



PORT ADELAIDE ENFIELD WALKING AND CYCLING PLAN

Prepared for: The City of Port Adelaide Enfield
26 August 2021

Prepared by the partnership team of



intermethod

and



**Engineering
Solutions**



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INTRODUCTION

ABOUT WALKING AND CYCLING PLAN

The City of Port Adelaide Enfield (PAE) is a vibrant community with a population of over 127,000 residents and a land area of 94 square kilometres. The map on the next page shows the extent of the Council area and lists state controlled roads within it.

The Council area is one of the largest and extends from the upper reaches of the River Torrens to Outer Harbour. The PAE area encompasses some of the best beaches and coastal trails that South Australia has to offer. It also has one of the highest number of commercial land uses and is an employment hub in the Adelaide metropolitan region. The Council is also amongst the fastest growing areas in metropolitan Adelaide.

The size of the Council area and diversity of the population brings many opportunities and challenges for people movement and transport of goods within and across the Council region.

Council commissioned the partnership team of Intermethod and Be Engineering Solutions to develop the Walking and Cycling Plan, to deliver on the directions for active transport outlined in the Integrated Transport Strategy (developed in parallel) and to supersede the Local Area Bike Plan 2015-2020. The ITS will provide a guiding strategy for the next 10 years for transport and mobility needs in the Council area.

The new Walking and Cycling Plan aligns with the City Plan 2030 and other key strategies. The Walking and Cycling Plan will enable walking and cycling as 'main stream' modes of active transport, not just a recreational activity. The Plan will be a driver to promote and encourage more people to walk and cycle, more often.

The Walking and Cycling Plan delivers on the City Plan Placemaking Vision by delivering actions to:

- Maintain and creatively activate parks and public spaces to create beautiful places, increase utilisation, support community connections and active healthy living
- Invest in upgrade to community infrastructure that build active participation and promote social inclusion.

STRUCTURE OF THIS REPORT

STRATEGIC ALIGNMENT AND CONTEXT

The first half of the Walking and Cycling Plan presents a summary of the strategic context and best practice review of the existing strategic and delivery framework for increasing walking and cycling in the City of Port Adelaide Enfield. It contains:

- Overview of strategic alignment for the Walking and Cycling Plan
- Examples of best practice strategic documents and action plans that provide good frameworks for delivering on the walking and cycling agenda
- Summary of existing conditions and data analysis
- GIS-based maps representing the area and network
- Tabled review of previous Local Area Bike Plan 2015-2020 - Action Plan
- Summary of the key pedestrian and cycling issues observed.

DELIVERY FOCUS AND ACTIONS

The second part of the Walking and Cycling Plan contains:

- A statement of the outcomes sought by the Plan
- An outline and explanation of key actions

PROPOSED INFRASTRUCTURE PRIORITY INVESTMENT PLAN

An infrastructure priority plan for the delivery of walking and cycling infrastructure for the five-year plan period was also prepared as a separate document. The Council we keep working on implementation of this Investment Plan, updating it every year in line with the budget program.

The Walking and Cycling Plan is intended for use by the Council but also guides collaboration and partnerships with State Government, working with adjoining councils, community and industry.

The City of Port Adelaide Enfield



STRATEGIC ALIGNMENT

COUNCIL DOCUMENTS

The hierarchy of Council’s strategic documents is included on this page.

The **City Plan 2030** is the lead strategic document designed to be a blueprint for all of Council’s actions and progress. It was first adopted in 2016 and was recently updated. The guiding vision for Council as expressed in the City Plan is for **“A city that values its diverse community and embraces change through innovation, resilience and community leadership”**.

The City Plan is underpinned by a suite of Strategic, Financial and Asset Management Plans. The City Plan is reviewed every four years with annual checks being delivered via Council’s Annual Business Plan and Budget plus strategic plan reviews. The complete strategic management framework meets the legislative requirements set out in Section 122(8) of Local Government Act 1999.

Council also assesses its strategies against the United Nations Sustainability Goals. It is noted that Goal 11 seeks sustainable cities and communities and Goal 3 aspires for healthy lives and promotion of wellbeing.

The City Plan is divided into five themes: Economy, Community, Environment, Placemaking and Leadership. Each theme has an outcome statement, priority actions and a list of relevant strategies aimed at achieving the overall Council vision. The corresponding thematic list of supporting strategic and operational plans are shown on the diagram on the next page.

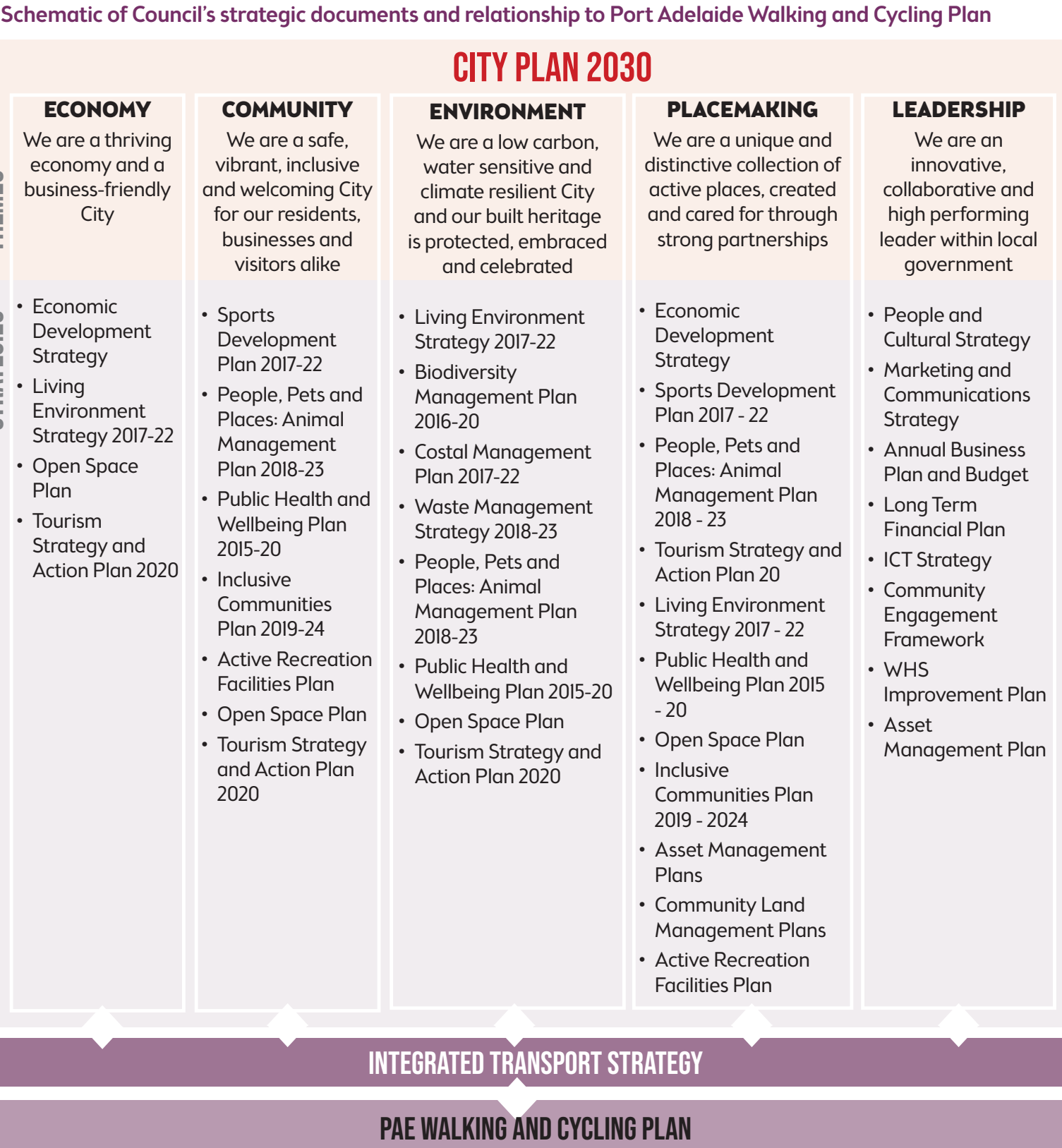
The City Plan recognises the unique nature of the Council with a valued coastline, key industrial sectors, heritage and built form, a network of public open spaces and growing vibrancy, particularly in Port Adelaide. The City Plan aims to build on these

assets and further improve community and sustainable infrastructure, improve transport integration and movement, develop local tourism, reduce greenhouse gas emissions, increase green cover and promote a ‘place first’ approach to placemaking.

Under the Economy theme a priority action is to develop an **Integrated Transport Strategy** (ITS) for the City that meets current and future needs. At the time of writing, the ITS was under development. This Walking and Cycling Plan is a key delivery tool for the ITS. The ITS set the vision for a traffic and transport system:

- that is safe and accessible for the whole community
- that supports economic activity and local businesses through well managed land development leading to sustainable urban outcomes
- that prioritises the use of sustainable and innovative transport solutions
- that ensures efficient parking management through deployment of new technologies, policy, collaboration and education.

The **Public Health and Wellbeing Plan 2015-20** identifies that Council aims to provide an environment conducive to walking and cycling activities linked through a range of planning focuses – including recreation programs, open space planning, neighbourhood design, and roads and footpaths infrastructure management. The Public Health and Wellbeing Plan supported the objectives of Council’s Local Area Bicycle Plan 2015-20 (to be superseded by this Walking and Cycling Action Plan) through general advocacy for maintaining good pedestrian pathways, ensuring neighbourhood routes that link to open spaces, walkable access to local services, community walking programs (including walk to school projects), and green corridors that promote safe walking.



ALIGNMENT WITH STATE STRATEGIC DOCUMENTS



THE 30-YEAR PLAN FOR GREATER ADELAIDE

Government of South Australia, 2017

As part of the city shaping vision set by the Plan is an overarching aim for greater emphasis placed on the quality of public open spaces and streets. They will connect people with nature, support social interaction, and be walking and cycling friendly. There is a strong ethos for developing healthy and walkable neighbourhoods. The value and benefit of walking and cycling is clear in the Plan and there are a number of policies seeking better outcomes.

Key walking related policies include:
P2, P47, P48, P49, P50, P78, P86 and P99.

Key cycling related policies include:
P47, P48, P78, P86, P99, PIII.

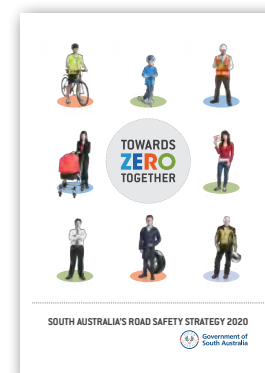
The Plan promotes safe cycling and pedestrian friendly streets along with developing walkable connections to public transport and activity centres and additional greenways in transit corridors, along major watercourses, linear parks, the coast and other strategic locations to provide walking and cycling linkages.



BUILDING A STRONGER SOUTH AUSTRALIA: THE INTEGRATED TRANSPORT AND LAND USE PLAN

Government of South Australia, 2015

The Integrated Transport and Land Use Plan outlines plan goals and objectives, and sets out where and when actions, investments and initiatives are proposed. ITLUP outlined that cycling and walking access will focus on extensions and upgrades to the Bikedirect and Greenways networks and ongoing improvements to the walkability of neighbourhoods. ITLUP identifies a number of greenway and bikeway projects to be undertaken with local government. For Port Adelaide Enfield this included completion of the Outer Harbor Greenway, new bicycle lanes on Main North Road and Levels-City Bikeway.



TOWARDS ZERO TOGETHER: SOUTH AUSTRALIA'S ROAD SAFETY STRATEGY 2020

Government of South Australia, 2015

The Strategy calls on providing safe infrastructure for people walking and cycling and in appropriate locations, designing for them as priority road users. The Strategy recognises the vulnerability of walking and cycling as road users and advocates for safe speed environments and promotion of shared use pathways for cycling and walking. The strategy seeks to encourage people to move away from the dominant car culture and re-establish active transport as an attractive and healthier alternative to driving.



STATE PUBLIC HEALTH PLAN 2019-2024

Government of South Australia, 2019

The plan identifies that public health is about what we do collectively as a society to create the conditions and environments that enable health and wellbeing. The plan specifically identifies that this includes footpaths and walking. There is a general aspiration for more liveable communities that foster more sustainable and inclusive places. The plan contains 'action areas' which advocate for built environments that support walking and cycling.



20-YEAR STATE INFRASTRUCTURE STRATEGY

Government of South Australia, 2020

This is South Australia's first long term integrated infrastructure strategy. It contains 38 priorities for infrastructure planning and investment. Priority 24 identifies a need for a more strategic approach to promoting active transport options. The writers of the strategy recognise that a more holistic approach that looks to build a safe and accessible active transport network encourages greater participation in cycling and walking along with positive health and wellbeing outcomes.



OPEN YOUR WOLD: STATE GOVERNMENT'S WELLBEING STRATEGY

Government of South Australia, 2020

This strategy aims to build community resilience and support physical, social, mental and community wellbeing in response to the COVID-19 crisis. Priority

focus area I promotes the opportunities and benefits of sport and physical activity.



SUPPORTING YOUR STATE OF WELLBEING: WELLBEING SA STRATEGY PLAN

Government of South Australia, 2020

The Wellbeing Strategy Plan puts in place a balanced health and wellbeing system that supports improved physical, mental and social wellbeing for all South Australians. The Plan recognises that much less money is spent on preventing health issues than on health costs, concluding that at present SA's health system is unbalanced. It puts forward a case for higher investment into preventative measures, which include walking and cycling.



SOUTH AUSTRALIAN HEALTH AND WELLBEING STRATEGY 2020-2025

Government of South Australia, 2020

This strategy is the guiding document to position SA's health system for the future. Creating healthier neighbourhoods and communities is part of the vision. This is intended to reduce preventable illness, improve wellbeing and aid community capability.

BEST PRACTICE EXAMPLES

EXAMPLES OF BEST PRACTICE CYCLING AND/OR WALKING STRATEGIES

There are many national and international organisations, which have a dedicated focus to promoting walking and cycling, safety, active travel, people-centred design and priority in street design. These include:

- America Walks
- Feet First
- Gehl Architects
- Heart Foundation
- Living Streets
- Monash University
- NACTO
- PlacemakingX/PPS
- Sustrans
- Victoria Walks
- Walk 21 (and Measuring Walking project)
- We Ride Australia.

These best practice organisations publish research, guidance and recommendations that provide resources to governments on developing best practice walking and cycling strategies and action plans. These are excellent resources in developing principles for achieving active cities.

It is important to draw from best practice foundations and share the knowledge and well established evidence on how investment in walking and cycling benefits communities. For example, the 'Cities Alive' report by Arup (2016) succinctly defined 16 areas of benefit around walking cities, as shown in the infographic on this page.

This section summarises key points from strategies and plans, that may shape the approach to developing the Port Adelaide Enfield Walking and Cycling Plan. The purpose of this review is to provide context to what a walking and cycling plan may look like to frame discussions during its development phase.

FRAMEWORK FOR WALKING BENEFITS

Source: 'Cities Alive', Arup (2016).



benefit framework

16 areas of benefits provide a framework to guide decision makers to set visions, long-term plan and monitor results, around walking in cities

QUEENSLAND CYCLING STRATEGY 2017-2027

Queensland Cycling Strategy was released as a suite of three documents in 2017:

- Cycling Strategy (a 10-year vision)
- Action Plan (actions for the next two years)
- State of Cycling Report (monitoring the progress)

The suite of three documents at a glance:



Ten year timeframe
24 pages in length
Summary of benefits of cycling
Five delivery priorities
Commitment and approach to delivering priorities



Two year timeframe
20 pages in length
63 actions
Based on five delivery priorities
Defined delivery organisations and timeframes



20 pages in length
Infographics and statistics
Based around five objectives

Development of the Queensland Cycling Strategy covers 48 local government areas and 98.9% of Queenslanders.

The Strategy put forward the following five priorities:

- Building connected infrastructure to grow participation
- Encouraging more people to ride
- Sharing our roads and public spaces
- Powering the economy
- Using research and data in decision making.

The Strategy puts forward a case for each of the priorities and suggests the approach to delivering these priorities. It also provides case studies.

The Queensland State of Cycling Report collated key statistics and infographics associated with outcomes for the following five objectives:

- More cycling, more often
- Cycle Networks that are complete, connected and integrated with other transport modes
- Positive perceptions of cycling throughout Queensland
- Cycling helping the Queensland economy to prosper
- A strong evidence base that guides decision making about cycling.

Some of the key actions in the Action Plan include:

- Review and publish Principal Cycle Network Plans every 5 years that respond to changing demand, land use and emerging opportunities
- Invest \$40 million through the Cycling Infrastructure Program to accelerate delivery of the highest priority routes
- Develop and update design guidance and guidance for infrastructure to integrate cycling infrastructure
- Deliver a road safety program, including age appropriate content on cycling safety
- Deliver a 5 year program of cycling research
- Deliver a rolling program to measure cycling participation and behaviour.

Key elements that make the Queensland Cycling Strategy successful:

- The Strategy supports those who ride and those who want to start riding by making travelling by bike safer and a more comfortable option.
- Supporting documents clearly define the benefits of cycling and the gaps that need to be addressed
- Actions are identified that will deliver on the principles and that focus on the practical things needed right now to get more people riding
- Appropriate timeframe cycles are set for the Strategy (10 years) and Action Plan (2 years)
- Delivery responsibilities and timeframes are identified
- 'Queensland State of Cycling Report' provides a snapshot of key data and statistics, which provides a benchmark for comparison in future years and will help to prioritise efforts as cycling participation grows

QUEENSLAND WALKING STRATEGY 2019-2029

Queensland Walking Strategy was released as a suite of three documents in 2019:

- Walking Strategy (10-year vision)
- Action Plan (actions for the next two years)
- Walking in Queensland Report (monitoring the progress).

The suite of three documents at a glance:



Ten year timeframe
21 pages in length
Summary of benefits of walking
Infographics and statistics
Based around five objectives
Four delivery priorities
Commitment and approach to delivering priorities



Two year timeframe
15 pages in length
44 actions



Based on four delivery priorities
Defined delivery organisations and timeframes
16 pages in length

Development of the Queensland Walking Strategy involved community engagement with 2,713 Queenslanders.

The Strategy put forward the following four priorities:

- Planning for walkable communities and places
- Building connected, comfortable and safe walking environments for all
- Encouraging more people to walk as part of their 'everyday'
- Working together to deliver for walking.

The Strategy puts forward a case for each of the priorities and suggests the approach to delivering these priorities. It also provides case studies.

The Walking in Queensland Report collated key statistics and infographics associated with outcomes for the following five objectives:

- More walking, more often
- Our communities are planned to make walking enjoyable and convenient
- Our streets and paths are welcoming, safe, connected and comfortable for all ages and abilities, and support vibrant local economies
- Walking is an irresistible and easy choice, particularly for short trips, tourism, recreation and health
- Walking is a high priority in policy and planning, delivered through partnerships and supported by evidence.

Some of the key actions in the Action Plan include:

- Develop neighbourhood design and planning guidance that prioritises walking
- Identify opportunities to enhance walking linkages around schools with \$20 million investment over 4 years to prioritise safe school travel
- Develop a walkability audit tool
- Develop and update design guidance and guidance for infrastructure providers, to enhance walking infrastructure
- Deliver pilot projects to improve network walkability
- Improve traffic signals (with \$4.5 million investment into smart crossings), signage and wayfinding
- Implement lower speed limits in 20 locations over

three years and publish findings

- Deliver road safety training and education campaigns, including social marketing
- Support walking programs and campaigns
- Prepare a business case to define the economic benefits for Queensland of increased investment in walking
- Identify gaps or deficiencies in data and evidence.

Key elements that make the Queensland Walking Strategy successful:

- The Strategy and supporting documents clearly define the benefits of walking and the gaps that need to be addressed
- Actions are identified that will deliver on the principles
- Appropriate timeframe cycles are set for the Strategy (10 years) and Action Plan (3 years)
- Delivery responsibilities and timescales are identified
- 'Walking in Queensland Report' provides a snapshot of key data and statistics, which provides a benchmark for comparison in future years
- The call to action behind development of the Strategy involved extensive community engagement, witness statements in parliament and budget submissions, which secured delivery commitment.

CITY OF SYDNEY CYCLING STRATEGY AND ACTION PLAN 2018-2030



Twelve year timeframe (2018-2030)
44 pages in length
Four delivery priorities
47 actions

The Cycling and Action Plan builds on the successful outcomes of actions from the last plan, which have doubled cycling trips in the last decade. The City has delivered on actions from the previous 2007-2017 Cycle Strategy, investing an average of \$11 million per annum to build a safe and connected bike network, which has doubled the cycling trips in the city.

The Sustainable Sydney 2030 target is for 10% of all trips in the city to be by bicycle. The Strategy puts forward four priorities to increase cycling to achieve this:

- Connect the network – build a bike network to make it safer for people to ride in Sydney, suitable for all ages and abilities, within 250 metres of all residents. It will serve workers, students, residents and visitors travelling in, to or through the city.
- Support people to ride – understand and address barriers and help people to start, and continue riding
- Support business – partner with employers to encourage staff to ride
- Lead by example – share our expertise and be a positive influence for improvements to cycling within and beyond our boundaries.

The Strategy outlines a case for each of the priorities and suggests an approach to delivering these priorities. It also provides case studies and collates

statistics and infographics associated with the outcomes.

As the bike network expands and demand for active transport increases, the City, state government agencies and neighbouring councils will need to work together even more. Supporting future demand for more walking and cycling in Sydney will include closing gaps in the network, providing new connections and increasing capacity.

Complementing the city's bike network, the behaviour change program is helping to build a bike-friendly city with courses, events, grants, campaigns and other projects. The program also targets safety, using education and information.

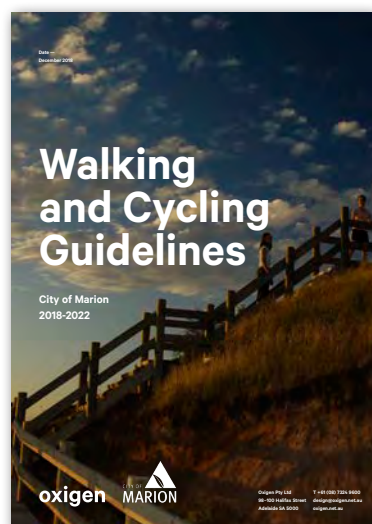
Some of the key actions are:

- Complete the 11 regional bike routes, and substantially complete the local bike network and where feasible and necessary build the regional routes as separated cycleways
- Investigate improved intersection designs and reduce delays for people riding
- Target activities in areas where existing and new infrastructure is connected
- Support children, school communities and families to ride safely and increase cycling participation by women
- Work with employers to encourage cycling, particularly in locations with job growth and change and where new cycling infrastructure is built
- Support and encourage bike based or related enterprises or activities and work with operators to maximise beneficial outcomes for Sydney, including bike share and food delivery
- Lead by example in encouraging our staff to ride to work and for work trips
- Identify and advocate for higher capacity separated cycleways along the most direct and flat routes with priority at intersections
- Push for integration between cycling and public transport operations, incorporation of cycling into transport projects and for building paths alongside rail corridors
- Advocate for changes to practices, legislation, training and technical guidance which will improve and increase cycling.

The Plan proposes to measure progress on and outcomes from the cycling strategy at three levels:

- The Sustainable Sydney 2030 target of 10 per cent of all trips in the city to be made by bike
- Indicators of safety and growth in cycling
- Indicators against actions in our four priority areas.

CITY OF MARION WALKING AND CYCLING GUIDELINES 2018-2020



Twelve year timeframe (2018-2030)
100 pages in length

The Walking and Cycling Guidelines is an aspirational document that details options for improving the walking and cycling network in the City of Marion. The guidelines describe the value and benefits of walking and cycling to the community, health, environment, and economy and outline relevant policies, best practices and case studies.

The Guidelines are intended for use by the City of Marion in collaboration with the State Government, other councils, developers, and the community, to:

- Provide an appreciation of the benefits of walking and cycling
- Evaluate existing walking and cycling networks and conditions to assess their adequacy in operation, connectivity, safety, comfort and amenity
- Propose a walking and cycling network that enhances connected communities and social inclusion

- Form part of Council's focus on achieving a more integrated and sustainable transport network promoting walking and cycling as viable transport alternatives
- Provide Council with information that helps assist in assessing existing and future State Government-led transport strategies
- Deliver strategies for improving the function and amenity of walking and cycling, and reinforce connected transport and recreation options
- Coordinate planning and delivery of walking and cycling infrastructure
- Develop long-term management plans for renewing and upgrading Council roads, footpaths and cycle infrastructure
- Plan for maintenance and management of walking and cycling networks
- Develop strategies for promotion, education, advocacy and support of walking and cycling.

The Guidelines identify the Vision for Walking and Cycling and include statistical, demographic information and context mapping. The guidelines also reviewed best practice examples and outlined opportunities and techniques for walking and cycling infrastructure.

The Guidelines setout strategies to continue the improvement of walking and cycling in the City of Marion. The preferred approach to delivery is an integrated program that responds to challenges and opportunities. Where possible the emphasis is on achieving outcomes through existing processes rather than new ones.

The Action Plan is summarised under five priority strategies and some of the key actions are:

- Strategy 1: Planning the Route - Greenways, Regional, Local
- Strategy 2: Working with Vehicles - reduce the width of vehicle lanes and increase cycle lane widths
- Strategy 3: The Details - streetscape
- Strategy 4: Maintenance and Management - appropriate funding
- Strategy 5: Promotion, Education, Advocacy and Support - marking resources, develop maps, signage and logos - monitor trends

(LONDON) WALKING ACTION PLAN

Transport for London, 2018



Timeframe not specified
110 pages in length
Contains advocacy, infographics, case studies and action plan
Action plan contains 11 actions

The Walking Action Plan is a comprehensive document that extends much further than actions by including:

- The vision for London: *'London should be the world's most walkable city. This means a city where walking is the most obvious, enjoyable and attractive means of travel for all short trips.'*
- Best practice discussion and advice focussing on the agenda of healthy streets and healthy people
- Benefits of walking within London's context
- Data to demonstrate what is known about walking in London
- Policy statements
- Targets with clear line of responsibilities among the stakeholders for their delivery
- Action Plan containing 21 actions all identifying specific opportunities and projects that will increase walking in London.

Actions in the Plan are thematically grouped and a narrative is included to explain rationale behind them and suggested scope. All of the actions are committed in terms of their delivery timeframe and delivery organisation. Some of the key actions are:

- Building streets that prioritise walking with redesign priority projects for the next three years

identified

- Delivering Liveable Neighbourhoods program with committed funding
- Priority improvements at signalised intersections
- Footpath de cluttering programs
- Implementing new design guidelines
- Improved monitoring to build evidence for walking
- Improving walking experience and wayfinding around transport interchanges, and improving journey planning app
- Implementing programs to increasing walking to school and walking in summer
- Launching community grant schemes and supporting low-cost projects to increasing walking in the community
- Supporting car free events
- Establishing a walking forum.

Key elements that make the London Walking Plan successful:

- Clear and ambitious vision
- Comprehensive nature of the document, interweaving benefits and imperatives with actions
- Strong section that identifies benefits of walking in statistical and monetary terms
- Definition of key problems and barriers associated with walking, with data on evidence presented
- A snapshot of key data and statistics, which provides a benchmark for comparison in future years
- Two clear targets
- Delivery actions are clear with responsibilities and delivery timeframes defined.

CONTEXT TO WALKING AND CYCLING IN PORT ADELAIDE ENFIELD

CURRENT LEVELS OF WALKING AND CYCLING

Data source: 2016 Census of Population and Housing, Australian Bureau of Statistics

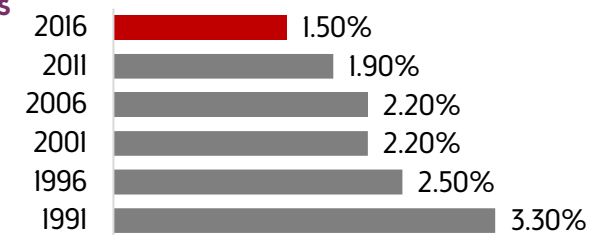
On the day of the 2016 Census, 478 people cycled to work (as a single mode of transport) in the Council area. Of 478 people, 83% were males. A higher number of people walked to work (as a single mode of transport), 874 people, with males and females almost equally represented.

The overall proportion of people cycling to work on the day of the Census was 0.9% and walking to work was 1.7%, both below the Greater Adelaide averages of 1.1% and 2.2% respectively. While some of the inner urban councils increased their cycling journey to work mode share above 3% (for example, the City of Adelaide, the City of Unley and the City of Norwood, Payneham and St Peters), the proportion of cycling commuters in outer council areas remains small, under 1%.

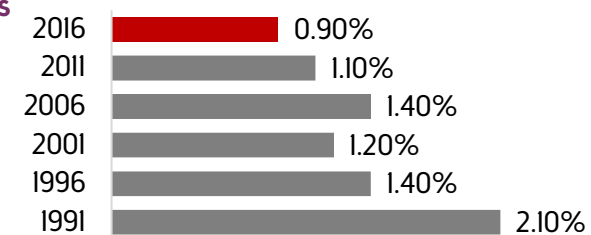
63,137 people work in the City of Port Adelaide Enfield, of which 23% also live in the area. 68% of the City of Port Adelaide Enfield's working residents travel outside of the area to work.

There is a trend of a general decline in both the proportion of residents who walked and cycled to work from 1991 to 2016, more than halving for both walking and cycling in that time period.

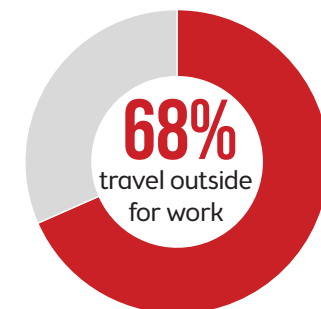
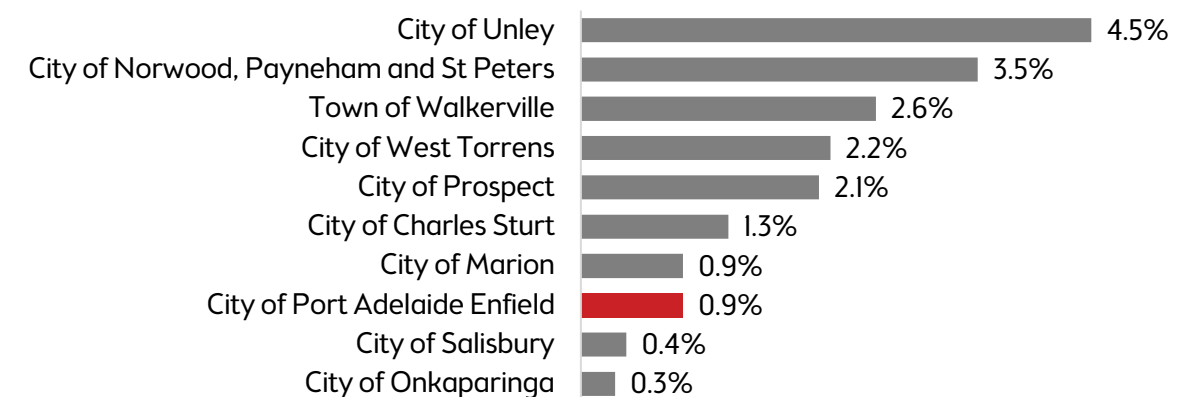
Proportion of the residents who walked to work as a single mode of transport on the day of the Census



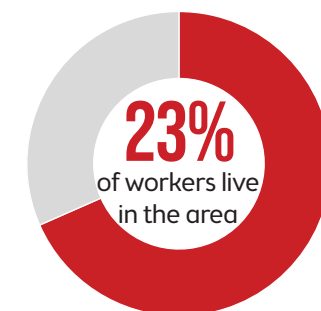
Proportion of the residents who cycled to work as a single mode of transport on the day of the Census



Proportion of residents who cycled to work as a single mode of transport on the day of the 2016 Census



35,673, or 68.4% of the City of Port Adelaide Enfield's working residents travel outside of the area to work



Of the 63,137 people who work in the City of Port Adelaide Enfield, 14,391 or 22.8% also live in the area.

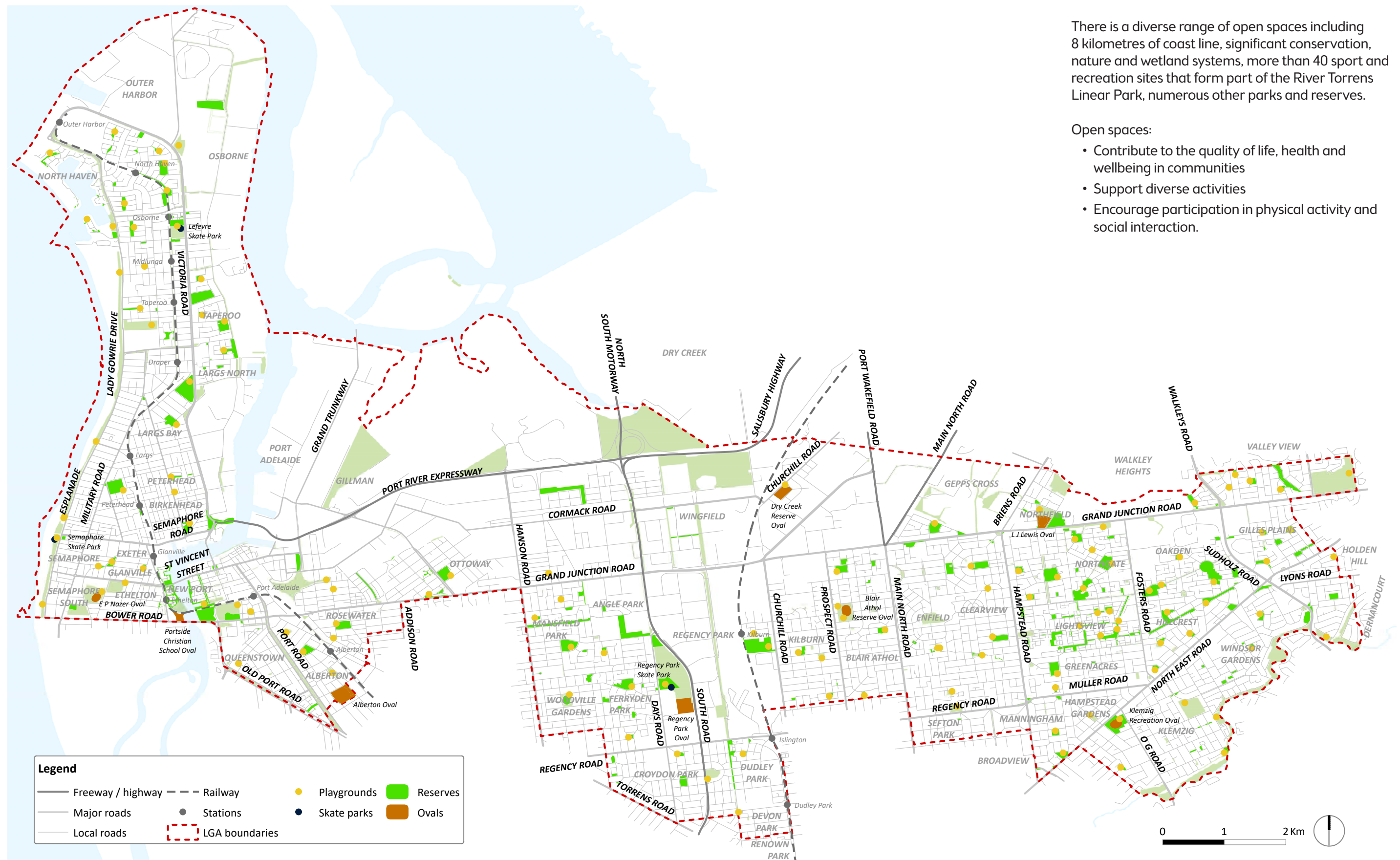
OPEN SPACES

This map shows key open spaces in the Port Adelaide Enfield Council area.

There is a diverse range of open spaces including 8 kilometres of coast line, significant conservation, nature and wetland systems, more than 40 sport and recreation sites that form part of the River Torrens Linear Park, numerous other parks and reserves.

Open spaces:

- Contribute to the quality of life, health and wellbeing in communities
- Support diverse activities
- Encourage participation in physical activity and social interaction.

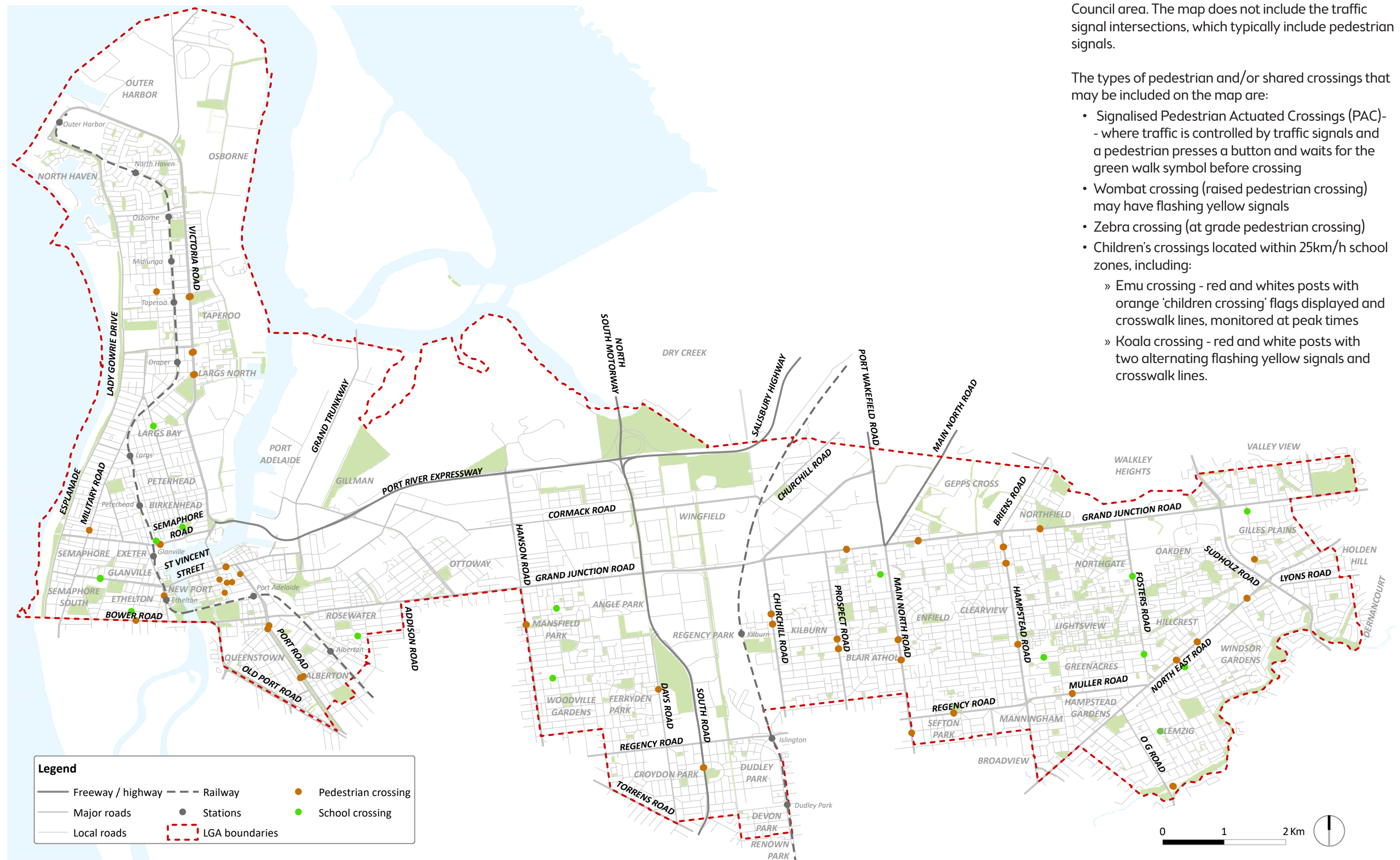


PEDESTRIAN AND SCHOOL CROSSINGS

This map shows the location of pedestrian and children's crossings in the Port Adelaide Enfield Council area. The map does not include the traffic signal intersections, which typically include pedestrian signals.

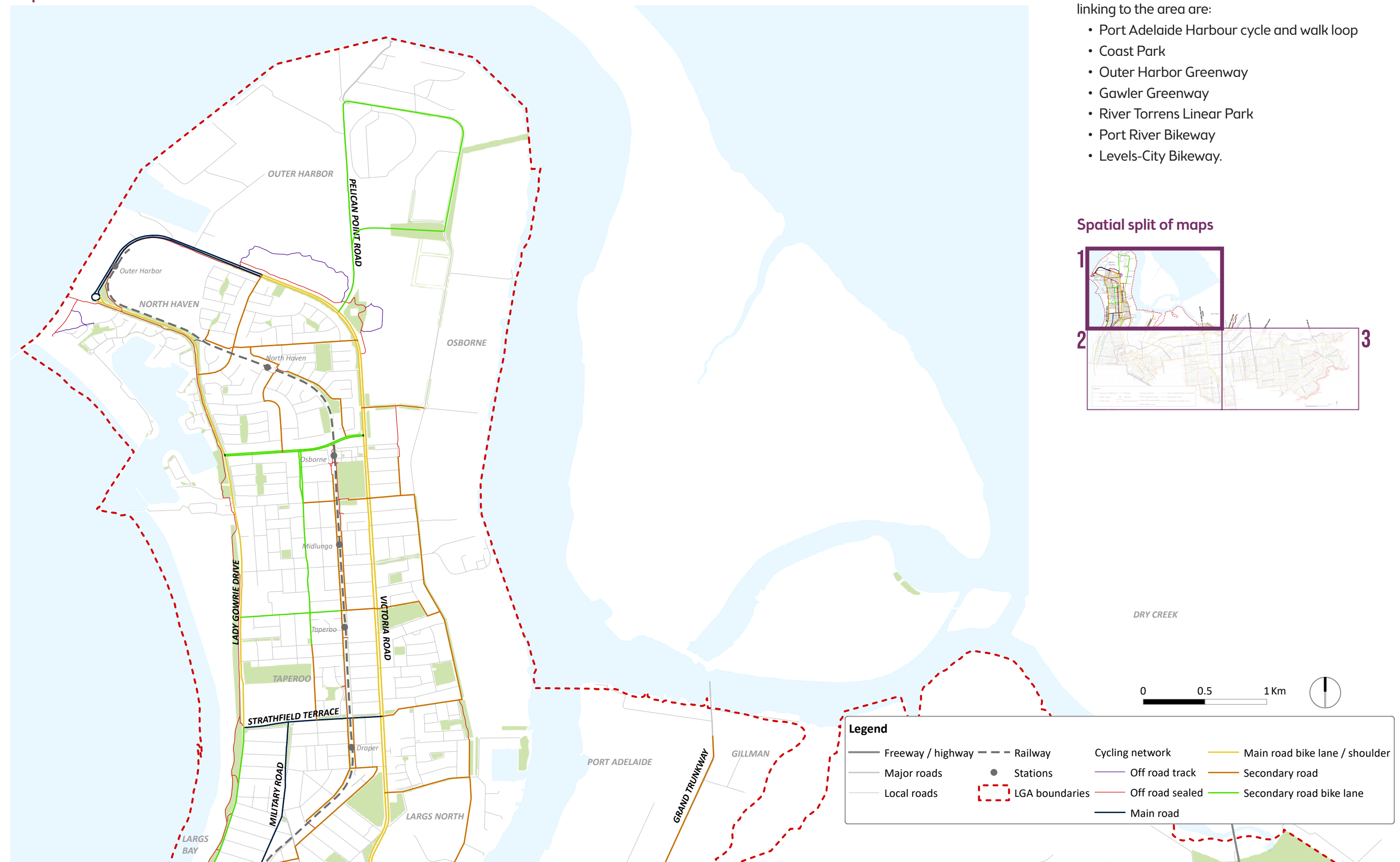
The types of pedestrian and/or shared crossings that may be included on the map are:

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



EXISTING BICYCLE NETWORK MAP

Map 1 of 3



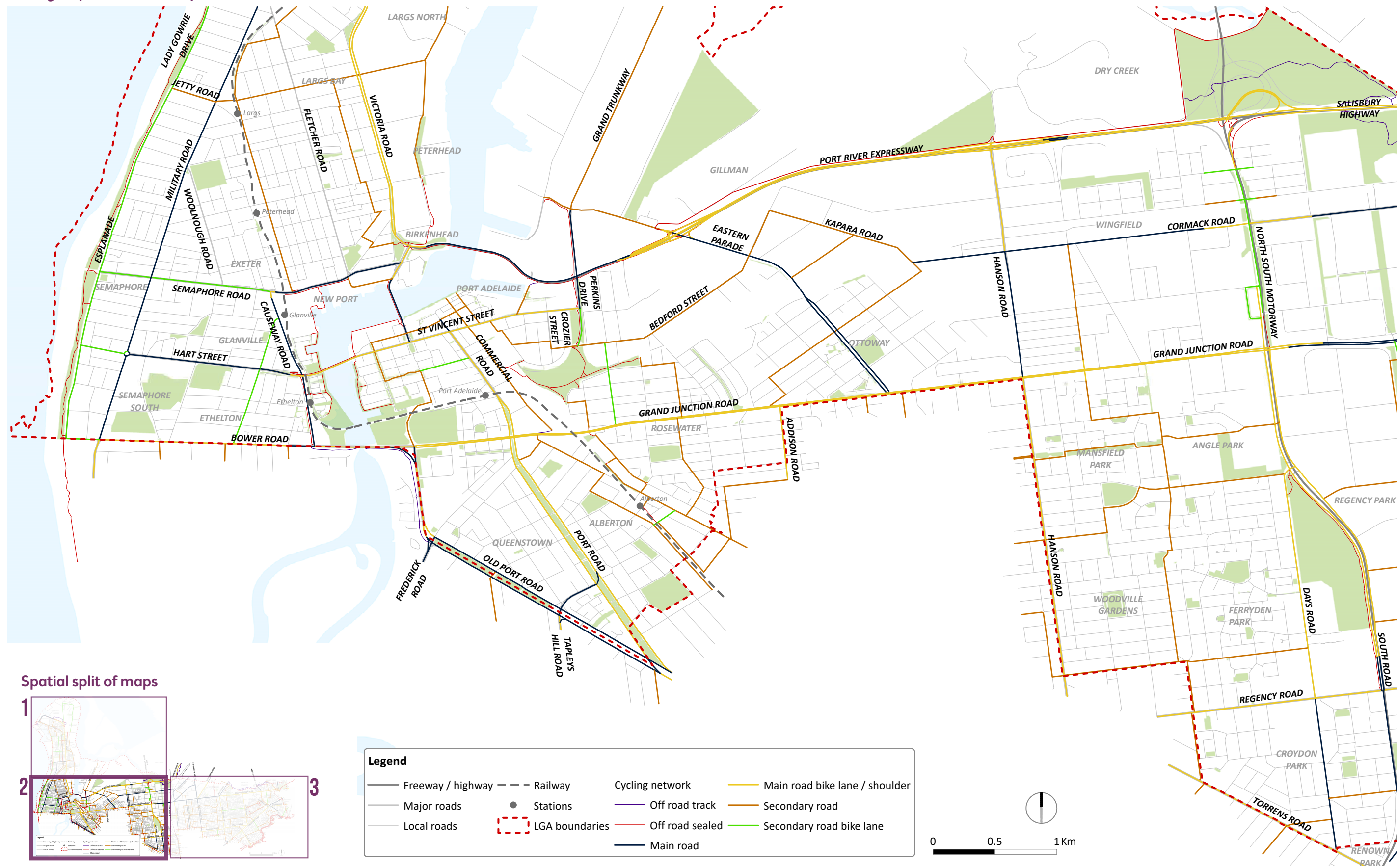
Existing bicycle infrastructure is shown across three consecutive maps. Key cycling routes within and linking to the area are:

- Port Adelaide Harbour cycle and walk loop
- Coast Park
- Outer Harbor Greenway
- Gawler Greenway
- River Torrens Linear Park
- Port River Bikeway
- Levels-City Bikeway.

Spatial split of maps



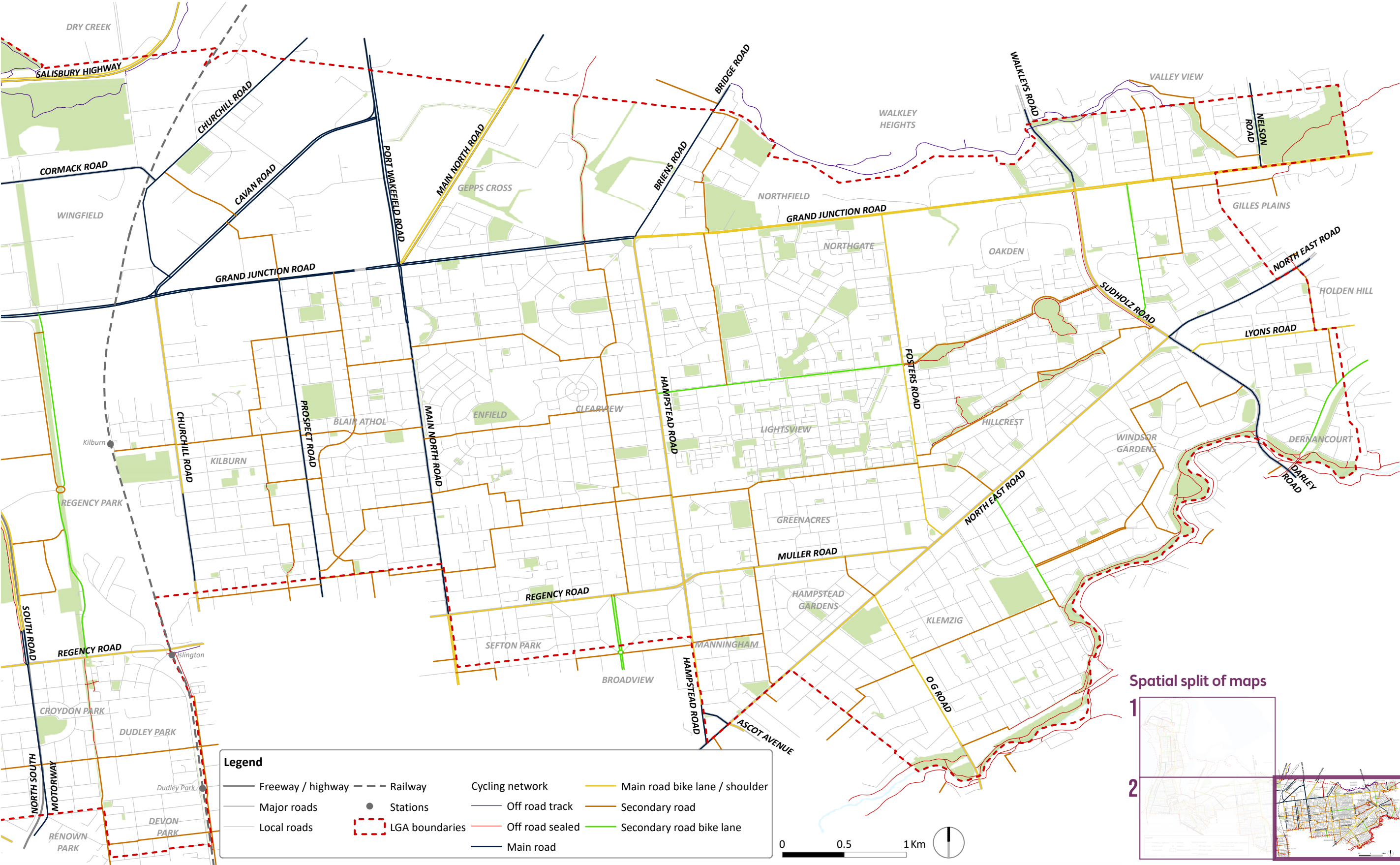
Existing bicycle network map 2 of 3



Spatial split of maps



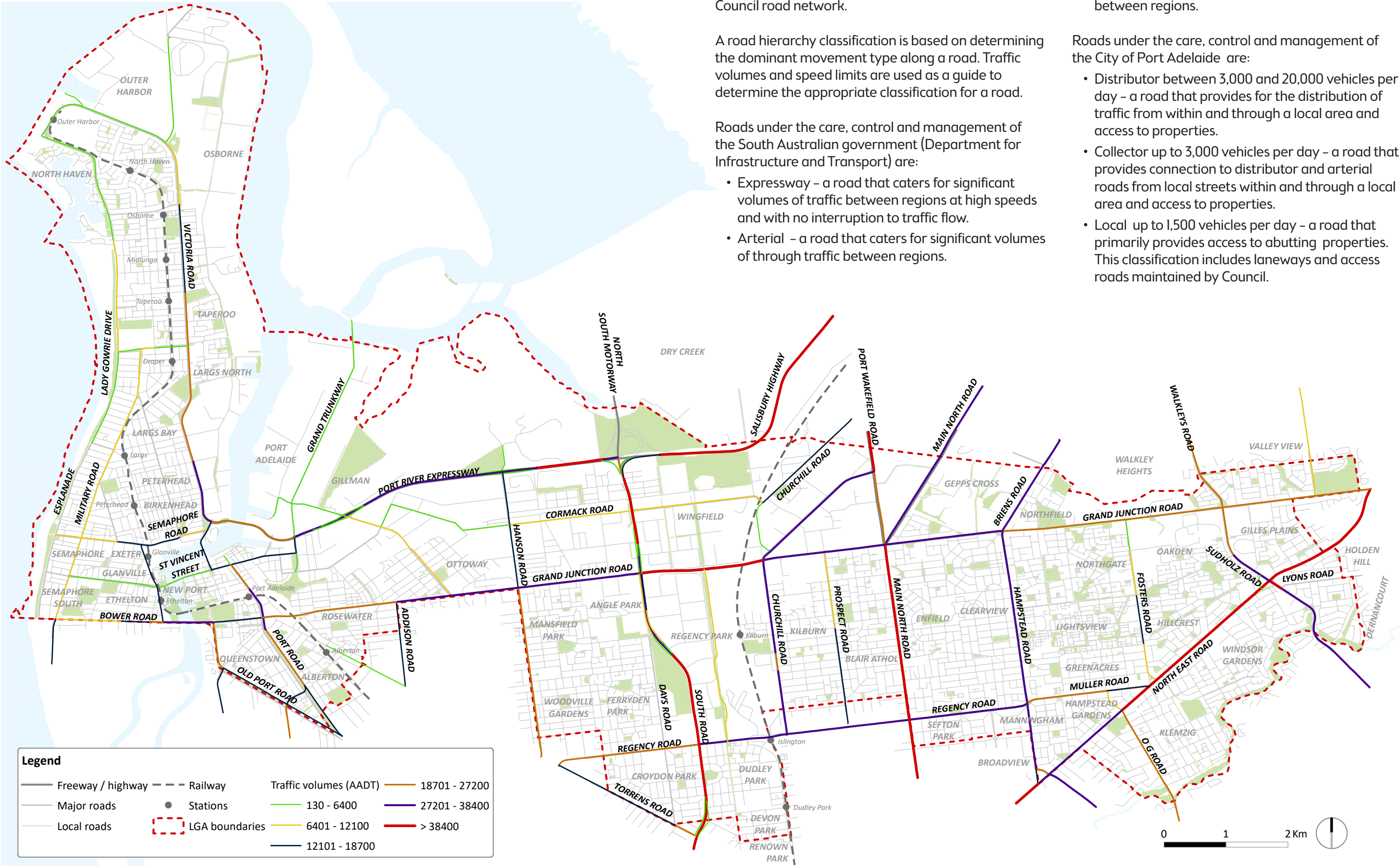
Existing bicycle network map 2 of 3



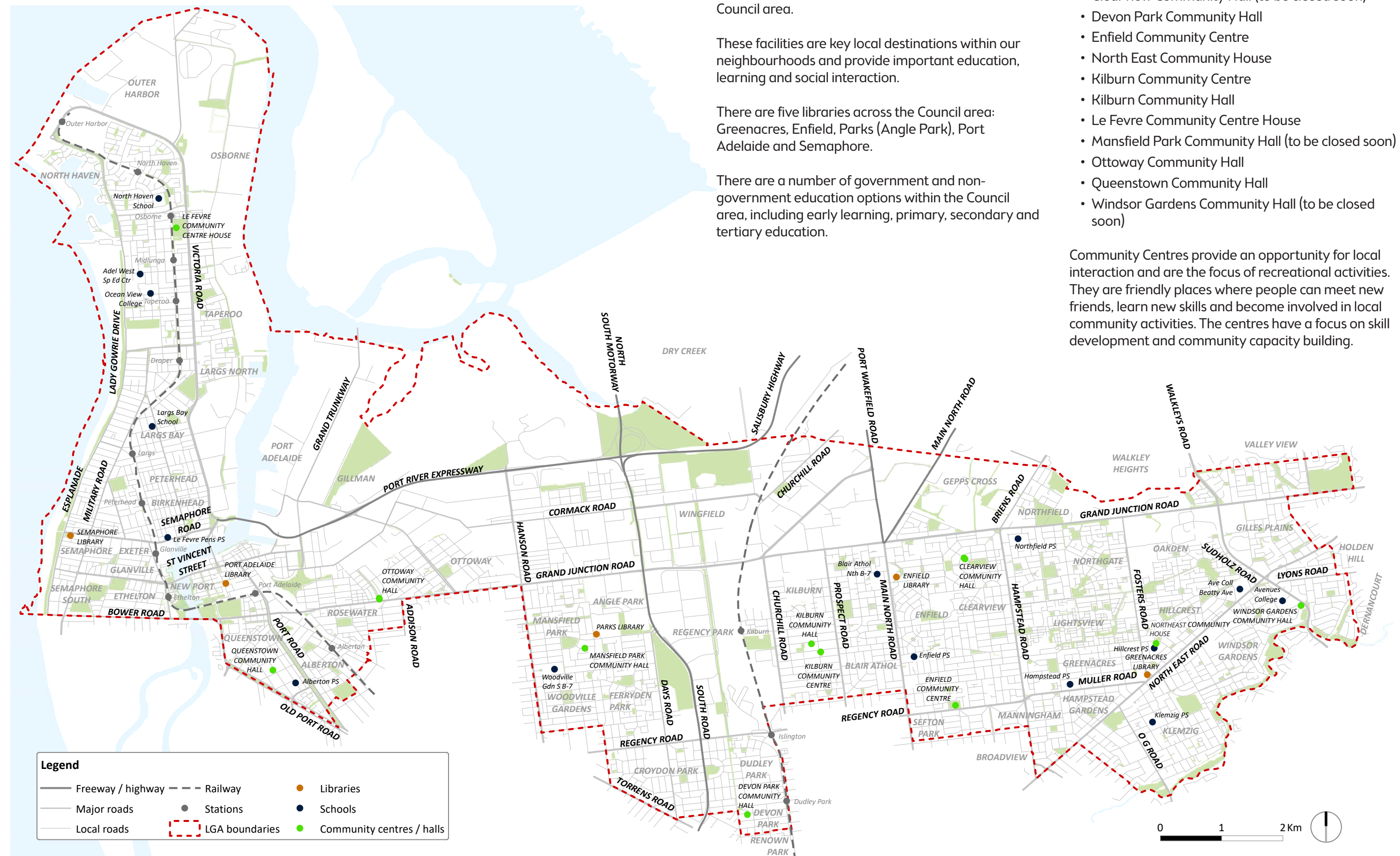
SPEED ZONES



INDICATIVE TRAFFIC VOLUMES



SCHOOLS, LIBRARIES AND COMMUNITY CENTRES



CRASH ANALYSIS

In the five year period between 2014 and 2018, there have been 143 crashes resulting in a pedestrian casualty and 198 crashes involving a cyclist casualty (data reported by the Department for Infrastructure and Transport). Eight of these crashes resulted in fatalities. The table below provides the statistics of crashes by injury type.

Pedestrian and cycle crashes resulting in casualties 2014-2018

	Pedestrian crashes	Cyclist crashes	Pedestrian and cyclist crashes combined
Fatal	7	1	8
Serious injury	22	21	43
Minor injury	114	176	290
Sub-total	143	198	341

Between 2014 and 2018,
143 road crashes resulted in a pedestrian casualty
198 road crashes resulted in a cyclist casualty

The majority of pedestrian and cyclist crashes have occurred along major roads (e.g. Churchill Road, Grand Junction Road, Hart Street, Main North Road, North East Road, Hampstead Road). However, a significant portion of cyclist crashes also occurred along Lady Gowrie Drive and the Esplanade. Pedestrian crashes in particular are focused around Main North Road, St Vincent Street and near the intersection of Sudholz Road and North East Road.

An analysis of the pedestrian and cyclist casualty crash data from 2014-2018 period showed that the majority of crashes were concentrated along specific sections of the arterial network. The two maps included on subsequent pages (pedestrian and cyclist crash maps) show these sections of concentrated crashes, dividing them into 13 zones.

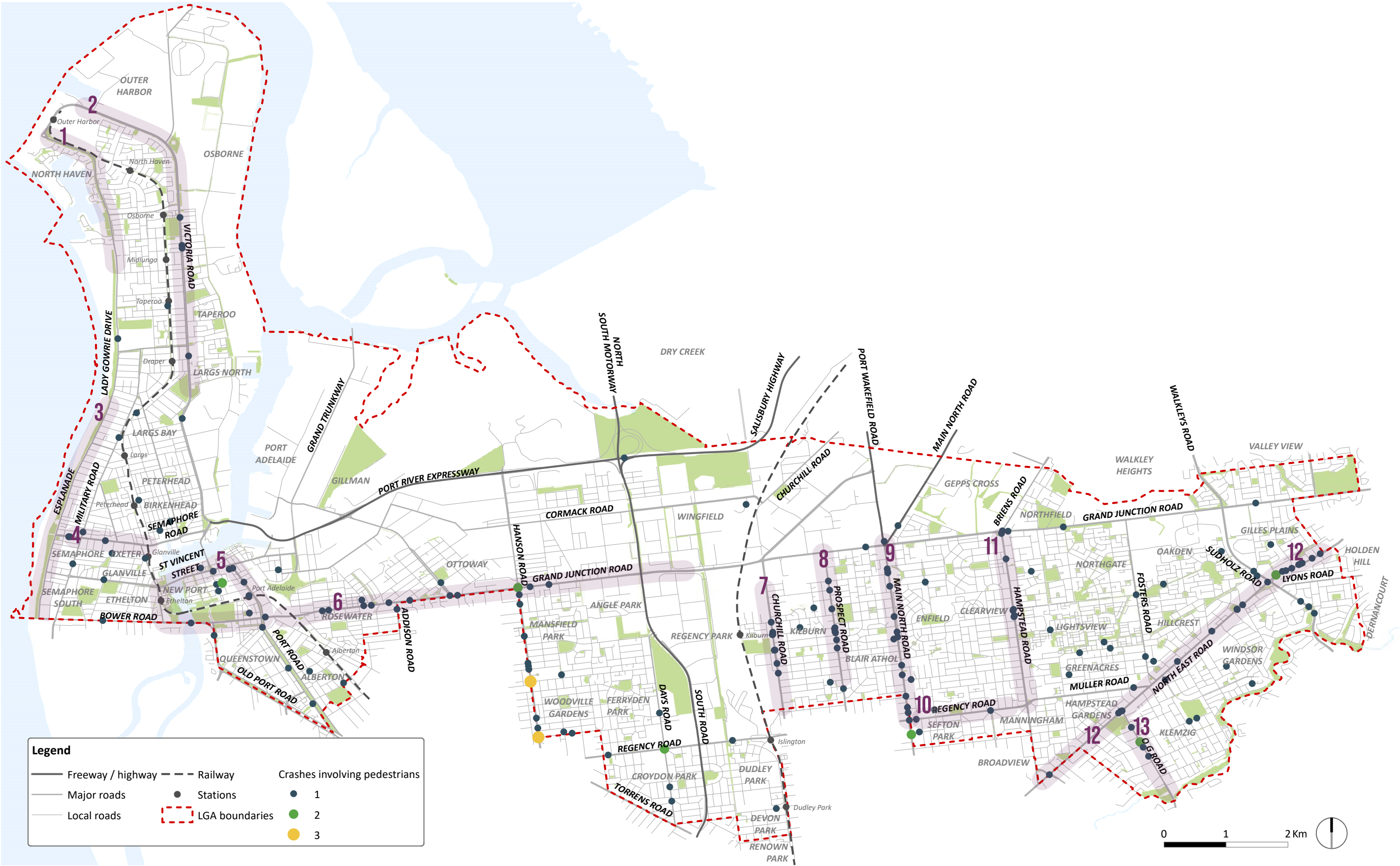
Twelve concentrated areas of pedestrian and cycle crashes 2014-2018 (see maps)

Zone highlighted on the map	Pedestrian casualty crashes	Cyclist casualty crashes	Pedestrian and cyclist casualty crashes combined	Road control
1 - Lady Ruthven and Lady Gowrie Dve (north of Strathfield Tce)	0	12	12	DIT
2 - Victoria Road	3	17	20	DIT
3 - Lady Gowrie Drive (south of Strathfield Tce)	2	12	14	Council
4 - Semaphore Rd	0	9	9	Council/DIT
5 - St Vincent St, Commercial Rd and Causeway Rd	12	8	20	DIT
6 - Grand Junction Rd	7	9	16	DIT
7 - Churchill Rd	5	4	9	DIT
8 - Prospect Rd	4	7	11	DIT
9 - Main North Rd	17	11	28	DIT
10 - Regency Rd	6	6	12	DIT
11 - Hampstead Rd	3	8	11	DIT
12 - North East Rd	14	13	27	DIT
13 - O G Road	5	4	9	DIT
Sub-total	78	120	198	

Between 2014 and 2018,
58% of casualty crashes involving a pedestrian or a cyclist occurred within 13 zones as shown on the maps

PEDESTRIAN CRASH LOCATIONS

Location of pedestrian crashes over a five year period 2014-2018



CYCLING CRASH LOCATIONS

Location of cycling crashes over a five year period 2014-2018



REVIEW OF ACTIONS FROM 2015-2020

LOCAL AREA BIKE PLAN

The City of Port Adelaide Enfield Local Area Bicycle Plan 2015-2020 set a framework and strong direction for expanding the cycling network. The key aspect of the Plan was identifying the cycling network across the council area. The cycling network was defined into route types, including:

- Metropolitan Routes: Greenways and Secondary Roads (Off Road Paths)
- Metropolitan Routes: Main Roads (State Government Roads)
- Neighbourhood / Local Links (connecting schools, shops and parks)
- Fine-Grained Cycling Network (providing safe road crossings, ramps to access paths and footpaths around schools)
- Streets for People (providing balanced street network, a lower speed environment and low-moderate traffic volumes).

The actions from the 2015-2020 Plan were comprehensive at the time, identifying more than 50 actions and recommendations in short, medium and long-term for the future.

This section lists a table of the actions identified in the 2015-2020 Plan. It summarises the proposed actions/recommendations and their current status with regard to delivery.

Key achievements in the last five years

Year	Project name	Details
Ongoing	Footpath upgrades	Replaced and upgraded footpaths across Port Adelaide Enfield in line with detailed audit results and risk analysis delivered a safe and accessible footpath network.
2020	Port River Bikeway	Shared use path alongside the northern connector motorway. 7.3 km section will link to the existing Stuart O'Grady Bikeway.
2019	Hanson Reserve	Drainage, lighting, open spaces and upgraded velodrome.
2019	Gawler Greenway	Completed greenway between Islington train station and Salisbury Highway.
2018	Roy Marten Park, Taperoo	Regional large playground development containing different age based activity zones and connected with walking and cycling paths and links to pedestrian refuge and on road bicycle lanes at Military Road and Lady Gowrie Drive coastal connection
2018	Hampstead Road	Improved pedestrian access to shops and public transport.
2015	Think Feet First	Small grant program for schools to establish 'park and walk' zones, 'walk to school' days and road safety education programs.
2015	Stage 1 Port River Loop Path	Linked to existing infrastructure creating a 3.5 km cycling and walking loop path. 2.2 km of infrastructure upgrades, including car park modifications, recreational pocket parks and significant surface improvements.
	DIT Way2Go program	A statewide South Australian program promoting safer, greener and more active travel for primary school students and their communities.
2020		Portside Christian College - 2020 Bike Ed and intensive workshop 2015.
2019		Our Lady of Visitation School 2019 Bike Ed, workshop 2012, invited Bike Ed 2021.
2019		Hillcrest Primary School - intensive workshop 2018, invited Bike Ed 2021.
2019		St Pauls College - 2018 workshop, intensive Bike ED 2019.
2018		St Pius X Catholic School 2018 workshop - intensive Bike ED 2020.
2018		St Paul Lutheran School - 2018 workshop - not continued.
2018		Klemzig Primary School - intensive workshop 2017, invited Bike Ed 2021.
2017		Largs Bay School - 2017 Bike Ed, workshop 2012.

EXISTING CONDITIONS AND DATA ANALYSIS

REVIEW OF LOCAL AREA BIKE PLAN 2015-2020 -ACTION PLAN

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
METROPOLITAN NETWORK: GREENWAYS / BIKEWAYS								
1	Outer Harbour Greenway	9.1.1						
1.1	Continue to liaise with DPTI to complete the Outer Harbour Greenway			PAE Resource	Short	◆		
1.2	Install Sharrow linemarking as per DPTI Operational Standard			Installed 2015	Completed	◆		
1.3	Assess all connections from the bicycle network into the Outer Harbour Greenway to ensure they are continuous			PAE resource	Short		◆	
2	Gawler Greenway							
2.1	Pym Street – Rail line to Shared Path (Janice Jensen Reserve)							
2.1i	Ban parking on Pym Street and install a 1.3 metre wide Bicycle Lane plus a 500mm wide flush island buffer between the bicycle lane and the moving traffic.		633	\$9,495.00	Short			◆
2.2	Shared path (Janice Jensen Reserve) – Pym Street to Regency Road							
2.2a	Upgrade path to 3 metres wide (minimum), including signage, linemarking, holding rails and bollards where required		785	\$94,200.00	Medium			◆
2.2b	Review tree root damage and remove where possible			PAE resource	Short		◆	
2.3	Gallipoli Drive – Regency Road to Grand Junction Road							
2.3a	Install a 400mm wide edge line (Enhanced Bicycle Lane) at existing bicycle lanes		2783	\$41,745.00	Medium	◆		
2.4	Grand Junction Road – Gallipoli Drive to Gawler rail line							
2.4a	Clarify land ownership and the users of the unsealed tracks			PAE resource	Short	◆		
2.4b	Liaise with the above with the aim to allow a shared path to be constructed		488	PAE resource	Short	◆		
2.5	Shared path Grand Junction Road to Cormack Road							
2.5a	Clarify land ownership and the users of the unsealed track			PAE resource	Short	◆		
2.5b	Liaise with the above with the aim to allow a shared path to be constructed		1178	PAE resource	Short	◆		
2.5c	Liaise with DPTI to install a cyclist/pedestrian median refuge crossing at Cormack Road			PAE resource	Short	◆		
2.6	Magazine Road - Cormack Road to Martin Street							
2.6a	Install shared path on east side of Magazine Road between Cormack Road and Martin Street (sharrows only - Gawler Greenway)		253	\$50,600.00	Short	◆		
2.7	Martin Street – Magazine Road to Rail Line							
2.7a	Install Sharrows to identify the Gawler Greenway route.		195	\$156.00	Short	◆		
2.7b	Install signage to raise awareness of cyclists, including “cyclists crossing” warning sign		195	\$200.00	Short	◆		
2.8	Shared path – Magazine Road to Council Boundary							
2.8a	Clarify land ownership and the users of the unsealed track			PAE resource	Short	◆		
2.8b	Liaise with the above with the aim to allow a shared path to be constructed		1100	PAE resource	Short	◆		
2.8c	Provide access to Dry Creek Station - detail to be determined			TBC	Short			◆
3	Levels-City Bikeway	9.1.3						
3.1	Install Sharrows to identify route (note - update from recently installed bicycle logos)		4824	\$3,859.20	Short	◆		
3.2	Monitor and evaluate traffic volumes and speeds with view to installing traffic calming measures to facilitate speeds of 40km/h or less			PAE resource	Short	◆		
3.3	Upgrade existing bicycle lanes in Galway Avenue – convert to enhanced bicycle lanes		465	\$6,975.00	Short			◆
3.4	Liaise with DPTI to ensure upgrade of Bikeway road crossings at Regency Road and Grand Junction Road			PAE resource	Short	◆		
4	Port River Expressway Greenway	9.1.4						
4.1	Liaise with DPTI with regard to providing a Greenway alongside the Port River Expressway that connects into the Gawler Greenway and the future Northern Connector Greenway			PAE resource	Short to Long	◆		

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
5	Coast Park	9.1.5						
5.1	Council continue regular inspections and maintenance of Coast Park			PAE resource	Ongoing		◆	
5.2	Develop a signage strategy that informs users of etiquette between cyclists and pedestrians: e.g. ring your bell when approaching a pedestrian		11,190	PAE resource	Short			◆
5.3	Develop a cyclist path behind The Marquee to separate cyclists from Palais patrons at this busy location			In Progress	Short	◆		
6	River Torrens Linear Park	9.1.6						
6.1	Develop a program to widen all Linear Park paths within the City of Port Adelaide Enfield to 4 metres where possible (3 metres minimum)			PAE resource	Long			◆
6.2	Develop an information and directional signage policy and implement. Includes distances to destinations, and path user etiquette		5,150	PAE resource	Medium			◆
7	Dry Creek Linear Park	9.1.7						
7.1	Liaise with the Cities of Salisbury and Tea Tree Gully to work together to upgrade the shared paths consistently			PAE resource	Medium / Long		◆	
8	Future Northern Connector Greenway Connection	9.1.8						
8.1	Liaise with DPTI and the City of Salisbury to identify the most appropriate route			PAE resource	Short / Medium	◆		
8.2	Investigated land ownership and map existing tracks			PAE resource	Medium	◆		
8.3	Investigate purpose for locked gate			PAE resource	Short	◆		
8.4	Formalise the most appropriate track			PAE resource	Medium	◆		
8.5	Install a safe crossing point at Port River Expressway - Location and design to be determined			TBC	Short	◆		
NEIGHBOURHOOD ROUTE NETWORKS								
9	Enfield East-West Neighbourhood Connector: Please refer to Enlargement D Enfield East-West Connector for location and design reference	9.2.1						
9.1	Assess identified safety issues and action any required improvements. - Safety Audit required			\$5,000.00	Short			◆
9.2	Install Sharrow linemarking along the length of the Enfield East-West Neighbourhood Connector in accordance with DPTI's Operational Instruction		8,750	\$7,000.00	Short			◆
9.3	Install ramp to shared use path at Swanson Ave (actioned as of August 2015)			Installed 2015		◆		
9.4	Upgrade shared path between Swanson Ave and Lewis Court		98	\$11,760.00	Medium			◆
9.5	Liaise with TAFE Gilles Plains to construct section of shared path from Blacks Road to Sudholz Rd (construction cost if approved approx. \$75,000)		300	PAE resource	Short	◆		
9.6	Upgrade existing shared paths adjacent Sir Ross Smith Blvd to 3m wide and install directional signage		1510	\$181,200.00	Medium / Long			◆
9.7	Enhance line marking on existing bike lanes on Folland Rd (e.g. 300mm wide buffers) between Fosters Rd and Hampstead Road		1,650	\$24,750.00	Short / Medium			◆
9.8	Provide cyclist cut-throughs at all road closures along Folland Ave Service Roads, between Hampstead and Fosters Rd		5	\$10,000.00	Short			◆
9.9	Install shared paths on footpaths to connect to existing signals at Hampstead Road		50	\$1,000.00	Short			◆
9.10	Main North Road: Convert footpath to shared paths between Harewood Ave and pedestrian activated crossing on East side and between Clifton St and pedestrian activated crossing on West side		52	\$1,040.00	Short			◆
9.11	Install Pedestrian Refuge in existing median on Main North Road between Warwick St and Barton St			\$5,000.00	Short	◆		
9.12	Convert footpaths to shared paths between signals at Darlington Ave and new refuge opposite Stanley Ave		87	\$1,740.00	Short			◆
9.13	Upgrade existing shared path access through road closure on Barton St			\$2,000.00	Short / Medium			◆
9.14	Install refuge in existing flush median on Prospect Rd at Northcote St			\$2,000.00	Short	◆		
9.15	Liaise with DPTI to develop cyclist crossing at Northcote St and Churchill Rd intersection.			PAE resource	Short			◆
9.16	Liaise with DPTI to develop cyclist facilities (extended and green lanes) at the Churchill/Regency Road intersection			PAE resource	Short			◆
10	Gillman East-West Connector: Please refer to Enlargement B Gillman East-West Connector for location and design reference	9.2.2						
10.1	Construct shared path north side of Regency Rd to connect path to signals at Regency Rd/South Rd intersection		372	\$7,440.00	Short		◆	
10.2	Construct shared path North side of Cowan St (completed section through Harold Tyler Reserve as of August 2015)			Installed 2015	Completed	◆		
10.3	Connect new shared path to existing shared path along South Rd			\$5,000.00	Short	◆		
10.4	Construct shared path adjacent Cardigan St		370	\$92,500.00	Medium			◆
10.5	Construct shared path adjacent Trafford St		238	\$28,560.00	Medium			◆
10.6	Construct shared path along open channel (long-term)		395	\$98,750.00	Long			◆
10.7	Connect to existing pedestrian crossing with shared paths along footpaths (both sides)		130	\$2,600.00	Short			◆

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
10.8	Construct shared path East side of Plymouth Rd		1,060	\$127,200.00	Medium			◆
10.9	Construct shared path East side of Wingfield Rd		95	\$11,400.00	Medium			◆
10.1	Construct shared path North side of railway line		1,080	\$270,000.00	Medium			◆
10.11	Construct shared path South side of railway line		990	\$247,500.00	Medium			◆
10.12	Provide railway crossing for shared path			TBC	Short			◆
10.13	Connect to Outer Harbour Greenway shared path			\$5,000.00	Short			◆
11	Sudholz Road Shared Path	9.4.6						
11.1	Convert existing footpath to a shared path on west side of Sudholz Road. Requires liaison with DPTI		2,395	\$47,900.00	Medium			◆
11.2	Convert footpath to shared path south of Grand Junction Road to connect to existing shared path (400 metres)		400	\$8,000.00	Medium			◆
11.3	Convert footpath to shared path from North East Road to the River Torrens (1200 metres)		1200	\$24,000.00	Medium			◆
12	Causeway Road Shared Path (also refer to Enlargement A Port Proposed Cycling Network for location/design reference)	9.4.1						
12.1	Construct new shared path on the west side of Causeway Road, to match into each end of the existing shared path (part of Port Hike and Bike Loop) (2.5m wide minimum)		410	\$49,200.00	Short / Medium	◆		
12.2	Install new shared path on east side of Causeway Road between Sutherland Street and Semaphore Road (2.5m wide minimum)		480	\$120,000.00	Short / Medium	◆		
12.3	Ensure ramp access to shared path is provided where practical			PAE resource	Short / Medium	◆		
12.4	Provide refuge crossing where path crosses from west side to east side (near Sutherland St)			\$5,000.00	Short / Medium	◆		
12.5	Match new shared path in to existing shared path at southeast corner of Semaphore Road / Causeway Road. Install linemarking and signage to recently constructed path – Note: Existing Pedestrian Actuated Crossing provides connection to the Outer Harbour Greenway			\$5,000.00	Short / Medium	◆		
13	Hart Street, Glanville/Ethelton	9.2.5						
13.1	Between Military Road and Causeway Road:							
13.1a	Liaise with DPTI to coordinate a consistent approach for a best practice cycling route along Hart Street from Jervois Bridge to Esplanade. This includes road sections managed by both DPTI and Council. Lobby to assess the capacity of Hart Street with view to reducing four lanes to two and installing kerb separated bicycle lanes.			PAE resource	Short	◆		
13.1b	Liaise with DPTI to reduce the signed speed to 40km/h or 50km/h			PAE resource	Short	◆		
13.1c	Provide directional and information signage		1,185	\$2,000.00	Short	◆		
13.2	Between Military Road and the Esplanade (Maintained by Council)	9.2.5						
13.2a	Liaise with DPTI to coordinate a consistent approach for a best practice cycling route along Hart Street from Jervois Bridge to Esplanade. This includes road sections managed by both DPTI and Council. Lobby to assess the capacity of Hart Street with view to reducing four lanes to two and installing kerb separated bicycle lanes.			PAE resource	Short	◆		
13.2b	Liaise with DPTI to reduce the signed speed to 40km/h or 50km/h			PAE resource	Short	◆		
13.2c	Provide directional and information signage		300	\$2,000.00	Short			◆
14	Dry Creek to Linear Park	9.2.7						
14.1	Liaise with the City of Tea Tree Gully to agree on a concept design for cycling facilities on Wandana Avenue. Note the road width is 12.5 metres which could facilitate exclusive bicycle lanes on one side and Bicycle / Car parking lanes on the other side. The road width is sufficient to provide enhance bicycle lanes, e.g., wide line marked buffers between bicycle lane, parking lane and traffic lane. The side of the road with parking could be alternated where parking demand requires it.		970	Shared with TTG (\$13,580)	Medium / Long			◆
14.2	Convert the exclusive bicycle lanes in Tarton Road to enhanced bicycle lanes, by a line marking buffer, e.g. 300mm wide flush island between bike lane and moving traffic. Liaise with the City of Tea Tree Gully to line mark the bicycle lane on the east side for consistency.		525	\$7,875.00	Medium / Long			◆
14.3	Install a 40 metre section of shared path on the existing paved footpath – east side of North East Road, between signals at Wandana Avenue and Kyle Road.		40	\$8,000.00	Medium / Long			◆
14.4	Install Advisory logos in Kyle Road and Andrew Avenue to identify route		90	\$72.00	Medium / Long			◆
14.5	Install Advisory logos in Haddington Street to identify route		450	\$72.00	Medium / Long			◆
14.6	Install Advisory logos in Kiltie Street to identify route		455	\$72.00	Medium / Long			◆

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
LOCAL LINKS								
15	Port CBD Connectivity: Refer to Enlargement A Port Proposed Cycling Network for location/design reference	9.3.1						
15.1	Provide a cyclist cut-through of the Heath Street road closure to connect to bicycle lanes on Fletcher Road			\$3,500.00	Short	◆		
15.2	Vincent Street / Nelson Street – Install cyclist hook turn to facilitate right turn into Nelson Street (adjacent two right turn lanes).(Note that Bus Hook turn is also proposed for this location by Council – design to consider both) - NA			\$220.00	Short			
15.3	Provide access to the Port Loop from Nelson Road as follows: As of August 2015, DPTI and Renewal SA have been installing new bike lanes at St Vincent Street – Nelson Street Jervois Bridge				Short			
	Install a cyclist/pedestrian refuge in the existing median on Nelson Street south of Victoria Road / Semaphore Road (where the bike lanes terminate)			\$2,000.00				◆
	Install a shared path on east side of Nelson Street between the Port Loop shared path and the new refuge		660	\$13,200.00		◆		
	Include directional signage for southbound cyclists to cross		660	\$1,000.00				◆
	Upgrade existing footpaths on both sides of Nelson Street, between North Parade and St Vincent Street to a Shared Path to provide alternative connection to traffic signals and bicycle lanes at St Vincent Street. (This will need to be done with care outside of the British Hotel to avoid creating a pedestrian and cyclist conflict.)		150	\$3,000.00				◆
15.4	Liaise with DPTI to install bike facility on Southern side of St Vincent Street			PAE resource	Short	◆		
15.5	Install median refuge on Grand Junction Road near College Street intersection			\$3,000.00	Short			◆
15.6	Upgrade footpaths to shared paths on Grand Junction Road (both Sides) between Russell Street and Lipson Street		350	\$14,000.00	Short			◆
15.7	Install median refuge on Lipson Street where shared use path joins (approx 100m north of Russell Street)			\$3,000.00	Short			◆
15.8	Upgrade existing shared use path between Rosetta Street and Lipson Street			\$1,000.00	Short	◆		
15.9	Along Old Port Road between Grand Junction Rd and Church St, upgrade existing path to shared path and connect to existing shared path		495	\$9,900.00	Short		◆	
15.1	Install cyclist refuge in existing median at St Vincent Street and Hart Street			\$3,000.00	Short			◆
15.11	Install cyclist refuge in existing median at Bower Road (liaise/work with City of Charles Sturt)			\$3,000.00	Short			◆
15.12	Liaise with DPTI and City of Charles Sturt to install crosswalk on west side of signalised intersection – Bower Road, Causeway Road and Old Port Road			PAE resource	Short	◆		
16	Briens Road, Gepps Cross (Shared Path)	9.3.2						
16.1	Widen path where required to at least 2.5 metres wide (3.0 metres preferred)		1,180	\$141,600.00	Medium			◆
16.2	Install a new section of cycle path behind the bus stop in front of College – to separate cyclists from passengers boarding and alighting the bus			TBC	Medium			◆
16.3	Install signage and line marking to convert footpath into Shared Path		1,180	\$23,600.00	Medium			◆
17	Rosewater / Ottoway link	9.3.3						
17.1	Add the following streets to the Bicycle Network, and install Advisory Logos to identify route					◆		
17.2	Murray Street, between McGregor Terrace and Jenkins Street (this includes laneway that has been closed to traffic with a Hazard Board blocking vehicle access. Ensure sufficient width for cyclist access).		340	TBC	Medium	◆		
17.3	Florence Street, between Jenkins Street and the disused rail line		140	\$112.00	Medium	◆		
17.4	May Terrace, between the rail line and Daisy Street		165	\$132.00	Medium	◆		
17.5	Liaise with DPTI and PTD to provide a cyclist and pedestrian crossing of disused rail line between Florence Street and May Street (short term recommendation included in Local Links Section of this report).			PAE resource	Medium	◆		
18	Bundara Avenue / Denver Terrace	9.3.4						
18.1	Work with the City of Prospect to extend the Braund Road Bicycle Boulevard route with a consistent approach along Bundara Avenue and Denver Terrace. Particularly with regard to providing a low-street cycling route to the Churchill Centre and Blair Athol Primary.		1,720	TBC	Medium / Long			◆
19	Victoria Road Shared Path	9.3.5						
19.1	Construct 2.5-3m wide shared path on western side of Victoria Road between Klingberg Drive and Peter Cousins Reserve		1,970	\$236,400.00	Medium			◆
20	Grand Junction Road footpath links	9.3.6						
20.1	Undertake feasibility study to provide shared paths in the Grand Junction road reserve at the following locations:			PAE resource	Medium / Long			◆
	North side – Old Port Road to Port Road							◆

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
	Both sides - Port Road to Tomset Street							◆
	South side - Gallipoli Road to South Road							◆
	South side - South Road to Main North Road (includes the section above Gallipoli - South)							◆
	North side - Main North Road to Amanga Street. East-west route to then continue along Amanga Street to Mira Street / along Mira Street to Tepko Street and return to Grand Junction Road							◆
	North side - Tepko Street to Briens Road							◆
	North side - Briens Road to Walkleys Road							◆
21	Mersey Road Bikeway	9.3.7						
21.1	Review the Mersey Road Bikeway to fill in missing links - liaise with the Port Adelaide BUG to determine most appropriate connections and works			PAE resource	Short		◆	
21.2	Install signage to identify this as an alternative lower traffic route to Victoria Road for cyclists			\$1,000.00	Short		◆	
21.3	Improve the connection to the Off road shared path at Elder Road (i.e. upgrade ramp). Note: as of August 2015 new crossing / ramp from off road shared path to Elder Road (Elder Road and Stirling St Birkenhead) has been installed.			Installed 2015	Completed	◆		
22	Future Gillman Development	9.3.8						
22.1	Structure planning - Ensure that a fine-grained network of on-road and off-road cycle routes are incorporated into the development and are designed to best practice Standards and guidelines			PAE resource	Ongoing		◆	
22.2	Ensure that the Gillman cycle network connects to the Port Adelaide Enfield cycle network			PAE resource	Ongoing		◆	
22.3	Take into consideration and request Renewal SA consider the recommendations of the Port Adelaide Bicycle Users Group for the route selections proposed in the submission to the Employment Lands (Gillman/ Dry Creek and Wingfield) and General Section Amendments Development Plan Amendment			PAE resource	Ongoing		◆	
METROPOLITAN ROUTES: MAIN ROADS								
23	Causeway Road	9.4.1						
23.1	Undertake survey to determine road widths and confirm concept design			PAE resource	Short			◆
23.2	Install full-time enhanced (buffered line marking) bicycle lanes on both sides of Causeway Road, including wide buffer lines between traffic lane and cycle lane, and greening at hazardous locations such as at left-turn merge lanes		1,250	\$37,500.00	Medium			◆
23.3	Investigate providing additional off-street parking for train commuters off of Causeway Road			PAE resource	Medium	◆		
23.4	Review the speed controls for Causeway Road with view to reducing to 50km/h			PAE resource	Medium			◆
23.5	Install green bicycle lanes at potentially hazardous locations (road junctions and intersections)			\$20,000.00	Medium			◆
24	Grand Junction Road - South Rd to Hampstead Rd	9.4.2						
24.1	Liaise with DPTI to encourage an assessment of the current traffic volumes with view to reducing two-lanes to one-lane in each direction to allow space for bicycle lanes. This is recommended for the entire length of Grand Junction Road in the long-term, but priority should be given to the existing gaps in the network			PAE resource	Long			◆
24.2	Liaise with DPTI to design and schedule bicycle lanes on Grand Junction Road, between South Road and Hampstead Road			PAE resource	Long			◆
25	Military Road	9.4.3						
25.1	Liaise with DPTI to ensure concept designs for Military Road bicycle lanes are prepared in the short term			PAE resource	Short			◆
26	Hanson Road	9.4.4						
26.1	Liaise with DPTI to install bicycle lanes on Hanson Road, between Grand Junction Road and Cormack Road			PAE resource	Short			◆
27	Old Port Road	9.4.5						
27.1	Liaise with DPTI to install bicycle lanes in Old Port Road			PAE resource	Short / Medium	◆		
27.2	Ensure crossing points are provided for viewing of the wetlands			PAE resource	Short / Medium	◆		
27.3	Liaise with the City of Charles Sturt to upgrade the shared path on Old Port Road and Bower Road			PAE resource	Short / Medium			◆
27.4	Liaise with DPTI to install a cyclist refuge crossing point of Port Road for eastbound cyclists on Old Port Road			PAE resource	Short / Medium	◆		
28	Sudholz Road	9.4.6						
28.1	Liaise with DPTI to ensure that the intersection upgrade of Sudholz Road and North East Road is scheduled and includes improved cycle facilities			PAE resource	Short		◆	

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
	Refer to Action II for separated facility recommendation.						◆	
29	South Road	9.4.7						
29.1	Liaise with DPTI to have the South Road Superway cycling facilities reviewed with particular focus on directional signage			PAE resource	Ongoing		◆	
30	North East Road	9.4.8						
30.1	Liaise with DPTI re: the designs for the intersection upgrade of North East Road and Sudholz Road, and lobby for these works to include bicycle lanes along North East Road that are continuous on both sides up to the intersection.			PAE resource	Short		◆	
31	Lady Gowrie Drive							
31.1	Liaise with cycling groups to discuss the conflicts that are occurring, and work together to develop solutions	9.9		PAE resource	Short / Medium		◆	
	Prepare educational brochures that provide information for residents on cycling in bunches and outlines the etiquette required by cyclists						◆	
	Distribute brochures around Semaphore and Largs Bay and request cycling groups to distribute to members						◆	
32	Prospect Road							
32.2	Review pedestrian refuge (just south of Marmion Avenue) with view to improving safety for pedestrians and cyclists. Consider installing kerb island over parking bay on west side of crossing similar to that on east side	4.5.2		PAE resource	Medium	◆		
33	Brookvale Road							
33.1	Review road crossing at Obahn underpass (just south of Beaverdale Avenue). Install cyclist refuge to improve safety for cyclists	9.5.3		\$3,000.00	Medium	◆		
CITY-WIDE INFRASTRUCTURE ACTIONS								
34	Links to Rail Stations	9.5.1		PAE resource	Ongoing			
	Liaise with DPTI Public Transport Division to assess current bicycle parking facilities at stations and provide additional parking if required						◆	
	Improve cyclist permeability through railway mazes by ensuring they are constructed to current Australian Standards						◆	
	Develop a signage strategy to identify routes to stations						◆	
35	Footpaths around Schools	9.5.2		PAE resource	Ongoing			
	Council develop footpath policy that includes:						◆	
	Footpaths to be 3 metres wide where possible, (or if not possible, construct as width between kerb and boundary) in close vicinity to Schools						◆	
	Footpaths to be maintained regularly with removal of surface debris and low hanging tree branches						◆	
CITY-WIDE ACTIONS								
36	Community input			PAE resource	Ongoing			
	Develop a strategy for the community to feed information to council at the fine-grained level as an on-going process and explore ways to improve use of existing options eg Council's web page and My Services App.						◆	
37	40km/h Area Speed Zoning	9.8		PAE resource	Short			
	Define feasibility of providing a 40km/h area speed zone that includes the Port Adelaide CBD						◆	
	Extend the proposed 40km/h Area Zone in the Kilburn area to include Northcote Street. This street is calmed is slow points and provides a direct link to the Kilburn Rail Station						◆	
38	Data Collection	10.6		PAE resource	Ongoing			
	Port Adelaide Enfield continue to participate in the Super Sunday Recreation Counts (given the surveys are designed to be conducted annually to provide council with the necessary data to assist planning and asset management.						◆	
	Supplement the data with additional counts on other days (at the discretion of Council) at these select locations for comparative data.						◆	
	Include cycle count downloads when undertaking local road AADT counts						◆	
39	Asset Register and End Task Administration:	10.6		PAE resource	Short			
	Develop administrative protocols for 'End Task Administration' to update records and asset registers. When bicycle facilities are implemented tasks should include: updating GIS layers, asset registers, recording an action database to assist in future updates of the Council Bicycle Plans.						◆	

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
COUNCIL POLICY								
40	Open Channels	9.7		PAE resource	Short			
	Develop policy to earmark Kilburn and North Arm open channels as future Greenways.						◆	
	Protect channel easements from development that could preclude them from being converted to Greenways						◆	
41	Councils Works Programs			PAE resource	Ongoing			
	Integrate cyclist network with Councils works program						◆	
	Council Depot Officers to refer to Bicycle Network prior to any road works						◆	
	Depot staff to alert designated Cycling Officer of future works that are planned on a road or path that is part of the cycling network						◆	
	Develop a maintenance and management plan for cycling infrastructure and ensure adequate budgets are allocated						◆	
PROMOTING CYCLING								
42	Council Advocacy	10.8		PAE resource	Short / Ongoing			
	Provide a designated Council Officer with a good knowledge of cycling facility design to implement the actions and ongoing management of projects listed throughout this Plan and be a liaison point for workplaces, schools, cycling groups, DPTI, etc.						◆	
	Facilitate an open communication process where the community can provide a designated Council Officer on updates of issues, constraints and opportunities within the cycling network						◆	
	Depot and technical staff who are trained in cycling facility requirements and who automatically cross-check the bicycle plan before any road works are constructed so that opportunities are not lost.						◆	
	Define the role for an existing council representative (or create a new position) to reflect in their job description specific roles for Way2Go Council Liaison;						◆	
	Continue to collaborate with DPTI on the Way2Go program, by identifying schools which can become involved in the program, and budgeting and resourcing to assist with the program implementation and any related engineering treatments						◆	
43	Travel Behaviour Change to Promote Cycling	10.1		PAE resource	Short			
	Research and implement education and travel behaviour change programs with DPTI, Bicycle SA and other relevant bodies						◆	
	Provide and support Bicycle Education programs such as Bike Ed, Ride a Bike Right in the Council area. (make this an action in Council's Community Wellbeing plan.)						◆	
44	Infrastructure Elements to Promote Cycling	10.3		PAE resource	Ongoing			
	Continue to support bike hire initiatives and consider cycling supportive infrastructure elements along the network where appropriate						◆	
45	Information Provision and Route Legibility	10.4		PAE resource	Ongoing			
	Ensure adequate public access to route information and consider additional media platforms for a diverse demographic.						◆	
	Plan for sufficient wayfinding, route notification and directional signage along key routes						◆	
46	Safety Training	10.5		PAE resource	Ongoing			
	Provide information and generate awareness on 'shared path etiquette' in locations with a high number of pedestrians/cyclists.						◆	
	Review existing reserves with view to suitable locations for bicycle training parks (for example Hanson Reserve and Kardi Yarta). Build at least one road Safety Park in the Council area.						◆	
	Engage with DPTI and MAC (Motor Accidents Commission) to consider undertaking a specific driver/cyclist awareness campaign.						◆	
47	Committing to ongoing research	10.6		PAE resource	Ongoing			
	Continue to participate in the Super Sunday Recreation Counts (given the surveys are designed to be conducted annually to provide council with the necessary data to assist planning and asset management)						◆	
	Supplement the data with additional counts on other days (at the discretion of Council) at these select locations for comparative data.						◆	
	Conduct Super Tuesday counts.						◆	
	Conduct a review of the Bicycle Plan every five years.						◆	

No.	Description	Report reference	Length (m)	Cost estimate	Priority	Completed	In progress	Not commenced
48	Local Government Policy	10.7		PAE resource	Ongoing			
	Propose the North-East Arm Management Plan considers use of channel to be used as a greenway.						◆	
	Review the City of Port Adelaide Enfield Development Plan to update/improve policies for cycling, such as:				Ongoing		◆	
	Providing end of trip facilities, such as: parking, lockers, showers; and including best practice facilities, treatments and networks in new developments						◆	
	Ensure future development at Gillman includes best practice cycling network and facilities that connect into the Port Adelaide Enfield Cycle Network						◆	
49	Funding Opportunities	11.1.3		PAE resource	Ongoing			
	Partner with DPTI as part of the Bikes for Better Business program and encourage businesses to apply for grant funding.						◆	
TOURISM / RECREATIONAL OPPORTUNITIES								
50	Garden Island / Torrens Island	9.6.1		PAE resource	Medium / Long			
	Commence feasibility and planning of cycle tourism to Port River/Garden Island						◆	
	Consider path alongside Grand Trunkway							◆
	Seal shoulders along main road crossing to Garden Island.							◆
51	Pelican Point Road	9.6.2		PAE resource	Medium / Long			
	Install median refuge in Victoria Road opposite Kardi Yarta						◆	
	Liaise with Bicycle SA regarding the feasibility of Pelican Point Route replacing Lady Gowrie Drive as the training route. This will include assessing road surface and upgrading to suit training cyclists						◆	
	Construct recreational unsealed shared path loop around Pelican Point Road						◆	
	Review feasibility of constructing path to Mutton Cove, ie across rail line						◆	
52	Snowdens Beach	9.6.3		\$1,000.00	Medium			
	Install signage to identify route to Snowdens Beach					◆		
	Install cycling parking rails					◆		
	Include Snowdens beach (listing facilities) on all cycling maps					◆		

REVIEW OF THE CURRENT NETWORK

Intermethod and Be Engineering Solutions carried out several site visits to review walking and cycling routes in the City of Port Adelaide Enfield in August and September 2020. The team focussed on identifying general level of provision to cater to the different route types and observed user experiences.

This report section summaries key observations from these site visits, grouping them by the route types. It provides an overview of existing network and infrastructure, issues and challenges including missing links.

Key observations in relation to the route type are listed below.

METROPOLITAN ROUTES – GREENWAYS AND BIKEWAYS

- Lack of intersection treatments to improve pedestrian and cycling safety at traffic signals (e.g. addressing blind spots, reducing speeds, tightening turning radii, enforcing adherence to traffic signals, reducing crossing distance)
- Green pavement marking at conflicting locations is not consistently used across the Council area
- Limited pedestrian and cyclist crossing facilities, especially mid-block between traffic lights for cross neighbourhood links or bus stop pairs
- Evidence of undulating footpaths and cracked pavement along arterial roads
- Lack of signage to raise awareness of cyclists, including 'cyclists crossing' warning signs
- Poor shade along many of the arterial roads
- Lack of pedestrian resting points.

NEIGHBOURHOOD LINKS

- Many actions from the 2015-2020 Cycle Action Plan were not implemented
- Narrower shared use paths require an upgrade to reduce conflict between users
- Lack of cycle route connectivity across closed roads
- Existing wide median islands do not sufficiently cater for road crossing points
- Opportunities missed to provide refuges for safe crossing of wider, higher traffic volume roads
- Higher traffic volume roads and/or wider roads have limited bicycle lane infrastructure
- Part time bicycle lanes installed as a compromise to maintain on-street parking or traffic capacity
- Limited use of "sharrow" pavement marking on designated routes with lower traffic volume and speed environment
- Limited north-south connecting neighbourhood links, forcing cyclists to ride along arterial roads
- Limited wayfinding signage
- Poor amenity and shade of on-road cycling routes
- Lack of pedestrian resting points.

LOCAL LINKS

- Poor CBD connectivity
- Evident undulating footpaths creating trip hazards and discomfort for mobility users
- Wide streets with unrestricted parking create challenges to achieve a lower speed environment and create points of conflict
- Limited use of "sharrow" pavement marking to promote shared use between bicycles and vehicular traffic
- Wide streets create an environment that prioritise cars, creating an unwelcoming pedestrian environment
- Some streets have missing footpath sections
- Lack of pedestrian resting points.

RECREATIONAL ROUTES

There has been a significant investment by the Council over the last five years into recreational routes, River Torrens linear trails, Dry Creek linear trails, Gawler Greenway and Port River Bikeway.

- Limited actions implemented for the Enfield East-West Neighbourhood Connector
- Local recreational loop opportunities not progressed
- Irregular maintenance with overgrown vegetation encroaching onto the paths reducing the effective width
- Limited wayfinding signage
- Lack of shading along long distance routes.

METROPOLITAN ROUTE REVIEW

OVERVIEW

The metropolitan routes within the City of Port Adelaide Enfield are made up of greenways, bikeways and cycling infrastructure along arterial and secondary roads.

PRIMARY BIKEWAYS

Coast Park Trail and Linear Park Trail

These shared paths are located in opposite corners of the Council area, with the Coast Park to the northwest and Linear Park to the southeast. Both bikeways provide a safe, off-road route for pedestrians and cyclists.

Outer Harbour Greenway and Gawler Greenway

These bikeways are also part of the network and provide north-south connectivity from the City of Port Adelaide Enfield to the Adelaide CBD. The greenways are comprised of both on and off-road infrastructure, including shared paths (off-road) and sharrow pavement markings (on-road).

OTHER INFRASTRUCTURE

The remainder of the metropolitan network consists of bicycle lanes installed on main and secondary roads. Grand Junction Road forms the 'backbone' of this network, running east-west across the length of the Council area. A series of north-south links stem from Grand Junction Road, providing connectivity from Outer Harbour into the Adelaide CBD.

These bicycle lanes provide separation between cyclists and motorists and are generally effective for confident cyclists.

KEY INFRASTRUCTURE ISSUES

A large portion of the bicycle lanes within the network are only part-time, resulting in them often being blocked with parked vehicles. This can create a safety issue when cyclists are required to diverge from the bicycle lane into traffic lanes.

Some of the bicycle lanes within the network have green pavement marking installed at locations where there may be conflicting movements between different traffic modes, such as the continuation of a bicycle lane across an intersecting road. However, this pavement marking is not consistent across the Council area.

MISSING LINKS

Hanson Road (between Cormack Road and Grand Junction Road), Grand Junction Road (between South Road and Hampstead Road), Prospect Road (between Kintore Avenue and Way Street)

Council to advocate to and work with DIT to complete the missing cycling links along Hanson Road and Grand Junction Road.



Linear Park Trail (off-road shared path)



Commercial Road (dedicated bicycle lane)



Grand Junction Road (part-time bicycle lane)



Coast Park (off-road shared path)



Hanson Road (part-time bicycle lane)



Railway Terrace (sharrow pavement marking)



Hampstead Road (part-time bicycle lane)



Days Road (dedicated bicycle lane)



Military Road

NEIGHBOURHOOD LINK REVIEW

OVERVIEW

The City of Port Adelaide Enfield has a number of neighbourhood links which form part of the overall cycling network. These neighbourhood links consist of both on and off-road infrastructure, and are centred around providing connectivity between the Council's suburbs, while avoiding busy arterial roads. This network contains a variety of treatments depending on the location and surrounding environment.

DEDICATED BICYCLE LANES

Folland Avenue and St Vincent Street

These are examples of neighbourhood links which contain a dedicated, full-time bicycle lane. Both of these links run east-west and provide a safe and efficient route for cyclists. While cyclists do have to travel on-road, vehicles are not permitted to park in these dedicated bicycle lanes, ensuring there is an unobstructed safer route for cyclists.

SEPARATED BICYCLE LANES

Hart Street

These bicycle lanes are not only full-time, but are separated from the traffic lanes via bollards and chevron pavement marking. This provides an extra layer of safety which appeals to all types of cyclists, not just those that are confident. Hart Street also contains the aforementioned green pavement marking at location of potential conflict.

KEY INFRASTRUCTURE ISSUES

A large portion of the neighbourhood links within the Council area have no dedicated cycling infrastructure. Cyclists have the option to utilise the off-road footpaths, or instead ride on-road while keeping to the left. In some locations, such as along Old Port Road, there is insufficient lane width to accommodate both cyclists and motorists' side-by-side. While cyclists still have the option to travel on-road, extra infrastructure such as fencing is provided alongside the footpath to create separation between the two traffic modes.

MISSING LINKS

It is noted that, particularly on the eastern side of the Council area, there is a lack of north-south connecting neighbourhood links. Instead, cyclists are encouraged to travel along the arterial roads, which may be unnerving for the less-experienced cyclists. It is recommended that Council investigates the potential installation of north-south connecting neighbourhood links.



Folland Avenue (dedicated bicycle lane)



Liberty Grove (footpath)



St Vincent Street (dedicated bicycle lane)



Gillman East-West Connector (off-road shared path)



Hart Street (separated bicycle lane)



Old Port Road

RECREATIONAL ROUTE REVIEW

OVERVIEW

The recreational routes within the City of Port Adelaide Enfield are largely comprised of off-road, shared paths. These paths are mostly bitumin and range from 2-3m in width. They provide a safe environment for both pedestrians and cyclists, and link to popular tourist locations such as the Kardi Yarta North Haven Adventure Playground.

SHARED PATH TREATMENT

Shared use paths are an excellent treatment for recreational cycling routes, as they provide full separation between pedestrian/cyclist traffic and vehicular traffic. In addition, this separation appeals to inexperienced cyclists as they feel safer and not required to ride on-road.

MISSING LINKS

Grand Trunkway and Veitch Road

Recreational routes make up the smallest portion of the overall cycling network within the Council area. The 2015-2020 City-Wide Cycling Plan outlined six different recreational routes, but many of these are yet to be constructed. At present, these locations boast wide footpaths which could be formalised into shared use paths to complete the proposed network.

SNOWDEN BEACH LINK

A recreational link to Snowden Beach was also proposed in the 2015-2020 City-Wide Cycling Plan. There is an existing local link which runs north-south along the eastern side of Outer Harbour and could connect to the proposed east-west recreational route. Snowden Beach is home to the Port Adelaide Sailing Club and is a popular tourist location. It is recommended that this recreational link be completed.

Though only six recreational routes were proposed in the 2015-2020 City-Wide Cycling Plan, the City of Port Adelaide Enfield boasts many more attractions which could generate the need for additional recreational cycling links.



Grand Trunkway



Mersey Road North (off-road shared path)



Pelican Point Road (off-road shared path)



Veitch Road

LOCAL LINK REVIEW

OVERVIEW

Local links make up the largest portion of the City of Port Adelaide Enfield's cycling network. The existing treatments vary greatly across the local network, from roads with no cycling infrastructure at all, to those with dedicated bicycle lanes. Local links are present across different road classes and therefore, the type of treatment is reflective of the road type and respective traffic volume.

In general, the local links provide a high level of connectivity across the City of Port Adelaide Enfield. While this network could be built upon, it is already extensive and there are no apparent missing links.

LOW ORDER ROADS

On low-order roads such as Elder Road, there is no dedicated infrastructure present for cyclists or pedestrians. In this case, cyclists are required to ride on-road and keep to the left.

RESIDENTIAL STREETS

On residential streets such as Coker Street and Strathfield Terrace, on-road cycling infrastructure is not present. Cyclists may either ride on-road and keep to the left, or utilise the footpath if they would like to ride off-road.

HIGH ORDER ROADS

The higher-order roads which are within the local network, such as Bedford Street and Osborne Road, have varying treatment types. There is a dedicated bicycle lane along Osborne Road which provides separation between cyclists and vehicles, whereas Bedford Street has no on-road facilities, and a standard footpath. It is recommended that, on higher-order roads with sufficient width, cycling infrastructure is installed.

OFF-ROAD FACILITIES

In regard to off-road facilities, a number of the Council's off-road shared paths are classified as local links. An example of this is the shared path which links to Veitch Street and provides north-south connectivity along the eastern side of Outer Harbour.



Coker Street



Strathfield Terrace



Bedford Street



Veitch Street (off-road shared path)



Elder Road



Osborne Road (dedicated bicycle lane)

LOCAL AREA TRAFFIC MANAGEMENT REVIEW

OVERVIEW

Local area traffic management (LATM) within the City of Port Adelaide Enfield is diverse and extensive. In general, the LATM including pedestrian crossing facilities is of a high level within the council area. While some treatments are outdated, they remain effective. More innovative treatments have recently been installed, such as kerb protuberances on Lamorna Terrace, and this is an excellent direction for the Council to be following.

TRAFFIC CALMING

For traffic calming, speed humps, pavement bar schemes and kerb protuberances are common within the Council. These are all effective traffic calming treatments, though speed humps are becoming less desirable due to their high cost of installation and damage to the existing road pavement. Around curved sections of road, the City of Port Adelaide Enfield implement continuous white centrelines. This is another common treatment to define the trafficable lanes and ensure vehicles do not park on the curve, which would heavily restrict sight distance.

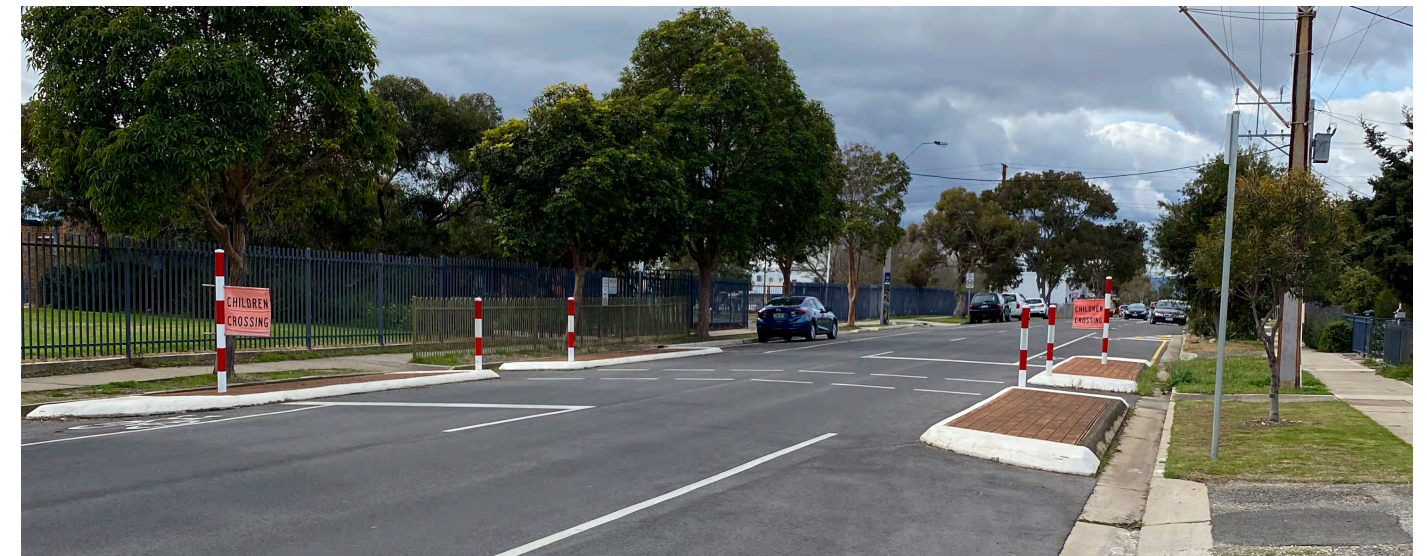
PEDESTRIAN INFRASTRUCTURE

Pedestrian crossing infrastructure is widespread across the Council. Emu crossings are present within school zones, wombat crossings are present within retail plazas, and pedestrian activated crossings (PACs) are present on arterial roads.

At locations where pedestrian volumes do not warrant a formalised crossing, holding rails and kerb ramps are installed in conjunction with median island treatments to allow pedestrians to store in the middle of the road while waiting to cross.



Sir Ross Smith Avenue (speed humps)



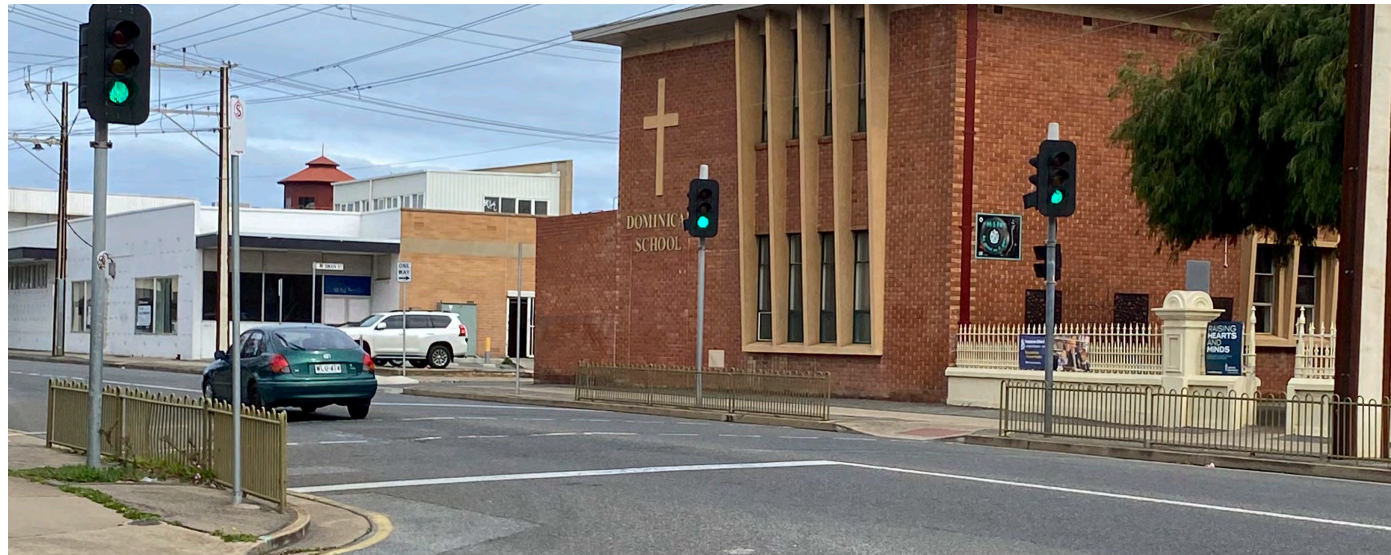
Gedville Road (emu crossing)



Lamorna Terrace (kerb protuberances)



Silicate Avenue (centreline and hazard markers)



Military Road (pedestrian actuated crossing)



Marryatt Street (wombat crossing)