, most notably:

- Better footpaths including wider pavements
- Improved/new cycle lanes
- Slowing vehicle speeds
- More crossings
- Improved/new lighting
- Better links to shops and public transport

These aspects are addressed in the recommendations of this Strategy (Part 06).

"Most footpaths are uneven /sinking and badly in need of upgrade. The main streets seem to be done but that's all."

"Fix them (footpaths) everywhere in local area. Not safe to walk or use pushers etc."

"I personally wouldn't let my kids ride to the school. Along our streets, if I'm scared to ride along it, I can't expect my kids to ride on it. "

"Better lighting along green linear walkway/ parks (at end of our roads)."

"Cycle tracks must be off road. It's too dangerous and they should not be on roads at all."

QUOTES FROM THE COMMUNITY

PART 05
BEST PRACTICE

A sign of a good cycling and walking environment is one that can be safely used by a child or the elderly.

5.1 BEST PRACTICE

TOOLS TO ACHIEVE A SUCCESSFUL CYCLING & WALKING NETWORK

This part of the Strategy provides best practice examples of cycling and walking route types that may be applied in the City of Playford. Key types explored are:

- Shared Use Paths
- Footpaths
- On-road Cycle Lanes
- Separated Bicycle Lanes
- Green Streets (Bike Boulevards)
- Shared Space

No one solution is better than another with each having their own advantages and disadvantages. They reflect current best practice, but are by no means, definitive. Other solutions may be explored to ensure the best outcomes for site specific projects. Each route should be considered on a case-by-case basis.

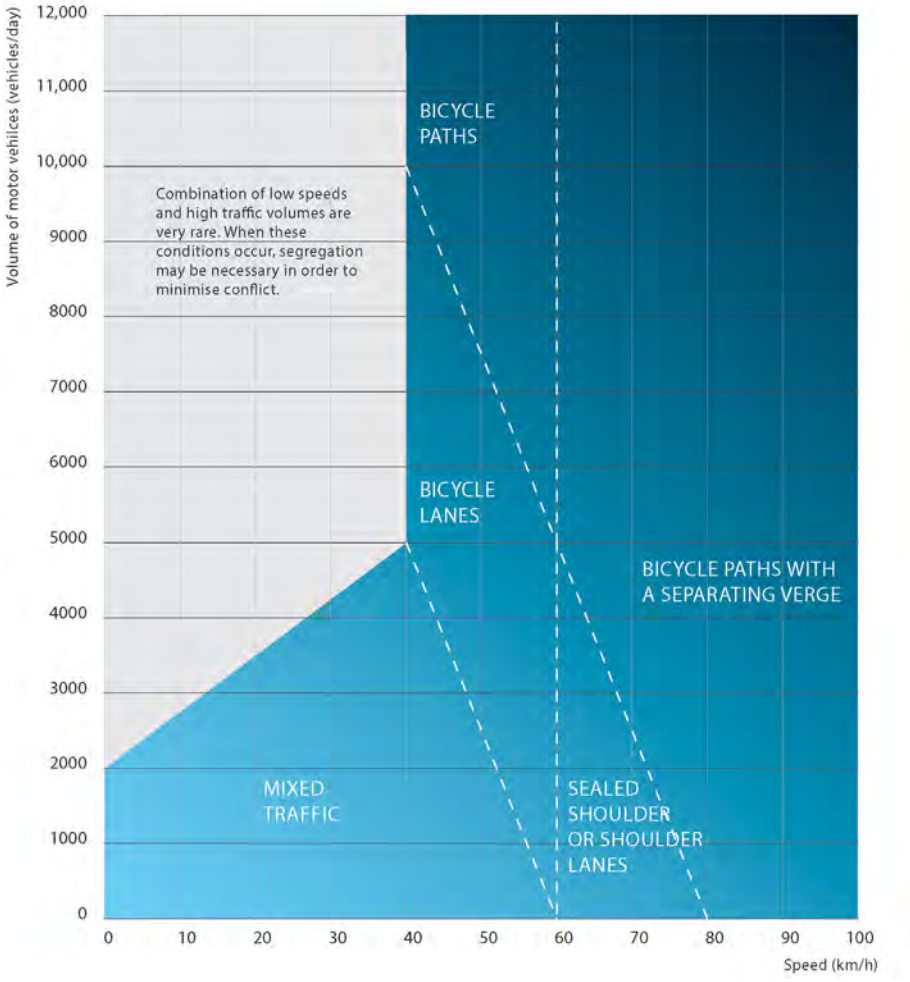
DESIGN CONSIDERATIONS

In determining an appropriate option a number of factors need to be considered, including:

- Vehicle speeds and volumes (refer diagram next page);
- Road alignments and traffic lane width;
- The full width of streets including verges (i.e. property boundary to property boundary);
- Off-set verges (providing one side of the street with a wider verge and paths);
- Opportunities for separating walking, cycling and vehicle routes;
- Sharing streets; and
- Levels and separation and interface with adjacent buildings.

The route types and design guidance included in this part of the report reflect typical situations. Each case should assess local conditions and adapt design and engineering solutions as appropriate, using best practice methods and Australian Standards (refer 5.5).

RECOMMENDED SEPARATION OF BICYCLES FROM MOTOR VEHICLES, BY TRAFFIC VOLUME AND SPEED



Note: This diagram is to be applied to urban roads and is not appropriate for rural of non-urban roads

SOURCE: WALKING, RIDING AND ACCESS TO PUBLIC TRANSPORT: DRAFT REPORT FOR DISCUSSION, AUSTRALIAN GOVERNMENT, 2012

5.2 KEY ROUTE TYPES

SHARED USE PATHS

What:
- Shared use paths are where pedestrians and bike riders share the same infrastructure. They are most often located off-road (in road verges) and in parks and reserves.

Advantages:
- Provides a comfortable cycling environment, particularly for less experienced cyclists.
- Efficient in providing both cycle and pedestrian access together.
- 'Sharing' the path is generally well-understood by the community.

Disadvantages:
- Can be difficulties integrating shared use paths at intersections.
- Can be less efficient than on-road lanes (particularly for high-speed cyclists). Where possible, consideration should be given to providing both on-road cycle lanes and off-road shared paths.
- Can be conflicts between pedestrians and cyclists sharing the same space. Centre-line markings can be used to encourage pedestrians and cyclists to travel on the left.

Where to apply:
- Road reserves, particularly for arterial roads with higher vehicles speeds and volumes where adequate separation from vehicles can be achieved (e.g. existing shared use path adjacent to Curtis Road).
- Parks and reserves, particularly linear reserves (e.g. Smith Creek Linear Parks).
- The City of Playford has considerable amounts of open space and generous road reserves along many arterial road suitable for shared use path provision.

FOOTPATHS

What:
- Footpaths are areas designated for use by pedestrians.
- A footpath provides an environment for walking as well as other pedestrian activities (e.g. socialising, outdoor dining, etc).

Advantages:
- Provides a separate facility for pedestrians protected from vehicles by a kerb.

Disadvantages:
- Does not provide provision for cyclists. Needs to be combined with other methods.

Where to apply:
- Each side of streets and in parks and reserves unless off-road shared use paths are provided.

'The simple act of walking, an activity available to almost all, taken for granted by many, yet ignored at our peril.'

PEDESTRIAN COUNCIL OF AUSTRALIA

ON-ROAD CYCLE LANES

What:
- On-road bicycle lanes are marked lanes on the left side of roadways for exclusive use by cyclists.
- They provide a cycling space on main roads, visually separated (painted lines)from normal traffic lanes.
- Buffered lanes provide extra clearance from adjacent parking and/or vehicle lane.

Advantages:
- Cost-effective - line marking.
- Use is generally well-understood by the community (although not always respected).
- Offers an efficient route for experienced cyclists.

Disadvantages:
- Not kerb-separated; therefore, on-road bicycle lanes can be encroached by vehicles (e.g. veering left, accessing parking, opening doors, etc).
- Can be an uncomfortable cycling environment (particularly for less-experienced bike riders) when there are higher vehicle volumes and speeds.

Where to apply:
- On through-roads (e.g. collectors and arterials) in addition to off-road shared use paths where possible.
- Generally not needed on local streets with low vehicle speeds and volumes.
- Where possible, buffers should be provided for roads with higher vehicle volumes and speeds and between parallel parking areas.

SEPARATED BICYCLE LANES

What:
- Bicycle paths adjacent to a roadway but separated and protected by a kerb or other physical barrier.
- Also known as Copenhagen-style cycle lanes or exclusive bicycle paths.

Advantages:
- The physically separated facility offers increased safety and comfort for cyclists. The vertical separation (e.g. kerb) provides extra protection for cyclists compared to on-road lanes.
- Encourages less experienced bike riders through a separated and protected environment.

Disadvantages:
- May require removal of parking or travel lane to install.
- More expensive than on-road cycle lanes.
- Can reduce pedestrian footpath space.
- Difficult to implement where intersections are closely spaced.
- As not common in Adelaide, requires community education on the use and benefits.

Where to apply:
- Key arterials where vehicle speeds and volumes are higher.
- Can also be useful in lower speed/ high-volume environments in busy retail /commercial areas.
- Suited to roads with fewer cross-streets and larger blocks.
- The City of Playford is generally more suited to off-road shared paths - however certain areas (e.g. Elizabeth Centre) may be suited to separated bicycle lanes.

GREEN STREETS (BIKE BOULEVARDS)

What:
- Green Streets are streets that prioritise cycling and walking over cars.
- Bike riders share the full-width of the roadway with vehicles.
- Pedestrian amenity is improved through increasing trees and plantings.
- Also known as 'Bicycle Boulevards', 'Complete Streets' or Neighbourhood Greenways'.

Advantages:
- Direct, comfortable and safe routes for pedestrian and bike riders.
- Lower vehicle volumes and speeds for improved neighbourhood amenity.
- Street trees and plantings provide an attractive and comfortable route.
- Provides cyclists alternatives to arterial roads and more comfortable conditions for less experienced bike riders.
- Helps to turn streets into places for people. Research suggests improved property values.
- Cost-efficient using existing road infrastructure.

Disadvantages:
- Few examples of implementation in Australia. May need education to gain understanding and support from community.
- Difficulties in implementing slower speed limits.
- Residential streets often do not provide direct links to shops and hubs.

Where to apply:
- Collector roads and residential streets that form strategic pedestrian and cycle links.
- More suited to the older suburbs around Elizabeth where there is less opportunity for off-road routes.

SHARED SPACE

What:
- Where road space is shared between pedestrians, cyclists, vehicles and other road users.

Advantages:
- Makes streets places for people, not just for vehicles.
- Creates a more vibrant place and an environment more suited to outdoor dining and street activity (e.g. busking).
- Improves amenity and reduces through-traffic.

Disadvantages:
- May slow travel time for vehicles (although in many cases overall travel time remains the same and slowing may only be perceived).

Where to apply:
- Areas with high pedestrian activity and where it is desirable for pedestrian movement to take priority over vehicles.
- Where traffic volumes are going to be less than 300 vehicles per day after the shared space is installed.
- Most often used in retail/commercial hubs but can also apply to residential streets, particularly near higher density developments (an example in the City of Playford is located between Saxon and Baratt Streets in Smithfield Plains).

In the City of Playford opportunities may include:
- Elizabeth Centre
- Munno Para Centre
- Other retail centres
- Appropriate residential streets

Useful Reference:
- Streets For People: Compendium For South Australian Practice

5.3 KEY DESIGN GUIDANCE

SHARED USE PATHS

1. Width

- Provide adequate width to comfortably accommodate pedestrians and bike riders. Preference is for 3.5m+ width (3.0m minimum). Additional width (or separated pedestrian paths) may be required for busy areas.
- Allow 0.5m clearance from fixed objects on both sides of the path.

2. Paving

- Provide Hotmix (AC7) surface to 'commuter-style' shared use pathways. Hotmix (AC7) uses a small aggregate to provide a smooth and consistent surface for cycling and walking. It is easily maintained and is less likely to cause a trip hazard when compared to unit pavers.
- Provide concrete pathways (exposed aggregate finish) to shared use paths requiring higher-amenity and where high pedestrian use is anticipated.
- Refer also DPTI Guide to Bikeway Pavement Design, Construction and Maintenance for South Australia.

3. Line marking

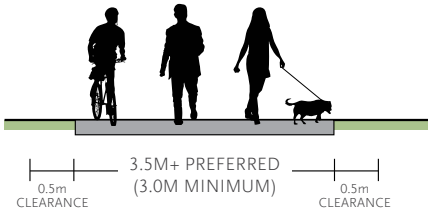
- Provide centre-line marking to pathways with higher volumes of pedestrians and cyclists (as per Australian Standards). Line marking is generally not required for less busy routes (e.g. local parks).

4. Plantings

- Use planting adjacent to pathways to assist in water management and provide amenity.

5. Intersections and cross-overs

- Preference is for shared-use paths to be designed to have priority over driveways and minor side streets.
- Pedestrian and cyclist activated crossings should be provided at signalised intersections.



FOOTPATHS

1. Street Trees

– Plant streets with suitable tree species that provide shade and amenity. Large street trees are one of the best ways to improve a walking environment. Refer also Part 6.3.3 Street Trees.

2. Width

– Provide footpaths of sufficient widths to allow comfortable pedestrian movement and clear access for people with a pram or in a wheelchair. Provide wider paths around activity areas such as shops and schools.

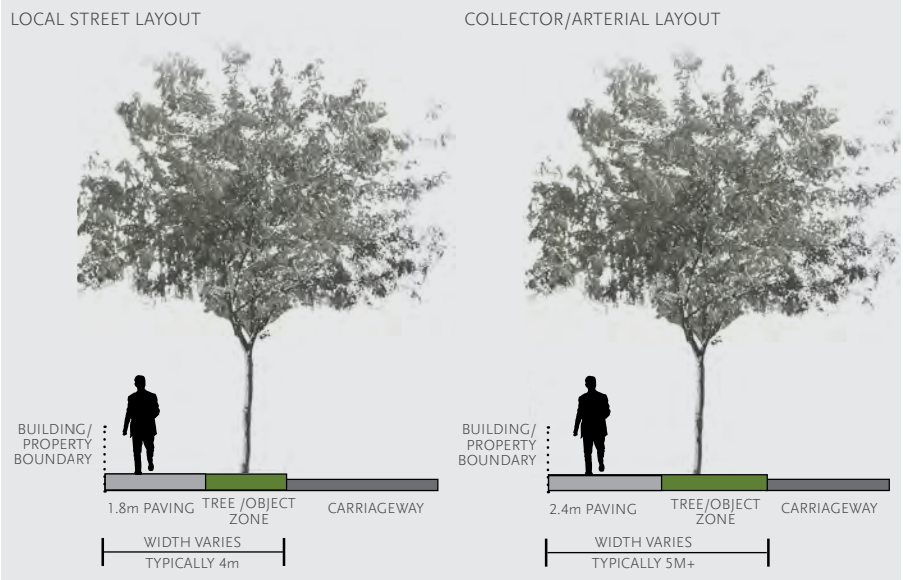
3. Layout

– Give priority to footpaths over driveways and minor streets. Provide suitable paving at driveway crossovers to ensure they withstand vehicle movement.
– Provide adequate sight distance for pedestrians and approaching vehicles at all crossings.
– Keep footpaths, kerb lines and medians straight. Where indents or protuberances are required, they should be designed as simple linear structures.
– Ensure footpath slope and access for people with disabilities meets Australian Standards.
– Avoid the over-use of barricades and bollards.
– Locate objects (e.g. street furniture, shop signage, etc) in a consistent location along footpaths to provide a clear pedestrian walkway.
– Align paths and kerb ramps to provide direct routes and crossings of intersections.

4. Paving

– Use surfaces that are slip resistant, flat and meet Australian Standards.
– Refer Paving Part 6.3.1.

STREET	WIDTH
Local (minor streets)	– 1.8m+ preferred width (allows 2 wheelchairs to pass). – Consider full-width paving (kerb to property boundary) where appropriate. – 1.5m (absolute minimum) is permissible over a short distance where significant constraints exist. This allows 1 wheelchair access.
Collector/Arterials	– 2.4m+ preferred width (1.8m minimum) – Consider full-width paving (kerb to property boundary) where appropriate.
Hubs, schools, shops and activity areas:	– 3.0m+ preferred width – Consider full-width paving (kerb to property boundary) where appropriate.



ON-ROAD CYCLE LANES

1. Width

Provide on-road bicycle lanes of appropriate width depending on traffic volumes and speeds (Austroads, 2011: Cycling Aspects of Austroads Guides).

2. Buffer

Where space allows, provide buffers to:

a) parallel parking for door opening clearance; and

b) the vehicle travel lane (refer image right).

Buffers provide cushion space between cyclists and vehicles in the travel lane and parked cars. Buffers are particularly important where there are higher vehicle speeds and volumes. The Austroad Guide refers to the buffer between parallel parking and the bicycle lane as a 'safety strip' and recommends a 'buffer' width of 0.4-1.0m to parallel parking (widths vary for angle on-street parking). Where space prohibits a full-buffer, an extra thick white edge line to the travel lane can also be effective.

3. Surface

Provide smooth surfaces for comfortable and safe travel without obstacles (potholes etc). Cyclist have narrower tyres than vehicles and are more vulnerable to rough surfaces.

4. Colouring

Provide green coloured surface treatment at busy intersections and conflict points to promote cyclist safety. Green coloured treatments are used to distinguish the bicycle lane and alert drivers and cyclists of conflict areas. The Cycling Aspects of the Austroads Guide states that green coloured surface treatments 'should be used sparingly to maintain its effectiveness'.

5. Intersections

Provide exclusive space for cyclists at intersections. Ensure bicycle lane continuity at intersections (i.e. ensuring they do not 'disappear').

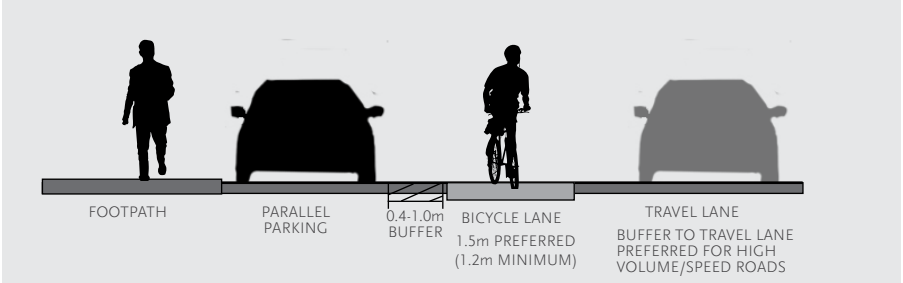
6. Maintenance

Provide regular maintenance for a smooth cycling surface and to reduce obstacles for cyclists (e.g. potholes, build up of leaves).

SPEED LIMIT	WIDTH
60km/h	– 1.5m+ (preferred) – 1.2 - 2.5m (acceptable range)
80km/h	– 2.0m+ (preferred) – 1.8 - 2.7m (acceptable range)

Widths should also consider traffic volumes

ON-ROAD CYCLE LANE FOR 60KM/HR ROAD



CYCLE LANE WITH MARKED BUFFER TO VEHICLE LANE (PORT ROAD, ADELAIDE)

Summary:

On-road bicycle lanes can provide a safe and efficient cycle facility when implemented with:

1. appropriate width;
2. buffers to parallel parking and travel lane as required;
3. smooth surface treatment;
4. colouring at conflict points;
5. continuity at intersections; and
6. regular maintenance.

SEPARATED BICYCLE LANES

1. Types

There are two main types of kerb-protected bicycle lanes (refer images right):

a) Copenhagen-style (Channel lane)

Copenhagen-style (Channel lane) cycle lanes use the existing road paving and stormwater infrastructure but adds a wide-kerb separating the bicycle lane from vehicles. The bicycle lane is essentially a 'channel' between the footpath and new kerb.

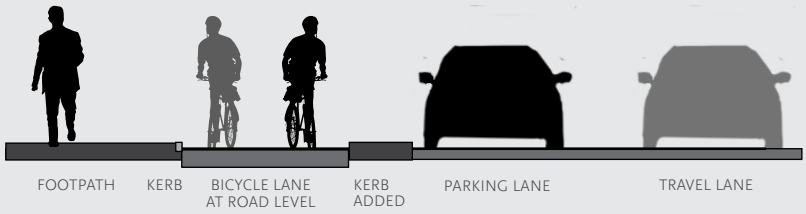
b) Raised Bicycle Path

A raised cycle track is located on the footpath level but provides an exclusive cycle path clearly distinguished from a walkway area for pedestrians.

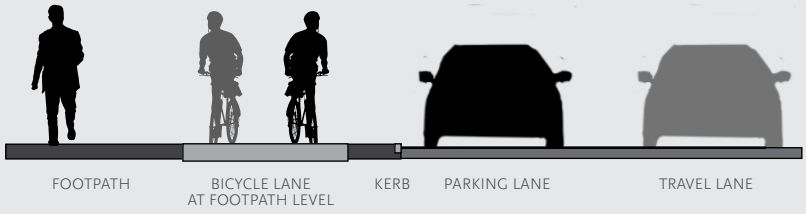
Both types of path can be either one- or two- way. Preference is generally to provide one-way paths on both sides of the street to correspond with adjacent vehicle traffic.

Determining whether to use a 'Copenhagen-style' or raised bicycle path depends on existing site conditions such as width of footpath and condition and location of stormwater infrastructure.

COPENHAGEN-STYLE (CHANNEL)



RAISED BICYCLE PATH



'COPENHAGEN STYLE' BICYCLE LANE

TWO-WAY 'COPENHAGEN STYLE' BICYCLE LANE, MELBOURNE

FOOTPATH WITH EXCLUSIVE BICYCLE PATH

2. Extent

- Implement over a reasonable length to provide a useful link.

3. Width

- Provide adequate width (refer Austroad Guides and Australian Standards).
- Ensure separation provides clear space from parallel parking.

4. Kerb

- Consider whether to use full-kerb or semi-mountable kerb.

5. Planting

- Provide trees and plantings for amenity and to define the exclusive bicycle path areas.

6. Intersection

- Give priority to cyclists across minor streets and driveways.
- Restrict parking at main intersections and convert the raised bicycle paths to cycle lanes to increase visibility of cyclist for motorists.
- Consider priority signal phase for cyclists.

GREEN STREETS

1. Traffic calming

- Reduce vehicle speeds to 40km/h (or below) using traffic calming methods and speed limits (subject to funding and DPTI approval).
- For example: Reducing the width of streets, planting street trees in parallel parking areas, improving lighting and narrowing entrance and exit points to promote pedestrian and cycle priority. Refer also Strategy 2: Working with Vehicles.

2. Traffic reduction

- Undertake Local Area Traffic Management to divert through-traffic to reduce vehicle numbers. Preference is for less than 500 per day.
- Consider strategic 'dead-ends' for vehicle traffic and creation of pocket parks. Ensure pedestrian and cycle access is maintained.
- Maintain local traffic access.

3. Branding 'Green Streets'

- Provide a distinctive look to 'Green-Streets' recognisable to motorists, bike riders and pedestrians.
- Use large cycle pavement signs (e.g. sharrows) and directional signage.

4. Prioritise travel

- Undertake Local Area Traffic Management to adjust give ways/stops to give the Green Street priority and reduce disruptions for bike riders.

5. Intersection treatments

- Provide safe crossing of major roads to link Green Streets.

6. Pedestrian amenity

- Enhance pedestrian amenity through suitable paving, large street trees and planting to assist in stormwater management. Refer 6.3 'Details'.

Useful References:

2009: Walker, Tresidder, Birk, *Fundamentals of Bicycle Boulevard Planning & Design.*

Streets For People: Compendium For South Australian Practice

'Do fewer children play in the street because the traffic is more dangerous, or is the traffic more dangerous because fewer children play in the street?'

DAVID ENGWICHT

SHARED SPACE

1. Layout and Design

– Plan shared spaces over an area wide precinct.
– Design the street with people in mind. Do not 'over-design'. This increases the level of ambiguity for drivers so they inherently drive slowly and also promotes pedestrian and cyclist priority.
– Allow access for loading and emergency vehicles.
– Integrate tree planting to provide amenity and to assist in circulation.
– Incorporate street furniture that visually enhances pedestrian priority.

2. Paving

– Use paving to indicate that shared spaces are a pedestrian-focused environment and a high amenity area. Refer also 'Paving' 6.3.1.
– Consider a single surface (i.e. no kerb and gutters) that allows free flow of pedestrian movement.

3. Vehicle speeds and volumes

– Use with traffic calming devices and speed limits (where appropriate) to reduce speeds (Refer 6.2).
– Use traffic diversion techniques to reduce through traffic from adjoining streets.

Useful Reference:
Streets For People: Compendium For South Australian Practice

SINGLE-SURFACE SHARED SPACE IN RESIDENTIAL SETTING

SHARED SPACE IN BRIGHTON, UK

5.4 SUMMARY

Cycling and walking solutions are influenced by individual circumstances such as vehicle speed and volume, movement hierarchy and physical constraints. Low vehicle speed and low volume environments are generally more suited to mixed traffic solutions. Higher vehicle speeds and volumes on the other hand are more suited to off-road separated paths.

While noting each site is different and has unique circumstances, the table right provides a general guide on where to apply different path options.

GENERAL GUIDE ON WHERE TO APPLY DIFFERENT PATH OPTIONS – CONSIDER ON A CASE-BY-CASE BASIS

	Greenways (Transit Corridors)	Arterials	Collectors	Residential Streets	Parks + Reserves	Shops + Centres
Shared use off-road paths	X	X	X		X	X
On-road bicycle lanes		X	X			X
Kerb separated bicycle lanes	X	X				X
Footpaths	X	X	X	X	X	X
Shared spaces					X	X
'Green-Streets'	X		X	X		

5.5 STANDARDS AND GUIDELINES

The detailed design of cycling and walking infrastructure is required to comply with the relevant standards and guidelines.

AUSTROADS

The Austroads Guides provides useful guidance and measures to assist with the planning and design of streets and pathways for pedestrians and cyclists.

Key considerations are (but not limited to):

- Austroads Guide to Traffic Management Series
- Austroads Guide to Road Design Series, in particular:
  - Guide to Road Design Part 6A: Pedestrian and Cyclist Paths.
  - Cycling Aspects of Austroads Guides.

AUSTRALIAN STANDARDS

The Australian Standards outline the minimum requirements for pedestrian and cycling infrastructure.

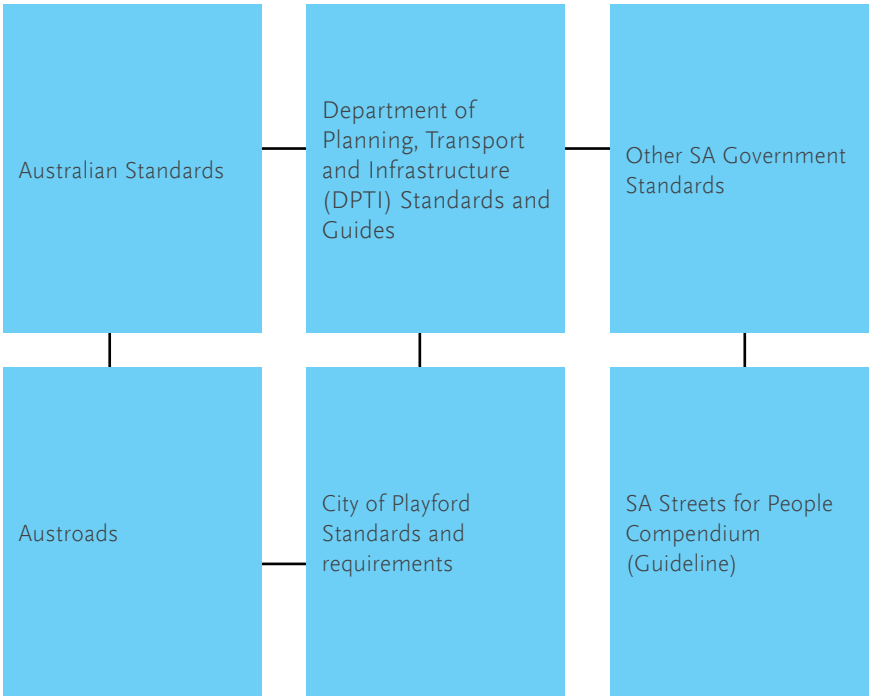
Key considerations are (but not limited to):

- Manual of uniform traffic control devices, in particular 'Bicycle facilities' and 'Pedestrian control and protection').
- Design for Access and Mobility.
- Lighting for roads and public spaces.

DEPARTMENT OF PLANNING, TRANSPORT AND INFRASTRUCTURE (DPTI) STANDARDS AND GUIDES

The South Australian Department of Planning, Transport and Infrastructure (DPTI) has also published useful Standards and Guides, for example:

- Guide to Bikeway Pavement Design, Construction and Maintenance for South Australia.



EXAMPLE: AUSTRALIAN STANDARD DOCUMENT

EXAMPLE: AUSTROADS DOCUMENT

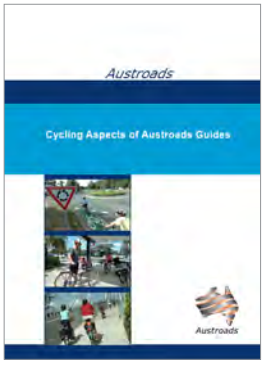


IMAGE: MUNNO PARA WETLANDS (SOURCE: CITY OF PLAYFORD)

PART 06
RECOMMENDATIONS

PART 06: RECOMMENDATIONS

This part of the report sets out the proposed strategy to improve cycling and walking in the City of Playford.

The preferred approach to delivery of cycling and walking outcomes is an integrated program that responds to the challenges and opportunities outlined in this report. Where possible the emphasis is on achieving outcomes through existing processes, rather than inventing new ones.

The Strategy is based on the philosophy below:

PHILOSOPHY (FROM PART 02)

THE STRATEGY

The proposed Cycling and Walking Strategy is divided into six-components:

Strategy 1
Providing the route – allowing space to walk and cycle.

Strategy 2
Working with vehicles – shift from car dominance.

Strategy 3
The details matter – these matter for safety, comfort and amenity.

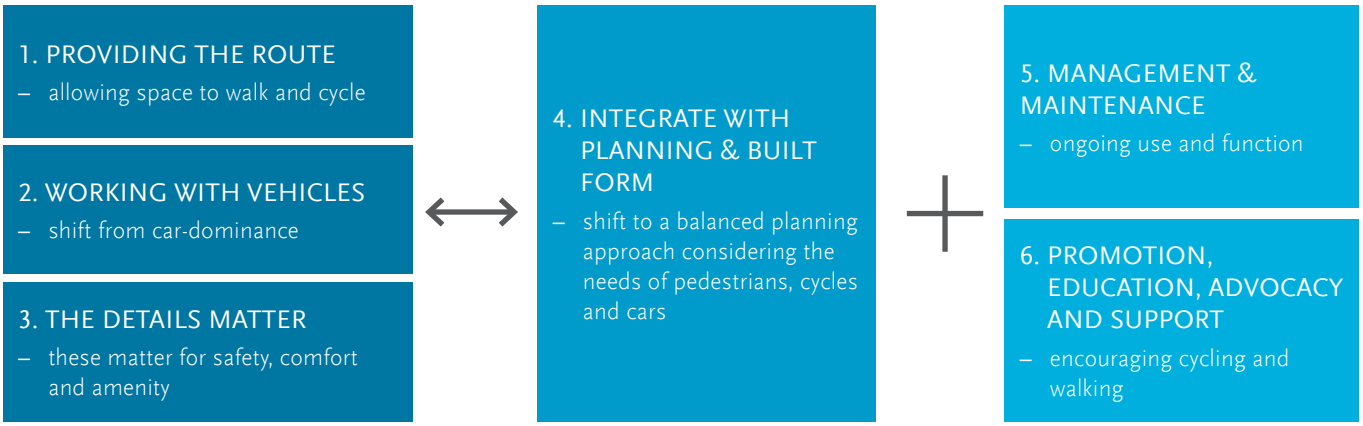
Strategy 4
Integrate with planning and built form – shift to a balanced planning approach considering the needs of pedestrians, cycles and cars.

Strategy 5
Management and maintenance – for ongoing use and function.

Strategy 6
Promotion, education, advocacy and support – encouraging cycling and walking.

The starting point for delivery is the adoption of the recommendations outlined in this Strategy. They provide the platform for improving the function and amenity of cycling and walking so they become a viable transport and recreation option for all City of Playford residents and visitors.

THE STRATEGY



Recommendation 1

Develop an integrated network of cycling and walking routes, as per the Proposed Cycling and Walking Network Plan.

OVERVIEW

'Providing the route' includes new projects and upgrade and maintenance of existing infrastructure.

The Proposed Cycling and Walking Network Plan (refer overleaf) illustrates the key existing, proposed and 'future growth' routes for expanding the pedestrian and cycle network across the City of Playford This includes new routes (e.g. shared use paths in reserves) and upgrading or reviewing existing infrastructure (e.g. Green Streets).

The Plan provides an integrated network and hierarchy of broad routes. The proposed routes are indicative and subject to area specific studies that will include details on specific route locations and local links and connections.

For many areas within the City of Playford, improving the cycling and walking environment simply means making better use of the existing space. For example better utilising existing road reserves.

Whilst cycling and walking opportunities should be provided on every street within the City of Playford, this Plan helps set up a priority network.

The Plan should be reviewed and updated as State Government and other development projects, new facilities and community needs develop and change.

6.1 STRATEGY 1
PROVIDING THE ROUTE

PROPOSED CYCLING AND WALKING NETWORK PLAN

The Proposed Cycling and Walking Network Plan:

- Provides an integrated network across the City, connecting key locations within the City including retail hubs, schools and key open spaces.
- Offers a hierarchy of Primary, Secondary and Tertiary cycling and walking routes.
- Plans efficiently, by connecting with and expanding from the existing cycling and walking infrastructure.
- Offers routes suitable for commuting and recreation.
- Incorporates the Bikedirect network as well as providing new opportunities.

The Proposed Cycling and Walking Network Plan is structured on a three 'levels' (Primary, Secondary and Tertiary). This is based on the significance and context of the route. The hierarchy assists in the legibility of the network both on the ground and on paper.

Primary

Primary routes are generally located along major corridors such as train lines, major roads and waterways. They provide important connections throughout Metropolitan Adelaide.

In the City of Playford, these connections include the Stuart O'Grady Bikeway, Gawler Greenway (along the Gawler railway line), Little Para River Trails, Smith Creek Trail, Curtis/ Craigmore Road.

The primary routes form the 'backbone' of the cycling and walking network in the City of Playford.

Secondary

Secondary routes are a level below the primary routes and provide regional-level connections. They include both off-road and on-road (generally arterial roads) treatments.

In the City of Playford regional routes include Andrews Road, Peachey Road, Davoren Road and Adams Road.

Tertiary

The tertiary network is generally local routes located in reserves and local and collector roads. These provide local-level connections to both local centres and destinations, and provide links to primary and secondary routes.

EXISTING, PROPOSED + FUTURE GROWTH

The Proposed Cycling and Walking Network Plan illustrates existing, proposed and 'future growth' routes for expanding the pedestrian and cycle network across the City of Playford.

Existing

These generally denote well-establish existing routes. Existing routes may require an upgrade to improve existing infrastructure.

Proposed

Generally undeveloped or minor routes (eg. 'goat tracks') requiring a new path or significant upgrade.

Future growth

Longer-term routes extending the network into future growth areas (as per the Playford Growth Area Plan). Implementation of these routes are to occur as urban expansion and nearby development dictate. Early network planning, land reservation and development standards assists efficient future implementation.

City of Playford

Proposed Cycling and Walking Network Plan

PRIMARY
- Existing
- Proposed
- Future growth

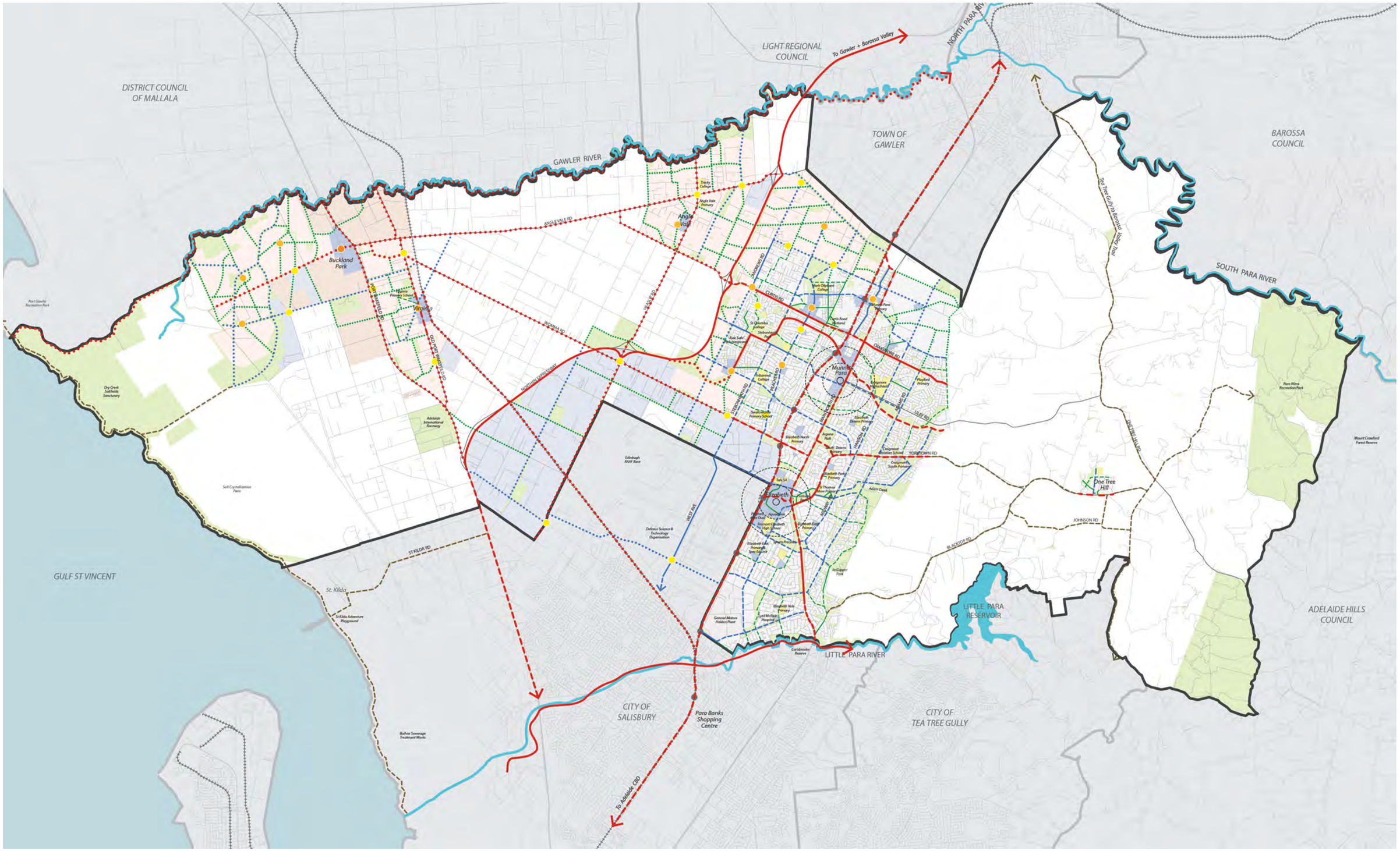
SECONDARY
- Existing
- Proposed
- Future growth

TERTIARY
- Existing
- Proposed
- Future growth

RURAL TRAILS
- Proposed

GROWTH AREA (PLAYFORD GROWTH AREA STRUCTURE PLAN)
- District
- Neighbourhood
- Local
- Growth centres 400 - 800m radius
- Future growth
- Future urban
- Future employment

- Train station
- School / education
- Reserve / park
- Commercial
- Built up areas



Main Urban Area + Angle Vale

Proposed Cycling and Walking Network Plan

PRIMARY
- Existing
- Proposed
- Future growth

SECONDARY
- Existing
- Proposed
- Future growth

TERTIARY
- Existing
- Proposed
- Future growth

RURAL TRAILS
- Proposed

GROWTH AREA (PLAYFORD GROWTH AREA STRUCTURE PLAN)
- District
- Neighbourhood
- Local
- Growth centres 400 - 800m radius
- Future growth
- Future urban
- Future employment

- Train station
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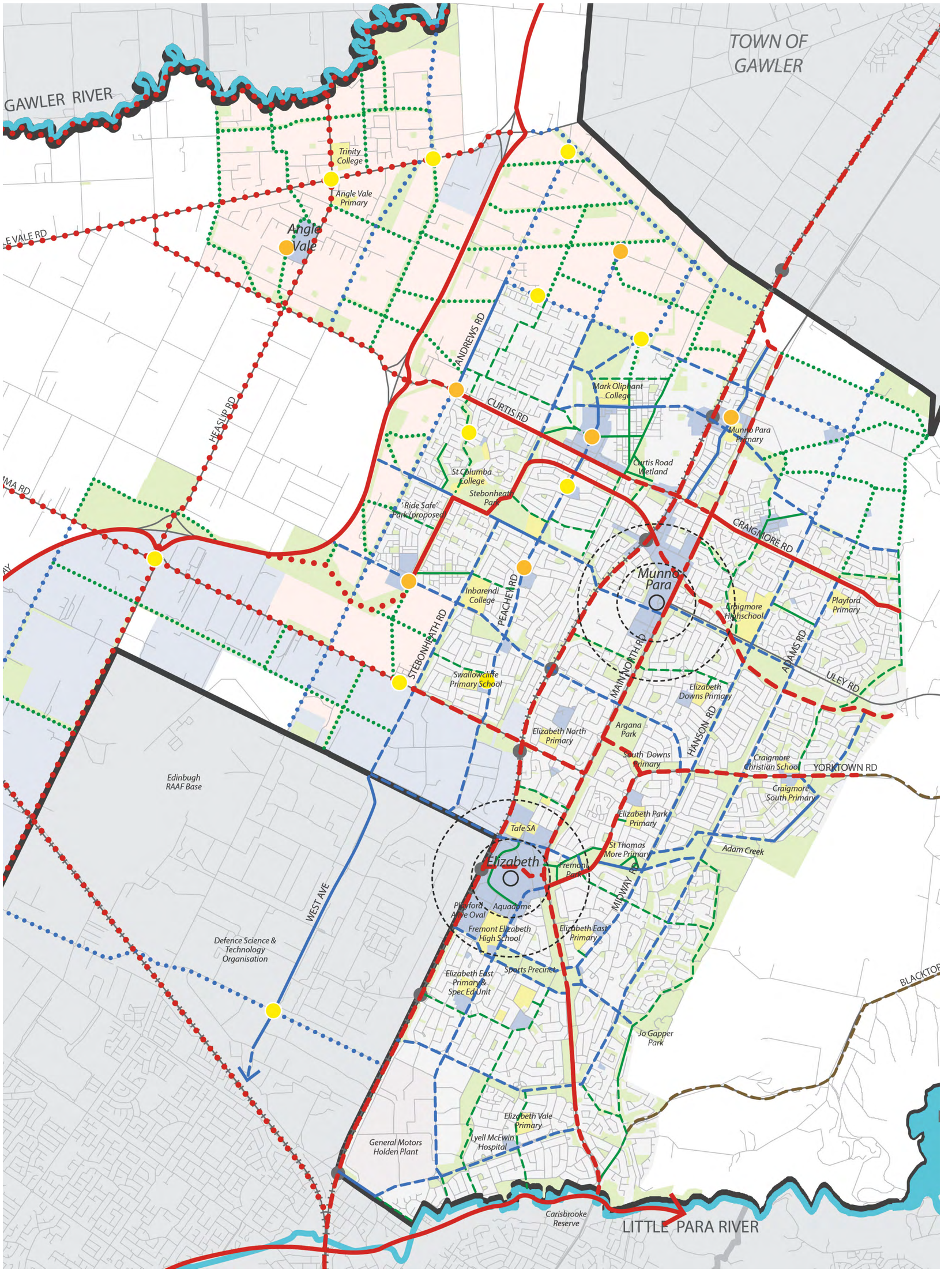


6.1.1 MAIN URBAN AREA & ANGLE VALE

Primary
The primary routes form the 'backbone' of the cycling and walking network.

Within the main urban area and Angle Vale area, primary routes include existing routes along:

– Stuart O'Grady Bikeway,
– Smith Creek Trails (part built),
– Craigmore Road, and
– Curtis Road (part built).

Proposed routes including Adelaide-Gawler Greenway (along the Rail corridor) and Main North Road Windbreak Trails will provide strong north-south links and connect the key centres of Munno Para and Elizabeth, and railway stations. Additional proposed routes such as the Smith Creek Trails (east of the rail corridor) and along Yorktown Road provide east-west paths that feed into the north-south corridors.

Secondary
Secondary routes provide additional north-south and east-west connections. They include routes along Andrews Road, Peachey Road, Stebonheath Road, Davoren Road, Midway Road and Adams Road.

Tertiary
The tertiary network provides local links along local and collector roads and through parks and reserves. Together with primary and secondary routes they connect key destinations such as schools, commercial centres and key parks and sporting facilities.

Angle Vale
'Future Growth' routes extend the network into Angle Vale growth area (based on the Playford Growth Area Plan). These routes connect future District, Neighbourhood and Local Centres and are to be developed in the longer-term as urban expansion and nearby development dictate.

6.1.2 VIRGINIA + BUCKLAND PARK

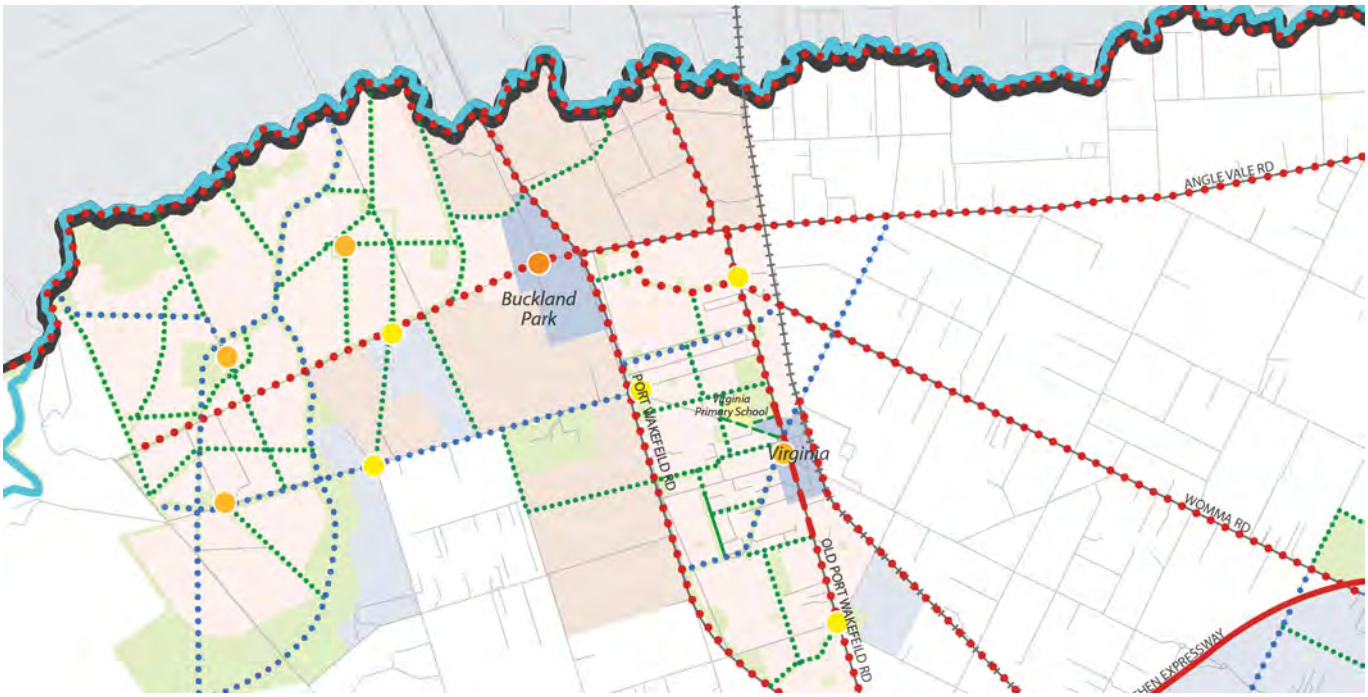
Primary, Secondary and Tertiary routes connect Virginia and Buckland Park. Routes are mostly 'Future Growth' and based on the Playford Growth Area Plan. There is significant opportunity to provide attractive and comfortable cycling and walking routes with the future development of the Buckland Park. This includes connecting open spaces, Gawler River, and existing and future retail centres and public transport stops. There is opportunity to 'get it right' from the beginning and avoid the need for expensive retro-fitting. Funding could be sought from land sales and developer contributions to assist in implementation (refer Part 07).

Primary
Primary routes along the Gawler River, Angle Vale Road, Womma Road, Old Port Wakefield and Port Wakefield Road connect the Virginia and Buckland Park area to the broader City of Playford and south to the City of Salisbury. These routes are to be developed in the longer-term as urban expansion and nearby development dictate.

Secondary and **Tertiary**
Secondary and tertiary routes will also be developed as urban growth occurs. These are generally to be located in future open space areas and connect future District, Neighbourhood and Local Centres.

Current opportunities include improving cycling and walking connections around the Virginia Primary School, recreation oval and retail strip.

Virginia + Buckland Park Proposed Cycling and Walking Network Plan



PRIMARY
- Existing
- Proposed
- Future growth

SECONDARY
- Existing
- Proposed
- Future growth

TERTIARY
- Existing
- Proposed
- Future growth

RURAL TRAILS
- Proposed

GROWTH AREA
- District
- Neighbourhood
- Local
- Growth centres 400 - 800m radius
- Future growth
- Future urban
- Future employment

- Train station
- School / education
- Reserve / park
- Commercial
- Built up areas

6.1.3 ONE TREE HILL AREA

Primary
In One Tree Hill, a primary route is proposed along Black Top Road. This will enhance pedestrian and cycle movement along the 'main street' and provide a cycle connection to the Elizabeth area.

Secondary
A secondary route is proposed along McGilp Road to connect One Tree Hill Primary School and McGilp Oval/Recreation Park with Black Top Road. This will build on the existing short section of shared-use path near the school.

Tertiary
Tertiary routes are proposed to provide local links to parks and open spaces.

Rural Trails
'Rural Trails' are proposed to extend the network the township area of One Tree Hill 'Rural Trails' are envisaged as recreation/ cycle tourism routes that could include shoulder widening and sealing, new signage and promotion.

Possible 'Rural' Trails include:

- a route to Para Wirra Recreation Park;
- a recreation loop south of One Tree Hill along Johnson Road ; and
- a route connecting Tea Tree Gully with Gawler and the Barossa Valley via City of Playford area (identified via consultation with the City of Tea Tree Gully).

Note all routes require further investigation, consultation and coordination with adjoining Councils and DPTI.

One Tree Hill Proposed Cycling and Walking Network Plan

PRIMARY
Existing
Proposed
Future growth

SECONDARY
Existing
Proposed
Future growth

TERTIARY
Existing
Proposed
Future growth

RURAL TRAILS
Proposed

GROWTH AREA
District
Neighbourhood
Local
Growth centres 400 - 800m radius
Future growth
Future urban
Future employment

Train station
School / education
Reserve / park
Commercial
Built up areas

LOCAL STREET FOOTPATH UPGRADE EXAMPLE (CRITTENDEN ROAD, SMITHFIELD PLAINS)

BEFORE

AFTER - ARTIST'S IMPRESSION

ARTERIAL ROAD EXAMPLE – OFF-ROAD SHARED PATH (STEBONHEATH ROAD)

BEFORE

AFTER - ARTIST'S IMPRESSION

Recommendation 2

Investigate the reduction of vehicle speeds and volumes on local streets.

'We prioritise quality sidewalks, wider cycle tracks, more trees on the streets and green city spaces instead of more asphalt and loads of cars in the streets'

MAYOR FOR THE TRAFFIC AND ENVIRONMENTAL ADMINISTRATION (DEPT OF TRANSPORT) COPENHAGEN, AYFER BAYKAL, 2011.

6.2 STRATEGY 2
WORKING WITH VEHICLES

'Working with vehicles' involves a series of moves to shift the balance from cars to alternate means of movement. It requires a change in thinking from having cars first to putting people first.

This requires a re-think in priorities.

Past Order	Cost	Movement Efficiency
1st. Cars and other vehicles	High	Low
2nd. Public Transport		
3rd. Cyclists		
4th. Pedestrians	Low	High

New Order	Cost	Movement Efficiency
1st. Pedestrians	Low	High
2nd. Cyclists		
3rd. Public Transport		
4th. Cars and other vehicles	High	Low

Current car-focus
– Few pedestrian and cycle facilities
– High vehicle speeds and volumes
– Poor urban quality
– Few people outside
– Homogenous built form
– Separated neighbourhoods
– Increasing obesity
– Large areas of hard surfaces
– Increases Urban Heat Island Effect
– Inactive streetscapes (e.g. car parking in front setback)

People focus
– Increased cycling and walking facilities
– Improved amenity – streets as places
– Enhanced urban quality
– More people activity for a safer city
– Urban form that reflects pedestrian scale
– Connected communities
– Shift to active living
– Permeable treatments and WSUD
– More greenery and cooler environments
– Integrated streetscapes at the pedestrian scale

KEY MOVES TO SHIFT THE BALANCE FROM CARS TOWARDS PEDESTRIANS AND CYCLISTS

1. Lowering vehicle speeds.
2. Calming traffic and narrowing streets.
3. Reducing vehicle numbers.
4. Providing separate space on arterial roads.

These moves are described further in the following pages. Priority areas to consider these include:

- Elizabeth and Munno Para Centres;
- local streets identified as part of key cycling and walking routes; and
- streets identified in Asset Management Plans for renewal or replacement.

'This is not about being anti-vehicle but rather about being pro-people'

FRED HANSEN: ALL ON BOARD,2010

Advantages

The benefits of reducing vehicle speeds and numbers on local streets include:

- safer pedestrian and cycle environments;
- reduced vehicle crashes;
- reduced noise;
- reduced vehicle numbers on local streets (less 'rat-running' - choosing to take local streets as 'shortcuts' rather than arterial roads);
- improved physical and mental health and associated economic benefits;
- improved residential amenity;
- increased property values;
- improved quality of life and well-being; and
- opportunities for streets to become 'places'.

'Reducing motor traffic speeds on our streets is the single biggest change that will make them safe, vibrant and social places.'

KEITH IRVING, LIVING STREETS UK, 2009

1. LOWERING VEHICLE SPEEDS

Lowering vehicle speeds significantly increases safety for people and enhances place quality. The priority is for slowing vehicles on local streets, particularly those identified as key cycling and walking routes (refer Proposed Cycling and Walking Network Plan). This also creates opportunities for streets to become 'places'.

Slowing vehicles on local streets generally will not mean longer travel times. Through traffic planning, suburban layout and street hierarchy, people need to only travel a short distance (mostly less than 1km) on local streets before joining the arterial road network.

Design Considerations

- Slowing vehicles speeds through changing the physical environment (e.g. traffic calming and narrowing of streets) that tend to 'self-regulate' rather than requiring enforcement.
- Considering lower speed limits in certain locations - for example Elizabeth Centre (refer 'High Activity Areas' section).

Advantages

- Improves safety for pedestrians, cyclists and motorists.
- Discourages motorists from cutting through residential streets.
- Relatively cost-effective.
- Enhances neighbourhood amenity.
- Reduces vehicle numbers in residential areas.

Disadvantages

- Some traffic calming measures (e.g. speed bumps) can increase traffic noise through braking and accelerating vehicles.

2. CALMING TRAFFIC + NARROWING STREETS

Traffic calming includes a variety of methods intended to slow vehicle speeds (and also reduce vehicle numbers).

Most of the City of Playford's streets were designed wide and straight, which tends to support fast vehicle movement and high traffic numbers.

Narrowing of streets is one method to slow traffic and increase safety for cyclists and pedestrians. Narrow-streets encourage motorists to drive slower in comparison to wide, open streets.

Design Considerations

- Reducing the width of vehicles lanes (3.0-3.2m instead of 3.5-4.0m).
- Planting trees between on-street parking to 'enclose' the street.
- Providing central medians to slow vehicles and assist road crossings by pedestrians and cyclists.
- Consider paved road treatments.
- Using on-street parallel parking.
- Providing mid-block pedestrian crossings and kerb out-stands at intersections.
- Providing vehicle slow-points (e.g. 'driveway links', speed bumps) while ensuring they are pedestrian and cycle-friendly.
- Ensuring traffic calming measures are pedestrian- and cyclist- friendly.
- Integrating Water Sensitive Urban Design (WSUD) to support amenity and sustainability outcomes.
- Preserving streetscape aesthetics and not 'over-engineering.'

Advantages

- Can be as simple (and cost-efficient) as repainting lines to 'narrow' vehicle lanes.
- 'Narrowing' can provide more space for footpaths, cycle lanes and street tree planting.
- 'Self-regulates' rather than requiring enforcement (e.g. speed limits).
- Offers a more 'people-friendly' place.

Disadvantages

- Speed bumps and raised 'crossings' can create noise for residents.
- Can delay emergency vehicles.

3. REDUCING VEHICLE NUMBERS

Roads and streets within the City of Playford accommodate a high proportion of through-traffic (refer Part 3.5). Most through-traffic is focused on the main arterial roads, however, in some cases 'rat-running' occurs through local streets and collectors increasing vehicle number on the local street network.

Traffic planners should continue to discourage 'rat-running' and support local streets becoming places which people, including pedestrians and bike riders, can enjoy.

Routes identified as 'Green Streets', in particular, will benefit from reduced through-traffic through appropriate traffic management by Council and DPTI.

A key way to improve local streets is through Local Area Traffic Management. One option is to consider strategic 'dead-ends' for vehicle traffic where it will create a better environment for pedestrians and cyclists and assist in the local movement network.

EXAMPLE CYCLE STOPPING ZONE FORWARD OF VEHICLES, SOUTH TERRACE, ADELAIDE

4. PROVIDING SEPARATE SPACE ON ARTERIAL ROADS

Arterial roads carry high numbers of fast moving vehicles. Due to the high vehicle volume and speed, separated space for cycling and walking on these roads is vital for the safety and comfort of pedestrians and bike riders.

Most arterial roads within the City of Playford have generous road reserves providing significant opportunity for off-road pathways.

Where off-road routes cannot be provided (or preferably in addition to), providing on-road space and separation is essential. Measures to achieve this include:

- Ensuring provision of wide bike lanes and continuation at intersections.
- Providing an extra wide edge line and/or 'vibra-line' (rumble edge line) to discourage motorists entering the cycle lanes.
- Providing wide road shoulders for cycling on arterial roads in rural settings (refer image below).
- Providing advanced bicycle stop lines at intersections to allow space and increase visibility of cyclists.
- Providing traffic light signal sequencing for cyclist to allow manoeuvring of intersections separate from vehicles.
- Providing separated or kerb protected bicycle lanes.
- Providing green surface treatments for bike lanes at intersections and conflict points.
- Avoiding vehicle slips lanes to improve safety for pedestrians and cyclists.

EXAMPLE OF WIDE ROAD SHOULDER AND 'VIBRA-LINE'

HIGH ACTIVITY AREAS

High-activity areas in particular should prioritise pedestrians and cyclists over cars (refer image below).

POTENTIAL ROAD USER HIERARCHY

Street or road type	Shared Zone* with mixed traffic considered on a case by case basis	High pedestrian activity areas
Vehicle speed	< 20km/h	15-40km/h
Consider first	PEDESTRIANS	
	BICYCLES	
	PUBLIC TRANSPORT	
	SERVICE VEHICLES	
	GOODS DELIVERY	
Consider last	PRIVATE VEHICLES	

SOURCE: WALKING, RIDING AND ACCESS TO PUBLIC TRANSPORT: DRAFT REPORT FOR DISCUSSION, AUSTRALIAN GOVERNMENT, 2012

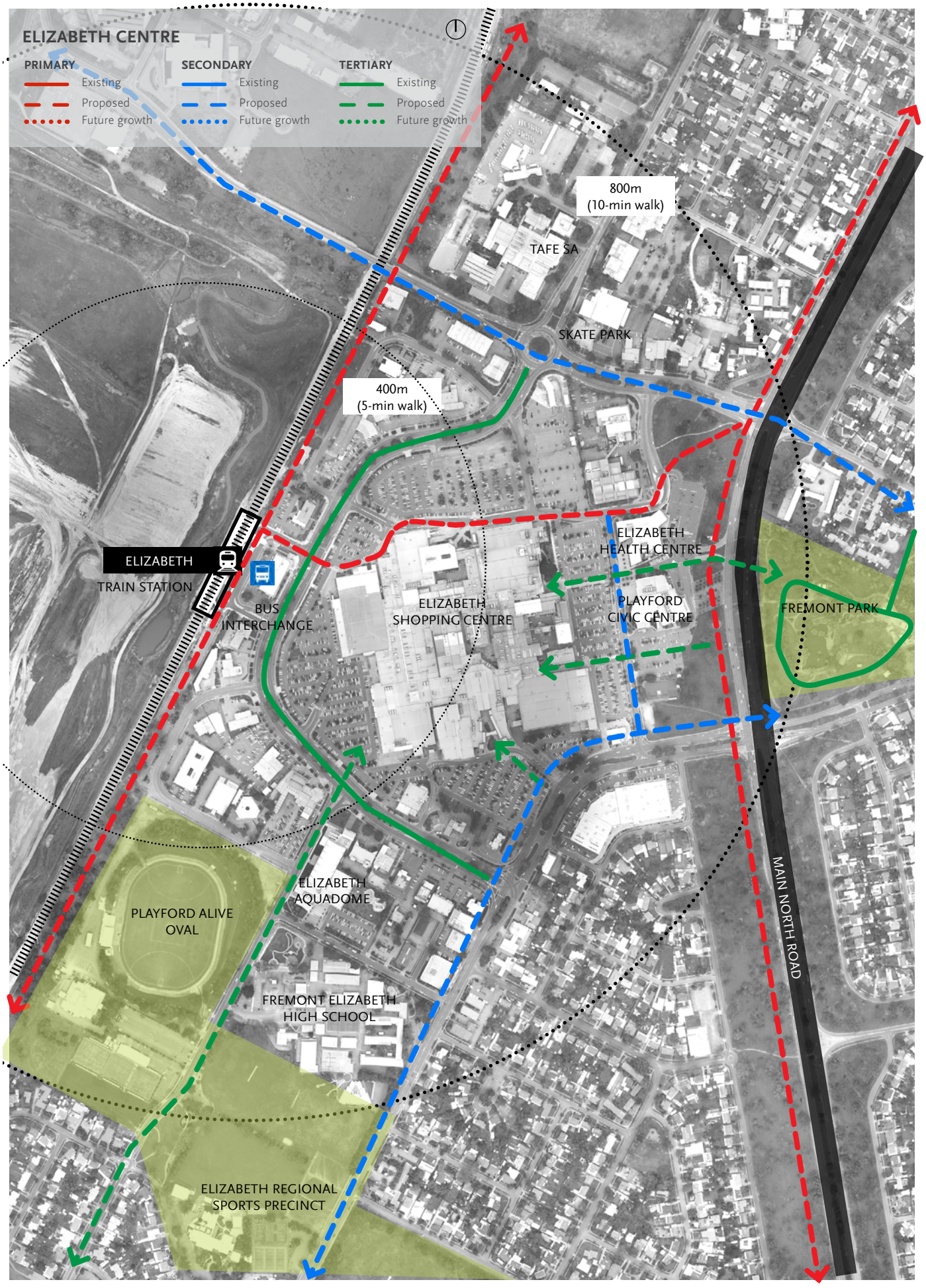
Elizabeth Centre (refer image right) is an example of a high-level pedestrian activity area in the City of Playford. It is proposed as the 'CBD of the North' which promotes 'People-friendly Streets'.

Elizabeth Centre contains a number of key destinations, services and facilities within 800m (10-minute walk) of Elizabeth Railway Station. These include:

- Elizabeth shopping centre
- Playford Alive Oval and Elizabeth Sports Precinct
- Skate Park
- TAFE SA Elizabeth Campus
- Fremont Park
- Elizabeth Health Centre
- Elizabeth Aquadome
- Fremont Elizabeth High School
- Playford Civic Centre.

Key moves to consider for improving walking and cycling in high pedestrian activity areas include:

- Lowering speed limits.
- 'Shared street' environments.
- Strong pedestrian and cycle links.
- Wide footpaths with high quality paving.
- Upgraded and additional crossings of major roads.
- Street tree planting, lighting, street furniture, signage etc to support walking and cycling.


ELIZABETH CENTRE
PRIMARY
Existing
Proposed
Future growth
SECONDARY
Existing
Proposed
Future growth
TERTIARY
Existing
Proposed
Future growth
800m
(10-min walk)
400m
(5-min walk)
TAFE SA
SKATE PARK
ELIZABETH
TRAIN STATION
BUS
INTERCHANGE
ELIZABETH
SHOPPING CENTRE
ELIZABETH
HEALTH CENTRE
PLAYFORD
CIVIC CENTRE
FREMONT PARK
ELIZABETH
AQUADOME
PLAYFORD ALIVE
OVAL
FREMONT ELIZABETH
HIGH SCHOOL
ELIZABETH REGIONAL
SPORTS PRECINCT
MAIN NORTH ROAD

6.3 STRATEGY 3
THE DETAILS

Recommendation 3

Provide the infrastructure that supports cycling and walking

Successful implementation of a cycling and walking strategy depends on attention to detail, including provision of infrastructure and choice of materials.

Developing a Service Standards Policy will improve the minimum provision and provide consistency across the City of Playford area.

This part provides guidance for the following:

SMOOTH, WIDE PATHWAYS AND LARGE TREES ARE KEY CONTRIBUTORS TO ENCOURAGING CYCLING AND WALKING

6.3.1 PAVING

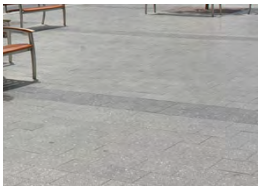
Providing suitable paving is important for encouraging cycling and walking.

Generally hotmix (AC7) is preferred to segmented paving which has the tendency to lift and cause trip hazards.

Footpaths should take priority over driveways and can also include priority over minor streets.

Refer also 'Footpaths' in Part 5.

Refer also DPTI *Guide to Bikeway Pavement Design, Construction and Maintenance for South Australia*.

PAVING TYPE	USE	BENEFITS	EXAMPLE
Type 1 High-quality precast unit paving	Limited to key pedestrian gathering areas / civic precincts. Generally, for pedestrian only areas.	High-quality finish	
Type 2 Concrete path Finish: Exposed aggregate	Shared use paths with anticipated higher pedestrian use and in higher amenity areas. Footpaths	High-quality finish Encourages slower speeds from cyclists on shared paths	
Type 3 Hotmix (AC7)	Shared use paths - commuter type Minor footpaths	Avoids lifting Ease of maintenance Cost-effective	
Type 4 Compacted sand/ gravel	Lower use paths in reserves and parks.	Blends well in 'natural' settings Cost-effective	

6.3.2 STREET TREES

Planting large trees is one of the key moves for the City of Playford to encourage cycling and walking.

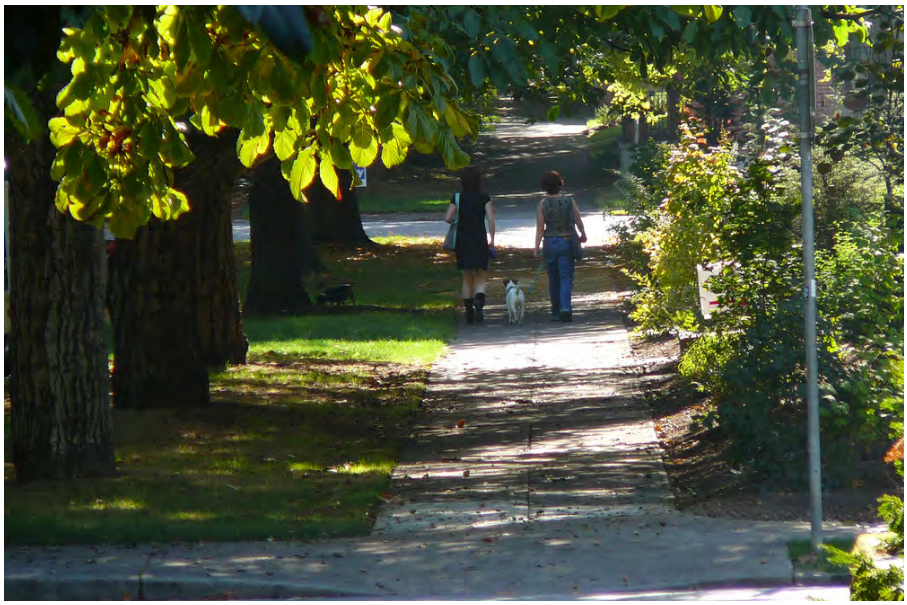
Streets provide the opportunity to plant large, shady trees. Larger trees assist in providing effective shade cover, vertical scale and streetscape presence as well as having positive environmental benefits.

Smaller trees should be restricted to narrower, minor streets where space limits planting of larger species.

Street tree planting should be formal and regular in placement. Continuity and consistency is promoted along the length of the street. Priority is given to establishing a single character along the length of a street rather than breaking streets into a number of precincts with different planting characters.

A mix of evergreen and deciduous, as well as native and exotic species, reinforces identity and promotes ecological diversity.

RESIDENTIAL STREET WITH LARGE TREES



6.3.3 PLANTING

Planting contributes to character and amenity by:

- providing colour and interest;
- offering structure, marking key locations (e.g. corners, entries);
- assisting in stormwater management;
- defining edges and paths; and
- providing seasonal change to the area.

Opportunities for the City of Playford include:

- Planting of low-maintenance native vegetation adjacent to cycling and walking paths, in particular off-road shared use paths.
- Utilising new walking and cycle path development as an opportunity to remove weeds and exotic species and replace with native grasses, groundcovers and trees, particularly along watercourses (e.g. Smith Creek, Little Para River).
- Planting areas that are bold and simple, encourage interest and diversity, however avoid overly fussy or busy planting designs.
- Selecting species appropriate to the site conditions, with suitable form, compliance with Crime Prevention Through Environmental Design (CPTED) principles and ongoing maintenance and watering requirements.
- Using native plants of local provenance to increase the biodiversity of vegetation, assist with Water Sensitive Urban Design (WSUD) and habitat creation.

EXAMPLES OF PLANTING ADJACENT TO CYCLING AND WALKING INFRASTRUCTURE

6.3.4 FURNITURE

Furniture and its arrangement is part of a well-integrated and well-maintained public realm.

Street furniture should be located in suitable locations and maintain a clear path of travel along the pathway.

Furniture and amenities supporting cycling and walking includes:

1. **Seating**
   - Provide seating adjacent to paths in locations that correspond with attractive views and features.
   - Seating should generally be provided every 400m on key routes or in response to public needs and usage.
2. **Shelters and Picnic settings**
   - Locate within reserves or parks accessed by the cycling and walking network.
3. **Bike stands**
   - Provide at destinations and parks responding to public needs and usage.
4. **Bins**
   - Locate at ends of pathways sections or at intersecting nodes.
   - Site suitably as not to dominate entries.
5. **Drinking fountains, dog-bowls/bag dispensers and fitness stations**
   - Provide within selected parks and reserves accessed via the cycling and walking network.
6. **Toilets**
   - Integrate the planning of assets such as public toilets with key cycling and walking routes.

EXAMPLES OF FURNITURE









6.3.5 SIGNAGE

Signs are key components in a legible public realm and add to the character and identity of an area.

It is recommended that a signage strategy that focuses on pedestrian and cycle wayfinding is developed in the City of Playford.

Primarily signage supports the use of cycling and walking routes but also markets and promotes the network to the community through prominence in the public realm.

A co-ordinated signage strategy provides direction, interpretation and advisory information.

- **Directional** signage guides routes and indicates open spaces, community facilities and other notable destinations. Directional signage may include regular arrows, 'markers' and maps.
- **Interpretive** signage educates, informs and entertains through interpretation of local history, flora, fauna, cultural heritage, etc.
- **Advisory** signage provides legal information (e.g. 'give way') and advises of a potential hazards (e.g. road crossing). Signage requirements are detailed in the Australian Standards.

EXAMPLES OF SIGNAGE

6.3.6 PUBLIC ART

Public art is an important component of a legible public realm.

Public art communicates a socially rich environment and allows for expression of culture, natural character and other distinctive features of the area. It provides identity within the landscape and creates a unique and meaningful sense of place.

It is important to avoid 'over-doing' public art, especially in the absence of providing suitable paving and tree planting.

Public art can also 'double' as play equipment, bike storage, etc or vice-versa.

Opportunities for the City of Playford include:

- Integrating public art in the cycling and walking network. The approach to public art should focus on the ease of communication and legibility of the network - for example locating at natural focal points (e.g. key public transport stations), providing themes and linking to signage.
- Co-ordinating the approach in collaboration with Arts SA to support the creation of a strong regional identity.
- Fostering community art for sense of place, social interactions and community ownership and capacity building.

EXAMPLES OF PUBLIC ART

PAVEMENT ART, DAVOREN ROAD, CITY OF PLAYFORD

6.3.7 LIGHTING

Lighting is an important component of the cycling and walking network, adding safety and liveliness to the environment and extending the usability of the network into the night.

For many areas, existing street lighting provides sufficient lighting for cycling and walking use, while other areas will benefit from additional lighting.

Feedback from community consultation (stage 1) suggests current lighting is inadequate in some areas and requires improvement to increase public safety.

It is recommended the City of Playford develop a Lighting Policy to increase safety and extend usability of walking and cycling routes.

Key locations to improve pedestrian lighting in the City of Playford include :

- Smith Creek Trails;
- Pedestrian activity hubs (e.g. Elizabeth Centre, Train stations); and
- Proposed Greenway along Gawler railway line.

The approach should not try to light 'everything' but rather provide safety and targeted lighting to key routes and precincts.

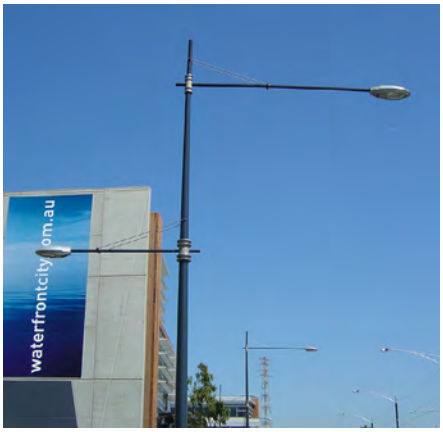
Lighting options for cycling and walking pathways include:

- Pole top lights (4.5m – 6m high);
- Recessed / ground mounted lights;
- Bollard lights;
- Incorporating fittings into built structures (e.g bridges, underpasses);
- Automatic control and sensing;
- Illuminating key features such as landmark buildings, trees, bridges and pedestrian gathering points;
- LED + solar lights; and
- Street lights (may include a pathway outreach).

Street and pole-top lighting is generally preferred over bollard and ground lighting as they produce less glare for pedestrians and cyclists and are less prone to vandalism.

Lighting design and implementation to comply with Austroads Guidelines, Australian Standards and DPTI requirements.

EXAMPLES OF LIGHTING



6.3.8 CROSSINGS

There are a number of major road and rail routes that go through the City of Playford (refer Part 3.5) and act as barrier to walking and cycling.

Safe pedestrian and cycle crossings are required to support and connect communities.

DESIGN CONSIDERATIONS

- Provide safe pedestrian and cycle crossings where key routes meet major roads and railway lines.
- Provide pedestrian and cyclist activated traffic lights along key routes.
- Provide generous width crossings and consider grade separation (e.g. 'land-bridges') for major connections (e.g. Smith Creek Trail at Main North Road).
- Increase 'green' crossing times for pedestrian and consider 'count-down' timers (examples in Adelaide City, Parade-Norwood), particularly around activity hubs and retirement villages.
- Provide traffic light signal sequencing for cyclists along key routes.
- Provide median 'safe-havens' with cyclist hand-rails (at road edge and median) to assist crossing of wide and busy roads.
- Provide adequate site-lines at crossings.
- Ensure crossings comply with Australian Standards.
- Avoid overuse of barricades and bollards.
- Seek to provide wide-automated pedestrian rail crossings (example at Woodville Station).
- Design for pedestrian and cycle priority at minor street crossings, particularly in activity hub areas.
- Particular consideration needs to be given to improving crossings of Main North Road (refer next page).

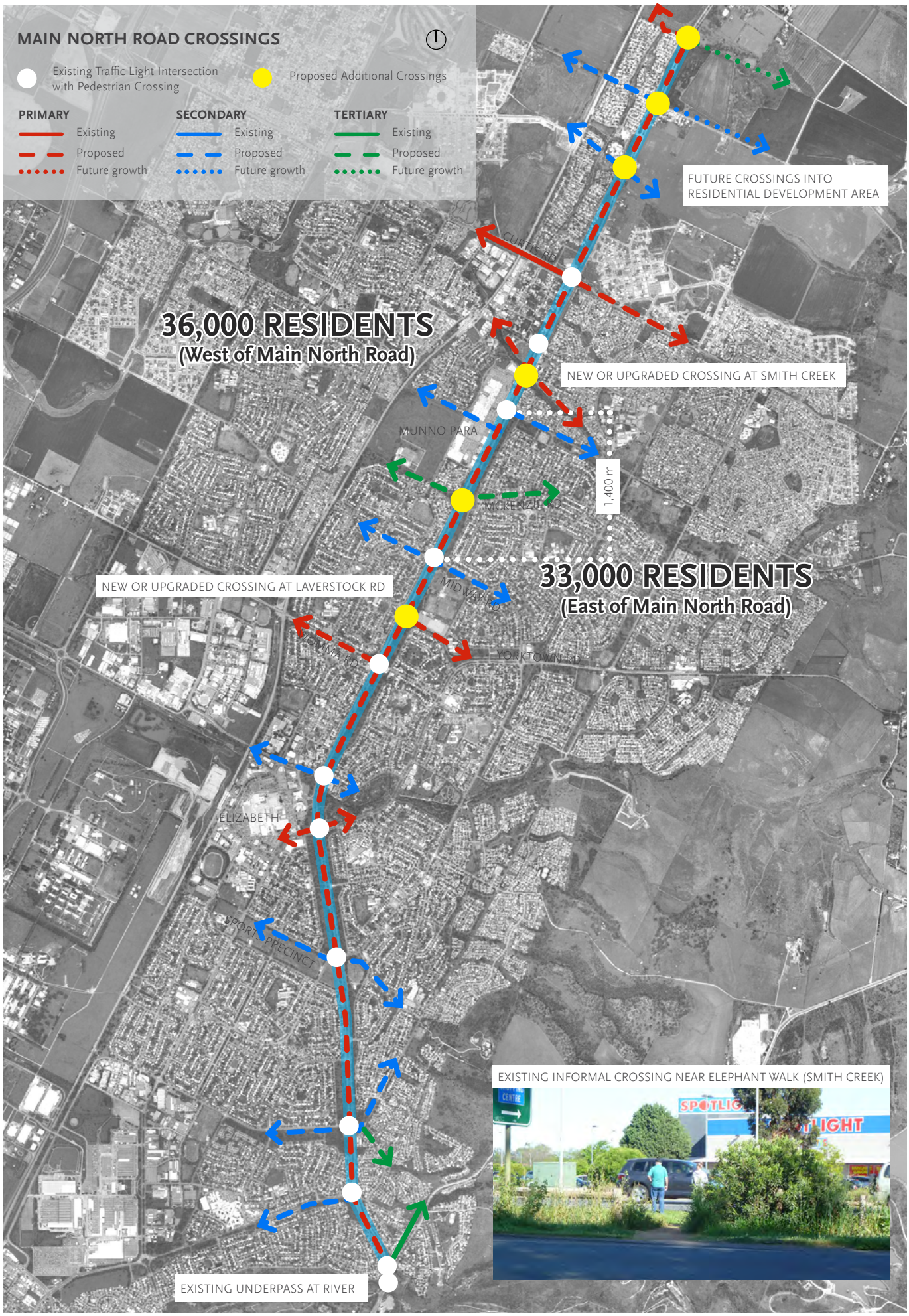
  Main North Road is major arterial road with high vehicle volumes and speeds (80km/hr speed limit).

  Existing formal pedestrian crossings are often around 1,400 metres apart.

SMITH CREEK TRAIL CROSSING AT PEACHEY ROAD

EXAMPLE OF AUTOMATED PEDESTRIAN RAIL CROSSING

COUNTDOWN PEDESTRIAN CROSSING IN ADELAIDE CBD


MAIN NORTH ROAD CROSSINGS
Existing Traffic Light Intersection with Pedestrian Crossing
Proposed Additional Crossings
PRIMARY
Existing
Proposed
Future growth
SECONDARY
Existing
Proposed
Future growth
TERTIARY
Existing
Proposed
Future growth
FUTURE CROSSINGS INTO RESIDENTIAL DEVELOPMENT AREA
CURTIS RD
36,000 RESIDENTS
(West of Main North Road)
NEW OR UPGRADED CROSSING AT SMITH CREEK
MUNNO PARA
1,400 m
MCKENZIE RD
NEW OR UPGRADED CROSSING AT LAVERSTOCK RD
33,000 RESIDENTS
(East of Main North Road)
MIDWAY RD
YORKTOWN RD
ELIZABETH
SPORT PRECINCT
EXISTING INFORMAL CROSSING NEAR ELEPHANT WALK (SMITH CREEK)
EXISTING UNDERPASS AT RIVER

Recommendation 4

Work with developers to achieve a built form that supports cycling and walking.

'It is the built environment that is the greatest determiner of our travel patterns'

FRED HANSEN: ALL ON BOARD, 2010.

Refer also to the City of Playford Land Division Guidelines, Urban Design Guidelines and Development Plan.

6.4 STRATEGY 4
INTEGRATE WITH PLANNING AND BUILT FORM

KEY CONSIDERATIONS

1. Permeability

Permeability in the street network and choice of route is important for pedestrians and cyclists. The grid-plan works best providing connections and choice of routes and should be encouraged for new developments.

Cul-de-sacs should be avoided for streets and site designs. Where unavoidable, ensure pedestrian and cycle links are maintained.

2. Built form

The built form has significant influence on encouraging or discouraging cycling and walking.

DESIGN CONSIDERATIONS

- Provide active frontages and avoid blank walls/fences to encourage cycling and walking through creating interesting environments and increased safety through passive surveillance.
- Provide fine-grain detail and interest. Shift from car-oriented, internally-oriented, 'big-box' built form to outward-oriented pedestrian-scale environments.
- Encourage verandahs and pergolas for shelter on footpaths.
- Ensure destinations encourage cycling and walking. Developments should exhibit high-quality urban design and be comfortable at a human-scale.
- Locate car parking to the rear of developments for an active frontage and to encourage arrival by walking or cycling.
- Incorporate street furniture such as seating and bicycle parking.

3. Mixed land use

Mixing compatible land uses provides a range of uses (e.g. shops, housing, offices) closer together and increases accessibility for cycling and walking. Mixing land uses also increases activity improving safety and adding interest to the street environment.

The 30 Year Plan for Greater Adelaide supports mixing of compatible land uses particularly along transit corridors.

EXAMPLE OF CAR-FOCUSED RETAIL CENTRE, ELIZABETH SOUTH CENTRE

4. Site Layout and Car parking

The City of Playford has a large amount of off-street parking as well as on-road parking.

Destinations with large areas of off-street parking car parking forward of the building location creates a visually unattractive and inactive streetscape character. It also discourages travel and arrival by walking or cycling.

DESIGN CONSIDERATIONS

- Ensure appropriate site planning and building design encourages arrival on foot or bike.
- Locate off-street car parking behind the building line.
- For larger developments, investigate pedestrian and cycle movements with the same level of detail as car-based traffic studies.
- Provide strong cycling and walking links through surface car park areas to the local network.
- Consider a review of the planning policies (e.g. car-parking requirements) that support a car-focused environment.
- Provide end-of-trip facilities.
- Undertake traffic management planning to direct site vehicle access to the preferred arterial or collector roads, and not local streets (i.e. to reduce vehicle volumes on the local network).

5. Planning System

The following table summarises opportunities within the existing planning system for the promoting cycling and walking:

PLAN	RECOMMENDATION	KEY PARTNERS
Structure Plans A Structure Plan has been prepared for the Playford Growth Area. It sets out a detailed spatial vision for urban growth and change, including some provisions for cycle and walking routes and linear open spaces.	*Further, embed Walking and Cycling strategies into spatial planning for growth areas* There is an opportunity to better emphasise walking and cycling policies future reviews of the Playford Growth Area Structure Plan to facilitate pedestrian and cycle outcomes (e.g. a dedicated plan for pedestrian and cycle connections).	Department of Planning, Transport and Infrastructure Renewal SA SA Active Living Coalition
Precinct/Master Plans Precinct/Master Plans have a direct influence on the range and quality of walking and cycling environments delivered from new and redeveloped urban spaces and buildings. Government Agencies prepare master plans for infrastructure projects (such as new schools, hospitals or highways) and for major urban development projects (such as Bowden or Tonsley). Councils prepare master plans for public realm upgrades (squares, parks, and town centres). And the private sector prepares master plans for development projects including new residential estates or major commercial buildings.	*Embed Walking and Cycling into plans for urban projects in new and defined regeneration areas.* Precinct/master plans should ensure that walking and cycling strategies form an integrated component of area-wide redevelopment schemes. Planning for walking and cycling should happen up-front rather than at the end. Priority should be on walking and cycling linked with public transport and then car movement. The focus should be on creating a walking and cycling focused precinct that links with the broader walking and cycling network (particularly Primary routes), public transport and the surrounding community.	Department of Planning, Transport and Infrastructure Renewal SA SA Active Living Coalition Department of Environment and Natural Resources Urban Development Institute of Australia
Development Plan The Development Plan includes Zones, Objective and Principles of Development Control to guide development and desired neighbourhood character.	*Embed Walking and Cycling directions into Council plans and policies* There is opportunity to further integrate walking and cycling directions into the Development Plan to have a direct influence on new developments. This may include translating key routes of the Walking and Cycle Plan to the Development Plan. This will assist Council staff and developers to identify these key walking and cycling routes and ensure they are integrated and considered up-front for new developments.	Local Government Association Department of Planning, Transport and Infrastructure
Council Plans The City of Playford prepare a range of strategic, statutory and operational plans.	*Embed Walking and Cycling directions into Council plans and policies* *Embed Walking and Cycling facilities into Council plans for infrastructure delivery* It is recommended that the City of Playford integrate walking and cycling directions across all its plans and policies. For example, walking and cycling strategies and implementation should inform Asset Management Plans, Recreation Plans, Traffic Management Plans, Road Re-sealing Programs, Public Arts Strategies, Street Tree Strategy reviews etc. The process of informing and aligning with other plans and policies will allow for increased efficiency in infrastructure delivery.	

Recommendation 5

Recognise the need and plan for increased funding for maintenance and upgrading of cycling and walking infrastructure.

6.5 STRATEGY 5
MANAGEMENT AND MAINTENANCE

Opportunities for the City of Playford to improve management and maintenance of cycling and walking infrastructure include:

- Developing service standards policy around cycling and walking to effectively translate into maintenance programs and operating budgets.
- Proactively maintaining existing cycling and walking facilities to support safe use by the community and ensure maximum lifespan of the asset.
- Ensuring maintenance of cycling and walking infrastructure and routes is included in Council maintenance staff programs and Asset Management Strategy.
- Identifying all current cycle routes and assign a condition rating. Align the routes with the priority works on the network plan and develop a program of maintenance.
- Undertaking regular footpath audits (refer suggested frequency on next page) and assign a condition rating. Align the routes with the priority works on the network plan and develop a program of maintenance.
- Exploring opportunities for upgrading cycling and walking facilities when undertaking scheduled maintenance such as road resurfacing etc.

SOURCE CITY OF PLAYFORD

MAINTENANCE AND SERVICING

The table below provides a list of key maintenance tasks and frequency for servicing cycling and walking infrastructure. Regular maintenance supports public use and safety and also extends the life of assets through timely maintenance and rehabilitation.

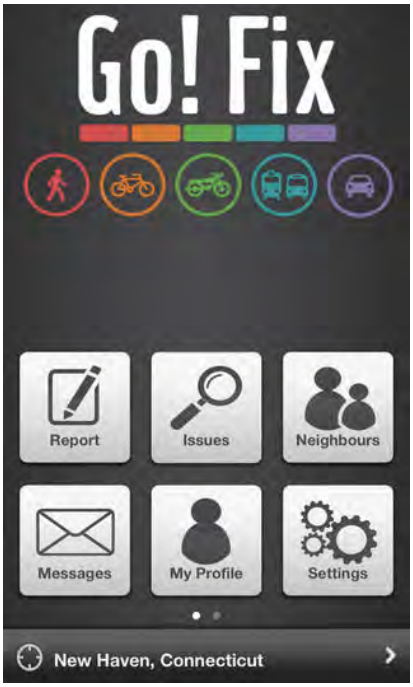
Maintenance frequency is to be modified and reviewed in line with Council's asset plans and budgets, and community expectations. Frequency of maintenance need to increase during autumn or following heavy wind or rain events.

CYCLING AND SHARED USE PATHS

Maintenance task & Frequency (indicative timing)	Primary	Other shared use paths/ off road cycle	Major roads & Northern Expressway	On-road cycle lanes & shoulders
Pruning of vegetation	Every 12 months	Every 18 months	DPTI	Every 18 months
Inspect surface (including shoulders) and repair and re-line mark as needed.	Every 2 years	Every 2 years	DPTI	Every 3 years

FOOTPATHS

Maintenance task & Frequency (indicative timing)	High use (Hubs, shopping precincts)	Medium use (Schools, parks)	Low use (Local, residential)
Pruning of vegetation	Every 12 months	Every 18 months	Every 18 months
Inspect surface (including shoulders)	Every 12 months	Every 2 years	Every 2 years



Go! Fix App

The City of Playford could consider using a smartphone application such as 'Go! Fix' (or similar) to help identify maintenance issues in the transport network and public realm. The phone app can be used by residents (e.g. walkers, cyclists and users of public transport, motorists) to describe and send geo-tagged reports of issues they have identified (e.g broken glass, pothole, fallen tree, street light outage, etc)

More information is available at go-fix.net

'Snap, Send, Solve' is another example similar to 'Go! Fix'.

Recommendation 6

Promote and advocate for cycling and walking by a range of Council initiated programs.

OVERVIEW

This part recommends strategies and opportunities relating to promotion, education, advocacy and support for cycling and walking.

The aim is to continue to build a culture within the City of Playford that respects and embraces cycling and walking both at a strategic, decision-making level and at local community level.

The current OPAL (Obesity Prevention and Lifestyle) program operating in the City of Playford has developed and implemented a number of healthy lifestyle initiatives including those focused on improving the activity patterns of children.

There are 15 walking groups in the City of Playford registered on the Heart Foundation website

WWW.HEARTFOUNDATION.ORG.AU/ACTIVE-LIVING/WALKING

6.6 STRATEGY 6
PROMOTION, EDUCATION, ADVOCACY & SUPPORT

PROMOTION AND EDUCATION

Opportunities include:

- Continuing to collaborate with other organisations (e.g OPAL, Heart Foundation, Bike SA etc) in community promotion and education of benefits of walking and cycling.
- Using OPAL's and Council's marketing resources (including website, newsletter and social media) to promote new and existing cycling and walking facilities to local residents.
- Maintaining active travel website www.opalchallenge.com with up to date resources and information.
- Educating and regularly updating the community about new or upgraded cycling and walking facilities and new solutions such as 'Green Streets'.
- Developing maps, signage and logos to assist in the community's use and legibility of cycling and walking infrastructure. Link with broader mapping networks (e.g. DPTI Bike Direct + Cycle Instead Journey Planner, Google maps etc).
- Exploring new-technology opportunities such as smart-phones and GPS to promote cycling and walking routes including recreation loops.
- Working with the Department of Planning, Transport and Infrastructure (DPTI) to keep Bike*direct* and 'Cycle-instead Journey Planner' up to date.
- Working with OPAL to continue to develop local cycling and walking programs (e.g. 'Active Travel', Bicycle SA Cycle Safe courses, etc).
- Working together with DPTI in expanding the 'Way2Go' schools program for education and improving infrastructure.
- Developing and promoting 'Ride-safe' park at Mayfair Park. Following implementation, Council should assess the need to develop other ride safe parks in the City of Playford.
- Working with DPTI to develop and introduce MetroCard operated bike-sharing schemes at key public transport hubs to encourage cycle use for short, local trips.

TARGETS + MEASURING PERFORMANCE

The SA Strategic Plan (SASP) (revised September 2011) includes the following targets:

- Double the number of people cycling in South Australia by 2020.
- Increase the use of public transport to 10% of metropolitan weekday passenger vehicle kilometres travelled by 2018.
- Increase the proportion of South Australians participating in sport or physical recreation at least once per week to 50% by 2020.

In a effort to measure performance and quantify outcomes of cycling and walking improvement in the City of Playford, it is recommended that targets and indicators are developed.

Opportunities include:

- Monitoring trends from ABS statistics including 'Journey to work' data.
- Exploring opportunities to gather baseline data to measure cycling and walking levels in the community. Understanding travel to school data may be a useful starting point. Some information may be available through Heart Foundation, SA Health and SA Walks. Refer also www.victoriawalks.org.au/measuring.
- Monitoring DPTI counts for bike storage area at public transport interchanges.
- Participating in Super Tuesday Annual Bike Counts. Super Tuesday is Australia's biggest visual bike count collecting annual figures on bicycle commuting. It provides participating councils with reliable annual figures of bicycle commuters and their movements on roads and bike paths. Refer also www.bicyclenetwork.com.au/general/bike-futures/30600)

ADVOCACY AND SUPPORT

Advocacy and support for cycling and walking from community leaders such as City of Playford is vital for successful implementation.

Opportunities include:

- Supporting the new and existing community cycling and walking groups.
- Signing-on and committing to cycling and walking through a Council position statement and/or public statement such as:
  - Walk 21: International Charter for Walking (refer image below)
  - Australia Pedestrian Charter
  - Charter of Brussels (cycling)
  - Toronto Charter for Physical Activity

  By signing on to a charter, the City of Playford will be committing to investing in their cycling and walking policy, culture and infrastructure development. Other Local Governments to recently sign on to the Walk 21 Charter include City of Marion, City of Salisbury, Adelaide City Council, City of West Torrens and City of Charles Sturt.

  For more information: www.heartfoundation.org.au/driving-change/current-campaigns/local-campaigns/Pages/signing-international-charter-walking.aspx
- Working with local businesses to encourage employees to walk or cycle to work. This will mean healthier staff, improved productivity and less sick days.
- Supporting the City of Playford staff to actively travel to work and local meetings.
- Co-ordinating with adjoining Councils, Government agencies, developers and the community to advocate and support cycling and walking projects and initiatives.

WALK 21 INTERNATIONAL CHARTER FOR WALKING

Walk21 — Taking walking forward in the 21st Century

International Charter for Walking

Creating healthy, efficient and sustainable communities where people choose to walk

I/We, the undersigned recognise the benefits of walking as a key indicator of healthy, efficient, socially inclusive and sustainable communities and acknowledge the universal rights of people to be able to walk safely and to enjoy high quality public spaces anywhere and at anytime. We are committed to reducing the physical, social and institutional barriers that limit walking activity. We will work with others to help create a culture where people choose to walk through our commitment to this charter and its strategic principles:

1. ***Increased inclusive mobility***
2. ***Well designed and managed spaces and places for people***
3. ***Improved integration of networks***
4. ***Supportive land-use and spatial planning***
5. ***Reduced road danger***
6. ***Less crime and fear of crime***
7. ***More supportive authorities***
8. ***A culture of walking***

Signed _____

Name _____

Position _____

Date _____

www.walk21.com

Think Feet First - Opal

Think Feet First – step, cycle, scoot to school' is a theme for the OPAL in the City of Playford.

The message is to encourage parents and students to think about how they travel to school and around their community. The focus is on choosing active ways to travel to school such as walking, cycling or other non-motorised modes of travel. Being active every day is important for everyone and active travel to school offers an opportunity to incorporate additional physical activity into your child's daily routine.

SOURCE: OPAL

ST COLUMBA COLLEGE, WALK SAFE TO SCHOOL DAY

IMAGE: THINK FEET FIRST OPAL FOOTPATH ART. SOURCE: CITY OF PLAYFORD

PART 07
IMPLEMENTATION

Prioritise the 'sustainable trails' lighthouse projects outlined in Council's strategic plan.

7.1 ACTION PLAN AND PRIORITIES

The following tables summarise the strategies and actions for implementing cycling and walking improvements in the City of Playford.

The Action Plan provides the following timeframes:

- short (next five years);
- medium (five to 15 years); and
- longer term (15 years and beyond).

These timeframes correspond with those of the Integrated Transport and Land Use Plan (DPTI, 2013). The staging of investment will allow maximum value from Council's existing assets as well as provision of new assets and services.

The Strategy applies the following principles when setting priorities:

- Connecting the gaps in the existing network and providing 'quick wins' to build momentum.
- Aligning with planned Council projects and those identified in State Government strategies and plans.
- Addressing solutions as short, medium or long-term initiatives so that the most pressing needs are addressed as a priority.
- Integrating 'non-physical' solutions such as education and promotion to encourage cycling and walking among the community.
- Investigating better use of existing assets along with investment in new facilities and services to maximise benefits and provide value for money.

	STRATEGY AND ACTION	SHORT (0-5yrs)	MEDIUM (5-15yrs)	LONG (15-30yrs)
	STRATEGY 1: PROVIDING THE ROUTE			
PRIMARY	P1 Curtis Road – Provide on-road and/or off-road route to connect with Stuart O'Grady Bikeway.			
PRIMARY	P2 Curtis Road – Provide on-road and/or off-road route to connect with Main North Road.			
PRIMARY	P3 Smith Creek Trails – Upgrade and extend the trail section east of the Gawler Railway line (including rail crossing and Main North Road crossing).			
PRIMARY	P4 Main North Road Windbreak Trails – Provide an off-road shared path to connect existing paths north and south of the Smith Creek Trail.			
PRIMARY	P5 Main North Road Windbreak Trails – Provide an off-road shared path from Munno Para Centre (near Uley Road) to existing section near Fairfield/Midway Roads.			
PRIMARY	P6 Main North Road Windbreak Trails – Provide an off-road shared path from existing section near Hogarth Road to Little Para River Trails.			
PRIMARY	P7 Adelaide to Gawler Greenway – Provide route from Elizabeth Centre to Curtis Road.			
PRIMARY	P8 Virginia – Provide route on Old Port Wakefield Road from Virginia Recreation Park(oval) to Virginia Grove.			
PRIMARY	P9 Stuart O'Grady Bikeway – Upgrade links to street network (e.g Fradd Rd, Taylors Rd, Petherton Rd). Improve crossing of Port Wakefield Road, signage and car parking at the start of the Bikeway (southern end). Plant trees along the route.			
PRIMARY	P0 Main North Road – Complete the provision of on-road cycle lanes from Munno Para to the city (DPTI).			
PRIMARY	– – All other Primary routes			
SECONDARY	S1 Stebonheath Road – Provide off-road shared path from Curtis Road to Roseworthy Drive.			
SECONDARY	S2 Peachey Road – Provide off-road shared path.			
SECONDARY	S3 Blakeview – Provide route from Kingate Boulevard to Munno Para Station & Curtis Road Town Centre.			
SECONDARY	S4 Perre Drive – Upgrade route in linear reserve west of Perre Drive.			
SECONDARY	S5 Adam Creek – Provide shared path in Jubilee Park from Lachlan Drive to Olive Grove Reserve.			
SECONDARY	S6 Jo Gapper – Provide route from Jo Gapper Park to Playford Alive Oval.			
SECONDARY	S7 John Rice Avenue – Provide off-road shared path.			
SECONDARY	S8 One Tree Hill – Provide route along McGilp Road connecting the school and oval to the 'main street'.			
SECONDARY	– – All other Secondary routes			
TERTIARY	T1 Coventry Road – Provide shared path from Smith Creek Trail to Curtis Road path.			
TERTIARY	T2 Kinkaid Road – Provide route to Midway Road.			
TERTIARY	T3 Mofflin Road – Provide route from Elizabeth Sports Precinct to Little Para River Trails.			
TERTIARY	T4 Virginia – Provide route to connect school and oval to the 'main street'.			
TERTIARY	– – All other Tertiary Routes			
RURAL	– – Proposed 'Rural' routes identified in the Cycling and Walking Network Plan.			
	Develop plans to prioritise the 'sustainable trails' lighthouse projects outlined in Council's strategic plan. Identify and implement a pilot project in the short-term.			
	Identify streets with missing footpaths and gaps between on-road cycle lanes. Prioritise action for improving.			
	Develop a detailed cycling and walking network plan to highlight connectivity and future linkages between priority projects such as Northern CBD/Civic Precinct, Health Precinct and Sports Precinct.			

Timing of 'Future Growth' routes is to occur with the development of adjacent residential and employment areas.

City of Playford

Proposed Cycling + Walking Network Plan

HIGH PRIORITY ROUTES

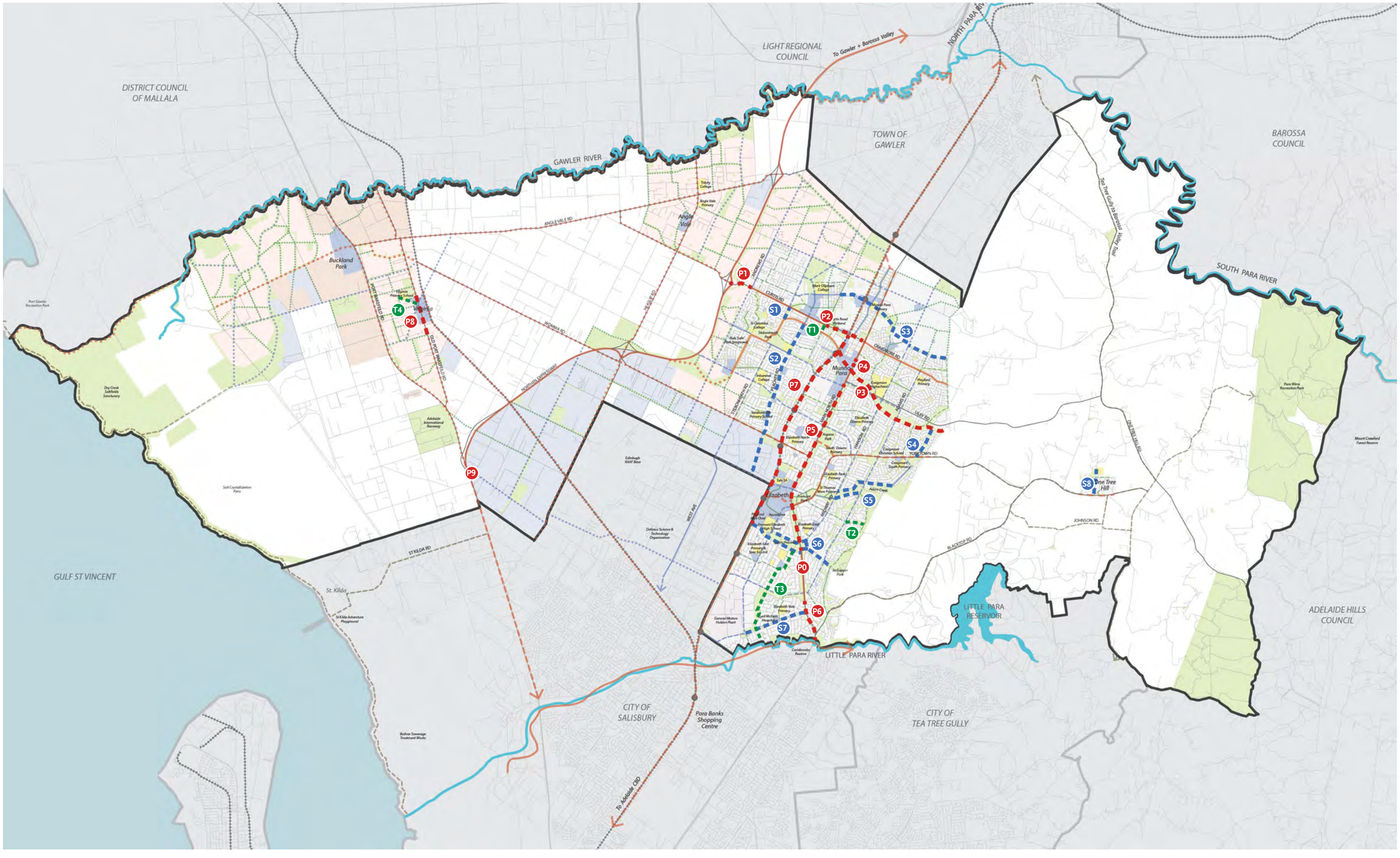
PRIMARY
- Existing
- Proposed
- Future growth

SECONDARY
- Existing
- Proposed
- Future growth

TERTIARY
- Existing
- Proposed
- Future growth

RURAL TRAILS
- Proposed

GROWTH AREA (PLAYFORD GROWTH AREA STRUCTURE PLAN)
- District
- Neighbourhood
- Local
- Growth centres 400 - 800m radius
- Future growth
- Future urban
- Future employment
- Train station
- School / education
- Reserve / park
- Commercial
- Built up areas



City of Playford

Main Urban Area and Angle Vale

HIGH PRIORITY ROUTES

PRIMARY
- Existing
- Proposed
- Future growth

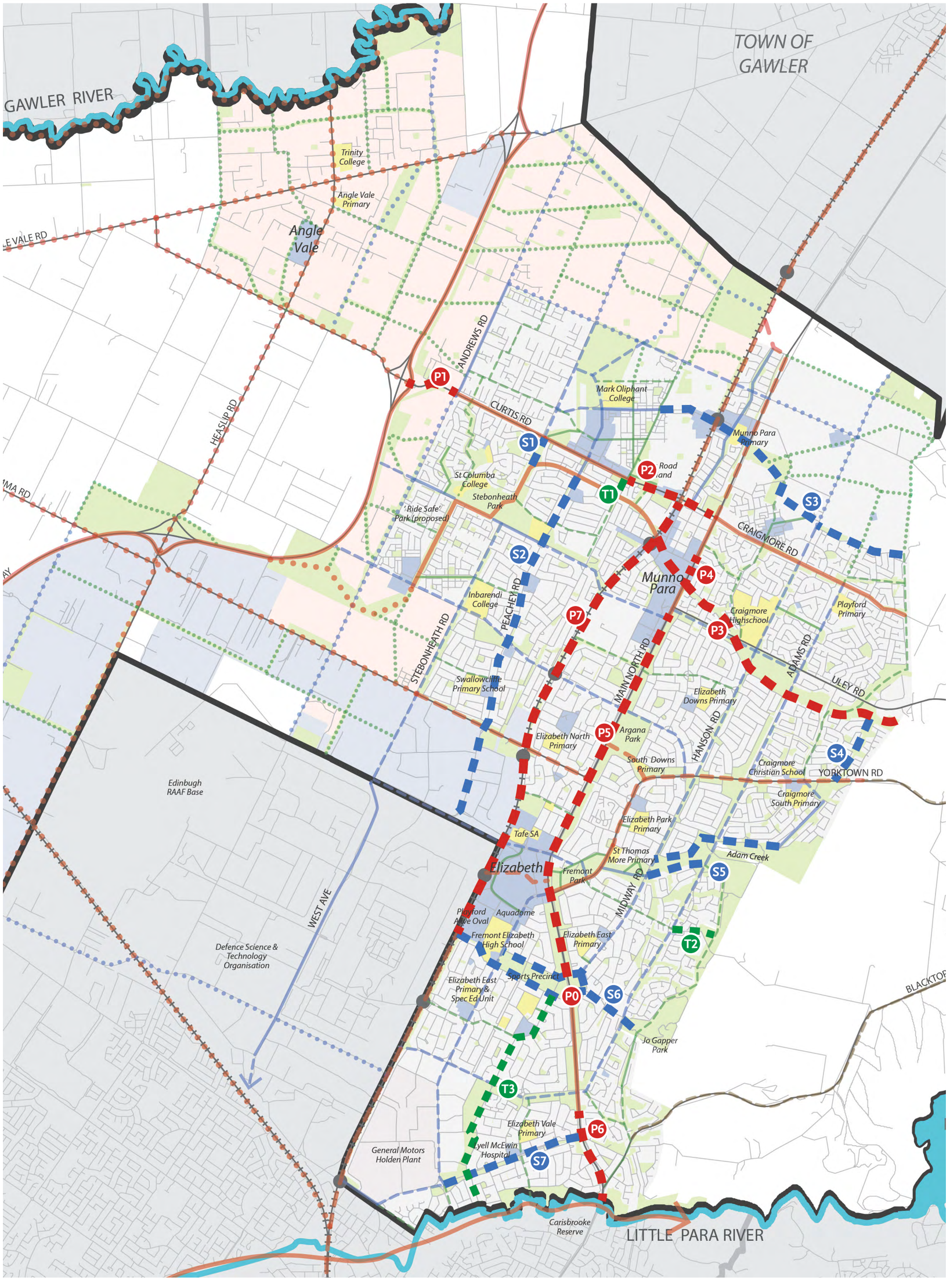
SECONDARY
- Existing
- Proposed
- Future growth

TERTIARY
- Existing
- Proposed
- Future growth

RURAL TRAILS
- Proposed

GROWTH AREA (PLAYFORD GROWTH AREA STRUCTURE PLAN)
- District
- Neighbourhood
- Local
- Growth centres 400 - 800m radius
- Future growth
- Future urban
- Future employment

- Train station
- School / education
- Reserve / park
- Commercial
- Built up areas

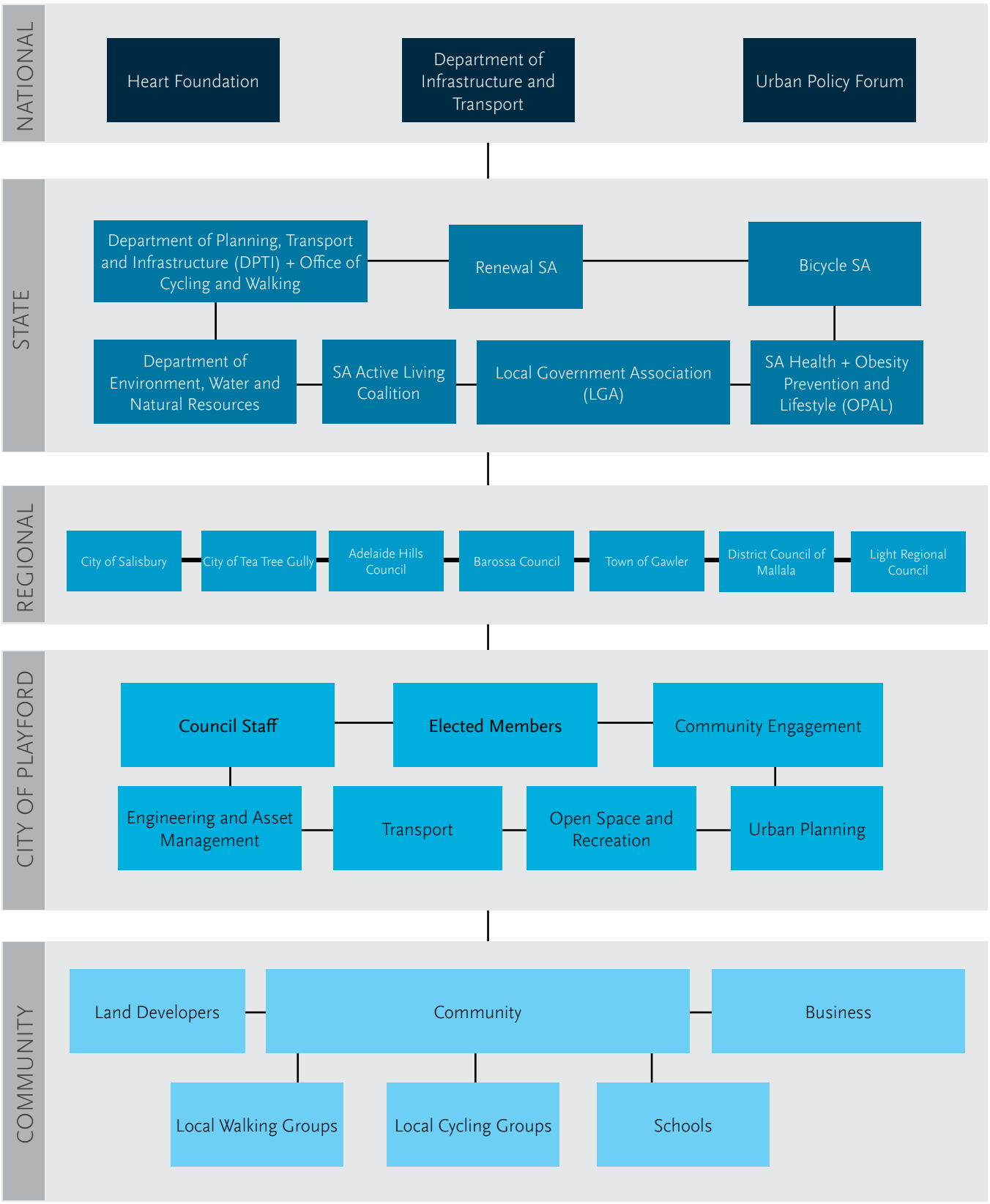


STRATEGY AND ACTION	SHORT (0-5yrs)	MEDIUM (5-15yrs)	LONG (15-30yrs)
STRATEGY 2: WORKING WITH VEHICLES			
Reduce the width of vehicles lanes (3.0-3.2m instead of 3.5-4.0m) and increase cycle lane widths through road line-marking renewal process.	■	■	■
Provide traffic calming that is cycling and walking friendly. Priority is for local streets identified as part of key cycling and walking routes (e.g. Proposed Cycling and Walking Network Plan) and streets identified in Asset Management Plans for renewal or replacement. Identify and implement a pilot project in the short-term.	■	■	■
Provide space for cyclists on arterial roads (e.g. continuous cycle lanes) and separation at intersections (e.g. bicycle boxes). Identify and implement a pilot project in the short-term.	■	■	■
Integrate Water Sensitive Urban Design (WSUD) in local streets. Priority is for streets identified for upgrade in long-term Asset Management Plans and the Proposed Cycling and Walking Network Plan.	■	■	■
Avoid slip lanes for vehicles.	■	■	■
STRATEGY 3: THE DETAILS			
Develop policies (e.g Service Standards Policy etc) to improve the minimum provision, in line with best practice and to provide consistency across the City of Playford.	■		
Street trees – Plant street trees of larger species to provide shade. Aim to increase canopy cover of the public realm.	■	■	■
Planting – Provide planting of native species along cycling and walking routes, particularly along watercourses and main road and rail corridors. Ensure compliance with CPTED requirements.	■	■	■
Furniture (seating etc.) – Provide furniture at key locations along cycling and walking routes. Priority for primary routes and high-pedestrian activity areas (e.g. retail and commercial centres).	■	■	■
Paving – Follow new service standard policy for new and upgraded footpath paving. Where possible, increase footpath widths as older footpaths are replaced.	■	■	■
Signage – Develop a cycling and walking signage strategy for the City of Playford.	■		
Public Art – Coordinate an approach with Arts SA and placemaking officer for public art development and identifying suitable locations along the cycling and walking network.		■	■
Lighting – Develop a lighting strategy/policy for improving safety along cycling and walking routes. Priority is for high-use areas and primary routes..	■	■	■
Crossings – Provide safe pedestrian and cycle crossings where key routes meet major roads and rail lines.	■	■	■
Undertake an audit and assign a condition rating for supporting infrastructure such as seating, lighting, signage, cycle parking (and other end of trip facilities). Focus on the routes of the network plan and key destinations (for end of trip facilities) and develop a program of maintenance.	■		

STRATEGY AND ACTION	SHORT (0-5yrs)	MEDIUM (5-15yrs)	LONG (15-30yrs)
STRATEGY 4: INTEGRATE WITH PLANNING AND BUILT FORM			
Add the Proposed Cycling and Walking Network Plan to the City's mapping and asset system to assist in day-to-day management decisions.	■		
Translate the Proposed Cycling and Walking Network Plan into the City of Playford Development Plan.	■		
Integrate cycling and walking directions across other City of Playford plans and policies.	■	■	■
Develop Standards/Guidelines to ensure developments have appropriate site planning and building design that focus on movement and scale of pedestrians and cyclists and not car-oriented design.	■		
STRATEGY 5: MAINTENANCE AND MANAGEMENT			
Proactively maintain existing cycling and walking facilities to support safe use by the community and ensure maximum lifespan of the asset.	■	■	■
Identify all current cycle routes and assign a condition rating. Align the routes with the priority works on the network plan and develop a program of maintenance.	■		
Undertake regular footpath audits and assign a condition rating. Align the routes with the priority works on the network plan and develop a program of maintenance.	■		
STRATEGY 6: PROMOTION, EDUCATION, ADVOCACY AND SUPPORT			
Develop and promote the proposed 'Ride-Safe' park at Mayfair Park.	■		
Assess the need for the development of other ride safe parks in the City of Playford.		■	
Use OPAL and Council marketing resources (including website, newsletter and social media) to promote new and existing walking and cycling facilities to local residents. Maintain active travel website www.opalchallenge.com with up-to-date resources and information.	■	■	■
Support City of Playford staff to actively travel to work and local meetings.	■	■	■
Consider signing-on and committing a public statement supporting cycling and walking (e.g. Council Position Statement or Walk 21).	■		
Work with DPTI to introduce MetroCard operated bike-sharing schemes at key locations.		■	
Develop maps, signage and logos to assist in the community's use and legibility of cycling and walking infrastructure. Link with broader network promotion (e.g. Bike*direct*).	■	■	■
Monitor cycling and walking trends using ABS statistics and any new indicators determined by Council.	■	■	■
Support local active travel education programs (e.g. 'Think Feet First' and 'Way2Go') and local cycling and walking groups.	■	■	■

7.2 PARTNERS

POSSIBLE PARTNERS FOR INPUT AND DELIVERY OF CYCLING AND WALKING IMPROVEMENTS



Plan ahead on cycling and walking projects to take advantage of Federal and State Government funding opportunities as they arise.

Work with developers to 'get it right' from the beginning.

7.3 FUNDING OPPORTUNITIES

Although cycling and walking are fundamental transport modes it is easily overlooked, particularly in comparison to money spent on car-focused activities.

Funding opportunities for detailed design and implementation of cycling and walking projects include:

- Developer contributions
- Department of Planning, Transport, and Infrastructure (DPTI)
- State Bicycle Fund and State Black Spot Cycling Projects
- Department of Panning and Local Government (DPLG)
- Public Space Grants (Planning SA)
- Office for Recreation and Sport (ORS)
- Arts SA
- Power Line Environment Committee (PLEC)

Funding opportunities may also be available through Federal Government programs.

More information on available grants can be found at:
www.grantslink.gov.au
www.sa.gov.au

DEVELOPER CONTRIBUTIONS

Developer contributions are a key opportunity for the local government to fund infrastructure works.

Public-private partnerships (PPP) should be explored to help deliver good-quality cycling and walking infrastructure within new and existing developments as well as connections to the broader network.

DEPARTMENT OF PLANNING, TRANSPORT AND INFRASTRUCTURE (DPTI)

Opportunities may exist for cost sharing between the Department of Planning, Transport and Infrastructure (DPTI) and Local Government for key arterial road upgrades.

Community Grants program
The Department of Planning, Transport and Infrastructure, in partnership with the Motor Accident Commission, offers grants for groups and organisations to deliver small scale projects that support safer, greener and more active travel choices. Projects can include getting people cycling, walking or catching public transport. More information is available here: http://dpti.sa.gov.au/communityprograms/community_grants

The Department of Planning, Transport and Infrastructure (DPTI) also overseas the State Bicycle Fund and State Black Spot Cycling Projects.

State Bicycle Fund
The State Bicycle Fund is an annual subsidy scheme that provides financial assistance of up to a dollar for dollar basis for Councils to progress cycling initiatives in their local area. The Fund has a long-standing partnership between the State Government and local councils to respond to Federal, State Government and Council strategies relating to encouraging cycling.

State Black Spot Cycling Program

The State Black Spot Program is directed towards bringing about significant reductions in crashes by the identification and treatment of locations and sections of road that have an unsatisfactory casualty crash record or that have a significant crash potential. Funds from the State Black Spot Program are specifically available to Councils as subsidy funding for cycling safety infrastructure projects.

PUBLIC SPACE GRANTS

The Places for People program is a State Government funded initiative aimed at revitalising important public places within the State. The program offers funding to assist local governments to plan, design and build high quality community places to encourage community life and economic investment and development.

Open Space Grant funding is another State Government program that provides financial assistance to local government for the purchase, development and planning of open space.

More information on Public Space Grants and how to apply can be found at:

http://publicspace.planning.sa.gov.au

OFFICE FOR RECREATION AND SPORT (ORS)

Fund sharing opportunities are also available with the Office for Recreation and Sport (ORS).

More information is available here: www.recsport.sa.gov.au/funding-scholarships/

ARTS SA

The role of Arts SA includes assisting the development of the arts and cultural industry and providing strategic financial support programs to the arts and cultural industry. Arts SA has a range of competitive grant areas. The program of most relevance to this project is Public art and design.

The public art and design program supports the commissioning of high-quality works of art and design for public places. Applicants in this program will be individuals, organisations, (including those in receipt of ongoing Arts SA funding), community groups and Local and State Government agencies.

Further information on funding and applications can be found at:

www.arts.sa.gov.au

POWER LINE ENVIRONMENT COMMITTEE (PLEC)

The Power Line Environment Committee (PLEC) assists Local Government with initiatives to enhance streetscapes by undergrounding power lines. Undergrounding enables large trees to be established and assists streetscaping projects thereby improving the appearance of a locality. Priority is generally given to retail precincts and projects of community benefit.

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