



LEETON
SHIRE COUNCIL

Active Transport Plan

Leeton Shire

2023



DOCUMENT CONTROL

PROJECT REPORT DETAILS	
Document Title	Leeton Shire Active Transport Plan
Principal Author	Currajong Pty Ltd
Client	Leeton Shire Council
Project Reference	APC220409
DOCUMENT STATUS	
Revision	A
Status	Final
Date	July 2023

DISCLAIMER

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FROM THE MAYOR

The Liveable Leeton 2035 Community Strategic Plan highlights the community's aspiration to be a shire that is moving and connected, with accessible towns and great local destinations and many options to get there. As quoted by Henry Ford and highlighted in Liveable Leeton 2035, 'If everyone is moving forward together, then success takes care of itself.'

Walking and cycling, otherwise referred to as Active Transport, is environmentally friendly and good for your health, not to mention the social and economic benefits.

Leeton Shire Council is positioned to help everyone make active transport part of our everyday routines, by providing infrastructure, services and facilities where they are needed.

With your help Council has developed an Active Transport Plan that includes a suite of new infrastructure projects to support walking, cycling and personal fitness and mobility in Leeton Shire.



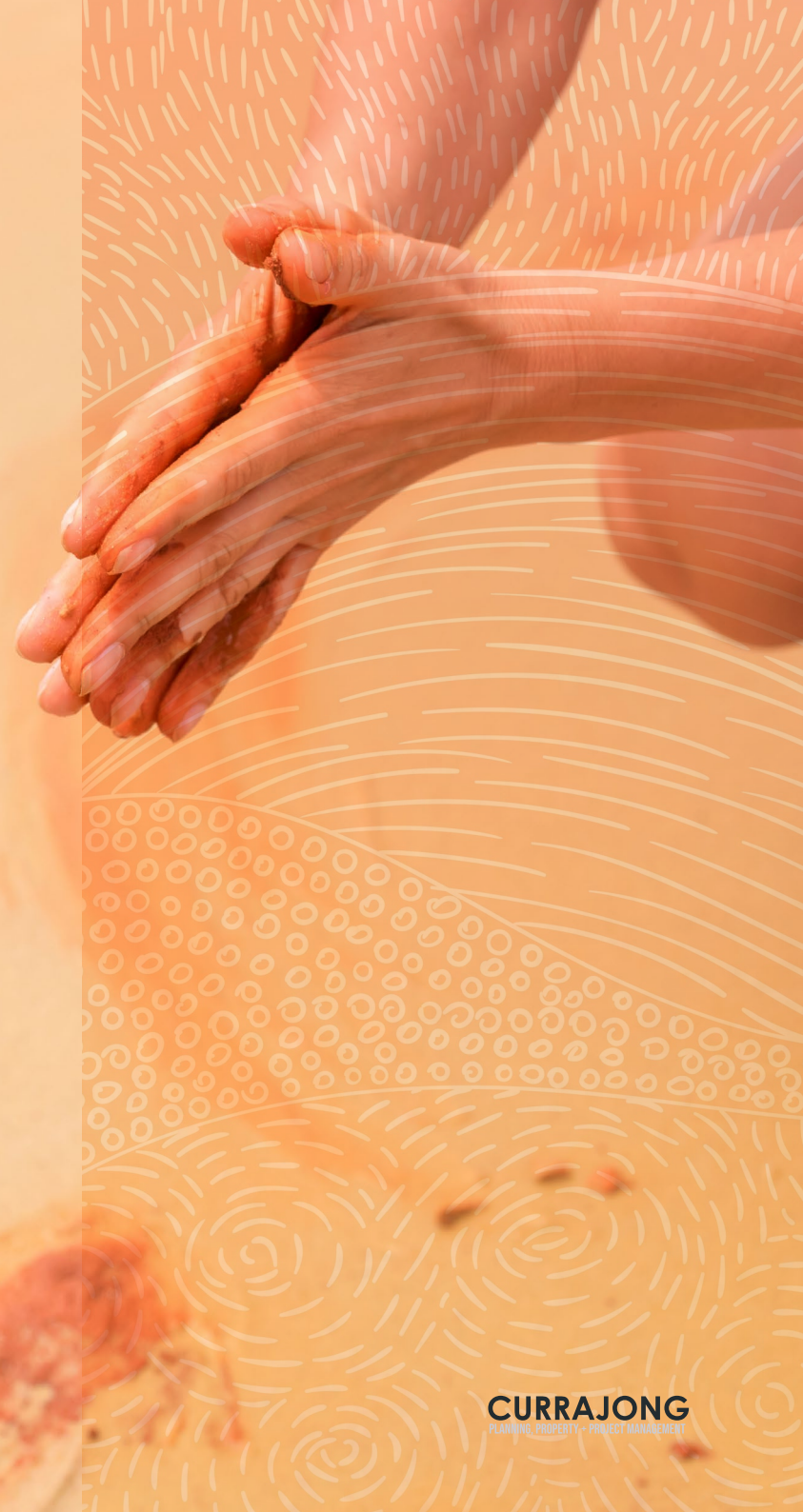
ACKNOWLEDGEMENT OF COUNTRY

Leeton Shire Council acknowledges the traditional custodians of the land on which we work and live, the Wiradjuri people, and pays its respects to Elders past, present and emerging. We recognise and respect their cultural heritage, beliefs and continuing connection with the land and rivers. We also acknowledge the contributions of Aboriginal Australians to this country we all live in and share together.

Aboriginal people maintain a strong belief that if we care for Country, it will care for us. This requires Country to be cared for throughout the process of design and development of Council projects such as the Leeton Shire Active Transport Plan.

Many of the transport routes we use today follow the traditional Songlines, trade routes and ceremonial paths in Country that Aboriginal people followed for thousands of years. It is appropriate that the Leeton Shire has an Active Transport Plan that plans for new connections to Country under a strategy approach that involves appropriate levels of community engagement.

A 'Connecting with Country' approach will also help Council meet any statutory requirements to sustainably manage Aboriginal culture and heritage in the Leeton Shire.





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INTRODUCTION

Leeton Shire Council is preparing the first Active Transport Plan to apply in the Leeton Shire.

The Leeton Shire Active Transport Plan (Leeton ATP) replaces the Leeton Shire Pedestrian Access and Mobility Plan 2019, which was largely focused on pedestrian improvements and provided minimal information on the needs of visitors, bike riders, people using the road network for fitness or people with a disability or mobility impairment.

The Leeton ATP draws on the new Transport for NSW Future Transport Strategy and Active Transport Strategy, both released in 2022. The aim is to make walking and cycling the preferred way to make short trips, with Transport for NSW encouraging regional councils to assist with achieving the NSW target of doubling the number of active transport trips within 20 years.

The Leeton ATP is specific to the travel patterns dispersed across the whole of the Leeton Shire, which is currently highly dependent on motorised vehicles for long and short trips. It brings into focus the specific requirements for creating a safe, cohesive and sustainable active transport network within the main towns and smaller settlements of the Leeton Shire. Public amenities, directional signage, water points, seating, bicycle racks, street lights and trees all support this network, and have also been considered in the Leeton ATP.

Stakeholder engagement and investigations have already commenced through surveys, workshops and meetings with various agencies, interest groups and residents. Feedback received so far provides valuable insight on active transport behaviour, attitudes and aspirations. It suggests the community is supportive of a more comprehensive and safer active transport network throughout the Leeton Shire.

Given there are limited funds available to undertake improvements, the Leeton ATP proposes targeted projects that are assessed to have the greatest benefits and user support.

The public exhibition of the draft Leeton ATP provided opportunities for feedback on the plan and generally confirmed that the actions proposed in the active transport plans for Leeton, Murrumbidgee, Wamoon, Whitton and Yanco are appropriate for investment by Council, TfNSW and other stakeholders. The exhibition process also identified a number of other projects that provide a benefit for active transport in Leeton and these projects have been incorporated into the recommendations for the final Leeton Active Transport Plan.

Now that the Leeton ATP has been adopted, it will be used by Council as a planning tool to assist with the programming of new projects and initiatives.



THE VISION

The State Vision

The Transport for NSW Future Transport Strategy 2022 sets out the key actions to connect communities and encourage more people to choose active transport, including:

- + Delivering continuous and connected cycling networks.
- + Improving the safety and comfort of people walking and riding bikes by providing fit-for-purpose active transport infrastructure and appropriate road speeds.
- + Facilitating children's and young people's independent mobility by improving safe walking and bike riding options for travel to and from school.
- + Supporting multi-modal journeys by integrating active and public transport.
- + Encouraging a shift to walking and cycling trips by delivering walking and cycling infrastructure to support mode shift.
- + Supporting emerging technology choices such as e-bikes and other micro-mobility devices.

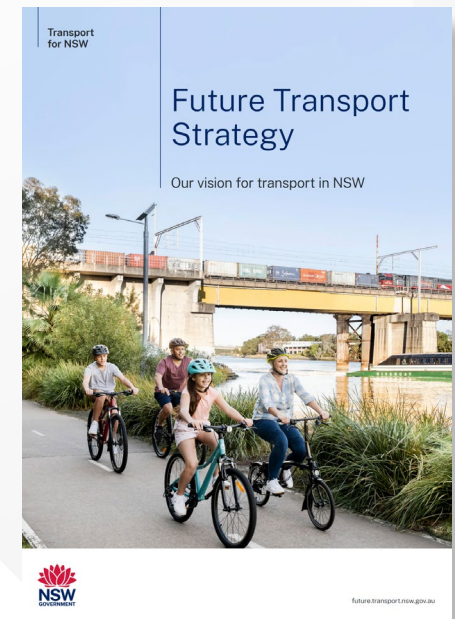
The TfNSW Active Transport Strategy 2022 draws on the NSW Future Transport Strategy 2022 and its vision for walking, bike riding and personal mobility. What is being established in NSW is a more targeted vision for safe, healthy, sustainable, accessible and integrated active transport journeys in NSW.

The NSW Government wants walking, bike riding and rolling to be the preferred way to make short trips and a viable, safe and efficient option for longer trips.

The vision of the NSW Active Transport Strategy 2022 is to double active transport trips in NSW over the next 20 years by focussing on five areas:

- + Enable 15-minute neighbourhoods.
- + Deliver continuous and connected cycling networks.
- + Provide safer and better precincts and main streets.
- + Promote walking and cycling and encourage behaviour change.
- + Support our partners and accelerate change.

The NSW Active Transport Strategy provides longer term ambitions accompanied by five-year priority moves to guide planning, investment and priority actions for active transport across NSW, including regional and rural areas.



The Vision for the Region

Leeton is at the centre of the Riverina Murray Region which is one of the most productive agricultural regions in Australia and well connected to national road and rail corridors.

The Riverina Murray Regional Plan 2041, provides the NSW Government's vision for land-uses in the Riverina Murray Region. While not specifically targeting transport planning, the Riverina Murray Regional Plan 2041 supports the expansion of transport networks and improved connections between centres and other regions to bolster business and industry growth.

Other recent regional planning work such as the NSW 2040 Economic Blueprint, Transport for NSW Future Transport 2056, NSW Services and Infrastructure Plan, regional economic development strategies and regional water strategies have also been considered in the Leeton ATP.

All these strategic planning resources have been used as an important strategic planning resources in the preparation of the Leeton ATP.



The Vision for Leeton

The Liveable Leeton 2035 Community Strategic Plan sets the following long-term vision for Leeton Shire:

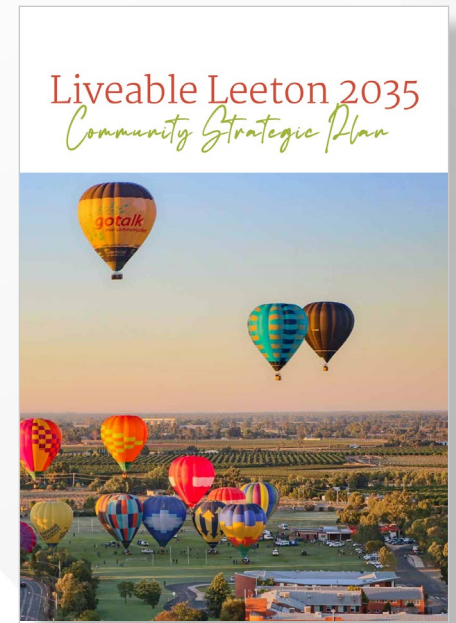
'We are a healthy, safe and connected community that respects people and the environment, enjoying active lives in a strong local economy underpinned by quality, accessible infrastructure, reliable water supplies and strong leadership.'

Five focus areas have been agreed upon to achieve the community's aspirations and vision for Leeton Shire, as follows:

- + A connected, inclusive and enriched community.
- + A safe, active and healthy community.
- + A thriving regional economy.
- + A quality environment.
- + Strong leadership and civic participation.

The preparation of the Leeton Shire Council 2022/25 Delivery Program is Council's four-year commitment to the progression of work highlighted for greater focus.

The Leeton ATP will inform Council's 4-Year Delivery Programs and 1-Year Operations Plans into the short to medium term, and should go a long way to implementing new projects that benefit walking and cycling in the Leeton Shire.



CHALLENGES + OPPORTUNITIES

A lot has changed since the adoption of the Leeton Shire Pedestrian Access and Mobility Plan in 2019, including:

- + Droughts, floods and bushfires have demonstrated the need to build more resilient settlements and multi-modal transport systems.
- + The COVID-19 pandemic has changed much in our daily lives and shown how quickly we can adapt and adopt new habits such as work-life balance, remote working, different transport choices beyond motor vehicles and a rethink of the 5-day work commute.
- + There is more urgency around reducing greenhouse gas emissions from transport, with a growing demand for electric vehicles and the NSW government making a commitment to Net Zero for transport operations by 2035.
- + Connecting with Country now informs the planning, design, and delivery of built environment projects in NSW.
- + The 6 Cities Region has replaced the Metropolis of Three Cities, with renewed emphasis on regional planning and development.
- + The 'Movement and Place' framework introduced in 2018 is now fully embedded in Transport for NSW policy.
- + New targets for the '15-minute neighbourhood' have been adopted by Transport for NSW policy under the NSW Active Transport Strategy 2022.
- + Other important policies that support active transport infrastructure have been released, including the NSW Road User Space Allocation, Providing for Walking and Cycling in Transport Projects, the Walking Space Guide and the Cycleway Design Toolbox.
- + Micro-mobility in the form of e-bikes, e-scooters and other mobility devices is growing strongly, requiring consideration of these new transport modes in the road environment.

The Leeton Shire Pedestrian Access and Mobility Plan 2019 focused mainly on footpaths in Leeton and not the other towns, villages and non-urban areas that makes-up the balance of the shire. There is a need to widen the focus of active transport planning beyond footpaths and to other areas of the Leeton Shire.



APPROACH + METHODOLOGY

Active transport users are far more attuned to the environment in which they are moving than faster moving motorists.

Planning for pedestrians and cyclists does not follow the same logic as motor traffic planning, which normally involves a 'car or truck' - 'trips' - 'routes' - 'parking' - 'traffic network' with some consideration given to the land-uses adjoining road corridors.

Active transport planning places more emphasis on the environment and the conditions along routes and at attractors.

An important aspect of the Leeton ATP is to build an understanding of the elements that will make a good pedestrian and cycling network in the Leeton Shire context. These include an understanding of the following:

- + The types of existing / potential pedestrians and cyclists and their needs.
- + The condition of the existing pedestrian and cycling network (including paths, gaps, barriers and surrounding land-uses).
- + Where pedestrians and cyclists are going and why.
- + The traffic environment (speed and volume) that pedestrians and cyclists must deal with.
- + The key planning and engineering principles that underpin an effective and usable network.
- + The most appropriate design options that meet pedestrian and cyclists needs, including standard and innovative options.
- + The views and aspirations of stakeholders.
- + Mechanisms to program / fund improvements to the active transport network.

The approach for the Leeton ATP is to develop new active transport plans for the main urban settlements in the shire that build upon existing infrastructure and that address the key issues and aspirations identified from community consultation and audits.

To achieve this approach, the Leeton ATP is being undertaken in the following stages:

STAGE 1 - Asset Review

Leeton Shire Council has adopted a Strategic Asset Management Plan in June 2022 to guide the management of its road network, including active transport assets.

The main elements of the existing network of active transport facilities in the Leeton Shire have been recorded on a series of maps in the Leeton ATP.

This local data has been presented to key Council, Transport for NSW and Murrumbidgee Irrigation as the basis for reviewing the long term management of the active transport network in Leeton Shire.

STAGE 2 - Independent Audit Investigations

Consultant planners and traffic engineers specialising in active transport planning and projects have been engaged to independently investigate the existing active transport network in Leeton Shire.

This audit work was undertaken by means of the following:

- + Drive-through and walk-through surveys of the study area, with particular focus on urban settlement areas, primary routes, land-use attractors and iconic destinations.
- + On-site meetings with interested community members where specific sites / issues needed to be observed and discussed.

The audits were not meant to gather a comprehensive inventory of pedestrian and cycling assets in the Leeton Shire. Safety reviews were also not part of the consultancy brief.

The emphasis of the independent / expert audits was on identifying gaps in the network, barriers to people undertaking regular active transport, and new opportunities to cater for existing and potential pedestrian and cycling activity.

STAGE 3 - Promotion

Information about the Leeton ATP was published in local media and Leeton Shire Council's website to inform community members about the preparation of the new plan. Emails were also sent out to stakeholders known to Council who have an interest in pedestrian and cycling activities.

STAGE 4 - Online Survey

An online survey was made available via Leeton Shire Council's website to provide community members with an opportunity to provide preliminary information and comments on the key issues about walking and cycling experiences, ideas, behaviour and attitudes.

STAGE 5 - Preliminary Community Workshops

Community workshops and meetings were held with interested locals in Leeton, Murrami, Wamoon, Whitton and Yanco in November 2022.

The workshops were structured around a series of local area maps. Questions were asked about the pedestrian and cycling network and local conditions that led the conversation to allow for problems, solutions, suggested routes and feedback to be covered within the allocated workshop.

Throughout the workshops, the responses given had common themes which reiterated the desire for additional paths to popular destinations and routes within the community.

STAGE 6 - Local Data Review and Planning

The audits and stakeholder feedback revealed a variety of pedestrian and cycling facilities provided in Leeton Shire, in varying conditions.

Expectedly, the preliminary investigations and engagement findings identified a number of deficiencies and barriers in the active transport network, which are discussed in more detail in later sections of the Leeton ATP.

Where these involved minor issues, they were discussed with Council staff for addressing. Project planning and development issues were also discussed with relevant staff to assist with the formulation of projects and priorities in the Leeton ATP.

STAGE 7 - Leeton Active Transport Plan

The Leeton ATP has been prepared (this report) to record the relevant information in one succinct strategy document.

Incorporated into the Leeton ATP are a series of maps dealing with the audit and preliminary engagement findings.

Active Transport Plans have also been prepared for Leeton, Murrami, Wamoon, Whitton and Yanco to 'visualise' the additional facilities required to achieve a more connected network.

A Matrix Table in Section 10 provides full visibility on how priorities and actions were decided.

Concept designs of the top priority projects recommended for action are also shown in the Leeton ATP along with project costings and any notes relating to project implementation.

STAGE 8 - Public Exhibition

Formal public exhibition of the draft Leeton ATP was completed in accordance with the requirements of the Leeton Community Participation Plan 2019.

STAGE 9 - Review of Submissions and Finalisation of Leeton ATP

The final task was to review the draft Leeton ATP and recommended programme of infrastructure projects by Council. The review incorporated the feedback received from the local community as a result of the public exhibition process, with a number of new projects identified for inclusion in the adopted Leeton Active Transport Plan.

LOCAL CONTEXT

Leeton in the MIA

Leeton is at the centre of the Riverina Murray Region Murrumbidgee Irrigation Area which is one of the strongest agricultural regions in Australia and well connected to national road and rail corridors.

The region has a number of larger town centres at Griffith (27,700), Wagga Wagga (67,800) and Albury (56,000). As well as having the highest proportion of the regional population, these centres are hubs for higher order shopping and trade services, health and education. The balance of the population is dispersed across many smaller towns, settlements and rural holdings, which results in travel patterns that are dispersed across the region.

Over 90% of all trips in the region, including work travel, are by private vehicle. Walking and cycling comprise less than 5% of all trips, while public transport use is less than 1%. Poor access to public transport contributes to social disadvantage and accessibility issues in some sections of the wider regional community.

Town centres, schools, sports and recreational centres tend to have higher levels of active transport participation, evidenced by walking, running, bike riding and other rolling activities and events.

Leeton Shire

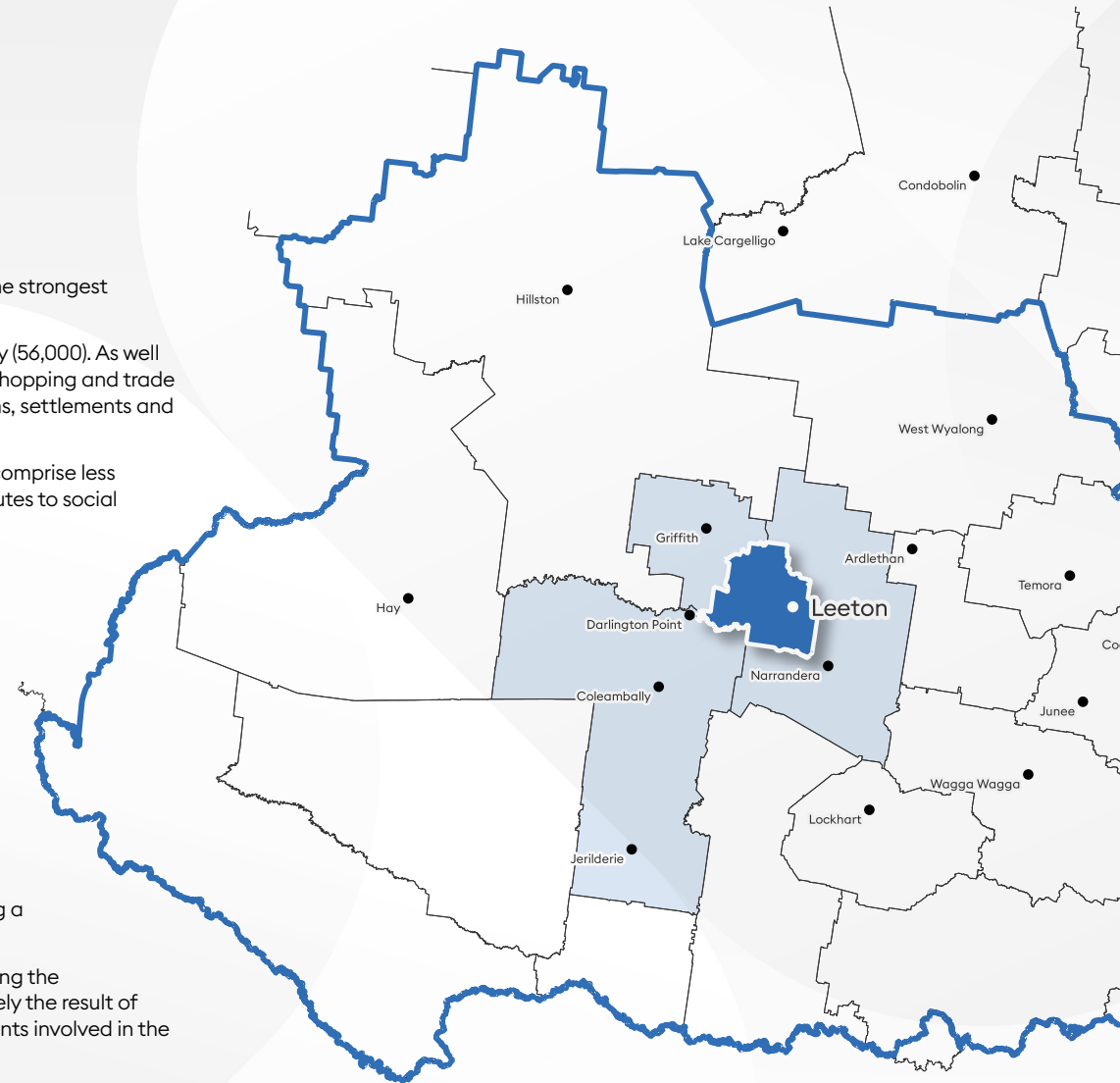
The Leeton Shire has a population of around 11,500 people, spread over a relatively large area of 1,167 square kilometres. The main towns in the shire are Leeton, Murrambi, Wamoon, Whitton and Yanco.

The mainstay of the Leeton Shire economy is manufacturing and agriculture, with other key employment sectors including education, health and retail trade.

The Leeton Shire community is considered to have high car dependency for both work and leisure. Analysis of car ownership in 2021 indicates 57% of households in Leeton Shire had access to two or more motor vehicles, compared to 55% in Regional NSW and 46% in Greater Sydney. Motor vehicle dependency is reflected in the method of travel to work with over 72% of people in Leeton Shire using a motor vehicle to travel to work.

Only a small proportion of the community use alternative methods to travel to work, with walking being the most preferred with around 4% of people walking to work. The dependency on motor vehicles is largely the result of limited public transport coverage and the large distances between origins and destinations of residents involved in the rural industry sector.

Access to education and support services and a long-term focus on improving health and wellbeing are important issues to cater to the needs of existing and future residents.



Leeton

Overview

Leeton was established by the Murrumbidgee Irrigation Trust in 1913 as the administration headquarters of the MIA. In 1914, the American architect Walter Burley Griffin re-designed the town along similar design principles to Canberra. Burley Griffin advocated a town square / meeting place, with the following key principles nominated for Leeton's "Plan of Extension":

- + A central symbol of progress and prosperity.
- + A community theatre of a civic function, representing continuity and stability.
- + A place of relaxation and respite.
- + A hint of the exotic fused with a sense of energy.

Griffin's organic design has culminated in strong vistas and places towards the central area of Leeton. Many buildings were constructed in the art deco period, which centres a strong 'sense of place' and opportunity for a strong destination 'brand'.

With a current population over 8,600 people, Leeton is the largest urban area in the shire and the mainstay of industry, employment, housing and society. Conditions at Leeton are ideal for walking and cycling. Over 90% of the town population lives within one kilometre of the Leeton CBD, schools and workplaces. Many streets in Leeton are quite wide and have lower traffic volumes than in larger regional centres. The parklands in Leeton offer ideal conditions for residents and visitors to enjoy these spaces. However, links to industrial areas, some schools and parklands and residential areas is patchy.



Preliminary consultation and audit findings - Leeton

A number of constraints and opportunities were identified in the Leeton active transport network, which are reported in the table below and Leeton township map on page 16.

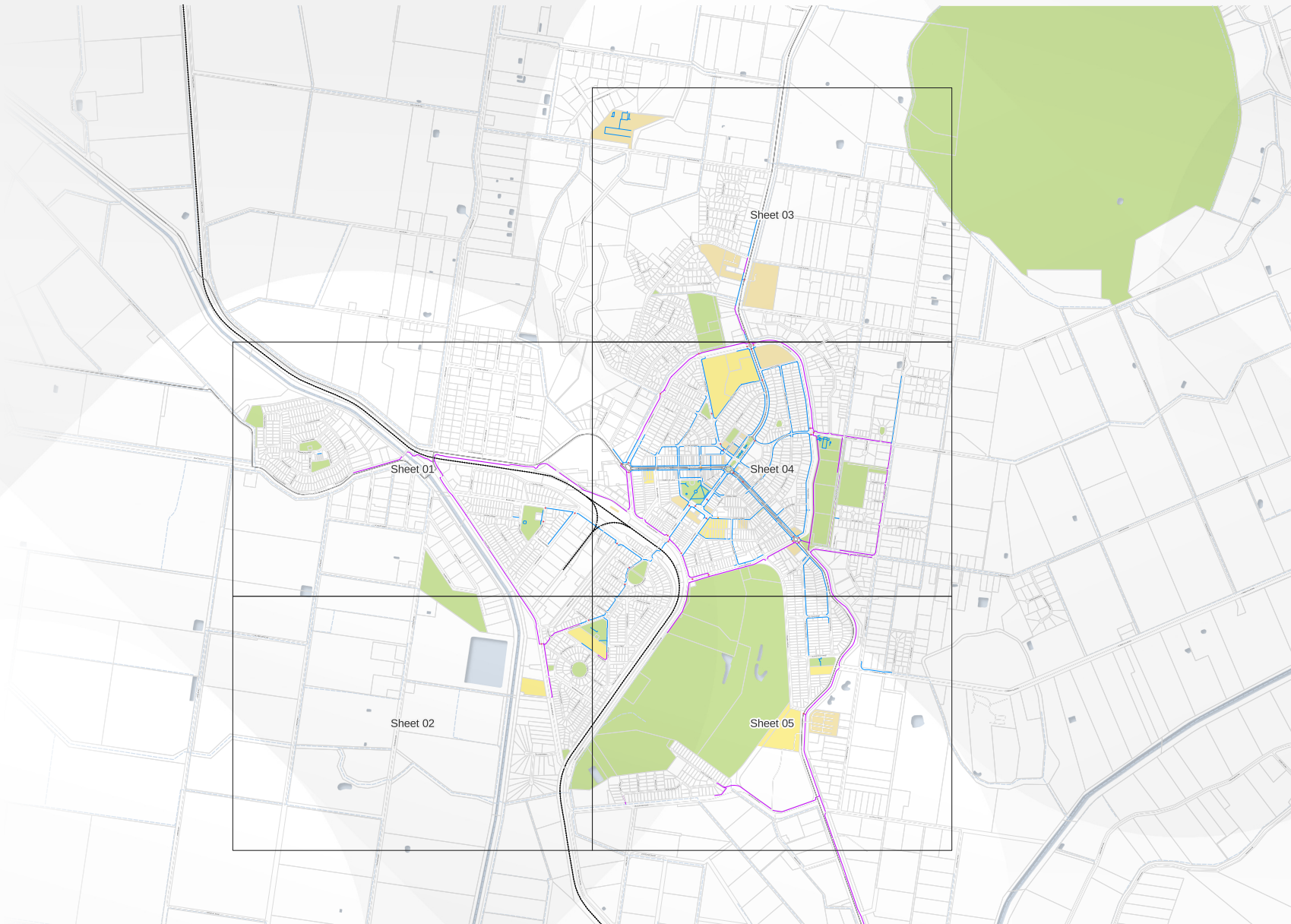
ISSUE	FINDING
Footpaths	The blue lines on the map show the existing network of constructed footpaths in Leeton. The blue dash lines show parts of the road network that are being readily used by pedestrians that do not have constructed footpaths. All community members consulted are supportive of more footpaths.
Shared Paths	The purple lines on the map show the existing shared path network, which include bitumen sealed and concrete surfaces. The purple dash lines on the map show parts of the road network that are being readily used by pedestrians and cyclists which would benefit from a shared path. All community members consulted are supportive of more shared paths.
Kerb Ramps	There are a number of kerb ramps that need to be provided or need replacing due to poor alignment, grade or condition.
School Zones	Schools in Leeton are generally provided with constructed footpaths. Conditions around Leeton High School and Leeton Public School are quite busy during school zone times and require a more comprehensive active transport network around schools and linking to other attractors such as the Leeton CBD.
Bicycle lanes and exclusive off-road cycle paths	There are no on-road cycling lanes or exclusive bike paths in Leeton. Consultation with community members suggested more focus on off-road shared paths is required for recreational riding with friends and / or family. Regular road cyclists advise they seek on-road cycling routes along the quieter rural roads for leisure or training where sealed shoulders are provided.
Road crossings	There is limited use of kerb extensions and blisters to reduce effective road carriageway width and provide safe road crossing points. The main existing crossing points are shown as black arrows.
Barriers	The Yanco to Griffith Railway running through Leeton acts a barrier for active transport movements. Limited railway crossing points tend to concentrate active transport movement along main roads where there are motor vehicle trips. Community members consulted suggested a focus on active transport linkages across railways and at existing railway crossings to ensure coherent, safe and direct paths. Canal road crossing points were also raised as potential barriers.
Obstacles	No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians or cyclists on constructed paths.
Trip Hazards	Footpath cracking and sections of broken paving were observed on some footpaths / shared paths. Some constructed paths finish before the bitumen seal of the road carriageway, creates potential trip hazard areas. Many existing kerb ramps present as trip hazards due to poor alignment, grade or condition. Provision of concrete footpaths, shared paths and new kerb ramps along main walkways to the edge of the sealed road carriageway would help address potential trips and falls.
Lighting	No major issues were raised / noted.
Tactile Indicators	Generally absent in Leeton CBD and other public areas.
End of trip facilities	There are a good number of public parks providing end-of-trip facilities throughout Leeton. There are few disabled parking spaces within Leeton CBD. A larger capacity public car park is required at Fivebough Wetlands and provision is required for lockable bicycle parking facilities.
Signage	Generally absent at important tourism attractors.
Other	People following the Australian Road Rules was raised as a general issue for continued road safety promotion.

Leeton mapping

A series of maps have also been prepared which summarise some of the key consultation / audit findings of the Leeton investigations (as presented in the previous table).

Leeton has an expansive / large urban area. To manage this issue, a grid-based approach to the project mapping has been adopted.

This grid is shown in the map to the right of page and should be referred to when necessary when viewing the Leeton based maps throughout this Active Transport Plan.





Joins Map Sheet 02

General Comments

There is a general lack of Tactile Ground Surface Indicators within Leeton.

More people are walking and cycling particularly around school holidays.

There needs to be more awareness and promotion of road rules and cyclist safety including lights, high visibility clothing and the importance of wearing helmets.

Cyclists wearing dark clothing can be an issue for travelling motorists.

There is a need for an off-leash walking area moving into the future.

Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Leeton Township

Sheet Ref
Sheet 01 of 05

Map Legend

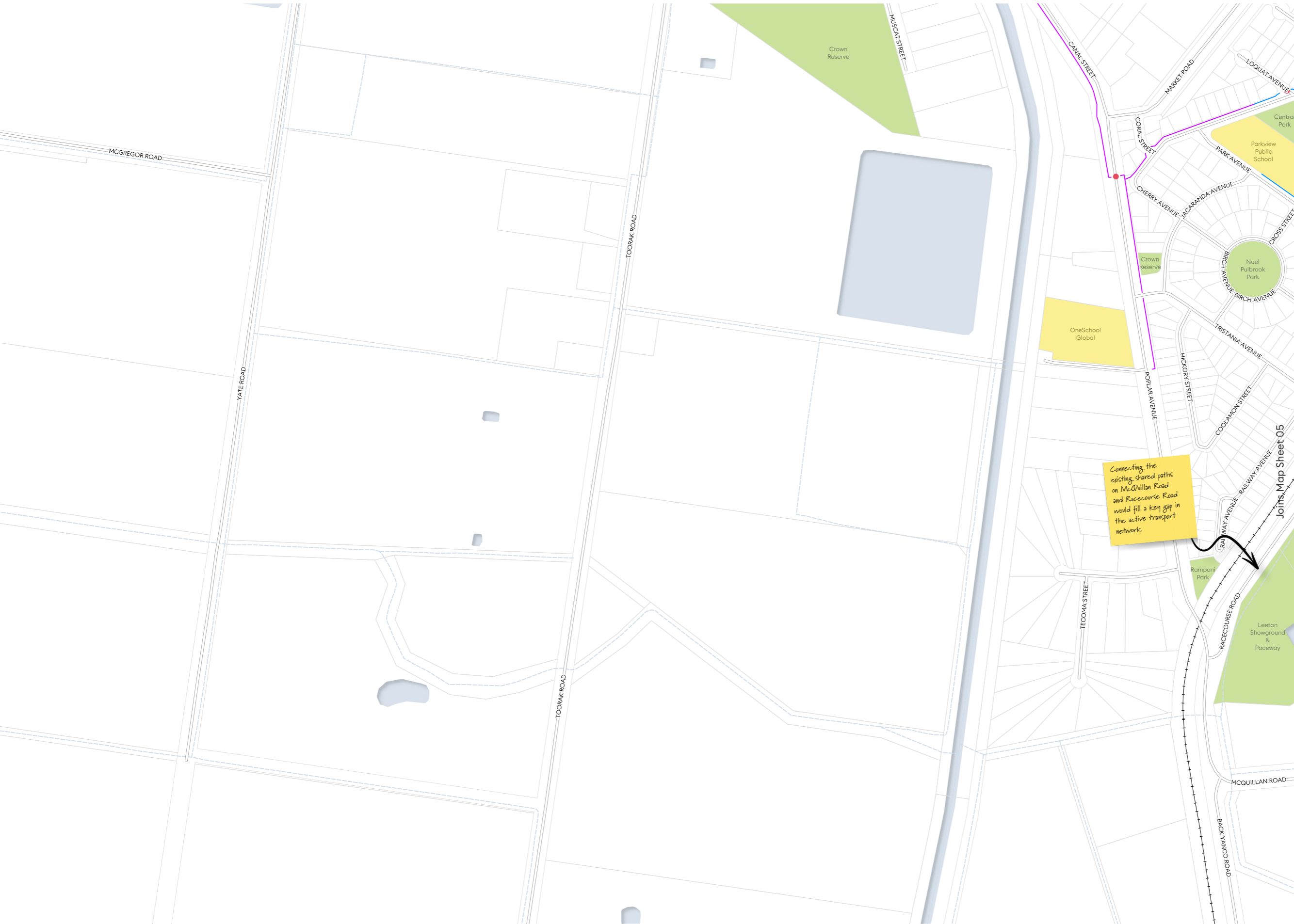
- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Education Facilities
- Community Facilities
- Parks and Recreation Areas

Map Scale
0 50 100 150 m

North

Joins Map Sheet 04

Joins Map Sheet 01



There is a general lack of Tactile Ground Surface Indicators within Leeton.

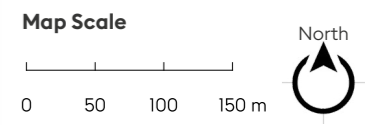
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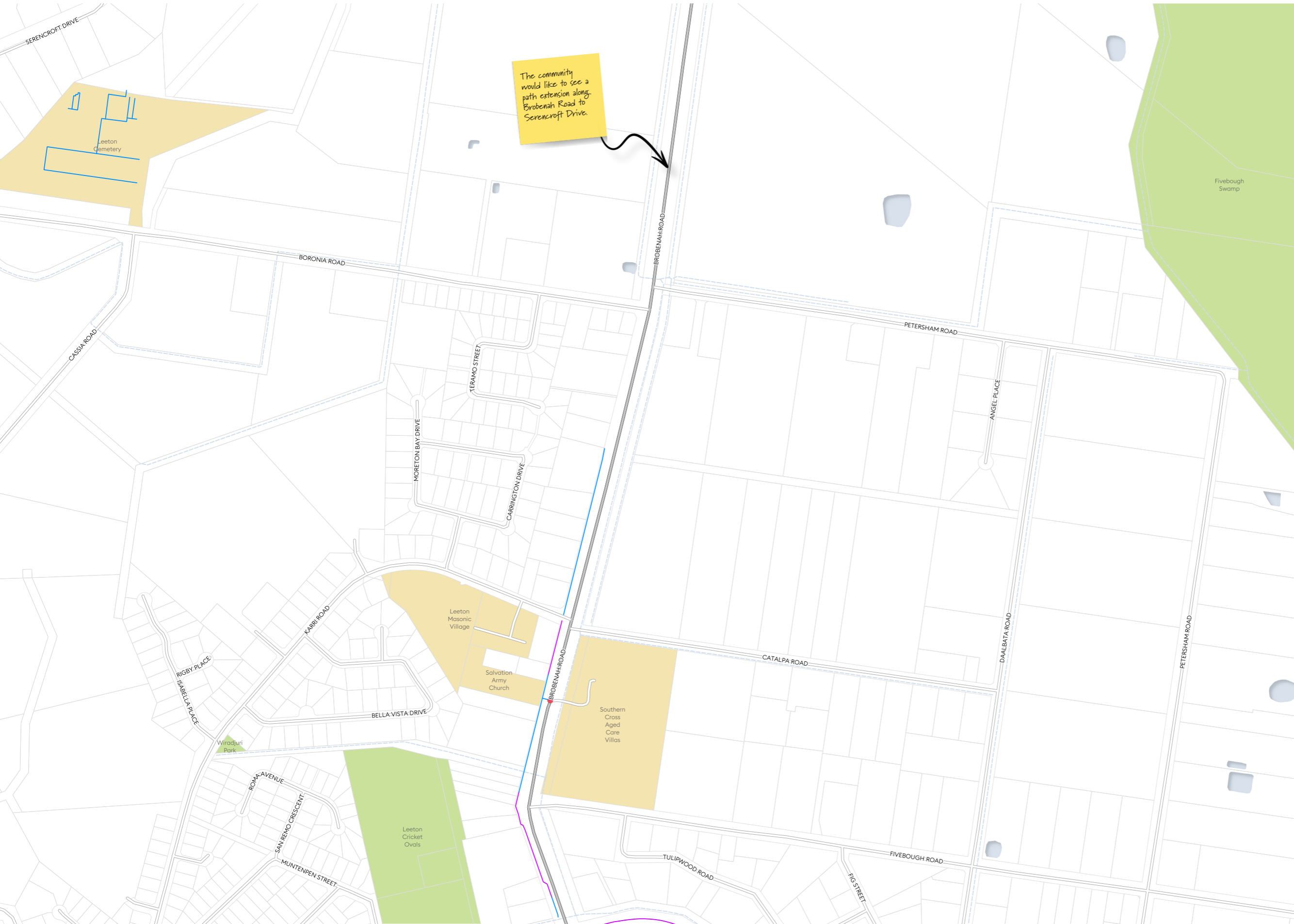
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Project	Leeton Active Transport Plan
Map Title	Consultation / Audit Map
Map Location	Leeton Township
Sheet Ref	Sheet 02 of 05
Map Legend	<ul style="list-style-type: none"> Primary Road Network Local Road Network Railways Existing Footpath Existing Shared Path Existing Pedestrian Crossing Existing Centre Refuge Education Facilities Community Facilities Parks and Recreation Areas





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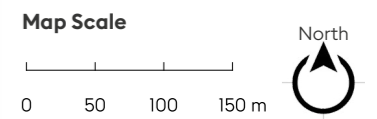
Project
Leeton Active Transport Plan

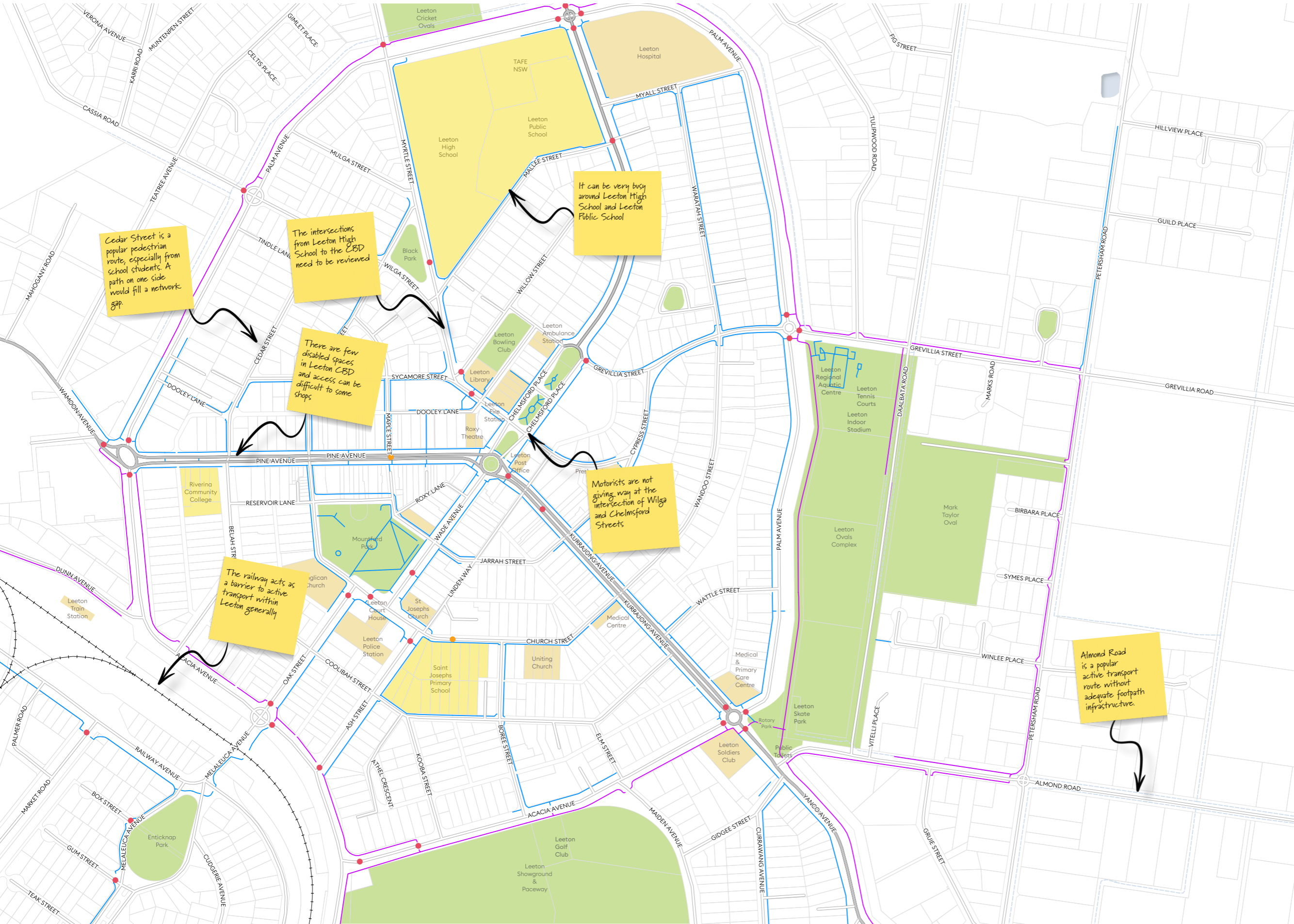
Map Title
Consultation / Audit Map

Map Location
Leeton Township

Sheet Ref
Sheet 03 of 05

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas





Cedar Street is a popular pedestrian route, especially from school students. A path on one side would fill a network gap.

The intersections from Leeton High School to the CBD need to be reviewed

It can be very busy around Leeton High School and Leeton Public School

There are few disabled spaces in Leeton CBD and access can be difficult to some shops

Motorists are not giving way at the intersection of Wilga and Chelmsford Streets

The railway acts as a barrier to active transport within Leeton generally

Almond Road is a popular active transport route without adequate footpath infrastructure.

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Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Leeton Township

Sheet Ref
Sheet 04 of 05

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Education Facilities
- Community Facilities
- Parks and Recreation Areas

Map Scale
0 50 100 150 m

North



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Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Leeton Township

Sheet Ref
Sheet 05 of 05

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Education Facilities
- Community Facilities
- Parks and Recreation Areas

Map Scale

0 50 100 150 m

North

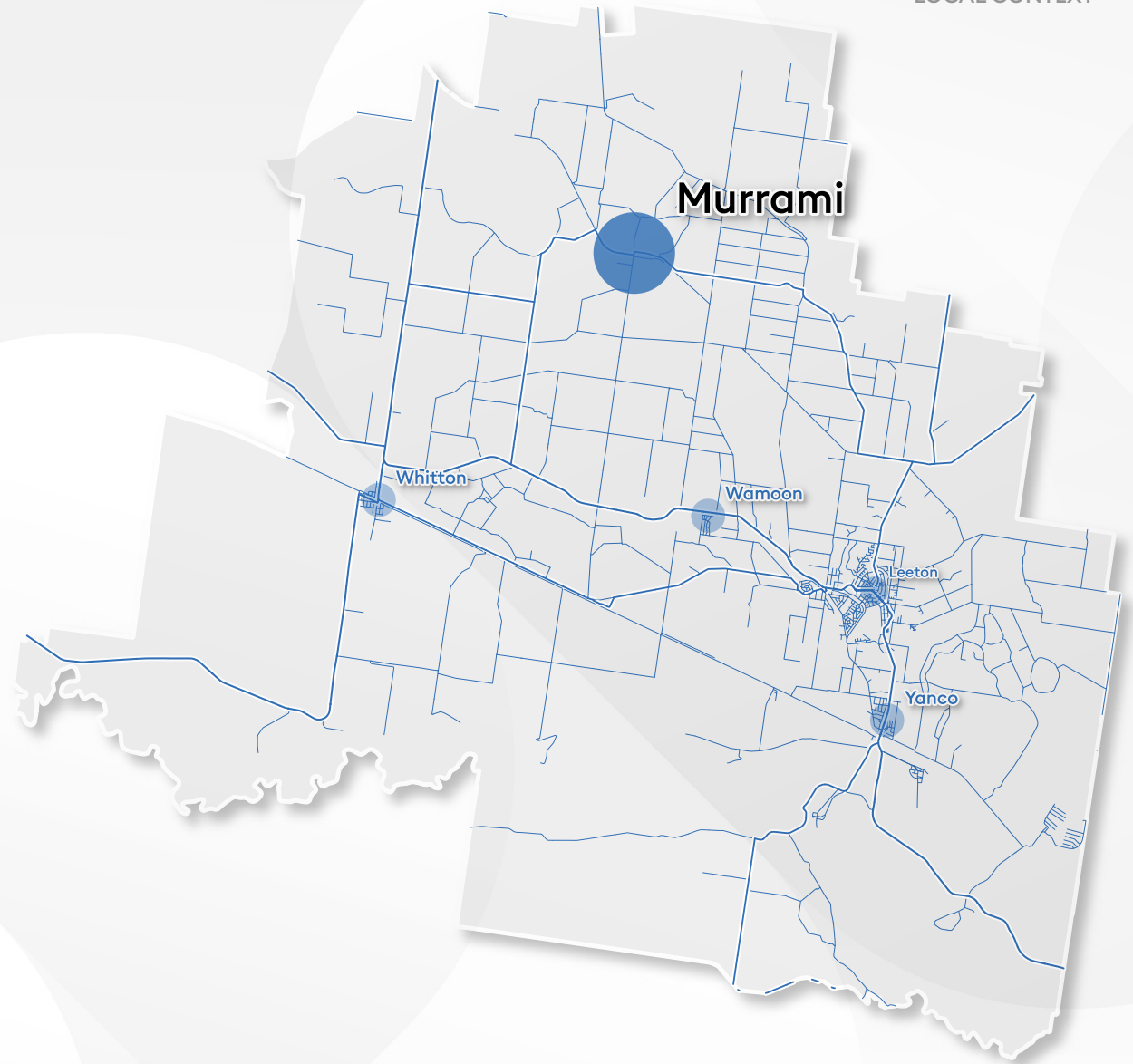
Murrami

Overview

Murrami (population 326) is located approximately 32 kilometres to the north-west of Leeton. Murrami is connected to reticulated potable water supply and comprises private residences, Murrami Post Office, and Murrami community hall and playground.

The Griffith-Junee Railway passes through Murrami and there are major grain receival depots adjacent to railway lines.

The Murrami Post Office is the centre of most daily traffic and activity. Residents were observed walking on the actual road carriageway, which is an issue along Wattle Avenue where there is heavy vehicle and through traffic.

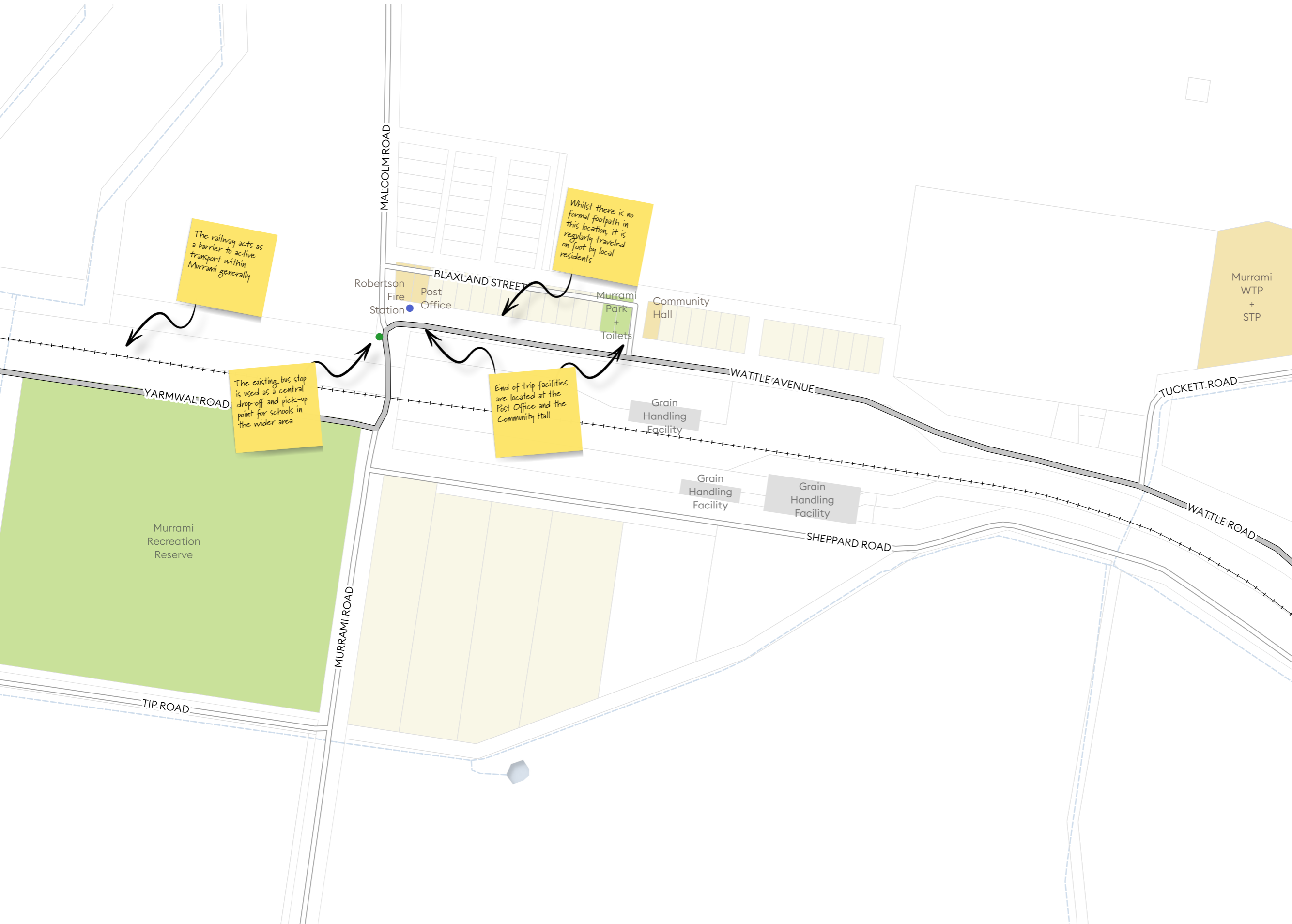


Preliminary consultation and audit findings - Murrami

The audit and consultation work in Murrami revealed a general lack of footpaths and facilities.

A map summarising the audit / consultation findings of the Murrami investigations is also presented.

ISSUE	FINDING
Footpaths	There are generally no constructed footpaths in Murrami. The grassed footpath verge between the Murrami Post Office and Murrami Hall is the area being readily used by pedestrians without benefit of constructed paths.
Shared Paths	There are no constructed shared paths.
Kerb Ramps	There are generally no kerb ramps as there are no constructed footpaths. New kerb ramps should form part of any new footpath treatments.
School Zones	There are currently no schools in Murrami and there is no need for school zones or crossings.
Bicycle lanes and exclusive off-road cycle paths	There are no on-road cycling lanes or exclusive cycling paths in Murrami, nor are they warranted at this stage.
Road crossings	There are no constructed road crossings in Murrami and there is no need for crossings at this stage.
Barriers	The railway acts a general barrier for active transport, however the warrant for a rail crossings is low due to lack of land-use attractors on the southern side of the railway.
Obstacles	No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians or cyclists on constructed paths.
Trip Hazards	Grassed footpaths and uncontrolled road drainage results in periodic washouts, erosion and footpath damage. There is potential for trips and falls between the Post Office and Hall where the majority of active transport trips were observed.
Lighting	No major issues were raised / noted.
Tactile Indicators	Generally absent in Murrami and not required at this stage.
End of trip facilities	The Post Office and Hall provide end of trip facilities, including commercial sale of drinks and packaged food.
Signage	Generally absent.
Other	The school bus stop and the Post Office is used as a central drop-off and pick-up point for schools students accessing education in the wider area. Trucks accessing grain receival facilities and farming properties present as a potential safety issue, particularly at the Post Office corner. Lack of underground drainage presents additional issues for pedestrians, particularly at the Post Office corner.



Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Murrami Village

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Village Bus Stops
- Village Phone Booths
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Notable Built Features
- General Village Uses

Map Scale

0 25 50 75 100 m

North

Wamoon

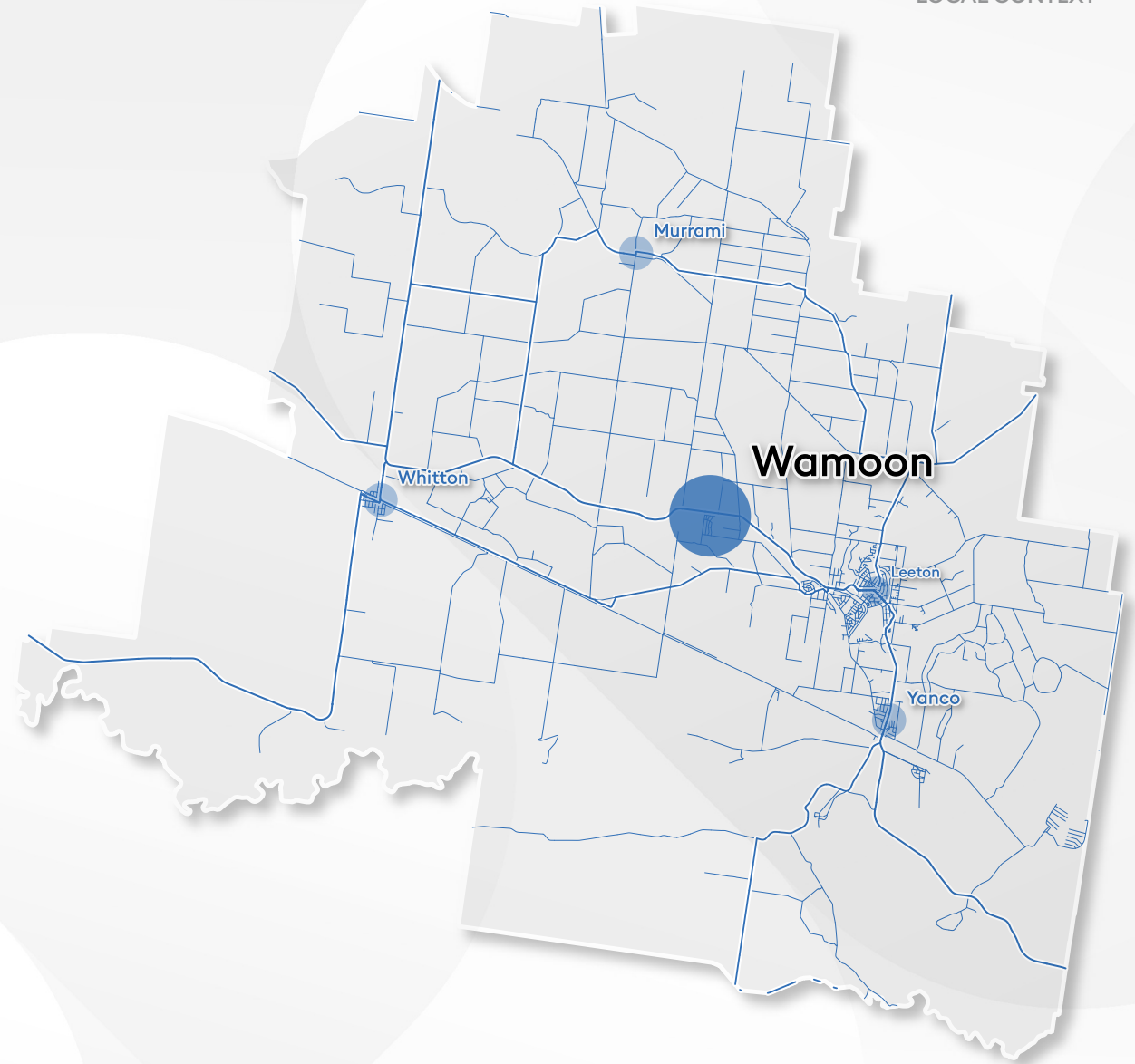
Overview

Wamoon (population 200) is located adjacent to Irrigation Way approximately 10 kilometres west of Leeton. Wamoon was established to provide a place of residence for farm and cannery workers when the rice and fruit industries were being established in 1912.

Wamoon is connected to reticulated potable water supply and there are plans to connect dwellings in the village to reticulated sewer.

Many of the local roads within the villages and surrounding rural areas are sealed, with few formed footpaths and no formal bicycle paths in villages. Due to the wide village streets and low traffic volumes, many residents walk or cycle on the actual road carriageway or along the grassed verge.

There is generally less pedestrian and cycling activity to access work, shops and other facilities in Wamoon. Most school students in Wamoon were observed walking to Wamoon Public School or to the adjoining bus stop to access other schools in the shire.



Preliminary consultation and audit findings - Wamoon

The audit and consultation work in Wamoon revealed a general lack of footpaths and facilities.

A map summarising the audit / consultation findings of the Wamoon investigations is also presented.

ISSUE	FINDING
Footpaths	There are generally no constructed footpaths in Wamoon. Everyone was observe to walk on the road carriageway or road shoulder. The grassed footpaths shown as a blue dash lines on the map show the footpath areas being used by pedestrians that do not have constructed paths.
Shared Paths	There are no constructed shared paths in Wamoon. Everyone was observe to walk on the road carriageway or road shoulder.
Kerb Ramps	There are generally no kerb ramps as there are no constructed paths. New kerb ramps should form part of any new path treatments.
School Zones	Wamoon Public School (approximately 50 students) has an established school zone. The school bus stop, drop-off and pick-up areas lack constructed footpaths.
Bicycle lanes and exclusive off-road cycle paths	There are no on-road cycling lanes or exclusive cycling paths in Wamoon, nor are they warranted at this stage.
Road crossings	There are no constructed road crossings in Wamoon and there is no need for crossings at this stage.
Barriers	Irrigation channels act as minor barriers / squeeze points for active transport.
Obstacles	No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians or cyclists.
Trip Hazards	Grassed footpaths and road drainage results in periodic washouts and erosion.
Lighting	No major issues were raised / noted.
Tactile Indicators	Generally absent in Wamoon and not required at this stage.
End of trip facilities	Wamoon Park provides end of trip facilities.
Signage	Generally absent.
Other	The school bus stop opposite Wamoon Public School functions as the central drop-off and pick-up point for Wamoon Public School as well as other schools in the area. Canals and narrow width roads present some challenges for active transport. The audit observed a number of free roaming dogs, which my may present issues under the Companion Animals Act.



Wamoon has an established 40km/h speed zone. The school has approximately 50 students.

The school drop-off and pick-up areas and bus stop area lack footpaths. There is a walkway bridge to the School.

The route highlighted in blue shows the route that the school bus takes through the village of Wamoon.

There are playground and end of trip facilities available at the Wamoon Park.

General Comments

- Wamoon is predominantly provided with single width bitumen sealed streets
- The existing drainage canals are limiting access (squeeze points)
- There is some uncertainty in the community about who is responsible for mowing and maintaining some areas of the village
- The community has observed lots of roaming dogs which can inhibit walking and cycling
- The school bus stop is busy during drop-off and pick-up times particularly

Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Wamoon Village

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Village Bus Stops
- Village Phone Booths
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Notable Built Features
- General Village Uses

Map Scale
0 25 50 75 100 m

North

Whitton

Overview

Whitton (population 496) is located approximately 20 kilometres to the west of Leeton on the intersection of Irrigation Way and the Whitton-Darlington Point Road.

Whitton is connected to reticulated potable water supply and a reticulated sewerage system. Within the village is a Council operated swimming pool, weekly garbage and recycling service, a public school (up to year 6), a general store / cafe, post office, hotel, bowling club, community run museum.

Many of the local roads within the villages and surrounding rural areas are sealed, with few formed footpaths and no formal bicycle paths in villages.

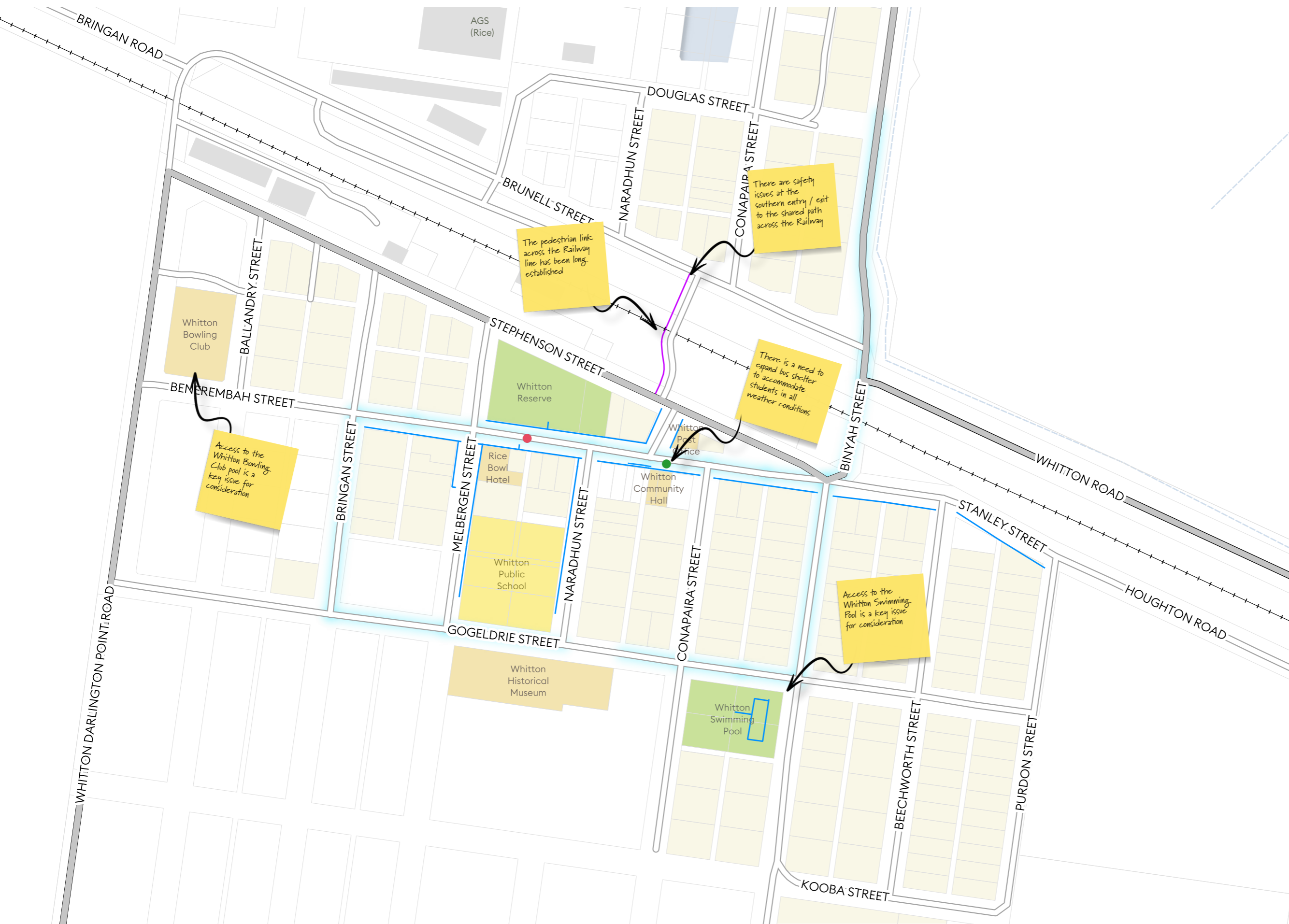
Many of the local roads within the villages and surrounding rural areas are sealed, with few formed footpaths and no formal bicycle paths in villages. Due to the wide village streets and low traffic volumes, many residents walk or cycle on the actual road carriageway or along the grassed verge.



Preliminary consultation and audit findings - Whitton

The audit and consultation work in Whitton revealed a central spine of footpaths and facilities along Benerambah, Melberger and Naradhun Streets. A map summarising the audit / consultation findings of the Wamoon investigations is also presented.

ISSUE	FINDING
Footpaths	The blue lines on the map show the existing network of constructed footpaths in Whitton. The blue dash lines on the map show parts of the road network that are being readily used by pedestrians that do not have constructed footpaths. There is a need to connect existing footpaths in Melberger and Naradhun Streets to the Whitton Swimming Pool in Gogeldrie Street. A footpath connection to the Whitton Bowling Club would also have merit.
Shared Paths	There is an existing shared path across the railway reserve (shown as a purple line on the map) that is well used by residents seeking to access shops and facilities from housing north of the railway line.
Kerb Ramps	There are kerb ramps along constructed footpaths with varying levels of compliance. Water ponding along constructed kerb and gutters presents a major issue for use of kerb ramps during extended rainfall events, and prevents pedestrians accessing footpaths. There is a need to fix drainage and kerb ramps along existing paths, particularly around the General Store and Post Office. New kerb ramps should form part of any new constructed path treatments.
School Zones	Whitton Public School has an established school zone. There are footpaths along Melberger and Naradhun Streets, with no footpath connection along Gogeldrie Street.
Bicycle lanes and exclusive off-road cycle paths	There are no on-road cycling lanes or exclusive cycling paths in Whitton, nor are they warranted at this stage.
Road crossings	There are no constructed road crossings in Whitton. Improved kerb ramps linking both sides of Benerambah Street near the General Store and Post Office are required, without taking away on-street parking.
Barriers	The railway acts a barrier for active transport. The existing shared path across the railway reserve is well located and used.
Obstacles	Water ponding along the existing kerb and gutter in Benerambah Street presents a temporary barrier to pedestrians. Regular maintenance and cleaning of the gutter would reduce water ponding and maintain access to footpaths. No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians or cyclists on constructed paths.
Trip Hazards	Some kerb ramps and grassed footpaths, where drainage has created washouts and erosion, present as trip hazards. Provision of concrete footpaths and new kerb ramps along main walkways would help address potential trips and falls.
Lighting	No major issues were raised / noted.
Tactile Indicators	Generally absent in Whitton and not required at this stage.
End of trip facilities	Whitton Reserve provides end of trip facilities.
Signage	Generally absent.
Other	Trucks travelling through town and higher speed vehicles along Benerambah Street present as a potential safety issue. Lack of underground drainage creates issues for pedestrians, particularly along Benerambah Street. There are a lot of residents who use mobility scooters to access services in town.



General Comments

Water is known to pond in the gullies at Whitton for up to a week which stops people walking along kerb ramps / footpaths and instead they walk on the road. Water will run along the gullies if they are regularly cleaned.

Trucks travel through town at higher speeds than signposted limits.

Truck compression braking signage has been recently installed.

A high percentage of residents are users of mobility scooters (approx. 13 people).

The town improvement committee is currently investigating a free camping site.

Project

Leeton Active Transport Plan

Map Title

Consultation / Audit Map

Map Location

Whitton Village

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Village Bus Stops
- Village Phone Booths
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Notable Built Features
- General Village Uses

Map Scale

0 25 50 75 100 m



Yanco

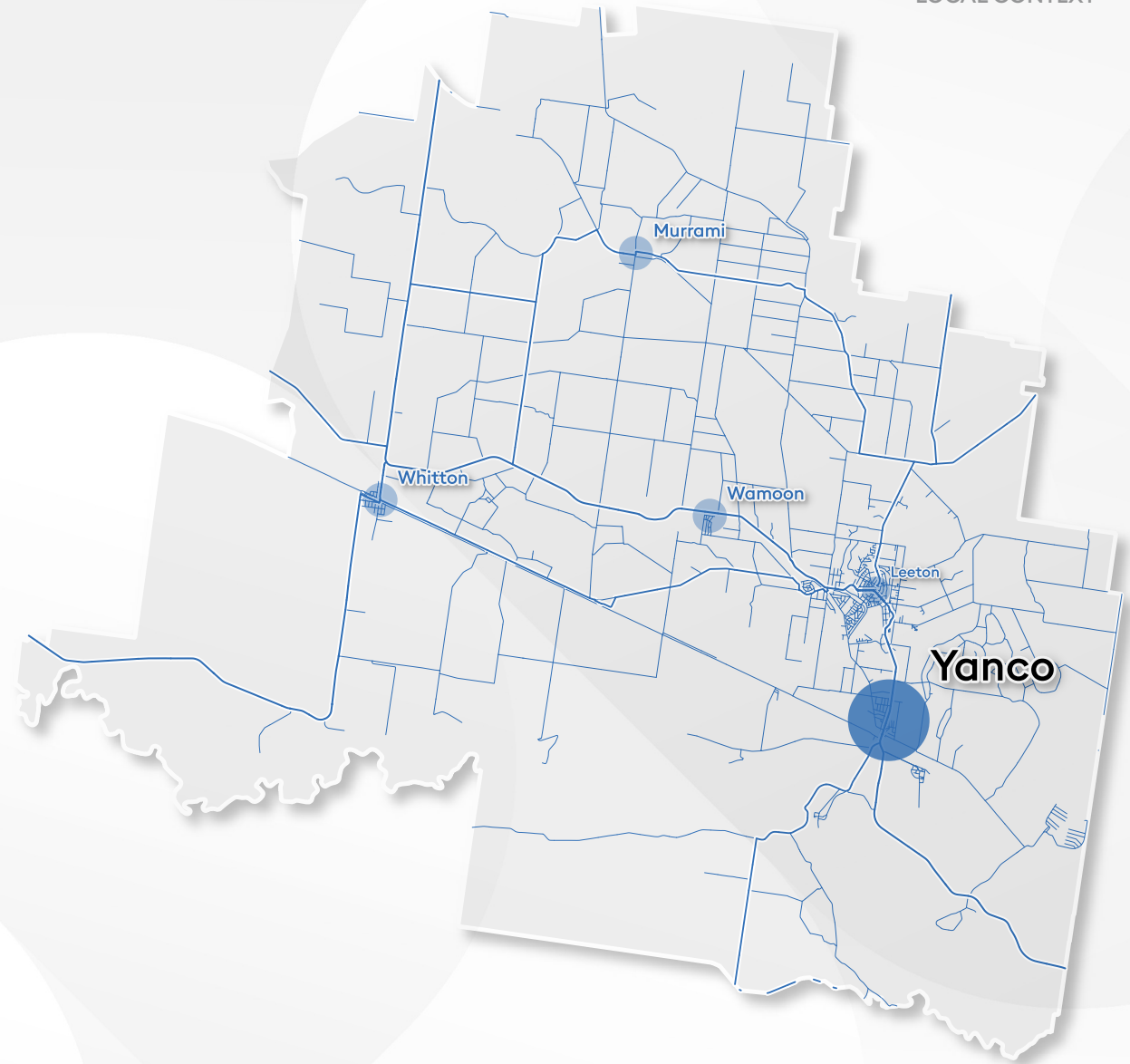
Overview

Yanco (population 505) is approximately 6 kilometres south of Leeton.

Yanco is a fully serviced town with reticulated water and sewer. The town has a public school, parks, multi-use sports ground, a central business area with a hotel, club, general store / café and post office. On the western side of Main Avenue from the Yanco Hotel to the All Services Club north of Binya Street (Back Yanco Road) and on the eastern side of Main Avenue north of Waring Park to the Yanco General Store.

Yanco is the home of the Yanco Agricultural High School which is based around the historical McCaughey homestead and offers education from year 7 to 12, as well as the Yanco Agricultural Institute which employs 95 people and is NSW DPI's Centre of Excellence for Sustainable Rice and Horticulture. Tocal College also runs short courses from the site.

Due to the wide main road and local street system, many pedestrians and cyclists may find it difficult to negotiate some elements of the road network in Yanco.



Preliminary consultation and audit findings - Yanco

The audit and consultation work in Yanco revealed a relatively extensive footpath network in fair to good condition and a less extensive shared path network in good condition. A number of opportunities and constraints (deficiencies, gaps and barriers) were identified in the Yanco active transport network, which are discussed below. A map summarising the audit / consultation findings of the Yanco investigations is also presented.

ISSUE	FINDING
Footpaths	The blue lines on the map show the existing network of constructed footpaths in Yanco. The blue dash lines on the map show parts of the road network that are being readily used by pedestrians that do not have constructed footpaths. There is a need to connect McCaughey Park and residential areas east of the Yanco Main Street via new constructed footpaths.
Shared Paths	There is an existing shared path that links Yanco and Leeton, shown as a purple line on the map which is well used. The purple dash lines on the map show parts of the road network that are being readily used by pedestrians and cyclists which would benefit from a shared path. There was a desire to connect outlying Yanco Agricultural High School and Yanco Agricultural Research Centre to Leeton with shared paths. All community members consulted are supportive of more shared paths.
Kerb Ramps	There are kerb ramps along constructed footpaths with varying levels of compliance. There is a need to fix kerb ramps along existing paths. New kerb ramps should form part of any new footpath treatments.
School Zones	Yanco Public School has an established school zone and there are existing footpaths along all streets.
Bicycle lanes and exclusive off-road cycle paths	There are no on-road cycling lanes or exclusive cycling paths in Yanco, nor are they warranted at this stage.
Road crossings	The road crossing of Irrigation Way near Cudgel Street makes no provision for cyclists travelling north south. Potential conflict issues have been raised by locals.
Barriers	Existing canals act as a barrier at some locations, particularly the narrow canal bridge in Short Street.
Obstacles	The blister rails installed at the road crossing of Irrigation Way near Cudgel Street have been raised as acting as barriers to cyclists travelling north - south. No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians or cyclists on constructed paths.
Trip Hazards	Some kerb ramps and grassed footpaths where drainage has created washouts and erosion present as trip hazards. Provision of constructed paths and new kerb ramps along main walkways would help address potential trips and falls.
Lighting	No major issues were raised / noted.
Tactile Indicators	Generally absent in Yanco and not required at this stage.
End of trip facilities	McCaughey Park provides end of trip facilities.
Signage	Generally absent.
Other	No other issues generally observed.



The Powerhouse Museum are open monthly and generate a lot of pedestrian and traffic activity

The Yanco markets occur monthly and generate a lot of pedestrian and traffic activity

Irrigation Way is a primary road link to Leeton and runs through the middle of Yanco.

The existing irrigation canals act as barriers to active transport in some locations of Yanco

General Comments

Yanco is located within close proximity to Leeton and a number of important agricultural schools and colleges

There are some gaps in the active transport networks, particularly to open space attractors and links to Main Avenue

Project
Leeton Active Transport Plan

Map Title
Consultation / Audit Map

Map Location
Yanco Village

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Existing Pedestrian Crossing
 - Village Bus Stops
 - Village Phone Booths
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 - Notable Built Features
 - General Village Uses

Map Scale
0 25 50 75 100 m

North

Rural Areas

Overview

There are no formal pedestrian or cycle routes connecting towns and villages in the Leeton Shire.

Cycling along rural roads is undertaken by individuals and small bunch rides via a number of well-established routes known to local cyclists.

Road touring cyclists and events are not regular occurrences in the Leeton Shire, and perhaps this is due to more favourable road conditions and more active cycling clubs and groups in Griffith and other regions.

The mode of choice for cyclists appears to be all-terrain bicycles, such as flat bar touring bikes and mountain bikes. Locals tend to ride these more sturdy bikes due to the existing road conditions and the freedom they provide in accessing quieter gravel roads and rural attractions.

STRATEGIC CONTEXT

Planning decisions at a local level are influenced by broader global, National, State and regional issues, trends, needs and planning priorities.

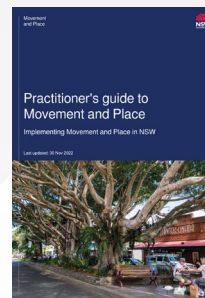
The Austroad Guide remains the base-line of standards for transport planning and design, and should be referenced when designing active transport projects.

Other guidelines and standards should also be considered, with some of the main guidelines presented in this section.

The review of supportive documents serves the following purposes:

- + To ensure the strategy aligns with regional, State and national policy directions.
- + To ensure the strategy aligns with the wider context of transport and land-use planning policy directions.
- + To understand the projects, links and network connections being planned in adjoining local government areas that might benefit the strategy.
- + To help understand the correct methodology and approach when preparing the strategy.
- + To help identify any deficiencies within the current network and existing policies that may hinder ongoing success.

Movement and Place Practitioner's Guide



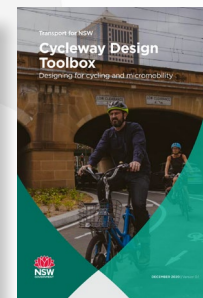
Explains how built environment practitioners can apply a Movement and Places approach to projects and plans

Walking Space Guide



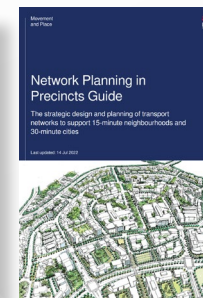
Provides a set of standards and tools to ensure that sufficient space is provided on streets to achieve comfortable environments which encourage people to walk.

Cycleway Design Toolbox



Provides guidance on desired outcomes for cycling and micromobility. It establishes design principles for cycleways in specific contexts including temporary initiatives and public bicycle parking facilities.

Network Planning in Precincts Guide



Provides best practice principles, tools, examples and case studies of a transport network that facilitates the efficient movement of people and goods while supporting 15 minute neighbourhoods.

NSW Public Spaces Charter



The NSW Public Spaces Charter has been developed to support the planning, design, management and activation of public spaces in NSW. It identifies 10 principles for quality public space, developed through evidence based research and discussions with public space experts and community members.

NSW Guide to Walkable Public Space



Outlines why walkable public spaces are needed. It includes ideas and opportunities for how they can be created and methods for trialling and evaluating improvements.

BENEFITS OF ACTIVE TRANSPORT PLANNING

Substituting vehicle trips with walking and cycling has a number of benefits, including:

Healthy Lifestyle

Leading an active lifestyle brings many benefits for the general health and well-being of Leeton Shire residents.

Using footpaths, bicycle lanes and shared paths provide a cheap means of incorporating exercise into our daily routine. As a regular activity, walking, running, bike riding and rolling can aid the prevention of:

- + Heart disease.
- + Stroke.
- + Type 2 diabetes.
- + Falls, fractures and injuries (through improved strength and coordination).
- + Hypertension.

Active transport activity can also improve psychological wellbeing, metabolism, muscle strength and flexibility, endurance, respiratory function, energy levels and weight management. In the event of illness or recovery from trauma / surgery, all this aids in a speedy return to good health.

Children's health should include regular physical activity, with at least 60 minutes of moderate to vigorous physical activity being recommended for children 5 to 18 years of age to keep healthy. Outdoor activity, such as playing, walking, running, rolling and bike riding can contribute to children's health, as well as their development of physical, practical, emotional and social skills.

The presence of footpaths, shared paths and cycleways are associated with active travel across all age groups.



Creating a comprehensive movement network

Comprehensive road environments are ones that incorporate efficient transport options (roads, public transport, footpaths and cycleways) as well as aesthetic presentation and general walkability.

Quality footpaths and shared paths are particularly influential in encouraging people across all ages to lead more active lifestyles.

Leeton Shire Council and State government transport planners are focussing efforts towards doubly active transport trips over the next 20 years. To achieve this goal requires planning of a more comprehensive active transport network that allows people to navigate between land-uses and destinations via roads, pedestrian footpaths, cycle paths and shared paths, as well as using public transport routes where available.

The active transport network in the Leeton Shire is currently largely based around private motor vehicles on roads. Continued lack of public transport options and large distances between work and home trips in the Leeton Shire are key reasons for improving the active transport network in the urban areas of the shire.

As a first major step in improving active transport goals, the urban areas of the Leeton Shire need more comprehensive active transport networks to cater for the growing needs of residents and visitors.



Achieving Safer Conditions

Pedestrians and cyclists are considered 'at risk road users' due to their lack of protection against motor vehicles in the event of a crash. It is therefore important for road safety reasons that facilities are available for pedestrians and cyclists that minimise their exposure to potential conflict with motor vehicles.

Connected active transport networks have been shown to be associated with more walking in older adults and children, but only when traffic-related issues are managed, and the local streets are perceived to be safe.

Evidence indicates that connected street networks that are perceived as safe by users, facilitate active walking for transport for all age groups. Older adults (particularly women) are more fearful and more vulnerable to crime thus the design and location of active transport facilities to achieve good levels of perceived / actual safety is important to avoid people constraining their behaviour.

Evidence indicates that consideration of Crime Prevention Through Environmental Design (CPTED) can encourage increased levels of active transport. CPTED principles focus on good street lighting, neighbourhood upkeep, and less physical incivilities (e.g. litter, graffiti and vandalism) and street features that promote safety from crime (e.g. front verandahs and neighbourhood maintenance) can encourage walking. The design of commercial buildings and their relation to the street also has the potential to increase natural surveillance which improves safety and feelings of safety.

Providing safe, well-lit building entrances that face the street and are directly accessible from the street and footpath and car parks and public transport stops has been shown to encourage active modes of transport to and from buildings.



Economic Benefits

For the wider community, leading a healthier lifestyle reduces the impacts on our health care system. It also reduces costs of living and boosts industry productivity from fit and healthy workers. Active transport also creates more footfall for local businesses and caters to the burgeoning visitor market interested in exploring Mainstreet environments, heritage walking trails, riparian areas and bushland trails, either on foot or on a bike.

Social Benefits

Active transport, particularly walking and bunch riding, are some of the most socially inclusive modes of transport. It provides opportunities to socialise with friends and creates a safer, friendlier and more connected community. Benefits include:

- + Encouraging family and community connectedness.
- + Improving social skills and networks.
- + Reducing isolation and loneliness.
- + Enhancing self-esteem and confidence.
- + Prolonging independent living for older people in the community.

Evidence suggests that active transport infrastructure, particularly footpaths around local shops and community facilities, are important for encouraging social interaction and social capital. Such facilities provide casual and chance interactions with other members of the community as well as providing places for people to meet friends and family and engage in social activities.



Great Places

The way we design and build our streets and neighbourhoods has an effect on many residents' social connections, sense of community and social capital, and thus their use of active transport facilities.

Neighbourhood 'walkability' (a combination of residential density, mixed-use planning and street connectivity) is particularly associated with walking for transport and general walking.

A connected street network that is legible and permeable enables more movement choices around town. This encourages more walking and cycling, allowing for more interactions between neighbours and residents, which in turn increases the sense of community in residents.

Shorter travel distances between land-uses can enable easy access to facilities and services for all people, including the very young, older persons and people with a disability, which can reduce social isolation for these groups. For example, living within close proximity (400-800m) of a mix of destinations is associated with higher levels of active travel across all age groups.

In terms of active travel behaviours, increased connectivity reduces the distances between origins and destinations and provides a range of routes to choose from, increasing the likelihood of walking and cycling between locations.

Traditionally designed neighbourhoods tend to have grid-style street layouts, which create few barriers to direct travel, resulting in high levels of connectivity and a choice of routes. In contrast, our more modern neighbourhoods have been developed around a network of hierarchical roads, which often result in creating low levels of connectivity. In these neighbourhoods, we are learning that some residents have little or no choice of transport (other than motor vehicles), there is only one road in and out of the development, there are limited available active transport routes, and the often indirect curvilinear streets leading to reduced appetite for active transport due to the distances between destinations.

A review of the walking and cycling conditions in urban areas is therefore important and may provide opportunities for the review of other land-use / transport policies. This is particularly important in areas that have encouraged an overuse of cul-de-sacs that can result in a disconnected street system and general lack of active travel facilities in new residential estates.

NETWORK PLANNING

The following provides some insights into the different needs of pedestrians which must be considered when the planning new Active Transport Plans for the Leeton Shire.

The Austroads Guide and other guidelines listed in Section 6 of this report provides more detailed guidance on the key considerations for active transport network planning.

Pedestrian Types + Needs

Everyone is a pedestrian, be it walking 30 metres from the car to a place of work, walking to school or the shops, using wheeled devices on footpaths or walking and running for fitness.

Pedestrians are considered 'at risk road users' due to the severe outcomes that can occur when they come into conflict with motor vehicles. In the five years from 2015 to 2019, about one in six people killed on the road was a pedestrian.

In the Leeton Shire context, the main pedestrian groups are as follows:

Older pedestrians

Are generally less mobile than other pedestrians and prefer footpaths and shared paths with minimal gradients / steps and a high degree of safety and personal security.

Commuters

This group comprises adults and secondary age students who use the footpath network mainly as a mode of transport for journeys to and from a workplace, school or TAFE. They prefer the fastest safe route between their origin and destination and are generally more skilled and experienced. On-road lanes and footpaths are suitable for commuters.

Utility / shopping

Trips are generated for specific purposes, such as running errands, shopping, visiting friends, local destinations and points of interest. Local trips are often short length trips and can be unpredictable. Users may be constrained by time and vary widely in skill and experience. They prefer footpaths, shared paths, low volume roads, minimal gradients and a high degree of safety and personal security.

Secondary / tertiary school students

Older students have similar characteristics as commuters and utility / shopping users. Footpaths, on-road lanes and shared paths are suitable for older students.

Infants / primary school students

Infant and primary school aged pedestrians have undeveloped cognitive skills, lack good peripheral vision, and have little knowledge of road traffic rules. They require adult supervision and / or off-road paths and facilities. Road crossing points must be carefully designed to give greater visibility / priority to children.

Fitness

Sports people use the road environment for fitness and training purposes and to access sporting events. They often travel alone or in small groups - seeking long distances for training purposes which can take them onto busier roads. Fitness pedestrians prefer footpaths and shared paths but will use any path or the road / road shoulder if necessary.



Cyclist Types + Needs

There are a range of cyclists who need to access different parts of the Leeton Shire on their bicycles for recreational, educational, shopping, commuting and other purposes.

Cyclists are considered 'at risk road users' due to the severe outcomes that can occur when a rider crashes their bike or when they come into conflict with motor vehicles.

Most cyclists are very aware of their vulnerability on the road network and use safety lights, helmets and high visibility gear when riding.

In the Leeton Shire context there are different cyclist groups as follows:

Older bike riders

Older people in the local context are tending to avoid using bicycles, which is not ideal as cycling is good fitness for cardio, skeletal and muscular fitness.

Commuters

This group comprises predominantly adults who use the road to cycle to work. These cyclists are generally more confident mixing with traffic, though still prefer separation. They prefer the fastest safe route between their origin and destination and are generally more skilled and experienced.

On-road lanes and shared paths are suitable for commuter cyclists. Commuters will ride longer distances of up to 20km. They prefer flat, direct routes, but may tolerate 10% gradients, or 15% with e-bikes. All day secure parking, showers and change facilities are desired by commuters.

Utility / shopping

A small percentage of people use a bicycle to run errands and do the shopping as well as visit friends and family, local destinations and points of interest.

Local trips may be 'spare-of-the-moment' decisions, where a bicycle is used to visit the shops for last minute supplies. Users may be constrained by time and vary widely in skill and experience. They may use footpaths, shared paths and roads to access their destination, and sometimes may forget to take appropriate safety precautions.

Secondary / tertiary school students

Older students in the local context are tending to avoid using bicycles (particularly in Leeton), other than to access weekend sports, skate parks and friends.

Infants primary school students

Infant and primary school aged cyclists have undeveloped cognitive skills, lack good peripheral vision, and have little knowledge of road traffic rules. More cycling in the infant / primary school age group has been observed in the smaller towns than in Leeton. Fear of traffic in the larger towns appears to be a factor in this age group riding their bikes regularly. Off-road routes may help with increased cycling activity.

Fitness

Adult riders are more confident mixing with traffic. If riding for training, touring or competition purposes, cyclists may ride very long distances, sometimes more than 100km.

Road and touring cyclists often travel in small groups or larger bunch rides seeking long distances for training and recreational purposes, which can take them onto busier roads.

A number of adults in Leeton Shire use road bikes, touring bikes and MTB bikes for fitness and recreation. MTB and other off-road riders travel individually or in small groups and seek quieter roads and off-road trails. Supervised rides involving children are also happening in the shire.

Families with children

Prefer separation from traffic and ride shorter distances. Prefer flat routes with less than 5% gradient. Adults / guardians may be walking / riding alongside young children to supervise activity.



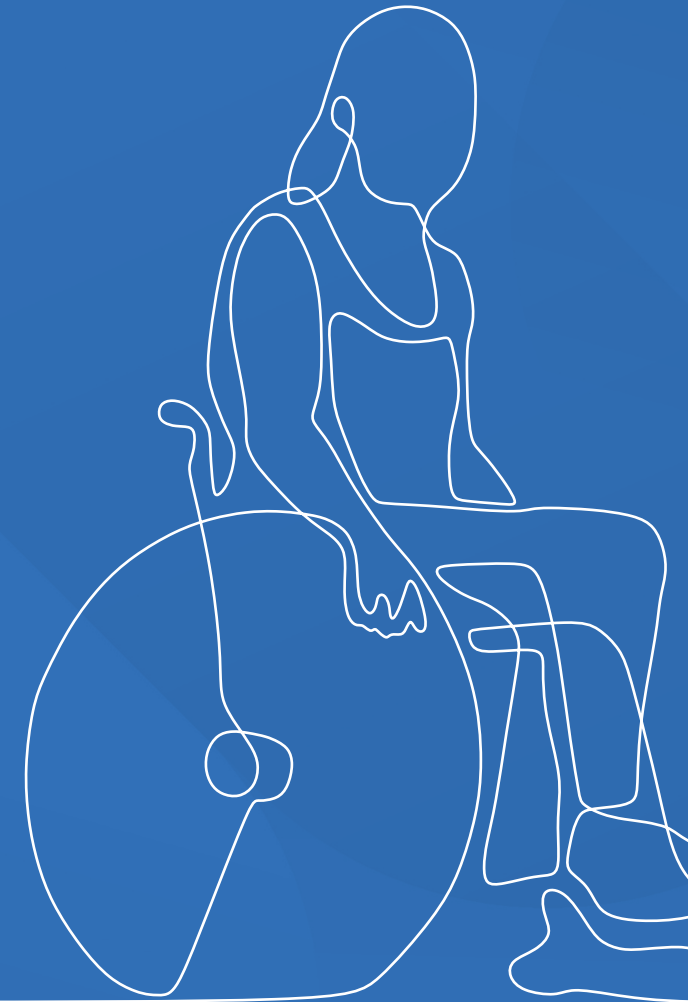
Access Impaired Needs

Disability is an issue that affects a significant proportion of the population. The 2018 ABS Survey of Disability, Ageing and Carers reported that 17.7% of Australians had a long-term disability that restricted their everyday activities.

Planning for the transport needs of disabled persons presents its own unique challenges, with a person in a wheelchair requiring different assistance to negotiate the movement network than a person who is sight impaired.

Motorized scooter usage is a growth industry and there is a need to review current and future innovations in these mobility devices to ensure infrastructure improvements are aligned with technology. Access impaired persons also desire end of trip facilities, such as parking facilities, water points and toilets.

A key focus of the Leeton ATP is on ensuring paths and facilities provide for mobility and access for disabled and older persons in our community, particularly in high activity areas such as the Leeton CBD.



Aged Access Needs

Age is related to a variety of characteristics and skills that influence the risk of traffic injury. These age-related characteristics can also affect the way in which people of different ages interact with the movement network.

In the 2010 NSW Health Falls Prevention Baseline Survey, 26.7% of people aged 65 and older, reported limiting their walking because of fear of falling whilst walking over rough or uneven surfaces, steps or stairs. The main needs of aged persons are for level walking surfaces that are free of hazards. Aged persons also appreciate end of trip facilities, such as seating, water points and toilets.

Older people continue to be over presented in pedestrian crashes. As shown by Job RFS, Pedestrians at Traffic Light Controlled Intersections: Crossing Behaviour in the Elderly and Non-elderly, several factors work together to increase the risk of older people:

- + Deterioration in visual acuity may have a negative impact on an older person's ability to cross the road safely.
- + Reduced mobility can render older people unable to react quickly in imminent danger to avoid a crash.
- + Underlying health conditions or frailty can result in greater injury severity when a crash occurs.
- + Reduced speed when crossing the road can be an issue at automated signals that do not allow sufficient time for slower pedestrians to cross safely.

A key focus of the Leeton ATP should be to provide mobility and access facilities for disabled and older persons in the community, particularly in high activity areas such as the Leeton CBD. The following measures have been adapted from the WHO Pedestrian Safety Manual 2013 and the NSW Centre for Road Safety to improve the safety, comfort and amenity of elderly pedestrians:

- + Increase the time allocated to pedestrians at signalized pedestrian crossings.
- + Install high-visibility crossings and advance stop bars.
- + Repair broken kerbs and pedestrian ramps.
- + Replace missing and / or upgrade existing signs.
- + Install pedestrian refuge islands or, preferably, raised medians.
- + Narrow roadways with traffic-calming techniques.
- + Raise public awareness about the safety needs of elderly pedestrians.
- + Reduce legal speed limits to where necessary.
- + Strengthen enforcement of laws on speed limits, and drink-driving.



Needs of Young Children

Children are highly vulnerable road users.

Infant and primary school aged children need their parents or other adult supervision when they travel on the road network, but they also need our confidence to explore their environment and learn how to do things independently.

Children can use the same facilities as adults however they are at risk from traffic for many reasons. Infant and primary school aged pedestrians and cyclists have undeveloped cognitive skills, lack good peripheral vision, and have little knowledge of road traffic rules.

Although children may think they can handle the road network, Kidsafe NSW advises they are:

- + Easily distracted and focus only on one aspect of what is happening.
- + They are smaller and harder for drivers to see, and less predictable than other pedestrians.
- + Cannot accurately judge the speed and distance of moving vehicles.
- + Cannot accurately predict the direction that sounds are coming from.
- + Unable to cope with sudden changes in traffic conditions.
- + Do not understand abstract ideas, such as road safety.
- + They may lack the ability to distinguish between safe and unsafe crossing gaps and sites, putting them at risk as they cross the road.
- + They may lack understanding of the dangers presented under different conditions, such as wet weather or darkness.

An extensive network of structured sporting activities is available for children in Leeton Shire that helps to keep them active and engaged.

There are also a number of areas where children can go 'off-road' and explore the environment and practice skills on their own or with friends. Some of these areas have become obscured and there are inadequate cues to invite children and their parents / guardians to use these spaces as part of the active movement network.



Network Planning Principles

The planning focus of the new active transport network is to make pedestrian and cycling activities a safe, healthy and attractive travel option throughout the Leeton Shire. To achieve this over such a vast area requires a targeted and systematic approach, based on a number of principles which are explored further in this section.

Coherence

Coherence refers to the extent of coverage and completeness of the facilities. Coherence can be characterised by the completeness of the network or the completeness of connecting routes. A cohesive network should be continuous and it should be clear to the user where the path leads. Clear, well-placed sign-posting and line-marking should indicate major destinations as well as the 'serious transport intent' of sections of road routes. The quality of network facilities should be consistent throughout the length of the route regardless of whether the facility uses a separate or shared road profile. End of trip facilities, such as seating, watering points, toilets, bicycle racks and storage facilities and change room facilities should also be integrated into the cohesive network.

Safety

Perceived and actual safety is very important to pedestrians and cyclists.

Pedestrians of all ages and genders need to feel that it is safe to walk, whenever they choose to do so. Pedestrians desire 'open-to-viewer' routes and well-lit pathways where they are regularly used in dark hours. Road crossings present the greatest danger to pedestrians and safe crossing locations need to be provided at regular intervals along major streets or at the location where key desire lines cross major streets. Pedestrians will rarely walk along an indirect route to access safe crossing points, so frequent crossing points must be provided.

Cyclists travel faster than pedestrians and therefore are less concerned about personal security. However, cyclists are still slower and smaller than motor cars and trucks, making them less likely to be seen. When they do come into conflict, cyclists have little protection in a collision. On-road paths and off-road paths reduce the risk of collision with motor vehicles, but still endanger cyclists at squeeze points and intersections with roads. They can also involve potential conflict with pedestrians and pets where the off-road facility is a shared path. The general principles of predictability and clear priority remain important for off-road paths, including directional segregation and high visibility for all users.

Directness

Pedestrians and cyclists do not like to travel out of their way to reach a destination. This is a natural 'hard wired' response to avoid the extra effort involved in walking or riding extra distances. Paths serving desire lines between activity areas need to be direct and legible in order to provide for and encourage walking and riding trips. Wherever possible, barriers should be overcome, with slight deviations or additional safe crossing points. A careful balance must be found between providing a direct route and also one free of delays, excessive energy expenditure, or safety concerns.

Amenity

People are more likely to walk or ride in an attractive environment because it is enjoyable. Areas with high volumes of vehicular traffic, excessive noise and poor pavements may discourage walking and cycling. Urban areas should be maintained at a human scale that provides an attractive and safe environment. Pedestrian and cycling facilities should be designed to fit into the surrounding environment so that the enjoyment of the experience is enhanced. The route should be scenic, quiet, and free of heavy traffic and traffic travelling at high speeds. The best walking and cycling environments are often found along quiet rural roads, in urban parklands or residential areas that have been traffic calmed.

Suitability for all users

Quality environments must be available to all who choose to use them. Paths and facilities must have appropriate gradients (including ramps) and be continuous and free of obstructions such as signage, street furniture and overhanging tree branches. The needs of hearing and vision-impaired users must be considered, especially where user safety is an issue.

15 minute neighbourhoods

People will generally walk or use assisted mobility for 10-15 minutes to access local shops and services, depending on their age, health, the walking environment and the weather. Principal Pedestrian Networks are based on walking distances of 10 minutes to the edges of local centres and 15 minutes to economic centres.



Identifying Activity Generators

There are certain areas of the Leeton Shire that generate significantly more pedestrian and cycling activity than other areas. Identifying activity generators is particularly important to consider in the preparation of new active transport plans. The different activity generators have been divided into four main groups and are presented in this section.

PRIMARY ACTIVITY AREA

Primary activity areas include central business districts as well as other areas that attract large concentrations of people, such as large railway stations, airports and the like. Safety, connected / wide footpaths, road crossing points, disability access infrastructure, secure bike parking and end of trip facilities are important design goals for primary activity generators.

SECONDARY ACTIVITY GENERATORS

These include neighbourhood shops, schools, popular sporting and recreational facilities, clubs, hospitals and community facilities such as the larger congregation churches that are not centrally located within primary activity areas. These land-uses are busy places at certain times of the day or week. Safety, connected footpath networks and end of trip facilities are important design goals for secondary activity generators.

PRIMARY ROUTES

These are routes from residential areas to the primary activity areas and secondary activity generators. They are collector level routes, which do not reach every property but instead form a network of routes that are accessible to a significant catchment of population.

HAZARD AREAS

There are a number of areas / routes that have been noted from accident reports or from road users as being potentially hazardous or particularly stressful places for pedestrians and cyclists.



Identifying Appropriate Paths

The selection of the appropriate path type treatment depends on a combination of factors, including:

- + The level of demand for the path.
- + The conditions present in the surrounding environment (traffic speed and volume).
- + The availability of space in which to provide the path.
- + Whether path usage is for exclusive pedestrian or cycle use or shared use.

The overall goal is to install facilities that are safe, practical and that respond to local conditions.

A number of different path treatments can be applied, including:

Footpaths

Footpaths are suitable for a wide range of pedestrian situations. They are required to be designed and built to meet minimum design requirements, including width, gradient, slip resistance, type of kerb and adequate setback distance of the footpath from the roadway.

The Austroads Guide and other guidelines listed in Section 6 of this report advocate for a minimum footpath width of 1.2m for most situations, except in commercial and shopping environments.

A footpath wider than the minimum may be necessary at locations where pedestrians gather such as at the entrance to schools and associated crossings, at recreation facilities and at important bus stops.



Shared paths

Shared paths are a type of off-road facility that are generally wider than footpaths (minimum 2.5m) and allow common use of the facility by both cyclists and pedestrians.

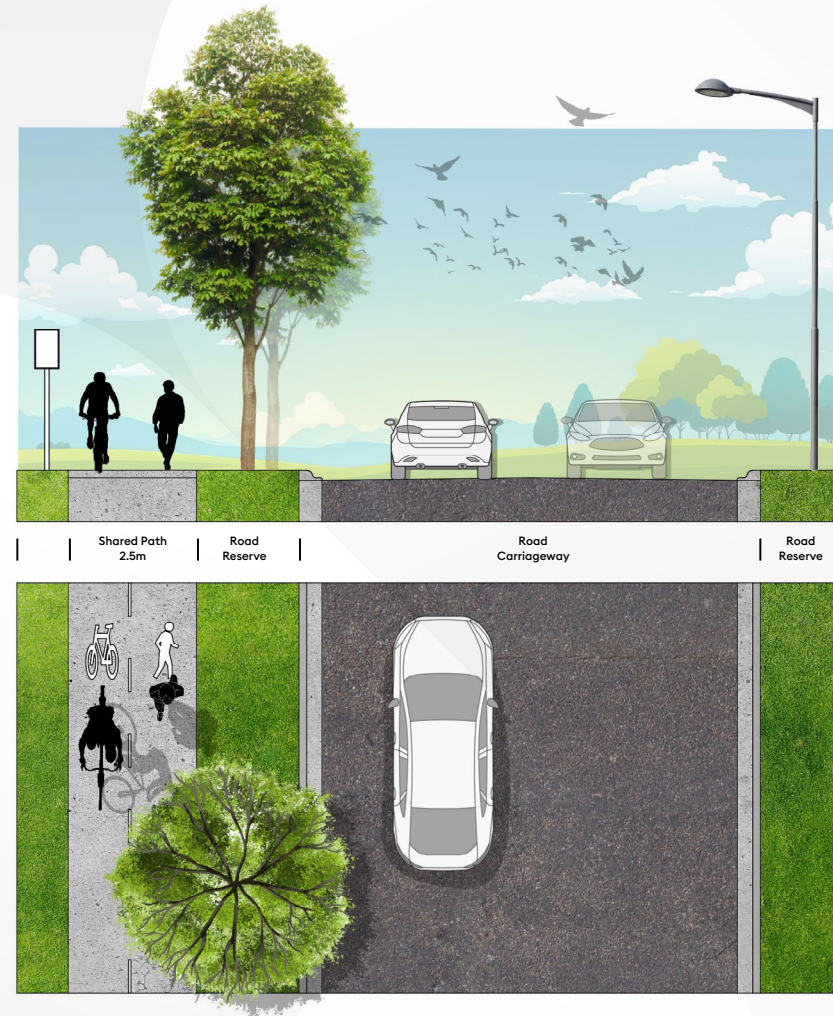
According to the Austroads Guide and other guidelines listed in Section 6 of this report, a shared use path may be appropriate where demand exists for both a pedestrian path and a bicycle path but where the intensity of use is not expected to be sufficiently great to provide separate facilities.

Shared paths are a popular response to connecting attractors and as paths in large parklands. In some situations shared paths may cause friction between pedestrians and cyclists.

Displaying highly visible signs and rules applying to the proper use of share paths are important considerations when planning these paths.

Shared streets

Shared local streets are safer streets with 'design speeds' of no more than 40km/h that enable more people of all ages and abilities to undertake active transport activity.

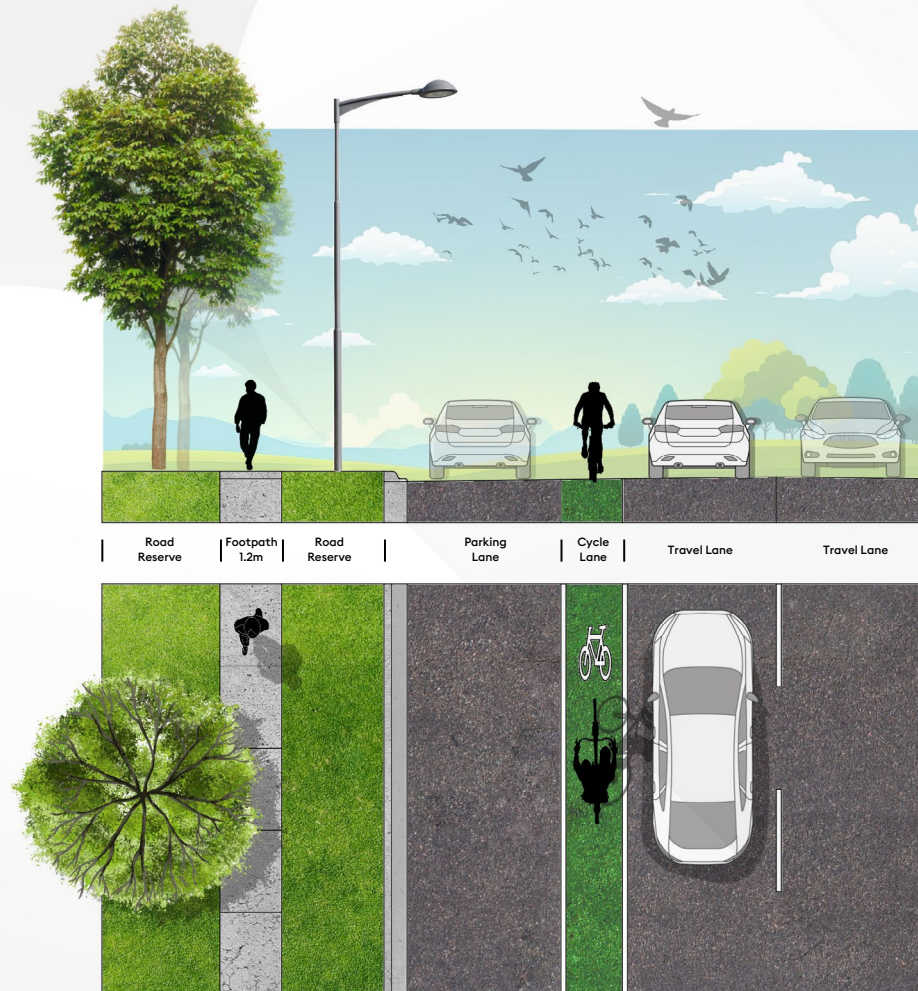


Exclusive off-road cycle paths

According to the Austroads Guide and other guidelines listed in Section 6 of this report, exclusive bicycle paths are most appropriate when there is a significant cycling demand and very few pedestrians desire to use the path or a separate footpath is provided, and there is very limited motor vehicle access across the path.

On-road cycle paths

Paths can either be on-road, which are essentially 'bicycle lanes' alongside motor vehicle traffic on a roadway within the road corridor, or off-road paths, which are separated from the road corridor. They include physically separated bicycle lanes, visually separated footpaths and bicycle lanes and wide sealed road shoulder paths. Where feasible, facilities should comply with current standards and also taking into account local conditions.



Pavement Surfaces

There are a variety of pavement materials commonly used as part of the construction of new active transport infrastructure, which are described in this section.

Ideally, paths should be free of obstructions and therefore should not include steps, stairways or obstacles that affect safety.

Concrete and asphalt

This provides a hard surface and is generally functionally appropriate. This material is ideal where footpaths are on a gradient and exposed to water, as the texture of these surface materials are slip resistant. Most footpaths in Leeton Shire are of these construction types. Some main street beautification works use a combination of asphalt, concrete and brick pavers to provide variety and interest.

Pavers and bricks

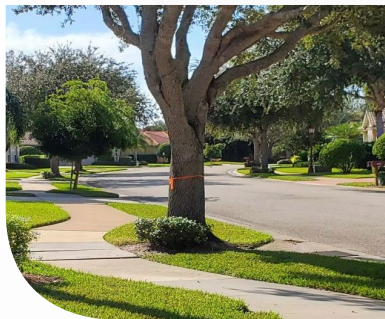
For aesthetic reasons and to add interest and variety, pavers and brick paving are often used. Pavers have been used extensively in the Leeton CBD and at some other commercial and tourism destinations. When used for pedestrian paths, glazed surfaces should be avoided as they are slippery when wet. Stone path surfaces should also be avoided as they can fail flatness tests. Pavers are ideal for sight impaired pedestrians as a guidance using different pavement colours, however overuse of colours can also be confusing.

Spray seal emulsion

Generally less hard wearing than concrete, asphalt or pavers. It is often used as a cheaper option in low trafficked areas where drainage is not an issue. It may also be considered where a new path is being trialled to determine its longer-term material type.

Loose surface material

These materials such as exposed aggregate, gravel, soil, sand, grass and tanbark should be avoided along heavily used routes. They can be very difficult to walk on and make it difficult for people in wheelchairs. However, gravel surfaces may be suitable for fitness walkers and runners and MTB cyclists.



End of Trip Facilities

Public amenities can be important mid-way or end of trip resources for pedestrians and cyclists. They include a range of supporting infrastructure such as bicycle parking, seating / rest stops, water points, toilets, shade and signage.

Exercise equipment is also being used / provided in some parks to facilitate more intensive fitness training. These facilities are the 'outdoor' equivalent of a gym, and may include weight resistance benches, step-up and pull-up devices and the like.



Lighting

Night time outdoor lighting has most often been designed for the vehicle driver, rather than for pedestrians and cyclists.

Where footpaths, bicycle lanes and shared pathways carry a substantial number of pedestrians and cyclists during periods of darkness, consideration should be given to the provision of path lighting. Lighting will increase both actual and perceived safety along the network and should be targeted along key primary pedestrian routes and activity zones.

The main objectives of pedestrian lighting are to ensure adequate lighting is provided to identify pedestrian routes and signage, illuminate pedestrians to other road users and to achieve facial recognition of another pedestrian at a reasonable distance.

The main objective of cycleways lighting is to ensure adequate lighting is provided so that cyclists, travelling at reasonable speed are able to avoid potholes and any other traffic hazards. Generally, provision for public lighting for bicycles may occur where:

- + Paths for cycling associated with Mainstreets, promenades or a centre for night-time activity.
- + Paths for cycling used for commuting by workers or students.

Lighting should be placed along key routes, key road crossing points, intersections and places where people congregate. Direction and height of illumination and background land illumination levels are key considerations that should be addressed at project design stage.



Landscape Design

People are more likely to walk or ride in an attractive landscape environment because it is enjoyable.

Landscape works which are poorly planned and designed can have negative impact on pathway use.

It is important that landscaping is designed, constructed and managed to:

- + Provide clear sight lines.
- + Promote good visibility.
- + Provide safe side clearances.
- + Prevents intrusion into pedestrian / cycling operating space.
- + Manages tree root damage to pathways.
- + Provide passive surveillance and promotes an open easy – supervised environment.
- + Manage weeds, especially cat-heads.

The Austroads Guide and other guidelines listed in Section 6 of this report provides guidance on the key considerations for landscape design.



Signage and Line Marking

Signage and / or road markings should be provided throughout the entire network to guide bicycle and shared path network movements.

Signage and / or markings should be provided as new on-road bicycle and shared pathways are constructed and should be progressively retro-fitted across the existing network.

The use of a green surface for bicycle lanes, which draws motorists' attention to the presence of bicycles, is recommended at busy or higher-speed locations and areas where the road layout is complex.

Technical advice on signage and marking treatments is provided in the Austroads Guide and other guidelines presented in Section 6 of this report. At primary attractors and for some end-of-trip facilities it may be necessary to provide large print signage, tactile or Braille signage and symbols.



ACTIVE TRANSPORT PLANS

Active Transport Plans have been prepared for Leeton Township and the outlying centres of Murrumbidgee, Whitton, Wamoon and Yanco. The Active Transport Plans are presented in a series of maps, as necessary, for each location and typically include the following detail:

- + Public Roads (sealed, unsealed, tracks-in-use).
- + Railway Infrastructure.
- + Primary Activity Areas.
- + Secondary Activity Generators.
- + Primary Routes.
- + Hazard Areas.
- + Other key land-uses and / or landmarks.
- + Existing and proposed footpath locations.
- + Existing and proposed shared path locations.
- + Existing and proposed off-road path locations.
- + Existing and proposed end of trip facilities.

Guiding Principles

Focusing efforts in areas of highest importance

Effective and useful planning relies on focusing effort and resources in areas that it is most needed. Leeton Shire Council has limited funds for improvements and these funds need to be carefully directed towards achieving optimal outcomes. The Leeton ATP needs to focus efforts on areas with high levels of pedestrian and cyclist activity as well as the desire lines of high potential and demand. Consideration should also be given to locations which may merit a review of road conditions based on a poor safety record.

Focusing on potential pedestrian and cyclists

It is important to consider existing pedestrians and cyclists, however, the biggest advantage in terms of increasing patronage is to target people who currently are not active pedestrians or cyclists, but who are likely to become so if conditions improve. The Leeton ATP needs to consider ways to promote behaviour-changes that encourages new users.

Developing effective infrastructure to improve conditions

The Leeton ATP aims to develop innovative infrastructure interventions, based on the Austroads Guide and other NSW guidelines and standards.

Setting achievable targets

Funds are limited and there is a need to focus on specific actions that are achievable by Council. There is no sense in developing an active transport plan that proposes excessive expenditure beyond the means of the community. It is better to set targets that can be realistically achieved over the intended 10 to 20 year implementation period. Should extra funding become available and targets are met earlier, it is a relatively simple task of reviewing the active transport plan to set more goals and targets.

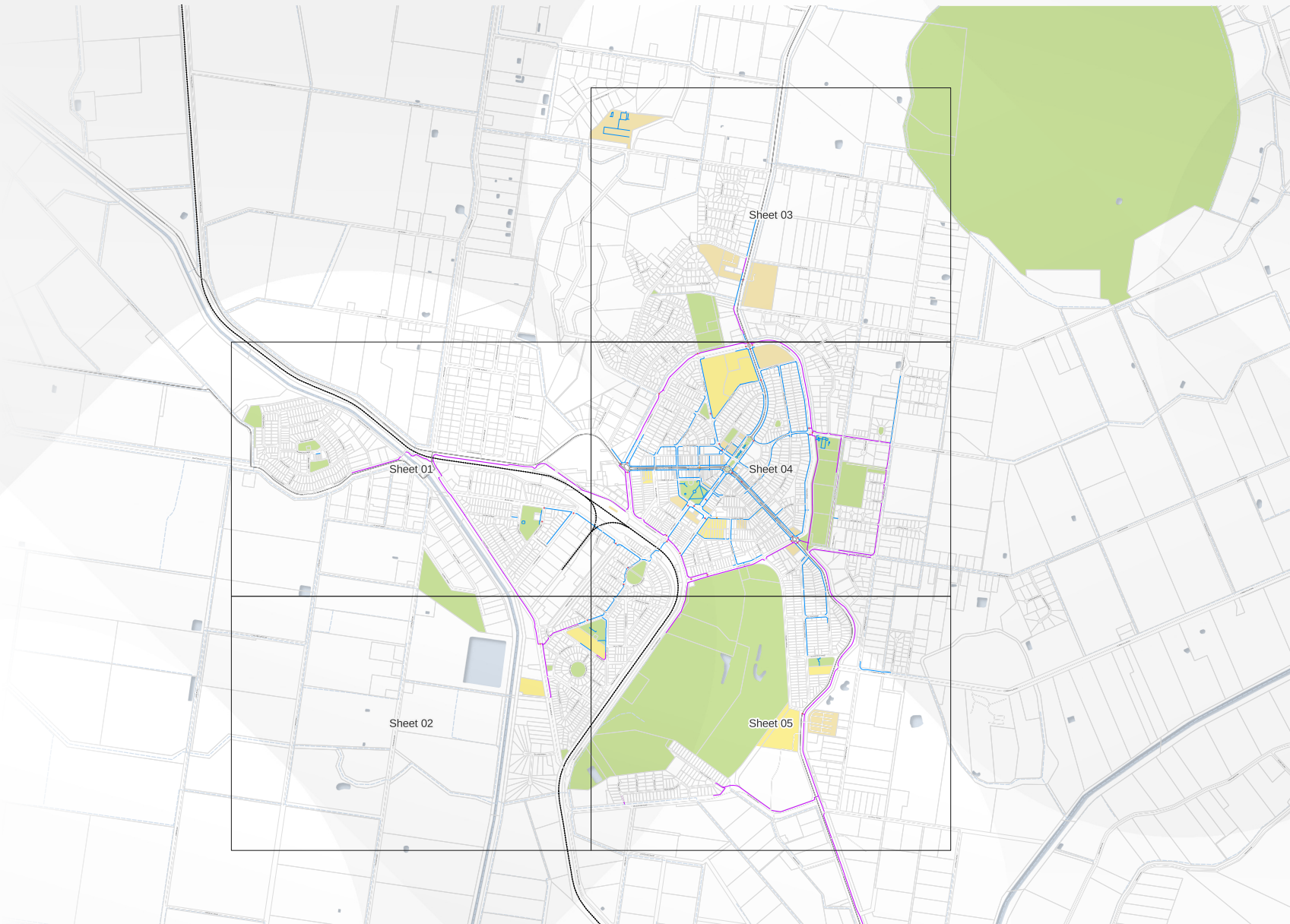
Leeton mapping

A series of maps have been prepared to visualise the proposed improvements to the active transport network in Leeton.

Leeton has an expansive / large urban area. To manage this issue, a grid-based approach to the project mapping has been adopted.

This grid is shown in the map to the right of page and should be referred to when necessary when viewing the Leeton based maps throughout this Active Transport Plan.

To give context and to allow the new active transport network to be viewed in the one map, Sheet 06 of 06 shows the whole of the Leeton Township in the one map.





Joins Map Sheet 02

Project
Leeton Active Transport Plan

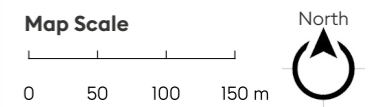
Map Title
Active Transport Plan

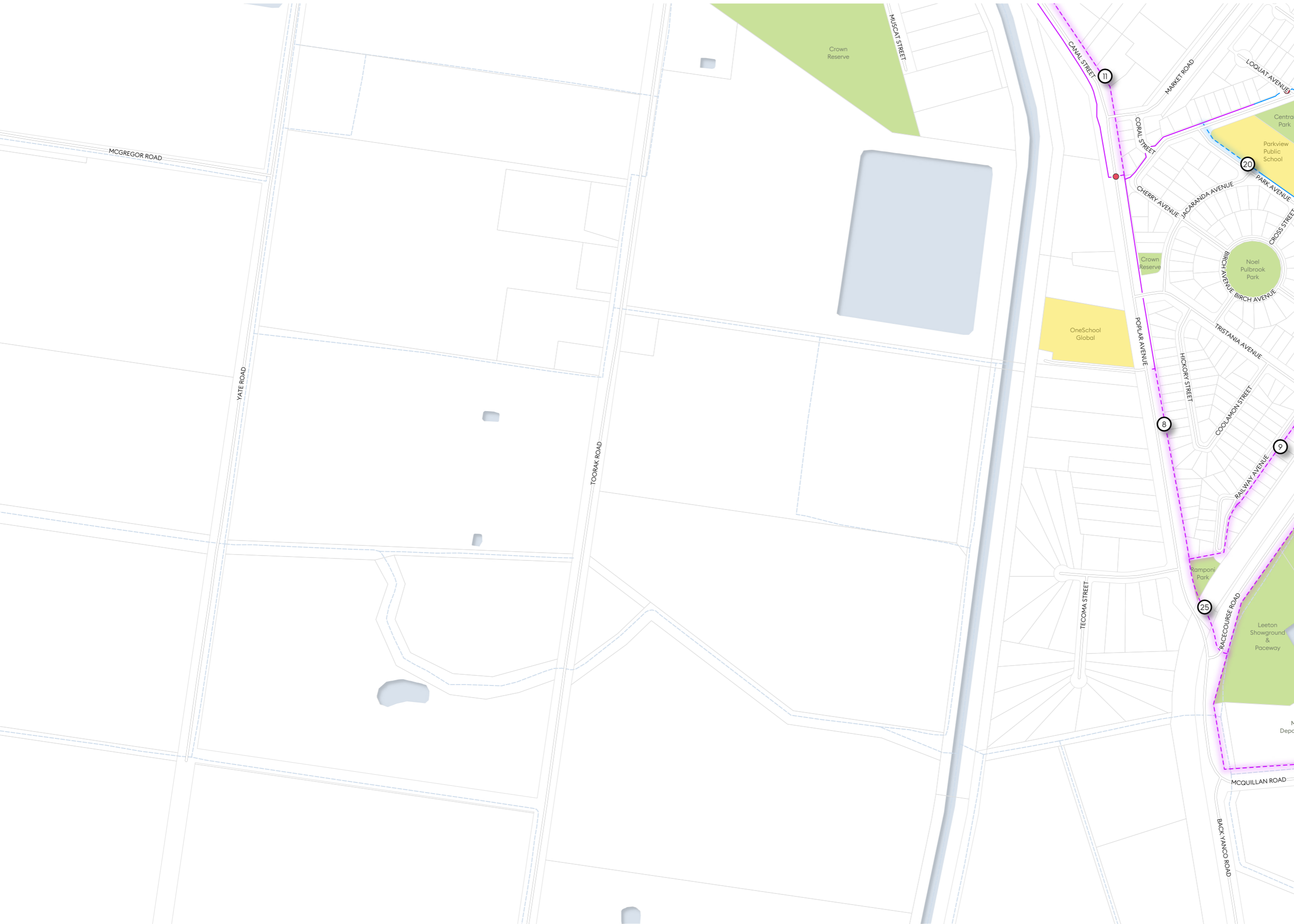
Map Location
Leeton Township

Sheet Ref
Sheet 01 of 06

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers





Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Leeton Township

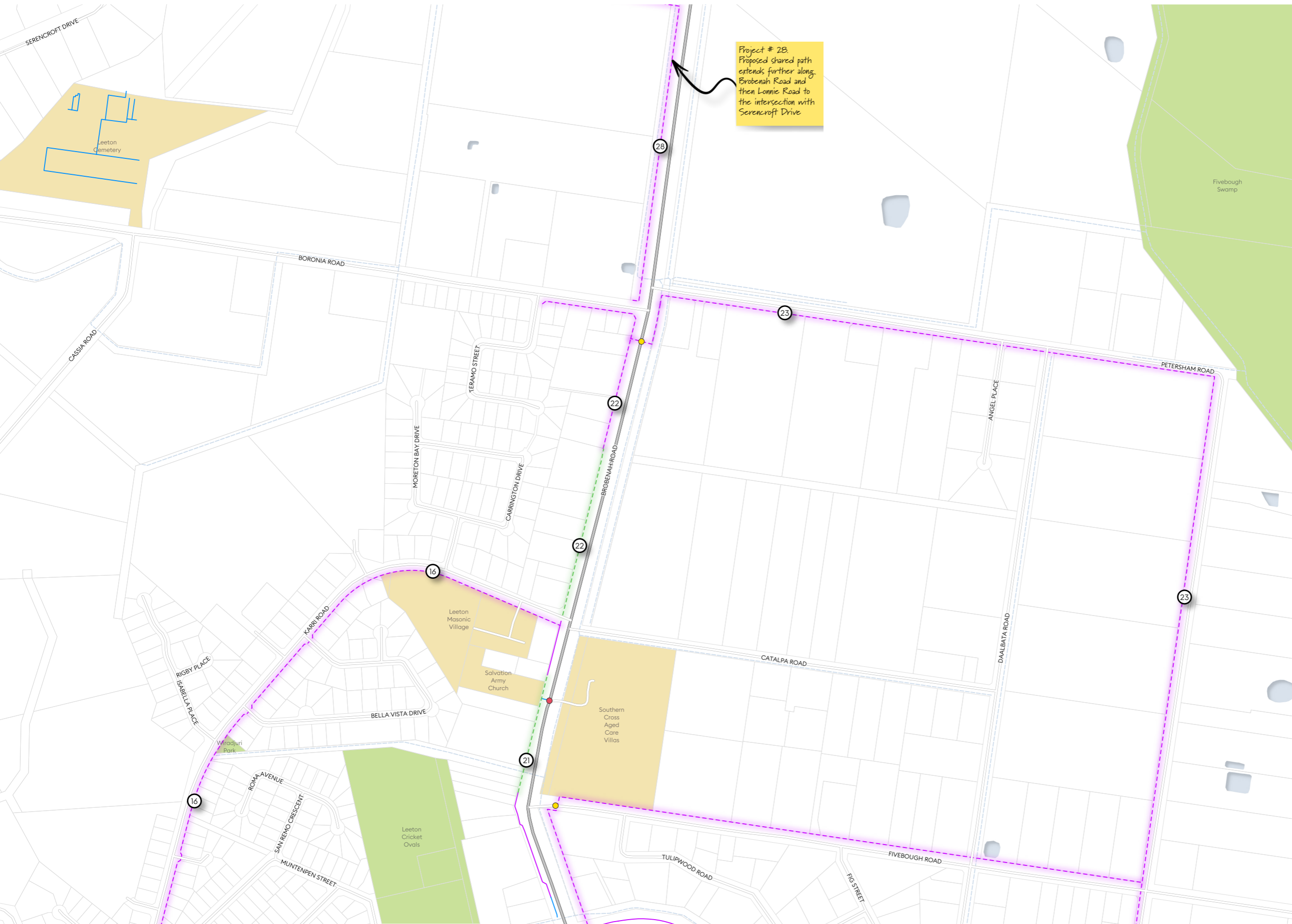
Sheet Ref
Sheet 02 of 06

Map Legend

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers

Map Scale
0 50 100 150 m

North



Project # 28.
Proposed shared path
extends further along
Brobenah Road and
then Lonnie Road to
the intersection with
Serencroft Drive

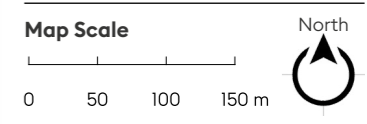
Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Leeton Township

Sheet Ref
Sheet 03 of 06

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers





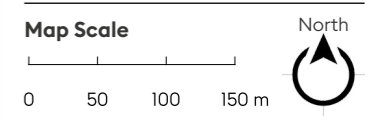
Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Leeton Township

Sheet Ref
Sheet 04 of 06

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
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 - Education Facilities
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 - Parks and Recreation Areas
 - Project Numbers





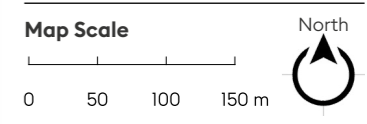
Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Leeton Township

Sheet Ref
Sheet 05 of 06

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers





Project
Leeton Active Transport Plan

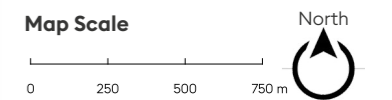
Map Title
Active Transport Plan

Map Location
Leeton Township (Whole)

Sheet Ref
Sheet 06 of 06

Map Legend

-  Primary Road Network
-  Local Road Network
-  Railways
-  Existing Footpath
-  Proposed Footpaths
-  Existing Shared Path
-  Proposed Shared Paths
-  Proposed Path Widenings
-  Existing Pedestrian Crossing
-  Existing Centre Refuge
-  Proposed Centre Refuge
-  Signage Improvements
-  Accessibility Improvements
-  Education Facilities
-  Community Facilities
-  Parks and Recreation Areas
-  Project Numbers





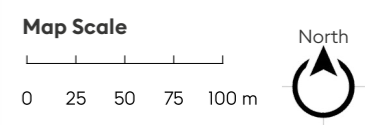
Project
Leeton Active Transport Plan

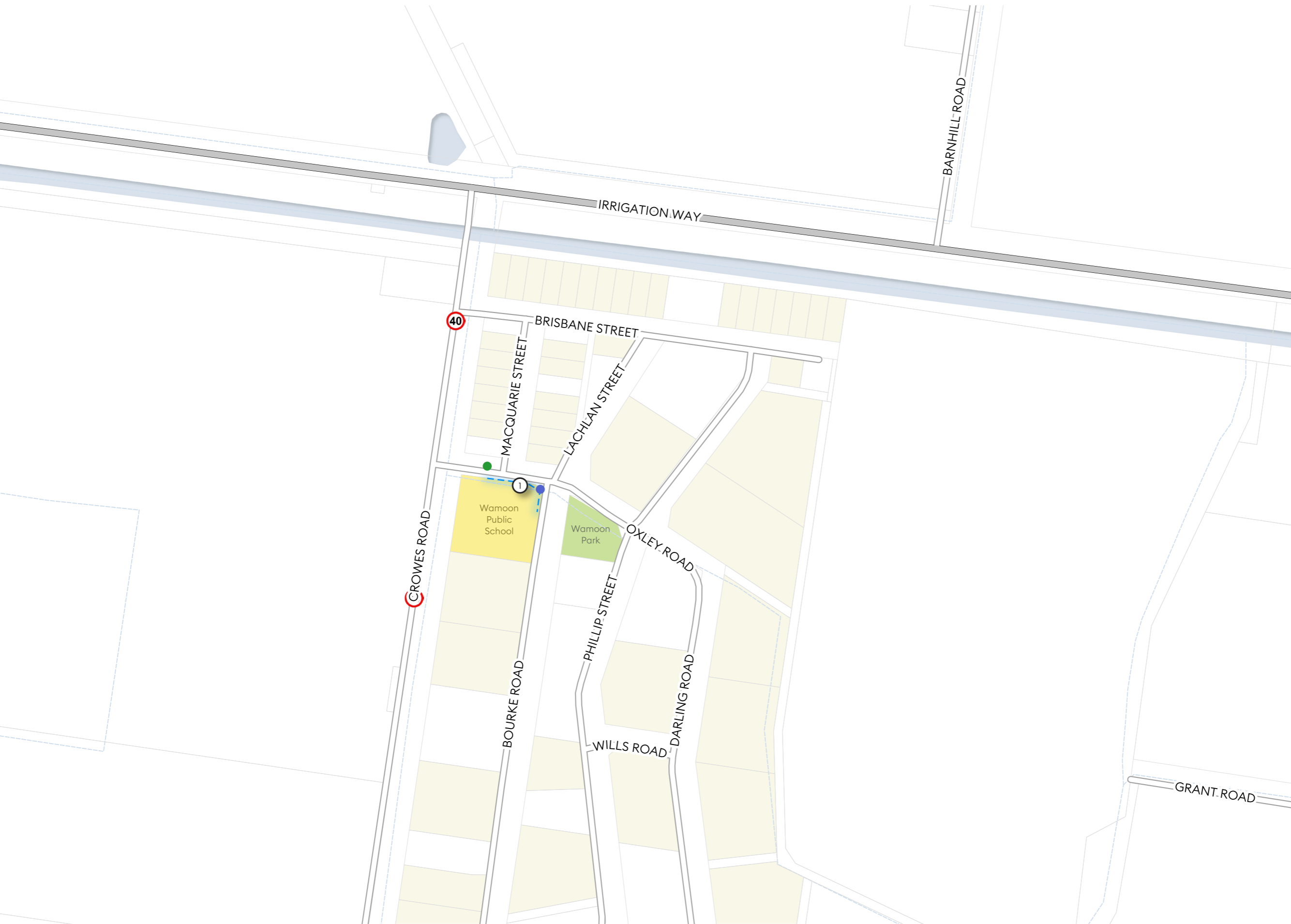
Map Title
Active Transport Plan

Map Location
Murrami

Sheet Ref
Sheet 01 of 01

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Village Phone Booths
 - Village Bus Stops
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers





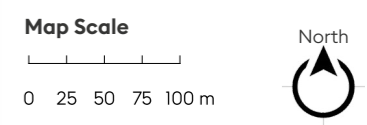
Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Wamoon

Sheet Ref
Sheet 01 of 01

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Village Phone Booths
 - Village Bus Stops
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers





Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Whitton

Sheet Ref
Sheet 01 of 01

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widening
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Village Phone Booths
 - Village Bus Stops
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers

Map Scale
0 25 50 75 100 m

North



Project
Leeton Active Transport Plan

Map Title
Active Transport Plan

Map Location
Yanco

Sheet Ref
Sheet 01 of 01

- Map Legend**
- Primary Road Network
 - Local Road Network
 - Railways
 - Existing Footpath
 - Existing Shared Path
 - Proposed Footpaths
 - Proposed Shared Paths
 - Proposed Path Widenings
 - Existing Pedestrian Crossing
 - Existing Centre Refuge
 - Proposed Centre Refuge
 - Signage Improvements
 - Accessibility Improvements
 - Village Phone Booths
 - Village Bus Stops
 - Education Facilities
 - Community Facilities
 - Parks and Recreation Areas
 - Project Numbers

Map Scale
0 25 50 75 100 m



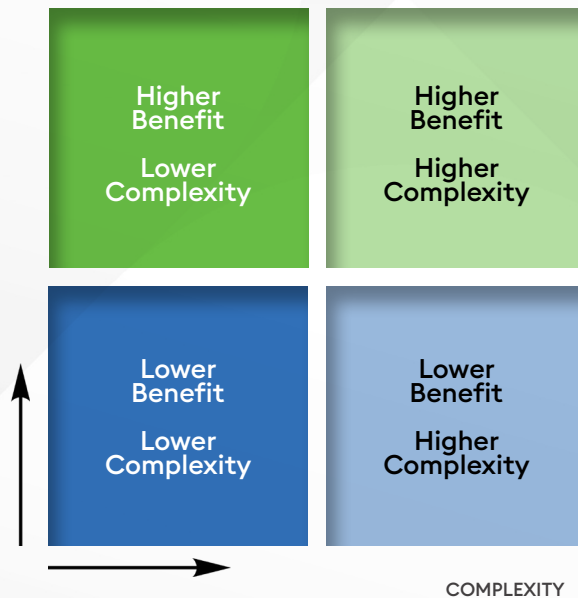
PRIORITIES + ACTIONS

The facilities and treatments required to create a more cohesive, safe, direct and attractive network forms the basis of the new Active Transport Plans developed for Leeton, Murrami, Wamoon, Whitton and Yanco.

The Active Transport Plans are the result of the consideration of a number of variables that have been examined in previous sections.

To prioritise potential new projects for action, a series of questions (see right of page) were asked and given a ranking score to reflect their importance in pedestrian and bicycle planning outcomes.

BENEFIT



- + Does it fill a network gap?
- + Has it been identified in consultation, audits and inspections?
- + Will it be suitable for all users? (safe, direct, comfortable, coherent)?
- + Will it benefit more than one user type? (recreation, commuter, fitness, shopping / short trips, student)?
- + Is it located in a high activity area? (primary activity area, secondary activity generator, primary routes)?
- + Is it located in a hazard area? (In a black spot, or near miss area, arterial or collector road, school zone, a place visited at night, or place where alcohol is available)?
- + Does it improve pedestrian / cyclist separation from motor vehicles?
- + Is it an iconic link that inspires greater uptake of walking and cycling?
- + Will it lead to greater active transport trips, user support and general awareness?
- + Is it practical / cost effective?

Project Description		From	To	Does it fill a network gap?	Has it been identified in consultation / audits?	Is it suitable for all users?	Are there multi-user-type benefits?	Is it located in a high activity area?	Is it located in a hazard area?	Does it improve separation from motor vehicles?	Is it an iconic route that inspires greater activity?	Will it increase active transport trips and support?	Is it practical and cost effective?	Total
Project Description		Street Name / Place	Street Name / Place											
Leeton Project # 01	Crossing alignment replacement	Wilga St / Willow St intersection	Wilga St / Willow St intersection	10	10	9	9	9	9	10	6	8	10	90
Leeton Project # 02	Footpath Installation	Mallee St / Wade Ave intersection	Mallee St / Myrtle St intersection	9	10	9	9	10	10	10	5	8	9	89
Leeton Project # 03	Footpath Installation	Wamoon Ave / Teatree Ave intersection	Wamoon Ave / Dunn Ave intersection	9	9	9	8	8	8	10	5	9	8	88
Leeton Project # 04	Footpath Installation	Palm Ave / Myrtle St intersection	Palm Ave / Dooley Lane intersection	9	9	9	8	7	8	9	6	8	8	81
Leeton Project # 05	Footpath Installation	Palm Ave / Myall St intersection	Palm Ave / Myrtle St intersection	9	9	9	8	7	8	9	6	8	8	81
Leeton Project # 06	Footpath Installation	Wilga St / Palm Av intersection	Wilga St / Yarran St intersection	9	9	9	8	7	8	9	6	8	8	81
Leeton Project # 07	Shared Path Installation	Almond Rd.	Leeton Skate Park	9	7	9	9	7	6	7	8	9	10	81
Leeton Project # 08	Shared Path Installation	Poplar Ave	Ramponi Park	9	8	8	8	6	8	8	6	7	7	75
Leeton Project # 09	Shared Path Installation	Railway Ave / Lilac Ave intersection	Ramponi Park	9	8	8	8	6	5	8	6	7	7	72
Leeton Project # 10	Shared Path Installation	Lilac Ave / Railway Ave intersection	Park Ave	9	8	8	8	6	5	8	6	7	7	72
Leeton Project # 11	Shared Path Installation	Canal St / Brady Way intersection (north side of road)	Poplar Ave (existing shared path on northside of road)	9	7	9	7	6	8	7	6	5	7	71

Project Description		From	To	Does it fill a network gap?	Has it been identified in consultation / audits?	Is it suitable for all users?	Are there multi-user-type benefits?	Is it located in a high activity area?	Is it located in a hazard area?	Does it improve separation from motor vehicles?	Is it an iconic route that inspires greater activity?	Will it increase active transport trips and support?	Is it practical and cost effective?	Total
Project Description		Street Name / Place	Street Name / Place											
Leeton Project # 12	Footpath Installation	Calrose St / Packham St intersection	Calrose St / Canal St intersection	8	7	7	8	8	7	8	5	6	6	70
Leeton Project # 13	Footpath Installation	Yanco Ave (Golden Apple IGA)	Yanco Ave (Golden Apple IGA)	9	8	7	7	8	7	7	5	5	6	69
Leeton Project # 14	Shared Path Installation	Maiden Ave / Acacia Ave intersection	Maiden Ave / Yanco Ave intersection	9	8	8	7	6	5	7	5	6	5	66
Leeton Project # 15	Shared Path Installation	Whitton Rd / Pendula St intersection	Gossamer Park, via Pendula St, Washington Dr and Lightwood St	7	7	7	7	6	5	7	5	6	6	63
Leeton Project # 16	Shared Path Installation	Karri Rd / Brobenah Rd intersection	Cassia Rd / Palm Ave intersection	6	7	6	6	5	5	7	5	6	5	58
Leeton Project # 17	Footpath Installation	Wandoo St / Grevillia St intersection	Wandoo St / Kurrajong St intersection	6	6	6	6	5	5	6	5	5	5	57
Leeton Project # 18	Shared Path Installation	Railway Ave / Oak St intersection	Railway Ave / Lilac Ave intersection	7	6	6	6	5	5	6	5	6	5	57
Leeton Project # 19	Footpath Installation	Brady Way / Valencia St intersection	Brady Way / Canal St intersection	7	6	6	5	6	5	7	5	5	5	57
Leeton Project # 20	Footpath Installation	Park Avenue / Cherry Ave intersection	Existing footpath on northside of Park Ave	7	6	6	5	5	5	7	5	5	6	57
Leeton Project # 21	Footpath widening	Brobenah Rd / Fivebough Rd intersection	Brobenah Rd	5	7	6	6	5	5	6	6	5	5	56
Leeton Project # 22	Footpath widening to Shared Path	Brobenah Rd / Karri Rd intersection	Boronia Rd / Teramo St intersection	6	7	6	6	5	5	6	6	5	4	56
Leeton Project # 23	Shared Path Installation	Petersham Rd / Brobenah Rd intersection	Existing path near Hillview Pl via Petersham Rd	5	8	4	4	5	5	7	7	6	4	55

		From	To	Does it fill a network gap?	Has it been identified in consultation / audits?	Is it suitable for all users?	Are there multi-user-type benefits?	Is it located in a high activity area?	Is it located in a hazard area?	Does it improve separation from motor vehicles?	Is it an iconic route that inspires greater activity?	Will it increase active transport trips and support?	Is it practical and cost effective?	Total
Project Description		Street Name / Place	Street Name / Place											
Leeton Project # 24	Accessibility Improvements	Intersection Reservoir La & Jarrah St	Intersection Reservoir La & Jarrah St	5	5	6	6	7	5	6	4	4	7	55
Leeton Project # 25	Shared Path Installation	Racecourse Road	Poplar Avenue / McQuillan Road	6	6	6	6	7	4	6	4	4	6	55
Leeton Project # 26 ¹	Footpath Installation	Almond Road (from Petersham Road)	Lansdowne Estate	7	8	5	5	6	4	6	3	4	5	53
Leeton Project # 27	Footpath Installation	Sycamore St / Cedar St / Wilmore St	Yarran Street to Yarran Street	7	8	5	5	5	3	6	3	4	5	51
Leeton Project # 28 ²	Shared Path Installation	Boronia Road	Serencroft Drive	3	8	6	6	3	3	5	3	5	4	46
Murrami Project # 1	Footpath Path Installation	Murrami Post Office	Murrami Park	8	8	4	4	8	4	7	5	7	7	62
Wamoon Project # 1	Footpath Path Installation	Wwamoon Public School	Wamoon Park	8	8	5	7	5	3	6	4	6	7	59
Whitton Project # 1	Footpath Path Installation	Naradhun Street	Whitton Swimming Pool via Gogeldrie Street	7	7	6	6	7	3	5	4	6	8	59
Whitton Project # 2	Footpath Path Installation	Melbergen Street	Naradhun Street via Gogeldrie St	8	7	6	6	7	3	5	4	6	8	60
Whitton Project # 3	Crossing relocation and improvements	Benerembah St	Benerembah St	6	7	8	8	8	5	7	4	7	8	68
Whitton Project # 4	Footpath Path Installation	Bringan Street	Whitton Bowling Club via Benerembah St	7	7	6	6	7	3	5	4	6	8	59

Project Description		From	To	Does it fill a network gap?	Has it been identified in consultation / audits?	Is it suitable for all users?	Are there multi-user-type benefits?	Is it located in a high activity area?	Is it located in a hazard area?	Does it improve separation from motor vehicles?	Is it an iconic route that inspires greater activity?	Will it increase active transport trips and support?	Is it practical and cost effective?	Total
Project Description		Street Name / Place	Street Name / Place											
Yanco Project # 1	Shared path installation	Main Avenue	McCaughey Bicentennial Park	8	7	8	7	7	3	7	4	7	8	66
Yanco Project # 2	Crossing improvements	Main Avenue	Main Avenue	5	6	8	7	9	3	7	4	6	8	63
Yanco Project # 3	Signage and accessibility improvements	Benerembah St	Benerembah St	2	7	5	7	8	3	4	4	5	8	53
Yanco Project # 4	Footpath Installation	Short Street	Coonong Avenue	7	7	8	7	8	3	6	6	6	6	64
Yanco Project # 5	Shared path installation	June - Hay Railway	Yanco Agricultural High School	5	6	8	7	7	3	8	7	8	5	64
Yanco Project # 6	Accessibility improvements	Coonong St	Coonong St	4	6	7	6	5	7	6	3	6	8	58
Yanco Project # 7	Shared path installation	June - Hay Railway	Agricultural Centre	5	6	8	7	7	3	8	7	8	5	64

Note Detail

- 1 Leeton Project # 26 was identified as a project as a result of the public exhibition of the Leeton Active Transport Plan. It is supported by Council only once the roadside irrigation channel is filled by Murrumbidgee Irrigation.
- 2 Leeton Project # 28 was identified as a project as a result of the public exhibition of the Leeton Active Transport Plan. It is supported by Council only once Leeton Projects # 22 and # 23 are completed to ensure there is continuity in the active transport network.

ON-GOING RESPONSIBILITIES

Supporting a Culture of Active Transport

Even a locally tailored evidence-based plan of action is not a guarantee of lasting results once completed and implemented.

According to the WHO Pedestrian Safety Manual, safe road-user behaviour and increasing user support depends on a number of factors, including:

- + Knowledge and skills.
- + Leaders.
- + Community support.
- + Perception of vulnerability and risk.
- + Social acceptance to norms and change models.
- + Engineering measures.
- + Law enforcement.

As this is a strategic document, detailed behaviour-change interventions and road safety programs have not been considered comprehensively. These issues need to be addressed over a longer period and with greater community involvement.

The following community awareness, education and activation strategies are suggested for further consideration by Leeton Shire Council and the wider local community over the life of the Leeton ATP.

Actions	Timeframe
Publicise an active transport routes way-finding map, possibly aligning with neighbouring councils and share data on recommended routes to help the NSW Government and third-party service providers improve digital trip planning services for walking and cycling.	1-5 years
Review shared path signage and investigate opportunities for improvements to encourage shared path etiquette, including use of social media.	1-5 years
Investigate an integrated approach to planning and prioritising local area traffic management interventions as part of area planning activities and road safety technical investigations to better align with pedestrian and cyclist safety issues and priorities.	5-10 years
Investigate community 'crowd funding' models that ensure delivery of active transport projects for Leeton Shire.	5-10 years
Encourage businesses to install secure bicycle parking, change rooms and shower amenities at their premises.	ongoing
Investigate / implement street tree plantings in appropriate locations along walking and cycling routes to create iconic trips that encourage increased active transport trips.	ongoing
Partner with the NSW Government and community organisations to deliver skills development and road safety awareness initiatives.	ongoing
Advocate for the NSW Government to investigate improved bicycle storage for significant public transport nodes and interchanges.	ongoing

Maintaining the Active Transport Network

The development of a comprehensive maintenance program which identifies key tasks and frequency of works is an important part of a quality active transport network.

Monitoring Progress

Implementing the priorities of the Leeton ATP will require on-going review of progress and regular feedback to key stakeholders and the wider community.

Council will monitor, review and report on its progress under the Leeton ATP using the existing Integrated Planning and Reporting Framework under the Local Government Act 1993 to ensure that its planning priorities are being achieved.

Funding Programs, Initiatives + Infrastructure

Moving forward, Council has the opportunity to make significant upgrades to walking and cycling infrastructure across the Leeton Shire with support from other government authorities.

Options for funding the actions outlined within the Leeton Active Transport Action Plan include:

- + Section 711 contributions - collected from new development in the relevant areas. However, these contributions will not be able to fund all of the actions in this Plan.
- + Grants and contributions (operational and capital) - Council will actively pursue grant funding and other contributions to assist in the delivery of new infrastructure.
- + Delivery partnerships - where Council and key partners (such as State Government agencies or private developers) collaborate to deliver a new infrastructure.

The following grant programs are currently available for active transport in NSW:

- + Transport, through the Get NSW Active grant program - funds grants to local and State governments for walking and cycling infrastructure as well as the development of strategies that support walking and cycling in local communities. To fund the development and delivery of the 15-minute neighbourhoods, the Get NSW Active grant program will fund local links that support a more cohesive active transport network.
- + The Liveable and Safe Urban Communities Initiative - will deliver targeted, area-based actions and treatments to improve safety. In busy urban places, the Safer Roads Program will deliver traffic calming, pedestrian facilities, and the expansion of safer speed settings.
- + The Streets as Shared Spaces program - provides grants for NSW councils to deliver temporary and demonstration projects that test and pilot innovative ideas for streets as safe, shared public spaces. The program tests possible permanent changes that can strengthen the amenity, accessibility and economic vitality of a high street and surrounding areas.



PROJECT SHEETS

A number of project sheets have been developed for some of the priority projects in Leeton, Murrumbidgee, Wamboon, Whitton and Yanco.

These project sheets are presented in the following sections of the Leeton Active Transport Plan.

Leeton Project # 1

PROJECT DESCRIPTION

Crossing alignment replacement at the intersection of Wilga Street and Willow Streets in Leeton.

PROJECT BENEFIT

The lack of kerb ramps following desire lines is encouraging pedestrian movement onto the through carriageway of Myrtle and Wilga Streets. The project is necessary to improve the safety of student and commuter pedestrians crossing the street environment at this location.

PROJECT SPECIFICATIONS

Concrete kerb and gutter realignment to create a more appropriate intersection, estimated @ \$9,000

Footpath repair and realignment works, estimated 10m @ \$270/lm

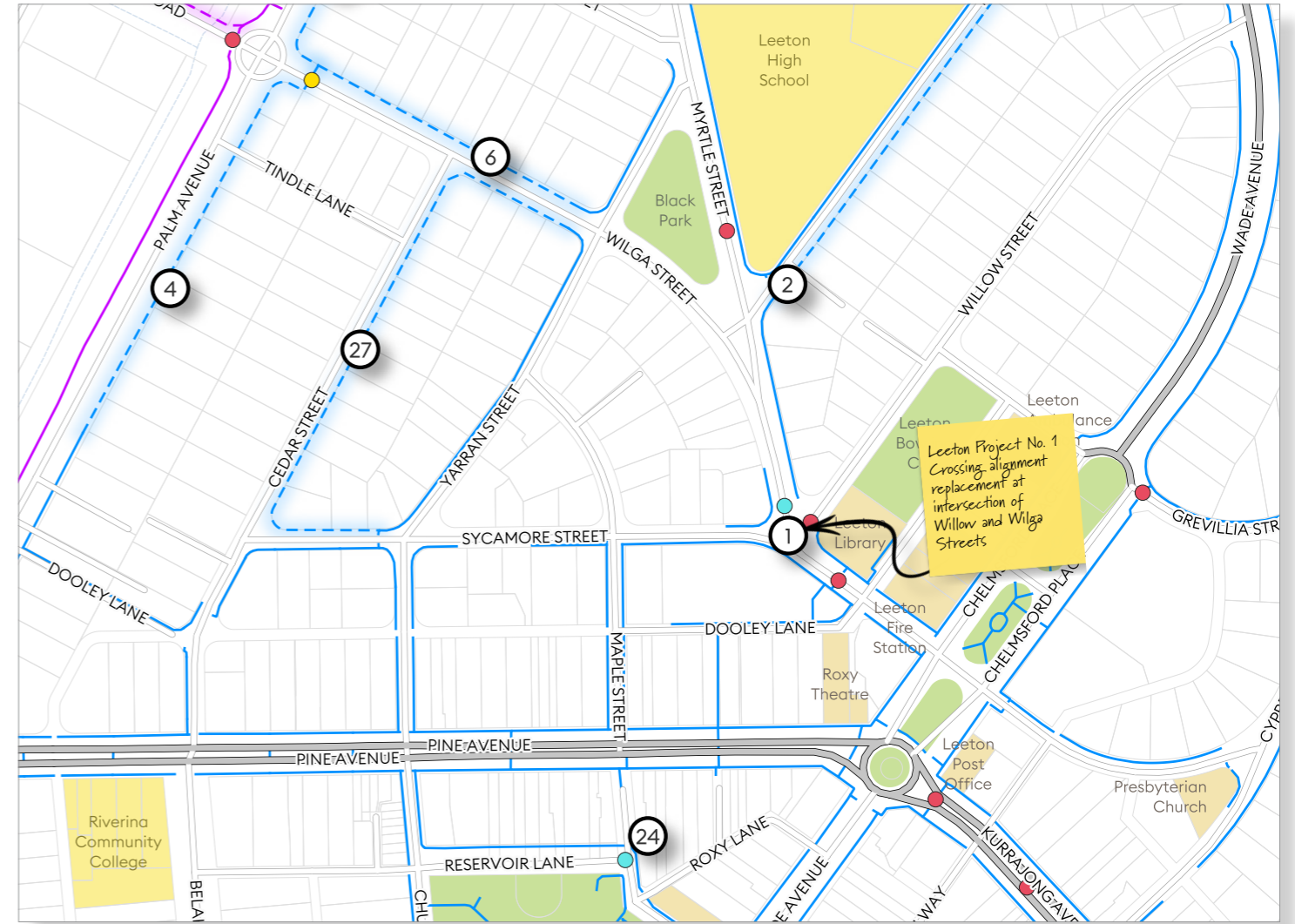
Kerb ramps x 2 @ \$3,500 each

Traffic control, estimated @ \$5,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$23,700

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Site Photograph



Site Photograph

Leeton Project # 3

PROJECT DESCRIPTION

Installation of a new footpath along the northern side of Wamoon Avenue linking from the existing footpath location near the intersection of Acacia Avenue Street to the existing shared path location on Dunn Avenue.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network along a primary route that is well used by pedestrians accessing the Leeton CBD.

PROJECT SPECIFICATIONS

1.5m footpath x 850m @ \$270/lm

Concrete blisters x 2, northern side of Wamoon Avenue, estimated @ \$7,000 each

Drainage and footpath rehabilitation, estimated @ \$7,000

Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$258,500

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Road Reserve | Footpath 1.2m | Road Reserve | On-road Cycling | Travel Lane | Travel Lane



Site Photograph

Leeton Project # 7

PROJECT DESCRIPTION

Installation of new shared path along the northern side of Almond Road, linking from the existing shared path location near Daalbata Road to the existing shared path network in the vicinity of Rotary Park and Leeton Skate Park.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network in the vicinity of Almond Road and the various public recreation facilities within the Leeton Ovals Complex.

PROJECT SPECIFICATIONS

2.5m shared path x 95m @ \$430/lm

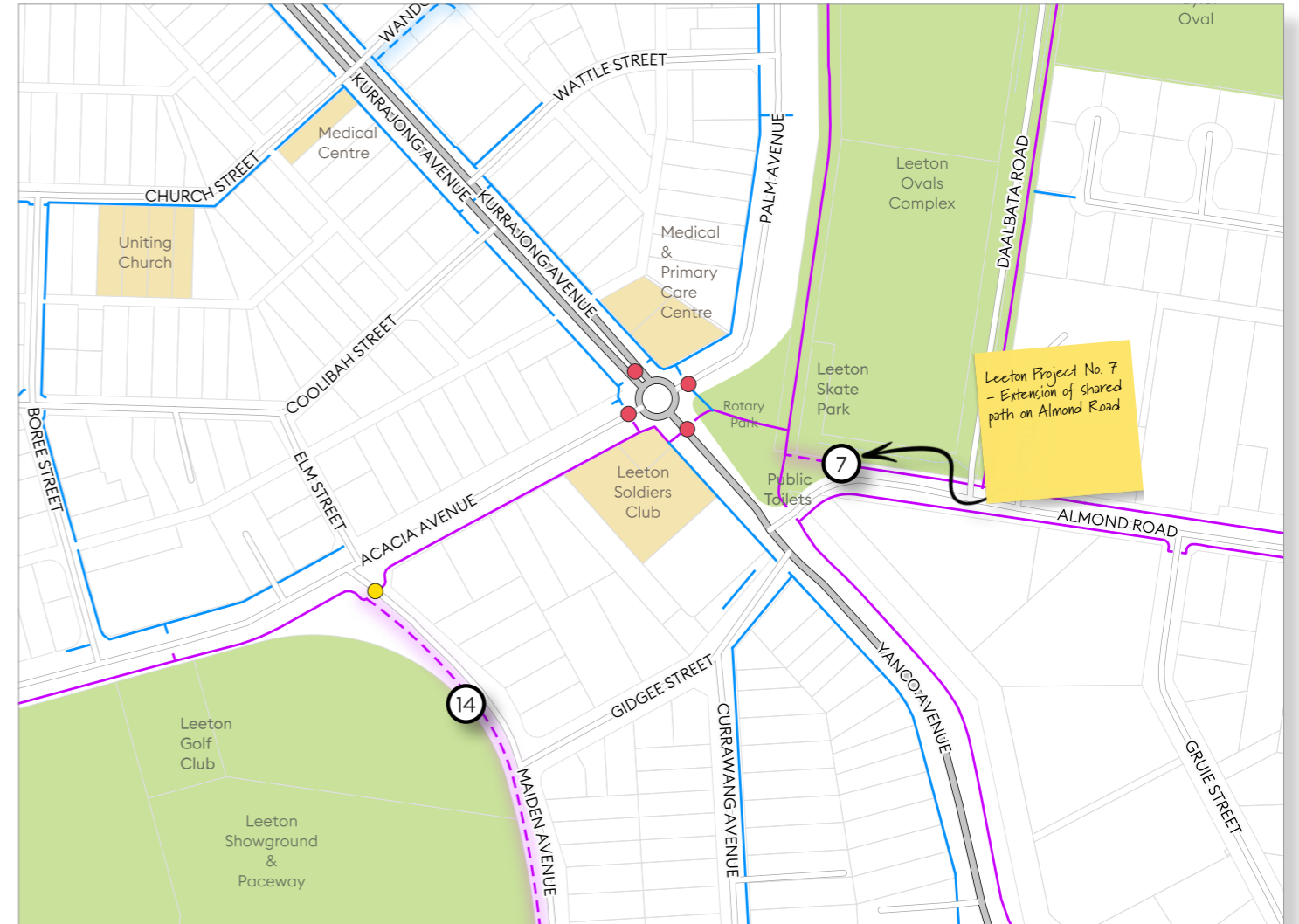
Drainage and footpath rehabilitation, estimated @ \$1,500

Work safe barrier / signage, estimated @ \$750

ESTIMATED COST

\$43,100

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Site Photograph



Site Photograph

Leeton Project # 8

PROJECT DESCRIPTION

Installation of new shared path along the eastern side of Poplar Avenue, linking from the existing shared path opposite OneSchool Global to Ramponi Park at the intersection of Poplar Avenue and Racecourse Road. The project is proposed as part of a larger shared path project involving Leeton Projects # 9, 10 and 11.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network along the busy Poplar Avenue.

PROJECT SPECIFICATIONS

2.5m shared path x 409m @ \$430/lm

Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$183,870

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Site Photograph

Leeton Project # 9

PROJECT DESCRIPTION

Installation of new shared path along the eastern side of Railway Avenue Road, linking from Ramponi Park to Beech Street. The project is proposed as part of a larger shared path project involving Leeton Projects # 8, 10 and 11.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network along Railway Avenue.

PROJECT SPECIFICATIONS

2.5m shared path x 460m @ \$430/lm

Kerb ramps x 2 @ \$3,500 each

Pedestrian refuge islands x 1 @ \$12,000 each

Kerb side blisters x 2 @ \$7,000 each

Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$238,800

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Site Photograph



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Leeton Project # 10

PROJECT DESCRIPTION

Installation of new shared path along the western side of Lilac Avenue linking from Racecourse Road to the existing shared path on Park Avenue adjacent to the Parkview Public School. The project is proposed as part of a larger shared path project involving Leeton Projects # 8, 9 and 11.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network between busy Railway Avenue and the Parkview Public School.

PROJECT SPECIFICATIONS

2.5m shared path x 175m @ \$430/lm

Kerb ramps x 2 @ \$3,500 each

Pedestrian refuge islands x 1 @ \$12,000 each

Kerb side blisters x 2 @ \$7,000 each

Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$116,250

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Site Photograph

Leeton Project # 11

PROJECT DESCRIPTION

Installation of new shared path along the eastern side of Canal Street, linking from the existing shared path near the intersection of Cherry Avenue to the existing footpath located on Brady Way. The project is proposed as part of a larger shared path project involving Leeton Projects # 8, 9 and 10.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network along the busy Poplar Avenue / Canal Street

PROJECT SPECIFICATIONS

2.5m shared path x 1100m @ \$430/lm

Pedestrian refuge islands x 1 @ \$12,000 each

Kerb ramps x 8 @ \$3,500 each

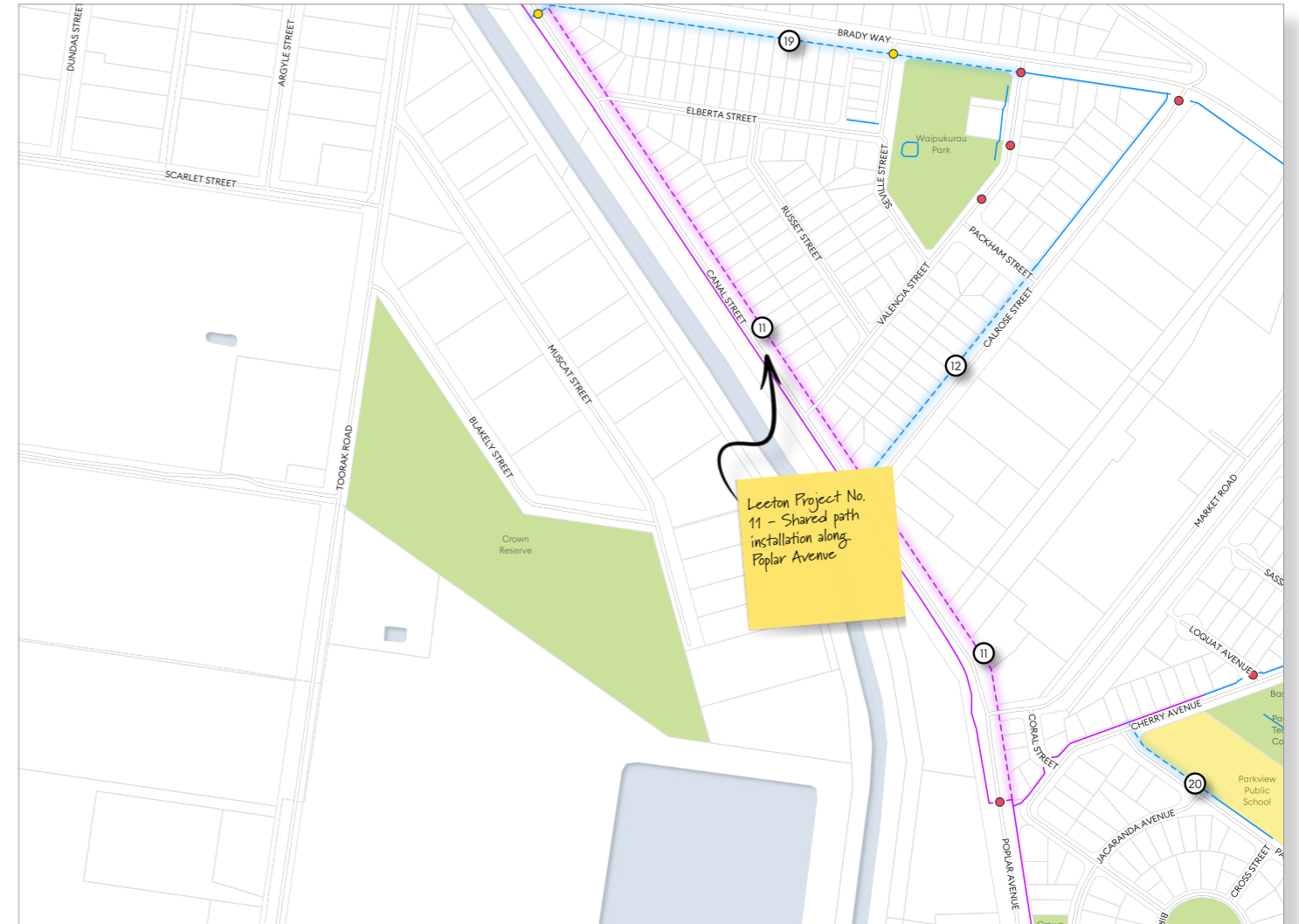
Kerb side blisters x 2 @ \$7,000 each

Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$535,000

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Site Photograph

Leeton Project # 14

PROJECT DESCRIPTION

Installation of a new shared path along the western side of Maiden Avenue linking from the existing shared path location near the intersection of Acacia Avenue Street to the existing shared path location on Yanco Avenue.

PROJECT BENEFIT

The project will fill an identified network gap and improve the connectivity of the active transport network along an existing primary route used by pedestrians accessing the Leeton Showground, the Gralee School and the St Francis De Sales Regional College, Leeton Caravan Park, Golden Apple IGA and Yanco wider afield.

PROJECT SPECIFICATIONS

- 2.5m shared path x 1,130m @ \$430/lm
- Pedestrian refuge islands x 1 @ \$12,000 each
- Drainage and footpath rehabilitation, estimated @ \$5,000
- Barrier kerb and guttering x 1,130m @ 200/lm
- Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$736,900

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Site Photograph

Murrami Project #1

PROJECT DESCRIPTION

Installation of a new footpath path along the northern side of Wattle Avenue linking from the Murrami Post Office to the Community Hall.

PROJECT BENEFIT

The project is necessary in order to improve conditions for active transport movement along a route that is identified to be well used by pedestrians accessing the Post Office and the Community Hall, being two of the primary trip generating activities in Murrami. Drainage and heavy vehicle traffic need to be carefully managed in the completion of this project.

PROJECT SPECIFICATIONS

1.5m footpath x 341m @ \$270/lm.

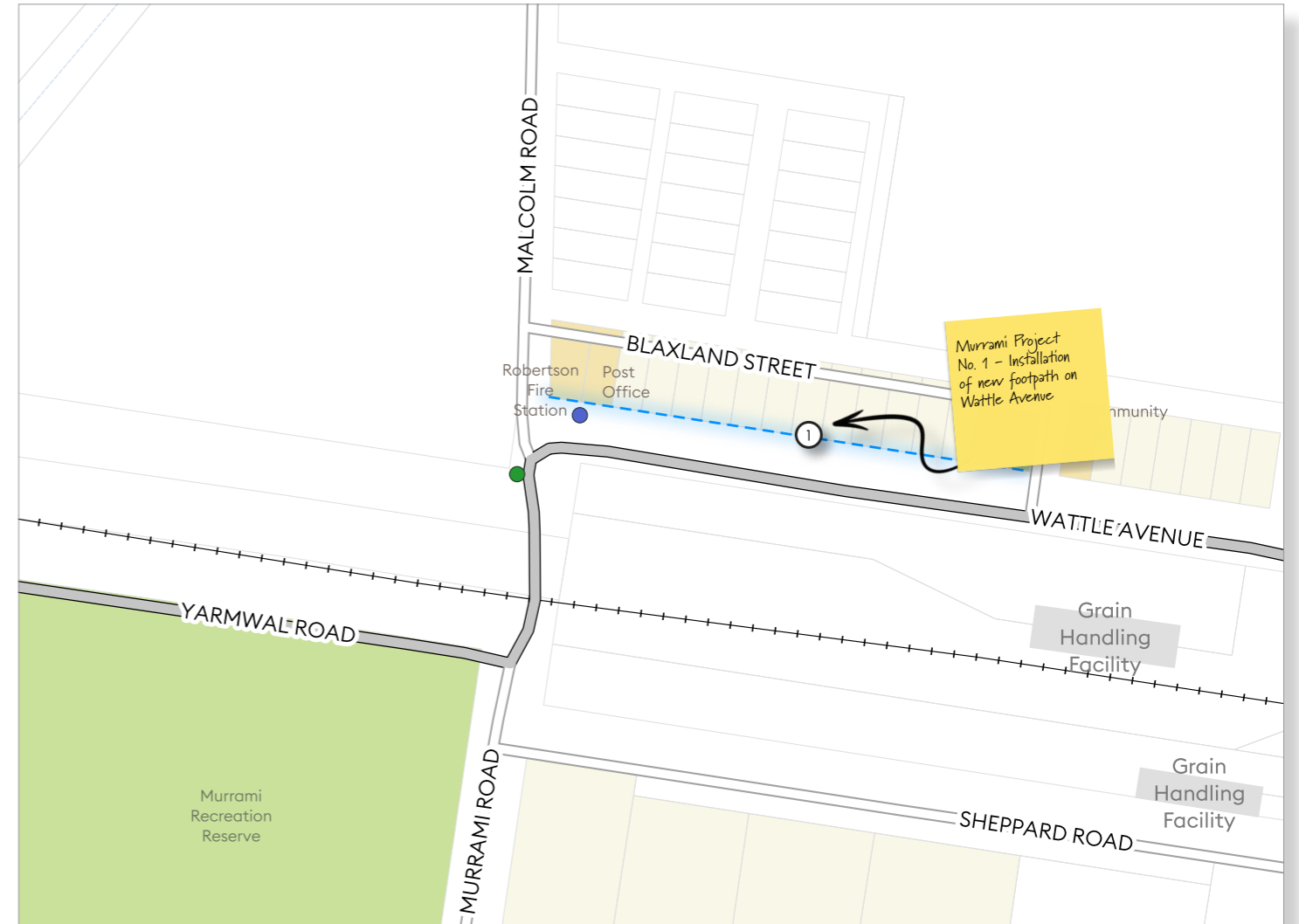
Drainage and footpath rehabilitation, estimated at \$10,000

Traffic control, estimated @ \$3,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$105,070

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Road Reserve | Footpath 1.2m | Road Reserve | On-road Cycling | Travel Lane | Travel Lane



Site Photograph



Site Photograph

Wamoon Project # 1

PROJECT DESCRIPTION

Installation of a new footpath path along the southern side of Oxley Road linking from the Wamoon Public School to the Wamoon Park.

PROJECT BENEFIT

The project will improve conditions for active transport movement along an identified route that is well used by students accessing the Wamoon Public School and bus stop and walking to the nearby Wamoon Park.

PROJECT SPECIFICATIONS

1.5m footpath x 115m @ \$270/lm

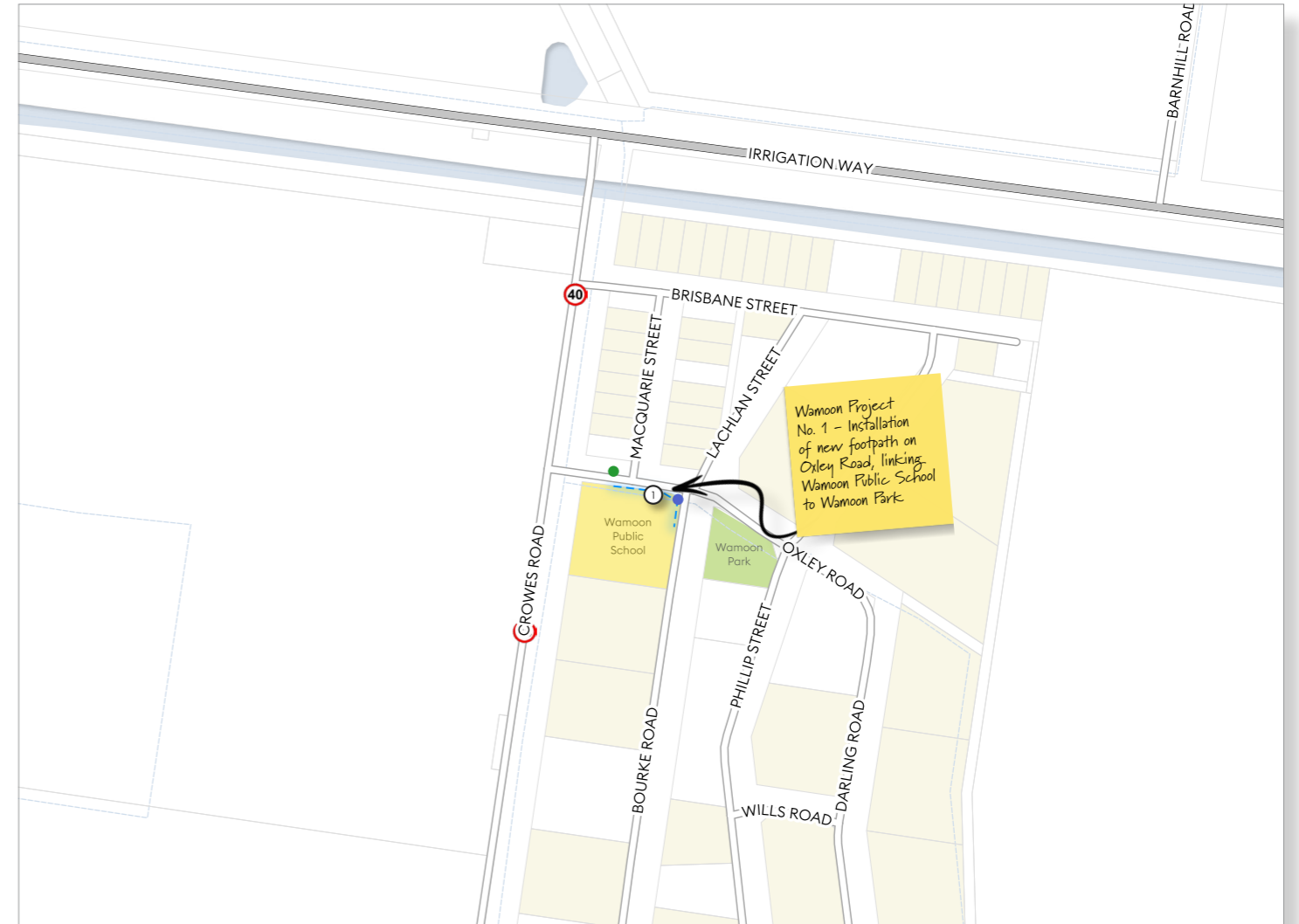
Drainage and footpath rehabilitation, estimated @ \$5,000

Traffic control, estimated @ \$3,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$35,188

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Road Reserve | Footpath 1.2m | Road Reserve | On-road Cycling | Travel Lane | Travel Lane



Site Photograph



Site Photograph

Whitton Project # 3

PROJECT DESCRIPTION

Relocation of the existing crossing location on Benerembah Street and associated improvement works including removal of existing refuge, installation of a new refuge, kerb blisters and kerb ramps. The project also involves new line marking and signage.

PROJECT BENEFIT

The project is necessary in order to improve the safety of pedestrians crossing Benerembah Street at this location which is well used by pedestrians accessing the Post Office, General Store and Community Hall. Maintaining existing car parking and drainage are important design considerations.

PROJECT SPECIFICATIONS

Remove existing centre refuge and blisters and requisite road seal, estimated @ \$8,000

Kerb Ramps x 6 @ \$3,500 each

Footpath extensions x 30m @ \$270/lm

Drainage and footpath rehabilitation, estimated at \$8,000

Pedestrian refuge islands x 1 @ \$12,000 each

Kerb side blisters x 2 @ \$7,000 each

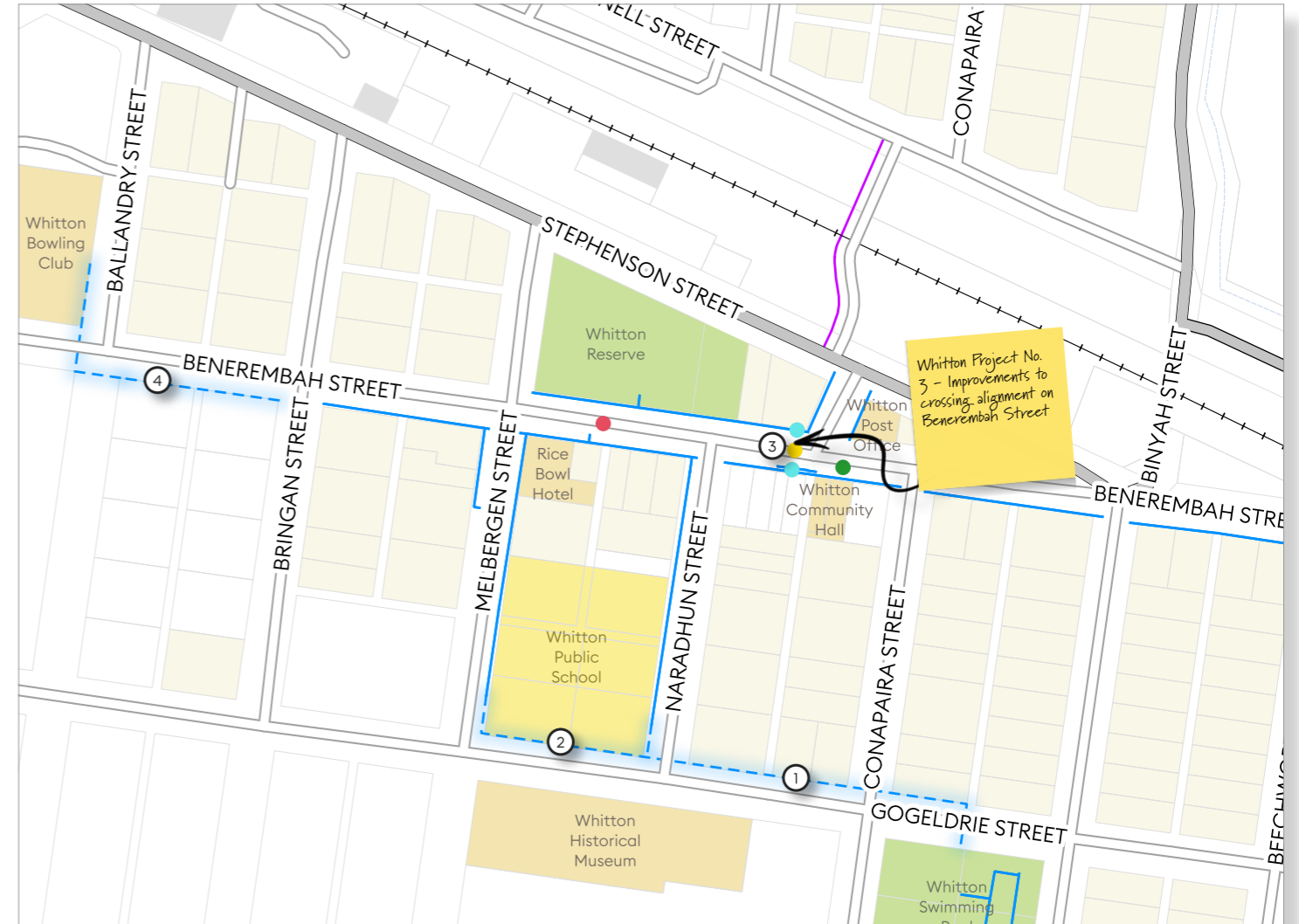
Traffic control, estimated @ \$8,000 for preparation / implementation of a Traffic Control Plan

Line marking and signage, estimated @ \$4,000

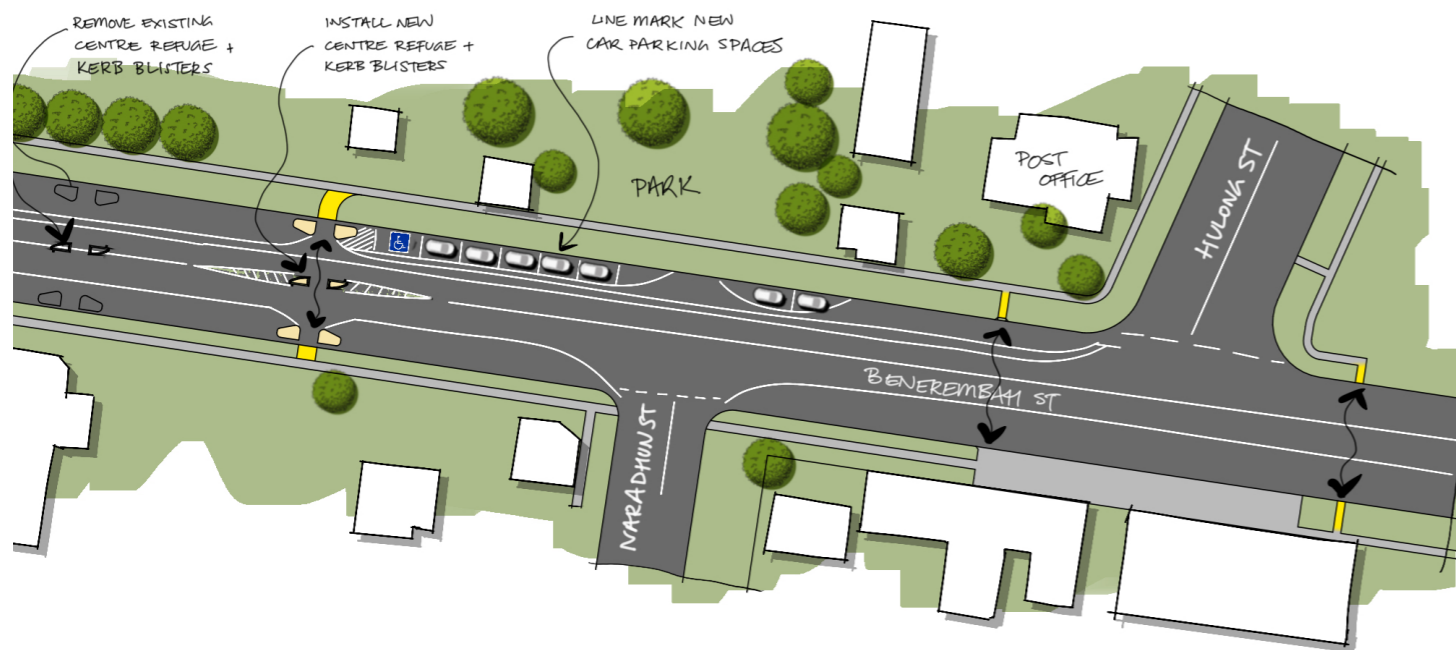
ESTIMATED COST

\$83,100

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Site Photograph



Site Photograph

Yanco Project #1

PROJECT DESCRIPTION

Installation of a new shared path along the northern side of Gogeldrie Street linking from the existing footpath location near the intersection of Main Avenue Street to the existing shared path in the McCaughey Bicentennial Park.

PROJECT BENEFIT

The project provides a necessary link from McCaughey Bicentennial Park to Yanco Main Street.

PROJECT SPECIFICATIONS

2.5m shared path x 240m @ \$430/lm

Kerb Ramps x 2 @ \$3,500 each

Drainage and footpath rehabilitation, estimated at \$6,000

Traffic control, estimated @ \$3,000 for preparation / implementation of a Traffic Control Plan

ESTIMATED COST

\$119,200

- Primary Road Network
- Local Road Network
- Railways
- Existing Footpath
- Existing Shared Path
- Proposed Footpaths
- Proposed Shared Paths
- Proposed Path Widening
- Existing Pedestrian Crossing
- Existing Centre Refuge
- Proposed Centre Refuge
- Signage Improvements
- Accessibility Improvements
- Education Facilities
- Community Facilities
- Parks and Recreation Areas
- Project Numbers



Project Location Map



Shared Path 2.5m | Road Reserve | Road Carriageway | Road Reserve



Site Photograph



Site Photograph



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