

Mildura Tracks and Trails Strategy



Mildura Rural City Council

July 2012

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1.0 Executive Summary

The provision of a high quality, connected tracks and trails network can have significant benefits for the Mildura Rural City community. Local residents can improve their physical health and wellbeing by choosing to use active transportation (i.e. walking or cycling) for leisure and commuting, thereby increasing their fitness levels and reducing their risk of contracting heart disease, certain types of cancers, illnesses and conditions such as obesity and type two diabetes. Improved health and wellbeing can result in fewer absentee days from work and less stress on the health system, as well as increased confidence and self-esteem. With the ageing of the community, walking (and cycling to a slightly lesser extent) are activities that can be undertaken by people of all ages and abilities. As an added incentive, other than equipment such as suitable footwear (or a bicycle, for cyclists), these activities are completely free to participate in and can be undertaken with others or alone at all times of the day.

From a social perspective, walking and cycling provides a greater sense of activity in a community and at the same time provides opportunities to meet neighbours and make new friends, thereby strengthening community connections and reducing people's sense of social isolation. An increase in the use of active transport also has a positive impact on the environment. Walking and cycling is a pollution free form of transport and people taking part in these activities may develop a strong connection to the environment in which they travel, thereby developing a greater appreciation of local flora, fauna, history, geography and culture of an area. Finally, an increase in cycling and walking can not only result in less wear and tear on the road network and a reduced need for car park construction, it can also promote employment opportunities in a local area, particularly if events and cycle tourism opportunities are increased.

There are a number of on and off road tracks and trails distributed throughout the municipality. Some of these trails are managed by Mildura Rural City Council, particularly on road bicycle lanes and off road trails in urban areas. Other organisations, such as Parks Victoria, manage off road trails in state and national parks, along some sections of the Murray River and in nature reserves areas such as Kings Billabong. The most commonly used on road lanes at present, according to survey respondents, include Deakin Ave, 11th Street, 15th Street and Walnut Ave. Trails along the Murray River, at Kings Billabong and around Merbein Common are the most frequently used off road trails. Cyclists and walkers in smaller towns in the municipality are primarily served by footpaths and the occasional on road bicycle lane. Some towns, such as Ouyen, are working on establishing a series of shared trails within the town boundaries to help encourage local residents to keep fit.

In general, local residents and key stakeholders are very supportive of the existing tracks and trails in Mildura Rural City and are encouraging of further trail development. Some of the key issues identified with the existing tracks and trails network through community consultations and research include the need to:

- Develop a regionally significant trail that will provide high quality opportunities for local residents and attract visitors to the area.
- Develop priority north-south and east-west on road commuter lanes along 11th St, Deakin Ave, 14th St and San Mateo Avenue, which enable cyclists to quickly and safely travel across Mildura into the CBD area.

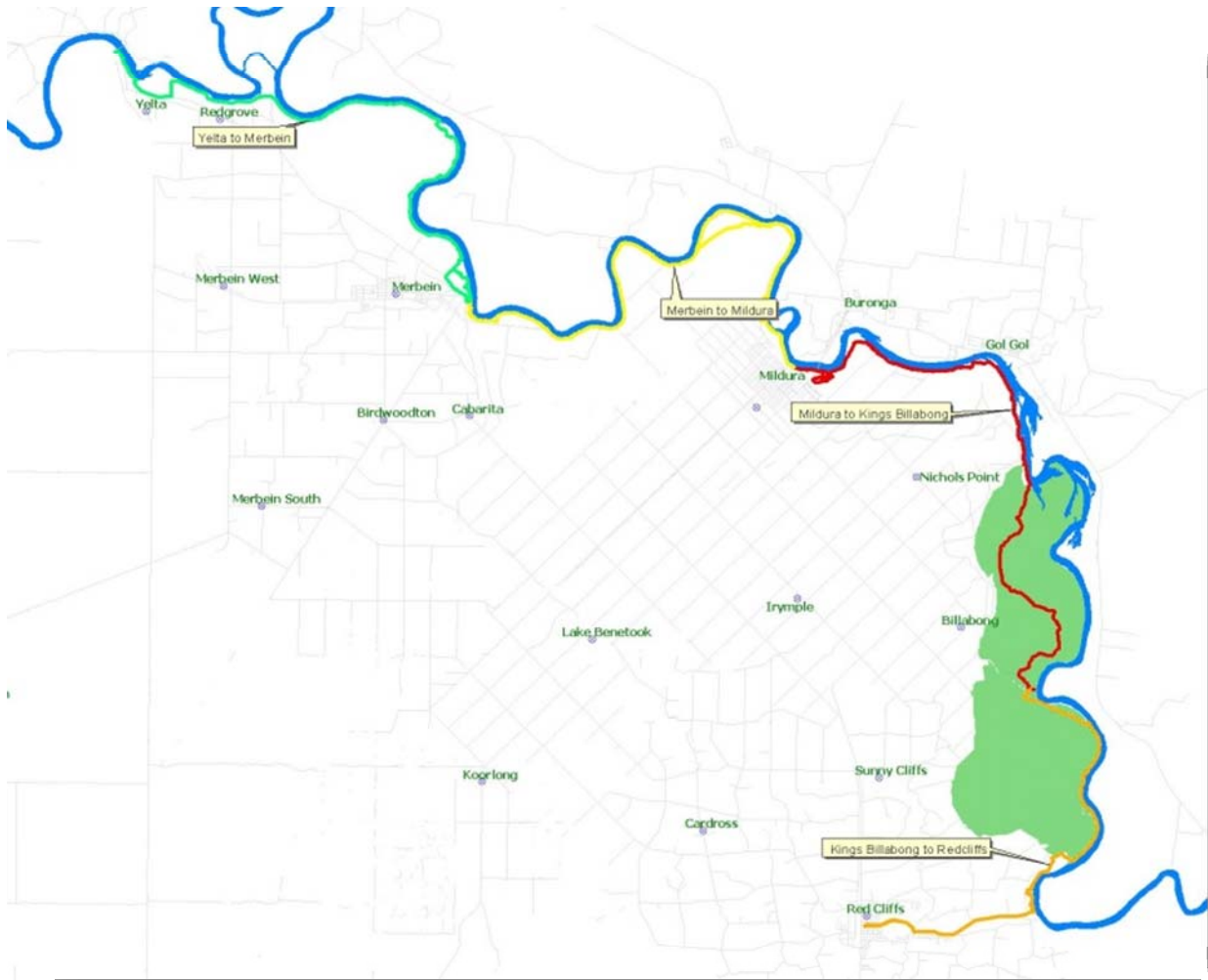
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- Develop prioritised pedestrian routes within Mildura CBD area, particularly along 8th and 9th Streets.
- Link trails to one another to form a connected network, including to and from residential developments, areas of open space, recreation reserves and community centres / hubs.
- Improve promotion, signage and branding of existing tracks and trails opportunities.
- Educate both drivers and cyclists about road rules and respect for other road users.
- Identify safe routes for young people to travel to school using active transport.
- Construct additional infrastructure along trails such as seats, shade, picnic facilities, etc and suitable end of trip facilities such as bicycle parking.
- Improve management and planning of trails in partnership with key stakeholders, including regular data collection and evaluation systems.
- Improve maintenance of tracks and trails and provide support to voluntary groups that undertake maintenance tasks.
- Improve trail designs and standards.
- Improve safety of trails by sealing shoulders on cycle training routes, improving roundabout designs for cyclists and improving crossings.
- Improve access from the Mildura CBD area to the riverfront for walkers and cyclists.
- Connect outlying towns / suburbs / areas safely with the Mildura CBD area, e.g. Nichols Point, Irymple, Red Cliffs, Merbein and Kings Billabong via tracks and trails and ensure that other small towns in the municipality have access to tracks and trails.
- Explore the extension of the existing off road trail along the railway easement.
- Work with local businesses to encourage the development of end of trip facilities and the provision of water along trails.
- Explore intra-municipal links with Wentworth Shire Council.
- Consider the employment of a part-time staff person to assist with the initiatives identified.
- Facilitate additional events and programs to encourage greater numbers of people to walk and cycle on a regular basis.
- Remove fences that have been constructed across trails (or potential trail sites) on public land by nearby residents or organisations.
- Manage illegal trail bike riders.

The further development of the Chaffey River Trail (part of the Murray River Experience Trail identified in the Loddon Mallee Regionally Significant Trails Strategy) as an off road shared trail for cyclists and walkers offers excellent potential to attract additional visitors to the region or to extend the stay of existing visitors. It is conservatively estimated that the entire Murray River Experience (linear sections of trail from Echuca to Wentworth via Gunbower Island, Swan Hill / Nyah and Mildura) will attract around 75,000 people annually; will create 26-30 full time jobs; and will generate between \$2.6 million and \$3 million annually. The completion of the 36km trail along the

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river from Mildura to Yelta (providing a connection to Wentworth) and the 32km trail to Redcliffs via Kings Billabong is estimated to cost in the vicinity of \$1.8 million, with \$1 million worth of works required on council owned land. The high priority sections from Merbein to Mildura and Kings Billabong to Mildura total 36km and would cost approximately \$600,000. This particular trail development is seen as a major priority within the Strategy, not only to increase visitor yield, but to increase the quality and range of recreational experiences available for local residents.



The benefits of providing a high quality connected walking / cycling network are compelling from a health, social, environmental and economic perspective. As a Council, we are committed to increasing the use of active transportation within Mildura Rural City. In order to achieve this, we need to create an environment that is conducive to and supports walking and cycling at all times so that people view active transport as a viable transport choice. We therefore need to focus on:

- Providing and facilitating good quality and well designed physical infrastructure such as trails, bicycle parking, seating, shade and other end of trip facilities.
- Promoting the benefits of cycling and walking to people of all ages and abilities.
- Developing programs that teach people how to cycle and maintain a bicycle.

- Developing initiatives that encourage people to cycle and walk.
- Reducing perceptions of danger through measures such as clear and consistent signage; separation from vehicles wherever possible; and other traffic calming measures.
- Integrating active transport with public transport.
- Reducing incentives to use vehicles for short trips.
- Creating the perception that cycling is a viable transport option, not just a sporting activity.
- Committing sufficient funds for infrastructure works and programs.
- Demonstrating our commitment to cycling and walking through our policy development, our works, our programs and our actions.

As a general rationale, priority should be given to the development of shared paths as they cater to both cyclists and walkers, thus enhancing value for dollars invested. Off road paths will usually only be required on one side of the road and can be installed at a substantially lower cost than on road bicycle lanes (depending on earthworks required). They are generally safer than on-road cycle lanes and so will encourage greater usage. In high use areas, sealing of trails is recommended to provide access for all abilities.

To achieve a high quality tracks and trails network within Mildura Rural City Council a prioritised list of specific works (including the Chaffey River Trail) has been developed with an estimated cost of \$5.8M over 10 years. With maintenance costs increasing in line with new trail developments, the annual budget allocation required is nearly \$590,000 in year 1, rising to \$660,000 in year 10 (not including CPI increase).

It is anticipated that matching funding from external sources may be obtained for many of the trail developments and maintenance costs minimised by using volunteer community groups, thereby reducing the burden on MRCC budget allocations.

Total required expenditure over 10 years, including external and internal funding is \$6.25M.



2.0 Introduction

2.1 Aims and Objectives

The aim of the Mildura Rural City Council Tracks and Trails Strategy is to identify, develop, upgrade, manage and maintain a network of linked and shared on and off road cycling and walking paths suitable for commuting and recreation purposes. These trails are to be designed to meet safety standards, will feature consistent branding and will be clearly marked and sign posted. They will link to key community destinations such as schools, shops, waterways, parks and recreation areas. They will also connect to other existing or proposed paths within the municipality and between other Local Government Areas wherever feasible to create a greater network of cycling and walking opportunities in the region for both local residents and visitors. This strategy replaces the previous Mildura Strategic Bicycle Plan.

2.2 Methodology

In order to develop a comprehensive understanding of existing and potential on and off-road tracks and trails throughout the municipality, as well as an understanding of existing policies and strategic directions, the project team reviewed a range of relevant reports, including the previous Cycle Strategy. The literature review was followed up with interviews with key stakeholders to provide an update on existing reports, policies and initiatives which may impact on the future development and management of tracks and trails in the municipality. The team also undertook extensive engagement with the community to identify not only enablers and constraints to cycling and walking, but gaps and opportunities to increase participation in these activities. A physical audit was undertaken of key tracks and trails throughout the municipality to identify limitations of existing tracks and trails or to identify opportunities to enhance existing trails through targeted upgrades or to further expand the cycling / walking network.

2.3 Scope

The Tracks and Trails Strategy specifically focuses on current and potential off road cycling and walking paths as well as on road cycling paths. It does not focus on footpaths, except in instances where there are opportunities for the development of a shared cycling / walking path. Further, the Strategy does not focus on paths, tracks or trails within school grounds or on land owned and managed by other authorities such as Parks Victoria or Department of Sustainability and Environment, unless such land is located within towns and is considered to be an important part of the cycling / walking network (e.g. King's Billabong).



2.4 Definitions

A range of different terms are used to describe tracks and trails, their various components and user groups. Each of these aspects is defined as follows:

Term	Definition
Bicycle Path	“A path or path section intended for the exclusive use of cyclists, generally referred to ... as an exclusive bicycle path.” ¹
Bush Track	Path through bush land or next to rivers, generally some distance from roads, usually an unmade dirt track, used by walkers, hybrid bikes, mountain bikes, dirt bikes and horse riders.
Copenhagen Bike Lane 	<p>Copenhagen Lanes were designed in Denmark in 1983 to separate cyclists from cars. The roadway comprises of a cycle track on the left hand side, space for cars to park to the right on the track and then a road for motorists on the far right, effectively using the parking bay to separate cyclists from the traffic.</p> <p><i>Image sourced from Wikipedia.</i></p>
Cyclist	“Rider of a bicycle or human powered vehicle.” ² There are many different types of cyclists, each with their own particular needs including: commuter, recreational (also includes mountain bike riders), tourist, competitive (training / fitness), utility (to shops, schools, recreation centres, etc) and novice cyclists.
Footpath	“An area open to the public that is designated for, or has as one of its main uses, use by pedestrians, but does not include a shared use path.” ³
Hiking	“A subtype of walking, generally used to mean walking in nature areas on specially designated routes or trails, as opposed to in urban environments; however, hiking can also refer to any long-distance walk.” ⁴

¹ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

² Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

³ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

⁴ Wikipedia - <http://en.wikipedia.org/wiki/Walking>

Human Powered Vehicles



“Refers to the array of alternative forms of pedal powered and hand cranked vehicles including recumbents, tandems, tricycles, and bicycles with trailers.”⁵

Image sourced from Wikipedia.

Hybrid bike



“A bicycle designed for general-purpose utility or commuter cycling on paved and unpaved roads, paths, and trails. Also known under such names as City bike, Cross bike, or Commuter, the hybrid takes design features from both the road bike and mountain bike, with the goal of making a bike for general commuting and transportation.”⁶

Image sourced from Wikipedia.

Mountain bike

“A mountain bike or mountain bicycle (abbreviated MTB or ATB (all terrain bicycle)) is a bicycle designed for off-road cycling, including jumps, and traversing of rocks and washouts, and steep declines, either on dirt trails, logging roads, or other unpaved environments. Bicycles typically used for mountain biking need to be able to withstand off-road use and the surmounting of obstacles such as logs and rocks.”⁷

Off road Trail

Path constructed a short distance away from a road – may be asphalt, concrete, crushed rock, granitic sand, gravel, or unmade dirt track – predominantly used by walkers, hybrid bikes or mountain bikes.

On road Trail / Lane



Sealed path joined to a road and predominantly used by road bikes.

Image sourced from Wikipedia.

Pedestrian

“A person walking, and including people in wheelchairs, on roller skates or riding on toy vehicles such as skate boards or other vehicles, other than by bicycle, powered by human effort or motor with a maximum speed of 10 km/h.”⁸

Rails with Trails


Trails located alongside operating railway lines.

⁵ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

⁶ Wikipedia - http://en.wikipedia.org/wiki/Hybrid_bike

⁷ Wikipedia - http://en.wikipedia.org/wiki/Mountain_bike

⁸ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

Rail Trail	Cycling / walking trail built along a disused railway line.
Riley Kerb 	<p>A yellow small profile that can be used to separate bicycle and travel lanes.</p> <p><i>Image sourced from</i> http://www.tcaaaustralia.com.au/riley.html</p>
Rural road	Usually unmade gravel or dirt roads which are frequently used by cyclists due to the lower traffic volumes than main roads and highways.
Sealed Shoulder	“Refers to the sealed edge of roads outside of the travelled carriageway (the shoulder) of roads where cyclists might be expected to ride. It is delineated by an edge line applied between the sealed shoulder and the travelled section of a carriageway. The treatment is almost invariably associated with unkerbed roads, as is often applicable to rural roads.” ⁹
Separated Path	A path divided into separated sections one of which is designated for the exclusive use of cyclists and an alternate section for other path users.
Shared Use Path	“A path open to the public that is designated for, or has as one of its main uses, use by both cyclists and pedestrians, but does not include a separated footpath or a footpath adjacent to a road.” ¹⁰
Track and Trail	“A trail is a pedestrian path or road mainly used for walking, but often also for cycling, cross-country skiing or other activities. Some trails are off-limits to everyone other than hikers, and few trails allow motorized vehicles ... In Australia, the word track can be used interchangeably with trail, and can refer to anything from a dirt road to a pedestrian walkway (generally also unpaved). The term "trail" gained popularity during World War II, when many servicemen from the United States were stationed in Australia, which probably influenced its being adopted by elements of the Australian media at the time. In New Zealand, the word track is used almost exclusively except in reference to cross-country skiing, where trail is used.” ¹¹
Trail head	Specific points at which trails start or end.

⁹ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

¹⁰ Austroads – “Guide to Traffic Engineering Practice – Bicycles – Part 14” (1999)

¹¹ Wikipedia - <http://en.wikipedia.org/wiki/Trail>

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Training Route	Refers to a designated on road route, usually more than 20km long, used by cyclists to improve their fitness. Often a group of cyclists will ride this particular route together, particularly on weekends or outside work hours.
Utility service road	Trails that have been established along service roads used occasionally by utilities such as water authorities to check on their assets (e.g. irrigation channels), also used by walkers, hybrid bikes and mountain bikes.
Walker	A person who travels from one place to another on foot for exercise, pleasure or as a form of transport.



3.0 Mildura Rural City Overview

3.1 Geography, Climate and Land Use

Mildura Rural City Council comprises of an area of 22,330 square kilometres in the top north-west corner of Victoria. The main service centre, Mildura, is located 541 km from Melbourne and 417 km from Adelaide. Other large towns in the municipality include Irymple, Merbein, Murrayville and Red Cliffs.

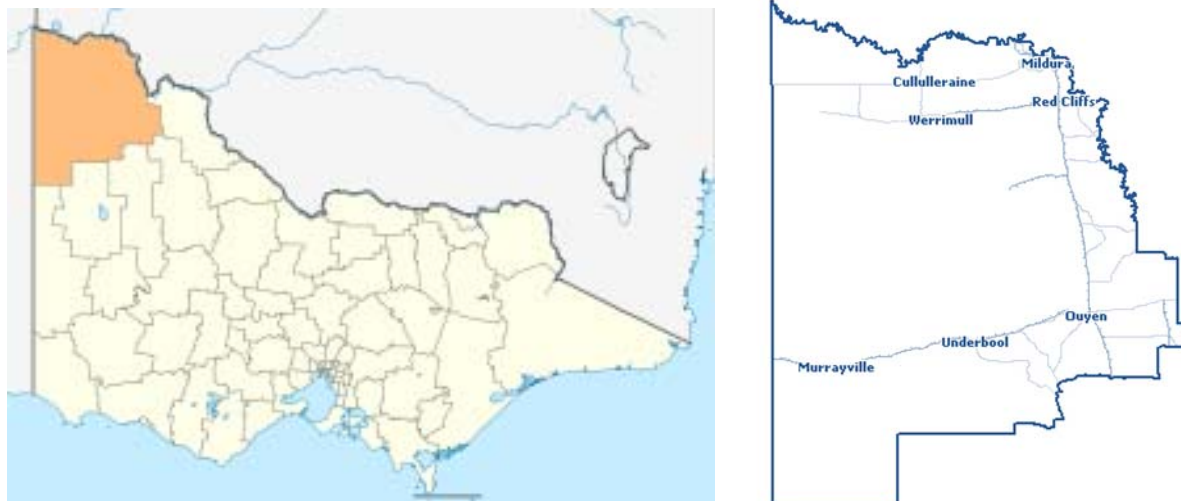


Figure 1: Map sourced from Wikipedia

Located on the Murray River, the main industries within the region include agriculture (predominantly grapes, citrus fruit and vegetables), tourism, food and beverage manufacturing, transport and logistics, retail, health and community services. Some of the emerging industries include renewable energy generation, aquaculture, mineral sands mining and recycling.

Mildura has a temperate climate featuring warm, dry summers and mild winters. Maximum temperatures average 32 degrees Celsius in summer and 15 degrees Celsius in winter. The area has an average rainfall of 280 mm per annum.

Located 50 metres above sea level on the river plains, Mildura itself is generally quite flat and fertile, whilst other areas of the municipality can be dry, saline or semi-arid. There are occasional sand hills in parts of the municipality.

3.2 Demographics

According to the Victorian State Government¹², the Rural City of Mildura currently has a population of 53,351 and is projected to grow to 55,523 by 2026 (an increase of 2,172 people over the next 14 years, or the equivalent of 155 new residents each year during this timeframe).

Compared with Australia, there is a slightly higher percentage of indigenous people living in the Rural City (2.9% in MRCC compared with 2.3% nationally). The median age for residents of Mildura is 37 years of age. This is exactly the same as the median age for Australia overall. However, compared with Australian figures, there is a slightly higher percentage of younger people,

¹² Victorian State Government (2008) *Victoria in Future 2008 Mallee*:
http://www.dpcd.vic.gov.au/data/assets/pdf_file/0003/32178/Final_VIF08_Mallee_booklet.pdf

particularly those aged between 5-14 years of age (15.9% compared with 13.5%) and slightly less people in the 25-54 age bracket (39.5% compared with 42.2%).

The percentage of people born overseas, who live in Mildura Rural City, is significantly less than the percentage of people born overseas in many other towns and cities (9.5% in Mildura Rural City compared with 22.2% for Australian towns and cities). Of those people who were born overseas, the majority come from Italy (1.5%); England (1.4%); New Zealand (1.0%); Turkey (1.0%) and Greece (0.4%). Although most people (87.4%) only speak English at home, other languages spoken in the home include Italian (2.5%); Turkish (1.5%); Greek (0.8%), Tongan (0.6%); and Samoan (0.3%).

22,838 people aged 15 years and over were in the labour force at the time of the 2006 Census, with 13,484 not in the labour force (e.g. retired, not looking for work, etc). 60.4% of the labour force was employed full-time, 27.8% was employed part-time, 3.4% was employed but away from work, 2.7% was employed but did not state their hours worked and 5.7% was unemployed. These figures are almost identical to the figures for Australia.

The median weekly individual income for persons aged 15 years and over was \$395 at the time of the 2006 Census, compared with \$466 in Australia. The median weekly household income was also lower than that for the average Australian, i.e. \$785, compared with \$1,027, and the median weekly family income was \$1,022 in Mildura Rural City, compared with \$1,171 in Australia. Of those homes being rented, the median weekly rent was \$150, compared to \$190 in Australia. For those with a mortgage, the median monthly housing loan repayment was \$1,000, compared to \$1,300 in Australia.

Implications for the Strategy

Growth in the order of 155 new residents each year will contribute to the expansion of new housing developments in areas such as Mildura (land bound by Fifteenth Street, Ontario Avenue and Riverside Avenue), Mildura South (land bound by Etiwanda Avenue, Thirteenth and Fifteenth Streets), Irymple (land north of Fifteenth Street, between Sandilong and Irymple Avenue) and Nichols Point (land between Karadoc Avenue and Irymple Avenue, surrounding Fifth Street).

This in turn is likely to create greater congestion on roads and potentially greater demand for cycling and walking opportunities to link these communities to the CBD and key recreational and entertainment areas. The high number of young people (i.e. those between 5-14 years of age), may create demand for safe cycling / walking routes to schools; safe off road trails on which to learn to ride; bicycle education programs; etc. Although the number of people born overseas, and those who speak a language other than English at home, it may be worth considering the translation of some promotional materials into Italian and Turkish, or some of the emerging languages such as Dari, Kirundi, Sudanese and Swahili. That being said, promotional materials alone may not result in an increase in walking or cycling, so some work may need to be initiated with these communities to ensure that they are aware of the location of trails and also aware of the benefits of cycling and walking. Whilst the median weekly income for residents of Mildura Rural City is somewhat less than the average for Australia, weekly rents and mortgage repayments are lower. Hence walking and cycling is likely to be accessible to the majority of people from a financial perspective.

3.3 Visitors to the Area

Mildura Rural City offers visitors to the area a broad range of opportunities and experiences ranging from state and national parks, lakes and rivers, Aboriginal heritage, early European settlement, food and wine, farming enterprises, wide open spaces, sunsets and starry skies. A variety of events and festivals are held in Mildura and surrounding townships throughout the municipality each year, attracting locals and visitors to the area.

In 2010/2011, approximately 600,000 people visited Mildura Rural City¹³. With at least 200,000 domestic day visitors spending approximately \$115 each and 362,000 domestic overnight visitors spending \$129 per day or an average of \$417 per trip; the economic contribution of this market is significant (NB: no expenditure amounts are available for the 13,000 international tourists to the region). It is estimated that over 40,000 of current visitors to Mildura Rural City are nature based tourists, interested in bushwalking and walks. Presumably, some of these people would also be interested in cycling. It is highly likely that there are additional visitors to the region who are also interested in cycling.



¹³ Tourism Research Australia, *Regional Tourism Profiles*:
<http://www.ret.gov.au/tourism/tra/regional/tourism/Pages/default.aspx>

Implications for the Strategy

Given Mildura Rural City's relatively flat landscape, attractive river vistas and good weather, it is ideally situated to promote itself as a destination for short walks and cycling opportunities primarily (but not wholly) suitable for recreational walkers and cyclists, including families, older adults and beginners who may visit the region. Promotional material about the region should incorporate photographs of people undertaking these activities in front of iconic local features, e.g. river boats. Suitable promotional materials (e.g. maps, brochures, etc) should be made available at Visitor Information Centres, at accommodation venues and on relevant websites. Bicycle hire information should also be made widely available. It may also be worthwhile working in partnership with accommodation venues to ensure that they are 'bicycle friendly' (i.e. provide drop sheets for bicycles and a secure place to store bicycles) and other businesses near trails such as cafes (i.e. provide water for cyclists and walkers and also items such as bicycle repair kits).

The benefits of attracting visitors to the area to take part in walking and cycling, and particularly in encouraging them to spend an additional night are important from an economic perspective to the region.



4.0 Cycling and Walking Benefits and Trends

4.1 Benefits of Trails

According to the Victorian Trails Strategy¹⁴, visitors to trails are motivated by:

“Appreciating natural scenic beauty, experiencing physical challenge and exercise, involvement in the natural environment, gaining an awareness of nature, and the opportunity to socialise with friends or family or pursue a special interest.”

There are many benefits to be gained from using trails. These potential benefits include:

Social	Physical Health and Wellbeing
<ul style="list-style-type: none"> • Opportunity to interact with friends and family and to meet new people. • Opportunity to connect townships to one another. • Opportunity to develop local events to increase community strengthening and connectedness. • Opportunity to improve community connectedness through management and maintenance of trails, i.e. through serving on Committees of Management or taking part in working bees. • A sense of activity in the local area. • Less dependence on parents / carers and a greater sense of freedom for young people. • Improved road safety skills. 	<ul style="list-style-type: none"> • Opportunity to improve health and fitness levels and thereby decrease community health care costs. • Increased self esteem and confidence. • Improved cardio vascular health. • Improved coordination. • Improved muscle tone. • Weight reduction. • Sense of achievement. • Less risk of heart disease and certain types of diseases and illnesses. • Higher energy levels. • Opportunity to relax, wind down and de-stress.
Environmental	Economic
<ul style="list-style-type: none"> • Greater appreciation of natural environment through interpretation. • Greater understanding of the environment, history, geography and culture of an area when taking part in a tour with a licensed operator. • Pollution free form of transport. • Minimal impact on the environment due to limited or no use of fuel as part of the overall activity (some people drive to the beginning of a trail, hence there may be some greenhouse gas emissions). • Opportunity to experience and enjoy 	<ul style="list-style-type: none"> • Low cost activity – cheaper than driving a car. • Economic contribution to towns through increased demand for products from local shops selling cycling / walking gear. • Increased local employment opportunities and income for accommodation, food, transport, entertainment, guiding companies and tourist attractions. • Increased local employment during trail construction if local trades are employed. • Reduced need for establishment of car parks. • Less wear and tear on roads. • Increased value of properties near trails.

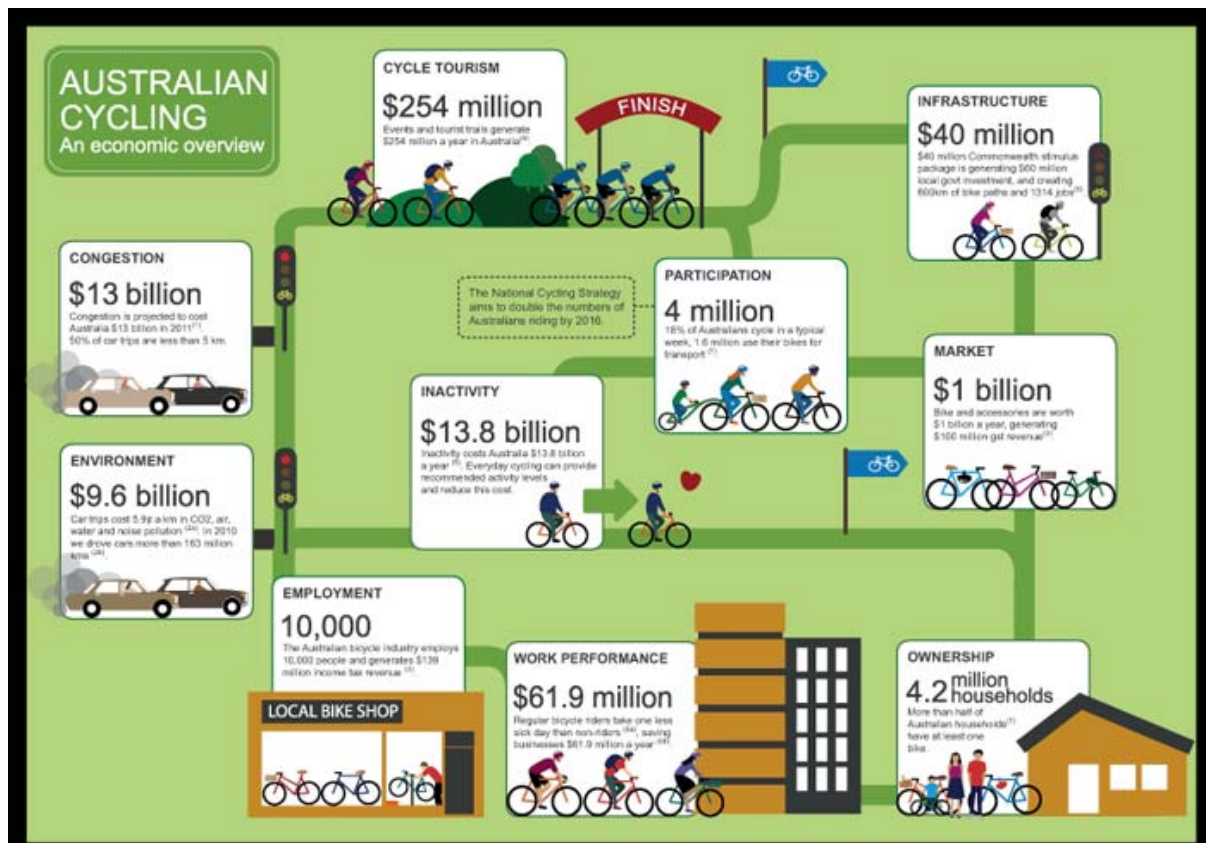
¹⁴ Victorian Trails Coordinating Committee – “Victorian Trails Strategy 2005-2010” (2005), pg 14

nature, views and local landmarks.

- Potential income from events.

The following diagram, reproduced from Austroad¹⁵, provides an economic overview of cycling in Australia:

¹⁵ Austroad website: <http://www.austroads.com.au/abc/economic-benefits-of-cycling>



4.2 National and International Trail Trends

National and international trail research shows the following trends:

Trail Design	<ul style="list-style-type: none"> • Greater focus on higher quality surfaces by organisations constructing tracks and trails, e.g. construction of drainage, etc. • Movement towards creation of mountain bike parks, rather than unrestricted use of bush tracks. • Increasing number of rail trails being developed throughout Victoria. • Greater awareness of different inner city trail designs such as the Copenhagen system.
Trail Use	<ul style="list-style-type: none"> • Tracks and trails are increasingly being used by personal fitness trainers and boot camps. • Commuter use of tracks and trails is increasing rapidly, particularly in regional and metropolitan areas. • Significant number of older adults and families are using tracks and trails on a regular basis as a form of leisure and exercise. • Trails are used not only by walkers and cyclists, but also other forms of human powered vehicles and equipment, e.g. skate boarders, roller skaters, inline skaters, people with prams, people in wheelchairs, etc. • Significant increase in the number of people riding mountain bikes and seeking opportunities to ride mountain bikes off-road.
Supporting Infrastructure	<ul style="list-style-type: none"> • Businesses specifically catering to users of tracks and trails are being established, e.g. Rail Trail Café at Porepunkah near Bright and cycle cafes in towns and cities. • Greater focus on providing supporting infrastructure such as seats, shade and toilets along major trails. • Increase in number of accommodation venues near major recreational trails offering bicycle friendly options, e.g. drop sheets, storage, etc.
Trail Benefits	<ul style="list-style-type: none"> • Local Government Authorities are recognising trails as a legitimate form of recreation, a valued service to the community and a means of increasing economic returns to the community. • Tourism industry and operators recognise the economic value of walking and cycling trails in tourist areas. • Communities are creating long distance trails with key attractions and accommodation options along them in order to attract and retain tourists

4.0 CYCLING AND WALKING BENEFITS AND TRENDS

	<p>in their area (economic benefits).</p> <ul style="list-style-type: none">• Greater recognition of the social and physical benefits of cycling and walking amongst government agencies and the general community.• Value of linking trails to key locations in the community is being recognised as a significant factor in increasing physical activity levels.
Trail Experience	<ul style="list-style-type: none">• Interpretive features along trails can significantly add to the overall experience of trail users.
Demand	<ul style="list-style-type: none">• Bicycle sales have outnumbered car sales in Australia in recent years.• High demand for off-road trails.• High demand for bicycle spin classes in gyms.
Events	<ul style="list-style-type: none">• Greater number of events being held on mountain bike trails.• Increased popularity in large participatory events such as <i>Round the Bay in a Day</i>, <i>Great Victorian Bike Ride</i> and various fundraising walking events.
Hire Options	<ul style="list-style-type: none">• Increased number of cities around the world providing bikes for hire for minimal fees to encourage decreased reliance on vehicles in city centres.



5.0 Cycling and Walking in Mildura Rural City

5.1 Policy Context

A broad range of documents were reviewed in order to gain an understanding of previous policy directions and strategies that may impact on the development of a Tracks and Trails Strategy for Mildura Rural City Council. Key points identified through the literature review include the need to:































- Provide safe connections for cyclists and pedestrians to the Murray River from the CBD area.
- Provide logical and safe linkages to both existing and proposed open space areas, community facilities and residential areas via walking / cycling paths.
- Develop a trails network that is integrated with the footpath network.
- Improve the standard of trails and trail maintenance.
- Develop appropriate signage along and to / from trails.
- Develop appropriate maps for trails.
- Develop priority pedestrian routes along 8th and 9th St.
- Develop priority north-south and east-west cycling routes.
- Develop supporting infrastructure for cycling and walking, e.g. bike parking, bicycle lockers, change facilities, seats, shade and drinking fountains.
- Encourage more people to use active forms of transportation and reduce dependency on vehicles.
- Maximise safety for cyclists and walkers.
- Develop a whole of organisation approach to the development, management and maintenance of shared paths.
- Develop looped trails wherever possible, rather than 'out and back' trails.





















A major gap identified through the literature review was the general lack of focus on cycling and walking connections to and from recreation reserves and within recreation reserves. A summary of each of the other reports has been provided in the Appendix.








5.2 Distribution of Trails

There are a variety of existing tracks and trails within Mildura Rural City. Some of these are well formed and well utilised, whilst others are in more remote areas and are less utilised. All offer opportunities to experience the outdoors and to enjoy and appreciate the natural and cultural features along the route. Note that there may be a number of other informal walking / cycling trails through bushland not included in the following list.

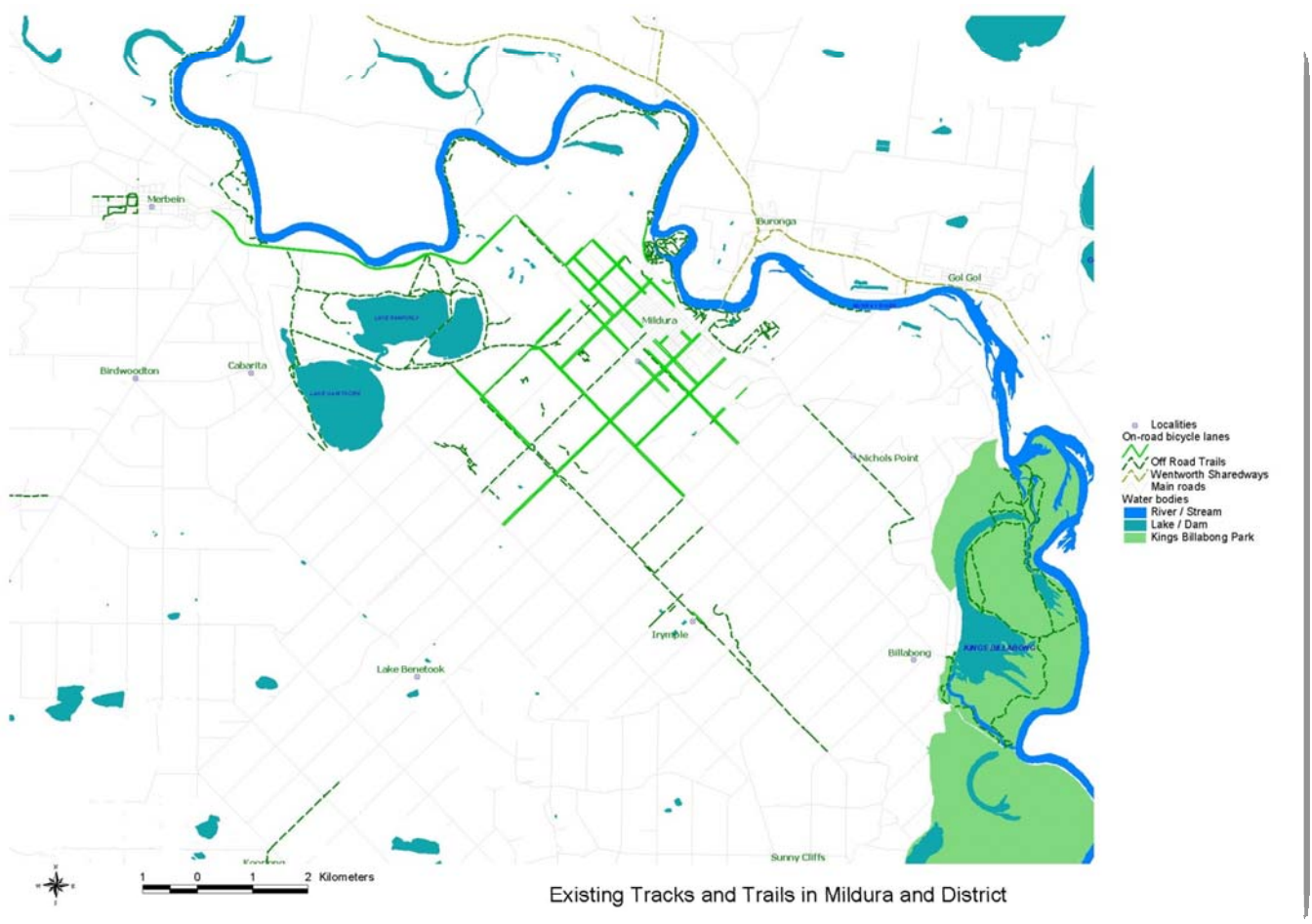
Community	Existing Trails
Mildura CBD	<p>On-road cycle lanes on:</p> <ul style="list-style-type: none">  Tenth St between Pine Ave and Shillidays Lane, also between Madden Ave and Orange Ave.  Seventh Street between Pine Ave and Deakin Ave.  Orange Ave between Ninth St and Tenth St.
Mildura	<p>On-road cycle lanes on:</p> <ul style="list-style-type: none">  Seventh St between Chaffey Ave and Pine Ave.  Eighth St between Riverside Ave and Olive Ave and also between Hawkes Lane and San Mateo Ave.  Tenth St between Riverside Ave and Pine Ave and also between Orange Ave and Etiwanda Ave.  Eleventh St between Flora Ave and Walnut Ave and also between Madden Ave and Cowra Ave.  Twelfth St between Ontario Ave and Deakin Ave and also between Cedar Ave and Etiwanda Ave.  Fourteenth St between Ontario Ave and Cowra Ave.  Fifteenth Street between Riverside Ave and Deakin Ave.  Ranfurly Way/Flora Ave between Merbein and Eleventh St.  Ontario Av between Seventh St and Eleventh St and also between Thirteenth and Fourteenth St.  Walnut Ave between Seventh St and Fourteenth St.  San Mateo Ave between Seventh St and Sixteenth St.  Etiwanda Ave between Seventh St and Fourteenth St.  Benetook Ave between Eleventh St and Ellswood Crescent. <p>Off-road trails include:</p> <ul style="list-style-type: none">  Rail reserve between Eleventh St and Fourteenth St.  River front to Chaffey and Slaughteryard Bends.  Ontario Ave between Fourteenth St and Fifteenth St.  Lock 11 Island Trails.  Rio Vista Park Trails.  Ornamental Lakes Park Trails.  Mildura Marina Trails.  Etiwanda Wetland Trails.  Deakin Ave (west side) between Sixteenth St and Tenth St.  Eleventh St (south) between Madden Ave and Etiwanda Ave and also between Flora Ave and Riverside Ave.  San Mateo Ave (east) between Eleventh St and Twelfth St.  Ontario Park Drive Trails.  The Boulevard and Matthew Flinders Drive.  Lake Ranfurly and Lake Hawthorn Trails.

Nichols Point / Billabong	<p>There are no on-road cycle lanes in this area.</p> <p>Off-road trails:</p> <ul style="list-style-type: none">  Bruce's Bend and Kings Billabong Park.  Fifth St from Cureton Ave to Cureton Ave and to Laurel Ave.
Irymple	<p>No on-road bicycle lanes are marked at Irymple.</p> <p>Off-road trails:</p> <ul style="list-style-type: none">  Fifteenth St from Dewry Av into Irymple and from Irymple to Deakin Ave.  Irymple Green Belt from Fifteenth St near Morpung Ave to 200 metres past Karadoc Ave.
Red Cliffs	<p>No on-road bicycle lanes are marked at Redcliffs.</p> <p>Off-road shared pathways:</p> <ul style="list-style-type: none">  Fitzroy Ave.  Indi Ave, Nursery Ridge Road, Cassia St and Nerrum Ave.  Jacaranda St (Calder Hwy) between Calotis St and Jamieson Ave.  Murray Ave and Kauri St (Redcliffs Primary School).  Sunny Cliffs Cres at Sunny Cliffs.
Merbein / Merbein West / Merbein South / Cabarita	<p>On-road cycle lanes:</p> <ul style="list-style-type: none">  Ranfurly Way to Flora Ave. <p>Off-road trails include:</p> <ul style="list-style-type: none">  Lake Hawthorn, Gibbs Street to Ranfurly Way.  From Ranfurly Way to the old Mildara Winery and along the Blandowski Walk (currently closed due to disrepair).  Merbein Common.  Merbein South; Sturt Hwy and Cowanna Ave South.  Merbein West; Paschendale Ave.
Cardross and Koorlong	<p>No on-road bicycle lanes are marked at Koorlong or Cardross.</p> <p>Off-road trails:</p> <ul style="list-style-type: none">  Benetook Ave to the south and North-East of Koorlong  Dairtnunk Ave at Cardross
Nangiloc/Colignan and District	<p>No on-road bicycle lanes are marked.</p> <p>Off-road trails include:</p> <ul style="list-style-type: none">  Kulkyne Way (Nangiloc) – shared pathway between Steve Collett Drive and a private property.  Kulkyne Way (Colignan) – shared path between former school site and Lewis Rd.
Walpeup	<ul style="list-style-type: none">  Cregan St – sealed shoulder on north side of the road.
Ouyen	<p>The Ouyen community is currently planning a trail at the rear of the hospital which will feature several loops of varying length – primarily designed for older residents and people rehabilitating from injuries or illnesses. It is also planning on developing an additional unsealed off road trail on the western edge of town as a recreational trail suitable for walking and mountain bike riding.</p>
Murrayville	<p>Off-road paths:</p>

5.0 CYCLING AND WALKING IN MILDURA RURAL CITY

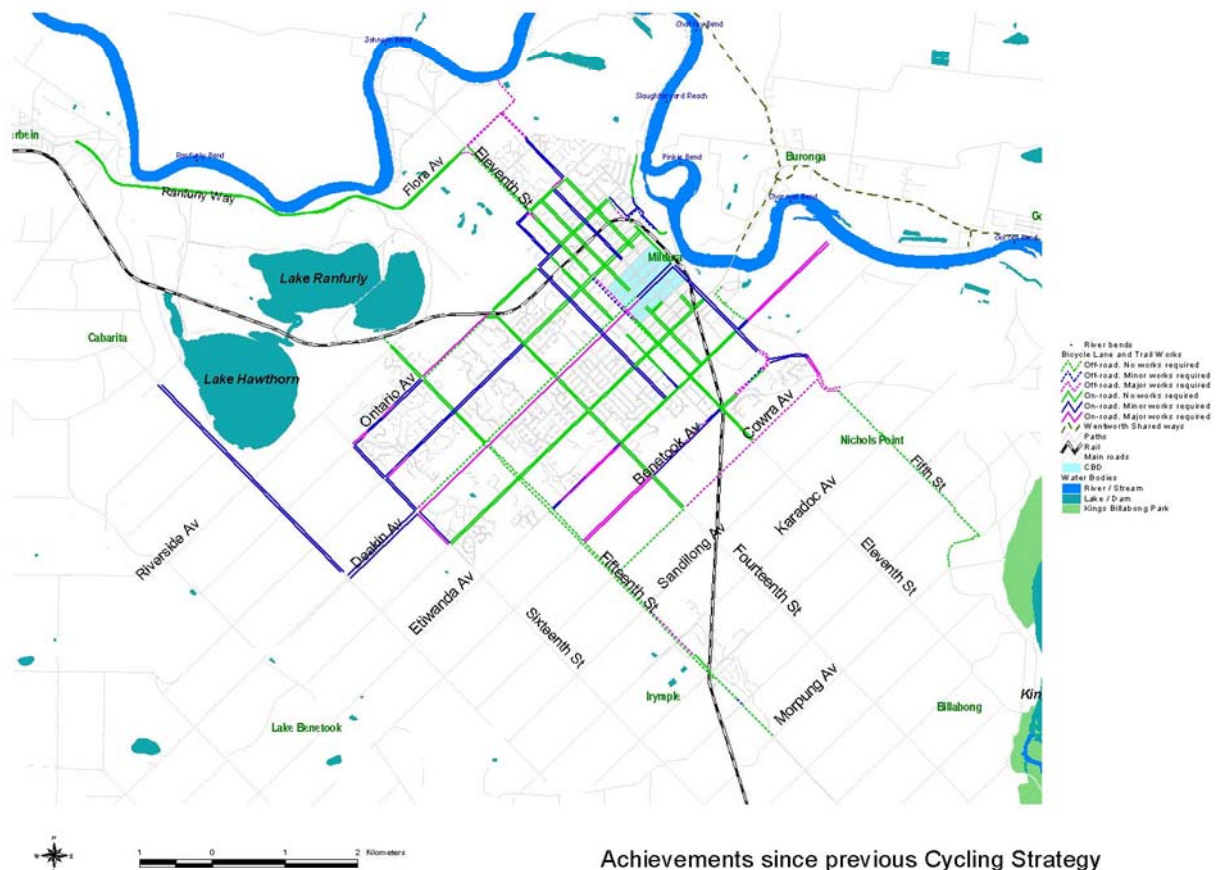
	 Francis St.  Gray St.
Underbool	Off road trails:  Monash Ave.  Mossop St.
Cullulleraine	Off road trails:  Lake Cullulleraine.

The following map shows the locations of on-road cycle lanes and off-road trails within Mildura and proximate districts.



5.3 Previous Cycling Strategy Achievements

The Mildura Strategic Bicycle Plan prepared in 2001 included a suite of recommendations for the development of both on-road bicycle lanes and off-road trails. MRCC has worked towards achieving these recommendations within budgetary constraints over the last 11 years.



The map above illustrates in green the tracks and trails that have been developed or improved since the previous Cycling Strategy. Those marked in blue still require minor works in order to complete development whilst those in pink require major works. The remaining works still provide strategic connections and their importance has been reinforced through consultations carried out as part of this strategy. Thus, they will be incorporated into the schedule of recommended works emerging from this current investigation.

5.4 Potential Cycling / Walking Market

Walking and cycling are the two of the most popular forms of physical activity in Victoria according to the Australian Sports Commission¹⁶. Participation rates in these two activities continue to increase, whereas participation in organised sporting activities such as tennis, and cricket is in a current period of decline. By transposing Victorian participation rates in the various physical activities that can be undertaken on tracks and trails against Mildura Rural City demographics, we can estimate the potential size of the market. It must be noted however, that these figures should be used with caution, as participation rates in selected activities vary from place to place dependent upon a whole range of factors including trail standards, access to trails, climate, culture / history of cycling / walking, etc. It must also be noted that these figures are only available for people 15 years of age and over; respondents may have only participated in these activities once in 2009, i.e. these figures do not necessarily represent regular participation in these activities:

No	Activity	% of Victorian Participants over 15 years of age	No. of Potential MRC Participants over 15 years of age (n=35,663)
1	Walking (other)	36.6	13,053
2	Aerobics / Fitness	24.7	8,809
3	Swimming	13.5	4,815
4	Cycling	12.7	4,529
5	Running	12.7	4,529
6	Golf	7.3	2,603
7	Tennis	6.8	2,425
8	Australian Rules Football	5.4	1,925
9	Basketball	4.8	1,712
10	Walking (bush)	4.6	1,641

The estimated local market for tracks and trails usage (i.e. walking, cycling, running or bushwalking) in the Rural City of Mildura is **23,752** people (aged 15 years or over), which equates to **67%** of the population (although there may be some doubling up of numbers due to people participating in more than one of these activities). No other physical activity comes close to this number, yet expenditure on infrastructure for many other physical activities currently far surpasses the expenditure on tracks and trails.

¹⁶ Australian Sports Commission (2011) *Participation in Exercise, Recreation and Sport Annual Report 2010: State and Territory Tables for Victoria*:
http://www.ausport.gov.au/data/assets/pdf_file/0003/436134/ERASS_Report_2010-VIC.pdf

A survey undertaken as part of the Mildura Recreation Strategy in 2006 of 300 people identified that 33% of respondents (99) had participated in casual walking and 7% (20) had cycled in the past 12 months. This data is not dissimilar to the data for Victoria.

“We need more of them (trails) so our children are safer on the roads. We need to encourage the children to exercise through the use of bicycles or walking but are unable to due to the lack of, on or off road paths in the rural areas”.

(Survey respondent)

The total market for tracks and trails, taking into consideration the estimated local market of 23,572 and the estimated number of current domestic day, domestic overnight and international visitors who take part in bushwalking / rainforest walks of 42,656, is approximately **66,228**.

5.5 Current Trail Usage and Demand

As trail counters have not been placed on tracks or trails (including footpaths and roads) in Mildura Rural City Council, the frequency that such trails are used is not known, other than the fact that on the Census day in 2006, there were 182 cycling trips to work, which represents 1.1% of all work trips that day. A community survey undertaken as part of the Tracks and Trails Strategy provides some detail on the most used tracks and trails in the municipality and the demand by trail users for upgrades or new developments. A total of 142 local residents participated in the survey.

Detailed analysis of survey responses are provided within the Appendix. The following provides an overview of existing usage and demand.

5.5.1 Demand and Use of On Road Bicycle Lanes

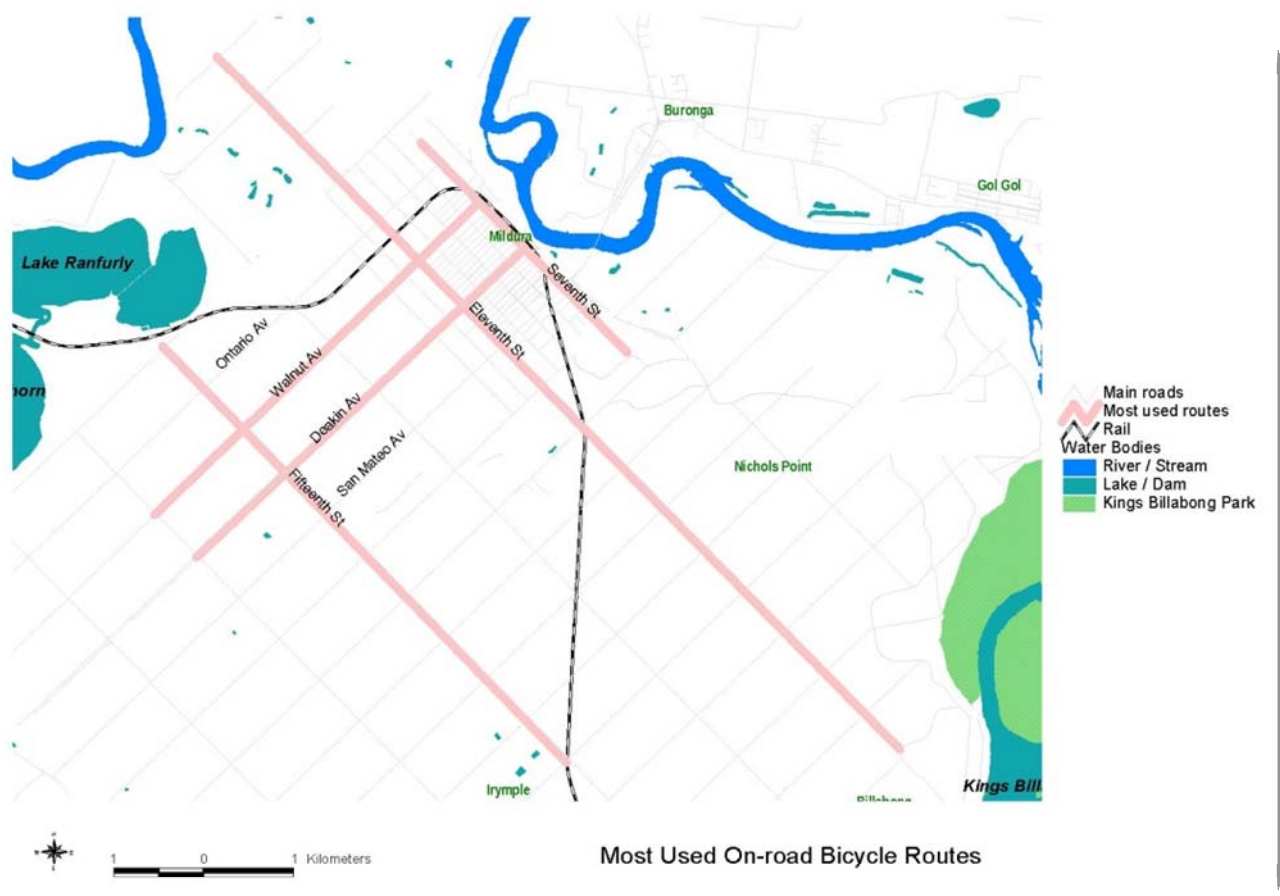


Most on-road cyclists who responded to the survey spend less than one hour on their bicycle (37%); travel between 5-10km (22%); and use on road bicycle lanes several times each week (28%).

In terms of **on road bicycle lanes**, the five most **used** routes at present are:

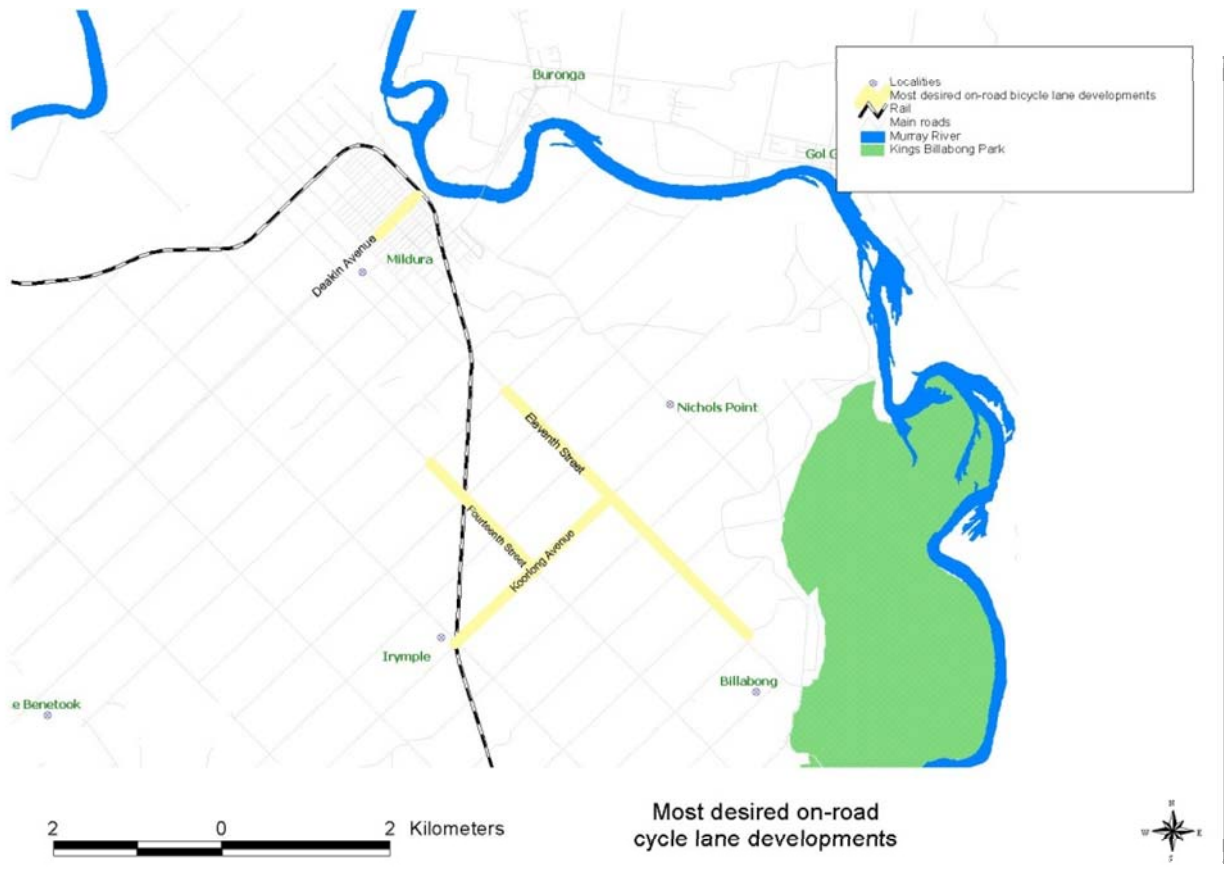
1. Deakin Ave (32)
2. 11th St (23)
3. 15th St (22)
4. Walnut Ave (22)
5. 7th St (12)

A number of survey respondents also identified Ontario Avenue and San Mateo Avenue as important on-road routes.



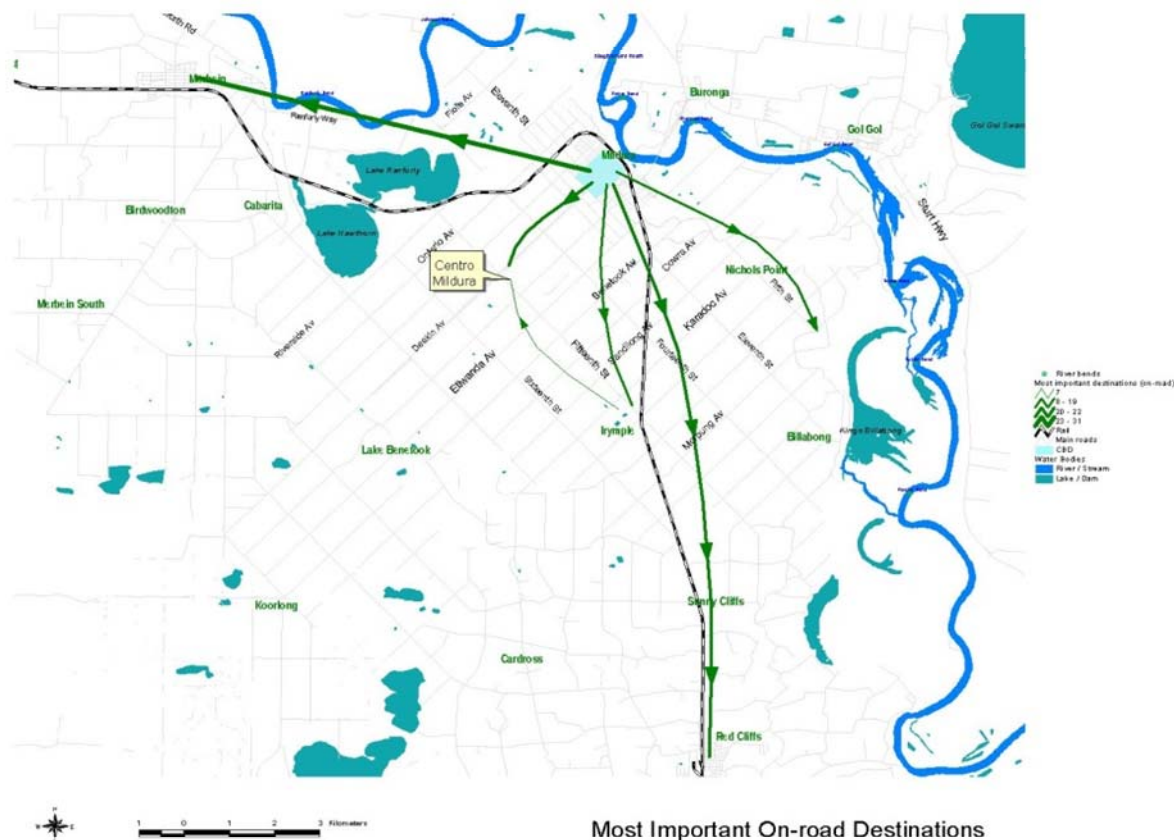
The most popular areas where people would like to see **on-road** bicycle lanes developed, according to the community survey include:

- 11th Street out to the DSE / DPI building via Eleventh Street (Koorlong Ave) and on to Kings Billabong;
- Deakin Ave (from 10th to 7th Street);
- 14th Street; and
- Koorlong Avenue between 15th and 11th Streets.



In terms of the most important destinations to travel between via **on-road** bicycle routes, respondents to the community survey (n=142) have identified the following six routes:

1. Mildura to Merbein (31)
2. Mildura to Red Cliffs (22)
3. Mildura to Centro Shopping Centre (21)
4. Mildura to Irymple (19)
5. Mildura to Nichols Point (19)
6. Irymple to Centro Shopping Centre (7)



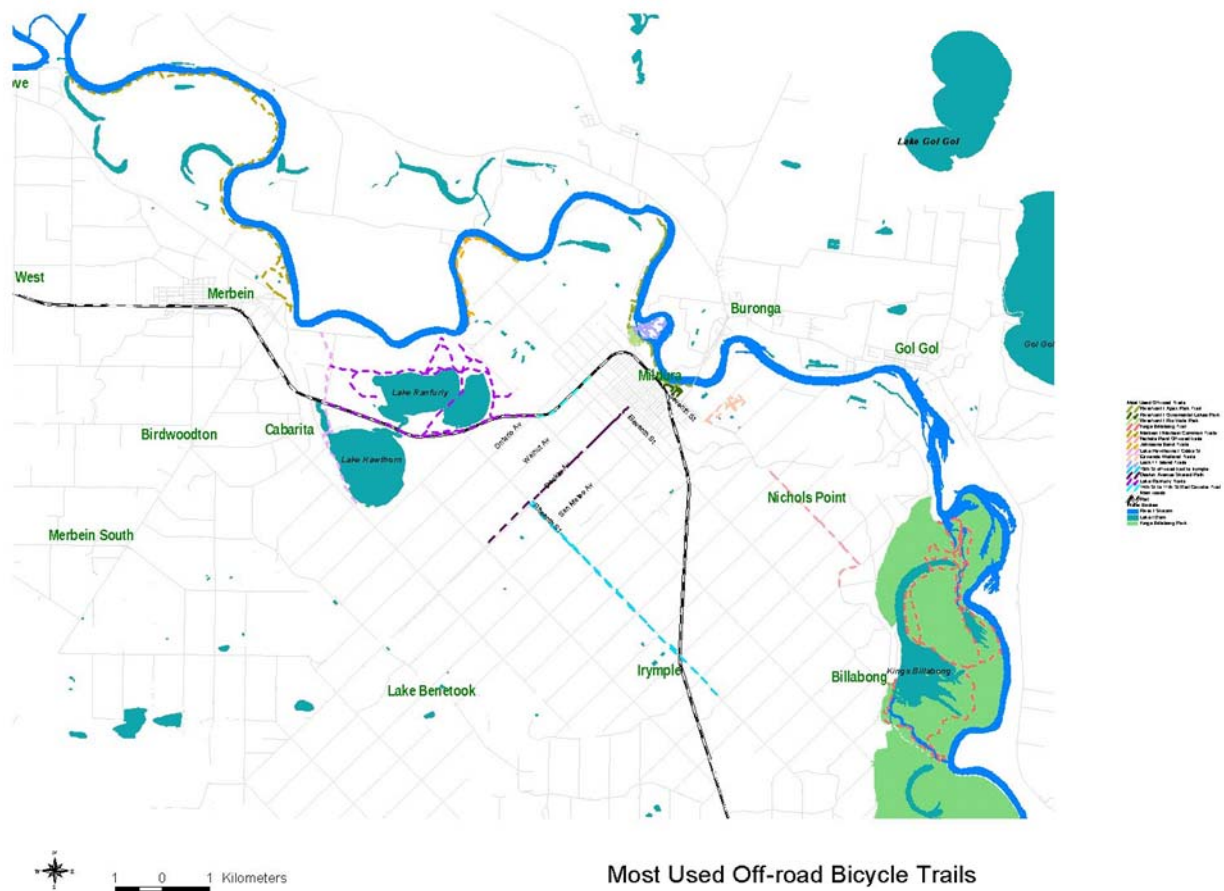
5.5.2 Demand and Use of Off Road Tracks and Trails

The majority of respondents who use off-road trails spend between 1-3 hours walking or cycling along them (47%); travel between 5-10km (41%); and use trails several times per week (30%).

The most commonly used **off-road trails** used in Mildura Rural City by walkers and cyclists, according to community survey respondents (n=142) are:

1. Riverfront / Apex Park (87)
2. King's Billabong including Bruce's Bend (40)
3. Merbein / Merbein Common (18)
4. Nichols Point (7)
5. Johnsons Bend (6)
6. Lake Hawthorn (5)
7. Etiwanda Wetlands (5)
8. Lock 11 Island (4)
9. 15th St to Irymple (4)
10. Deakin Ave Shared Path (3)
11. Lake Ranfurly (3)

12. Rail corridor between 14th and 11th Streets (3)



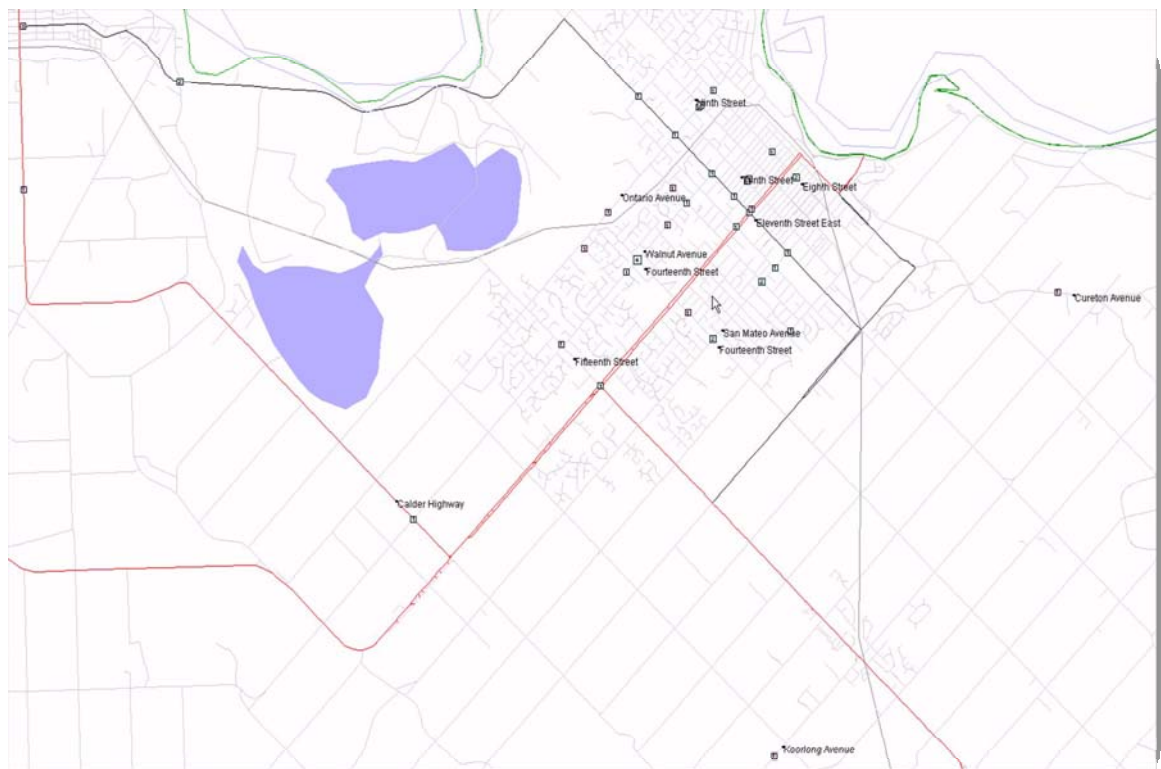
Suggestions by community survey respondents for new **off-road** trails are mostly focused on developing a linkage from the Mildura CBD to King's Billabong; developing connections between and within outlying towns; developing additional trails along the riverfront (or at least improving linkages between various sections); and developing off road trail opportunities in the Nichols Point area. Suggestions for existing **off road** trails that need upgrading are primarily focused on three of the most popular trails, i.e. Apex Park / river front, King's Billabong and Merbein / Merbein Common.

Community survey respondents were also asked to identify potential improvements to the **off road** cycling network. Many of the comments received were very supportive of existing trails and encouraging of further trail development. Improved marketing and maintenance were also highlighted as areas requiring further attention. Additional signage, a greater focus on safe designs of trails, the development of purpose-built mountain bike trails and the development of exercise stations along the river front were also considered worthy of further exploration by survey respondents.

5.6 Crash Data

Vic Roads collects data on bicycle accidents around the state. From 1 July 2005 to 30 June 2010, there were 44 bicycle accidents in Mildura Rural City, 16 of which were serious, but fortunately no fatalities. In all cases except one, the road was dry and the majority of accidents happened during daylight hours (32). Cars were involved in 39 of the accidents, and trucks in three. The majority of accidents were recorded around:

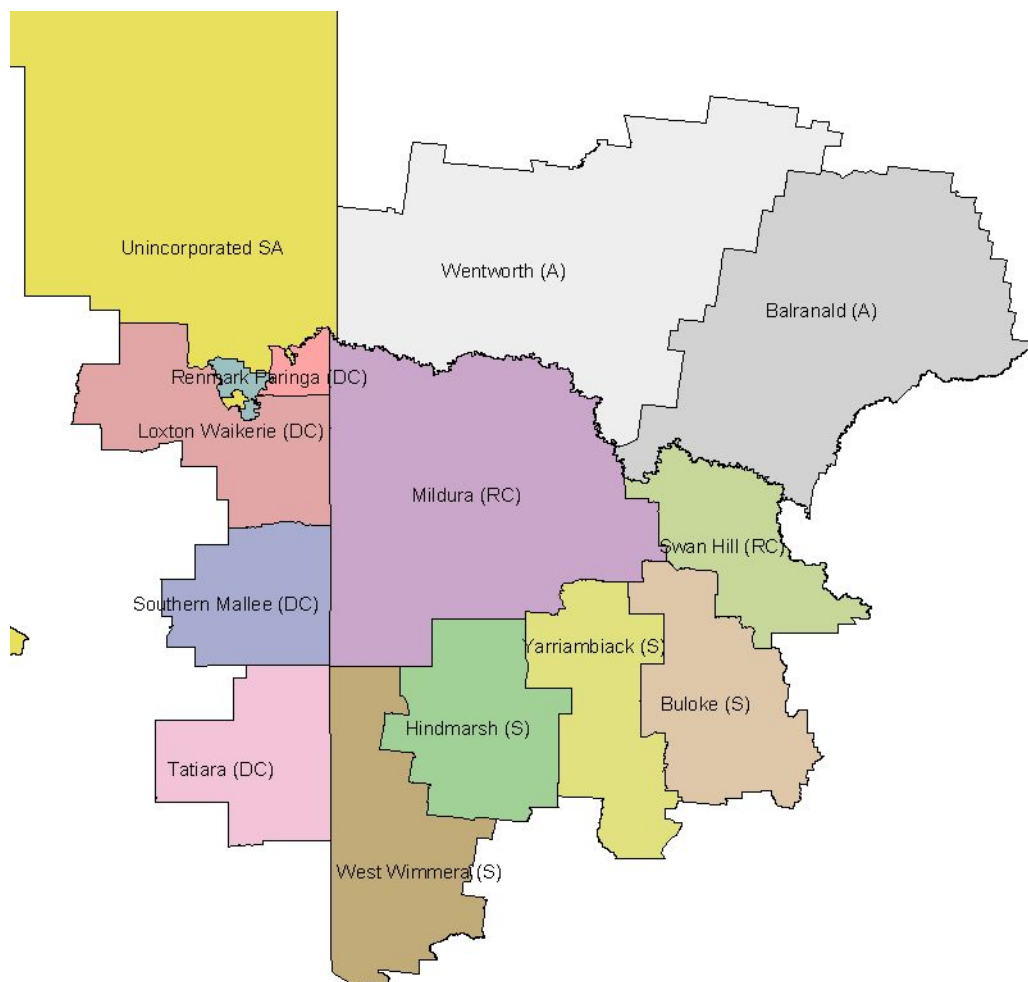
- Walnut Avenue between 15th St and 11th St (with four separate accidents recorded at the 14th Street intersection alone and nine accidents in total)
- San Mateo Avenue in the section between 14th St and 11th St (six accidents in total)
- 11th Street from Riverside Avenue to San Mateo Avenue (five accidents in total – two additional accidents at intersection of Walnut Ave and San Mateo Ave already counted above)
- 14th St (one accident in total, and six already counted in statistics for Walnut Ave and San Mateo Avenue).



Location of Cycling Accidents in Mildura Rural City Council: 1 July 2005 to 30 June 2010. Sourced from Vic Roads

5.7 Links to Trails in Other Municipalities

Mildura Rural City Council borders ten other municipalities – five in Victoria, two in NSW and three in South Australia.



Each of these municipalities has a number of tracks and trails within its boundaries. The following table provides an overview of tracks and trails that exist:

Municipality	Tracks and Trails Adjoining Mildura Rural City
Balranald Shire Council (NSW)	Balranald Shire council has some bicycle tracks which connect Euston to Robinvale. It is currently working on another project to connect Euston with Robinvale Weir.
Buloke Shire Council (Vic)	None of the trails in Buloke connect with Mildura Rural City Council. Most of them are town based (i.e. Donald town walk and Charlton River Walk), or are fairly short loops or linear trails (i.e. Wycheproof Mountain Walk and Birchip to Tchum Lake Trail).
Hindmarsh Shire	Hindmarsh Shire has no significant trails that connect with Mildura

Municipality	Tracks and Trails Adjoining Mildura Rural City
Council (Vic)	Rural City Council. Some of the smaller townships contain walking tracks.
Loxton Waikerie District Council (SA)	Loxton Waikerie DC has no significant trails that connect with Mildura Rural City Council. Some of the smaller townships contain walking tracks.
Renmark Paringa District Council (SA)	There are no trails that have potential to cross the border to Mildura and no current plans by Council to develop any additional trails.
Southern Mallee District Council (SA)	Southern Mallee DC has no significant trails that connect with Mildura Rural City Council. Some of the smaller townships contain walking tracks.
Swan Hill Rural City Council (Vic)	Planning is underway to extend the trail along the riverfront in Swan Hill and to develop an additional trail in Robinvale along the riverfront.
Wentworth Shire Council (NSW)	Wentworth Shire has “Shared-ways” from Chaffey Bridge to Gol Gol and Buronga to the Inland Botanic Gardens which connect directly to the MRCC tracks and trails network. Another trail connects Wentworth to Curlwaa following the Silver City Hwy. This trail has great potential to connect to MRCC should a trail be developed from Merbein to Yelta via Merbein Common.
West Wimmera Shire Council (Vic)	West Wimmera Shire has no significant trails that connect with Mildura Rural City Council. A concept of developing a trail along the “Carapolac Line” from Halls Creek to Natimuk has been considered.
Yarriambiack Shire Council (Vic)	Yarriambiack Shire has no significant trails that connect with Mildura Rural City Council. Some of the smaller townships contain walking tracks.

Of these municipalities, the trails with the most potential to link to Mildura Rural City include:

- Wentworth (Wentworth Shire, NSW) to Mildura
- Trentham Cliffs via Gol Gol (Wentworth Shire, NSW) to Mildura

The distances; hot, dry climate; and the lack of landscape amenity in some areas between other municipalities and Mildura Rural City would reduce the likelihood of such trails being used regularly, except for long distance on-road events and on-road training opportunities.

The Loddon Mallee Regionally Significant Trails Strategy does however identify an opportunity to develop the Murray River Experience Trail, which is essentially a series of trails along key sections of the Murray River in Campaspe, Gannawarra, Swan Hill and Mildura Local Government Authority areas. It is not intended that one long, continuous trail is developed, but rather that high quality

trails are developed in areas such as Echuca port area, Gunbower Island, Swan Hill riverfront and Mildura riverfront and packaged as a 'trail experience'.

6.0 Community Consultation

A key aspect of the Tracks and Trails Strategy involved consulting with Council Officers, Government agencies, health providers, walking and cycling groups, schools, businesses, community groups and local residents to identify gaps in the network and opportunities to improve the overall walking and cycling experience available. The consultative process was instrumental in identifying key gaps and opportunities in the cycling and walking network. A total of 260 people participated in consultative processes during the course of the Strategy development, as follows:

- 14 Council Officers
- 13 representatives from Government Agencies and health provision agencies
- 6 people from walking and cycling user groups
- 2 representatives of the business, education and community group sector
- 5 representatives from state sport and recreation organisations
- 32 people who spoke with the project team in Langtree Mall
- 42 people who spoke with the project team at the Sunraysia Farmer's Market
- 142 people who filled out a community survey about tracks and trails
- 4 members of the general public through written submissions

More detailed information about each consultation process is included in the Appendix.



6.1 General Issues

General issues and opportunities identified through the consultations include:

Issue	Details
Trail development	Support for high quality north-south and east-west super bicycle lanes to encourage commuter cycling, with other bicycle lanes as secondary lanes.
Promotion	There is an opportunity to better utilise the recreation page of Council's website, <i>Council Matters</i> and the Mildura Tourism website to promote trails.
Signage	There is a lack of signage of walking and cycling opportunities, e.g. Merbein Common and Deakin Ave shared trail. Trail heads are required, showing how to get from the CBD to the river.
Road treatments	Need to separate bicycles from cars on roads (Copenhagen style).
New residential developments	Strategy needs to integrate with new subdivisions to ensure continuity of access, e.g. 16 th St area.
Education	Both drivers and riders need to be educated about road rules and respect for other road users.
Barriers	<ul style="list-style-type: none"> • Lack of linkages / connections between tracks and trails. • Unrestrained dogs • Heat in summer • On road lanes are too narrow • Lack of shoulders along roads, e.g. 11th Street on the way to Benetook.
Opportunities	<ul style="list-style-type: none"> • Develop safer / back road school routes. • Explore linkages along rail lines
Safety issues	Rectify sandy trail near the river (Apex Park to Thompson's Beach).
Motorised Trail Bike Riders	Trail bike management is an issue at King's Billabong, Merbein Common and Cowanna Bend. Need to deter trail bike riders through developing trails with twists and turns and perhaps by creating a space specifically for trail bike riders.
Infrastructure	Need more seats along trails.
Maintenance	Need more maintenance of trails, e.g. Apex Park.

Some specific comments from the surveys and street consultations include:

- "I feel that the safety of vulnerable trail users needs to be considered more often - I would like constructors/planners to ask themselves 'how would a young female feel riding or walking here alone at any reasonable time of day?'"
- "Make sure that trails are in the open – not too many bushes close to the trail."
- "I don't know where I can park my bike down the street – need more signage and information."
- "One of the biggest disincentives to riding into town is the almost complete absence of bicycle parking anywhere in the downtown area."
- "Dogs along some trails are often a threat or perceived threat and will stop us from using the trail."

- “Grey crusher dust path along 5th Street in Nichols Point is working well. Keeps weeds away and more kids seem to be using it because it looks like a road.”

6.2 Suggested On and Off Road Trail Upgrades and Developments

A range of trail upgrades and developments have been identified through key stakeholder interviews, community survey, community consultations, literature review and trail audits. Not all of these suggestions will be possible to achieve, for a variety of reasons, including cost, inconsistency with local or state based policies, lack of space, limited use, limited benefits, etc. Those upgrades or developments identified multiple times include a number in brackets afterwards to provide some sense of the frequency of this ‘demand’. More details of the source of each suggestion are included in the Appendix of the strategy. In order to determine which of these suggestions are incorporated into the recommendation section of the strategy, each development was assessed against the planning principles identified for the strategy.

Specific suggestions for trail upgrades and developments identified through the consultation component of the strategy (in alphabetic order) are:

Street / Area	Details
11th Street	<ul style="list-style-type: none"> • Further develop on road trail along 11th St (27)
14th Street	<ul style="list-style-type: none"> • Develop on road lane trail along 14th St (8)
Benetook Ave	<ul style="list-style-type: none"> • Develop on road trails along Benetook Ave (8)
Deakin Ave	<ul style="list-style-type: none"> • Develop a safe on road trail along Deakin Ave from 10th – 7th Streets instead of shared footpath as road is faster and there is no conflict with walkers - away from parked cars (12)
Irymple	<ul style="list-style-type: none"> • Extend Irymple Green Belt to Mildura CBD by connecting Sandilong Ave and Morpung Ave (10)
Karadoc Ave	<ul style="list-style-type: none"> • Develop a trail on Karadoc Ave between 16th and 14th St (6)
King’s Billabong	<ul style="list-style-type: none"> • Develop a safe off road trail (potentially along 11th St) that connects King’s Billabong / Irymple to Mildura CBD (19)
Koorlong Ave	<ul style="list-style-type: none"> • Develop an on road trail from Mildura CBD to DSE / DPI offices at the corner of Koorlong Ave and 11th St (19)
Nichols Point	<ul style="list-style-type: none"> • Develop an on road trail from Nichols Point into Mildura CBD (down 11th St / Cureton Ave) (11)
Ontario Ave	<ul style="list-style-type: none"> • Consider development of priority on road cycling route along Ontario Ave (7)
Railway Easement	<ul style="list-style-type: none"> • Consider development of a trail along the railway easement near Benetook and 7th St, which connects on to 11th and 14th Streets and Red Cliffs with a link to the Murray River (6)
Riverfront / Apex Park	<ul style="list-style-type: none"> • Extend trail along the riverfront to connect all individual trails to form one continuous trail to Red Cliffs via Nichols Point in one direction and to Merbein in the other direction (34) • Create easy access from Mildura CBD to Murray River (along the river front near the rowing club lawns) (7)
San Mateo Ave	<ul style="list-style-type: none"> • Develop on road trails along San Mateo Ave (6)
Walnut Ave	<ul style="list-style-type: none"> • Develop on road cycling trails on Walnut Ave (6)
Outlying towns	<ul style="list-style-type: none"> • Develop trails to outlying towns and trails to connect towns (6)

NB: Only suggestions with at least six positive responses have been included in the table above. A more detailed list is available in the Appendix.

6.3 Suggested Footpath Improvements

Whilst footpaths weren't part of the scope of the strategy, there were numerous suggestions raised through community consultative strategies regarding improvements to footpaths to encourage greater participation in walking. These suggestions include:

- Repair pavements along Deakin Avenue to reduce the trip hazard.
- Construct a footpath all the way along on San Mateo Avenue between 14th and 15th Street (near new fire station).
- Develop wider footpaths so you can walk with friends side by side, especially in the east side community.
- Develop footpaths near La Trobe University along Benetook Avenue between 11th Street and 14th Street.
- Install lights on walking paths in Mildura South.
- Construct footpaths between Lizlee Drive and 16th Street on Walnut.



7.0 Issues and Opportunities

Mildura Rural City features a number of attractive and well utilised cycling and walking trails, particularly along the Murray River in Mildura and around Kings Billabong. There are however a number of barriers and issues that are currently impacting on the awareness and usage of these trails and the further development of additional trail opportunities. These issues, which have been identified by key stakeholders, community members, through the audit of trails and through the literature review include:

7.1 Trail Developments

7.1.1 Regionally Significant Shared Off Road Trail from Red Cliffs to Merbein



There is considerable support for the development of a shared off road trail along the Murray River that connects Red Cliffs to Merbein and for improved connections from the Mildura CBD to the riverfront to access such a trail. A connection from Merbein to Yelta/Wentworth will complete a significant long distance trail and provide access to the Shire of Wentworth trails network. A trail of this magnitude, right next to the river and incorporating Kings Billabong (which is currently difficult to access due to the lack of on or off road trails leading to the site and the high speeds of vehicles travelling on narrow

roads around the site) and other historic and cultural features is likely to be a significant draw card for the region, if promoted effectively.

This proposed trail, which is located on land owned by Council, DSE and Parks Victoria would not need to be developed from scratch as there are already a series of small, unconnected trails along this route. The priority would be to join each of these sections and to upgrade each section to a similar standard. This trail would become the priority off road trail for the municipality. Much of the proposed route is incorporated into the Chaffey Trail driving route. The responsibility for construction and maintenance of each section of trail will be borne by the respective land owners and described in a detailed Memorandum of Understanding.

Action: Undertake to connect each small section of the Red Cliffs to Merbein route to form one continuous linear route that is developed to a consistent standard in terms of trail surface, signage, supporting infrastructure, etc; is linked to other trails in the city; and is branded as The Chaffey River Trail. Take part in discussions with other river municipalities to apply for funding to undertake detailed planning of the Murray River Experience Trail and to ultimately construct this 'trail'.

7.1.2 Development of Priority North-South and East-West Commuter Cycling Routes

The promotion of cycling to and from work or school can assist in reducing traffic congestion at peak times and also reduce greenhouse gas emissions by reducing the number of cars on the road. Starting and finishing the day with exercise is also hugely beneficial to the health and wellbeing of

cyclists and walkers and contributes to safer neighbourhoods. It is anticipated that the development of priority north-south and east-west on road commuter cycling trails will help to encourage more people to cycle to work.

There is strong community support for the development of priority north-south and east-west cycling routes, which would essentially be classified as primary on road trails. These routes should

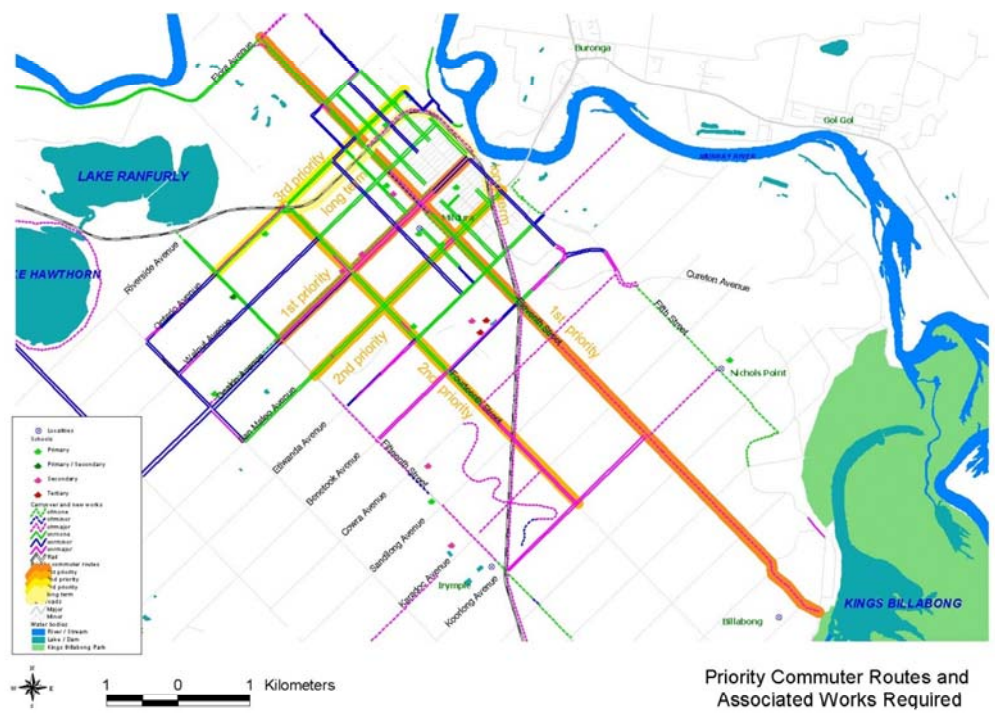


enable people from outer lying suburbs and towns, such as Merbein, Cardross, Red Cliffs and Nichols Point to commute quickly and safely into the centre of Mildura or to key facilities along the way such as education facilities. These cycling routes may be connected to parking areas at each end, or public transport options. They should also connect to the secondary on road trail network within Mildura, and if funding permits, be separated from motorists and parking lanes (along the lines of the Copenhagen Bike Lane

system). Ideally there will be end of trip facilities such as bike parking, bike lockers and showers for cyclists at the end of their commute. Proposed routes are:

North-south:

- Deakin Ave from 15th Street to 7th Street (1st priority)
- San Mateo Avenue from 15th Street to 7th Street (2nd priority) OR to Railway Easement on the corner of 8th Street (long term priority if feasible)
- Ontario Avenue from 15th Street to 7th Street (3rd priority) OR Railway Easement from 14th Street to and along 7th Street (long term priority if feasible) .



East-west:

- 11th Street from Ranfurly Way / Flora Avenue to Koorlong Avenue (1st priority)
- 14th Street from Ontario Avenue to Koorlong Avenue (2nd priority)
- Railway Easement just north of 7th Street (long term priority if feasible)

The priority north-south and east-west routes proposed within the Tracks and Trails Strategy generally support the proposed road usage identified in the *Mildura Road Hierarchy Major Traffic Route Proposals (1997)*¹⁷. This particular road usage report suggests that Deakin Ave is deleted as a National Highway, in recognition of its current design and usage, i.e. accommodation venues, restaurants, Centro Plaza and an attractive avenue (linear path) down its centre, not to mention far more traffic lights than some of the other north-south roads and traffic congestion in the CBD area. This would vastly improve access and enjoyment for cyclists and walkers.

Deakin Avenue currently has a good off-road shared path on the western side between 16th Street and 10th Street which provides access for walkers and cyclists to the CBD. This primarily caters to school children, walkers and low-speed cyclists. As a priority commuter route Deakin Avenue should also have on road cycle lanes on both sides to provide for higher speed commuters as well as road cyclists on training runs. In order to incorporate a cycle lane it will be necessary to resize vehicle lanes between 10th St and 14th St down to 3.0m to allow for the minimum 3.5m required for parking and cycle lanes. Road width between 14th and 15th Streets is already sufficient to mark cycle lanes. Cycle lanes between 7th and 10th Streets are also possible but will be located behind angle-parked cars so must be well demarcated and signed.

¹⁷ Mildura Rural City Council (1997) *Mildura Road Hierarchy Major Traffic Route Proposals*

The proposed 2nd priority commuter routes along San Mateo Avenue and 14th Street currently have on road bicycle lanes that are often shared with parking lanes. Ideally a separate bicycle lane would be marked adjacent to the parking lane however the width of these two roads will not always allow for this within design specifications. To provide priority commuter routes it is recommended to establish *Clearway Bicycle Lanes* on these roads. “Clearways, which prohibit kerbside parking at certain times, require cyclists to travel on different parts of the road at different times of the day. During Clearway times, cyclists will travel adjacent to the kerb, while at other times they travel adjacent to parked vehicles.”¹⁸ Thus parking may be prohibited at peak commuting times, say 7:00am to 9:00am and 4:30pm to 6:30pm, Monday – Friday. However, the presence of three schools on these routes confounds this development to some degree as parking at schools during this time is essential for parents dropping off and picking up school children. In order to establish contiguous Clearways it will be necessary to indent the parking bays outside the schools and mark bicycle lanes adjacent to them.



Any trail developed within the railway easement north of 7th Street would need to be considered in conjunction with the Mildura Murray Riverfront Central Precincts Feasibility (2010).

Actions: Develop a north-south priority route along Deakin Avenue and 11th Street as a high priority, followed by San Mateo Avenue and 14th Street via establishment of bicycle Clearways. As a long term priority, develop a trail along the Railway Easement if feasible.

7.1.3 Access to CBD from Nichols Point / Billabong

The Nichols Point / Billabong area has recently experienced high levels of residential growth. Residents from this area are keen to access the CBD from their homes by cycling or walking. The two centres of residential growth are near the intersection of Fifth Street and Koorlong Avenue and also around Cureton Avenue and Belar Avenue near Kings Billabong. Thus a two-pronged approach is required to service both areas.

A shared path exists on Fifth Street which could be resurfaced to upgrade it to ‘all-weather’ standard. A short off road path could be constructed along Cureton Avenue from the western end of Fifth Street to Cowra Avenue. This path would be located on a high embankment and significant



¹⁸ Vicroads Cycle Notes, No. 4 (1999) *Clear*

earthworks may be required. From this point the CBD may be accessed via on road options along Cureton Avenue / Benetook Avenue / 7th Street or Ellswood Crescent / Benetook Avenue / 11th Street. Another proposal which may also assist some Nichols Point residents to connect to the CBD is the development of an off road shared path along 11th St to the corner of Koorlong Ave. This commuter trail is likely to encourage employees of major businesses in this area such as DSE and DPI to travel to work on a safe bicycle path. The need for such a trail was identified through the consultation process. This off road path should then be extended along 11th St to Cureton Avenue and also along Koorlong Avenue to Fifth Street. These trail developments would not only enhance access to the CBD from these growing areas but also provide safe and direct access to Kings Billabong for Mildura visitors and residents. This need has also been identified strongly through the consultation process.

Actions: Explore the feasibility of developing an off road shared path along 11th St from Cowra Ave to Cureton Ave; and an off road shared path connecting Cowra Avenue and existing 5th Street shared path.

7.1.4 Extend the Irymple Green Belt Trail

An opportunity may exist to augment connections for Irymple residents with the CBD area by extending the Green Belt Trail. This trail commences at 15th St (Calder Hwy) and currently finishes at the northern corner of a new sub-division off Koorlong Ave. The formalized trail runs along a linear



Irymple Green Belt



crown land reserve which is a relic of a decommissioned irrigation channel. The reserve extends significantly further than the trail, all the way to Cowra Ave. Although these parcels appear not to have been leased or licensed to adjoining landowners, they currently have private buildings and a citrus orchard located within the crown land reserve as well as significant quantities of rubbish dumped in the old channel bed. Given the weight of community desire to extend the trail, it would be prudent to investigate the reclamation of these parcels in order to extend the trail through to Cowra Ave. It appears that public ownership of the channel reserve beyond Cowra Ave has been relinquished and so a continuous off-road trail into the residential areas of Mildura is not possible. From Cowra Ave commuters may use the on-road cycle lanes on 14th St to

travel to Deakin Avenue and then in to the CBD on the shared path.

Actions: Explore the feasibility reclaiming the remainder of the Irymple Green Belt crown parcels with the view to extending the existing trail through to Cowra Ave.



7.1.5 Safe School Routes

Traffic congestion around schools is becoming a major issue in many towns and cities. More and more parents are driving their children to school because of concerns about speeding cars, heavy traffic, lack of safe paths and fears for the general safety of their children (stranger danger). This in turn exacerbates the problem of traffic congestion.

Statistics show that the number of children walking or riding a bicycle to school has plummeted in recent years, yet research also espouses the health and wellbeing benefits of incidental physical activity such as cycling or walking for young people. Information provided during key stakeholder interviews indicates that only around 15-25 (2-4%) of the 650 students at Red Cliffs Secondary College ride a bicycle to school. This is in part due to the narrow roads around the fruit block area (which do not have sufficient space to provide a sealed shoulder or an off road trail) and the perceived risks associated with young people sharing roads as cyclists or walkers with cars and trucks travelling at up to 100km per hour. Reducing the speed of traffic in these areas (if possible), installing signage alerting drivers that school children may use these roads in the mornings and afternoons and an education program for motorists in these areas may contribute to a slightly safer environment and a greater number of students using active transport to get to school.

There is strong demand by some parents for the development of safe cycling / walking routes around schools, particularly in growth areas such as Nichols Point (potentially via Laurel St). A series of maps has been developed illustrating the location of footpaths, off-road shared paths and on road bicycle lanes in relation to schools and recreation reserves (Appendix 3). The maps also indicate recommended works to enhance or complete safe active transport routes. As these works are completed the map series may be promoted in school to encourage children to use these routes. Other initiatives, such as bicycle education programs in schools; a walking school bus program to and from schools; a campaign to promote the health and wellbeing benefits of active transportation; a competition between classes or schools about the highest percentage of students who use active transport (and thereby less carbon emissions); and the occasional police blitz on speeding traffic near schools will also need to be initiated if there is to be an increase in the number of young people who cycle or walk to school.

Action: Complete recommended works and then promote the Active Transport to Schools Map Series and support the development of other initiatives aimed at increasing the number of young people who use active transport to get to and from school.

7.1.6 Tracks and Trails Connections to and within Growth Areas

Mildura Rural City is continuing to grow at a rapid pace, with new residential developments occurring throughout Mildura, Mildura South and Nichols Point areas. Often new developments are located in outer suburbs, some distance from shops, schools and recreational facilities, thereby creating a car dependent community, particularly if public transport has not been extended to these areas. Additional cars on the road also create more congestion and green house gases.

To ensure that people who live in new residential areas (often young families) have the option of cycling and walking within their local neighbourhood and beyond, it is imperative that cycling and walking infrastructure is carefully planned and constructed as a matter of course in each development. These cycling / walking networks must be developed in such a way so that they link to the broader network, enabling local residents to link to other on and off road trails in the municipality. The funding of such trails in new developments needs to be undertaken by developers, as part of Council's Developer Contributions Policy.

Mildura Rural City Council's Developer Contributions Policy needs to be altered to ensure that all developers contribute a set amount, based on clear rationale, to the development of cycling and walking paths and that these funds are set aside in an account managed by Mildura Rural City Council specifically for this purpose. Further, it is proposed that where developers are required to provide land for open space as part of their contribution; that this land is not part of a drainage reserve.

Action: Modify Council's Developer Contributions Policy to ensure that cycling and walking trails in new developments are appropriately funded by developers based on clear rationale; that Council sets aside funds in a specific account to go towards the development of shared trails; and that trails are developed on suitable land and linked to the broader cycling and walking network.

7.1.7 Equitable Distribution of Trails throughout Small Towns in the Municipality

Residents of Mildura Rural City are dispersed across a wide region from Ouyen in the south east; Underbool in the south; Murrayville in the south west, Mildura and Red Cliffs in the north east; and Werrimull and Cullulleraine in the north. Regardless of which town or area residents live in or near, they should have access to opportunities to benefit from the social, physical, economic and environmental benefits of walking and cycling. The previous Cycling Strategy recommended works in each major town, but very few of those developments have actually been instigated. In the interests of equity, the following criteria have been developed to guide trail provision in small towns:

Town Size	Trail Provision
Areas with a population under 200 people	<ul style="list-style-type: none"> May incorporate an inner urban shared path in the town, but only if need can be demonstrated
Small towns with a population between 200-800 people (e.g. Cabarita – 280; Cardross – 739; Colignan – 204; Merbein South – 601; Murrayville – 404; Nangiloc – 400; Patchewollock – 322; Underbool – 207; Yelta – 390.	<ul style="list-style-type: none"> Should incorporate a minimum of one inner urban shared path within the town that is sealed or constructed with granitic sand. If the town has high tourism value, an outer ring network trail may also be constructed using natural materials
Larger towns with a population over 800 people (e.g. Irymple 5,740;	<ul style="list-style-type: none"> Should incorporate a minimum of one inner urban shared path within the town that is sealed or

Merbein – 2526; Ouyen – 1,061; Red Cliffs 4,596	<p>constructed with granitic sand.</p> <ul style="list-style-type: none"> • Should incorporate a minimum of one shared path (outer ring network) from the town to a nearby attraction, e.g. river, recreation reserve, etc
State and National Parks	<ul style="list-style-type: none"> • Should incorporate a minimum of one trail within the park suitable for walkers. Provision may be made for mountain bike riders and horse riders if the management plan allows. • May link to the existing town network or to another state or national park

Action: Work in partnership with Community Planning Groups to determine demand for trails in smaller towns and assist them to seek funding to develop such trails through Council budgetary processes and external grants in accordance with the Small Towns Trail Criteria.

7.1.8 Intra-municipal Linkages

Due to the proximity of a number of interesting towns in close proximity to Mildura, options should be explored with Wentworth Shire to develop some intrastate trails emanating in Mildura and finishing in Trentham Cliffs via Gol Gol in one direction (with a potential future link to Robinvale) and to Wentworth in the other direction (with a potential future link to Renmark in South Australia). The trail to Wentworth could potentially become a loop trail, with sections on the NSW side of the Murray and sections on the Victorian side. There may even be options to incorporate river boats to transport cyclists or walkers in one direction. Due to long distances, the costs of trail construction and poor landscape amenity along certain sections, it is recommended that the focus on intra-municipal linkages is confined at this stage to towns within 30km of Mildura. The most benefit will be obtained by developing high quality trails along the Murray River within Mildura (between Red Cliffs and Merbein) which can be promoted as part of a Murray River Experience. This potential trail, which was identified in the *Loddon Mallee Regionally Significant Trails Strategy*¹⁹ is not linked the entire way by cycling and walking trails, but has potential to be linked by other forms of transport, e.g. river boats, vintage cars, etc.

Action: Initiate discussions with Wentworth Shire in relation to developing trails to Wentworth and Trentham Cliffs; and initiate discussions with other Murray River based municipalities in terms of developing the Murray River Experience as outlined in the Loddon Mallee Regionally Significant Trails Strategy.

7.1.9 Further Development of Trail along the Mildura Railway Easement

Development of trails along railway easements such as rail trails or rails with trails have proven to be extremely popular Australia-wide (e.g. Riesling Trails in the Clare Valley in South Australia and the Murray to Mountains Trail in north east Victoria) and provide a safe traffic-free experience for recreational walkers and cyclists. The railway easement in Mildura (i.e. land next to the active railway line) is currently used as an off road trail between 14th St and 11th St (western section). This path, which is situated on land owned by VicTrack, is unsealed and unfenced and runs parallel to the railway line. There is potential to extend this section of trail further north along the railway easement to connect to trails along the riverfront. Potentially the trail could be developed between Merbein, all the way to the intersection of Benetook Ave and 11th St and perhaps to Red Cliffs.

¹⁹ Loddon Mallee Trails Network (2010) *Loddon Mallee Regionally Significant Trails Strategy*



Whilst this development is likely to be very costly (particularly as a 1.5m high fence is required alongside the entire track and any new pedestrian crossings that may be required over the railway line are estimated to cost in the vicinity of \$250,000 each), it would reduce the need to significantly upgrade on road cycle lanes on Ontario Avenue and would provide a new east-west link at the most northern end of the CBD (near 7th Street). Additionally, it is

likely to encourage a greater number of people to consider commuting to work, thereby reducing the need to develop more car parking and public transport opportunities. It will also create a much safer option for residents who live close to the trail to link to other recreational trails along the river. It is understood, from key stakeholder interviews, that the existing rail line is already used regularly by people in the east end of town to walk into the CBD.

In order for a trail to be developed along the railway easement, a two phase feasibility study is required. The first stage involves the development of full feature design work by Council which will involve:

- A statement of the benefits of such a trail and its relationship to other Council and State Government planning and policies
- Identification of linkages to the existing trail network and public transport opportunities
- Alternative options
- Estimated usage of the proposed trail
- A site survey to locate existing utility services
- Investigations relating to cultural heritage, heritage, flora and fauna as per Federal and State legislation
- Assessments on bridge structures by a suitably qualified person
- Life cycle considerations relating to finances, legislation, design, on-going maintenance, signage and emergency access
- Land licensing / leasing issues
- Identification of any major issues and proposed treatments required
- Identification of signage required
- Identification of potential risks and how to address such risks
- Preparation of concept plans
- Estimated costings
- Potential funding options
- Cost benefit analysis
- Estimated timeframes
- Statement to determine if the proposal is considered to be feasible.

At this point Council will have a fairly clear indication as to whether or not it wishes to or is able to proceed to the second stage of the feasibility study. The second stage of the feasibility involves four

specific stages, and is likely to take several years to achieve, if the proposed trail is actually approved. These four stages²⁰ are:

- Phase One – VicTrack ‘in principle’ approval – which may or may not be granted, pending the outcomes of consultation with the Department of Transport and VicTrack stakeholders (such as V/Line – the sub-lessee of the land)
- Phase Two – approval by an accredited VicTrack engineer in relation to compliance issues
- Phase Three – approval by the rail operator
- Phase Four – VicTrack Letter of Offer and license or lease.

An additional option that was considered is the re-routing of the railway line away from the centre of Mildura, thereby leaving the existing railway easement free of trains. However, discussions with VicTrack indicate that this option was considered to be too expensive.

Action: Investigate the feasibility of constructing an off road trail along the railway easement in Mildura between 11th St and the riverfront just north of 7th Street as well as the extension of this trail to the corner of Benetook and 11th St.

7.1.10 Horse Riding on Trails



Several people who attended the consultation held at the Sunraysia Farmer’s Market stated that they would like to see trails developed for horse riding. Whilst horse riding trails were not part of the scope of the Strategy, some of the trails in existence, or planned for extension may be suitable for this purpose, or may be able to be adapted for this purpose. Although the preference for horse riders is for a trail separated from walkers and cyclists to reduce potential conflict, there are examples of trails around the state where horse riding and walking

are quite compatible, e.g. Red Hill Trail. In general bicycles and horse riding don’t mix well. There are other examples around the state where a horse riding trail has been built parallel to the main shared cycling / walking trail. To some extent, the trail surface, its width and its clearance height will dictate whether or not shared use can be achieved.

Usually horse riders prefer well formed, soft unsealed trails approximately 2.5 metres wide for single lane sections and 3.7 metres wide to allow two people to travel side by side in other sections, with a cleared height of 3.5 metres. The preference is for limited road and water crossings and limited access to steep, rocky slopes. As with most off road trails, natural shade; clear signposts with instructions to promote appropriate use of the trail; and loops of varying lengths to cater for short or longer rides are important. Specific inclusions for horse riding are a space for car parking and horse floats at entry points, access to drinking water for horses where warranted, an open area that allows

²⁰ VicTrack (2010) *Shared User Pathways and Rail Trails on VicTrack Land – Design Guidelines for Applicants*

horses to gallop, trot or canter and if warranted, designated horse camps with hitching rails or holding facilities (at least 30 metres from lakes, streams, rivers, huts and camping areas).

Action: Promote trails which are already suitable for horse riding (e.g. Johnson's Bend) ; and if there is demand for additional horse riding opportunities in the future, consult with horse riding groups about the development of a suitable off road horse riding trail (either on Council owned land or land managed by DSE or Parks Victoria).

7.1.11 Develop River Trail between Lock 11 and Old Mildura Homestead

The existing river trail running north from Mildura Riverfront to Apex Park currently leaves the river at Lock 11 and follows Hugh King Drive and Cureton Ave around to the Old Mildura Homestead. This departure from the riverfront is made necessary by a fence constructed around the Lock 11 GM-W office and two private residences which effectively restricts access along the river between these two tourist features.



The private properties appear to extend beyond the Residential 1 Zone boundary and onto Crown Land Reserve. Planning permits allow building (including fence construction) within the property boundary only and any development or use on the Crown Land is subject to the land manager's consent (MRCC as the Committee of Management). In order to link the two tourist features via a river trail it would be prudent to investigate any agreements that may be in place between MRCC and the private landowners regarding use of the crown land reserve and consider revising any such agreement.

Action: Investigate any agreements between MRCC and private landowners regarding the use of adjacent Crown Land Reserve and consider revising any such agreement in order to facilitate the development of a river trail between Lock 11 and Old Mildura Homestead.

Action: Ensure appropriate conditions are applied to neighbouring land owners and enforced to enable public access to this area in the future.

7.2 Design Issues

7.2.1 Conflicts between Cyclists and Motorists

Conflicts between cyclists and motorists can inevitably stem from poor design of roads and trails; a lack of understanding of the challenges of riding a bicycle in traffic (particularly for beginners); and a disregard or a lack of understanding of road rules. There were a considerable number of references made by both cyclists and motorists regarding conflicts that they have experienced as certain times. Some options to reduce conflicts between motorists and cyclists include:

- Improved design of roads, on road bicycle lanes and off road trails to reduce conflict and squeeze points for cyclists (including road treatments that create a separation between cyclists and motorists where possible)
- Further education of all road users (including learner drivers) of the right of cyclists to share the road with other vehicles and of other relevant road rules (including the need for cyclists to obey such rules)
- Regular updates in the media or Council Matters about motorists being aware of cyclists when reversing out from car parking spaces and driveways, when re-entering traffic from a parking lane, when changing lanes, etc.

“I nearly got hit on my bike while riding through a round-about, so now I only ride on the footpaths and I don’t care what the law says”.

(Survey Respondent)

Action: Utilise best practice design guidelines for all road and trail constructions to ensure roads and trails are suitable for both cyclists and motorists; and instigate an ongoing education program for cyclists and motorists.

7.2.2 Roundabouts



One of the major concerns identified by key stakeholders and community members through consultative processes, in relation to on road cycling, particularly in the CBD area, is the current design of on road lanes and their interface with roundabouts. In a number of instances, the bicycle lane finishes just prior to the roundabout, thereby placing

the cyclist in the traffic with vehicles. Many people feel that motorists are unaware of the rights of cyclists on roundabouts and therefore some cyclists can feel intimidated by motorists. The current road rules state that for single lane roundabouts on local roads with no bicycle facility (i.e. no line markings for bicycles) cyclists are to occupy the approach lane. Many cyclists are fearful, however of taking over the entire lane because of the risk of a rear end collision. Others tend to move to the outer edge of the lane, although there is insufficient space for a cyclist and a vehicle within the space, hence squeeze points for cyclists can be created, potentially resulting in a collision.

Recently a number of Council staff has consulted with Aurecon (a multi-national engineering firm) to improve the condition of roundabouts in Mildura. This new design involves:

- Installation of signage at the approach to roundabouts to warn motorists to watch for cyclists
- marking of cycle symbols on the roadway in two locations prior to the roundabout so that motorists understand that the roadway is shared by cyclists and motorists
- installation of line marking at the end of the cycle path to indicate that the path finishes prior to the roundabout and that cyclists must enter the main flow of traffic
- extension of traffic islands into the roundabout to slow traffic down

Action: Implement Mildura Rural City Council's new roundabout design at key intersections in Mildura, e.g. 12th St and San Mateo Avenue.

7.2.3 Crossings

Some concern has been expressed about the safety and gradients of crossings, particularly on Deakin Ave at the Argyle St intersection (between 13th and 14th Streets). A number of key stakeholders spoke about the difficulties of using bicycles with children's trailers attached at the rear to cross over Deakin at this point. Presumably people in wheelchairs would experience similar issues with such a steep gradient. A suggested solution to this is to install raised pavement street crossings in order to provide a consistent elevation of the shared path, eliminate steep gradients associated with drop kerbs and reduce the speed of vehicles at these points. Each raised pavement crossing is estimated to cost around \$5,000.

Action: Undertake an audit of trail crossings and rectify those that are not accessible.

7.2.4 Connections and Linkages to the Riverfront and Other Key Areas



Trail users can find it very frustrating when trails simply stop suddenly for no obvious reason or when logical connections between trails are not made. Much can be achieved from linking existing trails to one another to create a network of joined trails, as opposed to developing a whole range of new trails that are completely separate from one another. By linking trails, opportunities may also be made available to develop loops, so that people have a choice of how far they walk or ride. It is therefore important not to

view any trail development in isolation; rather, it needs to be examined in the context of the larger picture, i.e. identify the potential connections that can be made to this trail in both the short term and the long term. Consideration should also be given to whether or not a slight deviation would create better value and greater benefits by linking the trail to existing or future residential areas, schools, recreation facilities or shopping areas. Survey respondents identified numerous trails which are not connected to others, particularly along the riverfront. Comments were also made about creating better linkages from the CBD to the trails along the river.

The Landscape Master Plan Report River Murray (1992), Mildura CBD Plan (2007) and the Deakin Ave Master Plan (2011) have all attempted to address improved access from the CBD to the river. Recommendations include:

- The Landscape Master Plan Report River Murray (1992) recommended: “A pedestrian crossing should be introduced across Seventh Street to safely move people from the city to the Railway Station and pedestrian bridge. A new brick paved path should be laid on the river side of Seventh Street to link with the pedestrian bridge. Direction signs should be placed in Langtree Mall and at the end of Langtree Ave directing people to the station and the riverfront.”
- The Mildura CBD Plan recommended “Facilitating pedestrian movements between the River environs and CBD with improved pedestrian links across Seventh Street at the intersections with Madden Avenue and Langtree Avenue.”
- The Deakin Ave Master Plan recommends that connections to the riverfront are explored through a new central pedestrian crossing.

Action: Develop connections between trails; from the CBD to the river; and also connections to areas of open space and recreation reserves.

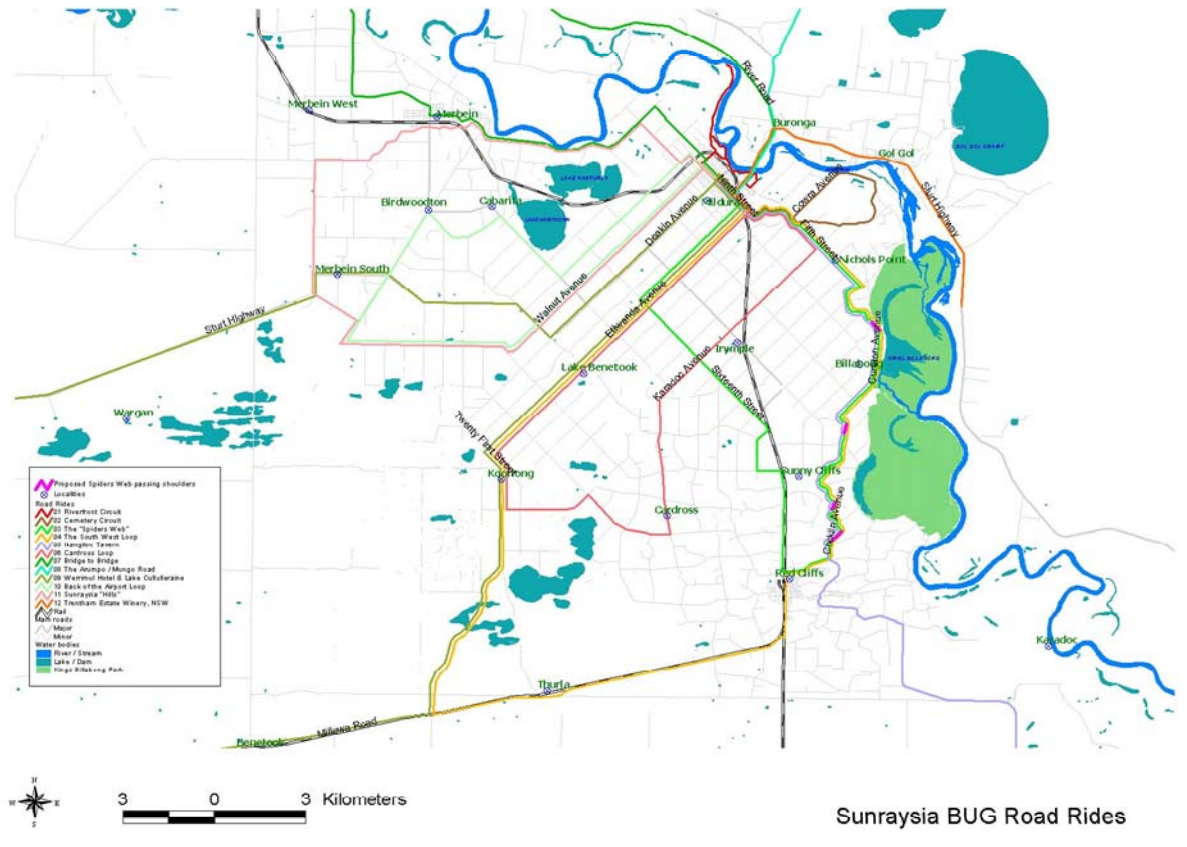
7.2.5 Sealed Shoulders on Training Routes



A number of local residents identified the lack of sealed shoulders on roads, particularly those used as training routes by cyclists, as a concern. Given that the majority of training cyclists prefer to use the road, as it is generally cleaner than shoulders, and given that training cyclists usually ride in groups, perhaps three or four abreast, it is unlikely that training cyclists would actually use the shoulders very often. However, key stakeholder interviews suggest that other cyclists and potential cyclists in these areas would use

sealed shoulders if they were available. The map on the following page shows twelve of the most popular training routes as described in “On Road Rides Around Mildura” produced by the Sunraysia Bicycle Users Group. Three heavily utilised routes (including “The Spider’s Web”) follow Cureton Avenue and Cocklin Avenue to Redcliffs and this section of road is known as the “Bourke Street” for on road cyclists. These training rides are generally loops and progress in a clockwise direction. This

section of road departs from the grid road pattern found in much of the municipality and incorporates a series of curves that provide interest for road riders. However, these curves present problems for drivers wishing to travel faster than the cycle bunches and who may find it very difficult to overtake.



Austrroads²¹ states that “Where significant numbers of cyclists use the roadway, consideration should be given to fully sealing the shoulders. Suggest use of a maximum size 10 mm seal within a 20 km radius of towns”. It also states that the seal should be a similar width to an online bicycle lane, i.e. 1.5m wide in a 60km per hour zone; 2.0m wide in an 80km per hour zone; and 2.5m wide in a 100km per hour zone.

Sealing of the eastern shoulder (for cyclists travelling clockwise on described routes) and marking of a bicycle lane for the full length of the “Bourke Street” would cost in excess of \$1.5 million. A more practical and cost effective solution is to widen the road at strategic points to provide opportunity for cyclists to move to the side and allow vehicles to overtake safely. These “overtaking shoulders” should be regularly spaced and on straight sections immediately following a series of curves. Provision of four overtaking shoulders strategically located along this section of road and including lane marking and signage would cost less than \$140,000. Further actions that may reduce conflict between cyclists and vehicles include:

- Reduction of speed limits on heavily used training routes.

²¹ Austrroads Cycling Aspects of the Austrroads Guides (2011).

- Installation of cyclist warning signs along training routes, at 5km intervals and just beyond all major intersections to warn motorists to be aware of cyclists.
- Fostering a culture amongst road riders to ensure they use these passing shoulders when provided.
- Encouraging cyclists to regiment their ride times so that drivers know when they are likely to encounter bunches and may choose to adjust their time / route of travel to suit.



Action: Seal shoulders at strategic points on specified, well utilised training routes and install warning signage as detailed.

7.2.6 Supporting Infrastructure



A range of amenities should be provided along trails so that users are provided with a comfortable experience wherever possible. Access to toilets, shelters, picnic areas, bins, doggie bags, bike parking, car parking and drinking water should be provided on priority off road trails with a recreational focus (e.g. along the Murray River or Kings Billabong), whereas secondary off road trails are more likely to have a more basic level of infrastructure such as seats. Given the climate of Mildura

Rural City, trees should be planted along trails wherever possible. Priority on road trails should have provision for bicycle parking, lighting and end of trip facilities such as showers. Secondary on road trails may have far more limited supporting infrastructure, if any at all. Refer to Section 17.0 for guidelines for trail inclusions.

Actions: Utilise the Design Guidelines developed in the Strategy to determine what type of supporting infrastructure is suitable for the various grades of trails.

7.2.7 Prioritised Pedestrian Routes in Mildura CBD



The key area used by pedestrians in the CBD is likely to be the block created by Deakin Ave, Langtree Ave, 8th St and 9th St. To create greater ease of access for pedestrians, it is recommended that traffic lights are altered at the Deakin Ave and 8th St intersection and the Deakin Ave and 9th St intersection to provide longer signalised priority for pedestrians arriving from residential areas. Additional measures should include the planting of shade trees

wherever possible near footpaths, shaded seating area, the installation of verandas, and lighting in both streets and car parks. Wayfinding signage should also be installed to direct pedestrians to key facilities and areas, and to provide them with some indication of distances and time to such locations.

Action: Increase traffic signal times, install wayfinding signage and install supporting infrastructure in the CBD as required to increase pedestrian use of this area.

7.3 Management and Maintenance

7.3.1 Maintenance



Poor levels of maintenance have been identified as a detractor to using trails in the municipality. Community members have spoken about some off road trails being overgrown with weeds and the potential for snakes during summer. They also spoke about pot holes and debris such as glass along on road trails, which frequently result in cyclists moving onto the road to avoid such hazards. Poor levels of maintenance also reduce the lifespan of cycling / walking assets. A maintenance plan and a maintenance budget have been identified as

part of the strategy.

Currently Mildura Rural City Council allocates an annual amount of approximately \$50,000 towards trail developments, upgrades and maintenance. The average expenditure for Councils who took part in the Austroads Local Government Bicycle Account survey²² in 2010 was \$239,000. This survey was completed by 305 of the 558 Councils across Australia - 130 of whom were from non-urban areas – regional, rural and Aboriginal councils. It is recommended that annual expenditure be increased to approximately \$580,000 in order to complete all identified works, including a regionally significant river trail, over 10 years. Annual maintenance costs will need to increase each year as new trails are developed, calculated as 3% of the development cost of off-road trails.

Not all maintenance is carried out by Council staff or staff from Parks Victoria or DSE. Some maintenance is carried out by friends groups, such as the Friends of Kings Billabong. Whilst local ownership of such a site is very positive and should be encouraged, there is a need to provide ongoing support and assistance to such groups with maintenance and other related issues.

Actions: Implement the maintenance plan incorporated into the Strategy; set aside sufficient funds on an annual basis to maintain trails; and provide ongoing support to Friends of Groups.

²² Austroads Local Government Bicycle Account Survey 20:
http://www.austroads.com.au/abc/images/pdf/australian%20local%20government%20bicycle%20account%202011_web.pdf

7.3.2 Trail Bike Management

Trail bike riding is a legitimate and popular recreational activity for many people. However, in some locations, particularly around Kings Billabong and Merbein Common, motorised vehicles such as trail bikes can be a major problem. Not only can trail bikes cause erosion to trails, the noise emitted from these vehicles can detract from the experience of authorised users of the trail and nearby land owners. Some cyclists and walkers are also fearful that they may be injured by a trail bike. To reduce the likelihood of trail bikes riders using tracks and trails in Mildura Rural City, consideration may need to be given to the installation of various traffic calming measures such as gates and chicanes. It will also be important to install regulatory signs, provide education about the negative impact of such use; and ensure that local authorities patrol key areas on weekends and after hours. Key stakeholders involved in the development of the Strategy also suggested that trails be designed with some curves, to reduce the appeal of the trail to riders and by working with trail bike riders to create their own trail bike riding area.

Action: Install traffic calming measures and regulatory signage on trails deemed to be most prone to illegal trail bike riders; ensure that these trails are regularly patrolled by local authorities; and if the problem persists, consult with users of trail bikes about the potential to develop a space of their own.

7.4 Marketing and Promotion

7.4.1 Tourism Market



As identified in the Strategy, there are at least 575,000 visitors to Mildura each year, with each person contributing a significant amount to the economy. Not all of these visitors will be interested in cycling and walking opportunities, but a significant number will be. In order to capture this market and to encourage them to stay on in the region and extra day or two to undertake walks or cycles, it is important that they are able to access information about these opportunities during the planning stage of their trip. Information therefore needs to be

made available on tourism internet sites and in visitor guides such as *Official Visitors' Guide Mildura* (produced by Visit Mildura and Visit Victoria). Quality photographs of people walking and cycling in the region also need to be sourced and produced on all promotional collateral, particularly images of people in front of river boats, orange groves, wineries, sunsets, etc.

The Murray to Mountains Rail Trail in Victoria's north-east has been particularly successful in working in partnership with local businesses to promote the trail, as these operators have experienced first-hand the economic benefits that such a partnership can bring. There are opportunities for local accommodation venues to provide safe bicycle lockers, bicycle repair kits, cycling / walking maps or drop sheets in rooms for bicycles. They may also offer a cycle pack including muesli bar and sports drink as an alternative to mini bar products. Some accommodation venues around Bright offer pick-ups and drop-offs and free bicycle hire. Local cafes may also supply free water for cyclists and walkers as well as bicycle repair kits and information about local trails.

Action: Source quality photographs of people participating in cycling and walking in front of attractions that are unique to the region; and work in partnership with local accommodation and food and beverage outlets to ascertain opportunities to attract cyclists and walkers to the region.

7.4.2 Promotion of Tracks and Trails

Unless people are aware of the existence of tracks and trails, the use of such assets is likely to be minimised. There is currently a lack of promotion of on and off road trails in Mildura. Some brochures are available at the Visitor Information Centre and several tourism websites provide basic details of some recreational walks. Mildura Rural City Council currently makes no reference to cycling or walking opportunities on its own website. Key promotional tools to consider as part of a marketing strategy include signage on trails, brochures / maps (both hardcopy and electronic versions), internet promotion on local sites (e.g. Mildura Rural City Council website, Visit Mildura, etc) with linkages to other sites, links to smart phone applications, facebook, interpretive podcasts, *Council Matters* and *Sunraysia Daily*.

Action: Implement a marketing strategy focussing primarily on signage, maps / brochures and websites and a suitable budget to implement initiatives.

7.4.3 Signage



Lack of signage can be a major issue on trails. Cyclists and walkers, for example, may not be aware that trails exist in certain locations if signs are absent, or may get lost. They may also be at risk of injury if warning signs or temporary closure signs have not been installed when required. If there are no regulatory signs on trails, unauthorised usage of trails by trail bike riders may occur. Motorists may not be conscious of looking out for cyclists or walkers if there are no warning signs. A number of key stakeholders and community members

commented on the lack of clear and consistent signs along trails. Section 15.0 of this Strategy provides recommendations on the types of signs required, the location of such signs and the need for consistent branding.

Action: Adopt the signage recommendations incorporated into the Tracks and Trails Strategy.



8.0 Vision and Planning Principles

As part of the consultation phase, key stakeholders were asked to identify a vision and planning principles to support the vision. Each of the ideas has been examined and the following vision and principles prepared.

8.1 Our Vision

Mildura Rural City Council contains a series of tracks and trails that link key facilities and attractions within townships and across the municipality, promoting physical, social, environmental and economic benefits for residents and visitors to the region.

8.2 Our Principles

Mildura Rural City Council will consider the following planning principles when making decisions about upgrading existing tracks or trails or developing new tracks and trails:

Principle	Description
Demonstrated Community Support and Evidence of Need	The trail demonstrates community need and evidence of support.
Sustainability	The trail is likely to be sustainable from a usage, management, maintenance and financial perspective.
Safety	The trail is likely to offer a safe experience for trail users, or provide a safer experience than that which currently exists.
Community Benefits	There are likely to be health, social, and economic benefits for the nearby community.
Linkages to Other Trails	The trail provides linkages to other trails.
Access Points	The trail has good access points for trail users, emergency services and maintenance vehicles.
Protection and Enhancement of Environmental and Cultural Assets	The trail is likely to protect or enhance environmental and cultural assets.
Better Utilisation of Existing Assets	The trail is likely to promote better use of existing assets.
Value for Money	The trail is likely to represent value for money to stakeholders.
Equitable Distribution of Trails	The trail contributes to the development of a municipal-wide network.

9.0 Hierarchy and Grading of Trails

In order to provide some guidance for Council and user groups around expected standards of trail design, infrastructure and maintenance, a hierarchy has been developed for trails in Mildura Rural City. For each level of this hierarchy, design guidelines have also been produced (refer to Section 17.0) which outline what types of infrastructure is likely to be found on each level of trail.

9.1 Hierarchy

9.1.1 Principal On Road Bicycle Lane

A principal on road bicycle lane refers to the specific priority routes recommended for development in Mildura to transport cyclists quickly in a north-south (i.e. on Deakin Ave, San Mateo Ave and Ontario Ave) and east-west direction (11th Street and 14th Street). It is expected that these on road lanes will be used extensively by cyclists for commuting to work, and for accessing other key locations such as recreational facilities, entertainment facilities and the CBD, with movement as the primary function and access secondary. Speeds of 30km per hour or more are likely to be achieved by trail users. These lanes will need to be maintained to a high standard, be well signed, be well lit, regularly swept of debris, with lane marking very clearly visible to both cyclists and motorists. It is expected that traffic calming measures will be introduced on these routes where necessary to ensure that cyclists will be given equal access to the road, if not priority over vehicles. Ideally some form of separation of cyclists from vehicles would occur on these routes, similar to the Copenhagen system, depending on the resources available. Other considerations such as coloured surface treatments of the bicycle lanes should be considered.

9.1.2 Secondary On Road Bicycle Lane

Secondary on road bicycle lanes refer to all other bicycle lanes marked on roads within the municipality. These roads may be used for a variety of purposes, including commuting to work, but also by students travelling to schools, people travelling to the shops, as part of a training route for cyclists, for recreational riders in areas where there may not be any off road trails and even as a connector between off road trails. Movement and access will be of equal priority and speeds are expected to be around 20-30km per hour. The level of maintenance and standard of infrastructure on these roads is not likely to be as high as it is for principal on road bicycle lanes. Nevertheless, clear line marking and signage will be very important, as will the clearance of any debris and repairs of any hazards such as pot holes.

9.1.3 Principal Off Road Trail

A principal off road trail refers to shared tracks and trails throughout the municipality that link to scenic locations, tourist attractions and other areas of interest and which are likely to appeal to a municipal, regional or state level audience, e.g. Apex Park / Riverfront Trail and King's Billabong. It is expected that these trails will have a higher level of infrastructure than other trails in the municipality, including items such as public toilets, car parking, interpretive signage, bins, seats, picnic areas, shelter, etc. Maintenance levels on principal off road trails also need to be more intense, in recognition of the larger number of people who use these facilities on a regular basis, so that trail surfaces don't become degraded, rubbish is removed, vegetation is trimmed, etc. Depending upon the setting and the type of experience on offer, it may be appropriate to seal some

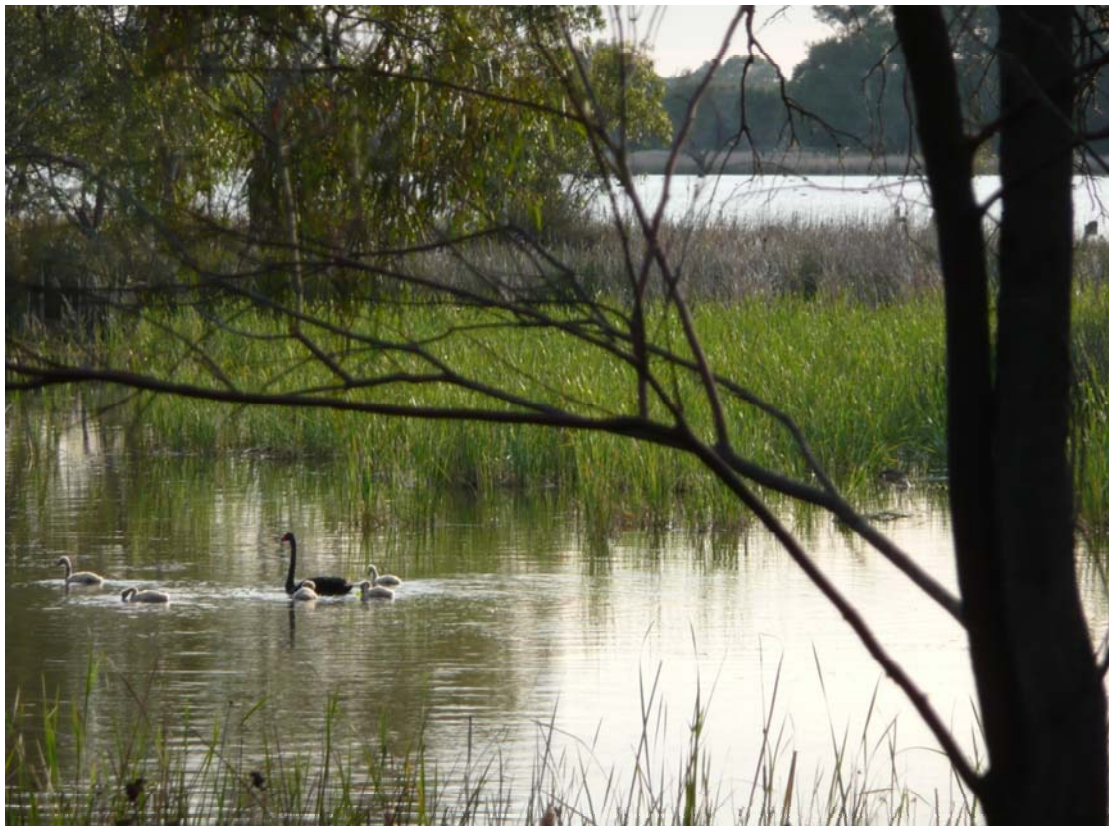
principal off road trails. There should also be provision for people of all abilities to use at least some sections of principal off road trails. Movement and access will be of equal priority on these trails and speeds are expected to be less than 25km per hour.

9.1.4 Secondary Off Road Trail

Secondary off road trails refer to all other tracks and trails located in the municipality, not built on the road and not including footpaths. These trails are typically found in locations such as around lakes, around recreation reserves, in nature reserves, in parks, in bushland, along rivers and occasionally alongside roads. The level of maintenance and standard of infrastructure on these off road trails is not likely to be as high as it is for principal off road trails. Nevertheless, these trails will still need to be maintained on a regular basis to ensure that potential hazards are identified and rectified. Movement and access will be of equal priority on these trails and speeds are expected to be less than 25km per hour.






9.2 Trail Grading System

In addition to hierarchies for trails, a grading system exists for walking trails and mountain bike trails to inform people about the degree of difficulty of trails and features that are likely to be found on various types of trails so that they can make a choice about the most suitable trail according to their abilities.



9.2.1 Walking Track Grading

The Australian Walking Track Grading System²³, developed by Department of Sustainability, Environment, funded by the Victorian Government's Go For Your Life initiative and endorsed by Parks Forum as a voluntary industry standard in 2010, is comprised of five different grades:

Grade	Symbol	Walk Description for Public Information
Grade One is suitable for the disabled with assistance		Less than 5km Flat Well formed track Clearly sign posted No experience required No steps
Grade Two is suitable for families with young children		Less than 10km Gentle hills Formed track Clearly sign posted No experience required Occasional steps
Grade Three is recommended for people with some bushwalking experience		Less than 20km Short, steep hills Formed track, some obstacles Sign posted Some bushwalking experience recommended Many steps
Grade Four is recommended for experienced bushwalkers		Track may be more than 20km Very steep Rough track, many obstacles Limited signage Experienced bushwalkers
Grade Five is recommended for very experienced bushwalkers		Track may be more than 20km Very steep and difficult Rough, unformed track No directional signage Very experienced bushwalkers






These symbols and descriptions should be incorporated onto trail head signage for all principal off road walking trails and for secondary off road trails where possible. It is expected that the majority of trails in Mildura Rural City will fall within Grade One or Two, whereas some trails in state or national parks in the area may fall within Grade Three, or possibly Grade Four. It is also important to

²³ DSE Website: <http://www.dse.vic.gov.au/recreation-and-tourism/australian-walking-track-grading-system>

ensure that trails comply with relevant standards, such as the Australian Standard for walking trail construction (AS 2156.1).



9.2.2 Mountain Bike track Grading

The International Mountain Bicycling Association²⁴ Grading comprises of five different levels:

	Very easy  White Circle	Easy  Green Circle	Intermediate  Blue Square	Difficult  Black Diamond	Extreme  Double Black Diamond
Description	Likely to be a fire road or wide single track with a gentle gradient smooth surface and free of obstacles. Frequent encounters are likely with other cyclists, walkers, runners and horse riders.	Likely to be a combination of fire road or wide single track with a gentle gradient, smooth surface and relatively free of obstacles. Short sections may exceed these criteria. Frequent encounters are likely with other cyclists, walkers runners and horse riders.	Likely to be a single trail with moderate gradients, variable surface and obstacles. Dual use or preferred use Optional lines desirable	Likely to be a challenging single trail with steep gradients, variable surface and many obstacles. Single use and direction Optional lines XC, DH or trials	Extremely difficult trails will incorporate very steep gradients, highly variable surface and unavoidable, severe obstacle. Single use and direction Optional lines XC, DH and Trials
Trail Width	2100mm plus or minus 900mm	900mm plus or minus 300mm for tread or bridges.	600mm Plus or minus 300mm for tread or bridges.	300mm Plus or minus 150mm for tread and bridges	150mm Plus or minus 100mm for tread or bridges.

²⁴ <http://www.imba.com/resources/maps/trail-difficulty-ratings>

9.0 HIERARCHY AND GRADING OF TRAILS

	Very easy  White Circle	Easy  Green Circle	Intermediate  Blue Square	Difficult  Black Diamond	Extreme  Double Black Diamond
				Structures can vary.	Structure can vary
Trail Surface	Hardened or smooth	Mostly firm and stable	Possible sections of rocky or loose tread.	Variable and challenging.	Widely variable and unpredictable.
Average Trail Grade	Climbs and descents are mostly shallow Less the 5% average.	Climbs and descents are mostly shallow, but may include some moderately steep sections. 7% or less average.	Mostly moderate gradients but may include steep sections. 10% or less average	Contains steeper descents or climbs. 20% or less average.	Expect prolonged steep loose and rocky descents or climbs. 20 % or greater average
Maximum Trail Grade	Max 10%	Max 15%	Max 20% or greater	Max 20% or greater	Max 40 % or greater
Level of Trail Exposure	Firm and level fall zone to either side of trail corridor	Exposure to either side of trail corridor includes downward slopes of up to 10%	Exposure to either side of trail corridor includes downward slopes of up to 20%	Exposure to either side of trail corridor includes steep downward slopes or freefall	Exposure to either side of trail corridor includes steep downward slopes or freefall

These symbols should feature on any mountain bike trails developed within the municipality. The descriptions above include input by Parks Victoria.

10.0 Management of Tracks and Trails

Tracks and Trails are managed by a variety of different organisations. According to the Victorian Trails Strategy²⁵, approximately 50% of all Victorian trails (4,000km) are managed by Parks Victoria, with a further 35% (2,800km) managed by DSE and the remaining 15% (1,200km) managed by local government authorities.

VicRoads coordinates the development of the Principle Bicycle Network (PBN). PBN trails are generally on-road lanes located on the arterial road network (e.g. highways and main roads). However, sometimes PBN's comprise of off road paths alongside roads and through areas of open space or sometimes even on local level roads.

Municipal Bicycle Networks (MBN) are often developed by Local Government Authorities. These trails form the local trail network and can be either on or off road shared paths.

Mildura Rural City manages and maintains all footpaths in town and any trails developed on its own land (e.g. Deakin Ave Shared Trail and part of the riverfront), whilst Parks Victoria and DSE manage tracks through areas of bushland and along other sections of the riverfront. The Catchment Management Authority manages flood plains and works with land managers. Occasionally a track or trail will cross from land managed by Council to land managed by the Crown or the CMA, thereby involving more than one agency.

Some trails, such as those around King's Billabong, are managed by community organisations such 'friends of groups' in partnership with the relevant land manager (i.e. in this instance, Parks Victoria). Other potential community-based organisations that could assist with trail management and maintenance include schools, clubs (such as scouts) and potentially businesses, through an 'adopt a trail' program.

This process of shared management between government agencies and the community has considerable benefits including:

- Regular passive surveillance of the trail by local residents and notification of any issues or concerns.
- A sense of ownership of the trail by local residents.
- A sense of pride in the trail by local residents.
- Development of community networks and community strengthenedness, brought about by local people working together towards common goals.
- Potential to undertake developments at a faster pace than if reliant on accessing local or state government resources and funding calendars.
- Potential to undertake developments at less cost than if reliant on local or state government budgetary allocation processes, due to potential for in-kind labour and donation of local materials.

²⁵ Victorian Trails Coordinating Committee – "Victorian Trails Strategy" (2005-2010)

However, in order for shared community management to work effectively, the following issues need to be addressed:

- Insurance cover must be made available for all community volunteers working on the trail.
- Training for volunteers in trail design and maintenance would be of considerable value and ensure that the community is skilled and empowered to develop and maintain quality trails.
- Suitable maintenance equipment needs to be made available to community groups so that they can maintain their trails to an agreed standard. This equipment may form part of an equipment pool, or may be shared between several locations.
- Grants need to be made available to community organisations to help them undertake trail development and improvement projects. Assistance with grant writing could also be of benefit if required.
- Rewards for community organisations managing trails also need to be considered. Certificates of appreciation, an award luncheon and positive media coverage can all help to sustain enthusiasm and boost morale.
- Support from Council, Parks Victoria and DSE staff with major works that are beyond the capacity of local people to perform or fund will also be required periodically.
- Although local community groups could install signage, the signage needs to be provided by the managing authority to ensure consistency across the municipality and across the state and to ensure that Australian Standards regarding signage are met.
- Marketing assistance needs to be provided to ensure that the trails are included in local and state publications, e.g. Park Notes, Council's website, tourism brochures, tourism websites, etc.

Management of a track or trail typically involves development of a Trail Management Plan – particularly for major trails (outlining objectives of the trail, management responsibilities, agreed trail standards, etc), as well as the development of relevant policies and strategies (e.g. signage strategy and risk management strategy). It also involves coordination of maintenance and hazard inspections of trails, in addition to facilitating trail upgrades. There is usually some degree of liaison with user groups and key stakeholders. Marketing and promotion of trails is another key function, as is the coordination of any events on site.

10.1 Monitoring of the Strategy

Monitoring of the Tracks and Trails Strategy should be undertaken by an internal Council reference group twice per year. This reference group should be made up of representatives from the following units:

- Leisure and Cultural Services
- Infrastructure Services
- Parks
- Statutory Planning
- Road Safety
- Visitor Information Centre
- Engineering

- Strategic Planning
- Community Planning
- Sustainability and Resources
- Biodiversity

The role of the reference group is to:

- Thoroughly review the actions contained within the Strategy.
- Identify which actions have been achieved.
- Identify which actions have not been achieved and why not.
- Identify any factors that may have or may contribute to the achievement of specific actions.
- Adjust the Strategy accordingly, if required (annually).
- Prepare budget bids to ensure sufficient funds are available for upgrades, new developments and maintenance (annually).
- Report to Council on the progress of the strategy in terms of its objectives (annually).

External groups should also be invited to attend a review meeting annually to discuss achievements of the plan thus far and to discuss future initiatives. By forming a partnership approach with these agencies to review the Strategy, there is potential that user groups will take greater ownership of the outcomes themselves and incorporate some of the actions into their own work plans, budgets or funding programs, thereby maximising local assets and resources. This external group should be made up of the following organisations:

- Department of Sustainability and Environment
- Parks Victoria
- Catchment Management Authority
- VicRoads
- Victoria Police
- Department of Planning and Community Development
- VicTrack
- Department of Transport
- Regional Development Victoria
- Regional Development Australia
- Victorian Tourism Commission
- Local cycling and walking groups, e.g. SUNBUG, Sunraysia Bushwalkers, Mildura Coomealla Cycling Club, Coomealla Triathlon Club, Coomealla Mildura Mountainless Bike Club
- Mallee Sports Assembly
- Business representative
- Education sector representative
- Health services, e.g. Northern Mallee Primary Care Partnerships, Sunraysia Community Health Services.

Implications for the Strategy

Inconsistencies between the various agencies that manage trails have the potential to negatively impact user satisfaction. For example, if one section of a trail, which is located on land controlled by Mildura Rural City, is constructed and maintained to a lower standard than another section of that trail and has a poorer standard of or no signage, the overall experience of the user and their likelihood to use the trail again, diminishes. There may also be safety concerns if the surface suddenly changes or if the maintenance levels and hazard inspection regime are significantly different. Therefore an agreement (such as a Memorandum of Understanding) needs to be reached between Mildura Rural City, DSE, Parks Victoria and the Catchment Management Authority to ensure that a consistent standard of trail construction and maintenance is introduced, as well as a consistent standard in management, signage, trail identification, infrastructure and risk management.

The use of Friends of Groups to assist with tasks such as promotion and some general maintenance tasks has been instrumental, particularly in the case of Kings Billabong, in ensuring that trails are well utilised and highly regarded by the broader community. Members of the community and user groups involved in Friends of Groups typically develop a strong sense of connection to the site, develop stronger connections with other like minded people and improve their skills as a result of their involvement. Wherever possible, local involvement in trails should be strongly encouraged.



11.0 Maintenance of Tracks and Trails

Regular maintenance of tracks and trails is critical in terms of providing a safe and enjoyable experience for cyclists and walkers and to retain assets in optimum condition so that they do not

“Sometimes I avoid particular trails in my small town because they are overgrown, and in summer this becomes a hazard due to snakes”.
(Survey respondent)

“They (on road trails) are often covered in litter and glass as car tyres do not sweep them clean”.
(Survey respondent)

deteriorate unnecessarily or do not pose an unnecessary or avoidable risk.

An annual budget allocation needs to be made by Mildura Rural City Council to ensure that there are sufficient funds to carry out maintenance to an agreed standard as required. The accepted Industry standard for annual maintenance cost of a trail is approximately 3% of the development cost of the trail however these costs may be reduced by utilizing ‘Friends Of’ or other user groups. Given that on road and off road trails may vary in terms of their usage and design, a maintenance plan should be developed to take these

factors into account. Once developed, maintenance of on-road cycle lanes will be incorporated into the general road maintenance program; though an adjustment to the appropriate budget area should be applied to cover this. Maintenance expenditure for off-road trails will need to increase each year as new trails are developed. Many existing off-road trails require immediate maintenance and an annual budget allocation of \$10000 is suggested from year 1 to carry out these works. This figure will increase by 3% of the cost of new off-road trail developments each year.

As well as inspecting for hazards, a suitable response time needs to be identified, as well as a suitable mechanism for the reporting of hazards, inspection of hazards and the completion of works required.

The following maintenance plan details maintenance tasks according to a trail hierarchy:

	Primary On Road Trail	Secondary On Road Trail	Primary Off Road Trail	Secondary Off Road Trail / Track
Clean toilets and replace toilet paper	N/A	N/A	Weekly (if provided)	N/A
Empty bins at rest stops	N/A	N/A	Weekly (if provided)	N/A
Full inspection of the Trail	Every six months	Every six months	Every six months	Every six months
Check all directional and warning signage and repair or replace as required	Every six months	Every six months	Every six months	Every six months

11.0 MAINTENANCE OF TRACKS AND TRAILS

	Primary On Road Trail	Secondary On Road Trail	Primary Off Road Trail	Secondary Off Road Trail / Track
Check vegetation adjoining trail and cut back if necessary	Every six months	Every six months	Every six months	Every six months
Check surface of trail for weeds, broken glass, branches, etc and clear as required	Every six months	Every six months	Every six months	Every six months
Check surface of trail for erosion and repair or grade as required	Every six months	Every six months	Every six months	Every six months
Check vegetation surrounding trail and reduce any potential fire hazards	N/A	N/A	Every six months	Every twelve months
Check bridges, bollards, culverts and drains	Every six months	Every twelve months	Every six months	Every twelve months
Check structural stability of infrastructure along the trail, e.g. seats, shelters, etc	N/A	N/A	Every six months	Every twelve months
Undertake hazard identification inspection and prepare a report to be actioned	Annually	Annually	Annually	Annually
Undertake major repairs and replacements	Every five to eight years	Every ten years	Every five to eight years	Every ten years

12.0 Cycling and Walking Education Programs and Initiatives

"I would like a Council campaign to inform drivers that cyclists do have a right to share the roads. I regularly encounter threatening and dangerous behaviour from motorists whilst using the road network"

(Survey respondent)

In order to increase the number of people walking and cycling, it can be beneficial to introduce an education program, incorporating the benefits of such activities to health, wellbeing and independence; and the environmental benefits (refer to Section 4.1). An education program should also focus on explaining the rules of using roads and trails – not only to cyclists and walkers, but also to others who may share the road, e.g. motorists. In addition, education programs may also focus on bicycle maintenance issues and riding skill development.

12.1 Rules for Use of Roads and Trails

Education about the rules associated the use of roads and trails, and the penalties of not complying with such rules (e.g. not wearing a bicycle helmet, driving a motorised vehicle in a bicycle lane, failing to obey road rules, having dogs off leads where not permitted, etc) is also important to reduce the potential for conflict between various users and to maximise safety to participants. There are several education programs currently in existence around Australia to support improved relationships between cyclists and motorists. In Victoria, VicRoads²⁶ launched a 'Road User or Abuser' social media campaign in February 2012 which involved the establishment of a facebook page. The facebook page was active for six weeks, allowing people to join a discussion about responsible sharing of roads. In addition to the forum, the site featured a quiz, polls and a video.

"I used to use on-road bike lanes until I was run over by a driver who failed to give way, and who was fined \$300 and is still driving. I lost \$15,000 income the TAC wouldn't cover, a year of my life unable to walk, and am left with a limp and other permanent damage. No matter how much you raise driver awareness of cyclists, they are not going to take enough care until they face penalties commensurate with the damage they cause."

(Survey respondent).

²⁶ VicRoads website:

<http://www.vicroads.vic.gov.au/Home/SafetyAndRules/SaferRiders/BikeRiders/Road+User+or+Abuser.htm>

In Queensland the Department of Transport and Main Roads²⁷ instigated a 'Share the Road' campaign to promote ways in which cyclists and motorists can both share the road responsibly. The television commercial produced as part of this campaign provides three steps to better driving:

- give cyclists plenty of room;
- check for cyclists (before opening doors, or pulling into oncoming traffic); and
- give way to cyclists.

It also provides one tip for cyclists, i.e. to follow the road rules. In previous years it has also instigated programs to encourage the wearing of bicycle helmets.

Discussions with the Mildura Police and other key stakeholders indicate that there appears to be a lack of knowledge by some motorists in the area about road rules pertaining to bicycle lanes and cyclists on roundabouts. Greater awareness of these types of rules may need to be considered.

12.2 Cycling Programs

Bicycle Education in schools is a critical educational program to encourage young people to learn to ride a bicycle; to understand road rules; to learn how to maintain a bicycle; and to feel comfortable riding in traffic. Other bicycle education programs, geared at adults could also be beneficial in increasing the number of people in the community who choose to ride a bicycle. These adult programs may also provide a function whereby less experienced riders and matched with more experienced riders initially until they gain in confidence or gain regular partners to ride with.



²⁷ Queensland Department of Transport and Main Roads: <http://www.tmr.qld.gov.au/Safety/Safety-campaigns/Bicycle-safety.aspx>

13.0 Encouragement of Cycling and Walking

The provision of cycling and walking trails alone is not sufficient to encourage greater participation in these activities. Other forms of encouragement will need to be instigated to increase people's awareness of the location of trails and to reassure them that there will be facilities at the end of their ride or walk to secure their belongings and to shower / change clothes if need be.

13.1 Existing Initiatives

There are currently numerous cycling and walking initiatives operating in Mildura Rural City community to promote and encourage cycling and walking, including:

- Road safety map;
- Ride to Work Day;
- Ride to School Day;
- Walking School Bus;
- Walktober;
- Walk Safely to School;
- Kids on Bikes program;
- Walking group at a shopping centre;
- Community house walking groups;
- Senior's walking groups;
- Sunraysia Community Health Heart Foundation walking programs; and
- Cycle Hub.

These programs are coordinated by a range of different internal Council units and external organisations. However, there is no one central point where information about these programs is available. Increased awareness of these initiatives may result in a larger number of participants in these programs and an increased number of people cycling and walking on a regular basis.

There are also a number of major events that promote and encourage cycling, such as the

- Murray to Moyne;
- Port to Port;
- Tour de Murray; and
- Tour of Sunraysia events.

Whilst these events showcase the more elite level of riders, it may be worthwhile initiating some events catering more for novices to encourage greater uptake of cycling / walking.

13.2 Potential Initiatives

In order to increase the number of people who regularly walk and cycle, there are a number of strategies which can be developed, including:

- Encouraging employers to provide end of trip facilities for cyclists and walkers such as secure bike parking, lockers and showers.
- Increasing the number of bicycle parks in key locations such as shopping centres, recreational areas, Council offices, etc and promoting the location of such end of trip facilities.
- Further promote organisations that support cycling and walking such as the Sun BUGS and various walking groups.
- Provide feedback mechanisms for the community so that they can inform Mildura Rural City Council staff of any specific issues which may impact on cycling or walking.
- Launch any new works on tracks and trails by holding a small community event to increase awareness of the facility
- Promote the location of cycling and walking trails on Mildura Rural City Council website
- Develop maps of cycling and walking trails
- Improve signage of and to cycling and walking trails
- Organise special walks or cycles as part of local events to encourage people to regularly take part in these activities.



14.0 Promotion of Cycling and Walking Opportunities

Awareness by local residents and visitors of the existence of trails is critical if trails are to be used regularly. Currently there are few promotional opportunities available in Mildura about trails. Several basic walking or cycling brochures can be picked up at the Visitor Information Centre. Information is also provided on the Visit Mildura website: www.visitmildura.com.au about walking

and cycling opportunities in National Parks, at natural attractions (such as King's Billabong), as well as a self-guided 6km walking tour of Mildura. However, there are no downloadable maps available on the site and no downloadable podcasts. The Discover Murray River website: www.murrayriver.com.au provides information about the Mildura Art Deco Walking Tour and a downloadable map. It also provides some basic information about three of the walks at Kings Billabong (but no maps).



Figure 2: Art Deco Walking Map and download icon. Sourced from The Discover Murray River Website.

In the past, the Sunraysia Bushwalkers' walking map was displayed on Mildura Rural City Council's website, but that information has since been removed from the site. There is no information on Council's website site to promote cycling or walking opportunities. Similarly Sunbug was funded by the Transport Accident Commission to produce three major videos, six radio advertisements and a safety booklet on trails, however, due to limited resources the booklet is no longer in print and the videos and radio advertisements are no longer broadcast.

According to community survey respondents, signage at entry points of trails is the best source of information about trails for both residents and visitors (83%), followed by maps / brochures (74%) and downloadable maps sourced from websites (65%). Word of mouth and information from local businesses such as bicycle shops also play a role in the promotion of trails, however, respondents stated that they are least likely to source information from magazines / newspaper articles or advertisements; information from membership organisations; or guidebooks.

Given this feedback from local residents, it will be imperative to install high standard signage at the entrance / exit points of trails, particularly for primary off road trails. Signage is covered in detail in Section 15.0 of this Strategy. Brochures and maps are also clearly very important promotional tools. Any brochures or maps (particularly for off road trails), should at a minimum, include:

- Consistent branding with logos of relevant partners.
- Name of the trail.
- A brief description of the trail
- Attractive photos or images of locations and people of all ages and abilities.
- Clear map of the trail, incorporating a legend which identifies toilets; rest stops; trail heads; accommodation; food / beverages; bridges; road crossings; car parking; and local attractions.

14.0 PROMOTION OF CYCLING AND WALKING OPPORTUNITIES

- Overview of the trail (i.e. development of the trail, topography, history, flora and fauna of the area, etc).
- User etiquette.
- Information about bicycle / horse hire; bicycle repairs; car parking; public transport access; toilets and rest stops; access to water; weather conditions; and useful contacts.
- Information about appropriate usage; length of trail (in time and kilometres); distances between towns; terrain; loops; and accommodation and food options (including availability of drinking water).

It will also be important to provide information about walking and cycling opportunities, including downloadable maps, on relevant websites. At a minimum, these websites should include Mildura Rural City Council and Visit Mildura. Linkages should also be made with other relevant organisations via their websites, such as Bicycle Victoria, Tourism Victoria, Victoria Walks, etc. Consideration needs to be given to including information about walking and cycling opportunities on applications designed for smart phones. Further, consideration may need to be given to promoting walking and cycling opportunities via social media sites such as facebook and by developing interpretive podcasts which can be downloaded from the internet or Visitor Information Centres, or hired on a pre-loaded MP3 player. The use of QR codes (Quick Response codes) whereby people scan an object similar to a barcode with their mobile phone (one with a data plan), is becoming increasingly common in outdoor locations as a means to transmit information. Such QR Codes could be placed on specific signs along a trail to provide interpretive information, including film clips, songs, images or text.

Another useful tool to promote trails to local residents is via Council Matters, the Council Newsletter. A regular article in this free publication which is mailed out to all households could greatly assist in raising awareness of not only the location of various trails and their attractions, but also the social, health, economic and environmental benefits of using trails. Similarly, several articles each year should be submitted to Sunraysia Daily to promote cycling and walking opportunities and events to local residents.



15.0 Signage of Tracks and Trails

Clear, consistent and well branded signage is of great importance on tracks and trails as it helps people to find their way; warns them of any dangers or inappropriate uses of the trail; and provides them with useful information to enhance their experience. The four key signing principles as identified by the Queensland Department of Transport and Main Roads (TMR)²⁸ are:

- Conspicuity
- Legibility
- Coherence
- Function

Key considerations of a signage system, as identified by TMR²⁹ are:

- Ensure consistency of signage layout and quality across the networks
- Identify important departure / destination locations and decision points
- Maintain rigid consistency in naming locations
- In the event of alternative routes, sign the most direct route
- Sign the CBD
- Indicate distances in kilometres
- Number routes (optional)
- Use map display boards at key entry points
- Ensure street name signs are in place at all network intersections

In order to provide suitable signage across the Rural City of Mildura's cycling and Walking Network, TMR³⁰ recommends:

1. "Prepare the cycle network focal point map which identifies all destination points and key decision points for each route;
2. Assess the current physical condition of the route via a pre-signage and risk assessment survey;
3. Determine the level of signing, the route numbering or branding required for each route to be signed;
4. Prepare a signing schedule specifying all signs, their locations and mounting; and,
5. Install the signs and inspect after installation to correct any errors and omissions".

15.1 Branding

Branding refers to something such as a logo, a name, a colour combination or a symbol that is easily recognisable by people as representing a particular organisation, service or product. In relation to the Tracks and Trails Strategy, it is important that all tracks and trails are branded with the Rural City of Mildura's particular style, so that people are aware that the track or trail is part of the municipal

²⁸ Queensland Department of Transport and Main Roads:
http://www.tmr.qld.gov.au/~media/5f790073-df42-4af3-8770-963f30253e55/pdf_guide_to_signing_cycle_networks_part1.pdf

²⁹ Queensland Department of Transport and Main Roads:
<http://www.tmr.qld.gov.au/~media/987e62b3-9a36-40a5-ae5c-1780ade32d43/1%2036.pdf>

³⁰ Queensland Department of Transport and Main Roads:
http://www.tmr.qld.gov.au/~media/5f790073-df42-4af3-8770-963f30253e55/pdf_guide_to_signing_cycle_networks_part1.pdf

cycling and walking network. It is recommended that all trail signs incorporate some or all of Council's corporate colours, i.e. blue, green, red and yellow; that Council's logo features on each sign; and that a standard graphic layout is produced for all signs. Where there is a trail that crosses land owned by other organisations, such as DSE or VicTrack, an agreement will need to be reached regarding appropriate branding, logos and colours.

15.2 Types of Signs

A hierarchy of different signs types will be required as part of the Rural City of Mildura's cycling and walking network. Typically this would include the following:

- Large, clearly visible **trail head signs** – including some with **interpretive** information
- **Directional signage** providing information about distances to key locations
- **Trail markers** to reassure people that they are still on the right track
- **Regulatory, behavioural and warning signs.**

15.2.1 Trail Head Sign



These are large free standing signs installed at the beginning of a priority one off road trail and occasionally on a priority two off road trail if there is a high level of use. These signs typically feature the following information:

- Trail name
- A map of the route, including a 'you are here' marker
- Information about the trail level or standard and a description of that level
- The length of the trail and the estimated time to complete the trail
- Key destinations
- Identification of sections suitable for all abilities access
- Code of conduct if it's a shared path
- Any rules, regulations or potential hazards
- Contact details to report incidents or issues
- Emergency contact details
- Possibly some interpretive information.



15.2.2 Directional Sign



Directional signs may be medium sized free standing signs made of wood (often called plank signs) or recycled plastic which indicate the name of the trail and both the distance and direction to key features or locations. Each plank should only have one line of wording. The first plank should incorporate the name of the trail in 70mm high capitalised lettering, centred. The wording on the other planks should be 50mm high for capital letters and 35mm for lower case letters.

Alternatively, directional signs may be a blade or finger board sign (similar in size to a street sign) attached to a galvanised steel pole between 2.5m and 3.0m high. These signs are located at key intersections along the trail to indicate direction to a significant destination, or along roadways to indicate the location of a trail. These signs may be made of materials such as extruded aluminium or plastic. Lettering should be 100mm high and the sign should be at least 150mm deep.



Another form of directional signage is a reassurance marker. These are small signs installed at various points along the trail, either as a free standing sign or attached to another item such as a fence, pole, etc which reassures users that they are still on the trail and still travelling in the correct direction. These signs may include an arrow to indicate direction and some sort of branding to indicate that the marker relates to the trail, e.g. logo, set of colours, etc. Reassurance markers are typically placed every 12-15 minutes of travelling time.

Directional signs are used on priority one and two off road trails.

15.2.3 Regulatory Sign



Regulatory signs are installed at the beginning of a shared off road trail or at key intersections where people may join the trail. They are used to inform potential trail users of appropriate and inappropriate uses for a specific trail. The example shown here of Red Hills Equestrian Trail indicates that walking and horse riding is permitted and that dogs must be on a leash. It does not permit trail bike riding. Sometimes this regulatory signage is included on the trail head sign. Regulatory signs



are typically used on priority one off road trails, and if required, on priority two off road trails.

Regulatory signage for on road paths includes:

- line marking to delineate bicycle lanes from lanes used by motorists
- bicycle path signage / shared path signage
- give way and stop signs.

15.2.4 Warning Sign



These signs are used to warn trail users of a specific danger, e.g. flood waters, or about unsafe conditions such as steep descent, steep climb, slippery road, cross with care, reduce speed, etc. They can be either permanent or temporary and can be found on either on or off road trails. These signs may take the format of a free standing sign (as is the case in the example provided) or may take the form of a standard warning sign, i.e. yellow diamond with black lettering.

15.2.5 Behavioural Sign



Behavioural signs provide users with information about how to use a specific trail, e.g.

- all users to keep to the left unless overtaking
- cyclists to ring their bells when approaching other trail users from behind
- move off the path when not walking or riding
- ensure dogs are on leashes (where required) and under voice control.

These signs can be found on or off road trails and may be in the format of free standing signs or as pavement markings (on sealed tracks). Sometimes information about behaviour or etiquette will also feature on trail head signs as well as maps / brochures about a specific trail or network.

There may also be other signs to consider such as those installed during construction, listing funding partners and potentially advertising signs promoting food, beverage and accommodation options for example. Advertising signs need to be carefully considered to determine whether or not they fit within the overall vision for the trail.

The information required should be bundled onto as few sign boards as possible to avoid visual littering. It is also recommended to remove any superseded signage, as its information content may be outdated and confusing.

Further, any signage developed on tracks and trails should reflect the relevant national trail standards (refer to Section 9.2) as well as Australian and industry standards.

15.3 Location of Signs

Different types of trails have different needs in relation to signage. The following table provides an overview for Mildura Rural City in terms of what types of signs should be provided in which locations:

Type of Sign	Priority One On Road Trail	Priority Two On Road Trail	Priority One Off Road Trail	Priority Two Off Road Trail
Trail Head	Not required.	Not required.	Trail head signs at the beginning of the trail if it is a loop, otherwise at each end of the trail if it is a linear trail.	Trail head signs at the beginning of the trail if the trail is well utilised loop trail and at each end if it is a well utilised linear trail.
Directional	<p>Advance direction signs to be installed prior to major intersections.</p> <p>Blade signs to be installed at all major intersections and along key roadways to direct people to the trail.</p> <p>Reassurance markers to be placed after major intersections with distance to key destinations (e.g. city centre) to be included.</p>	Blade signs to be installed at all major intersections.	<p>Plank signs to be installed at all t-intersections where cyclists or walkers could travel in either a left or right direction.</p> <p>Blade signs to be installed at all major intersections and along key roadways to direct people to the trail.</p> <p>Reassurance markers to be placed every 1km along the trail.</p>	<p>Plank signs to be installed at all t-intersections where cyclists or walkers could travel in either a left or right direction.</p> <p>Blade signs to be installed at all major intersections and along key roadways to direct people to the trail.</p>
Regulatory	Bicycle pavement logos (1100mm wide and	Bicycle pavement logos (1100mm wide and	Regulatory sign identifying appropriate use	Regulatory sign identifying appropriate use

Type of Sign	Priority One On Road Trail	Priority Two On Road Trail	Priority One Off Road Trail	Priority Two Off Road Trail
	<p>1800mm long) to be placed at all minor intersections with one on the approach side in the left turn area, and another just past the intersection. Intermediate logos to be placed between the intersections at not greater than 200m intervals (but more frequently in areas where there may be greater conflict).</p> <p>Bicycle lane signs at the start of a bicycle lane and immediately after each intersecting road or street.</p>	<p>1800mm long) to be placed at all minor intersections with one on the approach side in the left turn area, and another just past the intersection. Intermediate logos to be placed between the intersections at not greater than 200m intervals (but more frequently in areas where there may be greater conflict).</p> <p>Bicycle lane signs at the start of a bicycle lane and immediately after each intersecting road or street.</p> <p>Rural training circuit signs at beginning of circuit and then at 5km intervals and just after major road intersections.</p>	<p>of trail to be provided on trail head sign at beginning of trail and at any other major points where users may join the trail.</p>	<p>of trail to be provided on trail head sign at beginning of trail (if provided) or as a small stand alone sign at the beginning of a trail and at any other major points where users may join the trail.</p>
Warning	Warning signs to be installed at trail entrance or at specific location only if there is a danger to cyclists or walkers. To be removed when issue is resolved.	Warning signs to be installed at trail entrance or at specific location only if there is a danger to cyclists or walkers. To be removed when issue is resolved.	Warning signs to be installed at trail entrance or at specific location only if there is a danger to cyclists or walkers. To be removed when issue is resolved.	Warning signs to be installed at trail entrance or at specific location only if there is a danger to cyclists or walkers. To be removed when issue is resolved.

Type of Sign	Priority One On Road Trail	Priority Two On Road Trail	Priority One Off Road Trail	Priority Two Off Road Trail
Behaviour	Behaviour signs not likely to be required.	Behaviour signs not likely to be required.	<p>It may be necessary to install all four behavioural messages on priority one off road trails, i.e.</p> <ol style="list-style-type: none"> 1. Keep left (as pavement marking) 2. Warn when approaching 3. Move off path when stopped 4. Control your dog. <p>To reduce signage clutter, some of these messages may be incorporated onto trail head signage, but others will need to be strategically placed along the trail.</p>	<p>It depends on the usage level of the off road secondary trail as to which behavioural signs will be required. As a minimum, keep left signs will be required.</p>
Interpretive	Not required.	Not required.	Interpretive signage to be installed as part of trail head signage or at key locations along trail where interpretive information is required.	Interpretive signage only to be installed as part of trail head signage (if such signage exists) or at key locations along trail where interpretive information is required (if relevant).

15.4 Emergency Management

Victoria's Emergency Services Telecommunications Authority³¹ (ESTA) is currently in the process of installing alphanumeric signs on key off road trails throughout Victoria. These signs, which look like a street sign, are supported by GPS coordinates and directional instructions so that ESTA operators can provide advice to police, fire or ambulance services about the exact location of an injured person.



To assist with emergency management procedures in Mildura Rural City Council it is recommended that each trail is numbered and that the number of each trail is incorporated into trail head signage or at key points along the track. This may assist emergency units to locate cyclists, walkers, horse riders or other trail users who are lost or injured.

15.5 Other Signage Considerations

Some key considerations for all signs are:

- Signage needs to be installed using Universal Design Principles, so that people of all ages and abilities (including a seven year old child and a person in a wheelchair) can see the sign.
- Wording on signage should be in simple, plain English. Depending upon the area in which signs are located, there may also be a need to replicate wording in other languages.
- Consider use of universally recognised symbols on signage where appropriate to assist with interpretation of a message.
- Signage should be suitable for people with vision impairments, i.e. incorporate tactile and Braille components where possible.
- The luminance factor of the surface of writing or symbols on a sign should be a minimum of 30% different from a non-reflective background. To achieve this, it is recommended that a light background is used and dark lettering, e.g. black on white, black on yellow or ultramarine blue on white.
- Recycled material should be considered in the development of signage.
- Signage must be hard wearing and resistant to vandalism and graffiti.
- Vinyl adhesive lettering should not be used on signage.
- The height, spacing and weighting of letters on a sign needs to be carefully considered so that people can both read and understand the information contained on the sign.
- Glass panels and light reflective backgrounds on signage should be avoided.
- Too many signs at a play space can detract from the overall experience of trail and should be avoided.

³¹ Bicycle Network website: <https://www.bv.com.au/general/bike-futures/91744/>

- Signs should, wherever possible, have a positive focus rather than a negative focus.

15.6 Signage Maintenance

As with all infrastructure along trails, it will be important to regularly maintain trail signage by repairing any vandalised or damaged signs and by replacing old signs or signs that are missing.



Figure 3: Sign on Irymple Green Belt Trail with red cross across trail bike rider faded out

16.0 Assessment Tool

With the limited resources available to Mildura Rural City, it is important that potential trail upgrades and new developments are carefully assessed and prioritised. One way to do this is to develop an assessment tool, based on the planning principles that underpin the rationale behind developing trails. It is recommended that the following assessment tool is used to determine which trails receive the greatest priority. To reduce the likelihood of subjectivity, it is recommended that major developments or upgrades are assessed by individuals on a panel and the score averaged.

Name of Trail						
Town						
Length of Trail						
Surface of Trail						
Trail Status (e.g. new or upgrade)						
Land Ownership						
Trail Hierarchy						
Target Market / Proposed Use Groups						
Name of Assessor						
Date of Assessment						
Planning Principles	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
	5	4	3	2	1	
1. The trail demonstrates community need and evidence of support.			Do not proceed			
2. The trail is likely to be sustainable from a usage, management, maintenance and financial perspective.			Do not proceed			
3. The trail is likely to offer a safe experience for trail users, or provide a safer experience than that which currently exists.			Do not proceed			
4. There are likely to be health, social, and economic benefits for the nearby community.						
5. The trail provide linkages to other trails						

16.0 ASSESSMENT TOOL

6. The trail has good access points for trail users, emergency services and maintenance vehicles.						
7. The trail is likely to protect or enhance environmental and cultural assets.						
8. The trail is likely to promote better use of existing assets.						
9. The trail is likely to represent value for money to stakeholders.						
10. The trail contributes to the development of a municipal-wide network.						
TOTAL						



17.0 Design Guidelines

A series of guidelines have been developed to assist in the development of quality tracks and trails in Mildura Rural City. The following table provides a summary of the key aspects that need to be included for each level of track or trail and more details follow after the table:

17.1 Summary Table

✓ = Must have

± = Might have

X = Should not have

	Principal On-Road Trails	Secondary On-Road Trails	Principal Off-Road Trails	Secondary Off-Road Trails
Trail Width	1.5m in 60km zone; 2.0 in 80km zone; and 2.5m in 100km zone	1.5m in 60km zone; 2.0 in 80km zone; and 2.5m in 100km zone	3.5 metres to allow people to travel side by side and to be overtaken.	2.5+ metres
Trail Surface	Asphalt – possibly with coloured surface treatments	Asphalt	May include asphalt, concrete, compacted granitic sand, wooden boardwalks, etc.	May include compacted granitic sand, dirt or occasionally a sealed trail.
Line Marking	✓	✓	±	±
Bike Parking	✓	±	✓	±
Car Parking	±	X	✓	X
Link to Public Transport	±	±	✓	±
Lighting	✓	±	±	X
Toilets	X	X	✓	X
Seats	X	X	✓	✓
Bins	X	X	✓	±
Doggie Bags	X	X	✓	±

	Principal On-Road Trails	Secondary On-Road Trails	Principal Off-Road Trails	Secondary Off-Road Trails
Picnic Tables	X	X	✓	X
Shelters	X	X	✓	X
Shade Trees	±	±	✓	✓
Access to Drinking Water	✓	X	✓	±
Trail Head Signage	X	X	✓	±
Directional Signage	✓	✓	✓	✓
Interpretive Signage	X	X	✓	±
Distance Markers	±	±	✓	±
Maps	✓	✓	✓	✓
End of Trip Facilities (e.g. showers)	✓	X	X	X
Bike Lockers	✓	X	X	X
Public Art	X	X	±	±
Disabled Access	±	±	✓	±
Drainage	✓	✓	✓	✓

17.2 Regulations, Standards and Guidelines for Cycling and Walking Opportunities

Tracks and Trails in Mildura Rural City need to be designed according to industry standards, regulations and guidelines. Reference should be made to the following documents:

- Australian Standard – Walking Tracks Part One: Classification and Signage (AS 2156.1-2001)
- Australian Standard – Walking Tracks Part Two: Infrastructure Design (AS 2156.2-2001)
- Australian Standard – Signage (AS 1428.1)
- Australian Standard – Seating (AS 1428.2)
- Australian Standard AS 2890.3 1993 Parking facilities Part 3: Bicycle parking facilities.
- AS/NZS 1158 (AS/NZS 1158.3.1:2005, Pedestrian area (Category P) lighting
- AS/NZS 1158.0 Illumination
- Design for Access and Mobility – AS1428.
- Australian Standard AS4419 Soils for Landscaping and Garden Use
- Australian Standards AS 1428 – Parts 1 and 2 Design for Access and Mobility (General requirements for access – new building work and Enhanced and additional requirements – buildings and facilities).
- Australian Standard AS2890.1 –2004, Parking facilities, Part 1: Off-street car parking.
- Australian Standard AS/NZS 2890.6 – 2009 Parking facilities – Off-street parking for people with disabilities.
- AS 1172.1 – 2005 Water Closets.
- AS 1371-1973 Toilet seats of moulded plastics.
- AS/NZS 1730 – 1996 Washbasins.
- AS/NZS 3500.2 – 2003 Plumbing and Drainage – Sanitary Plumbing and Drainage.
- AS/NZS 3718: 2005 Tap Ware.
- AS 5200.000 – 2006 Technical specification for plumbing and drainage products - Procedures for certification of plumbing and drainage products.
- AS1428 – disabled toilets
- Disability Discrimination Act (1992)
- Austroads Guide to Road Design (2010): Part 2 – Design Considerations; Part 4 – Intersections and Crossings; Part 6A – Pedestrian and Cyclist Paths; Part 6B – Roadside Environment
- Austroads Guide to Traffic Management (2010): Part 4 – Network Management; Part 5 – Road Management; Part 6 – Intersections, Interchanges and Crossings; Part 7 – Traffic Management in Activity Centres
- Cycling Aspects of Austroads Guide
- VicRoads Cycle Notes:
<http://www.vicroads.vic.gov.au/Home/Moreinfoandservices/Bicycles/StrategicDirectionsForCycling/BicycleFacilityDesignStandards.htm>
- Austroads Guide to Traffic Engineering Practice, Part 14 – Bicycles
- Australian Standard 1742.9, Manual of Uniform Traffic Control Devices, Part 9 – Bicycle Facilities

- Road Safety Road Rules (2009)
- Road Safety (Traffic Management) Regulations (2009)
- Users Guide to the Australian Walking Track Grading System:
http://www.dse.vic.gov.au/_data/assets/pdf_file/0003/104754/dse_trail_grade_brochure_tagged.pdf
- DSE – Road Management Plan
- Bicycle Network: <http://www.bv.com.au/general/bike-futures>
- NSW Bicycle Guidelines (RTA):
http://www.rta.nsw.gov.au/doingbusinesswithus/downloads/technicalmanuals/nswbicyclev12aa_i.pdf
- Australian Bicycle Council (including Cycling Resource Centre):
<http://www.austroads.com.au/abc/>
- Department of Transport: You are Here – A Guide to Developing Pedestrian Wayfinding:
http://www.transport.vic.gov.au/_data/assets/pdf_file/0004/46570/PedestrianWayfindingGuide.pdf
- Other relevant industry documents and planning processes.

NB: Industry standards and regulations are regularly upgraded; hence it will be necessary to review the list above on a regular basis to ensure that these documents remain valid.

17.3 Basic Planning Guidelines

A series of basic guidelines has been developed to assist in the development of quality tracks and trails in Mildura Rural City. The following table provides a summary of the key aspects that need to be considered for each level of track or trail. Note that this information should only be used as a guide, as current thinking on best practice alters periodically and there is much more detailed information available in the resources listed in Section 17.2.

Design Aspect	Details	
Well Used Trails	Rationale	In order to develop well utilised trails, it is important that they are well designed, maintained and managed.
	Considerations	<p>Well utilised trails are usually those that:</p> <ul style="list-style-type: none"> • Are located in areas that people want to explore, travel through or commute. • Provide connections to key destinations or attractions. • Provide a trail surface suitable to the needs of trail users and the grading of the trail. • Have adequate drainage. • Provide access to toilets at trail heads, as well as shade and rest stops with seating, as required (for off road trails) and suitable end of trip facilities such as bicycle parking, lockers and showers (for commuting trails). • Are developed according to universal design principles. • Are well signposted. • Provide the level of experience desired, e.g. easy, safe and comfortable; high speed with minimal stops; or very

Design Aspect	Details	
		<p>challenging trail.</p> <ul style="list-style-type: none"> • Are well promoted. • Are considered to be safe. • Provide options for longer or shorter distances where appropriate, e.g. self-contained loops. • Provide opportunities to learn about the environment through interpretive signage and promotional material such as Park Notes (for off road trails). • Provide a high level of landscape amenity or a convenient path between point A and point B.
Trail Location	Rationale	The location of tracks and trails plays a major role in whether or not a track or trail is utilised.
	Considerations	<p>Some things to avoid in the design of tracks and trails is to make sure that the trail:</p> <ul style="list-style-type: none"> • Is not located next to a busy road or highway (if it is an off-road trail). • Is not longer than necessary or takes unnecessary diversions. • Is not located in areas considered to be unsafe. • Does not involve multiple highway or railway crossings. • Does not commence in out of the way locations. • Does not have a clear beginning and end. • Is not located in areas with poor landscape amenity.
Connectivity	Rationale	It is important that tracks and trails that are developed link to existing tracks and trails networks in the Rural City and also consider linkages with tracks and trails in neighbouring municipalities. This helps to create valuable linear pathways and also opportunities for tourism and events.
	Considerations	Self contained loops should be considered as part of the overall network. Tracks and trails also need to connect with key services and attractions within the City such as the Murray River, parks, lakes, bush, natural features, schools, shops, swimming pools, sporting facilities, accommodation venues and tourist attractions in order to encourage maximum usage.
Legibility	Rationale	Legibility of a route refers to the ease of following the intended route. Good legibility reduces the need for explicit directional signage.
	Considerations	<p>Good legibility is achieved by:</p> <ul style="list-style-type: none"> • Clear, direct track alignment along a logic desire line. • Continuous track surface of the same material, where possible. • Clearly visible continuation of the track, e.g. on the other side of a road or around a bend.

Design Aspect	Details	
		<ul style="list-style-type: none"> • Visibility of a track marker, in a location where you would expect it. • Avoidance of elements that discourage users to progress: closed gates, crossing of fence lines, fallen logs protruding into the path, rocks placed across a path. • Avoidance of elements that signal “neglect”: old infrastructure in disrepair (like unusable seats), litter, leaning sign posts, outdated signage, old footings etc. <p>Where legibility cannot be achieved by the path itself, directional signage is required. Examples are:</p> <ul style="list-style-type: none"> • Where a track leaves a concrete footpath and is continued as a gravel surface. • Where a track deviates from a logic route away from a key feature. • Where a track crosses a road, but does not continue directly opposite.
Trail Width	Rationale	The width of a trail will be dependent upon the level and type of use expected. If a track is not sufficiently wide, there is potential for conflict between trail users and injuries.
	Considerations	<p>On road bike lanes should be at least 1.5 metres wide on roads carrying vehicles at up to 60km per hour; 2.0m wide in 80km per hour zones and 2.5m wide in 100km per hour zones.</p> <p>Adequate clearance needs to be made available from parked cars and roadside kerbs.</p> <p>Consider installing visual (e.g. painted green cycling lanes) and tactile (e.g. rumble strips) to separate cyclists from motorists. Off road trails should be between 2.5m wide to 4.0m wide (with 3.5m as the preferred width) depending on how much use they receive. If sealed, they should have a line painted down the centre of the trail so that people are aware of which side of the trail they are permitted to use.</p>
Trail Surface	Rationale	Trail surfaces vary according to the type of use planned for the trail. An all abilities accessible trail for example is likely to be compacted, wide and relatively flat, whereas a mountain bike single track is more likely to be narrow, windy, steep in places and made of dirt and other natural materials.
	Considerations	<p>In relation to shared off road trails, sealed trails are more likely to attract a greater amount of use than unsealed trails.</p> <p>Concrete off road paths, whilst more expensive to construct than asphalt off road trails, have the advantage of greater visibility at night, the opportunity to develop coloured sections and lower ongoing maintenance costs.</p>

Design Aspect	Details	
		<p>Regardless of the surface of the trail, it is important to construct the trail well, taking into consideration issues such as drainage, cross fall, etc.</p> <p>Mountain bike trails should be properly constructed in order to minimise damage to the environment; to provide a high quality and enjoyable experience for mountain bike riders and to ensure that trails are developed in a strategic manner.</p>
Bike Parking	Rationale	Unless people feel comfortable that there will be a secure place to store their bicycle at the end of their trip, they may decide not to ride.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> • Bicycle racks / rails should be located in convenient and highly visible positions at the following key destinations such as schools, shopping areas / centres, recreation centres, entertainment venues, key scenic destinations and picnic facilities. • The racks should be easy to use by people of all ages and abilities and allow the bicycle frame and wheels to be locked securely. • The bicycle rack needs to be sturdy and as vandal resistant as possible, with good passive surveillance opportunities.
Car Parking	Rationale	A number of people who use off road trails (such as Kings Billabong) will travel by car or mini bus as the destination may be a significant distance from their home, or not easily accessible. Similarly, often people who use trails for horse riding will drive to the site with a vehicle and horse float. Hence car parking needs to be considered for priority one off road trails.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> • Car park designs should complement surrounding built structures and landscapes. • Car parks should be planted with shade trees at a ratio of one canopy tree for every six vehicles. • Car parks should be sealed where possible. • Opportunities for harvesting of storm water should be considered in any new car park developments. • Disabled car parking should be provided to support primary off road trails, along with full width access ramps. • Car park designs should minimise the opportunity for conflicts between pedestrians and motorists. • Car parks should be designed in such a way as to allow vehicles to enter and exit car parks in a forward direction (i.e. one entrance point and one exit point).

Design Aspect	Details	
		<ul style="list-style-type: none"> Ideally some car parks would be made wider to accommodate visitors to the site who may have a pram.
Link to Public Transport	Rationale	Where possible trails should link into public transport networks. This allows people to either walk from their home to a bus stop and then catch a bus to their final destination, or allows people to catch a bus from near their home to a walking trail, thereby eliminating privately owned motorised vehicles from the trip.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> Linkages to public transport and trails need to be clearly articulated on all maps and signage Timetable information must be easily accessible so that people are able to plan their journey using a combination of active transport and public transport Secure bicycle racks should be provided at key bus stops which may be used by people using a combination of cycling and public transport.
Lighting	Rationale	Given the heat in Mildura Rural City during summer months, many people choose to walk or cycle in the evenings or early morning when the weather is somewhat cooler. However, some people feel uncomfortable using unlit tracks and trails during these times as are concerned that they cannot see hazards on or adjacent to the trail or signage and have personal safety concerns. Hence lighting should be considered for all priority one on and off road trails and sections of some priority two trails if there is a high level of use or potential for higher use.
	Considerations	<p>Consideration needs to given to the following:</p> <ul style="list-style-type: none"> Trail lighting needs to be an average of 5 lux; vertical and horizontal. Occasionally this can be achieved from lighting spilt over from roadways, if the roadway is less than 5 metres away. Consider the use of solar lighting mounted on poles. However, note that solar lighting at ground level does not illuminate tracks or trails; it only helps to delineate the edge of a path. Lighting with timer automated cut-off sensors should be considered along trails. Where lighting is provided along trails, it is important that the lights also illuminate supporting infrastructure such as toilets, signage and BBQ / picnic area. Lighting should be even and consistent. The style of lighting should reflect the theme of the trail (if there is a theme). Light poles need to be a minimum of 1.0 m away from the trail.

Design Aspect	Details	
Toilets	Rationale	Some people choose to undertake cycling or walking trips of several hours duration, or visit such sites with young children. These extended visits may also include having a picnic. Hence it will be necessary to provide toilet facilities on such trails (generally only primary off road trails and perhaps highly utilised secondary off road trails).
	Considerations	<p>When developing toilets, consider the following:</p> <ul style="list-style-type: none"> • Where toilets are not provided along trails, and where there are public toilets nearby, signage should be made available to indicate the direction and the distance to the nearest toilet block. • Signage may be required to indicate the location of toilet facilities. • Clear signage needs to be provided on the exterior of the toilet using internationally recognised symbols for toilets as well as Braille signage for people with vision impairments. • Signage should be installed inside toilet blocks with contact phone numbers for Council or management authority to allow members of the public to report a maintenance issue. • Toilet blocks should include toilets that are accessible for people with disabilities. • Toilet blocks on priority one off road trails should feature at least one unisex child sized toilet. • Toilet blocks on priority one off road trails should feature baby change facilities. • Toilets should generally feature: cisterns, basins, hooks on the back of toilet doors to hang bags, soap dispenser, sanitary bins, sharps disposal bin and electric hand dryers. • Toilets should be designed in such a way as to provide ease of maintenance. • Toilets should be kept in an attractive and clean state as much as possible. • Toilets should be located in a visible location, free of bushes and potential hiding spots. • Toilets should be located close to sealed footpaths and car parking areas. • Entrances to toilets need to face the trail so that people can be seen entering or leaving the facility. • Entrance to toilet buildings should be a minimum of 1500mm wide to allow two people to pass each other and to allow enough space for a pram to be brought into the building. • If the toilets are used at night time, lighting is required. Consider the use of solar lighting where possible. • If the toilets are not required 24 hours per day, they need

Design Aspect	Details	
		<p>to be locked with galvanized iron gates when not in use.</p> <ul style="list-style-type: none"> • All fittings should be vandal resistant. • The toilet block should be designed so that people are protected from the weather as much as possible, i.e. it should have a roof and be designed so that leaves and rubbish are not blown into the building. • Natural light and ventilation should be used as much as possible in the design of the facility. • Consider use of environmentally friendly design and materials in the construction of toilet facilities, e.g. rainwater tanks for flushing of toilets and hand washing, self-composting toilets, etc. • Low flow taps or sensor taps or automated cut off taps, as well as dual flush toilets must be incorporated into the design. • New toilets developed should be unisex where possible. • Preference is for open wash basin areas which provide maximum visibility to the toilet cubicles and are likely to reduce crime and other inappropriate behaviours.
Seats	Rationale	Seats are particularly important on trails frequented by walkers, particularly older adults and younger children who may need to rest frequently.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> • Seats should be developed to a high standard, using quality materials (including recycled materials where possible). • Seats should be constructed of materials that are hard wearing and resilient to vandalism. • Seats should reflect the theme of the trail (if there is one) wherever possible. • Seats should be developed with backs and arms to allow people to lift themselves out of seats easily. • Seats should be provided in a variety of sizes to cater for different users, from children to adults. • Seats should be constructed on a compact surface so that people with wheelchairs, prams or mobility aids can park themselves next to the seat. • Seats constructed on a concrete pad should have additional space next to it to allow for the parking of a wheelchair or pram. • Seats should be positioned in a location which maximises usage. • Seats should be positioned near trees to maximise the opportunity for afternoon shade. • Seats should be made using Australian materials where possible.

Design Aspect	Details	
		<ul style="list-style-type: none"> Seats should be cost effective to repair and replace, and parts should be readily available.
Bins	Rationale	Bins should be provided on trails which feature BBQ or picnic facilities so that cyclists or walkers can dispose of their waste.
	Considerations	Where bins are placed at picnic areas, they should be placed in discrete positions (which are still accessible to rubbish trucks), but should not dominate the landscape at the trail entry point.
Doggie Bags	Rationale	A significant number of people walk their dogs along off road trails. Those trails that are most popular with dog walkers should incorporate doggie bags and bins to allow for easy disposal of waste and to ensure a cleaner path for other trail users.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> Doggie bags should be located in strategic locations along a trail – the beginning, the end and in the middle. Where doggie bags are provided, there should also be bins. Doggie bags need to be regularly replaced by Council staff; hence the location of such facilities needs to be carefully considered due to cost implications, i.e. only primary off road trails and well used secondary trails only. It may be worthwhile installing signage to inform people that it is compulsory to pick up after dogs and to detail the penalties if people do not abide by this local law.
Picnic Tables	Rationale	Picnic tables should be provided on priority one off road trails to allow cyclists and walkers to have a comfortable place to eat or drink during their trip.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> Picnic tables need to be positioned close to BBQs and seats and may be covered by shade. It may be necessary to sign post the position of picnic tables if not clearly visible from trail. Where feasible, bins should be provided close to picnic tables (unless it is clearly signed that trail users must take all of their rubbish with them) Picnic tables should be identified on maps and trail head signs. Picnic tables should be designed to be as vandal-proof and graffiti resistant as possible. Picnic tables should feature recessed table legs to allow wheelchairs to be parked at the short ends of the table.
Shelters	Rationale	Shelters should be provided at key destinations along priority one off road trails to provide a comfortable place for cyclists and

Design Aspect	Details	
		walkers to shelter from wind, rain or sun during their trip.
	Considerations	<p>Consideration should be given to the following:</p> <ul style="list-style-type: none"> Shelters need to be positioned close to or over seats, BBQs and picnic facilities. It may be necessary to sign post the position of shelters if not clearly visible from trail. Shelters should be identified on maps and trail head signs. Depending upon the design, opportunities may exist to provide some interpretive information in or on shelters.
Shade Trees	Rationale	Given the climate in Mildura Rural City, the provision of shade trees along all paths (where practical) will be of significant benefit to trail users in terms of comfort and also in general trail amenity.
	Considerations	<p>In relation to shade trees, consideration needs to be given to the following:</p> <ul style="list-style-type: none"> Trees planted should, where possible, be native indigenous species. Trees should be planted close enough to the trail so that they provide shade for cyclists and walkers, but not so close as to cause root damage to the trail surface or to encroach on the path (i.e. a minimum of 2.0m). At rest stops, trees should be planted close to seating, BBQs and picnic tables to enable these areas to receive benefit from shade provided by trees in the afternoon. Trees along trails should be regularly inspected and any overhanging branches trimmed so as not to be a hazard to trail users. The minimum vertical clearance from overhanging tree branches is 2.4 metres.
Drinking Water	Rationale	Access to drinking water will be an important factor for many cyclists / walkers when choosing whether or not to utilise a specific trail, particularly in the hotter months. Water will therefore need to be made available along well utilised trails.
	Considerations	<p>There are both practical and public liability concerns associated with the provision of drinking water including:</p> <ul style="list-style-type: none"> Contamination of water by vandals. Tanks emptied by campers. Tanks emptied due to lack of rain. The need to regularly inspect tanks. Users expecting to be able to access water when there is none. The need to purchase water to top up tanks. Shops selling bottled water in towns not open.

Design Aspect	Details	
		It is therefore recommended that discussions take place with local businesses along priority one off road trails to ensure that water is available for cyclists / walkers, either from taps or from bottled water sales. Further, opportunities to fill drink bottles should be made at key destinations such as shopping centres, schools, recreation centres and at all key end of trip facilities. All marketing material should state where water is able to be obtained, but also recommend that people take sufficient water with them in case it is not available.
Signage	Rationale	Without suitable signage, trail users may get lost; may not be aware of the existence of trails or the destinations they travel to; may be injured as a result of not being aware of a potential danger; may use trails incorrectly; and may not get the most out of their experience. Signage is therefore an important aspect of any cycling or walking trail.
	Considerations	<p>The types of signs used on a trail and their location will be dependent of a variety of factors including the purpose of the trail, proposed users, surface, amount of usage, presence of hazards, number of intersections, etc.</p> <p>Signs need to be conspicuous, legible, coherent and functional and should be clearly branded.</p> <p>Consideration will need to be given to providing the following signs in Mildura Rural City (as per Section 15.0 of this Strategy):</p> <ul style="list-style-type: none"> • Trail head signage • Directional signage • Reassurance signage • Regulatory signage • Behavioural signage • Warning signage • Interpretive signage <p>Other things to consider:</p> <ul style="list-style-type: none"> • Signage needs to be installed using Universal Design Principles, so that people of all ages and abilities (including a seven year old child and a person in a wheelchair) can see the sign. • Wording on signage should be in simple, plain English. Depending upon the area in which signs are located, there may also be a need to replicate wording in other languages. • Consider use of universally recognised symbols on signage where appropriate to assist with interpretation of a message. • Signage should be suitable for people with vision

Design Aspect	Details	
		<p>impairments, i.e. incorporate tactile and Braille components where possible.</p> <ul style="list-style-type: none"> • The luminance factor of the surface of writing or symbols on a sign should be a minimum of 30% different from a non-reflective background. To achieve this, it is recommended that a light background is used and dark lettering, e.g. black on white, black on yellow or ultramarine blue on white. • Recycled material should be considered in the development of signage. • Signage must be hard wearing and resistant to vandalism and graffiti. • Vinyl adhesive lettering should not be used on signage. • The height, spacing and weighting of letters on a sign needs to be carefully considered so that people can both read and understand the information contained on the sign. • Glass panels and light reflective backgrounds on signage should be avoided. • Too many signs at a play space can detract from the overall experience of trail and should be avoided. • Signs should, wherever possible, have a positive focus rather than a negative focus.
Maps	Rationale	<p>Maps assist people to understand where a particular trail may go, what the key attractions along the route may be, the length of the trail and therefore the approximate time that it would take to complete, etc.</p>
	Considerations	<p>Maps should be provided for any off road trail greater than 2km in length, or any off road trail that may not have a straightforward route.</p> <p>As a minimum, cycling / walking maps should show potential trail users:</p> <ul style="list-style-type: none"> • The route of the trail and distances • Major intersections • Key attractions or features • Infrastructure such as toilets, the bicycle hub, etc • Areas suitable for people of all abilities <p>An overview of all on and off road trails should be produced as a small hard copy booklet or map, with the same information replicated onto Mildura Rural City's website. Individual maps may be produced for priority one off road trails and may take the format of a booklet, downloadable map or even a map printed onto a large microfibre handkerchief known as a manky (becoming increasingly popular with mountain bike riders in New Zealand).</p>

Design Aspect	Details	
End of Trip Facilities	Rationale	People using commuter trails will often have travelled for a reasonable distance at reasonable speeds from their home to their workplace and would like the opportunity to have a shower and to change out of their cycling / running / walking gear prior to starting their work day. The Mildura Bicycle Hub is one example of an existing end of trip facility.
	Considerations	<p>Consideration needs to be given to providing or encouraging the development of end of trip facilities for cyclists, runners, joggers and walkers at key destinations such as the CBD area, major employers and potentially schools. End of trip facilities may include:</p> <ul style="list-style-type: none"> • Secure bicycle parking • Lockers • Change area with showers and toilets <p>These facilities need to be available in a convenient location, either as a stand-alone facility (e.g. Mildura Bicycle Hub) or within an existing workplace. The availability of these facilities also needs to be promoted. Consideration could also be given to the provision of irons and ironing boards.</p>
Public Art	Rationale	Public art along a trail, such as sculptures, murals, water features, text or poetry on pavements, tiled seating, carved bollards, special lighting, landscaping, etc can help to create a sense of place and community identity for cyclists and walkers. It can be used to commemorate certain events or people; be used to make a place more attractive; to celebrate local traditions or unique aspects of a community, etc. Such features can be an attraction in themselves.
	Considerations	<p>Consideration should be given to:</p> <ul style="list-style-type: none"> • Art work needs to reflect the theme or respond to the location in which it exists. • Art work should be designed in consultation with the local community and will ideally involve children in its development. • Any art work developed along trails needs to be vandal resistant, weather resistant and easily maintained. • Due to the cost of works of art, artwork will generally only be provided on primary off road trails and occasionally on secondary off road trails with high usage or associated with an active local arts group. • Sculptures may require an engineering report prior to installation. • Artworks details including artist, materials and a maintenance plan must be retained for future reference on Council's Public Art Register.

Design Aspect	Details	
Disabled Access	Rationale	It is important to provide some trails in the municipality that are accessible to people of all abilities and designed according to universal design principles.
	Considerations	<p>To help ensure accessibility, the following should be considered:</p> <ul style="list-style-type: none"> • Relatively flat paths with a compacted surface such as asphalt, concrete or granitic sand. • Any compacted granitic sand surfaces should be cement stabilised and require excellent drainage to avoid the forming of erosion corrugations. Granitic sand surfaces intended for all abilities access need to be regularly maintained to repair soft spots or scouring. • Signage that is clear and easy to read with a contrast luminance of greater than 30%. • Directional signage at intersections. • Raised tactile information with adjacent Braille signage. • Disabled toilets. • Bollards that are easily distinguishable from the path with a contrast luminance of greater than 30%. • Picnic tables designed to allow a person in a wheelchair to sit at the table. • Seats with arm rests and backs. • Parking at trail heads suitable for mini buses. • Disabled car park at trail head. • Paths sufficiently wide (1.8-2m) to allow people in wheelchairs to pass oncoming trail users. • Paths with sufficient flat run-off at the sides (to allow someone to regain control of a motorized wheelchair or scooter if need be). • Tactile ground surface indicators.



18.0 Recommendations

The following recommendations have been prepared, based on analysis of information sourced through:

- Community consultations including surveys; written submissions; and face to face interviews with local residents in the Langtree Mall and at the Sunraysia Farmer's Market.
- Key stakeholder interviews with Council officers; state government agencies; local health, education and business representatives; and organisations that represent cyclists and walkers.
- Literature review of local, state and national plans and policies
- Socio-demographic trends for the region
- National and international tracks and trails trends
- Physical audit of a sample of tracks and trails, particularly those locations identified as requiring work or having particular safety concerns
- Standards and industry regulations / guidelines outlining current best practice in relation to tracks and trails development

The recommendations are presented in table format, comprising of the following:

- Issue – identification of a particular matter that needs to be addressed in the Strategy.
- Action – what needs to be implemented to address the particular issue.
- Performance Indicator – outcomes of the action which will determine whether or not it has been achieved, or is on the way to being achieved.
- Resources – human, physical and monetary assets needed to complete the action. In order to achieve the larger projects identified in the Strategy, external funding will need to be sought. The success of funding applications is not guaranteed, hence projects may be delayed somewhat if it takes longer than anticipated to receive external grants. Refer to Section 5.0 of the Appendix for details of potential funding options.
- Priority – the degree of urgency of the particular action and the likely timing to achieve the action. High priorities are those which will ideally be achieved within 1-5 years; Medium priorities within 5-8 years; and Low priorities are those which may be achieved in 8-10 years. Long term priorities are those which have considerable merit, but due to the need for extensive planning and / or resourcing, may take more than ten years to complete. During the annual monitoring of the strategy, priority for some of the strategies may alter somewhat if resources are made available earlier or later than anticipated and if Council and / or community priorities change significantly. Some priorities identified in the Strategy will be ongoing.

- Partnerships – identification of internal units and other external organisations that could assist with and / or benefit from the achievement of the action. The overall success of the strategy will rely heavily on achieving significant buy-in from partner organisations particularly in providing maintenance of tracks and trails. A powerful example exists at Kings Billabong where the ‘Friends Of’ group provides great support to Parks Victoria in the construction and maintenance of trails within the park. The ability of these units or organisations to contribute to the development of the actions may alter over time, depending on resource availability and the commitment of the organisation and its key staff to the project. Some of these partnerships may no longer be relevant when the project is initiated, and some additional partnerships may be identified in future years. The lead unit or agency is identified in bold print.
- Council Role – the functions and responsibility of specific council units required in order to achieve the action. Roles will include one or more of the following: Policy / Planning; Provision / Management; Advocacy; Innovation / Leadership; Facilitation / Communication.

18.0 RECOMMENDATIONS

All identified works on council owned land, including the proposed Chaffey River Trail carry an estimated cost of nearly **\$5.8 million** and have been designated as high, medium and low priority. The aims and objectives of this strategy (as described in section 2.1) may only be fully realised by implementing all recommended works; this equates to an annual budget allocation of \$580,000 for trail construction, creation of on road cycle lanes and signage (increasing each year in line with CPI) over 10 years. Staff time has not been included in the estimate.

Assuming that maintenance of on-road cycle lanes is incorporated into the general road maintenance program, the tracks and trails maintenance cost may be estimated as 3% of all new off-road trail developments plus an amount of \$10,000 annually to maintain existing off-road trails.

The Chaffey River Trail may be regarded as a major stand alone proposed development and has been estimated to cost around \$1.8 million but may be developed in four stages. The proportion of this trail located on council land has an estimated cost of **\$1 million**.

It is anticipated that many of the identified new developments will attract matching funds from external sources thereby reducing the burden on MRCC budget allocations. Maintenance costs may also be significantly reduced by utilising 'Friends of' and other community groups. Total expenditure for construction and maintenance over 10 years from all funding sources is estimated to be **\$6.25M** and is summarised in the table below.

Year	All new works	New on-road works	New off-road works	Maintenance (off-road only)	Budget requirement
1	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 10,000.00	\$ 588,933.31
2	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 17,962.08	\$ 596,895.40
3	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 25,924.16	\$ 604,857.48
4	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 33,886.24	\$ 612,819.56
5	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 41,848.33	\$ 620,781.64
6	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 49,810.41	\$ 628,743.72
7	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 57,772.49	\$ 636,705.80
8	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 65,734.57	\$ 644,667.88
9	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 73,696.65	\$ 652,629.97
10	\$ 578,933.31	\$ 313,530.60	\$ 265,402.72	\$ 81,658.73	\$ 660,592.05
Total					\$6,247,626.80

For the purpose of this strategy, high priorities and ongoing initiatives have been highlighted in yellow in the action plan below.

Detailed cost estimates are contained in Appendix 2.

18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
Trail Developments							
Regionally Significant Shared Off Road Trail from Red Cliffs to Yelta via Merbein – Part 1		<i>Initiate discussions with other river municipalities (Campaspe, Gannawarra, Swan Hill and Wentworth) to apply for funding to undertake detailed planning of the Murray River Experience Trail and to ultimately construct this 'trail'.</i>	Discussions have taken place with representatives from other river municipalities and a funding application submitted for additional planning.	Staff time. \$4,000 for planning grant contribution (total cost around \$32,000 – external grant required on 1:1 basis).	High	Leisure and Cultural Services Swan Hill Rural City Council; Gannawarra Shire Council; Campaspe Shire Council; Wentworth Shire Council; State / Federal Government agencies.	Advocacy; Innovation / Leadership
Regionally Significant Shared Off Road Trail from Red Cliffs to Yelta via Merbein – Part 2		<i>Connect each small section of the Red Cliffs to Yelta (via Merbein) route to form one continuous linear route (which includes Kings Billabong) that is developed to a consistent standard in terms of trail surface, signage, supporting infrastructure, etc; is linked to other trails in the city and Wentworth Shire; and is branded as The Chaffey River Trail (part of the Murray River Experience Trail).</i>	External funding has been received to assist with the development of the Chaffey River Trail. The Chaffey River Trail has been developed as a linear trail from Red Cliffs to Yelta and features high quality surface, signage and supporting infrastructure, with continuous linkages to key features and attractions in the region.	Total \$1.83 million, not including external professional and management fees or staff costs. Stage 1, Mildura - Kings Billabong \$330K. Stage 2 Mildura – Merbein	High	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Parks Victoria; Department of	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			<p>The Chaffey River Trail is extensively marketed through the tourism sector.</p> <p>Increase in the number of people using the trail is recorded on an annual basis.</p>	<p>\$520K. Stage 3 Kings Billabong – Red Cliffs \$380K. Stage 4 Merbein – Yelta \$600K.</p>		<p>Sustainability and Environment; Catchment Management Authority; Wentworth Shire Council; State / Federal Government Agencies.</p>	
Development of Priority North-South and East-West Commuter Cycling Routes		<p><i>Develop a north-south priority commuter route along Deakin Avenue (from 15th St to 7th St) and 11th Street (from Flora Ave to Cureton Ave, Billabong) as a high priority, followed by San Mateo Avenue (from 15th St to 7th St) and 14th Street (from Ontario Ave to Koorlong Ave).</i></p>	<p>Priority north-south and east-west on road commuter cycling lanes have been developed along Deakin St and 11th St as the first stage.</p> <p>Priority routes are developed along San Mateo Avenue and 14th St as the second stage.</p>	<p>Deakin Ave - \$330K. 11th St - \$400K. San Mateo Ave - \$160K. 14th St - \$200k Ontario to Cowra, then another \$400k to Koorlong Ave.</p>	High	<p>Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning; Sustainability and Resources</p> <p>VicRoads; State / Federal Government Agencies.</p>	Provision / Management
Access to CBD from Nichols Point / Billabong		<p><i>Develop an off road shared path along 11th St from Cowra Ave to Cureton Ave; and an off road shared path connecting Cowra Avenue and existing 5th Street shared path.</i></p>	<p>Off road shared paths have been developed from Nichols Point / Billabong to connect with on road bicycle lanes into the CBD.</p>	<p>\$293K for 11th St (incl. \$105K for bridge over channel), \$100K for Cureton / 5th Ave.</p>	High	<p>Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning; Community Planning; Sustainability and Resources.</p>	Provision / Management
Access to Local Work Places		<p><i>Develop an off road bicycle path along 11th St from</i></p>	<p>An off road bicycle path has been developed to</p>	<p>(\$67K included in</p>	High	<p>Infrastructure Services; Statutory Planning;</p>	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>Cowra Ave to the corner of Koorlong Ave (State Gvt office location) to connect with existing 11th Street cycle lanes and off road shared paths and provide a safe commuting option.</i>	link the corner of 11 th St and Koorlong Ave to the Mildura CBD. An increase in the number of DSE and DPI staff regularly commuting to work via bicycle is recorded after completion of the trail.	11 th St development to Kings Billabong (above)		Road Safety; Engineering; Strategic Planning; Sustainability and Resources Department of Sustainability and Environment; Department of Primary Industries; VicRoads	
Overtaking zones on training route on Cureton Ave and Cocklin Ave		<i>Seal shoulders at strategic points along training route located on Cureton Ave and Cocklin Ave.</i> <i>Assess effectiveness and consider applying to other heavily used training routes.</i>	Overtaking shoulders are installed and used regularly by cyclists. Fewer accidents occur and cyclists report feeling safer on route. Drivers report less frustration at being unable to overtake cycle bunches.	\$136K	High	Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning; Sustainability and Resources VicRoads; State / Federal Government Agencies.	Provision / Management
Trails in Ouyen		<i>Support the development of a trail at the rear of the hospital and along the western edge of town.</i>	The trail at the rear of the hospital is completed and is regularly used by patients and other members of the community. An off road shared trail	\$120K. Locals may be able to organize working bees to reduce cost of trail development with financial	High	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Engineering ; Strategic Planning; Community Planning;	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			is developed along the western edge of the town.	support from Council for materials.		Sustainability and Resources; Biodiversity	
			An increase in walking and cycling is recorded in Ouyen following the completion of these trails.			Ouyen Hospital; Ouyen Community Planning Group	
Safe School Routes		<i>Complete suggested developments and upgrades in order to provide safe active transport routes to all schools and reserves.</i>	Recommended works are completed.	\$179K for high priority works. \$66K for medium priority and \$103K for low priority works.	High	Infrastructure Services; Statutory Planning; Road Safety; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources	Advocacy; Innovation / Leadership
		<i>Promote the Active Transport to Schools Map series and support the development of other initiatives aimed at increasing the number of young people who use active transport to get to and from school.</i>	The Active Transport Map series is distributed to all schools in the region.	Staff time		Schools	
Tracks and Trails Connections to and within Growth Areas		<i>Modify Council's Developer Contributions Policy to ensure that cycling and walking trails in new developments are appropriately funded by developers based on clear</i>	Council's Developer Contributions Policy is altered to incorporate appropriate contributions for the development of cycling and walking trails in new	Staff time	High	Leisure and Cultural Services; Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning;	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>rationale; that Council sets aside funds in a specific account to go towards the development of shared trails; and that trails are developed on suitable land and linked to the broader cycling and walking network.</i>	<p>residential areas.</p> <p>Council has established a specific account for the payment of developer contributions for cycling and walking trails.</p> <p>Council is sufficiently resourced to develop cycling and walking trails in new residential areas utilising the funds collected through the Developer Contributions Policy.</p>			Community Planning; Sustainability and Resources; Biodiversity	
Equitable Distribution of Trails throughout Towns in the Municipality		<i>Work in partnership with Community Planning Groups to determine demand for trails in smaller towns and assist them to seek funding to develop such trails through Council budgetary processes and external grants in accordance with the Small Towns Trail Criteria.</i>	<p>Through community planning processes, each town identifies any need for trail developments or upgrades in line with the criteria developed within the Tracks and Trails Strategy.</p> <p>Each town is serviced by a minimum of one shared cycling and walking trail, as per the criteria developed</p>	Staff time. Annual contribution of \$10,000 to small town trails.	Ongoing	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			within the Tracks and Trails Strategy. Increased number of local residents reported to walk or cycle is recorded within 12 months of any trail upgrade or development.			Township Community Planning Groups	
Extend the Irymple Green Belt Trail		<i>Remove private property and agricultural developments from the remainder of the Irymple Green Belt crown reserve parcels and extend the existing trail through to Cowra Ave; ensure pedestrian crossings are marked; and that appropriate signage is installed.</i>	The Irymple Green Belt has been extended to Cowra Ave. An increase in the number of people using the trail is recorded within 12 months of the completion of this trail.	\$150K	Medium	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Provision / Management
15th Street Shared pathway		<i>Improve existing shared pathway on the north side of 15th Street</i>	Improvements have been made to the shared pathway on the north side of 15 th Street. An increase in usage of the trail is recorded	\$106K	Medium	Infrastructure Services; Parks; Statutory Planning; Road Safety; Engineering; Strategic Planning; Sustainability and	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			within 12 months of the trail's upgrade.			Resources VicRoads	
Restricted river access between Lock 11 and Old Mildura Homestead		<p><i>Investigate any agreements between MRCC and private landowners regarding the use of adjacent Crown Land Reserve and consider revising any such agreement in order to facilitate the development of a river trail between Lock 11 and Old Mildura Homestead.</i></p> <p><i>Ensure appropriate conditions are applied to neighbouring land owners and enforced to enable public access to this area in the future.</i></p>	<p>Any agreement between MRCC and private landholders at Lock 11 have been determined.</p> <p>Negotiations to revise any agreements and relocate fence to allow the development of a river trail have been conducted.</p> <p>If possible river trail has been constructed to link Lock 11 and Old Mildura Homestead.</p>	<p>Staff time.</p> <p>\$13,300 for construction of approximately 380m of trail.</p>	Medium	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Visitor Information Centre;</p> <p>Engineering ;</p> <p>Strategic Planning;</p> <p>Community Planning;</p> <p>Sustainability and Resources;</p> <p>Biodiversity</p>	Provision / Management
Access along Karadoc Ave		<p><i>Develop an off road trail on Karadoc Ave between 17th and 14th St by augmenting existing trail adjacent to Irymple Secondary College</i></p>	<p>A trail has been developed along Karadoc Ave between 17th and 14th Streets.</p> <p>An increase in the number of people using</p>	\$110K	Low	<p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Engineering;</p> <p>Strategic Planning;</p> <p>Community Planning;</p>	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			the trail is recorded within 12 months of the completion of this trail.			Sustainability and Resources	
Lake Hawthorn		<i>Create a linear path around Lake Hawthorn, which is linked to the existing trail network.</i>	<p>A linear path is created around Lake Hawthorn.</p> <p>An increase in the number of people using the trail is recorded within 12 months of the completion of this trail.</p>	\$142K	Low	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Provision / Management
Intra-municipal Linkages		<i>Initiate discussions with Wentworth Shire in relation to developing trails to Wentworth and Trentham Cliffs; and initiate discussions with other Murray River based municipalities in terms of developing the Murray River Experience as outlined in the Loddon Mallee Regionally Significant Trails Strategy.</i>	<p>A trail has been developed to connect Mildura to Wentworth and Trentham Cliffs.</p> <p>Usage of the trail by locals and visitors to the area increases each year.</p>	Staff time.	Low	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Advocacy; Innovation / Leadership

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Wentworth Shire Council Local Businesses, e.g. wineries.	
Development of Trails for Horse Riding		<i>Consult with horse riding groups about the development of a suitable off road horse riding trail (either on Council owned land or land managed by DSE or Parks Victoria) if there is demand for additional horse riding opportunities in the future.</i>	Meetings have been held with horse riding groups to ascertain the requirements of additional horse riding trails (if demand warrants such action). Planning and development of additional horse riding opportunities has taken place (if demand warrants such action).	Staff time. Potential horse trail not costed as need has not yet been determined.	Low	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity DSE; Parks Victoria; Horse Riding Groups	Advocacy; Innovation / Leadership
Further Development of Trail along the Mildura Railway Easement		<i>Investigate the feasibility of constructing an off road trail along the railway easement in Mildura between 11th St and the riverfront just north of 7th Street as well as the extension of this trail to the</i>	A study has been prepared to determine the feasibility of the proposed trail. If deemed feasible, the trail is constructed.	\$25,000 contribution to feasibility study and planning processes. Works not costed as	Long term	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre;	Policy / Planning; Innovation / Leadership

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>corner of Benetook and 11th St.</i>	Usage of the trail by locals and visitors to the area increases each year.	scope not yet known.		Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity VicTrack; VLine; Cycling and Walking Groups	
Design Issues							
Roundabouts		<i>Implement Mildura Rural City Council's new roundabout design at key intersections in Mildura, e.g. 12th St and San Mateo Avenue.</i>	<p>New roundabout design is developed.</p> <p>Cyclists and motorists report greater levels of clarity and satisfaction with new design.</p> <p>Fewer accidents between cyclists and motorists are reported on roundabouts featuring new design.</p>	Funded through VicRoads.	High	<p>Infrastructure Services; Statutory Planning;</p> <p>Road Safety; Engineering; Strategic Planning; Sustainability and Resources.</p>	Provision / Management
Crossings		<i>Undertake an audit of trail crossings and rectify those that are not accessible or too steep, e.g. Deakin and Argyle Street.</i>	<p>All trails have been inspected for difficult crossings.</p> <p>Crossings that are not accessible or too steep have been rectified.</p>	<p>Staff time to undertake audit.</p> <p>Approximately \$5K for each raised pavement</p>	High	<p>Infrastructure Services; Statutory Planning; Road Safety;</p> <p>Engineering; Strategic Planning; Sustainability and Resources;</p>	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			Greater satisfaction levels have been reported by trail users along trails that previously had crossing difficulties.	crossing.		Biodiversity	
Fences		<i>Remove fences across pathways at Charcoal Bend and Riverside Golf Club; and also along properties near King's Billabong.</i>	<p>Fences have been removed from Charcoal Bend, Riverside Golf Club and from properties bordering King's Billabong.</p> <p>Trail users report greater access and satisfaction levels with these trails.</p>	To be undertaken as part of Murray Riverfront Management Plan 2011 to 2015 and development of "Chaffey River Trail"	High	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Engineering ;</p> <p>Strategic Planning;</p> <p>Sustainability and Resources;</p> <p>Biodiversity</p>	Provision / Management
Trail Surface		<i>Improve trail surface on trails along the Murray River as current surface, particularly at Apex Park and Chaffey Park, as these areas are considered too sandy.</i>	<p>Improvements have been made to trail surface.</p> <p>Trail users report greater satisfaction levels with the trail surface in this area.</p> <p>An increase in the number of people using these trails is recorded annually.</p>	To be incorporated into Stage 1 of "Chaffey River Trail" development.	High	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Visitor Information Centre;</p> <p>Engineering;</p> <p>Strategic Planning;</p> <p>Community Planning;</p> <p>Sustainability and Resources;</p>	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
Biodiversity							
Trail Design and Conflict Minimisation		<i>Utilise best practice design guidelines incorporated into the Tracks and Trails Strategy for all road and trail constructions to ensure suitability for cyclists, walkers and motorists and to reduce conflicts between cyclists and motorists.</i>	<p>Design guidelines are used by Council staff and community organisations during the planning stage of all trail developments and upgrades.</p> <p>An improved standard of trails is reported by walkers and cyclists on all new upgrades and developments.</p> <p>Fewer conflicts resulting from trail design are reported to Council by cyclists, walkers and motorists.</p>	No cost.	Ongoing	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Engineering;</p> <p>Strategic Planning;</p> <p>Sustainability and Resources;</p> <p>Biodiversity</p>	Policy / Planning; Innovation / Leadership
Supporting Infrastructure		<i>Utilise the Design Guidelines developed in the Strategy to determine what type of supporting infrastructure is suitable for the various grades of trails (e.g. seats, shade trees, shelters, picnic tables, etc).</i>	Standard of trail design has been improved and suitable supporting infrastructure is incorporated as required.	Staff time then annual allocation to develop supporting infrastructure along tracks and trails.	Ongoing	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Visitor Information Centre;</p> <p>Engineering;</p> <p>Strategic Planning;</p> <p>Community Planning;</p>	Policy / Planning; Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Sustainability and Resources; Biodiversity	
Connections and Linkages		<i>Develop connections between the Mildura CBD and the Murray River across 7th Street</i>	<p>Linkages have been developed between the Mildura CBD and the Murray River across 7th Street.</p> <p>Usage of the trail by locals and visitors to the area increases each year.</p>	To be developed in conjunction with Mildura Murray Riverfront Central Precincts Plan (if adopted), costed at \$222 million.	Ongoing	<p>Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning; Sustainability and Resources; Biodiversity</p> <p>State / Federal Government agencies</p>	Provision / Management
		<i>Develop connections to areas of open space and recreation reserves, e.g. Old Aerodrome Oval Reserve, Mildura Recreation Reserve, Mansell Reserve, Cardross Recreation Reserve, Chaffey Recreation Reserve (Merbein), Henshilwood Recreation Reserve (Irymple) Kenny Park (Merbein), Johansen Recreation Reserve (Lake Cullulleraine), Murrayville Recreation Reserve,</i>	<p>Connections between the existing cycling / walking network and open space and recreation reserves are identified and established.</p> <p>Greater numbers of people visiting areas of open space and recreation reserves are reported to utilise active transport.</p>	Connections considered in overall prioritization of recommended works and costed accordingly.	Medium	<p>Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity</p>	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>Nangiloc Recreation Reserve, Nichols Point Recreation Reserve, Blackburn Park Recreation Reserve (Ouyen), Quandong Recreation Reserve (Red Cliffs), Underbool Recreation Reserve and Walpeup Recreation Reserve.</i>					
Prioritised Pedestrian Routes in Mildura CBD		<i>Increase traffic signal times, install wayfinding signage and install supporting infrastructure in the CBD as required to increase pedestrian use of this area.</i>	Pedestrian access to the Mildura CBD has improved and greater numbers of pedestrians are accessing the area.	Costings to be sourced from engineering budget.	Medium	Infrastructure Services; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Sustainability and Resources.	Provision / Management
Management and Maintenance							
Management Plans		<i>Develop management plans for all significant regional trails, incorporating roles and responsibilities, meeting details, capital works timetables, etc.</i>	Management plans have been prepared and are being implemented for all regionally significant trails.	Staff time	High	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ;	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Parks Victoria; Department of Sustainability and Environment; Catchment Management Authority; Friends of Groups	
Memorandum of Understanding		<i>Establish an agreement (such as a Memorandum of Understanding) between Mildura Rural City, DSE, Parks Victoria and the Catchment Management Authority to ensure that a consistent standard of trail construction and maintenance is introduced, as well as a consistent standard in management, signage, trail identification, infrastructure and risk management along all trails where more than one agency owns the land.</i>	A Memorandum of Understanding has been prepared, signed off, and is utilised by all relevant agencies for trails on land owned by more than one organisation.	Staff time	High	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Parks Victoria; Department of Sustainability and Environment; Catchment Management Authority; State / Federal Government agencies	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
Trail Bike Management – Part 1		<i>Install traffic calming measures and regulatory signage on trails deemed to be most prone to illegal trail bike riders and ensure that these trails are regularly patrolled by local authorities.</i>	<p>Traffic calming measures and regulatory signs are installed on trails most prone to trail bike riders.</p> <p>Tracks and trails are patrolled by local authorities on a regular basis.</p> <p>Tracks and trail users report less incidents or conflicts with trail bike riders.</p>	<p>Traffic calming measures.</p> <p>Staff time for enforcement.</p>	High	<p>Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity</p> <p>Parks Victoria; trail bike riders</p>	<p>Provision / Management; Facilitation / Communication.</p>
Strategic Plans		<i>Incorporate the Tracks and Trails Strategy recommendations into other Council documents such as the Health and Wellbeing Plan and other community documents such as the Primary Care Partnerships Health Plan.</i>	<p>Recommendations from the Tracks and Trails Strategy have been incorporated into other strategic planning documents.</p>	Staff time.	Ongoing	<p>Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity</p>	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
Data Collection		<i>Install counters along tracks and trails on a regular basis to measure usage so that baseline data is produced for comparison.</i>	Counters are used on each track and trail at least once every 12 months to record the number of trail users. Data is prepared into a report each year and distributed to all relevant Council units and stakeholders to enable comparisons to be made.	Staff time.	Ongoing	Infrastructure Services; Road Safety; Engineering; Strategic Planning	Provision / Management; Policy / Planning
Satisfaction Levels		<i>Undertake an annual customer satisfaction survey of tracks and trails by users to determine areas that require improvements, and feed these suggestions into the annual review of the Strategy.</i>	Customer satisfaction survey conducted annually. Suggestions from trail users considered in annual review of the Tracks and Trails Strategy.	Staff time.	Ongoing	Leisure and Cultural Services Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Policy / Planning
Support Voluntary Organisations		<i>Promote and support voluntary groups such as Friends Groups to maintain</i>	Annual meetings are conducted with voluntary organisations	Staff time. \$2,500 to support	Ongoing	Leisure and Cultural Services; Infrastructure Services;	Advocacy; Innovation / Leadership

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>tracks and trails in the municipality by providing training opportunities and access to suitable equipment.</i>	to determine specific needs. Suitable training opportunities and resources (such as grants) are offered to these groups each year.	volunteers annually		Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Friends of Kings Billabong; Apex Club; other service clubs	
Monitoring of the Tracks and Trails Strategy		<i>Monitor the Strategy twice per year by an internal Council reference group.</i>	Review meeting is held twice per year with internal staff and once per year with external agencies. Actions from the Strategy are incorporated into the Capital Works Budget wherever possible. External funding is sought to implement some of the actions contained within the Strategy.	Staff time	Ongoing	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Department of Sustainability and	Policy / Planning

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Environment; Parks Victoria; Catchment Management Authority; VicRoads; Victoria Police; Department of Planning and Community Development; VicTrack; Department of Transport; Regional Development Victoria; Regional Development Australia; Victorian Tourism Commission; Local cycling and walking groups, Mallee Sports Assembly; Business representative; Education sector representative; Health services.	
Maintenance		<i>Implement the maintenance plan incorporated into the Strategy and set aside sufficient funds on an annual basis to maintain trails.</i>	<p>The maintenance plan is implemented.</p> <p>A suitable maintenance budget is allocated each year to tracks and trails.</p>	\$20,000 for annual maintenance (10% of annual budget allocation of \$200K).	Ongoing	Infrastructure Services; Parks; Statutory Planning; Road Safety; Engineering; Sustainability and Resources;	Provision / Management

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Biodiversity Parks Victoria; Department of Sustainability and Environment; Catchment Management Authority;	
Staff Time		<i>Employ a part time staff member, within the Leisure and Cultural Services team to oversee the future development of tracks and trails. This person could potentially be shared with other municipalities such as Swan Hill Rural City Council and Wentworth Shire Council.</i>	Suitably qualified and experienced staff person is employed on a part-time basis. Staff person has initiated various actions from the Tracks and Trails Strategy and has successfully secured external grants to fund some of the works.	\$25,000	Medium	Leisure and Cultural Services Swan Hill Rural City Council; Wentworth Shire Council	Provision / Management; Policy / Planning; Advocacy; Innovation / Leadership; Facilitation / Communication
Trail Bike Management – Part 2		<i>Consult with users of trail bikes about the potential to develop a space of their own if demand warrants such action.</i>	Meetings have been held with trail bike riding groups to ascertain the requirements of a specific trail bike area (if demand warrants such action). Planning and development of a specific trail bike area	Trail bike facility not costed as need not yet determined.	Low	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and	Advocacy

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Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
			has taken place (if demand warrants such action).			Resources; Biodiversity Parks Victoria; DSE; State / Federal Government agencies	
Marketing and Promotion							
Promotion of Tracks and Trails		<i>Implement a marketing strategy focussing primarily on signage, maps / brochures and websites with high quality local images and a suitable budget to implement initiatives.</i>	<p>A marketing strategy has been developed to promote tracks and tails.</p> <p>An annual marketing budget has been established.</p> <p>Feedback mechanisms have been established to measure the effectiveness of promotional tools in raising awareness and usage of tracks and trails.</p>	\$5,000 annual marketing budget for maps and website.	High	<p>Leisure and Cultural Services; Parks; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity</p> <p>Parks Victoria; Department of Sustainability and Environment; Catchment Management Authority;</p>	Facilitation / Communication
Council Website		<i>Develop a section on Council's website about cycling and walking opportunities, with a link to the Visit Mildura website –</i>	Mildura Rural City Council's website provides detailed information about walking and cycling	Staff time.	High	Leisure and Cultural Services ; Visitor Information Centre	Facilitation / Communication

18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>incorporating downloadable maps and feedback opportunities.</i>	opportunities (including downloadable maps and feedback opportunities) and links to other suitable sites such as Visit Mildura.				
Signage		<i>Adopt the signage recommendations incorporated into the Tracks and Trails Strategy.</i>	Signage recommendations are adopted and implemented.	Costs incorporated into estimates for each new development or upgrade. Staff time for bi-annual audit plus replacement costs.	High / Ongoing	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity	Facilitation / Communication
Communication		<i>Improve coordination and promotion of existing cycling and walking initiatives in the community by developing a process whereby all relevant information is provided to a designated Council officer for</i>	Information dissemination process established and utilised.	Staff time.	Ongoing	Leisure and Cultural Services; Road Safety; Visitor Information Centre; Community Planning.	Facilitation / Communication

18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
<i>dissemination.</i>							
Local Tourism Operators		<i>Work in partnership with local accommodation and food and beverage outlets to ascertain opportunities to attract cyclists and walkers to the region.</i>	<p>Meetings have been held with tourism operators.</p> <p>Initiatives have been implemented to attract additional cyclists and walkers to the region and to increase their level of expenditure locally.</p> <p>An increase in visitor numbers and visitor yield has been reported from cyclists and walkers visiting the region.</p>	Staff time.	Medium	<p>Visitor Information Centre</p> <p>Local Tourism Operators</p>	Facilitation / Communication; Innovation / Leadership
Education and Encouragement							
Education		<i>Instigate an ongoing education program via Council Matters and the local media for cyclists and motorists to promote the message of sharing the road and looking out for bicycles.</i>	Insert articles about tracks and trail use and sharing of roads into local media outlets on at least a quarterly basis.	Staff time. \$2,000 annually.	High	<p>Leisure and Cultural Services;</p> <p>Infrastructure Services;</p> <p>Parks;</p> <p>Statutory Planning;</p> <p>Road Safety;</p> <p>Visitor Information Centre;</p>	Facilitation / Communication

18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Engineering ; Strategic Planning; Community Planning; Sustainability and Resources; Biodiversity Sunbug	
Encouragement		<i>Continue to support bicycle education programs in schools and encourage adult bicycle programs in the community.</i>	Council officers have provided advice and support to schools and community organisations to encourage cycling opportunities.	Staff time.	High	Leisure and Cultural Services; Road Safety; Community Planning; Schools; Sunbug	Facilitation / Communication; Advocacy
Events		<i>Facilitate the development of events catering more for novices to encourage greater uptake of cycling / walking and organise special walks or cycles as part of local events to encourage people to regularly take part in these activities.</i>	Council officers have provided advice and support to community organisations to encourage cycling and walking events for novices. Council officers have organised special walks or cycles as part of local events.	Staff time. \$3,000 annually.	Medium	Leisure and Cultural Services; Road Safety; Visitor Information Centre; Community Planning Cycling and walking groups; Health organisations	Provision / Management
Celebrations		<i>Launch any new works on tracks and trails by holding a small community event to increase awareness of</i>	Council officers have organised or facilitated small community events to celebrate the	Staff time. \$2,000 annually	Medium	Leisure and Cultural Services; Infrastructure Services; Parks;	Facilitation / Communication

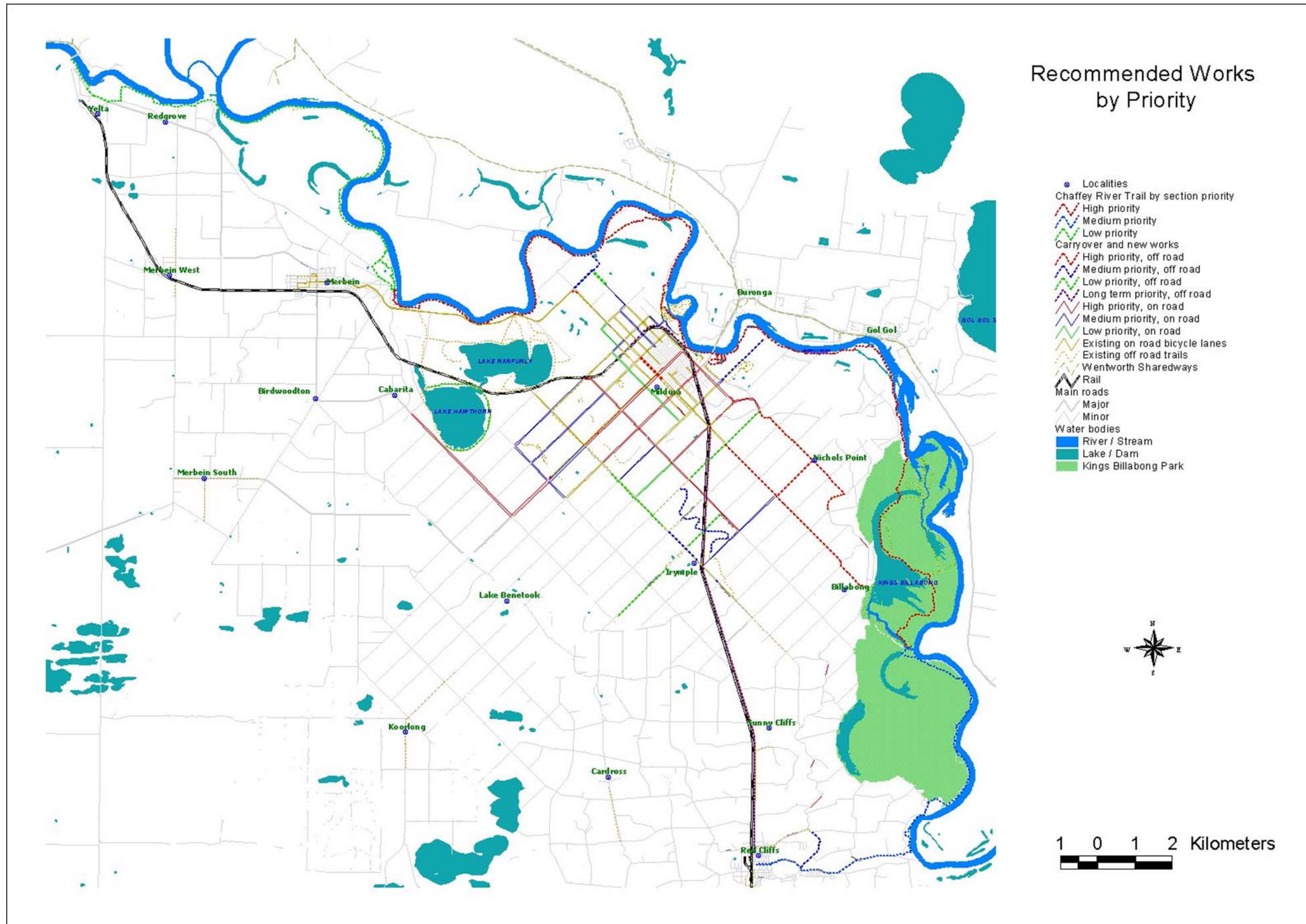
18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
		<i>the facility.</i>	completion or major upgrade of tracks and trails in the municipality.			Road Safety; Visitor Information Centre; Engineering ; Strategic Planning; Community Planning Community Planning Groups; Local Businesses; walking and cycling user groups; Parks Victoria.	
End of Trip Facilities		<i>Work in partnership with larger local businesses such as DSE, DPI, and Parks Vic to encourage the development of appropriate end of trip facilities.</i>	Meetings held with larger local businesses to discuss the benefits of end of trip facilities. End of trip facilities established at a minimum of one large business each year.	Staff time.	Medium	Infrastructure Services; Parks; Engineering ; Strategic Planning Department of Sustainability and Environment; Department of Primary Industries	Facilitation / Communication; Advocacy
		<i>Install bicycle parking at all recreation reserves, swimming pools, shopping centres / strips and neighbourhood centres where such facilities do not currently exist.</i>	Bicycle parking has been installed at all recreation reserves, swimming pools, shopping centres / strips and neighbourhood centres.	Staff time to conduct audit of gaps plus cost of required infrastructure.	Medium	Leisure and Cultural Services; Infrastructure Services; Parks; Statutory Planning; Road Safety; Visitor Information Centre; Engineering; Strategic Planning;	Provision / Management

18.0 RECOMMENDATIONS

Issue	No.	Action	Performance Indicators	Resources	Priority	Partnerships	Council Roles
						Community Planning	
						State / Federal Government agencies	
Drive and Stride		<i>Introduce park and walk / ride concept (e.g. Drive and Stride) to promote walking as a legitimate form of transport.</i>	<p>Drive and Stride program piloted in one location in the municipality.</p> <p>Evaluation of program conducted.</p> <p>Program rolled out to other locations if deemed suitable.</p>	\$3,000 for signage and promotion.	Medium	<p>Infrastructure Services; Statutory Planning; Road Safety; Engineering; Strategic Planning; Sustainability and Resources.</p> <p>State / Federal Government agencies</p>	Facilitation / Communication; Advocacy

19.0 Recommended Works



Mildura Tracks and Trails Strategy – Appendix 1



Mildura Rural City Council
July 2012

Disclaimer

The information contained in this report is intended for the specific use of the within named party to which it is addressed ("the *communityvibe* client") only. All recommendations by communityvibe are based on information provided by or on behalf of the communityvibe client and communityvibe has relied on such information being correct at the time this report is prepared. communityvibe shall take no responsibility for any loss or damage caused to the communityvibe client or to any third party whether direct or consequential as a result of or in any way arising from any unauthorised use of this report or any recommendations contained within.

Report Date: July 2012



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1.0 Aims and Objectives

The aim of the Mildura Rural City Council Tracks and Trails Strategy is to identify, develop, upgrade, manage and maintain a network of linked and shared on and off road cycling and walking paths suitable for commuting and recreation purposes. These trails are to be designed to meet safety standards, will feature consistent branding and will be clearly marked and sign posted. They will link to key community destinations such as schools, shops, waterways, parks and recreation areas. They will also connect to other existing or proposed paths within the municipality and between other Local Government Areas wherever feasible to create a greater network of cycling and walking opportunities in the region for both local residents and visitors.

This strategy replaces the previous Mildura Strategic Bicycle Plan.

Specific actions, as outlined in the project brief, are as follows:

- Consider both transport routes as well as routes used for recreation and fitness
- Identify potential linkages and connectivity to existing and planned open space networks and recreation precincts
- Identify existing off road tracks and trails and required linkages between these as well as on-road routes
- Develop a strategic plan detailing the construction or formalization of cycling and walking pathways (both on and off-road) and opportunities for linkages
- Identify priorities to link tracks and trails in order to form a greater network including adjacent municipal/state boundaries
- Incorporate current and future urban growth areas
- Promote alternate transport and recreational use of tracks and trails within the municipality by providing safe and accessible tracks and trails
- Review and integrate the existing Mildura Strategic Bicycle Plan into this document, including identifying what works have been done, what is yet to be done and what is still relevant
- Develop a consistent approach to signage and branding the Tracks and Trails network
- To provide an audit of signage that will be required to provide clear identification of the network and various routes with indicative costings
- Provide a list of other infrastructure requirements such as drinking fountains, bike racks etc with estimates
- Involve key stakeholders and community groups relevant to the use of shared pathways.

2.0 Demographics

According to the Victorian State Government¹, the Rural City of Mildura currently has a population of 53,351 and is projected to grow to 55,523 by 2026 (an increase of 2,172 people over the next 14 years, or the equivalent of 155 new residents each year during this timeframe). Data from the Australian Bureau of Statistics 2011 Census has yet to be released; hence the following demographic analysis is based on data from the previous Census conducted in 2006. Due to the time that has elapsed between Census information being released, some of the following information may now be somewhat out of date, including current population statistics. However, for the purpose of the demographic analysis, 2006 Census data is used.

Approximately 49,815 people resided in the Mildura Rural City Council at the time of the 2006 Census². Of these, 48.9% were males and 51.1% were females. Compared with Australia, there is a slightly higher percentage of indigenous people living in the Rural City (2.9% in MRCC compared with 2.3% nationally). The median age for residents of Mildura is 37 years of age. This is exactly the same as the median for Australia overall. However, compared with Australian figures, there is a slightly higher percentage of younger people, particularly those aged between 5-14 years of age (15.9% compared with 13.5%) and slightly less people in the 25-54 age bracket (39.5% compared with 42.2%).

The percentage of people born overseas, who live in Mildura Rural City, is significantly less than the percentage of people born overseas in many other towns and cities (9.5% in Mildura Rural City compared with 22.2% for Australian towns and cities). Of those people who were born overseas, the majority come from Italy (1.5%); England (1.4%); New Zealand (1.0%); Turkey (1.0%) and Greece (0.4%). Although most people (87.4%) only speak English at home, other common languages include Italian (2.5%); Turkish (1.5%); Greek (0.8%), Tongan (0.6%); and Samoan (0.3%).

22,838 people aged 15 years and over were in the labour force at the time of the 2006 Census, with 13,484 not in the labour force (e.g. retired, not looking for work, etc). 60.4% of the labour force was employed full-time, 27.8% were employed part-time, 3.4% were employed but away from work, 2.7% were employed but did not state their hours worked and 5.7% were unemployed. These figures are almost identical to the figures for Australia.

¹ Victorian State Government (2008) *Victoria in Future 2008 Mallee*:
http://www.dpcd.vic.gov.au/data/assets/pdf_file/0003/32178/Final_VIF08_Mallee_booklet.pdf

² Australian Bureau of Statistics (2007) *2006 QuickStats: Mildura (RC) (Local Government Area)*:
<http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ViewData?method=Place%20of%20Usual%20Residence&subaction=-1&producttype=QuickStats&areacode=230054781&action=401&documenttype=Main%20Features&collection=Census&textversion=false&breadcrumb=PLD&period=2006&javascript=true&navmapdisplayed=true&>

2.0 DEMOGRAPHICS

The major industries in which people in the Mildura Rural City are:

- Fruit and tree nut growing (7.8%)
- School education (5.8%)
- Beverage manufacturing (4.1%)
- Cafes, restaurants and takeaway food services (3.2%)
- Road freight transport (3.1%).

There is a greater percentage of managers and labourers in Mildura Rural City than for Australia (17.3% and 15.9% compared with 13.2% and 10.5%); less professionals (14.1% compared with 19.8%); less clerical and administrative workers (11.4% compared with 15.0%) and similar numbers of technicians and trades workers, sales workers, community and personal service workers and machinery operators and drivers.

The median weekly individual income for persons aged 15 years and over was \$395 at the time of the 2006 Census, compared with \$466 in Australia. The median weekly household income was also lower than that for the average Australian, i.e. \$785, compared with \$1,027, and the median weekly family income was \$1,022 in Mildura Rural City, compared with \$1,171 in Australia.

13,261 families lived in the municipality at the time of the 2006 Census; 43.6% were couple families with children, 38.8% were couple families without children, 16.5% were one parent families and 1.2% were listed as other families. Family households in Mildura Rural City make up 67.8% of all households, with lone persons making up 25.2% of households and the remaining 2.5% made up of group households. These figures are all similar to the overall figure for Australia.

The average household size in Mildura Rural City at the time of the 2006 Census was 2.5 (2.6 for Australia) and the average number of persons per bedroom was 1.1 (same as Australia).

In terms of dwellings, 33.8% of occupied private dwellings were fully owned, 31.9% were being purchased and 27.5% were rented. These percentages are very similar to those for Australia overall. Of those homes being rented, the median weekly rent was \$150, compared to \$190 in Australia. For those with a mortgage, the median monthly housing loan repayment was \$1,000, compared to \$1,300 in Australia. The majority of dwellings are separate houses (82.1%).

3.0 Visitors to the Area

Mildura Rural City offers visitors to the area a broad range of opportunities and experiences ranging from state and national parks, lakes and rivers, Aboriginal heritage, early European settlement, food and wine, farming enterprises, wide open spaces, sunsets and starry skies. A variety of events and festivals are held in Mildura and surrounding townships throughout the municipality each year, attracting locals and visitors to the area.

In 2010/2011, approximately 600,000 people visited Mildura Rural City³. With at least 200,000 domestic day visitors spending approximately \$115 each and 362,000 domestic overnight visitors spending \$129 per day or an average of \$417 per trip; the economic contribution of this market is significant (NB: no expenditure amounts are available for the 13,000 international tourists to the region). It is estimated that over 40,000 of current visitors to Mildura Rural City are nature based tourists, interested in bushwalking and walks. Presumably, some of these people would also be interested in cycling. It is highly likely that there are additional visitors to the region who are also interested in cycling.

Implications for the Strategy

Given Mildura Rural City's relatively flat landscape, attractive river vistas and good weather, it is ideally situated to promote itself as a destination for short walks and cycling opportunities primarily (but not wholly) suitable for recreational walkers and cyclists, including families, older adults and beginners who may visit the region. Promotional material about the region should incorporate photographs of people undertaking these activities in front of iconic local features, e.g. river boats. Suitable promotional materials (e.g. maps, brochures, etc) should be made available at Visitor Information Centres, at accommodation venues and on relevant websites. Bicycle hire information should also be made widely available. It may also be worthwhile working in partnership with accommodation venues to ensure that they are 'bicycle friendly' (i.e. provide drop sheets for bicycles and a secure place to store bicycles) and other businesses near trails such as cafes (i.e. provide water for cyclists and walkers and also items such as bicycle repair kits).

The benefits of attracting visitors to the area to take part in walking and cycling, and particularly in encouraging them to spend an additional night are important from an economic perspective to the region.

Domestic Day Visitors

It is known that there were 437,000 day visitors to the Mallee region in 2010/11⁴, but the exact number visiting Mildura Rural City is not available. Domestic day visitors spend an average of \$115 per day in the Mallee region. Of this amount, 46% is spent on shopping; 26% on fuel; 20% on food

³ Tourism Research Australia, *Regional Tourism Profiles*:
<http://www.ret.gov.au/tourism/tra/regional/tourism/Pages/default.aspx>

⁴ Tourism Research Australia, *Regional Tourism Profiles*:
<http://www.ret.gov.au/tourism/tra/regional/tourism/Pages/default.aspx>

3.0 VISITORS TO THE AREA

and drinks; 6% on other; and 2% is spent on transport, fares and packages and a further 2% on entertainment. For the purpose of this report, we have conservatively assumed that the number of day visitors to Mildura Rural City is 200,000 of the 437,000 day visitors to the Mallee region.

Domestic Overnight Visitors

According to Tourism Research Australia⁵, in 2010/11 there were 362,000 domestic overnight visitors to Mildura Rural City, staying an average of three nights each, equating to 1,215,000 visitor nights. The majority of these visitors come for a holiday; stay in hotels, motels or serviced apartments; drive to the region; and are primarily interested in food and wine experiences. The majority of these visitors come from Victoria and source information about the area from the internet. Generally these people will travel as an adult couple or as a family group. Domestic overnight visitors spend approximately \$129 per day, and an average of \$417 each per trip. Food and drink is the biggest expenditure item by domestic overnight visitors (31%); followed by 25% for accommodation; 17% for fuel; and 13% for shopping.

International Visitors

According to Tourism Research Australia⁶, in 2010/11 there were 13,000 international visitors to Mildura Rural City, staying an average of 16 nights each, equating to 213,000 visitor nights. The majority of these visitors come for a holiday; camp or stay in caravans; arrive in the region via various forms of transport; and are interested in food and wine, nature based and cultural / heritage experiences. The majority of these visitors source information about the area from the internet, but it is not known which countries the majority come from. Generally these people travel alone.

Nature Based Tourists

Visitors most likely to participate in cycling and walking are nature based tourists. According to Tourism Research Australia⁷, the majority of nature visitors in Australia are domestic visitors, rather than international visitors.

Nine percent (9%) of domestic day visitors are classified as nature visitors by Tourism Research Australia. Nineteen percent (19%) of domestic overnight visitors are nature based visitors and 64% of international visitors fall within this category. Not all nature visitors are interested in the types of activities undertaken on tracks and trails, however Tourism Research Australia estimates that 36% of domestic day visitors take part in bushwalking / rainforest walks, whilst 48% of domestic overnight nature visitors and 38% of international visitors enjoy this type of activity. When domestic day,

⁵ Tourism Research Australia, *Regional Tourism Profiles*:
<http://www.ret.gov.au/tourism/tra/regional/tourism/Pages/default.aspx>

⁶ Tourism Research Australia, *Regional Tourism Profiles*:
<http://www.ret.gov.au/tourism/tra/regional/tourism/Pages/default.aspx>

⁷ Tourism Research Australia (2010), *Nature Tourism in Australia – Snapshots 2009*:
http://www.ret.gov.au/tourism/Documents/tra/Snapshots%20and%20Factsheets/nature_09_FINAL.pdf

3.0 VISITORS TO THE AREA

domestic overnight and international visitor figures are extrapolated against tourism figures for Mildura Rural City, we can estimate that the total visitor market for Mildura tracks and trails may be almost 43,000 people per annum, as demonstrated in the table below⁸:

Visitor Details	Domestic Day Visitors	Domestic Overnight Visitors	International Tourists	Total
Estimated Number of Visitors to Mildura Rural City	200,000	362,000	13,000	575,000
Estimated Number of Visitors involved in nature tourism (9% for domestic day; 19% for domestic overnight and 64% for international)	18,000	68,780	8,320	95,100
Estimated Number of Visitors involved in nature tourism who take part in bushwalking / rainforest walks (36% for domestic day; 48% for domestic overnight; and 38% for international)	6,480	33,014	3,162	42,656

This figure makes a number of assumptions:

- that the category "bushwalking / rainforest walks" actually reflects people who walk and / or cycle
- that all nature based visitors to the area are interested in walking or cycling along Mildura Rural City Council Tracks and Trails
- that the statistics for Mildura Rural City Council closely reflect national statistics
- that nature based tourism visitors to the area are aware of Mildura Rural City tracks and trails
- that the trails are easily accessible to all nature based tourism visitors
- that nature based tourism visitors have or are able to obtain the appropriate equipment / gear to use the trails

⁸ Tourism Research Australia (2010), *Nature Tourism in Australia – Snapshots 2009*:
http://www.ret.gov.au/tourism/Documents/tra/Snapshots%20and%20Factsheets/nature_09_FINAL.pdf

3.0 VISITORS TO THE AREA

- that tourism statistics have remained the same since this data was collected (although it is possible that tourist visitation numbers may increase if additional opportunities are made available)
- that the trails are designed, constructed and managed in such a way as to be most appealing to potential riders and walkers
- that nature based tourism visitors have sufficient time to use a section or several sections of the trails given that day visitors may only be in the area for a few hours.

4.0 Community Consultation

4.1 Overview of Key Issues

A summary of key consultation issues and the source of this information follow:

Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
Trail development	Need guidance on which roads should become pedestrian precincts and which trails become priority cycling routes.	✓		
	Support for high quality north-south and east-west super bicycle lanes to encourage commuter cycling, with other bicycle lanes as secondary lanes.	✓	✓	✓
Promotion	Would like to see information produced for visitors, i.e. maps of trails with attractions identified, pod casts, signage.	✓		
	Trails could be colour coded on maps and signs to improve legibility.	✓		
	Use facebook to promote trails.		✓	
	There is an opportunity to better utilise the recreation page of Council's website, <i>Council Matters</i> and the Mildura Tourism website to promote trails.	✓	✓	✓
	Promote events such as Active Travel Day.	✓		
Encouragement	Conduct community days to promote walking / cycling, e.g. Aboriginal cultural heritage walk or cycle.	✓		
	Need to consider how to promote King's Billabong and other trails to people from various ethnic backgrounds who may not be able to read English well.	✓		
	Children don't consider it cool to ride bikes – need high profile bike riders to speak with children to encourage them to take up cycling.	✓		
	Need to encourage bicycle education in schools.	✓		

4.0 COMMUNITY CONSULTATION

Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
	Older adults may need a supported riding group where they are linked to a friend or buddy.	✓		
Signage	There is a lack of signage of walking and cycling opportunities, e.g. Merbein Common and Deakin Ave shared trail. Trail heads are required, showing how to get from the CBD to the river.	✓	✓	✓
	Signs have to be carefully placed and consistency of branding is required.	✓		
	Need distance markers to track how far you have travelled or still have to travel.		✓	
Accessibility	Disabled access needs to be incorporated onto signage.	✓		
	Consider development of a wheelchair accessible track at Kings Billabong.	✓		
New Developments	Strategy needs to integrate with new subdivisions to ensure continuity of access, e.g. 16 th St area.	✓	✓	
Crossings	Safe crossing points need to be identified.	✓		
Road Treatments	Consider stenciling of trail information onto concrete paths in cul de sacs where possible.	✓		
	Need to separate bicycles from cars on roads (Copenhagen style).	✓	✓	✓
	Line marking of on-road bicycle trails need to be improved.	✓		
Linkages and Loops	Develop loops wherever possible to create interest and diversity.	✓		
	Develop a pedestrian bridge across the river near Lock 11 to create a loop (back over the George Chaffey bridge).		✓	
Shade	Need more shade trees along trails, e.g. Deakin Avenue and Walnut Avenue.		✓	
Public Art	Incorporate public art features along trails.		✓	
Education	Both drivers and riders need to be educated about road rules and respect for other road users.	✓		✓

4.0 COMMUNITY CONSULTATION

Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
	Need to ensure people are aware of how to use the trails and of trail etiquette.	✓		
	Cyclists need to remember to ring their bell when coming up from behind pedestrians. Paint reminders on the path or on signs could help.		✓	
	Need to incorporate cycle education information for motorists in Learner Permit Booklets.	✓		
	Could use health students to check peoples' health while they are using the trails.		✓	
Barriers	Gaps in the trail network.			✓
	Speed of cars / busy roads / too much traffic.			✓
	Lack of linkages / connections between tracks and trails.	✓		✓
	Lack of designated on and off road trails.			✓
	Poor maintenance of trails.			✓
	Unrestrained dogs.	✓		✓
	Heat in summer.	✓	✓	
	Magpies in spring.	✓		
	Lack of lighting along the river front in Mildura.	✓		
	Safety concerns at particular crossings.	✓		
	Fencing across trails (e.g. Three Chain Reserve and across a pathway at Riverside Golf Club)	✓		
	On road lanes are too narrow.		✓	✓
	Roads are too narrow.			✓
	Lack of shoulders along roads, e.g. 11 th Street on the way to Benetook.	✓		✓
	Difficulties in accessing VicTrack land for trail development.	✓		
	Lack of awareness of existing trails.	✓		
	Cost of undertaking Cultural Heritage Plans for trail development.	✓		

4.0 COMMUNITY CONSULTATION

Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
Opportunities	Drainage reserves could be used as a cycling / walking link if the basin is reshaped.	✓		
	Develop safer / back road school routes.	✓		✓
	Develop cycling tracks in CBD (currently there are none).	✓		
	Reduce the number of car parks around schools.	✓		
	Introduce park and walk / ride concept (e.g. Drive and Stride) or vice versa.	✓		
	Explore linkages along rail lines.	✓		✓
Partnerships	Need to encourage businesses to develop showers and bike storage sheds / areas for cyclists.	✓		
Road Design	Traffic in Mildura CBD needs to be examined – some roads are gridlocked and reversing cars hold up traffic. Consider one way roads to free up roads for non-car use as well. Need to redesign interface with Murray River.	✓		
Fencing	Properties near Kings Billabong have erected fences – this should be a public access area.		✓	
Safety Issues	Sealed shoulders on 80km per hour roads.	✓		
	Sandy trail near the river (Apex Park to Thompson's Beach).	✓	✓	
	Roundabouts (have squeeze points).	✓		
	Single lane roads in the fruit blocks around Red Cliffs are considered by some people to be too dangerous to ride a bicycle or to walk due to the high speed of cars and lack of paths.	✓		
	Speed limits are too high on Cureton Avenue between Mildura and Red Cliffs (100km per hour) and also on Cowra Ave near Riverside Golf Club – this is a major training and recreation route for cyclists that finishes at the Golf Club but seems to be used by VicRoads for truck testing. Need to lobby VicRoads to undertake this testing elsewhere.	✓		

4.0 COMMUNITY CONSULTATION

Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
	Cars parked in cycle lanes, car doors opening into cyclist's paths and cars re-entering traffic without regard to cyclists in the lane.			✓
Motorised Trail Bike Riders	Trail bike management is an issue at King's Billabong, Merbein Common and Cowanna Bend. Need to deter trail bike riders through developing trails with twists and turns and perhaps by creating a space specifically for trail bike riders.	✓		✓
Trail Treatments	There are some very steep cross-overs in Mildura which do not allow people with a bicycle and trailer (containing a child) to cross the road at these points safely. Cannot get past barriers on trails when travelling with a bicycle and trailer.	✓		
	Make sure off road trails have a smooth surface with no rocks.		✓	
	Need to ensure drainage is incorporated into trail design so they don't get washed away (only need a small bit of storm water pipe underneath).		✓	
Infrastructure	Need to consider installing accessible toilets at King's Billabong (4-5 bio-toilets) and rubbish bins.	✓		
	Need more seats along trails.	✓	✓	
	Need more toilets along trails.	✓		
	Need access to drink refill stations			✓
	Need more car parking at trail heads, e.g. King's Billabong and Merbein Common.	✓		
	Need to create an all weather vehicle track to King's Billabong car park.	✓		
	Need more bins and doggie bags along Apex Park to Homestead Walk.		✓	
Bicycle Parking	Install bicycle parking in the Langtree Mall.	✓		
Target Market	The Strategy needs to identify each potential user group and determine ways to increase their use of trails for cycling and walking. Need to	✓		

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Topic / Issue	Details	Key Stakeholder Interviews	Public Consultations	Community Survey
	work out how we work with each of these groups (employers, school children, people with disabilities, older adults, Aboriginal people, Culturally and Linguistically Diverse people and tourists).			
Partners	The Strategy needs to identify potential partners in the community and the role they can play in increasing walking and cycling.	✓		
Management	Develop a policy for workplaces around cycling and walking.	✓		
	It is important that the Strategy is reviewed externally each year as well as internally.	✓		
	Strategy needs to be incorporated into other Council documents such as the Health and Wellbeing Plan and other community documents such as the Primary Care Partnerships Health Plan.	✓		
Maintenance	Need to identify who will maintain trails and make sure that this happens.	✓		
	Re-stencil on-road trails on a regular basis.	✓		
	Need more maintenance of trails, e.g. Apex Park.	✓		✓
	Poor standard of maintenance of existing on road cycling lanes – need for regular sweeping of on road trails and repairs of pot holes.			✓
Other Trail Users	Trails should be available to all trail users including horse riders. Need to clarify where people can ride horses.		✓	
	Consider development of canoe trails in the future (outside the scope of this Strategy) – using King's Billabong and the Murray River with two portage locations to connect the loop.	✓		

4.2 Suggested On and Off Road Trail Upgrades and Developments

A range of trail upgrades and developments have been identified through key stakeholder interviews, community survey, community consultations, literature review and trail audits. Not all of these suggestions will be possible to achieve, for a variety of reasons, including cost, inconsistency

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with local or state based policies, lack of space, limited use, limited benefits, etc. Those upgrades or developments identified multiple times include a number in brackets afterwards to provide some sense of the frequency of this 'demand'. More details of the source of each suggestion are included in the Appendix of the strategy. In order to determine which of these suggestions are incorporated into the recommendation section of the strategy, each development was assessed against the planning principles identified for the strategy.

Specific suggestions for trail upgrades and developments identified through the consultation component of the strategy are:

Street / Area	Details
7th Street	<ul style="list-style-type: none"> Develop an on road trail along 7th St (5) Improve pedestrian crossing opportunities along 7th Street between San Mateo Avenue & Deakin Ave
8th Street	<ul style="list-style-type: none"> Develop on-road lane bike markings to encourage motorists to look out for cyclists when reversing back into the traffic on 8th Street (2) Improve pedestrian crossing at intersection of 8th Street and Lemon Avenue (Post Office) as it is difficult to see the cars through the trees
9th Street	<ul style="list-style-type: none"> Develop an on road bicycle lane on 9th Street
10th Street	<ul style="list-style-type: none"> Improve pedestrian crossing at intersection of 10th Street and Pine Avenue
11th Street	<ul style="list-style-type: none"> <i>Further develop on road trail along 11th St (27)</i> Construct a proper shoulder on 11th Street past Cowra Ave Improve line marking on 11th St Develop an off road trail next to 11th Street
13th Street	<ul style="list-style-type: none"> Undertake traffic works to reduce potential of motorists reversing into cyclists on 13th Street
14th Street	<ul style="list-style-type: none"> <i>Develop on lane trail along 14th St (8)</i> Continue trail from 14th Street Levy Bank Extend linear track from 14th St, across the train line (note some private land issues there) to Lake Hawthorne and the Murray River
15th Street	<ul style="list-style-type: none"> Improve markings on 15th Street (2) Improve on road cycling lane on 15th St
16th Street	<ul style="list-style-type: none"> Develop an on lane trail along 16th Street (2)
17th Street	<ul style="list-style-type: none"> Develop an on lane trail along 17th Street
Benetook Ave	<ul style="list-style-type: none"> <i>Develop on road trails along Benetook Ave (8)</i>
Bob Corbould Wetland	<ul style="list-style-type: none"> Create a path around the Bob Corbould Wetland
Campbell Ave	<ul style="list-style-type: none"> Extend Campbell Ave trail beyond Newton Ave to McCracken St.
Centro Shopping Centre	<ul style="list-style-type: none"> Improve bike-designated road space for riders to enter and exit the 'car park' safely
Chaffey Bridge	<ul style="list-style-type: none"> Continue to develop an off road trail from Chaffey Bridge to Bruce's Bend (3)
Chaffey Trail	<ul style="list-style-type: none"> Further develop the proposed Chaffey Trail Link the Chaffey Trail and Apex / Lions Walk
Colignan / Nangiloc	<ul style="list-style-type: none"> Develop a trail along the Murray around Nangiloc and Colignan
Cureton Ave	<ul style="list-style-type: none"> Develop a triangular shaped route between Cureton Ave, 11th St and

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Street / Area	Details
	<p>Belar Ave. This path could also be linked to the path from the centre of Nichols Point that finishes at Woodsies</p> <ul style="list-style-type: none"> • Develop a trail to link Cureton Ave to 7th Street • Link Cureton Ave to the wetlands
Deakin Ave	<ul style="list-style-type: none"> • <i>Develop a safe on road trail along Deakin Ave from 10th – 7th Streets instead of shared footpath as road is faster and there is no conflict with walkers - away from parked cars (12)</i> • Improve stencil markings and surface on shared path (2) • Improve cycle trails on Deakin Ave through resurfacing (2) • Develop a shared cycling / walking path down the centre of Deakin Avenue between 7th to 10th Streets to access the riverfront (4) • Improve cross-over points between 14th and 15th Street • Improve markings on road • Reduce gradients of bike path ramps at intersections along Deakin Ave, e.g. Argyle St. • Improve bicycle access between 11th to 14th Streets
Etiwanda Ave	<ul style="list-style-type: none"> • Consider development of priority cycling route along Etiwanda Ave (15th St to 7th St) (4)
Etiwanda Wetlands	<ul style="list-style-type: none"> • Further develop trails through Etiwanda Wetlands
Fern Ave (off Cureton St)	<ul style="list-style-type: none"> • Widen Fern Ave as it is too narrow for cyclists (2)
Flora Ave	<ul style="list-style-type: none"> • The Flora Avenue river connection to Merbein from the Old Aerodrome Sporting Complex needs more maintenance
Irymple	<ul style="list-style-type: none"> • <i>Extend Irymple Green Belt to Mildura CBD by connecting Sandilong Ave and Morpung Ave (10)</i> • Develop a trail along the rail reserve between Irymple / Red Cliffs and Mildura CBD (2) • Develop a trail along Campbell Ave, Irymple and extend to McCracken St to encourage children to ride to school (2) • Develop a trail from Irymple to Wetlands • Develop a trail incorporating Eastern Irymple and Nichols Point through to the Highway and the new developments around Kings Billabong
Karadoc Ave	<ul style="list-style-type: none"> • <i>Develop a trail on Karadoc Ave between 16th and 14th St (6)</i>
King's Billabong	<ul style="list-style-type: none"> • <i>Develop a safe off road trail (potentially along 11th St) that connects King's Billabong / Irymple to Mildura CBD (19)</i> • Link King's Billabong to Red Cliffs by completing the trail along the river behind Marina to Kings Billabong (5) • Upgrade tracks around King's Billabong (2) • Develop 2-3 new sections of trail at Kings Billabong (2)
Koorlong	<ul style="list-style-type: none"> • Develop an on road trail from Koorlong into Mildura CBD. (2)
Koorlong Ave	<ul style="list-style-type: none"> • <i>Develop an on road trail from Mildura CBD to DSE / DPI offices at the corner of Koorlong Ave and 11th St (19)</i>
Lake Cullulleraine	<ul style="list-style-type: none"> • Need to upgrade signage, information display and paths around the perimeter of Lake Cullulleraine.
Lake Hawthorn	<ul style="list-style-type: none"> • Develop a trail around Lake Hawthorn from 14th St and Ontario Ave along the railway line to the Lake Hawthorn outlet (3). • Develop a loop to connect Lake Hawthorn, Snakes and Ladders, Ontario

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Street / Area	Details
	Ave, Ranfurly Way and 17 th Street.
Merbein	<ul style="list-style-type: none"> • Develop an on road trail between Merbein and Mildura (4) • Create a trail from Merbein to King's Billabong (2) • Develop a trail all of the way from Merbein to Red Cliffs by • Continue trail behind Merbein Winery • Link Pump Hill and Merbein Common; currently impassable • Develop a trail from Merbein to Wentworth
Mildura Airport	<ul style="list-style-type: none"> • Develop a trail in the bushland near Mildura Airport
Mildura South	<ul style="list-style-type: none"> • Improve maintenance of existing trails in Mildura South around the wetlands area (crusher dust paths)
Murrayville	<ul style="list-style-type: none"> • Consider development of a shared rail around the TAFE controlled CSIRO Research Station
Nichols Point	<ul style="list-style-type: none"> • <i>Develop an on road trail from Nichols Point into Mildura CBD (down 11th St / Cureton Ave) (11)</i> • Develop a safe route to Nichols Point School – from 5th St to the school (3) • Improve walking tracks from Nichols Point to Mildura • Improve safety of 11th St / Benetook Ave route to Nichols Point • Continue trail from River Road Pottery
Ontario Ave	<ul style="list-style-type: none"> • <i>Consider development of priority on road cycling route along Ontario Ave (7)</i> • Complete the path on Ontario Avenue between 11th & 12th Streets • Improve maintenance and signposting of walking trail that follows behind wetlands on Ontario Avenue. • Consider connecting Ontario Ave walking trail along train tracks or along back streets from the wetlands to the river, or from 14th St towards Lake Hawthorn.
Railway Easement	<ul style="list-style-type: none"> • <i>Consider development of a trail along the railway easement near Benetook and 7th St, which connects on to 11th and 14th Streets and Red Cliffs with a link to the Murray River (6)</i> • Consider developing trail between Red Cliffs and Mildura • Develop a trail along the railway easement between 9th St and Lake Hawthorn
Ranfurly Way	<ul style="list-style-type: none"> • Rectify the river trail from Johnson's Bend to Merbein so that it no longer forces cyclists into traffic on Ranfurly Way.
Red Cliffs	<ul style="list-style-type: none"> • Develop off road trail to connect Mildura to Red Cliffs (3) • Reopen the walking tracks at the cliffs (2) • Develop an on road bike lane to Red Cliffs along the Calder Highway • Mark on road bicycle trails on back roads between Mildura and Red Cliffs, i.e. Spiders Web route • Develop a train crossing from the west side of Red Cliffs into town (Intersection of Fitzroy Avenue and Nardoo Street near the Highway). • Develop a trail to connect Red Cliffs township (via Pump Road) to the river, including a connection to the Red Cliffs East Primary School • Develop a trail along the river from Abbotsford Bridge to Red Cliffs Pumping station • Develop a trail from Psyche Pumps to Red Cliffs Pumps via Horseshoe Lagoon

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Street / Area	Details
	<ul style="list-style-type: none"> Develop a trail from Red Cliffs up stream around Cardross Lakes Develop a trail from Red Cliffs to Werrimul (rail trail) and down to Lake Cullulleraine Re-open the Red Cliffs Scenic Reserve stairway.
Riverfront / Apex Park	<ul style="list-style-type: none"> <i>Extend trail along the riverfront to connect all individual trails to form one continuous trail to Red Cliffs via Nichols Point in one direction and to Merbein in the other direction (34)</i> <ul style="list-style-type: none"> Incorporate Johnsons Bend. Link to the new Marina development under the Bridge rather than having to cross the highway and walk along Cureton Avenue Open up the river front past Baldwin Boats to follow the river along the Three Chain Reserve From boat ramp upstream of bridge to lock Improve connections between River, Old Homestead and Apex Park Further enhance trails and signage at Lock 11 and clean up area Fill in gaps in existing network, (e.g. Chaffey Bridge to Bruce's Bend , Red Cliffs boat launching area into Red Cliffs Art gallery precinct to start of Linear track(at 11th St) and track near River Road pottery) <i>Create easy access from Mildura CBD to Murray River (along the river front near the rowing club lawns) (7)</i> Improve surface of Apex Park to Pump Hill; track behind Rio Vista; Johnston's Bend; and Chaffey Bend where it is sandy and uneven (3) Develop trails that allow easy access for prams and children on bikes and scooters (optimally sealed) – preferably around the river front and parkland areas (2) Develop a variety of trails along the river that are shorter in length, with rest stops and water access Widen Apex / Riverfront track to accommodate walkers and bikes Improve maintenance of Apex Park - Ranfurly Way Install additional signage at Riverfront / Apex Park
Riverside Golf Course	<ul style="list-style-type: none"> Develop a trail in the bushland near Riverside Golf Course Consider a trail development along #56 Levy at the Riverside Golf Club Consider re-opening the gates at the Golf Club to allow public access to the riverfront.
San Mateo Ave	<ul style="list-style-type: none"> <i>Develop on road trails along San Mateo Ave (6)</i>
Walnut Ave	<ul style="list-style-type: none"> <i>Develop on road cycling trails on Walnut Ave (6)</i>
Warneth Ave	<ul style="list-style-type: none"> Improve parking lanes
Werrimull	<ul style="list-style-type: none"> Develop a rail trail from Werrimull to Millewa
Yelta	<ul style="list-style-type: none"> Extend Mildura-Yelta Rail linear path to link with Three Chain Reserves at Rio Vista Park and with the Lake Hawthorn to Ranfurly Way linear path
<u>General</u>	
Management	<ul style="list-style-type: none"> Many informal trails on lands controlled by PV or DSE require some rationalisation, signage and surface repairs.
Mountain Bike Park / Pump Track	<ul style="list-style-type: none"> Develop a Mountain Bike Park / Pump Track similar to that of the skate park or BMX track

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Street / Area	Details
Outlying towns	<ul style="list-style-type: none"> • <i>Develop trails to outlying towns and trails to connect towns (6)</i>
Regional	<ul style="list-style-type: none"> • Develop a trail to out to Gol Gol / Trentham Cliffs, which access Gol Gol Hotel and Trentham Winery. • Develop a long distance trail along the river from Wentworth to Robinvale via Nangiloc and Hattah Lakes using much of the existing network of roads and tracks (which are already in place) • Develop a trail between Mildura and Wentworth • Develop a trail into the Swan Hill municipality
Schools	<ul style="list-style-type: none"> • Develop safe trails to all schools

4.3 Council Officers Workshop

Fourteen Council officers attended a workshop with the project team to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with Council officers include:

Staff Member	Comments
Scott Umback, Jodie Arnold, David Zacher, Peter Douglas, Gloria Booker, Trevor Watts, Chris Davis, Ray Lyons, Jacob Slimmon, Lee Jones, Mark Henderson, Damien Sutton, Mark Woodhouse, Bonnie Pettett	<ul style="list-style-type: none"> • Need to incorporate aspects of previous bicycle strategy that weren't achieved. • Recommendations need to be realistic from a budgetary perspective and community expectations need to be carefully managed. • Maintenance costs must be built into budget (whole of life costing). • Need to identify roles and responsibilities of Council units in the Strategy and make sure that each unit is comfortable with their tasks. • Make sure that the Strategy encompasses the whole Shire. • Develop an assessment tool with rankings and costs. • Promote the survey via local media and newsletters. • Need to provide guidance on which roads should become pedestrian precincts. Consider Copenhagen system on Deakin Ave and 11th Street (to Benetook) as a truck route. Previous studies identified Deakin Ave with a path down the middle for pedestrians, with crossings at each intersection. • Need to develop a hierarchy of trails with expected service levels for maintenance. • Accessibility is important. • Would like to see information produced for visitors, i.e. maps of trails with attractions identified, pod casts, signage. • There is a lack of signage of walking and cycling opportunities. Trail heads are required, showing how to get from the CBD to the river. Disabled access needs to be incorporated onto signage. Signs have to be carefully placed and consistency of branding is required. • Shared footpaths should be considered in the Strategy as these can be important links between destinations. • Strategy needs to integrate with new subdivisions to ensure continuity of access. • Developer contributions need to be examined. • Monitoring of the Strategy should be undertaken by a reference group twice per year. External groups should also be invited to attend a review meeting annually.

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Staff Member	Comments
	<ul style="list-style-type: none"> • Bicycle Victoria has identified expenditure on bicycle infrastructure in MRCC as one of the lowest in the state. • Safe crossing points need to be identified. • Consider stenciling of trail information onto concrete paths in cul de sacs where possible. • Trails could be colour coded on maps and signs to improve legibility. • Develop loops wherever possible to create interest and diversity • Major barriers include unrestrained dogs; the heat in summer; magpies in spring; lack of lighting along the river front in Mildura; safety concerns at particular crossings; fencing across trails (e.g. Three Chain Reserve); lack of shoulders along 11th Street on the way to Benetook; difficulties in accessing VicTrack land for trail development; and lack of linkages between tracks and trails. • Possible planning principles are: access, sustainability, equity (across towns), improve existing assets and environmental sustainability. • Both drivers and riders need to be educated about road rules and respect for other road users. • The Mildura Bike Hub has approximately 70 members. This is to be the key area for bicycle parking in the CBD. • Need to encourage businesses to develop showers and bike storage sheds / areas for cyclists. • Traffic in Mildura CBD needs to be examined – some roads are gridlocked and reversing cars hold up traffic. Consider one way roads to free up roads for non-car use as well. Need to redesign interface with Murray River. • State Government frameworks support walking and cycling. • There has not been enough focus on cycling and walking trails in Master Plans (either within site or to connect to the site). • Drainage reserves could be used as a cycling / walking link if the basin is reshaped. • Mildura Rural City Council is not renowned as a cycling community yet (as some areas of the state are), due to its agricultural base, yet it is ideally suited to this activity. • There are no accurate statistics available for the number of walkers or cyclists in the community. • There are numerous cycling and walking initiatives operating in the community, e.g. road safety map, Ride to Work Day, Ride to School Day, Walking School Bus, Kids on Bikes program, walking group at shopping centre, senior's walking groups, Murray Mallee Health walking programs, etc. • There is an opportunity to better utilise the recreation page of Council's website and the Mildura Tourism website to promote trails. • Potential safety issues to be considered: sealed shoulders on 80km per hour roads, sandy trail near the river (Apex Park to Thompson's Beach), roundabouts (have squeeze points). • Opportunities: develop back road school routes; develop cycling tracks in CBD (currently there are none); reduce the number of car parks around schools; introduce park and walk / ride concept (e.g. Drive and Stride); explore linkages along rail lines.

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Staff Member	Comments
	<ul style="list-style-type: none"> Funding opportunities: Department of Transport; VicRoads; Department of Sustainability and Environment; Catchment Management Authority. Rectify the river trail from Johnson's Bend to Merbein so that it no longer forces cyclists into traffic on Ranfurly Way. <i>Key priorities: education; safety; development of loops; reduction of conflict between pedestrians / cyclists and cars; promotion; signage; links to new housing developments; development of a major east-west and north-south protected route (separated Copenhagen style).</i>

4.4 Government Agencies and Health Providers Workshop

Five people representing four organisations were represented at a workshop to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with Government Agencies and Health Providers include:

Agency	Comments
Dennis Jewell (VicRoads)	<ul style="list-style-type: none"> Car parking is required at King's Billabong and Merbein Common so that people can drive to the site and unload their bikes.
Dave Schammel (Catchment Management Authority)	<ul style="list-style-type: none"> Trail bike management is an issue at King's Billabong and Merbein Common. Damage left by other vehicles and trail bikes dragging bogged trail bikes out of these sites is also problematic. There needs to be a safe off road trail that connects King's Billabong to Mildura CBD.
Tressna Martin (Sunraysia Community Health – Transport Connections Program)	<ul style="list-style-type: none"> Need to consider installing accessible toilets at King's Billabong (4-5 bio-toilets) and rubbish bins. Need to consider how to promote King's Billabong and other trails to people from various ethnic backgrounds who may not be able to read English well. CMA can provide some funding in flood plains (e.g. King's Billabong) for maintenance, capital works and signage.
Jane McCracken (Sunraysia Community Health)	<ul style="list-style-type: none"> There is a fence across a pathway at Riverside Golf Club which restricts access to people walking or cycling along the Murray River. It is important to create linkages to the East End of Mildura; recreation centres and shops.
Carmel Mackay (Mallee Sports Assembly)	<ul style="list-style-type: none"> There are some very steep cross-overs in Mildura which do not allow people with a bicycle and trailer (containing a child) to cross the road at these points safely. Cannot get past barriers on trails when travelling with a bicycle and trailer. Crossing points need to be clearly marked on maps. Line marking of on-road bicycle trails need to be improved. Ideally cars and cyclists would be clearly separated on the road. VicRoads has a bicycle strategy which needs to link to MRCC's Strategy. Usage data needs to be examined. Possible planning principles - connectivity and safety. Need to ensure people are aware of how to use the trails and of trail etiquette.

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Agency	Comments
	<ul style="list-style-type: none"> • There needs to be some work between 11th to 14th Streets to improve bicycle access. • Recognise that trails are used for different reasons, e.g. commuting, recreation, training, etc. • The Strategy needs to identify each potential user group and determine ways to increase their use of trails for cycling and walking. Need to work out how we work with each of these groups (employers, school children, people with disabilities, older adults, Aboriginal people, Culturally and Linguistically Diverse people and tourists). • The Strategy needs to have a staged approach and identify who the works will impact and when the works need to occur (priority groups and priority works). • The Strategy needs to identify potential partners in the community and the role they can play in increasing walking and cycling. • Consider developing mini bicycle hubs throughout the municipality whereby people are encouraged to ride to a bus stop and park their bikes, as opposed to extending public transport routes. • Need to identify who will maintain trails and make sure that this happens. • Cultural Heritage Plans can be expensive to undertake for potential trails. • To increase cycling, consider the following enablers: more car parks, more public toilets, education, supporting infrastructure such as seats along trails, signage, promotional tools and community days (e.g. an Aboriginal cultural heritage walk or cycle). • Promote events such as Active Travel Day. • Develop a policy for workplaces around cycling and walking. • It is important that the Strategy is reviewed externally each year as well as internally. • Strategy needs to be incorporated into other Council documents such as the Health and Wellbeing Plan and other community documents such as the Primary Care Partnerships Health Plan. • Need to develop a range of promotional tools and recognise the role and limitations of symbols (particularly for CALD people). • Marketing will differ according to who it is directed at. • Need to develop trail etiquette • Consider development of a wheelchair accessible track at Kings Billabong. • Fern Ave (off Cureton St), Mildura, which is used by cyclists, is too narrow. • A properly constructed shoulder is required on 11th St past Cowra Ave. • Re-stencil on-road trails on a regular basis. • Strategy needs to consider future growth areas. • Attempt to overcome conflicts between cyclists and drivers. • Cyclists / walkers need to be aware of the dangers of snakes, magpies and crop spraying in certain areas at certain times of the year.

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Agency	Comments
	<ul style="list-style-type: none"> • The cross-over points between 14th and 15th Street on Deakin Ave, Mildura are difficult. • Improved markings are required on Deakin and 15th Streets, Mildura • Improved stencil markings required on shared path on Deakin St, Mildura. • Important to link new housing estates into existing trails. • Consider developing trail between Red Cliffs and Mildura along the train track. • Possible funding options include: VicRoads, Transport Accident Commission, RACV, Department of Planning and Community Development, Regional Development Victoria, Department of Transport (walking and cycling unit). • Consider a trail development along #56 levee at the Riverside Golf Club. • <i>Priorities: widen existing roads and develop shoulders for cyclists along them; ensure that trails are connected to each other; re-mark tracks that already exist; develop shoulders along roads to link from off-road trails (to act as a connector); provide trails off the main roads and clearly signpost and map these; develop a safe route to specific locations such as Kings Billabong; establish water refill stations at existing locations Apex Caravan Park, Riverside Golf Club and Woodsies; and develop quality maps that can be accessed in print or on smart phones.</i>

4.5 Walking / Cycling Organisations Workshop

Six people from four organisations were represented at a workshop to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with Walking / Cycling Organisations include:

Organisation	Comments
Roger and Barbara Cornell (Sunraysia Bushwalkers Group)	<ul style="list-style-type: none"> • Barriers to cycling include: on road paths that are too narrow; on road paths that end before an intersection or roundabout; lack of awareness of trail location.
Ian Beruldsen (Mountainless Bike Club)	<ul style="list-style-type: none"> • Major barrier to walking is the non-continuation of trails, e.g. gap behind Merbein Winery; River Road Pottery; 14th St levy bank; and Chaffey Bridge to Bruce's Bend. • Education of drivers and riders is important.
Steve, and Michael Jobe (SUNBUG)	<ul style="list-style-type: none"> • Sunbug was funded by the Transport Accident Commission to produce three major videos, six radio advertisements and a safety booklet.
Richard Hale (Coomella Cycling Club)	<ul style="list-style-type: none"> • Need to consider Copenhagen system of separating bikes and vehicles and using green paint on the roads to designate a cycle path. • Need to incorporate cycle education information for motorists in Learner Permit Booklets. • Use <i>Council Matters</i> as a means to promote awareness of cycling and road rules to the broader community. • Improve parking lanes in Warneth Avenue. • Etiwanda Ave considered to be dangerous for cyclists.

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Organisation	Comments
	<ul style="list-style-type: none"> • Improve lane marking in 11th St and 15th St. • Need to upgrade tracks around Kings Billabong and develop a safer route to Kings Billabong. • Consider development of north-south and east-west priority routes (Ontario and Etiwanda). • Bike Ed programs operate at Chaffey College and St Jo's. • Insurance costs are a major deterrent for Sunbug to operate community activities. • There is no incentive for people to cycle to the mall – need bike parking available there. • Better signage is needed at Merbein Common. • Need to improve signage on Deakin Ave shared path. • Mountain bike riders prefer not to have crusher dust on tracks. • Signage overall needs to be improved on trails. • Need to deter trail bike riders through developing trails with twists and turns and by creating a space of their own. Not all motorcycle / trail bike riders are members of the North West Motorcycle Club. • Bushwalking group prepared a walking map for the MRCC website, but the map is no longer available on the website. • Mountain Bike Club organises social rides. • Older adults may need a supported riding group where they are linked to a friend or buddy. • Consider the establishment of a velodrome in Mildura. • Speed limits are too high on Cureton Avenue between Mildura and Red Cliffs (100km per hour) and also on Cowra Ave near Riverside Golf Club – this is a major training and recreation route for cyclists that finishes at the Golf Club but seems to be used by VicRoads for truck testing. Need to lobby VicRoads to undertake this testing elsewhere. • Sunbug is keen to see the development of a track up the railway easement near Benetook and 7th St, which connects on to Red Cliffs with a link to the Murray River. • Potential, but not a high priority, to develop a rail trail between Werrimul and Red Cliffs. • Potential to develop a trail all of the way between Red Cliffs to Merbein. • The TAFE controlled CSIRO Research Station at Murrayville could be developed for walking and cycling. • Need to extend linear track from 14th St, across the train line (note some private land issues there) to Lake Hawthorne and the Murray River. • <i>Priorities: development of off road trail between Chaffey Bridge and Bruce's Bend; improved marking of existing on road bike lanes (stencils and green colour of path); improvements to Deakin Ave, Walnut Ave and 11th St (from Merbein to Kings Billabong); install bicycle parking in the Langtree Mall.</i>

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4.6 Schools, Businesses and Community Groups Workshop

Two organisations were represented at a workshop with the project team to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with schools, businesses and community groups include:

Organisation	Comments
David Browne (Red Cliffs Secondary College)	<ul style="list-style-type: none">• Single lane roads in the fruit blocks around Red Cliffs are considered by some people to be too dangerous to ride a bicycle or to walk due to the high speed of cars and lack of paths.
George Kerridge (Birdlife Mildura)	<ul style="list-style-type: none">• Limited bicycle education classes run by schools in the region.• Children don't consider it cool to ride bikes – need high profile bike riders to speak with children to encourage them to take up cycling.• Of the 650 young people who attend Red Cliffs Secondary College, only 15-25 of them (2%-4%) ride bicycles to school.• Need more bike paths in the municipality.• Need to improve roundabout access.• Bike Hub in Mildura does not appear to be getting a lot of use.• A bike shop opened in Red Cliffs in September and is proving to be very popular with young people.• Suggest that everyone should be allowed to ride on the footpath• Birdlife Mildura is keen for additional trails in Merbein Common (in the opposite direction to Mildura)• Swooping magpies is an issue for pedestrians and cyclists during spring.• Safety concerns around the blocks, near harvest vehicles, at Nichols Point and on 11th, Deakin and Walnut Streets.• <i>Key priorities: create easy access from Mildura CBD to Murray River (along the river front near the rowing club lawns); develop a trail along the riverfront – boat ramp upstream of bridge to lock; upgrade King's Billabong Trails; and encourage bicycle education in schools.</i>

4.7 State Government Agency Meetings

Eight individuals, representing **six** organisations attended a number of informal meetings or were involved in teleconferences to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with State Government agencies include:

Organisation	Comments
Jenny Dyer (Department of Planning & Community Development)	<ul style="list-style-type: none">• Need to consult with indigenous communities.• Consider the development of canoe trails (outside the scope of this Strategy).• Potential to blend several small trails together as one big funding application.
Jacinta Allen (Department of Planning & Community Development)	<ul style="list-style-type: none">• Potential to attract Federal Government tourism funding for the Riverfront project.• Could apply to Regional Development Australia for planning and design funding, in partnership with other Councils along the Murray

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Organisation	Comments
Community Development)	River to ensure that the Murray River Trail Experience can be 'shovel ready' for future grants.
Mark (Mildura Police)	<ul style="list-style-type: none"> • Incorporate the Loddon Mallee Iconic Trails Strategy into this Strategy. • Ensure that disabled toilets are provided where required along trails. • Consider DSE Walking Guidelines in signage requirements.
Rob McGlashan (Parks Victoria)	<ul style="list-style-type: none"> • Many motorists seem to be unaware of road rules relating to cycling, e.g. that they cannot cross a solid white line. • Education of all road users is important.
Matt Bunney (VicTrack)	<ul style="list-style-type: none"> • Concern that alterations to roundabouts (to reduce conflict points for cyclists) will cause difficulties for larger vehicles. • Support use of railway easement all of the way out to Irymple.
David Dunston (VLine)	<ul style="list-style-type: none"> • Consider opportunities to re-route railway line. • Bicycle lane on 7th Street does not work well.
Richard Wadsworth (DSE)	<ul style="list-style-type: none"> • Car parking area on Deakin Ave not wide enough and shared path involves too many crossings for cyclists. • In order to expand Deakin St, lanes would have to be built onto the median strip, or sections of the median strip would have to be cut away to widen the road.
Alan Carter (VicRoads Western Region Office)	<ul style="list-style-type: none"> • Bicycles travelling along the shared path on Deakin travel at fairly high speeds, hence it would be good to separate them from pedestrians. • VicTrack owns the railway land and VLine leases the land from VicTrack. • Difficult to develop a trail along the railway easement due to two fuel depots and one primary school car park adjacent to the railway line, leaving very little space for a trail. • Development of a shared off road trail on land leased by VLine will increase VLine's risk profile. • Re-routing of railway line was discussed several years ago, but deemed to be too expensive. • Full feature design work needs to be undertaken of the railway easement land to determine the feasibility of developing a shared trail along the active train line. • Pedestrian crossing at 11th Street is quite steep and would require some treatment if a trail was to be established. • A new pedestrian crossing is likely to cost around \$250,000. • If a trail is considered feasible along the railway line, it is likely to take 2-3 years to complete the formal negotiations and transfers with VicTrack and VLine. • Regionally significant trails should be incorporated into local tourism strategies. • There are no templates in existence for MOUs at present and the commitment to MOUs is questionable over time. Management model needs to be self-sustaining. • Important to seek community partnerships in trail developments. • VicRoads does occasionally fund off road trail developments, if the trail can be justified well, e.g. important linkages, removes cyclists from busy roads, provides safe access to schools, etc.

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Organisation	Comments
	<ul style="list-style-type: none"> • Parks Victoria has scant resources for trail development or maintenance. They rely heavily on “Friends Of” groups for this work. • Parks Victoria will have a larger area to manage after formation of new parks through VEAC report. • Parks Vic sees opportunities to develop Cowanna Bend for non-motorised recreation and the development of a canoe trail at Kings Billabong.

4.8 State Sporting Association Consultations

Five State Sporting Associations were contacted by telephone to identify gaps and opportunities related to cycling and walking in the municipality. Key points arising from consultation with State Sporting Associations include:

Organisation	Comments
Kate Butler Bicycle Victoria	<ul style="list-style-type: none"> • Linking the rail corridor that runs through the heart of Mildura to the Train Station and river path would create a great transport and recreation facility for residents and visitors to Mildura.
Chris Towers Bushwalking Victoria	<ul style="list-style-type: none"> • Proposed trail projects may be eligible for funding through the Regional Growth Fund. • Rail Trails Australia has been involved in a code of practice that is being developed to advise how the shared path and the Tourist and Heritage Railway can share the corridors. Document not yet released.
Norm Douglas Mountain Bike Australia	<ul style="list-style-type: none"> • VicTrack has released a document called Shared User Pathways on VicTrack Land.
Frank Kinnersley Rail Trails Australia	<ul style="list-style-type: none"> • Pony Club Association of Victoria is expanding its insurance cover to 24/7 so that members are covered at all times when they ride, and is also incorporating adult riders into the Association.
Vicki Jans Pony Club Association Victoria	<ul style="list-style-type: none"> • Pony Club Association of Victoria supports development of etiquette for all users of trails. • Bushwalking is traditionally viewed as walks of two or more day's duration, in remote country, carrying a heavy pack with all of your food and shelter requirements. The reality is that many people who bushwalk, including most if not all bushwalking clubs, incorporate a wider range of walking opportunities. To this end Bushwalking Victoria has been developing and promoting a 'new' concept of Green Walks that are essentially easy walks in urban and regional areas, often utilising local government parklands. In the Greater Melbourne Area these walks would typically be in the metropolitan parks managed by Parks Victoria, such as Jells Park, Brimbank Park, Braeside Park, Point Cook Coastal Park. It seems that the Rural City of Mildura, located as it is on the banks of the Murray, has a great opportunity to develop tracks and trails that would fit such a model. The efforts of the City of Shepparton are an excellent local example of how this can be done. • There are opportunities for developing a network of tracks and trails utilising the river bank and adjoining land that could stretch from Merbein as far south along the river as Colignan, and even connecting up with the trails in Hattah NP.

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Organisation	Comments
	<ul style="list-style-type: none"> Consider Bushwalking Victoria's <i>Shared Trails Policy</i> and <i>Creating Trails That Walkers Will Want to Walk</i>. The current state government is committed to supporting increased participation in active sport and recreation across the state, but in particular in rural and regional areas.

4.9 Public Consultation in Langtree Mall

A public consultation event was held in Langtree Mall, Mildura on Friday, 4 November 2011, from 12pm to 4pm so that members of the project team could speak informally with local residents about their needs in relation to cycling and walking opportunities. The event, which was advertised in both the local newspaper and on the radio, featured a display consisting of maps, surveys, drawing materials and sticky notes for residents to write down their comments. During the event, which was held on a warm, sunny day, **32** people (17 females and 15 males) spoke with the project team and offered their ideas and suggestions. The majority of participants were under 20 years of age, or between 40-50 years of age for females and between 50-60 years of age for males (ages are estimates only). Key issues identified through this consultation included:

Topic	Comments
Riverfront and off-road trails	<ul style="list-style-type: none"> Need to connect the Rowing Club building/facilities to the existing trail along the river – Male, 15 Properties near Kings Billabong have erected fences – this should be a public access area – Female, 40 Fern Avenue near Kings Billabong is too narrow. It is used by road cyclists and cars at the same time – Female, 40 The Flora Avenue river connection to Merbein from the Old Aerodrome Sporting Complex is really good. Just needs more attention and maintenance – Female, 60 Trail near Apex Park feels too isolated and unsafe – Female, 20 Need more maintenance of trails near Apex Park, they are a bit rough with weeds – Female, 60 Past Apex Park, the track gets too sandy for riding – Female, 30 Improve maintenance of existing trails in Mildura South around the wetlands area (crusher dust paths) – Female, 40
Roads and pavements	<ul style="list-style-type: none"> Intersection of 10th Street and Pine Avenue is difficult for pedestrians to cross – Male, 50 Too hard to cross 7th Street between San Mateo Avenue & Deakin Ave – Male, 50 I nearly got hit on my bike while riding through a round-about, so now I only ride on the footpaths and I don't care what the law says – Female, 30 8th Street feels a bit dangerous as cars reverse out. On lane bike markings could be good – Male, 50 Pavements along Deakin Avenue are uneven and are a trip hazard – Female, 15 Bike lanes on roads are too narrow – Female, 15

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Topic	Comments
	<ul style="list-style-type: none"> • Need footpath all the way along on San Mateo Avenue between 14th & 15th Street (near new fire station) – Female, 20 • Need wider footpaths so you can walk with friends side by side, especially needed in the east side community – Male, 20 • Footpaths needed near the university along Benetook Avenue between 11th Street and 14th Street – Male, 20 • Need on road cycling tracks on Deakin Avenue instead of shared footpath. Road is faster and there is no conflict with walkers – Male, 20 • Intersection of 8th Street and Lemon Avenue (Post Office) is difficult to cross as you can't see the cars through the trees – Male, 50 • Need more on road bike lanes to Red Cliffs along the highway – Male, 30 • Path down the centre of plantation in Deakin Avenue for pedestrians – Female 50 • On road bike lane on 8th and 9th Streets is needed – Male, 18 • Need lights on walking paths in Mildura South – Female, 40 • Trails need to connect to the shopping areas – Male, 20
Education and Marketing	<ul style="list-style-type: none"> • Use Facebook, email and mail to let people know about existing trails – Female, 15 • Trail maps should be available on Council's website – Female, 40 • Cyclists need education about road rules – Male, 30 • Confusion over what side to walk/ride on along Deakin Avenue Shared Path. Need to repaint lines and symbols – Male, 40 • Clearer markings for on road paths and maps to show you where the rides are – Male, 50 • Information about what exists on Facebook – Female, 15
Other	<ul style="list-style-type: none"> • Bike hub should be in the centre of town (Mall area) – Male, 50 • High temperatures (over 30 degrees) deters me from walking/cycling – Female, 20 • Need more shade trees along Deakin Avenue and Walnut Avenue – Female, 15

4.10 Public Consultation at Sunraysia Farmers' Market

An additional public consultation event was held at the Mildura Farmer's Market at the Ornamental Lakes in Hugh King Drive, Mildura on Saturday 5 November, 2011, from 9am to 12pm so that members of the project team could speak informally with other local residents about their needs in relation to cycling and walking opportunities. The event, which was advertised in both the local newspaper and on the radio, featured a display consisting of maps, surveys, drawing materials and sticky notes for residents to write down their comments. During the event, which was held on a hot,

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sunny day, **42** people (23 females and 19 males) spoke with the project team and offered their ideas and suggestions. The majority of female participants were between 30-50 years of age and the majority of male participants were between 60-80 years of age (ages are estimates only). Key issues identified through this consultation included:

Topic	Comments
Riverfront and Off-road Trails	<ul style="list-style-type: none"> Track is too sandy past Apex to ride bikes through to Johnston's Bend – Male, 60 Trails should be available to all trail users including horse riders – Male, 50 Need to make sure that horses can use trails too. Need to clarify where people can ride horses – Male, 50 Build bridge across the river for pedestrians from caravan park – Male, 70 Make sure that trails are in the open – not too many bushes close to the trail – Female, 40 Extend river trail to Kings Billabong – Male, 70 Need to continue trail along the river by filling in the gaps – Male, 60 Need more seats in the shade for older adults along the river walk from Apex Park to town. A log would be fine. – Male & Female, 70 Make sure off road trails have a smooth surface with no rocks – Female, 40 Need to ensure drainage is incorporated into trail design so they don't get washed away (only need a small bit of storm water pipe underneath) – Male, 40 Would like a trail loop around Lake Hawthorn. Need to know if you are allowed to walk all the way around as there seems to be some sections of private property – Female, 40 Support a river trail to Kings Billabong, making sure the trails is compacted with no ruts – Female, 60 Track to Apex Park from the Homestead needs more bins and doggy bags along the entire length – Male, 30 Track behind Rio Vista Park needs maintenance to fix the pot holes – Male, 30 Need a walking track/loop around Lake Hawthorn – a lot of facilities already there that are being used by walkers – Female, 50 Grey crusher dust path along 5th Street in Nichols Point is working well. Keeps weeds away and more kids seem to be using it because it looks like a road – Male, 40 Tracks along the river and the wetlands are great – Male, 60 Need a bike track all the way out to Kings Billabong so you don't have to ride on roads, which would make it safer – Male, 30 A pedestrian bridge across the river near Lock 11 to create a loop (back over the George Chaffey bridge) – Female, 30
Roads and Pavements	<ul style="list-style-type: none"> Should have a cycle track up the middle of Deakin Avenue –

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Topic	Comments
	<p>Male, 60</p> <ul style="list-style-type: none"> Reverse car parking is very dangerous for cyclists on 13th Street – Male, 60 Between Lizlee Drive & 16th Street on Walnut there are several houses without footpaths. It is too hard to walk with kids and a pram as you have to go onto the road – Female, 30 Very difficult for pedestrians to cross 7th Street as there is only one safe location with crossing lights. Currently have to walk on grass to get under bridge which is very hard with a pram. Need a path along there – Female, 30 Complete the path on Ontario Avenue between 11th & 12th Streets – Female, 30 Deakin Avenue bike path ramps at intersections are too steep. Can they be made into a gentler slope? – Male, 70 Need a proper train crossing from the west side of Red Cliffs into town (Intersection of Fitzroy Avenue and Nardoo Street near the Highway). Children currently have to lift their bikes over the tracks – Male, 40 Need on road trails from Mildura to Red Cliffs on the back roads – i.e. Spiders Web – Female, 20 Want to be able to ride from Irymple to Wetlands – Female, 70 Develop a trail to connect Red Cliffs township (via Pump Road) to the river, including a connection to the Red Cliffs East Primary School – Female, 20
Education and Marketing	<ul style="list-style-type: none"> Need to further promote existing trails as people can't see the river trails from the CBD. Put in colourful signs with distances and direction to trail clearly marked – Female, 20 Need signage and markers on trails to let people know where trails are – Male, 60 Cyclists need to remember to ring their bell when coming up from behind pedestrians. Paint reminders on the path or on signs could help – Male, 70 Motorists don't understand cyclists' rights at roundabouts – Male, 60 I don't know where I can park my bike down the street – need more signage and information – Female, 20 Install poles/signage that say 'Here is a good place to check your heart rate'. Include reading blocks for heart rate – Female, 50 Need to educate cyclists and walkers about the road rules – Male, 70 Need to educate people that all people can use the trails, including tricycles and scooters, etc – Female, 40
Other	<ul style="list-style-type: none"> We are waiting for the construction of the Mildura South Sporting Precinct so we can walk to and around the ovals – Female, 30 Need some bins in The Grange for doggy bags – Female, 70

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Topic	Comments
	<ul style="list-style-type: none"> • Incorporate public art features along trails – Male, 50 • Need more bins along all trails – Female, 60 • Could use health students to check peoples' health while they are using the trails – Male, 50 • Need distance markers along trails so you can track how far you have walked – Female, 30 • Implement bike paths similar to the Copenhagen system to separate cars and cyclists – Male, 60 • Make sure trails are not developed in secluded/isolated places – Female, 40 • Need tracks that connect people from outer suburbs to CBD area – Male, 50 • Support development of trails in the newly developed 16th Street area – Male, 50

4.11 Written Submissions

Written submissions were invited from the general community. A total of **four** written submissions were received. Key points arising from these written submissions are:

Submission	Comments
Submission 1 (TW)	<ul style="list-style-type: none"> • Some potential improvements to the cycling network are: <ol style="list-style-type: none"> 1. Deakin Ave - The existing bike path from 15th - 10th street isn't linked to the riverfront. There is a pedestrian path ear-marked for the Deakin Ave redevelopment but that could become a dedicated bike path as there is already plenty of footpath space along either side of Deakin Avenue. 2. The bike path along the railway between 11th and 14th Streets could be extended through to 7th Street and even through to Benetook Ave to provide a cost-effective, safe, off-road bike transport route. 3. With such a good climate for bike riding and being so flat, the district is ideally suited to encouraging cycling as significant form of commuting. With the right person pushing the vision, Mildura could become a leader in Australia in promoting cycle infrastructure. 4. Consider the development of high quality, dedicated bike paths linking Mildura with surrounding towns - Merbein, Irymple, Red Cliffs etc. 5. Develop a bike path down the centre of Deakin Avenue between 7th to 10th Streets where there is no existing bike path or link for bike to access the riverfront 6. Need to develop links between schools / accommodation venues on Deakin Avenue and the riverfront in Mildura.
Submission 2 (M&WS)	<ul style="list-style-type: none"> • Would like to see improvements made to walking tracks from Nichols Point to Mildura.
Submission 3 (Anon)	<ul style="list-style-type: none"> • Like the trails at Kings Billabong and Apex Beach. • Would like to see the Irymple Green Belt connected between Sandilong Avenue and Morpung Avenue to create greater usage.

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Submission	Comments
Submission 4 (Anon)	<ul style="list-style-type: none">Wants missing sections of Irymple Green Belt joined up from Karadoc to Sandilong to create a safer walking route to school than the highway.

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4.12 Community Survey

A survey was developed to seek views from the general community about track and trail preferences, motivations, gaps and opportunities. The survey was publicised via Council's website, through the media and in school newsletters. It was available in both hard copy and electronic format and was open for completion for several months. A total of **142** surveys were completed, 56% by males and 44% by females. The majority of respondents (75%) were aged between 30-59 years of age, and lived in Mildura (57%), Irymple (11%) and Nicholls Point (8%).

Almost two thirds of those who completed the survey, use off road trails for cycling (63%); use off road trails for walking or running (62%); or use on road bicycle lanes for cycling (59%). Of those respondents who cycle for transport, 45% use their bicycles to get to work. Of those who respondents who walk for transport, 27% travel to or from sport or entertainment activities. Of those who respondents who cycle or walk for recreation, fitness is the prime motivation (64% and 59% respectively).

The majority of respondents who use off-road trails spend between 1-3 hours walking or cycling along them (47%); travel between 5-10km (41%); and use trails several times per week (30%). Most cyclists who use on-road bike lanes and responded to the survey spend less than one hour on their bicycle (37%); travel between 5-10km (22%); and use on road bicycle lanes several times each week (28%).

Survey respondents who do not use trails or on road bicycle lanes were asked to identify barriers that prevent them from using these trails and lanes. The major barriers included safety concerns regarding existing on road paths; gaps in the cycling / walking network; and the speed of vehicles along roads / busy roads. These barriers in priority order include:

Barriers	Number of Responses
Safety concerns on existing on-road trails, e.g. <ul style="list-style-type: none">• Lanes are too narrow• Roads are too narrow• 11th & 14th St on the way out to Kings Billabong• Cars parked in cycle lane taking up space; car doors opening into cyclist's path; cars re-entering traffic from car park without regard for cyclists travelling along the lane.	15
There are gaps in the trail network e.g. <ul style="list-style-type: none">• between the bike lanes that run along Deakin Avenue and the Riverfront bike paths;• 16th St, 17th St, Benetook Ave, Sandilong Ave• no bike lanes near Sixteenth Street, and one that stops half way down Karadoc (15th and 16th)• On eleventh street out to the DPI Complex• Trail on Campbell Ave stops at Newton Ave. It would be good if extended to McCracken Street.• Continuation of bike lane or new bike/walking track on 11th street out towards Irymple (3 responses)	11

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Barriers	Number of Responses
<ul style="list-style-type: none"> Along 11th street from Cowra to Koorlong Ave. Karadoc Ave and 11th St 11th St, Deakin Ave, San Mateo, Walnut, 7th Street. From Nichols Point into Mildura (down 11th St) Koorlong to Mildura Triangle to be made by Cureton Ave, 11th St and Belar Ave. This path could also be linked to the path from the centre of Nichols Point that finishes at Woodsies 	
Speed of vehicles / busy roads	10
Lack of trail connections to other trails (i.e. continuous network)	6
Lack of on-road bike lanes	5
Lack of off road shared trails	4
Poor maintenance of existing trails	4
Lack of consideration of cyclists by motorists	3
Lack of road bicycle education program	1
Lack of sealed paths	1
Lack of bike parking (i.e. in front of the major supermarkets, in Langtree Mall and near all the restaurants)	1
Lack of separated paths (Copenhagen style)	1
Lack of safe places to teach children to ride a bicycle	1
Prefer shared footpaths (painted red to indicate cyclist's side)	1
Existing trails are too sandy	1
Lack of incentives to cycle, e.g. could consider rate reduction	1

On Road Bicycle Lanes

In terms of the most important destinations to be able to travel along **on-road** bicycle routes, respondents have identified the following eight routes:

- Mildura to Merbein (31)
- Mildura to Red Cliffs (22)
- Mildura to Centro Shopping Centre (21)
- Mildura to Irymple (19)
- Mildura to Nichols Point (19)
- Irymple to Centro Shopping Centre (7)
- Mildura to Koorlong (6)
- Werrimul Rd to Benetook Ave (5).

A number of survey respondents also identified Deakin Ave as an important on-road route (but didn't mention start and finishing points), as well as Ontario Avenue, Walnut Avenue and San Mateo Avenue.

In terms of **on road bicycle lanes**, the five most **used** routes at present are:

- Deakin Ave (32)
- 11th St (23)

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- 15th St (22)
- Walnut Ave (22)
- 7th St (12)

The fifteen most popular areas where people would like to see **on-road** bicycle lanes developed include:

1. 11th St (23)
2. Deakin Ave - from 10th St to 7th St (9)
3. Mildura to DSE / DPI building via Eleventh Street (Koorlong Ave) (9)
4. Kings Billabong to Mildura along 11th St (8)
5. 14th St (8)
6. Koorlong Avenue between 15st and 11st (8)
7. Benetook Ave (7)
8. 11th Street Nichols Point / Irymple (7)
9. Ontario Ave (6)
10. San Mateo Ave (5)
11. Merbein – Mildura - River Road (4)
12. Etiwanda Avenue - 15th St to 7th St (4)
13. Walnut Ave (4)
14. 7th St (4)
15. Karadoc Ave - Irymple 16th to 14th St (4)

The top five most important features for an **on road** bicycle lane (i.e. those rated 'of some importance', 'quite important' and 'very important'), are:

1. Clearance distance from parked car doors (100%)
2. Connectivity (lanes available for the whole trip) (99%)
3. A minimum width of one metre (98%)
4. A smooth surface (98%)
5. Cyclists box in front of left lane at traffic lights (83%).

Of least importance are a coloured green surface painted onto the bike lane and island barriers at roundabouts.

Survey respondents were asked whether or not they had any general comments to make about **on road** bicycle lanes in Mildura. These comments were mostly about:

- lack of on road cycling lanes
- poor design of on road bicycle lanes, particularly near roundabouts and when the cycling trail passes behind angle parking or is required to share a car parking lane
- conflicts between motorists and cyclists, generally related to issues such as lack of understanding of road rules, poorly defined on road bicycle lanes, cyclists venturing onto the roadway to avoid a poorly maintained section of on road bicycle lane,
- poor standard of maintenance of existing on road cycling lanes – need for regular sweeping of on road trails and repairs of pot holes
- lack of connectivity to other trails

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- support for more clearly defined and separated lanes such as those in Europe
- support for high quality north-south and east-west super bicycle lanes to encourage commuter cycling, with other bicycle lanes as secondary lanes
- desire for safer cycling routes around schools
- support for cycle trails along rail reserves
- lack of shoulders on many rural roads.

Off Road Tracks and Trails

The most commonly used **off-road trails** used in Mildura Rural City Council are:

- Riverfront / Apex Park (87)
- King's Billabong (36)
- Merbein Common (13)
- Nichols Point (7)
- Johnsons Bend (6)
- Lake Hawthorn (5)
- Etiwanda Wetlands (5)
- Merbein / Merbein Common (5)
- Lock 11 Island (4)
- Psyche Trail / Bruce's Bend (4)
- 15th St to Irymple (4)
- Deakin Ave Shared Path (3)
- Lake Ranfurly (3)
- Rail corridor between 14th and 11th Streets (3)

In terms of **off road** trail surfaces, the most preferred option for walkers is crushed, compacted gravel (59%), whereas for cyclists it is either crushed, compacted gravel (36%) or a sealed asphalt or concrete track (33%).

According to survey respondents, signage at entry points of trails is the best source of information about trails for both residents and visitors (83%), followed by maps / brochures (74%) and downloadable maps sourced from websites (65%). Word of mouth and information from local businesses such as bicycle shops also play a role in the promotion of trails, however, respondents stated that they are least likely to source information from magazines / newspaper articles or advertisements; information from membership organisations; or guidebooks.

The top ten most important features for an **off road trail**, (i.e. those rated 'of some importance', 'quite important' and 'very important'), are:

1. Well maintained trails (98%)
2. Trails that provide good scenery and a variety of scenery (93%)
3. Trails that travel next to a river or water body (88%)
4. Trails that have all intersections / changes in direction sign posted (87%)
5. Trails that travel through bushland (86%)
6. Trails with self-contained loops (85%)
7. Trails that are located well away from major roads (82%)

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8. Trails that provide interpretive information / signage (78%)
9. Trails that provide secure parking at the beginning / end of a trip (76%)
10. Trails that visit areas of cultural / historical significance (76%).

Of least importance are trails that travel near food / beverage outlets; trails that travel via wineries; trails that travel through farmland; trails that have toilets along the way; trails that provide access to drinking water; and trails that offer regular rest stops.

Suggestions for new **off-road** trails are mostly focused on developing a linkage from the Mildura CBD to King's Billabong; developing connections between and within outlying towns; developing additional trails along the riverfront (or at least improving linkages between various sections); and developing off road trail opportunities in the Nichols Point area. Specific recommendations received from survey respondents include:

Location	Details
Outlying towns	Trails to outlying towns and trails to connect towns (6)
Riverside Golf Course	Develop a trail in the bushland near Riverside Golf Course
Mildura Airport	Develop a trail in the bushland near Mildura Airport
Deakin Ave	Develop a dedicated bicycle path down the centre of Deakin Avenue to the River Develop shared cycling / walking trails down the centre of Deakin Ave
11th Street	Develop an off road trail on 11 th St
Kings Billabong	Develop an off road trail along 11 th St to Kings Billabong / Irymple (8) Extend trail from Marina to King's Billabong (3) Develop 2-3 new sections of trail at Kings Billabong (2) Link King's Billabong to Red Cliffs
Eastern Irymple	Develop a trail incorporating Eastern Irymple and Nichols Point through to the Highway and the new developments around Kings Billabong
Nichols Point	Develop a trail to link Cureton Ave / 11 th St with Nichols Point (3) Develop a trail along the river to Nichols Point (2) Develop a trail to Nichols Point School – from 5 th St to the school (2) Improve safety of 11 th St / Benetook Ave route to Nichols Point
Irymple	Develop a trail along Campbell Ave, Irymple and extend to McCracken St to encourage children to ride to school Develop a trail along the rail reserve between Irymple / Red Cliffs and Mildura CBD (2) Extend Irymple Green Belt to Mildura CBD
Cureton Ave	Develop a trail to link Cureton Ave to 7 th Street
Apex Park	Extend Apex Park trail to 11 th Street and Merbein
Red Cliffs	Develop off road trail to connect the Mildura to Red Cliffs (3) Develop a trail along the river from Abbotsford Bridge to Red Cliffs Pumping station Develop a trail from Psyche Pumps to Red Cliffs Pumps via Horseshoe Lagoon Develop a trail from Red Cliffs up stream around Cardross Lakes Develop a trail from Red Cliffs to Werrimul (rail trail) and down to Lake Cullulleraine

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Location	Details
Lake Hawthorn	Develop a loop to connect Lake Hawthorn, Snakes and Ladders, Ontario Ave, Ranfurly Way and 17 th Street. Develop a trail around Lake Hawthorn from 14 th St and Ontario Ave along the railway line to the Lake Hawthorn outlet.
Riverfront	Open up the river front past Baldwin Boats to follow the river along the Three Chain Reserve Develop a variety of trails along the river that are shorter in length, with rest stops and water access Link existing trails along the riverfront Develop more trails along the river front (5)
Family	Develop trails that allow easy access for prams and children on bikes and scooters (optimally sealed) – preferably around the river front and parkland areas (2)
Regional	Develop a trail to Out to Gol Gol / Trentham Cliffs, which access Gol Gol Hotel and Trentham Winery. Develop a long distance trail along the river from Wentworth to Robinvale via Nangiloc and Hattah Lakes using much of the existing network of roads and tracks (which are already in place) Develop a trail between Mildura and Wentworth Develop a trail into the Swan Hill municipality
Colignan / Nangiloc	Develop a trail along the Murray around Nangiloc and Colignan
Koorlong	Develop a trail out to 11 th St from 15 th St
General	Develop inner city travelling to outer city trails for safe commuting
Karadoc Ave	Develop a trail between Karadoc Ave and 14 th St
Chaffey Trail	Further develop the proposed Chaffey Trail Link the Chaffey Trail and Apex / Lions Walk
Chaffey Bridge	Develop a trail from Chaffey Bridge to Bruce's Bend
Schools	Develop safe trails to all schools
Mountain Bike Park / Pump Track	Develop a Mountain Bike Park / Pump Track similar to that of the skate park or BMX track
Merbein	Further develop the trail between Merbein / Merbein Common and Mildura / Apex Park (4) Develop a trail between Merbein and Red Cliffs
Johnsons Bend	Develop a trail that utilises the area toward Johnsons bend from Apex Park
Lock 11	Further enhance trails at Lock 11
Etiwanda Wetlands	Further develop trails through Etiwanda Wetlands
Railway Easement	Develop a trail along the railway easement between Benetook and 7 th St for commuter use, linked to other river trails
Linkages	Fix gaps between existing trails (e.g. Chaffey Bridge to Bruce's Bend , Red Cliffs boat launching area into Red Cliffs Art gallery precinct to start of Linear track(at 11 th St) and track near River Road pottery - this would create one continuous track between Merbein and Red Cliffs.
Rail Trail	Develop a rail trail from Werrimull to Millewa
Brides Bend	Develop a trail between Mildura and Brides Bend

4.0 COMMUNITY CONSULTATION

Suggestions for existing **off road** trails that need upgrading are primarily focused on three of the most popular trails, i.e. Apex Park / river front, King's Billabong and Merbein / Merbein Common. Specific recommendations include:

Location	Details
Deakin Ave	Reduce steepness of ramp at Argyle St (off Deakin Ave)
	The shared path along Deakin avenue needs a big make over
	Bike lane on Deakin Avenue needs to be resurfaced
Mildura CBD	Need safe route from 10 th – 7 th Streets away from parked cars
	railway line trail from 9th st to Lake Hawthorn
	Cureton Avenue extension - wet lands
	Walking trail that follows behind wetlands on Ontario Avenue could be better maintained and signposted and extended to other areas i.e., along train tracks or back streets from the wetlands to the river, or from 14th St towards lake hawthorn for variety and offer walking trails at the 15th St end of town.
Apex Park / Riverfront	Some sections of Murray river bank trail have deep sand
	Extend Apex Park trail by upgrading river track through to Olympic Speedway or on to Merbein.
	Apex Riverfront track needs to be wider to accommodate walkers and bikes
	Apex Park - Ranfurly Way - the surface has deteriorated in sections. Needs more signage
	Apex Park to Nichols Point
	Apex park, concrete to skate on too
	River Frontage and Parkland areas - would be favourable to be connected off main roads.
	Better connect the trail along the Murray River past the Old Homestead, and connect at Apex Park
	Lock 11 is disgraceful with discarded fish, litter, smell and poor signage of thing of interest
	Link the Murray River Foreshore link to the new Marina development under the Bridge rather than having to cross the highway and walk along Cureton Avenue.
	Apex Park to Pump Hill - inconsistent surface
	Improve the river tracks to the same standard as work done from (old) Fauna Park so that we have one long track all the way along the river
	Trail to Apex Park
	River front
	Chaffey Bend is sandy and uneven.
Red Cliffs	Re-open the Red Cliffs Scenic Reserve stairway.
Kings Billabong	Linking Mildura to Bruce's Bend and Kings Billabong to take advantage of the river and the existing network of trails around the Billabong and Psyche Pumps.
	Trail to Kings Billabong
	Complete trail along river behind Mariner to Kings Billabong - it would finish the trail to Red Cliffs

4.0 COMMUNITY CONSULTATION

Location	Details
	Need to help the friends of Kings Billabong to maintain their (great) trails
Nichols Point	School Route to Nichols Point Primary
Centro Shopping Centre	Bike access to Centro - bike riders have to watch out for cars all the time and there is not enough bike-designated road space for riders to enter and exit the 'car park' safety - it should not just be a 'car' park; it's for bikes also.
Merbein	Linking Mildura to Merbein via the river - an excellent scenic ride that just needs to have a formalised trail all the way.
	Link between Pump Hill and Merbein Common; currently impassable.
	Merbein to Wentworth
	River Rd to Merbein
General	Bike paths on roads need to be marked clearly (lines).
	Many informal trails on lands controlled by PV or DSE simply because there are often too many. Requires some rationalisation and signage and probably surface repairs too.

Respondents stated that their favourite aspects of existing **off road** tracks and trails in Mildura Rural City Council are:

- proximity to the river (13)
- pleasant scenery (11)
- good standard of maintenance of trails (particularly those along the Murray River in Mildura) (5)
- availability of trails and the opportunities they present for fitness and social interactions (4)
- safety of trails (4)
- separation from vehicles (3)
- located within bushland (3)
- good, flat surface (3)
- pleasant place to exercise / recreate (3)
- trails developed in good locations (3)

Least favourite aspects of existing **off road** tracks and trails in Mildura Rural City Council, according to survey respondents are:

- lack of connections in the cycling walking network (12)
- insufficient number of trails in the municipality (9)
- poor standard of maintenance for some trails (8)
- poor standard or lack of signage (4)
- lack of promotion of trails (3)
- trails are too short (3)
- too much traffic (2)
- lack of connections to CBD and areas that surround the CBD (2)
- lack of connection to river front tracks (2)
- safety concerns (e.g. 11th St to Kings Billabong) (2)
- not enough trails outside Mildura CBD (2)
- motorcyclists / trail bike riders using trails (2)

4.0 COMMUNITY CONSULTATION

- lack of drink refill stations (2)

General comments

Respondents were asked to identify potential improvements to the **off road** cycling network. Many of the comments received were very supportive of existing trails and encouraging of further trail development. Improved marketing and maintenance were also highlighted as areas requiring further attention. Additional signage, a greater focus on safe designs of trails, the development of purpose-built mountain bike trails and the development of exercise stations along the river front were also considered worthy of further exploration by survey respondents.

Detailed Survey Responses

Areas where people would like to see **on-road** bicycle lanes developed include:

Location	Number of Respondents
11 th St	23
Deakin Ave - from 10th St to 7th St	9
Mildura to DSE / DPI building via Eleventh Street (Koorlong Ave)	9
Kings Billabong to Mildura along 11th St	8
14 th St	8
Koorlong Avenue - Koorlong Ave between 15 th St and 11 th St	8
Benetook Ave	7
11 th Street Nichols Point / Irymple	7
Ontario Ave	6
San Mateo Ave	5
Merbein – Mildura - River Road	4
Etiwanda Avenue - 15 th St to 7 th St	4
Walnut Ave	4
7 th St	4
Karadoc Ave - Irymple 16 th to 14 th St	4
Sandilong Avenue - from Fifteenth to Eleventh Streets	3
Cureton Ave - Mildura to Red Cliffs	3
20th St between Benetook and Deakin Ave shared walking and cycling track	1
11th St shared footpath should go all the way to Ranfurly Way and Kings Billabong	1
Link Nichols bike track at Cureton (Woodsies) to the Calder Hwy via Morpung Avenue	1
Cureton Avenue (Nichols Point into Mildura CBD / Riverfront)	2

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Red Cliffs	1
Ontario Ave to link up with a bike path around Lake Hawthorn	1
15 th Street - all the way to Irymple	2
Irymple / DPI to Mildura CBD	1
Eleventh Street from Benetook to Nichols Point	1
16 th St	1
Length of 11 th Street to Merbein	1
Any roads that have a 80-100km speed limit that are 10km from town	1
11 th Street Mildura – Red Cliffs	1
Campbell Ave past Irymple South Primary School	1
Eleventh Street beyond Benetook Avenue	1
Irymple Ave from 14 th to 5 th Street	1
Irymple Ave	2
Calder Highway or Avocat Ave from Sunnycliffs to Red Cliffs	1
Nichols Point /Irymple to CBD (14 th Street)	1
Twelfth Street from Ontario to Etiwanda	1
Wentworth Road	1
Eleventh St between Walnut Ave and Cureton Ave	1
Eleventh Street – Koorlong to Cowra Ave	1
Eleventh St from Benetook to Kings Billabong	1
McEdward St	1
Flora Ave - between 8 th and 11 th st preferably shared trail	2
Mildura-Yelta	1
Deakin Ave 9 th St to 16 th St in a safe bike lane continuously	1
17 th Street towards Merbein	1
15 th Street between Centro and Irymple	1
Park Lane Nichols Point	1
Cureton Ave, homestead to Apex Park	1
Merbein – from homes to P12 college	1
River Road	2
Ontario Ave between 15 th and 14 th St on north side	1
11 th Street from Aero Ovals to Nichols Point	1
Mildura to Werrimull Road via Benetook Ave	1
Fifteenth Street/Calder Highway	1
Deakin Avenue shared footpath should go all the way to river	1
Nichols point to the King Billabong reserve near Cooke Street which then links to the Psyche track	1
CBD – Red Cliffs	1
Irymple	1
Bike path Seventeenth St to Link up with bike path around Lake Hawthorn	1
16 th Street all the way to Irymple	1
Continue path along 3 Chain Reserve past Baldwin Boats	1
Sturt Highway	1
16 th St Mildura - Irymple, especially behind Irymple Primary	1

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Ranfurly Way	1
Length of 15 th Street to Irymple and Red Cliffs	1
Irymple – Red Cliffs	1
15th St to Irymple, including through the roundabouts	1
Mildura to Irymple	2
Cowra Ave	1
Calder Hwy Mildura to Red Cliffs	1
Between hospitals and the town centre	1
15 to 11 th Street connection (Irymple Ave/Morpung)	1
20 th Street Cardross	1
Paschendale Rd, Merbein West	2
Fourteenth Street – Karadoc to Koorlong Ave	1
17 th St	2
8 th St to Flora Ave	1
Cowra Ave, Park Lane, Sandilong Ave and Cureton Ave circuit	1
dedicated cycle track along the railway easement from Benetook Ave to the corner of 7 th and Orange Ave	1
CBD to Riverside	1
Park Street Nichols Point (Riverside)	1
14 th St, Cowra Ave to the Billabong	1
13 th St	1
Ontario , Etiwanda, Deakin	1
15 th St	2
Roundabout needed at 10 th and Madden	1
17 th Street, from Merbein, all the way to Irymple shopping area, and down san Mateo, Mildura and Benetook, into Mildura CBD	1
14 th St from San Mateo out	1
Central Mildura to Bike Hub	1
Deakin Ave from 15 th St to 7 th St	1
Meridian Avenue	1
15 th Street bike path should have proper pedestrian/cycle crossings at car park entry points	1
14st from Cowra Ave to Koorlong Ave	1
From the Irymple South Primary school to the new development area of Cureton Avenue	1
Karadoc Avenue (Nichols Point into Irymple)	1
River Road to Link up with bike path around Lake Hawthorn	1
Cowra Ave - near Irymple Primary and Henderson College	2
Around the Nichols Point School	1
All along Cureton Avenue (cycle route)	1
Ontario to Cureton	1
22 nd Street Cardross	1
Fifth St, Merbein	1
Karadoc Ave 15 th St back towards Cardross	1
Red Cliffs-Werrimull	1

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
River front	1
To Riverside Golf Club, very narrow	2
Calder Hwy from Merbein to Abbotsford Bridge	1
7 th St from Benetook to the arts centre	1
Path along railway line between Mildura and Walnut should go all the way to the station	1
Nichols Point via 5 th Street and Benetook to Mildura	1
around The Lake Primary School	1
Mildura to Benetook	1
Fern Ave, Irymple	1
Dalmura Ave and Wentworth Rd (Merbein bypass), Merbein	1
Cureton Ave	1
Walnut Ave out from 15 th St.	1
Mildura-Nangiloc	1
Safe tracks from all directions to La Trobe University and TAFE	1
Karadoc Avenue Nichols Point	1
17 th St from Deakin Ave to Merbein	1
Benetook Ave - from 15 th St to 7 th St - out from 15 th St	2
Walnut Ave - from Mildura to Merbein South - extension west of Airport	2
13 th St	1
Create a round trip for riders 7 th Street end of Mildura and 15 th Street end of Mildura via either Irymple or Nichols Point	1
Nichols Point to CBD (11 th Street)	2
Sealed path along (most of the) railway easement from Ontario Ave to Benetook Ave	1
Cemetery Road Nichols Point	1
12 th St	1

In terms of **on road bicycle lanes**, the most **used** routes at present are:

Location	Number of Respondents
Deakin Ave	30
Walnut Ave	22
11 th St	20
15 th St	12
7 th Street	8
San Mateo Ave	4
Ontario Ave	4
Mildura to Merbein	3
CBD	3
14 th St	3

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Apex Park	3
CBD to Centro	3
10 th St	3
Cureton Ave / Riverfront	3
Centro to Irymple via 15 th St	2
Nichols Point to Woodsies	2
11 th St to CBD	2
Etiwanda Ave	2
15 th Street Calder Hwy Irymple	2
13 th St	2
7 th St – Hugh King Dr	2
Centro to 7 th St	1
Ontario, 15 th St to Apex	1
15 th St – shared footpath	1
Sandilong Ave	1
15 th Street between Irymple Ave and Sandilong Ave	1
Mildura CBD to Hospital	1
Road bike circuit – racecourse, Red Cliffs, Koorlong	1
Irymple, shops, Mildura	1
Etiwanda between 14 th and 7 th	1
15 th St to Red Cliffs	1
Cureton Av from San Mateo to Red Cliffs	1
Nicholls Point to Mildura	1
Nicholls Point to 5 th St	1
Fitzroy Ave, Red Cliffs	1
CBD to Cowra via 11 th St	1
Merbein to Irymple via Calder Hwy	1
Sixteenth St, Walnut Ave, San Mateo Ave	1
Mildura to Kings Billabong onto spiders web onto Koorlong	1
14 th St Cowra to Deakin Ave	1
Merbein – in and around	1
CBD, 13th St, Ontario Ave, Walnut	1
15 th St – Deakin Av	1
Deakin Avenue, Sixteenth St to Seventh St	1
8 th St	1
Nichols Point to Mildura CBD / Riverfront	1
Deakin Ave shared footpath	1
Ontario 15 th Street to Merbein	1
Ranfurly Way	1
Mildura to Red Cliffs via Spiders Web	1
5 th St	1
Mildura to Red Cliffs	1
Nicholls Point	1
Merbein to Irymple via Mildura CBD	1
Mildura to Merbein to back of airport to Mildura	1
Deakin Ave, 15 th St to CBD	1

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Mildura Merbein ring	1
Walnut Avenue, Sixteenth St to Seventh St	1
Mildura Bridge to Bridge	1
Magnolia Ave	1
Mildura Nicholls Point ring	1
Seventh St, Chaffey Avenue to Benetook Avenue	1

In terms of **on road bicycle lanes**, the most **used** routes at present are:

Location	Number of Respondents
Deakin Ave Deakin Ave shared footpath Deakin Ave, 15 th St to CBD Deakin Avenue, Sixteenth St to Seventh St	32
11 th St 11 th St to CBD CBD to Cowra via 11 th St	23
15 th St 15 th Street Calder Hwy Irymple 15 th St – shared footpath 15 th Street between Irymple Ave and Sandilong Ave Centro to Irymple via 15 th St Ontario, 15 th St to Apex 15 th St to Red Cliffs 15 th St – Deakin Ave Ontario 15 th Street to Merbein	22
Walnut Ave	22
7 th Street 7 th St – Hugh King Dr Centro to 7 th St 7 St, Chaffey Avenue to Benetook Avenue	12
San Mateo Ave	4
Ontario Ave	4
Mildura to Merbein	3
CBD	3
14 th St	3
Apex Park	3
CBD to Centro	3
10 th St	3
Cureton Ave / Riverfront	3
Nichols Point to Woodsies	2
Etiwanda Ave	2
13 th St	2
Sandilong Ave	1
Mildura CBD to Hospital	1
Road bike circuit – racecourse, Red Cliffs, Koorlong	1

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Irymple, shops, Mildura	1
Etiwanda between 14 th and 7 th	1
Cureton Ave from San Mateo to Red Cliffs	1
Nicholls Point to Mildura	1
Nicholls Point to 5 th St	1
Fitzroy Ave, Red Cliffs	1
Merbein to Irymple via Calder Hwy	1
Sixteenth St, Walnut Ave, San Mateo Ave	1
Mildura to Kings Billabong onto spiders web onto Koorlong	1
14 th St Cowra to Deakin Ave	1
Merbein – in and around	1
CBD, 13th St, Ontario Ave, Walnut	1
8 th St	1
Nichols Point to Mildura CBD / Riverfront	1
Ranfurly Way	1
Mildura to Red Cliffs via Spiders Web	1
5 th St	1
Mildura to Red Cliffs	1
Nicholls Point	1
Merbein to Irymple via Mildura CBD	1
Mildura to Merbein to back of airport to Mildura	1
Mildura Merbein ring	1
Walnut Avenue, Sixteenth St to Seventh St	1
Mildura Bridge to Bridge	1
Magnolia Ave	1
Mildura Nicholls Point ring	1

Off Road Tracks and Trails

The most commonly used **off-road trails** used in Mildura Rural City Council are:

Location	Number of Respondents
Riverfront / Apex Park	87
King's Billabong	36
Merbein Common	13
Nichols Point	7
Johnsons Bend	6
Lake Hawthorn	5
Etiwanda Wetlands	5
Merbein	5
Lock 11 Island	4
Psyche Trail / Bruce's Bend	4
15 th St to Irymple	4
Deakin Ave Shared Path	3
Rail corridor between 14 th and 11 th Streets	3
Lake Ranfurly	3

4.0 COMMUNITY CONSULTATION

Location	Number of Respondents
Cardross	2
Cowra Ave	2
Irymple Green Belt	2
Ranfurly Way	1
Colignan / Nangiloc riverfront	1
Walpeup	1
Iraak	1
Road between sewerage farm and native nursery	1
Track between Sandilong Ave and Irymple	1
Cureton Ave Wetlands	1
Abbotsford Bend	1
Bike tracks in Mildura West	1
Bob Cordwell Wetlands	1

Least favourite aspects of existing **off road** tracks and trails in Mildura Rural City Council, according to survey respondents are:

- lack of connections in the cycling walking network (12)
- insufficient number of trails in the municipality (9)
- poor standard of maintenance for some trails (8)
- poor standard or lack of signage (4)
- lack of promotion of trails (3)
- trails are too short (3)
- too much traffic (2)
- lack of connections to CBD and areas that surround the CBD (2)
- lack of connection to river front tracks (2)
- safety concerns (e.g. 11th St to Kings Billabong) (2)
- not enough trails outside Mildura CBD (2)
- motorcyclists / trail bike riders using trails (2)
- lack of drink refill stations (2)

Least Favourite Aspects of Trails	Number of Respondents
Lack of connections / gaps in the network	12
Not enough trails	9
Poor maintenance of trails	8
Poor / lack of signage	4
Lack of promotion	3
Trails are too short	3
Traffic	2
Lack of connections to CBD and areas that surround CBD	2
Lack of connection to riverfront tracks	2
Safety concerns (e.g. 11 th St to Kings Billabong)	2
Not enough trails outside Mildura	2
Motorbike users	2
Lack of drink refill stations	2
Too many road crossings	1

4.0 COMMUNITY CONSULTATION

Least Favourite Aspects of Trails	Number of Respondents
Dog excreta and lack of dog bags and bins	1
Homeless people popping out of the bushes	1
Lack of connection from Mildura to Red Cliffs	1
Tracks don't cater for tourists	1
Too many tracks on main roads	1
Trails that include roads without markings	1
On-road bike lanes that disappear when cars park in them	1
Trails that are too narrow	1
Trails not suitable for inline skates	1
Inappropriate use by horse riders causes damage to trails	1
Lack of interpretive signage	1
Lack of toilets along trails	1
Lack of accessibility	1
Lack of campaign to encourage safer more considerate car driving	1
Trails are too busy, e.g. Apex Park Track	1
Trails are not well used	1

Respondents stated that their favourite aspects of existing **off road** tracks and trails in Mildura Rural City Council are:

- proximity to the river (13)
- pleasant scenery (11)
- good standard of maintenance (particularly for trails along the Murray River in Mildura) (5)
- availability of trails and the opportunities they present for fitness and social interactions (4)
- safety of trails (4)
- separation from vehicles (3)
- located within bushland (3)
- good, flat surface (3)
- pleasant place to exercise / recreate (3)
- trails developed in good locations (3)

Specific likes include:

Favourite Aspects of Trails	Number of Respondents
Being near the River	13
Scenery	11
Good standard of maintenance	5
Availability of trails / opportunities they present	4
Safety	4
Separation from vehicles	3
Located within bushland	3
Good, flat surface	3
Pleasant place to exercise / recreate	3
Trails in good locations	3

4.0 COMMUNITY CONSULTATION

Favourite Aspects of Trails	Number of Respondents
Being able to walk dogs off lead	1
Being outdoors	1
Distance	1
Good connectivity	1
Good free activity for the family outdoors	1
No motorbikes	1
Pleasant place to socialise	1
Privacy	1
Quality of trails	1
Relaxation	1
The fact that trails service immediate community areas	1
Variety of unofficial trails	1

General comments

Respondents were asked to identify potential improvements to the off road cycling network. Many of the comments received were very supportive of existing trails and encouraging of further trail development. Improved marketing and maintenance were also highlighted as areas requiring further attention. Additional signage, a greater focus on safe designs of trails, the development of purpose-built mountain bike trails and the development of exercise stations along the river front were also considered worthy of further exploration by survey respondents. Specific comments included:

- Extend trail from Koorlong Primary School (Benetook Ave to 20th St) along south side of 20th St to Deakin Ave
- Dog excreta is a problem
- Consider water taps at the Bridge
- Consider installing some exercise stations along the river front (2)
- Encourage bike hire at old Snakes and Ladders site so children could learn to ride in safety
- Develop off road tracks along the river from the CBD to Merbein and Kings Billabong
- Need to improve marketing of existing trails to locals and visitors (4)
- Need more trails, near the river and close to people's homes (7)
- Greater focus on safe design of trails (2)
- Need more signage (2)
- Need improved maintenance (3)
- Need to fill in gaps in the network
- Need to ensure that motorbikes don't use walking / cycling trails
- Don't focus on off-road trails – use existing roads in built up and horticultural areas
- Strategy needs to incorporate PV and DSE in terms of off road trail management and rationalisation. Mallee CMA may have a role to play too.
- Require more tracks that cater for mountain bikes - narrow, twisty with natural undulations, not wide crusher dust trails that are now replacing those that existed – e.g. from Ski Club to Cowra Ave (2)
- Need to install a barrier near Merbein pottery on river side so that cars are separated from bicycles and riders do not need to ride on the busy road between Merbein and Mildura.

5.0 Policy Context

A broad range of documents were reviewed in order to gain an understanding of previous policy directions and strategies that may impact on the development of a Tracks and Trails Strategy for Mildura Rural City Council. These reports included:

1. Mildura Rural Council Vision 2025
2. Mildura Rural City Council Plan 2009 – 2013
3. Mildura Rural City Council Municipal Health and Wellbeing Plan 2009 – 2013
4. Mildura Retail Strategy 2010
5. Mildura Planning Scheme Review 2010
6. Mildura Road Management Plan 2009
7. Sunraysia Remnant Linkage Strategy 2003
8. Significant Linkages Strategy 2007
9. Cullulleraine Structure Plan 2006
10. Mildura CBD Plan 2007
11. Industrial Land Strategy Update 2006
12. Fifteenth and Deakin Structure Plan 2010
13. Etiwanda Report for Residential Development Plan 2010
14. Irymple Report for Residential Development Plan 2007
15. Nichols Point Report for Residential Development Plan 2007
16. Riverside Report for Residential Development Plan (2007)
17. Residential Development of Land East of the Grange Mildura (2002) & Residential Land for Red Cliffs (2002)
18. Irymple Structure Plan 2010
19. Ouyen Structure Plan (2006)
20. Mildura Murray Riverfront Central Precincts Feasibility Study (2010)
21. Irymple Community Plan 2011
22. Mildura Strategic Bicycle Plan 2001-2011
23. Off Road Bicycle Routes Around Mildura 2007
24. On Road Rides around Mildura (2011)
25. SunBug Bicycle Strategy Plan for Mildura Draft (2011)
26. Safe Cycling of our Roads Sunraysia BUG (2010)
27. Mildura Recreation Strategy Vol 1 2008
28. Mildura Recreation Strategy Vol 2 2008
29. Mildura Rural City Council Public Open Space Strategy 2004
30. Mansell Reserve Master Plan (2011)
31. Mildura Recreation Reserve Master Plan 2009
32. Mildura Sporting Reserves Master Plan Strategy (2004)
33. Old Aerodrome Ovals Sporting Complex Master Plan 2004
34. Old Aerodrome Ovals Sporting Complex Master Plan Stakeholder Review 2009
35. Cardross Recreation Reserve Master Plan and Report (2009)
36. Chaffey Recreation Reserve, Merbein Master Plan and Report (2009)
37. Henshilwood Recreation Reserve, Irymple Master Plan and Report (2009)

38. Kenny Park, Merbein Master Plan and Report (2009)
39. Johansen Recreation Reserve Lake Cullulleraine Master Plan and Report (2009)
40. Murrayville Recreation Reserve Master Plan and Report (2009)
41. Nangiloc Recreation Reserve Master Plan and Report (2009)
42. Nichols Point Recreation Reserve Master Plan and Report (2009)
43. Blackburn Park Ouyen Recreation Reserve Master Plan 1 and 2 and Report (2009)
44. Quandong Recreation Reserve, Red Cliffs Master Plan and Report (2009)
45. Underbool Recreation Reserve Master Plan and Report (2009)
46. Walpeup Recreation Reserve, Master Plan and Report (2009)
47. Loddon Mallee Regionally Significant Trails Strategy (2010)
48. Victorian Government (2010) Pedestrian Access Strategy – A Strategy to Increase Walking for Transport in Victoria
49. Victorian Government (2009) Victorian Cycling Strategy
50. Mildura Road Hierarchy Major Traffic Route Proposals (2007)
51. Community Plans

Mildura Rural Council Vision 2025

Purpose:

The Vision provides an aim for the Council for the next 14 years – “Making this the most liveable, people friendly community in Australia”

Relevance:

The document does not specifically mention trails but it promotes “an environment where the community experiences health, safety and well-being to enjoy their chosen lifestyle.”

Council Plan 2009 -2013 (Updated 2011)

Purpose:

The Council Plan expands on Council’s Vision and provides details on how it will be implemented.

Relevance:

The Council Plan reports on all the documents that are to be implemented to achieve the vision. The Plan promotes the following points:

Liveable Community - 1.5 Planning and Development Standards

- Ours will be a community “That is connected with the river”

Growth of the Economy - 3.1 Economic Development

- Implement and evaluate Chaffey Trail Strategy by 2013

Active Community - 4.2 Recreation and Sport

- Review and Implement Bicycle Strategy 2010 to 2025
- Develop Tracks and Trails Strategy 2011

Municipal Health and Wellbeing Plan 2009 – 2013

Purpose

This document outlines the priorities with respect to the development of community health and well being over the next four years.

Relevance

It is recommended in 6.2 Active Participation that Council develops a Tracks and Trails Strategy (6.4).

Mildura Retail Strategy 2010

Purpose

The purpose of the report was to provide a strategy to guide the future location of retail development over the period 2010 to 2025. The study covered the urban area of Mildura and the nearby towns of Merbein, Irymple and Red Cliffs.

Relevance

The report notes that pedestrian traffic should be encouraged throughout the retail areas as a means to increase revenue.

Mildura Planning Scheme Review (2010)

Purpose

This document carried out a full review of the Mildura Planning Scheme and amendments to the scheme since 1999. It included additional submissions, a review of the zones and overlays and their schedules and the preparation of a single final review report.

Relevance

Although there are no references to walking and cycling paths in this document, the scheme does encourage planning for open space and gives guidelines for provision of open space activities that can provide linkages via walking and cycling paths.

The document does point out that the current MSS lacks a community wellbeing section that could draw upon other strategies that sit outside of the planning scheme such as the open space strategy.

Municipal Road Management Plan (2009)

Purpose

The purpose of the Road Management Plan is to establish a management system for Council to inspect, maintain and repair its public roads based on policy and operational objectives having regard to available resources. It also sets the relevant standard in relation to discharge of duties in the performance of those road management functions.

Relevance

The road network and footpath network are rated in two separate hierarchies. There is no mention of trails, shared paths, pedestrian and cycling linkages. Footpaths are mentioned in more detail.

Sunraysia Remnant Linkage Strategy (2003)

Purpose

The SRLP aims to identify potential strategic corridors throughout the irrigation and urban zones of Sunraysia that provide linkages between the dryland and Riverine environments.

Relevance

Construction of walking and bicycle trails, vehicle tracks and car parks were proposed to be implemented. These included Ranfurly Way by 2007, Johnson's Bend by 2005 and Chaffey Bend for upgrading. Community organisations were being involved in developing these trails.

Significant Linkages Strategy (2007)

Purpose

The purpose of the Strategy was to:

1. Identify significant linkages along road reserves that provide strategic continuous connectivity between larger vegetated public land blocks, smaller reserves and private land remnants.

5.0 POLICY CONTEXT

2. Provide strategic direction for corridor widening, vegetation establishment, protection and enhancement activities within the MRCC.

Relevance

The document points out the importance of roadside corridors for remnant vegetation and fauna. It does not mention off road trails through the bush; the main focus is on road reserves.

Cullulleraine Structure Plan 2006

Purpose

The aim of the Structure Plan is to provide a planning and staging blueprint for management and development of Cullulleraine Township and environs.

Relevance

Pedestrian movement in Cullulleraine is generally satisfactory at a local level, with well-defined and maintained footpaths in the commercial, public and recreational areas. There are number walking trails located around the perimeter of Lake Cullulleraine. However the existing paths including signage and information display needs to be upgraded.

The unsealed road on the north side of the Sturt Highway is a major pedestrian link between the public reserve and convenience store, also used as vehicular access to properties abutting the Sturt Highway. Whilst vehicle movements are not significant, there appears a need to restrict vehicle access along the track on the grounds of pedestrian safety. The track should also be upgraded with an all weather surface.

Clear signage should be placed at intervals showing the direction of the trail and the trail start and finish. The trail surface needs to be upgraded to a safe standard and cleared of fallen trees and braches.

The Draft Structure Plan states the vision for Lake Cullulleraine needs to promote the area as an important recreational and community precinct for visitors offering a range of sporting and leisure activities set in unique bush–outback environment whilst providing a critical water resource to stakeholders. To further promote and manage the unique role that Lake Cullulleraine provides to all stakeholders including the local community, recreational and leisure users, irrigators, it is recommended that the perimeter walking track is upgraded for pedestrians and cyclists, and possibly upgrading the Lake crossing to the north.

Mildura CBD Plan 2007

Purpose

This plan reviews the original Urban Design Framework Plan of 1999 and identifies outstanding actions. It also identifies short term and long term actions that can be undertaken by the Council, other organisations and stakeholders, so that the Mildura CBD sustains and prospers in achieving Council's vision.

Relevance

The Mildura CBD Plan has developed a number of strategies and actions regarding walking and cycling. A key priority is to provide easy access for pedestrians and cyclists from outside and within the CBD.

Recommendations include:

- Encouraging laneways and weather protection for pedestrians (verandas) and outdoor cafes and markets.
- Being environmentally sustainable by changing the patterns of behaviour about access to and around the CBD. Activities will need to be more easily accessible on public transport, by bike or on foot.
- Bike facilities and cycle paths throughout the CBD to support commuter and recreational cycling.
- Facilitating pedestrian movements between the River environs and CBD with improved pedestrian links across Seventh Street at the intersections with Madden Avenue and Langtree Avenue.
- Creating two priority pedestrian routes along Eighth and Ninth Streets from residential areas to the CBD with tree planting for shade, signage and lighting
- Facilitating pedestrian movement across Deakin Avenue at the intersections of Eighth and Ninth Streets including:
 - Longer signalised priority for pedestrians.
 - Directional signage on street corners directing pedestrians to key functions and attractions within the CBD.
 - Shade
 - Lighting

5.0 POLICY CONTEXT

- Provision of shaded seating in central median strip
- Ensure that improved pedestrian connections and installation of interpretive and directional signage, facilitate tourist movements.
- Review pedestrian routes to and from car parks to ensure they are well lit and signed.

Industrial Land Strategy Update December 2006

Purpose

The purpose of this strategy was to update previous industrial strategies and investigations to determine if (and where) additional industrial land and any other consequential land rezoning can be strategically justified at this time.

Relevance

There are no references to walking and bike paths in this document although there are references to obtaining overlays and open space. These include:

- Liaise with VicRoads regarding the application of the Public Acquisition Overlay to facilitate the road widening of Benetook Avenue between 14th and 15th Streets;
- Apply a Public Acquisition Overlay over the recommended Greenbelt/Open Space Corridor located mid block between 14th and 15th Streets;
- Prepare and apply a Development Contributions Plan;
- Overlay for the new industrial rezoning along Benetook Avenue to facilitate the equitable cost recovery of Council funded Stormwater and local road infrastructure as well as costs associated with the acquisition of the recommended Greenbelt / Open Space Corridor.

Fifteenth & Deakin Structure Plan 2010

Purpose

The purpose of the Fifteenth and Deakin Structure Plan is to provide a framework for integrated development of this important sub-regional activity centre, managing change to the physical environment and guiding future activities.

Relevance

Key issues identified by the community include:

5.0 POLICY CONTEXT

- The amount of car parking available in peak times
- Pedestrian and cycle safety
- Pedestrian and cycle infrastructure
- The amount of 'green space' and public space
- Traffic management issues

Key opportunities identified by the community:

- Install a signalised intersection for Deakin Avenue and Fifteenth Street to increase pedestrian and cyclist safety and improve traffic management.
- Streetscape, landscaping and signage treatment improvements.
- Improve pedestrian and cycle pathways and infrastructure

Key Study objectives advised that a long term prospect to re-route through traffic, particularly large trucks, away from Fifteenth Street is favoured as it will significantly reduce heavy vehicle movements and consequently improve pedestrian priority within the Study Area.

Opportunities to improve pedestrian and cyclist permeability across private sites will be encouraged through the establishment of pseudo service lanes and through limiting the extent of fencing around private developments. Promoting sustainable modes of transportation can be supported through high quality and attractive infrastructure and facilities, such as attractive bike parking racks.

A key direction of the Structure Plan is to facilitate the creation of a high quality, attractive and safe public realm that encourages an increase in pedestrian and cyclist movement throughout the Study Area. This includes recommendations to improve the existing shared path network along both sides of Fifteenth Street and enhance facilities such as drinking fountains, seating and bike parking rails. Such improvements could provide an impetus for more pedestrian and cyclist movements to, from and within the study area as an alternative form of transport to the car.

The provision of pedestrian priority routes through car park areas is considered key to ensuring compatibility between all forms of movement; directing pedestrians in an orderly and safe manner along the shortest practicable routes. Designation of these routes should be highlighted through painted line markings, coloured pavements or raised tables which will serve to slow traffic.

City Gate Precinct

The objective is to create a viable and sustainable City Gate Activity Centre focused around a compact retail centre that reduces dependency on the car.

Pedestrian / Cycling Strategies and Actions are:

- Improve the existing shared pathway along both sides of Fifteenth Street commensurate with available funds and subject to VicRoads approval.

5.0 POLICY CONTEXT

- Improve safety and access connections to surrounding residential areas, particularly at the rear of commercial developments to provide alternative connections to the key activity areas in the City Gate Activity Centre.
- Improve links to the existing and proposed network of open spaces to the north-east of Fifteenth Street.
- Improve pedestrian amenity through the use of street tree planting and landscaping at key nodes such as prominent corners.
- Improve cyclist amenities and provide high quality end of trip facilities at key locations. This includes bicycle lockers, vertical storage and change facilities.
- Provide more bicycle parking racks through City Gate including at Centro and any new retail developments.
- Provide drinking fountains, seating and shade at popular bicycle parking locations (e.g. Centro).
- Encourage businesses to provide change facilities and bicycle storage to encourage people to ride to work.
- Prepare a Streetscape Master Plan for Fifteenth Street (between Deakin Avenue and San Mateo Avenue) to implement recommended improvements to Fifteenth Street, including
 - continuation of the shared path network, additional street tree planting and low water species planting in kerb outstands; incorporating the principles of water sensitive urban design
- Fences and barriers should be avoided within the 'retail core' where appropriate to encourage better integration of activities and access/ movement of pedestrians, cyclists and vehicles.

Fifteenth St Pedestrian / Cycling Actions and Strategies:

- Improve connections to surrounding residential areas, particularly at the rear of commercial developments.
- Improve pedestrian amenity through the use of street tree planting and landscaping at key nodes such as prominent corners.
- Create safe movement across Fifteenth Street.
- Continue / improve the shared pathway along both sides of Fifteenth Street to link to City Gate and in the longer term, Irymple; commensurate with available funds and subject to VicRoads approval.
- Improve cyclist amenities:
 - Provide more bicycle parking racks through Fifteenth Street including at bus stops and any new retail developments.

5.0 POLICY CONTEXT

- Provide drinking fountains, seating and shade at bicycle parking locations.
- Encourage businesses to provide change facilities and bicycle storage to encourage people to ride to work.

Etiwanda Report for Residential Development Plan 2010

Purpose

This report is one of four that outlines the Residential Development Plans (RDPs) for four areas in Mildura that are expected to be the focus of residential development in the city in the near future.

Relevance

This report also includes the same principles and design principles for Irymple, Riverside and Nichols Point.

The Neighbourhood principles (Page 2) include:

The detailed design of the new neighbourhoods is envisaged to reflect the neighbourhood principles outlined under Clause 12.05.2 and in Section 56 of the Planning Scheme, which can be summarised as:

- Compact walkable neighbourhoods where neighbourhood Centres support local services and facilities. Reduced car use is encouraged because public transport is easy to use and walking and cycling are promoted.

Detailed Design Principles

- Provide a logical, safe and connected movement network for pedestrians and cyclists
- Ensure that all streets and parks are overlooked by houses, to enhance their safety for pedestrians and cyclists

The vision plans seek to ensure desire lines are catered for, encouraging walking and cycling a relatively more attractive way of getting around for shorter journeys. Routes are designed to link up key destinations and site assets with primary movement routes to provide for direct and logical movement through the site. (Page 3)

Shared Pathway/Laneway

Shareways will provide the edges to the green belt. They will ensure the greenbelt is safe and overlooked to ensure they can remain attractive places for walking and cycling. The shareways can accommodate local vehicular access

Characteristics:

5.0 POLICY CONTEXT

- 12m wide road reserve
- Accommodates walking, cycling and local vehicular access in share-way within landscaped corridor which incorporates retained and proposed trees
- Road course narrows and meanders to ensure slow vehicle speed

Shared Pathway/Laneway Perspective

Perspective illustrating shared pathway/laneway character. Shared pathways/laneways reconcile limited vehicle access with the imperative to create safe, attractive, overlooked corridors to make walking and cycling relatively more attractive than alternative modes of transport.

An issue was raised regarding the connectivity of this residential development to the rest of the Mildura Bike Plan. Consultants agreed that links to Irymple greenbelt should be incorporated and have been made.

Irymple Report for Residential Development Plan (2007)

Purpose

The report identifies the characteristics of development that will achieve the optimum benefit for both the incoming residents and the wider Mildura community by ensuring the new neighbourhoods are at once seamlessly stitched into their surroundings yet with their own distinctive character and identity.

Relevance

Neighbourhood Principles and Design Principles are the same as the 3 other suburbs – Etiwanda, Riverside and Nichols Point.

Section 5 Residential Development Plan indicates key locations for pedestrian and cycling improvements.

The summary of consultation amendments stated that walking tracks could be linked between Harness Club, existing Henshilwood Reserve and Senior Citizens/Youth facilities and also in the larger picture through to the Irymple greenbelt.

Nichols Point Report for Residential Development Plan (2007)

Purpose

This report is one of four that outlines the Residential Development Plans (RDPs) for four areas in Mildura that are expected to be the focus of residential development in the city in the near future. The other areas are Irymple, Riverside and Etiwanda

Relevance

This report also includes the same principles and design principles as the other three Residential Development Plans.

It was noted that there is a bike path along Cureton Ave.

The new plan states that pedestrian and cycle paths should be continuous around the new subdivision even though vehicle access need not be continuous.

Appendix 2 Community Consultation asked that “Options be investigated for drop off zone in or out for parking for schools”. And contact to be made with Principal to access plans of new school and any condition reports that may exist for the existing heritage listed school building and rotunda. The school should be asked to encourage students to cycle to school rather than be driven by parents.

Riverside Report for Residential Development Plan (2007)

Purpose

This report is one of four that outlines the Residential Development Plans (RDPs) for four areas in Mildura that are expected to be the focus of residential development in the city in the near future. The other areas are Irymple, Nichols Point and Etiwanda

Relevance

This report also includes the same principles and design principles as the other three Residential Development Plans.

Context Analysis

The Issues Plan suggests the beautification of lakes and walking tracks.

Residential Development Plan proposes pedestrian links around lake Hawthorn, Dyar Street and along the railway line should it become disused.

5.0 POLICY CONTEXT

Community Consultation recommended that the foot/bike path shown around Lake Hawthorn should run up Dyar Road through the Public Open Space and onto 15th Street in lieu of crossing the railway line and joining with Lake Ranfurly.

Residential Development of Land East of the Grange Mildura (2002) & Residential Land for Red Cliffs (2002)

Purpose

To design development plans for residential area of East of the Grange, a growth corridor and Red Cliffs.

Relevance

There is no information specific to trails and paths for walking and cycling in the subdivision. The documents are general in requesting a tender for developing the subdivision.

Irymple Structure Plan 2010

Purpose

The purpose of the Irymple Structure Plan is to provide a framework for integrated development of this important growing settlement, managing change to the physical environment and guiding future activities.

Relevance

Key issues identified by the community were:

- Poor bike/ pedestrian connections to Mildura.
- Safety concerns regarding: car parking, vehicle speed and traffic control.
- Pedestrian/ cyclist safety, and infrastructure.

Key priorities identified by the community were:

- Create/upgrade walking/ bike tracks to Mildura.
- Improve pedestrian safety and traffic management.
- Improve key pedestrian routes and access.

Pedestrian and Cyclist Movement

5.0 POLICY CONTEXT

Given the Highway function of Fifteenth Street, safe pedestrian access across the road is currently limited to a signalised crossing at the intersection with Karadoc Avenue. Recent upgrades have been made to informal pedestrian crossing points at the existing neighbourhood shops near Koorlong Road and outside the swimming pool. It is envisaged that objectives to reroute larger vehicles from Fifteenth Street and reduce the speed limit on Fifteenth Street be achieved, these crossing points are adequate in their design and location.

There is potential to provide on-road and off-road bicycle links in Irymple. The off-road cycle links include a shared pathway along the north side of Fifteenth Street. It is envisaged that the shared pathway will connect with Mildura forming a consistent pathway link along Fifteenth Street to Deakin Avenue. The Irymple Green Belt is also a fantastic resource for cyclists providing an off road and safe link within Irymple and northward beyond Sandilong Avenue.

The creation of a high quality, attractive and safe public realm that encourages an increase in pedestrian and cyclist movement throughout Irymple. This includes recommendations to improve a shared path network along the north side of Fifteenth Street and enhance facilities such as drinking fountains, seating and bike parking rails. Such improvements could provide an impetus for more pedestrian and cyclist movements to, from and within the study area as an alternative form of transport to the car.

Strategies and Actions include:

Traffic Management

- Advocate to VicRoads to reduce the volume of traffic and provide a safer pedestrian environment on Fifteenth Street:
- Support all actions to reroute large vehicles entering Irymple from the south-east along the Calder Highway (Fifteenth Street) to Sixteenth Street.
- Support all actions to reroute large vehicles entering Irymple from the north-west along Fifteenth Street (Calder Highway) to use Seventeenth Street or Sixteenth Street from Benetook Avenue.
- Advocate to VicRoads to reduce speed on Fifteenth Street between Gowrie Grove and Sandilong Avenue (including beyond the Primary School on Fifteenth Street) to 40km/ph.

Pedestrian and Cyclist

- Improve the existing shared pathway on the north side of Fifteenth Street; commensurate with available funds and subject to VicRoads approval.
- Improve safety and access connections to surrounding residential areas, and between new developments to ensure a connected pedestrian and cycle network.
- Improve links to the existing and proposed network of open spaces, neighbourhood focal points, future community hub and future neighbourhood centre.

5.0 POLICY CONTEXT

- Improve the safety and amenity of the Irymple Green Belt where it intersects with roads or the railway line, using signage, paint or other means to define pedestrian crossing points.
- Improve pedestrian amenity through the use of street tree planting and landscaping at key nodes such as prominent corners.
- Improve the on road bicycle network to link key activity areas with the surrounding residential areas and Mildura.
- Improve cyclist amenities:
 - Provide high quality end of trip facilities at key locations including such locations as the Henshilwood Recreation Reserve, the Pool, a new neighbourhood centre, and schools. This includes bicycle lockers, vertical storage and change facilities.
 - Provide more bicycle parking racks throughout Irymple and any new retail developments.
 - Encourage businesses to provide change facilities and bicycle storage to encourage people to ride to work.

To ensure a high quality pedestrian environment:

- Apply CPTED (Crime Prevention Through Environmental Design) principles to all open space, streetscape and building design, including lighting, passive surveillance opportunities, minimising 'hidden' spaces, providing clear sight lines.
- CPTED assessment to be undertaken to identify where lighting upgrades are required.
- Provide active frontages and weather protection for buildings along key pedestrian routes in commercial areas.
- Provide shade trees, additional greenery, seating and drinking fountains in a new neighbourhood centre and on key pedestrian routes.

Ouyen Structure Plan (2006)

Purpose

The aim of the Structure Plan is to provide a planning and staging blueprint for management and development of Ouyen Township. The Structure Plan identifies the long term planning requirements for Ouyen and sets the direction for future consolidation and expansion of residential/commercial, rural and industrial uses within and immediately beyond the Ouyen Township.

Relevance

Pedestrian movement is reported in Ouyen's commercial heart as generally satisfactory with defined footpaths and a legible, easy to navigate network throughout the town. In contrast, the network of footpaths outside the commercial precinct is poorly defined and in poor condition. A number of areas were identified for immediate upgrade:

- Around the Hospital precinct;
- Around school precincts, and
- Railway crossings at the Mallee Highway and Williams Street.

The major difficulty from a pedestrian perspective is the presence of the railway line, which dissects the town and poses both a visual and physical barrier stifling connectivity and hindering integration between Ouyen's eastern and western precincts. The Calder Highway, which runs parallel to the railway line, also contributes to the "separation" of pedestrians from the eastern side to the western side of Ouyen. In addition to causing difficulty for internal pedestrian movements within Ouyen, the presence of the railway / highway corridor hides Ouyen's commercial centre from north/south traffic on the Calder Highway. Improved pedestrian connectivity across the railway line (both physical and visual) may encourage Calder Highway motorists (who may be stopping for a break) to explore the heart of Ouyen.

In contrast, the Mallee Highway apart from the previously stated concerns at the railway crossing, while being a major road in its own right, does not create the same difficulty for pedestrians as its alignment travels very close to the town centre. Furthermore, its comparatively modest traffic flows enable its effective integration into Ouyen's urban fabric.

Two recommendations on the redevelopment of the railway precinct include:

- Create clearer linkage with pedestrian bridge in Pickering Street.
- Create a pedestrian link from Community Park to railway precinct.
- Construction of pedestrian crossings over the existing railway line at the Mallee Highway and Williams Street.

The main opportunity to improve the pedestrian linkage between the eastern and western parts of Ouyen is dependent on the upgrade and realignment of the existing pedestrian bridge over the railway line. The current design does little to encourage pedestrian movement between the two sides of the railway line and Ouyen's commercial heart west of the railway line is effectively invisible to pedestrians and motorists on the Calder Highway.

Given the likely cost of a full bridge replacement the improvements to pedestrian connectivity should be staged as follows. In the short term there should be an upgrade to the existing bridge and environs:

- Establish ownership of the bridge and station infrastructure (buildings etc)
- Assess DDA (Disability Discrimination Act) compliance, as this may affect the level and type of intervention that is possible
- Provide clearer ground level links and signage to both bridge approaches

5.0 POLICY CONTEXT

- Improve amenities on the Calder Highway and Station precinct to facilitate stopping of cars and movement of people through this area

Mildura Murray Riverfront Central Precincts Feasibility Study (2010)

Purpose

The Mildura Riverfront Central Precincts Feasibility assesses and develops the Mildura Riverfront 2005 Master Plan. The purpose of this further investigation is to provide a strategic basis to secure the proposed outcomes for both the Central Precincts and the entire Mildura riverfront. New opportunities have arisen since the 2005 Master Plan's adoption with the removal of rail.

Relevance

Part 1 Background

5.1.4 Rail Crossings and Pedestrian Connections

The use of the rail corridor has been a contentious issue amongst relevant government authorities and the Mildura community for many years. Community consultation has resulted in strong recommendations to cease all rail use on the existing rail line in the Central Precincts area.

The MRMP suggested the removal of freight rail activity; however it also proposes the use of an upgraded crossing at the Langtree and Deakin Ave pedestrian extensions.

The study pointed out that the master plan must focus on suitable transit oriented development strategies. The focus must be on creating pedestrian and bicycle friendly environments, to reduce the need for private car use.

Part 2 Concepts

The Concept Report records the outcomes of the conceptual development process and consultation for the Central Precincts Master Plan.

2.1.9 Pedestrian Flows

There are numerous pedestrian flows to, from and within the Central Precincts area. An all encompassing approach to pedestrian flows and connectivity can be achieved by:

- Defining major pedestrian gateways to the site
- Establishing major pedestrian/cycleway throughout the site, responding to the connections from the CBD and Seventh Street, and riverfront and other Master Plan precincts
- Redirecting pedestrian connections above and below the rail corridor and ensure connectivity from Seventh Street
- Pedestrian connections to correlate with visual vistas and physical connections from the CBD.

5.0 POLICY CONTEXT

Part 3 Feasibility Report

This section provides more detail on the preferred design outlined in the Concept Report

Pedestrian links via bridges, overpasses and underpasses are suggested concepts to link the Riverfront with the CBD.

Part 4 Implementation Report

This section provides more detail on the preferred design outlined in the Concept Report.

This strategy will need to resolve issues pertaining to the provision of bicycle and pedestrian access to the Central Precincts area. The strategy will need to address accessibility to public areas, and shall focus on the need to develop bicycle and pedestrian routes for recreational use. The strategy shall also investigate the use of bicycle storage facilities to encourage people to cycle to and throughout the area.

It suggests the First Steps:

1. Engage a traffic consultant or similar to undertake the report:
2. Initiate discussions with MRCC, the community and relevant Government authorities.

Investigate options for public bicycle and pedestrian strategies:

3. Prepare Pedestrian and Bicycle Strategy Report and account findings to the Implementation Group and bus service providers.

Part 5 Expressions of Interest report

This section duplicates Part 3 – Feasibility Report.

Irymple Community Plan 2011

Purpose

The community plan was developed to:

- Identify what is important to the community
- Allow the community to have input into how the township can grow and develop
- Acknowledge the needs and wants which exist by members of the community
- Have a clear plan and direction for the future
- Create a stronger feeling of community and improve the connections within it
- Ensure the community is sustainable on a number of levels

5.0 POLICY CONTEXT

Relevance

The need for more bike/walk tracks around Irymple to encourage more activity and riding to school was identified as a high priority.

Mildura Strategic Bicycle Plan (2002)

Purpose

The objectives of the study included the identification of existing cycling infrastructure, the preparation of a 10 year program of works to achieve an ideal cycling infrastructure with an emphasis on connectivity of facilities, establishment of priorities and cost estimates for proposed works with a detailed works program for the first three years and an increase in the participation rate of cycling within the municipality.

Relevance

The Rural City of Mildura contains a large regional population with an active cycling club for competitive cyclists as well as a great number of tourist destinations. It is envisaged that the bicycle plan will not only cater for the local residents but also that facilities will be provided to form another valuable tourist asset in the form of both training routes and recreational facilities.

A community questionnaire was also distributed via copies at Council libraries, a Council media release and circulation from a cycling focus group with responses received from 140 individuals. The results of this survey indicated that improving on and off road bicycle facilities and end of journey facilities could attract a number of people to cycling. Short cycling distances (2 to 5 kilometres) were the most common trip lengths. Those cyclists responding to the questionnaire were mainly recreational cyclists and this indicates that there is likely to be a reasonably high demand for off-road recreational paths where conflict with traffic is minimised.

The network has been created based on the five principles of a useable network (Bicycle Victoria, 1996):

- Coherence
- Directness
- Safety
- Comfort, and
- Attractiveness.

Cycling is often found to be inconvenient due to the lack of end of journey facilities. These facilities are required so that cyclists can change facilities or mode of travel at the end of their cycling

5.0 POLICY CONTEXT

journey. This issue was identified in the questionnaire to Mildura residents. The type of facility required will depend upon the location. End of journey facilities include:

- bicycle stands,
- bicycle lockers,
- drinking fountains and taps to fill water bottles,
- toilets,
- showers and change rooms.

Proposed networks were proposed, including programmed works and maps. It was suggested that in order for the bicycle system to work it must address the following points: the connectivity of the network, the maintenance of bicycle facilities, future road development and traffic devices and the lighting requirements of the bicycle facilities.

Exclusive Off-Road Paths and Shared Footways

Exclusive off-road paths are a good cycling facility to cater for certain bicycle user groups. The condition of the path's surface as well as the width of the path are important factors in determining its standard and therefore its uses. Also, consideration must be given to the continuity of the path, its directness, and therefore its part in the overall bicycle network. Therefore where off-road paths exist it may also be desirable to provide on-road facilities in order to cater for different user groups. Off-road paths may be provided as alternatives where the possibility of on-road cycling is very difficult, or where the main users of the path are likely to be recreational cyclists or school aged children.

Shared footways provide a less appropriate cycling facility than exclusive paths however, when space is particularly limited off-road or the volumes of cyclists are relatively low, these offer an adequate facility to cater for cyclists travelling at low speeds.

In addition, in order to justify the cost of construction of any new off-road path, a shared footway will provide for more than one user group, and will therefore provide a better benefit-cost ratio. It is recommended however that shared footways be constructed at a suitable width to allow safe use for both user groups. A shared path width should desirably be 3.0m, a minimum of 2.5m, or an absolute minimum of 2.0m in constrained circumstances. It is also required to have 0.5m clearances to objects such as fences, trees or parked cars that may be adjacent to the path.

Cycling events such as races also help to encourage the sport within the municipality. Mountain biking and cross-country cycling are popular within this region, and there are currently several races and events that attract cyclists from other areas to cycle within Mildura.

The report states that in some cases there is opportunity for sections of off-road trails and end of journey facilities to be partly funded by local businesses or community groups. This method of funding provides an ideal opportunity for local organisations to receive recognition and get involved in benefiting their local communities. Various shared paths in other parts of the State have developed trail committees where local volunteers assist with path maintenance and minor infrastructure improvements.

5.0 POLICY CONTEXT

The maps in Appendix A show proposed “Off Road” trails following the Murray River and creeks in Mildura. There are few other “Off Road” trails in the smaller towns. There are proposed connections around Irymple and Red Cliffs.

Off Road Bicycle Rides around Mildura (2007)

Purpose

This document is a guide to eight rides and walks all within a short distance from the centre of Mildura.

Relevance

The guide is for walking or cycling. The trails can be joined to make longer trips. The guide was prepared by the Sunraysia Bushwalkers Group with the funding from the Rural City of Mildura.

On Road Rides around Mildura (2011)

Purpose

This document outlines various on road riding options around Mildura.

Relevance

The document has been created by the local BUG using its own resources.

SunBug Bicycle Strategy Plan for Mildura Draft (2011)

Purpose

SunBug (Sunraysia Bicycle Users Group) prepared the Draft to stimulate the need for cycling to be acknowledged and the previous Mildura Bicycle Plan was out of date and in need of bringing up to date.

Relevance

This document provides an overview of the current status of cycling around Mildura. It articulates the rationale for improving cycling infrastructure and sets out a series of actions that SunBug would like Council to address.

Safe Cycling of our Roads Sunraysia BUG (2010)

Purpose

The purpose of this document is to be an education and information guide for safer cycling.

Relevance

The document is a good example of community enterprise and passion. The BUG has been motivated to obtain funding from TAC to develop the booklet and promote it to the community.

Mildura Recreation Strategy Action Plan Vol 1 2008 – 2018

Purpose

The purpose of the Recreation Strategy is to develop a strategic direction for recreation provision in Mildura for the next 10 years.

Relevance

The document found that walking and bike riding were in the top seven most popular casual recreation activities in a community survey. It also pointed out that Mildura has a lower level of participation in both organised (e.g. sport) and non-organised (e.g. bike riding) exercise than regional Victoria as a whole and Melbourne.

Mildura Recreation Strategy Action Plan Vol 2 2008 – 2018

Purpose

This document sets out the actions arising from Volume 1.

Relevance

Action 1 recommends to complete a trails and pathways strategy that:

- Has a priority for linking places of significance within local communities
- Identifies linkages within different urban areas and townships
- Identifies linkages to regional sites significance

5.0 POLICY CONTEXT

- Identifies opportunities to effectively integrate footpath and trail networks

It recommends as a priority one action:

1. A cross organisational approach to the planning and development of trail / pathway infrastructure
2. Completion of a trails and pathway strategy that includes Township based implementation plans (sub plans), identifies primary and secondary networks and integrates Trails (all types e.g. sealed and unformed paths) and footpath networks
3. Seeking of external funding support
4. Implementation of actions and 'sub plans' according to timelines.

Action 3 was to work with communities to establish healthy lifestyle groups that could assist in identifying opportunities for safe off road trails/ tracks, circuit trails, improved integration between trails, footpaths and information.

4.1 Trails

Council's Open Space Strategy makes a number of recommendations relating to trails, however these tend to relate to major trails such as Trails around Lake Hawthorn/Lake Ranfurly, linking Three Chain Reserve with Rio Vista Park and extending the Irymple Greenbelt Trail. Given the popularity and frequency of trail related activities in the community e.g. walking and bike riding, consideration needs to be given to developing *local* trails. Trails that are easy to access, link to sites of significance in the community, are well integrated with the footpath network and are appropriately constructed will encourage active lifestyles.

Trails are particularly important in small and rural towns that traditionally do not have a well developed footpath network and as a result people are required to use roadsides. Forward planning for trails, particularly in these situations is important given the ageing nature of communities and the need to maximise opportunities for maintaining mobility in the elderly and safety.

Public Open Space Strategy – Strategy Plan (2004)

Purpose

The Public Open Space Strategy developed an approach which integrates Open Space Planning with other Council planning initiatives including development plans, development contribution plan, recreation plans, bicycle plan and others. It also presented a five year plan with strategies and priorities for resource allocation (including linear trails and open space in major towns).

Relevance

Major Strategies proposed that:

- A series of linear trails and linkages will continue to be established throughout Mildura, using Three Chain Reserve, Irymple Green belt and transport corridors, supplemented by other shorter linear open space links.

There is a discussion on the preference for single purpose trails or multi use trails. The report does not recommend one over the other; however it does suggest the type of trail depends on the amount of space and resources available.

The report advises that:

1. Trails should be kept to a reasonable standard (signage)
2. Maps should be prepared and include description of the trail, its length and time to travel along it, points of interest, signage, etc
3. On popular trails it is important that trail users can follow the route without the use of a map, therefore good signage is needed
4. The general public must be aware of the difference of public and private lands (Signage)

Principles for establishing a trail or linkage include:

1. Trails should be “loops”, rather than “out and back” trails. Where longer “out and back” trails exist, such as along the Murray River, shorter loops can be established along the main trail.
2. Walking, equestrian and skate trails should primarily involve “off road” linkages, and where necessary be joined by short, safe “on road/ footpath sections.
3. Trails through or near areas of conservation value must be designed to ensure environmental sustainability.
4. Trails should link points of interest and be designed to allow the user to pass through a diverse range of settings.
5. Within urban areas linear trails should link sporting facilities with shops and transport connections.
6. Trails should cater for people with disabilities and include supporting amenities.

Actions and Strategies from the report include:

1. Extend existing paths along the Murray River from Ornamental Lakes Park to the east and Cowra Avenue and to the west to Merbein.

5.0 POLICY CONTEXT

2. Extend Mildura-Yelta Rail linear path to link with Three Chain Reserves at Rio Vista Park and with the Lake Hawthorn to Ranfurly Way linear path.
3. Create a path around the Bob Corbould Wetland.
4. Extend Irymple Green Belt through the proposed new subdivision to link through the East of Grange development Plan area to the Hollywood Linear Reserve and through the Mildura South Development Plan to the Mildura – Yelta line.
5. Create a linear path around Lake Hawthorn.
6. Extend the Irymple Green belt through proposed new subdivisions.

Mansell Reserve Master Plan (2011)

Purpose

This master plan sets out the future development plans for Mansell Reserve.

Relevance

The plans include a walking path around and through the reserve linking all the facilities. This will encourage accessibility and activity to the netball, croquet, playground and supporting infrastructure.

Mildura Recreation Reserve Master Plan and Map (2009)

Purpose

Prepare a 10 to 15 year development plan for the Mildura Recreation Reserve

Relevance

No mention is made of trails in the report, nor the need to link the facility to other facilities, destinations and parts of the City.

Mildura Sporting Reserves Master Plan Strategy (2004)

Purpose

5.0 POLICY CONTEXT

The project required the development of the long term planning direction for each sporting Reserve
- Mansell Reserve, Mildura Recreation Reserve and the Old Aerodrome Reserve.

5.0 POLICY CONTEXT

Relevance

Walking and bike trails are suggested in the top three improvements for the reserves. Walking and bike trails were highly requested in the survey by the community.

Old Aerodrome Sporting Complex Master Plan and Map (2004)

Purpose

Prepare a 10 to 15 year development plan for the Old Aerodrome Sporting Complex.

Relevance

No mention is made of trails in the report, nor the need to link the facility to other facilities, destinations and parts of the City.

Old Aerodrome Sporting Complex Master Plan Stakeholder Review (2009)

Purpose

This document reviewed the **Mildura Sporting Reserves Master Plan Strategy (2004)** and made recommendations to the future development of the Old Aerodrome Sporting Complex and its relationship to other sporting precincts.

Relevance

The document that recognised that there was a well used walking path within the complex. There is no further mention of links of trails or pathways from outside the complex.

Cardross Recreation Reserve Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Cardross Recreation Reserve.

Relevance

5.0 POLICY CONTEXT

There is mention of a pedestrian only zone and pedestrian pathways. It would be preferable if the pedestrian pathway was around the oval boundary fence to encourage people to walk for exercise.

Chaffey Recreation Reserve, Merbein Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Chaffey Recreation Reserve.

Relevance

There is no mention of any pathways around the oval or linking the activities on the reserve – i.e. the playground, car park, oval and skate park.

Henshilwood Recreation Reserve, Irymple Master Plan and Report (2009)

Relevance

Prepare a plan outlining priorities for development at Henshilwood Recreation Reserve.

Report

A pedestrian link is mentioned around the soccer car park and a walking path from the reserve to Casuarina Crescent is marked. There is no mention of a circular walking path around the oval or linking all the facilities on the reserve – i.e. Bowls, senior citizens centre, oval, and netball courts.

The report is aware of the need for bicycle and walking paths as it was raised at a consultation session.

Kenny Park, Merbein Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Kenny Park Recreation Reserve in Merbein.

Relevance

The report suggested a “pedestrian zone only” around the Croquet and Bowls area for picnics and the removal of the perimeter fence on the multi-purpose area field.

5.0 POLICY CONTEXT

A pedestrian and cycle circuit has been planned for around the multi-purpose area / precinct and traffic calming bollards have been allocated to prevent cars from entering the pedestrian only zones.

Johansen Recreation Reserve Lake Cullulleraine Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Johansen Recreation Reserve Lake Cullulleraine.

Relevance

A loop pathway aligns with the foreshore around the lake. The Plan also mentions that there are other trails throughout the reserve, although these are not marked on the Plan.

The report recommends that the lakeside loop trail should be clearer signed and advocates for the trail to go past the yacht club or include signage to say that it continues. The report also recommends that the various activities should be linked to each other.

Murrayville Recreation Reserve Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Murrayville Recreation Reserve.

Relevance

It is reported that there are no decent walking trails in the area. A wetlands precinct has been suggested for the reserve as the sporting clubs are decreasing in numbers and non competitive activities could be introduced. Pedestrian only zones have been set up around the club rooms and netball courts.

Nangiloc Recreation Reserve Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Nangiloc Recreation Reserve.

Relevance

The report supports the creation of a walking trail around the perimeter of the reserve and with sufficient signage to assist people where to go. It also supports the trail to continue along the river.

A long trail has been included in the master plan for the reserve. It meanders through the bush and along the road, but then returns to the same trail.

Nichols Point Recreation Reserve Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Nichols Point Recreation Reserve.

Relevance

The sporting clubs at the reserve are in need of a pavilion, change rooms and supporting infrastructure. Otherwise the clubs will continue to decline in numbers. Increasing other activities such as walking and bike trails will assist and improve participation. There is a pedestrian only zone around the playground which is in good condition.

Blackburn Park Ouyen Recreation Reserve Master Plan 1 and 2 and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Blackburn Park Recreation Reserve.

Relevance

Two options were submitted to the Reserve Committee of Management. The preference was for Option 2 due to the closer proximity of the netball courts and playground to the oval and traffic being redirected south of the netball courts. The pathway was costed as being more expensive for option 2.

Option 1

1. There are two pathways suggested in this master plan.
2. One is a link from the car park past the netball courts, playground to the Skate facility without crossing the roadway. The roadway aligns with the boundary and has been narrowed to slow the traffic down around this area as well.
3. The other pathway is a loop around the wetlands.
4. There still should be a perimeter pathway around the oval to encourage walking,

Option 2

The design of the roadway around the netball courts, playground and skate park has been realigned to the south of the netball courts and playground. It does dissect this area from the skate park. However it still encourages and increases the size of the pedestrian zones between the netball courts, the playground and the oval (compared to Option 1). Points 3 and 4 in Option 1 still apply.

Quandong Recreation Reserve, Red Cliffs Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Quandong Recreation Reserve.

Relevance

There is a pedestrian trail marked throughout the reserve. There are pedestrian only zones between ovals three, four and five.

Underbool Recreation Reserve Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Underbool Recreation Reserve.

Report

There is an action to construct a formal pathway to link the bowls green with the oval pavilion in the plan. There are plans for a pedestrian zone only area around the pavilion, playground and netball courts. A walking path could be included in the perimeter driveway around the oval to encourage walking for exercise.

The report advises that the bowls club rooms will not be replaced and that the bowlers will use the main pavilion as their clubrooms. Eventually the bowls green will be replaced by a new green north of the pavilion. Meanwhile a formal pathway will be constructed to link the existing bowls club with the pavilion.

Walpeup Recreation Reserve, Master Plan and Report (2009)

Purpose

Prepare a plan outlining priorities for development at Walpeup Recreation Reserve.

Relevance

The reserve has plans for a pedestrian only zone around the playground between the pavilion, tennis courts and oval. A golf course is adjacent to the reserve (with five members and some casual players). There is no mention of paths or trails.

Loddon Mallee Regionally Significant Trails Strategy (2010)

Purpose

The purpose of this report is to identify potential trails throughout the Loddon Mallee region that have potential to be considered regionally significant and therefore attract economic benefits to towns and cities within the region, as well as social, physical and environmental benefits for local residents.

Relevance

The Strategy identifies the development of a Murray River Experience, which is essentially a series of small trails along sections of the Murray River, potentially linked through alternative forms of transport such as river boats, vintage cars, aeroplanes, horse and cart, etc, rather than one long, connected trail. Specifically in relation to Mildura Rural City, the Strategy recommends the development of a 48km trail along the river from Mildura to Wentworth at an estimated cost of \$1.3 million. It is estimated that the entire Murray River Experience will attract around 75,000 people annually; will create 26-30 full time jobs; and will generate between \$2.6-\$3 million annually.

Victorian Government (2010) *Pedestrian Access Strategy – A Strategy to Increase Walking for Transport in Victoria*

Purpose

5.0 POLICY CONTEXT

The aim of this document is to identify ways in which the State Government can partner with local government to promote walking as a viable form of transportation, particularly for short trips and in combination with public transport.

Relevance

The key strategic directions identified in this document to increase walking for transport are:

- Encourage people to walk by changing attitudes and behaviour.
- Collaborate to improve provision for walking.
- Create pedestrian friendly built environments, streets and public spaces.
- Increase the safety of walking.
- Continue integrating walking with public transport.

Victorian Government (2009) *Victorian Cycling Strategy*

Purpose

The purpose of this strategy is to “develop cycling as a safe and appealing transport mode for Victorians of all ages, genders, levels of fitness, cycling experience and location.”

Relevance

The five key strategic directions emanating from this strategy are:

- Build networks to connect communities
- Promote and encourage a culture of cycling
- Reduce conflicts and risks for cyclists
- Better integrate cycling with public transport
- Integrate cycling into land use planning.

Some of the priority actions which may be of relevance to regional areas such as Mildura include:

- Completing cycling links in regional centres
- Developing bicycle facilities as part of major transport projects, such as road and rail
- Travel planning and safe cycling programs in Victorian schools
- A range of promotional and educational campaigns and tools to encourage cycling
- A review of cycling accident patterns and creation of appropriate counter-measures
- Launching a ‘look out for cyclists’ campaign to educate about road rules and cyclist safety
- Creating a ‘cycleability’ toolkit for local government to help assess and guide the planning and development of cycling facilities in new developments.

Mildura Road Hierarchy Major Traffic Route Proposals (2007)

Purpose

The purpose of this report is to identify shortcomings in the urban road network in Mildura and to identify strategies to address those issues.

Relevance

The central business district is defined as the area bound by 7th St, Orange Ave, 11th St and Pine Ave.

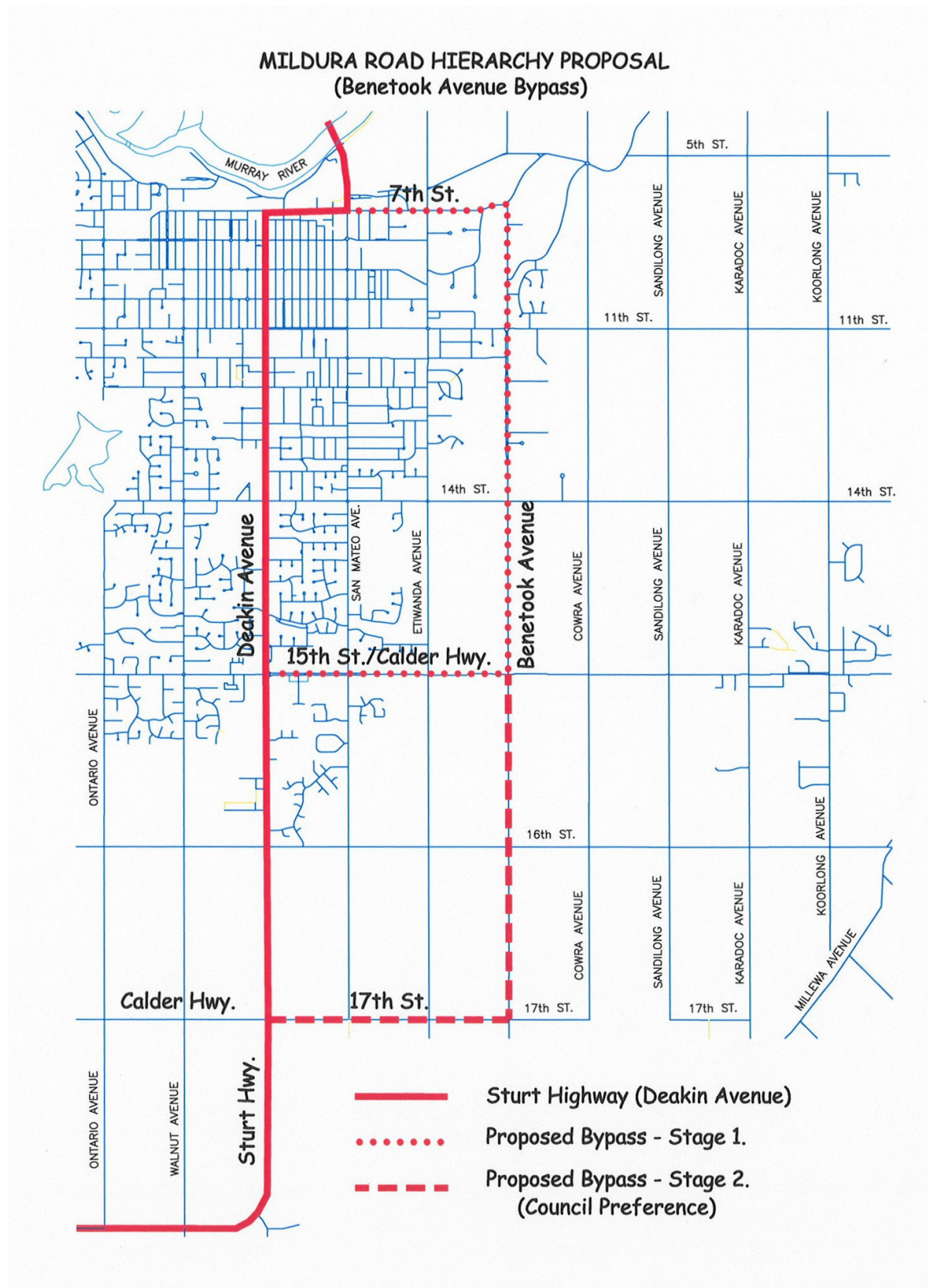
The report proposes that Deakin Ave and Benetook Ave become the two major arteries of the network.

A heavy vehicle bypass is also proposed along 7th St, east of San Mateo Ave; along Benetook Ave between 7th St and 17th St; and along 17th St between Benetook Ave and Deakin Ave.

The report recommends that bicycle lane marking and associated signage is undertaken on Deakin Ave between 15th St and 10th St; and also that a new kerb line should be established on the eastern side of Deakin between 11th St and the roundabout at 12th St to provide for minor widening for a dedicated bicycle lane.

The long term plan (i.e. 5-15 years) is for Deakin Ave and Benetook Ave to become the two primary north-south routes, with secondary routes along Ontario Ave (extend the link to 11th St) and Etiwanda Ave (between 7th and 15th Streets). 11th Street is to become the primary east-west 'cross city link'. 8th St is maintained as a secondary cross-city route and 16th St (east of Deakin Ave) is identified as a secondary road.

The short term plan is to discourage through traffic from using secondary roads such as Walnut Ave, San Mateo Ave, 7th St (west of Deakin Ave) and 5th St at Nichols Point. The report noted that 14th St should have been considered as a potential cross-city secondary road.



5.0 POLICY CONTEXT

Community Plans

A review of community plans within Mildura Rural City Council has identified the following cycling / walking priorities:

Community	Walking / Cycling Priorities
Mildura East	<ul style="list-style-type: none"> Look at getting more bicycle paths to encourage more activity and riding to school
Mildura South	<ul style="list-style-type: none"> Investigate improvement of footpaths including: in streets, parklands, walking/bike tracks and lighting Community involvement in development of Wetland including walk/bike tracks and fencing Support development of new and existing walking and bike tracks
Mildura West	<ul style="list-style-type: none"> Improved access via walking tracks to river etc for prams and gophers Residents value width of current bike tracks Improve and maintain walking paths, accessible and extended
Irymple	<ul style="list-style-type: none"> Maintain and develop the Green Belt for passive recreation Promote the need for more bike/walk tracks around Irymple to encourage more activity and riding to school
Red Cliffs	<ul style="list-style-type: none"> Explore opportunities to re open walking tracks at the cliffs at Red Cliffs
Merbein	<ul style="list-style-type: none"> To increase pedestrian and bike safety in Merbein for all residents, particularly at key areas such as the town centre and primary school A healthier community, particularly young people through the encouragement of walking and cycling To improve pedestrian and cycling paths for current and future generations of Merbein residents Pedestrian and Bicycle Links – improved family friendly walking and bike paths A more socially connected community Great participation in walking and riding leading to better health outcomes
Cardross and Koorlong	<ul style="list-style-type: none"> Improve bike track maintenance
Millewa	<ul style="list-style-type: none"> Investigate the opportunity to hold a triathlon at the Lake, to not only get locals involved but competitors from outside community.
Nangiloc/Colignan and District	<ul style="list-style-type: none"> Maintain existing bike/walking tracks and develop additional bike/walking tracks adjacent to the river
Walpeup, Ouyen, Murrayville, Underbool	No reference to tracks and trails

6.0 FUNDING OPPORTUNITIES

6.0 Funding Opportunities

It is not possible for Mildura Rural City Council to fund the upgrade of all existing tracks and trails and the development of new trails on its own, due to resource limitations. Wherever possible, trails should be developed in partnership with other organisations, i.e. through Government grants or agreements with the private sector. Some potential funding opportunities to consider are:

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
Department of Planning and Community Development Community Facility Funding Program – Minor Facilities Program http://www.dpcd.vic.gov.au/home/grants/all-grants/community-facilities-funding-program	Program is currently closed but is expected to re-open in latter half of 2012.	Grants of up to \$100,000 (where the total project cost is up to \$500,000) are available on a DPCD \$2:\$1 Local basis. Only local government authorities are eligible to apply.	The Community Facility Funding Program helps provide high quality, accessible community sport and recreation facilities across Victoria. The program encourages: <ul style="list-style-type: none"> • increasing sport and recreation participation • increased community access to leisure opportunities • better planning of sport and recreation facilities • innovative sport and recreation facilities • environmentally sustainable design The Building Community Infrastructure category is designed to improve places where communities meet, interact and participate in sport and recreation. The Minor Facilities sub-category is for community groups, working in partnership with local councils, to develop or upgrade community sport and recreation facilities.
Department of Planning and Community Development Community Facility Funding Program – Major Facilities Program http://www.dpcd.vic.gov.au/home/grants/all-grants/community-facilities-funding-program	Program is currently closed but is expected to re-open in	Grants of up to \$650,000 (where the total project cost is more than \$500,000) are	The Community Facility Funding Program helps provide high quality, accessible community sport and recreation facilities across Victoria. The program encourages: <ul style="list-style-type: none"> • increasing sport and recreation participation

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
s/all-grants/community-facilities-funding-program	latter half of 2012.	available on a DPCD \$1:\$1 Local basis. Only local government authorities are eligible to apply.	<ul style="list-style-type: none"> increased community access to leisure opportunities better planning of sport and recreation facilities innovative sport and recreation facilities environmentally sustainable design <p>The Building Community Infrastructure category is designed to improve places where communities meet, interact and participate in sport and recreation. The Major Facilities sub-category provides funding to develop major sport and recreation facilities.</p>
Regional Development Victoria Putting Locals First Program http://www.dpcd.vic.gov.au/home/grants/all-grants/putting-locals-first	This program is open for applications on an ongoing basis.	Improved Local Infrastructure grants of up to \$500,000. If the grant is up to \$300,000, the funding ratio is: RDV\$2:\$1 Other (excluding land). If it is over \$300,000 to a maximum of \$500,000 the ratio is: RDV\$1:\$1 Other (excluding land). Up to 50% of the applicants contribution can be sourced from in-kind works.	<p>The Putting Local First program, which is part of the Regional Growth Fund, is designed to enable regional communities to devise and deliver service and infrastructure responses which reflect local priorities. The key focus areas are:</p> <ul style="list-style-type: none"> improved infrastructure, facilities and services increased business and employment opportunities improved community connections communities taking action on their own behalf <p>Under the type of activities it may fund, the guidelines state that the Putting Locals First Program will consider “pathway projects connecting communities and attracting visitors, such as rail trails and walking tracks”. It will not fund purchase of land or routine or ongoing maintenance activities of walking tracks.</p>

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
Regional Development Victoria Economic Infrastructure Program - Building Strategic Tourism and Cultural Assets http://www.rdv.vic.gov.au/infrastructure-programs/economic-infrastructure		No specific funding amounts set, however, projects seeking more than \$5m need approval from the Minister and the Treasurer. Applicants are expected to make a financial contribution or source third party funding. Projects should maximise their funding support from a range of sources, including Federal and local government, community, private sector and regional organisations. 'In kind' contributions are not accepted as	<p>The Economic Infrastructure program aims to improve the productive potential of regional Victoria by strengthening regional industries, supporting and growing local economies, and providing opportunities for regional Victoria through investment in enabling strategic infrastructure. The four key funding categories are:</p> <ul style="list-style-type: none"> • Growing and sustaining regional industries and jobs • Transporting and transitioning local economies • Building strategic tourism and cultural assets • Energy for the regions. <p>The specific aim of the Building Strategic Tourism and Cultural Assets sub-program is to develop strategic, targeted tourism and cultural assets that grow the tourism and cultural product mix across Victoria, stimulate increased visitation, and enhance the liveability of regional towns. Priority will be given to projects that are considered to be of State or regional significance.</p> <p>Under the type of activities it may fund, the guidelines state that the Economic Infrastructure Program - Building Strategic Tourism and Cultural Assets component will consider projects that “facilitate nature-based tourism opportunities including iconic walks and cycling trails.”</p>

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
		part of the funding contribution.	
Regional Development Australia Regional Development Australia Fund http://www.regional.gov.au/regional/programs/rdaf.aspx	Grants generally between \$500,000 and \$15 million. Round 2 closed on 1 December 2011. Round 3 likely to be announced in the latter part of 2012.	Maximum grant of \$15 million. Preference is for applications that demonstrate partnership funding of 1:1 for grant requests of \$5 million and less, and 1:2 for grant requests of more than \$5 million. At least 50 per cent of partnership funding must be cash.	Projects must benefit the broader region or other parts of Australia. Projects asked to develop a full application (following an expression of interest process) under Round Two were extremely broad and included initiatives such as: <ul style="list-style-type: none"> • Bus priority measures and on road cycle lanes • Aged care services • Sporting precincts • Airport expansions • Regional infrastructure upgrades • Marina developments • Community and tourism hubs • Libraries • Aquatic centre developments • Regional tourist precinct and rail link The Mildura Riverfront (Eastern Precinct) was also invited to develop a full submission.
VicRoads VicRoads Bicycle Facilities Program http://www.vicroads.vic.gov.au/Home/SafetyAndRules/SaferRoads/Western+region.htm	Opens around September to November each year.	No upper limit specified.	VicRoads seeks bids from Council between September and November each year for cycling infrastructure projects. Each project is judged on its individual merit according to the following type of criteria: <ul style="list-style-type: none"> • Importance of route • Number of cyclists who use the trail • Crash factors • Proximity to schools, shops, recreation centres, employment, community hubs, etc • Links with other modes of transport

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
			<ul style="list-style-type: none"> Level of support from Council. <p>Each project is entered onto a spreadsheet and weighted against the selection criteria at a local level, and then at a state level. Whilst the majority of projects are for on road bicycle lanes and associated works, occasionally VicRoads will fund off road trails if they can be justified, e.g. they remove cyclists from busy roads, they provide an important link, or they provide a safe route to schools.</p>
Australian Department of Infrastructure and Transport Roads to Recovery Fund http://www.nationbuildingprogram.gov.au/funding/r2r/index.aspx	Allocations have been made through to 2014. Mildura RCC has been allocated funds.	Mildura Rural City Council has been allocated an amount of \$8,847,703 from 2009-10 to 2013-14. In 2011-12, the allocation was \$1,769,541. A total of 36 projects have been funded within the municipality during this time.	<p>The Roads to Recovery Program operates uniformly across Australia. Under current arrangements, each council is guaranteed a share of the total available funding. Under simple administrative procedures whereby spending decisions are made locally and reported to the government, money is paid directly from the Australian Government to each council. Much of the administration is via the internet.</p> <p>Money provided under the Roads to Recovery Program is not intended to replace council spending on roads or State and Territory Government assistance to councils for local road construction or maintenance.</p> <p>Local councils nominate the repair and upgrade projects to be funded.</p>
Department of Sustainability and Environment Victorian River and Wetland Management Program http://www.dse.vic.gov.au/land-management/catchments/victorian-investment	Not specified	Not specified	<p>The Victorian River and Wetland Management Program aims to secure the health of rivers, wetlands and estuaries in the face of increasing water scarcity and climate change and improve their environmental condition to ensure they can continue to provide environmental, social and economic benefits for all Victorians. Priority works may include environmental watering, riparian protection through fencing, revegetation, weed control and off-stream watering, provision of in-</p>

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
framework/vifstatementofpriorities20112012.pdf			stream habitat and structural measures to manage bed and bank erosion. Regulatory functions are also funded through the program, as are planning, community engagement and monitoring activities.
Department of Sustainability and Environment Biodiversity Program http://www.dse.vic.gov.au/land-management/catchments/victorian-investment-framework/vifstatementofpriorities20112012.pdf	Not specified	Not specified	<p>The objective of this program is to enhance stewardship and catalyse positive changes in biodiversity outcomes across Victoria.</p> <p>The Biodiversity Program aims to address five broadly defined areas of effort:</p> <ul style="list-style-type: none"> • securing key biodiversity assets such as threatened species populations or habitat, through both core protected areas and a mosaic of strategic linkages • implementing on-ground interventions such as weed and pest animal control that retain and enhance existing habitat to ensure that it remains healthy and resilient • re-establishing strategic populations and revegetating habitats in the locations that are needed to protect and connect important biodiversity assets • developing and disseminating essential knowledge to land managers to enable sound decision-making in policy development, program design, standards, investment and regulation • influencing key land managers to use natural resources sustainably and to manage threats appropriately.
Department of Sustainability and Environment Communities for Nature Grants http://www.dse.vic.gov.au/conservation-and-environment/biodiversity/communities-for-nature-grant-program	Last round closed on 19 December 2011	Small grants up to \$10,000; and large grants of between \$10,000 and \$150,000	<p>This funding program aims to achieve the following outcomes:</p> <ul style="list-style-type: none"> • Support practical community action in the environment • Create visible and lasting improvement • Foster greater enjoyment of the natural environment • Strengthen partnerships and participation by equipping communities with the ability, skills and knowledge to take

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
			<p>action safely and with the capacity to optimise resources.</p> <p>The grants are competitive and targeted towards local community groups and organisations, and are for projects focused on:</p> <ul style="list-style-type: none"> • Biodiversity and habitat preservation • Threatened species recovery • Sustainable management of native wildlife • Revegetation • Cleaning up waterways • Control of weeds and pest animals.
Department of Sustainability and Environment Victorian Landcare Program http://www.dse.vic.gov.au/land-management/catchments/victorian-investment-framework/vifstatementofpriorities20112012.pdf	Not specified	Not specified	<p>The Victorian Landcare Program aims to:</p> <ul style="list-style-type: none"> • mobilise community volunteers and leverage community action • positively influence the management practices of private landholders • build the skills and capacity of the community to undertake natural resource management activities. <p>The Victorian Landcare Program will invest in projects through a regional grants program. Victorian Landcare Grants will support Landcare and other community based environmental groups by funding:</p> <ul style="list-style-type: none"> • on-ground works that link local priorities to regional and State priorities • capacity building activities for land stewardship and on-ground change • projects that promote innovation through experimental trials

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
			<p>and pilot programs</p> <ul style="list-style-type: none"> • maintenance and start up funding to ensure a strong Landcare base across the state • opportunities to promote Landcare and increase membership and volunteer numbers. <p>There is no restriction on where on-ground projects can be located, however, preference is given to projects aligned with regional and/or state priorities.</p>
Murray Catchment Management Authority Murray River Frontage Action Plan - On Ground Targeted Works www.malleecma.vic.gov.au	Opens in September each year	Most grants between \$10,000 and \$50,000.	<p>Only available to preferred suppliers such as Council and Parks Victoria. Available for projects such as trail development, bollards, signage, etc. Priority in 2012 is for maintenance projects to repair infrastructure damaged in the floods. Council typically applies for 1-2 grants each year, and Parks Victoria may apply for 10-20 projects per year. There is no limit on the amount of projects that may be applied for, however, funding amounts vary from year to year; hence there is no guarantee that all projects will be funded. Applications are assessed on their ability to meet a range of different criteria.</p>
Murray Catchment Management Authority Murray River Frontage Action Plan - On Ground Grants www.malleecma.vic.gov.au	Opens in September each year	Not specified, although grants are generally fairly small	<p>These grants are available to community groups and schools for works such as tree planting and bollards. Funding amounts vary from year to year; hence there is no guarantee that all projects will be funded. Applications are assessed on their ability to meet a range of different criteria.</p>
Transport Accident Commission Community Road Safety Grants http://www.tacsafety.com.au/jsp/content/NavigationController.do?areaID=13&tierID=1&navID=3E45A1C87F00000100B12FEF5A2E58C5&navLink=null&pageID=1524	Last round closed on 17 February 2012. Assessments usually made within eight	\$25,000 or less.	<p>The program aims to:</p> <ul style="list-style-type: none"> • encourage community involvement in local road safety programs that are consistent with Victoria's Road Safety Strategy, <i>arrive alive</i> (www.arrivealive.vic.gov.au)

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
	weeks.		<ul style="list-style-type: none"> provide opportunities for local community groups to develop and implement effective road safety projects targeting specific local road safety issues. <p>Projects must address road safety issues in your local community. They should also be based on sound research and road safety principles. Applications can be made for community projects that:</p> <ul style="list-style-type: none"> rely on evidence-based research or principles which suggest they have potential for success are adaptable to specific local community needs identify specific target groups and specific road safety objectives are sustainable in the longer term are delivered by organisations/providers in a community context could be adopted by communities throughout Victoria and adapted if necessary are culturally inclusive can be evaluated. <p>Projects that won't be funded include:</p> <ul style="list-style-type: none"> Those focusing on driver training and education. One-day expos or road safety shows. Road engineering, signage, or traffic law enforcement programs. Advertising campaigns.
Department of Agriculture, Fisheries and Forestry and Department of	Last round closed on 27	Grants are between \$5000	Community Action Grants are a small grants component of the Australian Government's Caring for our Country initiative that aims to

6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
Sustainability, Environment, Water, Population and Communities Caring for Our Country - Community Action Grants http://www.nrm.gov.au/funding/cag/index.html	March 2012.	and \$20 000	<p>help local community groups take action to conserve and protect their natural environment. The grants are targeted towards established local community-based organisations that are successfully delivering projects to support sustainable farming and/or protect and enhance the natural environment.</p> <p>Community Action Grants funds activities such as:</p> <ul style="list-style-type: none"> • encouraging community participation in protecting, restoring endangered ecological communities • educating farmers in sustainable agricultural techniques • holding field days • improving land management practices • recording and using traditional ecological knowledge • developing natural resource management plans • developing land and sea country plans • training in the latest practices for sustainable agriculture • increasing and improving biodiversity • reducing critical threats to native habitats • reducing the spread and impact of Weeds of National Significance • tree planting and other revegetation activities • dune rehabilitation • restoring endangered ecological communities • reducing the impact of vertebrate pest animals • increasing wildlife habitat
Arts Victoria Community Partnerships http://www.arts.vic.gov.au/Funding_Pro	Currently closed. Previous	Funding for Community Partnerships	The Community Partnerships program supports collaborations between professional artists, arts companies and Victorian communities.

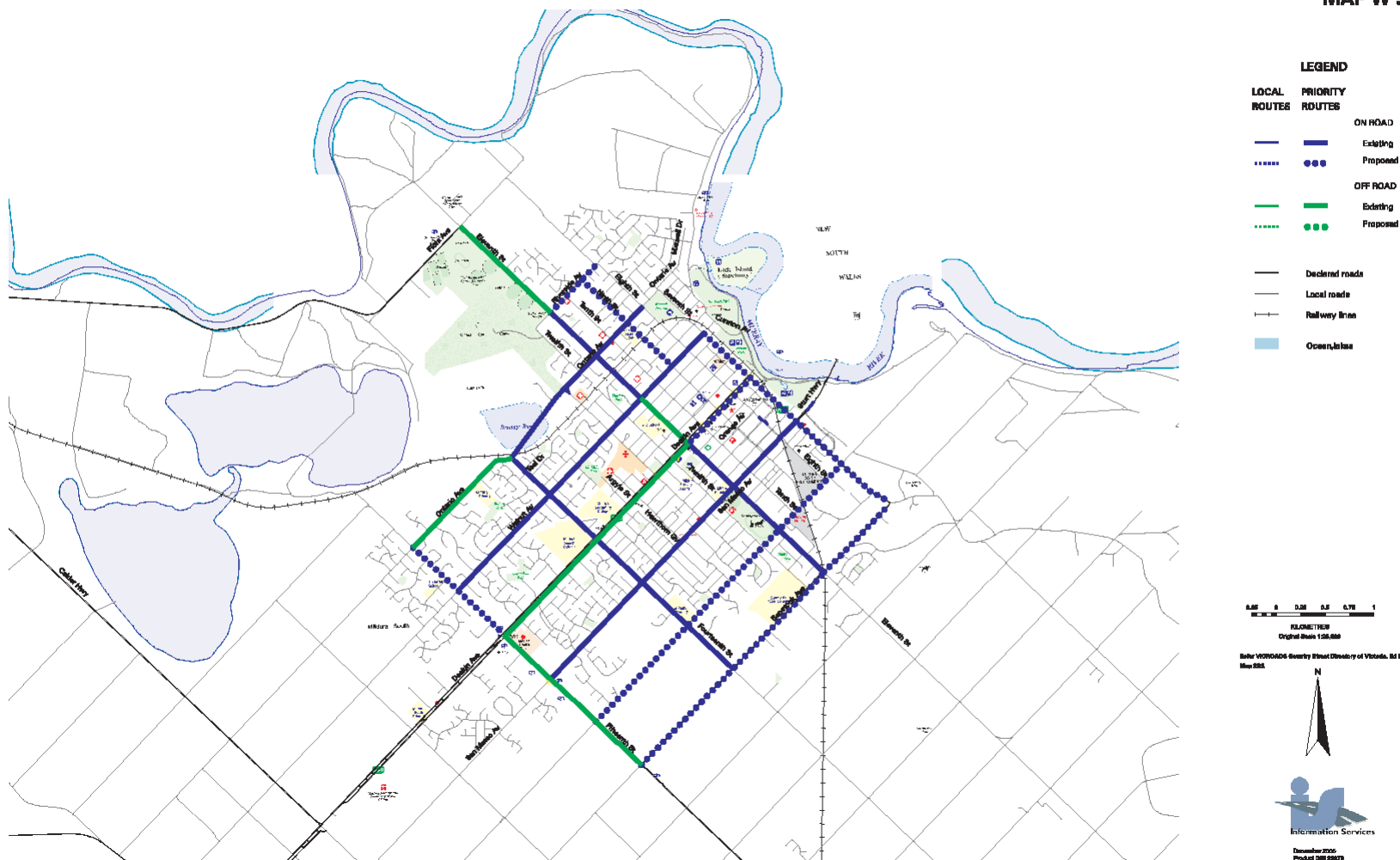
6.0 FUNDING OPPORTUNITIES

Name of Funding Body and Grant	Opening and Closing Date	Funding Amount and Conditions	Eligibility
<u>grams/Community Partnerships</u>	funding rounds closed in August 2011 and March 2012.	projects is capped at \$65,000.	<p>Projects may involve a single art form or a combination of art forms and can include new and experimental forms. The role of the professional artist(s) and the project's artistic elements must be central to achieving its overall purpose.</p> <p>Proposals to the program must demonstrate capacity to develop a collaborative relationship between the artist(s) and a defined community group.</p> <p>The Community Partnerships program aims to:</p> <ul style="list-style-type: none"> • Ensure that all Victorian communities are able to access, engage with and participate in a diverse range of artistic and cultural experiences • Enable collaborations and partnerships involving professional artists, arts companies and Victorian communities that bring about mutually beneficial and positive results • Provide opportunities for artists and arts companies to develop their professional practices and extend the reach and viability of their activities

6.0 FUNDING OPPORTUNITIES



MUNICIPAL BICYCLE NETWORK MILDURA MAP W 5



Mildura Tracks and Trails Strategy

Appendix 2 – Costing of Works



Mildura Rural City Council

July 2012

Disclaimer

The information contained in this report is intended for the specific use of the within named party to which it is addressed ("the *communityvibe* client") only. All recommendations by communityvibe are based on information provided by or on behalf of the communityvibe client and communityvibe has relied on such information being correct at the time this report is prepared. communityvibe shall take no responsibility for any loss or damage caused to the communityvibe client or to any third party whether direct or consequential as a result of or in any way arising from any unauthorised use of this report or any recommendations contained within.

Report Date: July 2012



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1.0 CHAFFEY RIVER TRAIL

1.0 Chaffey River Trail

The proposed Chaffey River Trail has been considered in four distinct sections with varying priority rankings. The Mildura to Kings Billabong section has the highest priority as it will provide an immediate connection to the popular Kings Billabong Wildlife Reserve and offer a return loop via 11th Street. Also of high priority is the Merbein to Mildura sector which will enhance access to Ranfurly, Johnson's, Slaughteryard and Chaffey Bends, as well as Pioneer Gardens and Blandowski Walk (if refurbished) at Merbein. Consultation with public and key stakeholders has revealed this connection to Merbein to be highly desirable. Completion of these two sectors will cost around \$850,000.

Completion of the Kings Billabong to Red Cliffs sector will provide a connection with the Chaffey River Trail and the township of Red Cliffs and surrounding localities. Whilst offering the complete connection between Merbein and Red Cliffs, it will include points of interest such as the southern section of Kings Billabong Wildlife Reserve, the Red Cliffs Pumping Station and the Red Cliffs Reserve. It will cost a further \$380,000 to complete.

The final sector between Merbein and Yelta requires the most new trail construction and will therefore be more costly to complete, requiring a further \$600,000. However it will provide a strategic connection to Wentworth Shire and their network of 'shareways' and offer opportunities to complete loops by travelling via Victoria and NSW.

To complete all four sectors will cost around 1.83 million dollars in on-ground works. This figure does not include external professional and management fees or staff costs.

1.1 Chaffey River Trail Estimated Costs

Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Mildura to Kings Billabong						
Mildura to Kings Billabong	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	551	\$ 100.00	\$ 55,098.20
Mildura to Kings Billabong	Mildura Marina	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	302	\$ 100.00	\$ 30,223.30
Mildura to Kings Billabong	Mildura Marina	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	41	\$ 100.00	\$ 4,111.90
Mildura to Kings Billabong	Mildura Marina	Existing concrete path	none	285	\$ -	\$ -
Mildura to Kings Billabong	Mildura Marina	Existing concrete path	none	152	\$ -	\$ -
Mildura to Kings Billabong	Mildura Marina	Existing concrete path	none	727	\$ -	\$ -
Mildura to Kings Billabong	Mildura Marina	Existing crushed bluestone trail	none	146	\$ -	\$ -
Mildura to Kings Billabong	Mildura Marina	Existing crushed bluestone trail	none	356	\$ -	\$ -
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	73	\$ 35.00	\$ 2,538.10
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	86	\$ 35.00	\$ 3,002.20
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	368	\$ 35.00	\$ 12,864.95
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	397	\$ 35.00	\$ 13,896.79
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	501	\$ 35.00	\$ 17,520.69
Mildura to Kings Billabong	Charcoal Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	626	\$ 35.00	\$ 21,907.41
Mildura to Kings Billabong	River Boulevard	Use existing off road trail	none	847	\$ -	\$ -
Mildura to Kings Billabong	Park Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	345	\$ 35.00	\$ 12,070.21
Mildura to Kings Billabong	Gol Gol Bend	Construct crushed bluestone trail on current dirt track	trail construction (metres)	314	\$ 35.00	\$ 11,000.96
Mildura to Kings Billabong	Riverside Golf Club	Construct crushed bluestone trail on levee bank	trail construction (metres)	782	\$ 35.00	\$ 27,356.32
Mildura to Kings Billabong	Riverside Golf Club	Construct crushed bluestone trail on levee bank	trail construction (metres)	766	\$ 35.00	\$ 26,816.76
Mildura to Kings Billabong	Riverside Golf Club	Construct crushed bluestone trail on levee bank	trail construction (metres)	346	\$ 35.00	\$ 12,120.57
Mildura to Kings Billabong	Riverside Golf Club	Construct crushed bluestone trail on levee bank	trail construction (metres)	527	\$ 35.00	\$ 18,459.77

1.0 CHAFFEY RIVER TRAIL

Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	234	\$ 35.00	\$ 8,205.79
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	179	\$ 35.00	\$ 6,274.45
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	147	\$ 35.00	\$ 5,155.12
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	248	\$ 35.00	\$ 8,668.52
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	248	\$ 35.00	\$ 8,680.42
Mildura to Kings Billabong	Billabong Rd	Construct crushed bluestone trail on current dirt track	trail construction (metres)	286	\$ 35.00	\$ 9,993.17
Mildura to Kings Billabong	Bruce Bend	Use existing forest road	none	430	\$ -	\$ -
Mildura to Kings Billabong	Bruce Bend	Use existing forest road	none	157	\$ -	\$ -
Mildura to Kings Billabong	Kings Billabong	Use existing forest (PV) road	none	836	\$ -	\$ -
Mildura to Kings Billabong	Kings Billabong	Add signage for "Chaffey River Trail"	none	286	\$ -	\$ -
Mildura to Kings Billabong	Kings Billabong	Use existing trail	none	3146	\$ -	\$ -
Mildura to Kings Billabong	Kings Billabong	Use existing trail	none	2958	\$ -	\$ -
			Trail head sign	2	\$ 1,500.00	\$ 3,000.00
			Interpretive sign	0	\$ 1,500.00	\$ -
			Behavioural sign	2	\$ 500.00	\$ 1,000.00
			Directional Plank sign	4	\$ 400.00	\$ 1,600.00
			Directional Blade sign	6	\$ 200.00	\$ 1,200.00
			Reassurance sign	6	\$ 70.00	\$ 420.00
		Charcoal Bend	Picnic table	1	\$ 2,000.00	\$ 2,000.00
		Charcoal Bend, Gol Gol Bend and Bruce's Bend	Seats	3	\$ 2,000.00	\$ 6,000.00
			Total kilometres	17.7	Total	\$ 331,185.55
Merbein to Mildura						
Merbein to Mildura	Pioneer Walk	Existing trail of good standard	none	33	\$ -	\$ -
Merbein to Mildura	Pioneer Walk	Existing trail of good standard	none	24	\$ -	\$ -
Merbein to Mildura	Pioneer Walk	Existing trail of good standard	none	65	\$ -	\$ -
Merbein to Mildura	Pioneer Walk	Existing trail of good standard	none	185	\$ -	\$ -
Merbein to Mildura	Merbein	Existing trail	none	132	\$ -	\$ -
Merbein to Mildura	Pump Hill	Existing trail	none	410	\$ -	\$ -
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	430	\$ 35.00	\$ 15,035.79
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	900	\$ 35.00	\$ 31,490.73
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	712	\$ 35.00	\$ 24,918.04
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	184	\$ 35.00	\$ 6,447.49
Merbein to Mildura	Ranfurly Bend	Will require 'W-barrier' guard rail installation	trail reconstruction and guard rail	504	\$	\$

1.0 CHAFFEY RIVER TRAIL

Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
			(metres)		35.00	17,642.63
Merbein to Mildura	Ranfurly Bend	Requires bench cuts with switch-backs	trail construction (metres)	66	\$ 100.00	\$ 6,589.80
Merbein to Mildura	Ranfurly Bend	Use existing road	none	118	\$ -	\$ -
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	252	\$ 35.00	\$ 8,813.04
Merbein to Mildura	Ranfurly Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	450	\$ 35.00	\$ 15,735.83
Merbein to Mildura	Levee bank	Use existing track but upgrade to surfaced trail	trail construction (metres)	387	\$ 35.00	\$ 13,544.76
Merbein to Mildura	Johnsons Bend	Use existing road	none	326	\$ -	\$ -
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	498	\$ 35.00	\$ 17,440.54
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	502	\$ 35.00	\$ 17,576.13
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	311	\$ 35.00	\$ 10,901.80
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	342	\$ 35.00	\$ 11,956.53
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	68	\$ 35.00	\$ 2,366.67
Merbein to Mildura	Johnsons Bend	Use existing bush tracks but upgrade to surfaced trail	trail construction (metres)	524	\$ 35.00	\$ 18,354.74
Merbein to Mildura	Johnsons Bend	Existing crusher dust trail	none	409	\$ -	\$ -
Merbein to Mildura	Speedway	Existing crusher dust trail	none	79	\$ -	\$ -
Merbein to Mildura	Speedway	Existing crusher dust trail	none	460	\$ -	\$ -
Merbein to Mildura	Regina Ave	Use Regina Ave. Pumps restrict formation of new trail on river.	none	920	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Upgrade existing track	trail construction (metres)	88	\$ 35.00	\$ 3,080.70
Merbein to Mildura	Chaffey Bend River Trail	Upgrade existing track	trail construction (metres)	489	\$ 35.00	\$ 17,126.52
Merbein to Mildura	Chaffey Bend River Trail	Upgrade existing track	trail construction (metres)	513	\$ 35.00	\$ 17,957.98
Merbein to Mildura	Chaffey Bend River Trail	Upgrade existing track	trail construction (metres)	244	\$ 35.00	\$ 8,527.12
Merbein to Mildura	Chaffey Bend River Trail	Cureton Ave. Upgrade and exclude motorised vehicles	trail construction (metres)	227	\$ 35.00	\$ 7,958.55
Merbein to Mildura	Chaffey Bend River Trail	Technically Cureton Ave. Upgrade and exclude motorised vehicles	trail construction (metres), bollards	492	\$ 35.00	\$ 17,226.86
Merbein to Mildura	Chaffey Bend River Trail	Technically Cureton Ave. Upgrade and exclude motorised vehicles	trail construction (metres), bollards	209	\$ 35.00	\$ 7,321.27
Merbein to Mildura	Chaffey Bend River Trail	Cureton Ave. Upgrade and exclude motorised vehicles	trail construction (metres)	275	\$ 35.00	\$ 9,631.90
Merbein to Mildura	Chaffey Bend Inland Trail	Use Cureton Ave and Chaffey Track	none	172	\$ -	\$ -
Merbein to Mildura	Chaffey Bend Inland Trail	Existing trail of good standard	none	841	\$ -	\$ -
Merbein to Mildura	Chaffey Bend Inland Trail	Existing trail of good standard	none	396	\$ -	\$ -
Merbein to Mildura	Chaffey Bend Inland Trail	Existing trail of good standard	none	372	\$ -	\$ -
Merbein to Mildura	Chaffey Bend Inland Trail	Existing trail of good standard	none	356	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing trail of good standard	none	121	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing trail of good standard	none	137	\$ -	\$ -
Merbein to Mildura	Apex Park	Sealed road through Apex Park. Directional signage required	none	258	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	97	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	241	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	274	\$ -	\$ -

1.0 CHAFFEY RIVER TRAIL

Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	113	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	163	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	340	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	272	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	169	\$ -	\$ -
Merbein to Mildura	Chaffey Bend River Trail	Existing crushed bluestone trail	none	290	\$ -	\$ -
Merbein to Mildura	Old Mildura Homestead	Existing crushed bluestone trail	none	213	\$ -	\$ -
Merbein to Mildura	Old Mildura Homestead	Existing crushed bluestone trail	none	219	\$ -	\$ -
Merbein to Mildura	Cureton Ave to Hugh King Drive	Existing crushed bluestone trail	none	179	\$ -	\$ -
Merbein to Mildura	Port of Mildura	Existing crushed bluestone trail	none	223	\$ -	\$ -
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	60	\$ 100.00	\$ 5,963.20
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	196	\$ 100.00	\$ 19,581.00
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	196	\$ 100.00	\$ 19,633.90
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	123	\$ 100.00	\$ 12,349.10
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	126	\$ 100.00	\$ 12,612.40
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	12	\$ 100.00	\$ 1,165.30
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	70	\$ 100.00	\$ 7,035.90
Merbein to Mildura	Port of Mildura	Road crossing	none	12	\$ -	\$ -
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	221	\$ 100.00	\$ 22,093.70
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	249	\$ 100.00	\$ 24,901.80
Merbein to Mildura	Port of Mildura	Existing asphalt path	none	37	\$ -	\$ -
Merbein to Mildura	Port of Mildura	Very high use section. Provide access for all abilities	Upgrade to sealed bitumen surface	104	\$ 100.00	\$ 10,428.20
Merbein to Mildura	Port of Mildura	Existing asphalt path	none	55	\$ -	\$ -
			Trail head sign	1	\$ 1,500.00	\$ 1,500.00
			Interpretive sign	0	\$ 1,500.00	\$ -
			Behavioural sign	0	\$ 500.00	\$ -
			Directional Plank sign	2	\$ 400.00	\$ 800.00
			Directional Blade sign	8	\$ 200.00	\$ 1,600.00
			Reassurance sign	12	\$ 70.00	\$ 840.00
			Bollards	2	\$ 200.00	\$ 400.00
			Guard rail	504	\$ 110.00	\$ 55,448.25
			Guard rail terminal assemblies	2	\$ 2,500.00	\$ 5,000.00
		Johnson Bend	Picnic table	1	2000	\$ 2,000.00

1.0 CHAFFEY RIVER TRAIL

Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
		Slaughteryard Bend, Johnson Bend, Ranfurly Bend	Seats	3	2000	\$ 6,000.00
			Total Kilometres	18.7	Total	\$ 516,998.10
Kings Billabong to Red Cliffs						
Kings Billabong to Red Cliffs	Psyche Bend	Use existing informal tracks where possible	trail construction (metres)	1059	\$ 35.00	\$ 37,075.12
Kings Billabong to Red Cliffs	Psyche Bend	Use existing informal tracks where possible	trail construction (metres)	850	\$ 35.00	\$ 29,740.97
Kings Billabong to Red Cliffs	Kings Billabong Sth	Use existing informal tracks where possible	trail construction (metres)	793	\$ 35.00	\$ 27,756.51
Kings Billabong to Red Cliffs	Kings Billabong Sth	Use existing informal tracks where possible	trail construction (metres)	832	\$ 35.00	\$ 29,125.43
Kings Billabong to Red Cliffs	Kings Billabong Sth	Use existing informal tracks where possible	trail construction (metres)	782	\$ 35.00	\$ 27,368.08
Kings Billabong to Red Cliffs	Kings Billabong Sth	Use existing informal tracks where possible	trail construction (metres)	862	\$ 35.00	\$ 30,180.29
Kings Billabong to Red Cliffs	Kings Billabong Sth	Use existing informal tracks where possible	trail construction (metres)	1587	\$ 35.00	\$ 55,544.44
Kings Billabong to Red Cliffs	Woomera Ave	Construct off-road trail in road reserve	trail construction (metres)	367	\$ 35.00	\$ 12,830.79
Kings Billabong to Red Cliffs	Cliffside Reserve	Construct crushed bluestone trail on existing informal dirt tracks	trail construction (metres)	1812	\$ 35.00	\$ 63,436.52
Kings Billabong to Red Cliffs	Cassia St	Construct off-road trail in road reserve	trail construction (metres)	1187	\$ 35.00	\$ 41,534.64
Kings Billabong to Red Cliffs	Cassia St	Use existing off road-trail	none	613	\$ -	\$ -
Kings Billabong to Red Cliffs	Nursery Ridge Rd	Use existing off road-trail	none	1087	\$ -	\$ -
Kings Billabong to Red Cliffs	Indi Ave	Use existing off road-trail	none	336	\$ -	\$ -
Kings Billabong to Red Cliffs	Indi Ave	Develop on-road bicycle lane	on-road lane marking (metres)	539	\$ 5.00	\$ 2,697.20
Kings Billabong to Red Cliffs	Indi Ave	Develop on-road bicycle lane	on-road lane marking (metres)	533	\$ 5.00	\$ 2,665.19
Kings Billabong to Red Cliffs	Indi Ave	Develop on-road bicycle lane	on-road lane marking (metres)	366	\$ 5.00	\$ 1,829.46
Kings Billabong to Red Cliffs	Indi Ave	Develop on-road bicycle lane	on-road lane marking (metres)	391	\$ 5.00	\$ 1,955.59
			Bicycle symbol (on-road)	25	\$ 140.00	\$ 3,500.00
			Trail head sign	2	\$ 1,500.00	\$ 3,000.00
			Interpretive sign	0	\$ 1,500.00	\$ -
			Behavioural sign	0	\$ 500.00	\$ -
			Directional Plank sign	0	\$ 400.00	\$ -
			Directional Blade sign	6	\$ 200.00	\$ 1,200.00
			Reassurance sign	10	\$ 70.00	\$ 700.00
			Picnic table	1	\$ 2,000.00	\$ 2,000.00

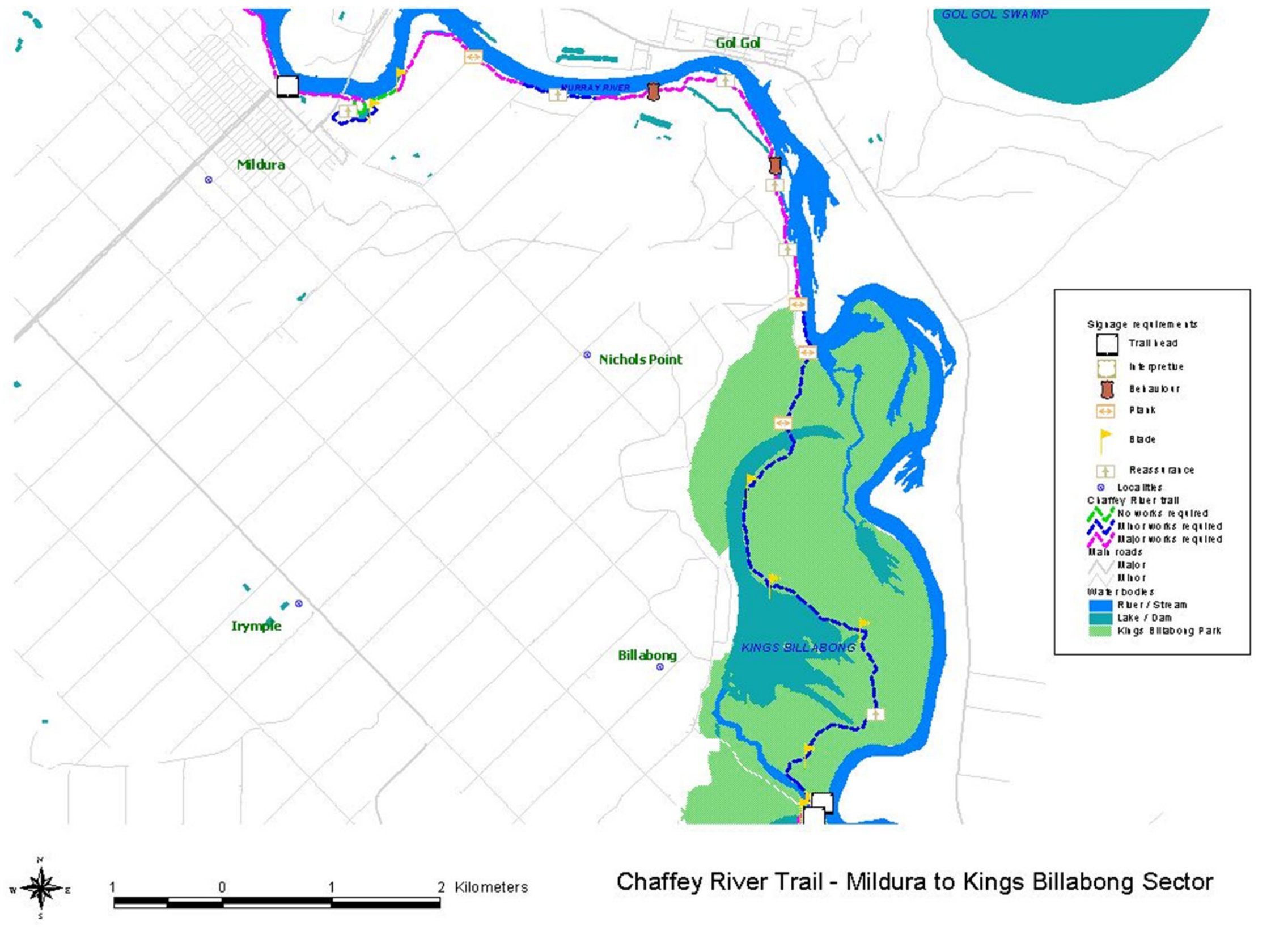
1.0 CHAFFEY RIVER TRAIL

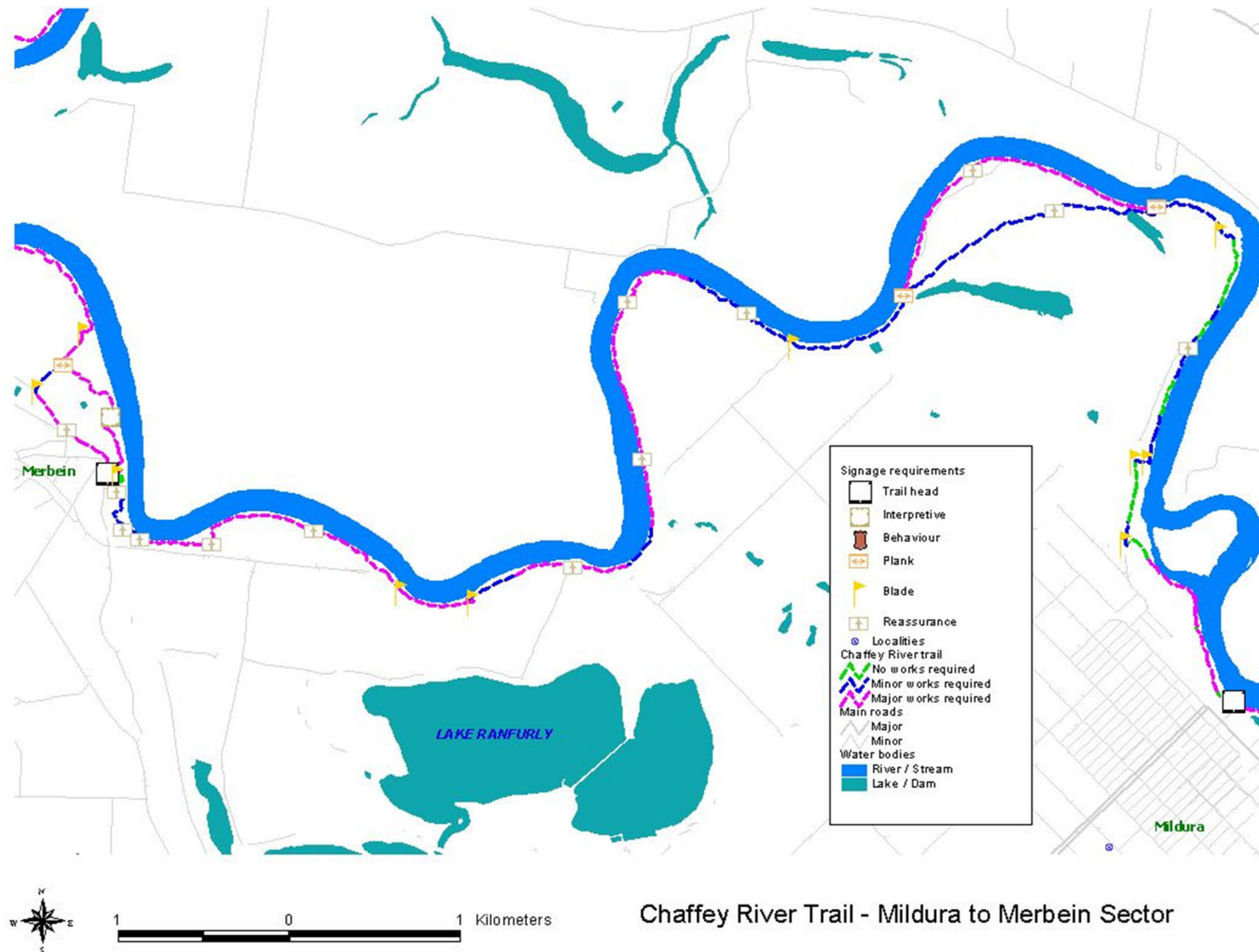
Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
			Seats	3	\$ 2,000.00	\$ 6,000.00
			Total kilometres	14.0	Total	\$ 380,140.20
Yelta to Merbein						
Yelta to Merbein	Yelta Bridge	Use existing informal tracks where possible	trail construction (metres)	893	\$ 35.00	\$ 31,244.78
Yelta to Merbein	Yelta Bridge	Need to negotiate with Vicroads to develop trail in road reserve	trail construction (metres)	418	\$ 35.00	\$ 14,613.69
Yelta to Merbein	Yelta Bridge	Need to negotiate with Vicroads to develop trail in road reserve	trail construction (metres)	414	\$ 35.00	\$ 14,474.50
Yelta to Merbein	Old Wentworth Rd	Directional signage along existing road	none	821	\$ -	\$ -
Yelta to Merbein	Redgrove	Directional signage along existing road	none	787	\$ -	\$ -
Yelta to Merbein	Redgrove	New trail required to connect existing unsealed roads	trail construction (metres)	597	\$ 35.00	\$ 20,905.29
Yelta to Merbein	Cowanna Bend	Use existing informal tracks where possible	trail construction (metres)	1303	\$ 35.00	\$ 45,608.57
Yelta to Merbein	Cowanna Bend	Use existing informal tracks where possible	trail construction (metres)	1279	\$ 35.00	\$ 44,761.12
Yelta to Merbein	Halfway Rocks	Use existing informal tracks where possible	trail construction (metres)	1150	\$ 35.00	\$ 40,237.58
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	407	\$ 35.00	\$ 14,235.73
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	1716	\$ 35.00	\$ 60,068.72
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	907	\$ 35.00	\$ 31,733.10
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	1366	\$ 35.00	\$ 47,825.44
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	567	\$ 35.00	\$ 19,833.42
Yelta to Merbein	Horseshoe Bend	Use existing informal tracks where possible	trail construction (metres)	1203	\$ 35.00	\$ 42,115.71
Yelta to Merbein	Merbein Common	Use existing informal tracks where possible	trail construction (metres)	1202	\$ 35.00	\$ 42,054.92
Yelta to Merbein	Merbein Common	Use existing informal tracks where possible	trail construction (metres)	295	\$ 35.00	\$ 10,336.45
Yelta to Merbein	Chaffey Landing	Will become primary route when Blandowski Walk is restored	trail construction (metres)	637	\$ 35.00	\$ 22,283.03
Yelta to Merbein	Blandowski Walk	Currently closed due to dangerous conditions	trail construction (metres)	223	\$ 100.00	\$ 22,294.90
Yelta to Merbein	Blandowski Walk	Currently closed due to dangerous conditions	trail construction (metres)	118	\$ 100.00	\$ 11,814.70
Yelta to Merbein	Blandowski Walk	Currently closed due to dangerous conditions	trail construction (metres)	225	\$ 100.00	\$ 22,501.40
Yelta to Merbein	Merbein Common	Use existing unsealed road	none	249	\$ -	\$ -
Yelta to Merbein	Merbein	Need to negotiate with Vicroads to develop trail in road reserve	trail construction (metres)	307	\$ 35.00	\$ 10,760.96
Yelta to Merbein	Merbein	Need to negotiate with Mildara Winery to develop trail across frontage	trail construction (metres)	201	\$ 35.00	\$ 7,030.73
Yelta to Merbein	Merbein	Need to negotiate with Mildara Winery to develop trail across frontage	trail construction (metres)	311	\$ 35.00	\$ 10,890.18
Yelta to Merbein	Merbein	Use International Drive	none	80	\$ -	\$ -

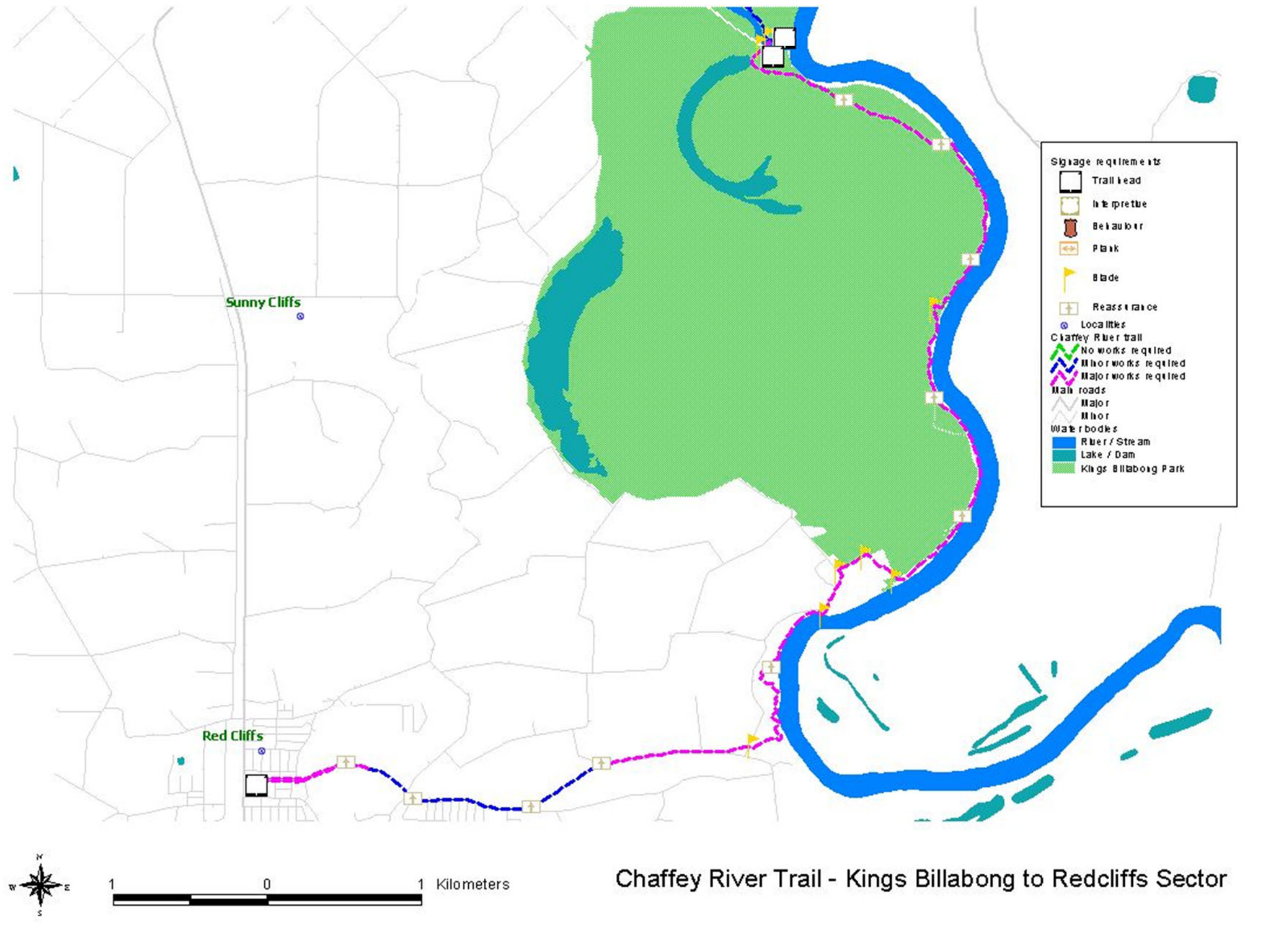
1.0 CHAFFEY RIVER TRAIL

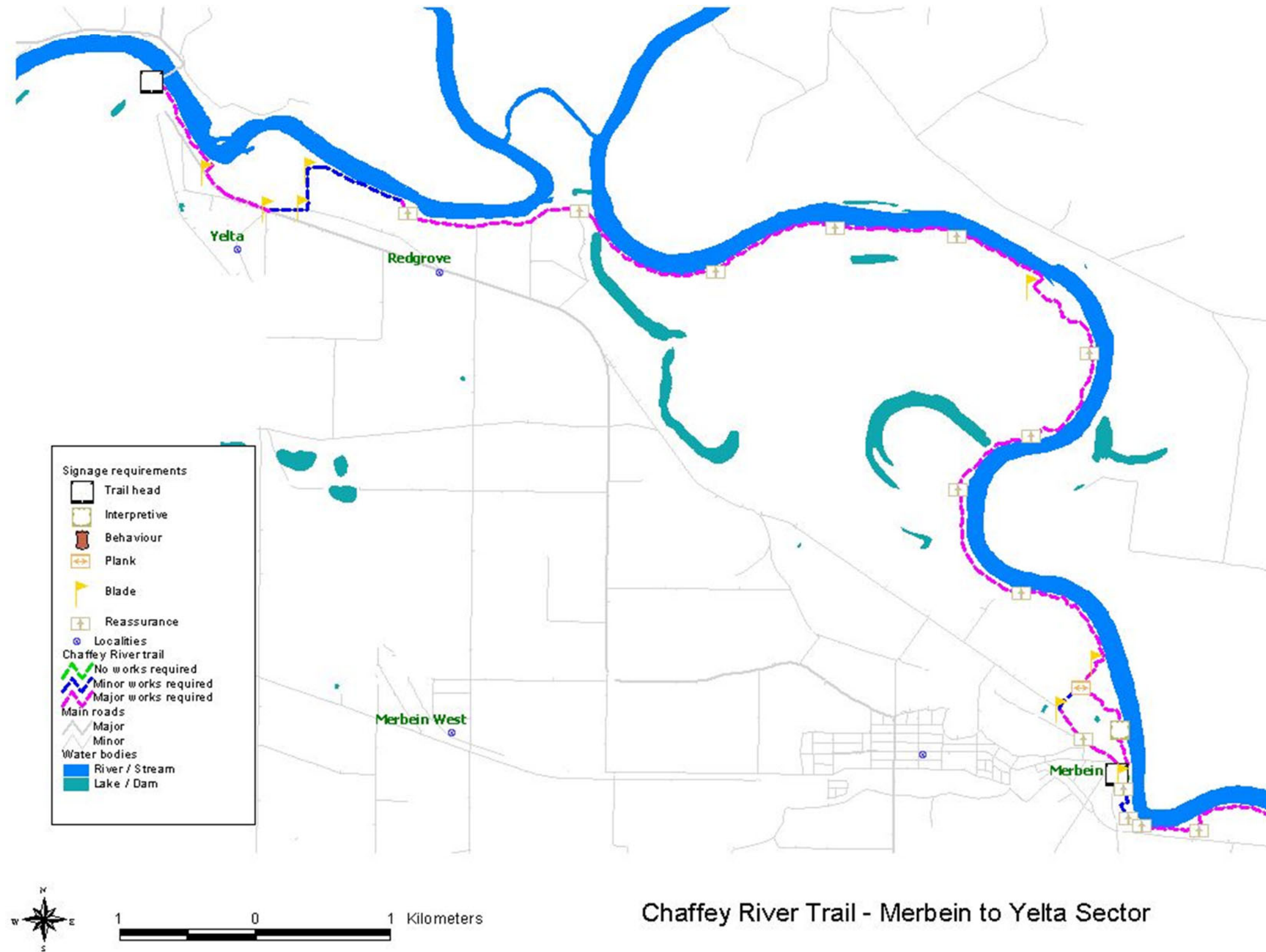
Sector	Specific Section	Comments	Works detail	Quantity	\$/Unit	Subtotal
			Trail head sign	1	\$ 1,500.00	\$ 1,500.00
			Interpretive sign	1	\$ 1,500.00	\$ 1,500.00
			Behavioural sign	0	\$ 500.00	\$ -
			Directional Plank sign	1	\$ 400.00	\$ 400.00
			Directional Blade sign	7	\$ 200.00	\$ 1,400.00
			Reassurance sign	10	\$ 70.00	\$ 700.00
			Picnic table	1	\$ 2,000.00	\$ 2,000.00
			Seats	3	\$ 2,000.00	\$ 6,000.00
					Total	\$ 601,124.88
			Total kilometres	17.7		.
			Grand total kilometers	68.100388		
				Grand Total		\$ 1,829,448.72

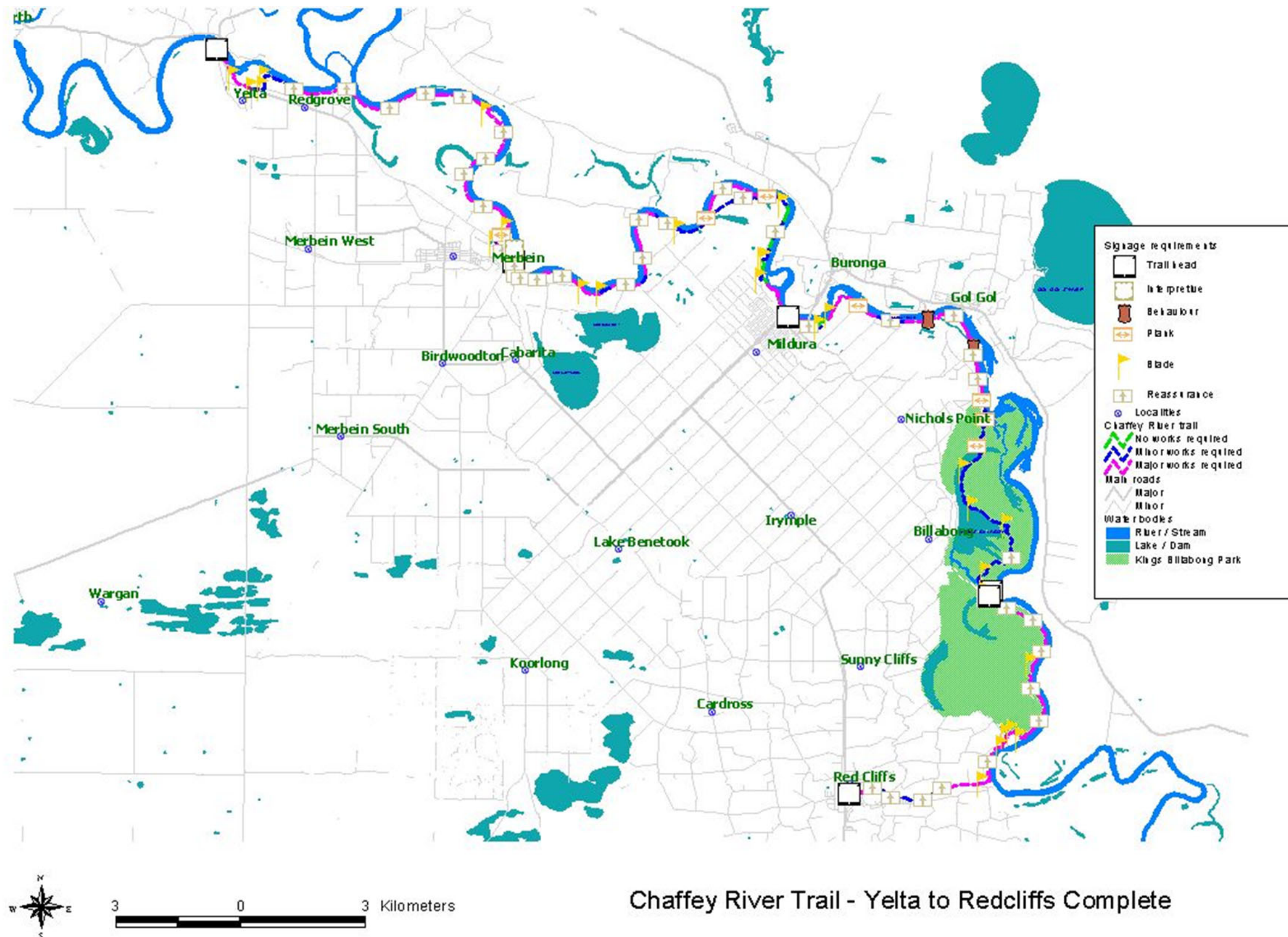
1.2 Chaffey River Trail Maps











2.0 RECOMMENDED WORKS BY PRIORITY

2.0 Recommended Works by Priority

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
High Priority Works								
Benetook Avenue	on road	major	Benetook between 14th and Hector	Improve connection between tertiary schools and 11th and 14th Sts	shoulder sealing and lane marking	1064.625	\$ 105.00	\$ 111,785.63
Benetook Avenue	on road	major	Benetook between 7th and 11th	Improve access to growth area around The Crescent	shoulder sealing and lane marking	220.028	\$ 105.00	\$ 23,102.94
Benetook Avenue	on road	major	Bend joining 7th to Benetook	Access to CBD from Nichols Pt and common training route	shoulder sealing and lane marking	371.852	\$ 105.00	\$ 39,044.46
Benetook Avenue	on road	major	Bend joining 7th to Benetook	Access to CBD from Nichols Pt and common training route	shoulder sealing and lane marking	290.452	\$ 105.00	\$ 30,497.46
Benetook Avenue	on road	major	Benetook between 7th and 11th	Improve access for growth area around Ellswood	shoulder sealing and lane marking	239.687	\$ 105.00	\$ 25,167.14
Benetook Avenue	on road	major	Benetook near Ellswood	Improve access for growth area around Ellswood	shoulder sealing and lane marking	264.122	\$ 105.00	\$ 27,732.81
Benetook Avenue	on road	minor	Benetook between 7th and Cureton	Access to CBD from Nichols Pt	lane marking	538.581	\$ 5.00	\$ 2,692.91
Benetook Avenue	on road	minor	Benetook between 14th and 11th (south side)	Improve access between Tertiary schools and 11th St and 14th St	lane marking	1308.062	\$ 5.00	\$ 6,540.31
Benetook Avenue	on road	minor	Benetook between 7th and Cureton	Access to CBD from Nichols Pt	lane marking	572.52	\$ 5.00	\$ 2,862.60
Benetook Avenue	on road	minor	Benetook between Hector and 11th	Improve access between Tertiary schools and 11th St	lane marking	249.816	\$ 5.00	\$ 1,249.08
Benetook Avenue	on road	minor	Benetook between 7th and 11th	May need to use current truck parks	lane marking	66.794	\$ 5.00	\$ 333.97
Benetook Avenue			Benetook between 7th and 14th		Signs and road stencils	5.186539	\$ 900.00	\$ 4,667.89
Cureton Avenue (east)	off road	major	Cureton between 5th and Cowra	Access to CBD from Nichols Pt	construct off road trail	366.2	\$ 75.00	\$ 27,465.00
Cureton Avenue (east)	off road	minor	Cureton between 5th and Laurel	Access to CBD from Nichols Pt	resurface existing trail	763.122	\$ 20.00	\$ 15,262.44
Cureton Avenue (east)	off road				signage	0.3662	\$ 500.00	\$ 183.10
Cureton Avenue (east)	on road	major	Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	shoulder sealing and lane marking	306.873	\$ 105.00	\$ 32,221.67
Cureton Avenue (east)	on road	major	Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	shoulder sealing and lane marking	310.15	\$ 105.00	\$ 32,565.75
Cureton Avenue (east)	on road		Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	Signs and road stencils	0.7634882	\$ 900.00	\$ 687.14
Deakin Avenue	off road	major	Deakin between 16th and Mildura Sth Primary	Complete connection with existing off road path on Deakin and 16th St	widen path to continue sharedway to 16th	135.984	\$ 75.00	\$ 10,198.80
Deakin Avenue	off road		Deakin between 16th and Mildura Sth Primary		signage	0.135984	\$ 500.00	\$ 67.99
Deakin Avenue	off road	major	At side streets on western side	Will provide more consistent elevation and safer road crossings	Raised pavement street crossing	8	\$ 5,000.00	\$ 40,000.00
Deakin Avenue	on road	minor	Deakin between 16th and 17th	Strategic connection for Cabarita residents with Mildura CBD	lane marking	1308.876	\$ 5.00	\$ 6,544.38
Deakin Avenue	on road	minor	Deakin between 16th and 17th	Strategic connection for Cabarita residents with Mildura CBD	lane marking	1306.756	\$ 5.00	\$ 6,533.78
Deakin Avenue	on road	minor	Deakin between 14th and 15th	Carriageway wide enough for cycle lane	lane marking	1323.037	\$ 5.00	\$ 6,615.19

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Deakin Avenue	on road	major	Deakin between 14th and 15th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1323.037	\$ 50.00	\$ 66,151.85
Deakin Avenue	on road	major	Deakin between 10th and 14th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1566.002	\$ 50.00	\$ 78,300.10
Deakin Avenue	on road	major	Deakin between 10th and 14th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1566.002	\$ 50.00	\$ 78,300.10
Deakin Avenue	on road	minor	Deakin between 10th and 7th (north side)	Priority commuter route 1st priority	lane marking	669.139	\$ 5.00	\$ 3,345.70
Deakin Avenue	on road	minor	Deakin between 10th and 7th (south side)	Priority commuter route 1st priority	lane marking	671.858	\$ 5.00	\$ 3,359.29
Deakin Avenue	on road	minor	Deakin between 15th and 16th		lane marking	1328.999	\$ 5.00	\$ 6,645.00
Deakin Avenue	on road	minor	Deakin between 15th and 16th		lane marking	1328.999	\$ 5.00	\$ 6,645.00
Deakin Avenue	on road		Deakin between 7th and 17th		Signs and road stencils	12.392705	\$ 900.00	\$ 11,153.43
Eleventh Street	off road	major	11th between Belar and Kings Billabong	Priority commuter route 1st priority	construct off road trail	1016.285	\$ 35.00	\$ 35,569.98
Eleventh Street	off road	major	11th between Koorlong and Belar	Priority commuter route 1st priority	construct off road trail. 8m bridge req across channel.	2162.409	\$ 35.00	\$ 75,684.32
Eleventh Street	off road	major	Corner joining Flora and 11th	Will negate need for cyclists to go through roundabout	Construct off-road trail	177.269	\$ 35.00	\$ 6,204.42
Eleventh Street	off road	major	11th between Cowra and Koorlong	Priority commuter route 1st priority	construct off road shared trail	1901.462	\$ 35.00	\$ 66,551.17
Eleventh Street	off road	major	11th between Koorlong and Channel	Priority commuter route	construct off road shared trail	296.584	\$ 35.00	\$ 10,380.44
Eleventh Street	off road	major	11th St - bridge over channel between Koorlong and Irymple	3m wide bridge at 10m long = 30 sq m	Construct trail bridge over channel	30	\$3,500.00	\$ 105,000.00
Eleventh Street	off road	major	11th between Walnut and Risbey	Priority commuter route 1st priority	widen footpath to create sharedway	853.007	\$ 75.00	\$ 63,975.53
Eleventh Street	off road	minor	11th between Walnut and Madden	Priority commuter route 1st priority	signs to direct cyclists from road lanes to off road path	778.824		\$ -
Eleventh Street	off road		11th between Flora and Belar		signage	7.21584	\$ 500.00	\$ 3,607.92
Eleventh Street	on road	major	11th between Riverside and Bingara (south)	Priority commuter route 1st priority	shoulder sealing and lane marking	103.583	\$ 105.00	\$ 10,876.22
Eleventh Street	on road		12th between Riverside and Bingara (south)		Signs and road stencils	0.103583	\$ 900.00	\$ 93.22
Fifth Street	off road	minor	5th between Cureton and Cureton		Resurface existing path	2867.672	\$ 20.00	\$ 57,353.44
Fourteenth Street	on road	none	14th between Ontario and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	999.814		\$ -
Fourteenth Street	on road	none	14th between San Mateo and Cowra	2nd Priority commuter route	Erect clearway signage	1405.828		\$ -
Fourteenth Street	on road	major	14th outside St Pauls Primary School	Need to indent parking bays to complete clearway	Indent parking bays	172.152	\$ 400.00	\$ 68,860.80
Fourteenth Street	on road	none	14th outside St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	172.131		\$ -
Fourteenth Street	on road	none	14th outside Mildura Senior College	2nd Priority commuter route	Erect clearway signage	301.564		\$ -
Fourteenth Street	on road	major	14th outside Mildura Senior College	Need to indent parking bays to complete clearway	Indent parking bays	306.997	\$ 400.00	\$ 122,798.80
Fourteenth Street	on road	none	14th between Mildura Senior College and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	950.878		\$ -
Fourteenth Street	on road	none	14th between Mildura Senior College and St Pauls	2nd Priority commuter route	Erect clearway signage	954.856		\$ -

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
			Primary School					-
Fourteenth Street	on road	none	14th between San Mateo and Cowra	2nd Priority commuter route	Erect clearway signage	1405.524		\$ -
Fourteenth Street	on road	none	14th between Ontario and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	1009.367		\$ -
Fourteenth Street	on road				Signs and road stencils	11.504157	\$ 900.00	\$ 10,353.74
Koorlong Avenue	off road	major	Koorlong between 11th and 5th	Nichols Pt commuter route	construct off road shared trail	1338.201	\$ 35.00	\$ 46,837.04
Koorlong Avenue	off road		Koorlong between 11th and 5th		signage	1.338201	\$ 500.00	\$ 669.10
San Mateo Avenue	on road	none	San Mateo between 11th and 7th	Create Clearway / shared bicycle lane	Erect Clearway signage	925.125		\$ -
San Mateo Avenue	on road	none	San Mateo between 11th and 7th	Create Clearway / shared bicycle lane	Erect Clearway signage	918.638		\$ -
San Mateo Avenue	on road	none	San Mateo between 15th and 12th	Create Clearway / shared bicycle lane	Erect Clearway signage	2500.383		\$ -
San Mateo Avenue	on road	major	San Mateo between 11th and 12th	Need to indent parking bays to complete clearway	Indent parking bays and erect clearway signage	187.5	\$ 400.00	\$ 75,000.00
San Mateo Avenue	on road	major	San Mateo between 11th and 12th	Need to indent parking bays to complete clearway	Indent parking bays and erect clearway signage	188.759	\$ 400.00	\$ 75,503.60
San Mateo Avenue	on road				Signs and road stencils	4.720405	\$ 900.00	\$ 4,248.36
Seventeenth Street	on road	minor	17th between McEdward and Deakin	Strategic connection for Cabarita residents with Mildura CBD	lane marking	3814.96	\$ 5.00	\$ 19,074.80
Seventeenth Street	on road	minor	17th between McEdward and Deakin	Strategic connection for Cabarita residents with Mildura CBD	lane marking	3826.501	\$ 5.00	\$ 19,132.51
Seventeenth Street	on road		18th between McEdward and Deakin		Signs and road stencils	7.641461	\$ 900.00	\$ 6,877.31
Seventh Street	on road	minor	7th, Cherry, Cureton past lawn bowls and tennis	Connection from Ontario to Rio Vista Park	lane marking	983.194	\$ 5.00	\$ 4,915.97
Seventh Street	on road	minor	7th between Deakin and The Crescent	Access to CBD from Nichols Pt	lane marking	1677.377	\$ 5.00	\$ 8,386.89
Seventh Street	on road	minor	7th between Deakin and The Crescent	Access to CBD from Nichols Pt	lane marking	1677.377	\$ 5.00	\$ 8,386.89
Seventh Street	on road	minor	7th, Cherry, Cureton past lawn bowls and tennis	Connection from Ontario to Rio Vista Park	lane marking	990.58	\$ 5.00	\$ 4,952.90
Seventh Street	on road				Signs and road stencils	5.328528	\$ 900.00	\$ 4,795.68
Spiders Web	on road	major	Cureton Ave near Belar Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	347.879	\$ 105.00	\$ 36,527.30
Spiders Web	on road	major	Cureton Avenue between Lancaster and Fern	Passing section for high use road training route	Shoulder sealing and lane marking	292.591	\$ 105.00	\$ 30,722.06
Spiders Web	on road	major	Cocklin Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	437.14	\$ 105.00	\$ 45,899.70
Spiders Web	on road	major	Cocklin Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	216.008	\$ 105.00	\$ 22,680.84
Spiders Web	on road				Signage	4	\$ 150.00	\$ 600.00
'The Boulevard'	off road	major	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	Install off road path across centre reserve	21.931	\$ 35.00	\$ 767.59
'The Boulevard'	on road	major	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install school crossing	1	\$ 4,200.00	\$ 4,200.00
'The Boulevard'	on road	major	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install school crossing	1	\$ 4,200.00	\$ 4,200.00

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Twelfth Street	on road	minor	12th between Sargent and Etiwanda	Will complete connection to Mildura Primary on 12th St	lane marking	289.255	\$ 5.00	\$ 1,446.28
Twelfth Street	on road	minor	12th between Sargent and Etiwanda	Will complete connection to Mildura Primary on 12th St	lane marking	286.073	\$ 5.00	\$ 1,430.37
Twelfth Street	on road		13th between Sargent and Etiwanda		Signs and road stencils	0.575328	\$ 900.00	\$ 517.80
								\$ 1,773,005.80

Medium Priority Works								
Cocklin Avenue	off road	major	Cocklin Ave between Fitzroy Ave and Nursery Ridge Rd, Red Cliffs	To connect satellite settlement to Red Cliffs East PS	construct off road shared trail	1252.712	\$ 35.00	\$ 43,844.92
Cocklin Avenue	off road		Cocklin Ave between Fitzroy Ave and Nursery Ridge Rd, Red Cliffs		signage	1.252712	\$ 500.00	\$ 626.36
Commercial St, Merbein	on road	major	Commercial Street in front of Merbein Secondary College	To provide a connection with the northern residential area of Merbein. Requires ongoing cost of crossing attendant.	install pedestrian crossing	1	\$ 6,200.00	\$ 6,200.00
Cureton Avenue (west)	on road	minor	Cureton between Cherry and 6th		lane marking	157.014	\$ 5.00	\$ 785.07
Cureton Avenue (west)	on road		Cureton between Cherry and 6th		Signs and road stencils	0.157014	\$ 900.00	\$ 141.31
Eighth Street	on road	minor	8th between Canterbury and Riverside (west)	Will connect growth area around 8th Ave with CBD	lane marking	762.627	\$ 5.00	\$ 3,813.14
Eighth Street	on road	minor	8th between Canterbury and Riverside (east)	Will connect growth area around 8th Ave with CBD	lane marking	766.634	\$ 5.00	\$ 3,833.17
Eighth Street	on road		9th between Canterbury and Riverside (east)		Signs and road stencils	1.529261	\$ 900.00	\$ 1,376.33
Etiwanda Avenue	off road	major	Etiwanda between wetland entrance and Baldwin Boats	Will provide short loop option with Chaffey River Trail	construct off road shared trail	1581.159	\$ 35.00	\$ 55,340.57
Etiwanda Avenue	off road		Etiwanda between wetland entrance and Baldwin Boats		Signage	1.581159	\$ 500.00	\$ 790.58
Etiwanda Avenue	on road	major	Etiwanda between Rodeo and 14th		shoulder sealing and lane marking	542.788	\$ 105.00	\$ 56,992.74
Etiwanda Avenue	on road	major	Etiwanda between 14th and Ford dealership		shoulder sealing and lane marking	1167.277	\$ 105.00	\$ 122,564.09
Etiwanda Avenue	on road	minor	Etiwanda between 15th and Rodeo		lane marking	648.238	\$ 5.00	\$ 3,241.19
Etiwanda Avenue	on road	minor	Etiwanda near 14th		lane marking	123.905	\$ 5.00	\$ 619.53
Etiwanda Avenue	on road	minor	Etiwanda nr 15th		lane marking	137.505	\$ 5.00	\$ 687.53
Etiwanda Avenue	on road	minor	Etiwanda between 7th and wetlands	connect CBD with Etiwanda wetlands	lane marking	171.593	\$ 5.00	\$ 857.97
Etiwanda Avenue	on road	minor	Etiwanda between 7th and wetlands	connect CBD with Etiwanda wetlands	lane marking	181.129	\$ 5.00	\$ 905.65
Etiwanda Avenue	on road		Etiwanda between 15th and wetlands		Signs and road stencils	2.972435	\$ 900.00	\$ 2,675.19
Fifteenth Street (north side)	off road	major	15th between Sandilong and Holney	Will complete safe connection between Irymple and Mildura	construct concrete shared path	967.105	\$ 100.00	\$ 96,710.50
Fifteenth Street (north side)	off road	major	15th between John and Holney	Will complete safe connection between Irymple and Mildura	Widen path to north of service road to 'shared trail' size	83.962	\$ 75.00	\$ 6,297.15
Fifteenth Street (north side)	off road	minor	15th between Myrtle and Irymple Ave	Will complete safe connection between Irymple and Mildura	surface existing path with crushed bluestone	100.758	\$ 20.00	\$ 2,015.16
Fifteenth Street	off road				signage	1.151825	\$	\$

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
(north side)							500.00	575.91
Flora Avenue	off road	major	Flora between 11th and 8th	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	construct off road trail	660.476	\$ 35.00	\$ 23,116.66
Flora Avenue	off road	major	Flora between 11th and 8th	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	Construct off-road trail	657.483	\$ 35.00	\$ 23,011.91
Flora Avenue	off road	major	Flora between 8th and Cureton	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	Construct off-road trail	609	\$ 35.00	\$ 21,315.00
Flora Avenue	off road		Flora between 11th and Cureton		signage	1.926959	\$ 500.00	\$ 963.48
Irymple Green Belt	off road	major	Irymple Green Belt between Karadoc and Sandilong		removal of citrus orchard, trail construction and tree planting	911.926	\$ 42.00	\$ 38,300.89
Irymple Green Belt	off road	major	Irymple Green Belt between Koorlong and Karadoc		rubbish removal, backfill channel, trail construction and tree planting	979.658	\$ 42.00	\$ 41,145.64
Irymple Green Belt	off road	major	Irymple Green Belt between Sandilong and Cowra		trail construction and tree planting	1041.573	\$ 42.00	\$ 43,746.07
Irymple Green Belt	off road	major	Irymple Green Belt between Karadoc and Rail		trail construction, rail crossing	58.273	\$ 42.00	\$ 2,447.47
Irymple Green Belt	off road				Rail crossing	1	\$ 4,000.00	\$ 4,000.00
Irymple Green Belt	off road	minor	Irymple Green Belt between Koorlong and Karadoc		trail surfacing and tree planting	457.652	\$ 42.00	\$ 19,221.38
Irymple Green Belt	off road				signage	3.450082	\$ 500.00	\$ 1,725.04
Koorlong Avenue	on road	major	Koorlong between 15th and 11th	Connect Irymple and State Govt Office, IGB. Feed into on road trails on 14th and 11th	shoulder sealing and lane marking	2678.267	\$ 105.00	\$ 281,218.04
Koorlong Avenue	on road	major	Koorlong between 15th and 11th	Connect Irymple and State Govt Office, IGB. Feed into on road trails on 14th and 11th	shoulder sealing and lane marking	2653.999	\$ 105.00	\$ 278,669.90
Koorlong Avenue	on road		Koorlong between 15th and 11th		Signs and road stencils	5.332266	\$ 900.00	\$ 4,799.04
Ninth Street	on road	minor	9th between Olive and Riverside (west)		lane marking	1360.712	\$ 5.00	\$ 6,803.56
Ninth Street	on road	minor	9th between Olive and Riverside (east)		lane marking	1360.706	\$ 5.00	\$ 6,803.53
Ninth Street	on road		10th between Olive and Riverside		Signs and road stencils	2.721418	\$ 900.00	\$ 2,449.28
Ontario Avenue	on road	major	Ontario between 14th and 15th	Priority commuter route 3rd priority	shoulder sealing and lane marking	1329.424	\$ 105.00	\$ 139,589.52
Ontario Avenue	on road	major	Ontario between Rita and 16th		shoulder sealing and lane marking	273.378	\$ 105.00	\$ 28,704.69
Ontario Avenue	on road	major	Ontario between unnamed road and Sherring		shoulder sealing and lane marking	258.273	\$ 105.00	\$ 27,118.67
Ontario Avenue	on road	major	Ontario between Ontario Park Dr and Ontario Park Dr		shoulder sealing and lane marking	104.066	\$ 105.00	\$ 10,926.93
Ontario Avenue	on road	minor	Ontario between 15th and unnamed road		lane marking	529.261	\$ 5.00	\$ 2,646.31
Ontario Avenue	on road	minor	Ontario between 16th and Ontario Park Dr		lane marking	152.151	\$ 5.00	\$ 760.76
Ontario Avenue	on road	minor	Ontario between 11th and 13th	Priority commuter route 3rd priority	lane marking	432.467	\$ 5.00	\$ 2,162.34
Ontario Avenue	on road	minor	Ontario between 11th and 13th	Priority commuter route 3rd priority	lane marking	432.467	\$ 5.00	\$ 2,162.34
Ontario Avenue	on road	minor	Ontario between Ontario Park Dr and 15th		lane marking	1073.963	\$ 5.00	\$

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
								5,369.82
Ontario Avenue	on road	minor	Ontario between Sherring and Rita		lane marking	269.403	\$ 5.00	\$ 1,347.02
Ontario Avenue	on road				Signs and road stencils	4.854853	\$ 900.00	\$ 4,369.37
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	170.579	\$ 35.00	\$ 5,970.27
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	1011.983	\$ 35.00	\$ 35,419.41
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	244.846	\$ 35.00	\$ 8,569.61
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	262.227	\$ 35.00	\$ 9,177.95
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	51.4	\$ 35.00	\$ 1,799.00
Ouyen Hospital	off road	major	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	33.336	\$ 35.00	\$ 1,166.76
Ouyen Hospital	off road				signage	1.774371	\$ 500.00	\$ 887.19
Riverside Avenue	on road	major	Riverside between 8th and 9th		shoulder sealing and lane marking	201.387	\$ 105.00	\$ 21,145.64
Riverside Avenue	on road		Riverside between 8th and 9th		Signs and road stencils	0.201387	\$ 900.00	\$ 181.25
Sixteenth Street	on road	major	16th between Deakin and San Mateo	High growth residential area. Connection to Deakin and San Mateo priority routes	shoulder sealing and lane marking	609.923	\$ 105.00	\$ 64,041.92
Sixteenth Street	on road	minor	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.397	\$ 5.00	\$ 3,046.99
Sixteenth Street	on road	minor	16th between Walnut and Deakin	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.404	\$ 5.00	\$ 3,047.02
Sixteenth Street	on road	minor	16th between Deakin and San Mateo	High growth residential area. Connection to Deakin and San Mateo priority routes	lane marking	609.506	\$ 5.00	\$ 3,047.53
Sixteenth Street	on road	minor	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.397	\$ 5.00	\$ 3,046.99
Sixteenth Street	on road	minor	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.404	\$ 5.00	\$ 3,047.02
Sixteenth Street	on road				Signs and road stencils	3.657031	\$ 900.00	\$ 3,291.33
Walnut Avenue	on road	major	Walnut between 16th and Lizlee		shoulder sealing and lane marking	77.019	\$ 105.00	\$ 8,087.00
Walnut Avenue	on road	major	Walnut between 16th and John Monash Blvd	High growth residential area	shoulder sealing and lane marking	432.587	\$ 105.00	\$ 45,421.64
Walnut Avenue	on road	minor	Walnut between Lizlee and 15th	High growth residential area	lane marking	2480.413	\$ 5.00	\$ 12,402.07
Walnut Avenue	on road	minor	Walnut NE from 16th	High growth residential area	lane marking	133.082	\$ 5.00	\$ 665.41
Walnut Avenue	on road	minor	Walnut between John Monash Blvd and 15th	High growth residential area	lane marking	2256.311	\$ 5.00	\$ 11,281.56
Walnut Avenue	on road				Signs and road stencils	5.379412	\$ 900.00	\$ 4,841.47
								\$ 1,685,373.60

Low Priority Works								
Benetook Avenue	on road	major	Benetook between 14th and 15th		shoulder sealing and lane marking	1313.988	\$	\$

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
							105.00	137,968.74
Benetook Avenue	on road	major	Benetook between 14th and 15th		shoulder sealing and lane marking	1313.994	\$ 105.00	\$ 137,969.37
Benetook Avenue			Benetook between 14th and 15th		Signs and road stencils	2.627982	\$ 900.00	\$ 2,365.18
Cowra Avenue	off road	major	Cowra between Cureton and 11th		construct off road trail	1252.117	\$ 35.00	\$ 43,824.10
Cowra Avenue	off road	major	Cowra between 11th and 14th	Off road alternative connection from IGB extension	construct off road trail	1327.887	\$ 35.00	\$ 46,476.05
Cowra Avenue	off road		Cowra between Cureton and 14th		signage	2.580004	\$ 500.00	\$ 1,290.00
Eighth Street	off road	major	8th between Flora and Canterbury (south)		construct off road trail	488.927	\$ 35.00	\$ 17,112.45
Eighth Street	off road	major	8th between Flora and Canterbury (north)		construct off road trail	486.178	\$ 35.00	\$ 17,016.23
Eighth Street	off road		9th between Flora and Canterbury		signage	0.975105	\$ 500.00	\$ 487.55
Fifteenth Street (south side)	off road	major	15th St between Etiwanda and The Good Guys	Will complete safe connection between Irymple and Mildura	construct off road shared trail	316.954	\$ 100.00	\$ 31,695.40
Fifteenth Street (south side)	off road	major	15th St between Benetook and Cowra	Will complete safe connection between Irymple and Mildura	construct off road shared trail	632.495	\$ 100.00	\$ 63,249.50
Fifteenth Street (south side)	off road	major	15th St in front of Spotlight/ Clive Peeters	Will complete safe connection between Irymple and Mildura	widen path to make shared trail	258.335	\$ 75.00	\$ 19,375.13
Fifteenth Street (south side)	off road	major	15th St in front of The Good Guys group of shops	Will complete safe connection between Irymple and Mildura	widen path to make shared trail	304.688	\$ 75.00	\$ 22,851.60
Fifteenth Street (south side)	off road	minor	15th St between Cowra and Irymple Primary School	Will complete safe connection between Irymple and Mildura	resurface off road trail	376.574	\$ 20.00	\$ 7,531.48
Fifteenth Street (south side)	off road				signage	1.889046	\$ 500.00	\$ 944.52
Fourteenth Street	on road	major	14th between Cowra and Koorlong	2nd Priority commuter route	shoulder sealing and lane marking	1912.523	\$ 105.00	\$ 200,814.92
Fourteenth Street	on road	major	14th between Cowra and Koorlong and Karadoc	2nd Priority commuter route	shoulder sealing and lane marking	1912.523	\$ 105.00	\$ 200,814.92
Karadoc Avenue	off road	major	Karadoc between 15th and 16th		construct off road trail	651.385	\$ 35.00	\$ 22,798.48
Karadoc Avenue	off road	major	Karadoc between 15th and 14th		construct off road trail	1223.296	\$ 35.00	\$ 42,815.36
Karadoc Avenue	off road	major	Karadoc Ave from 16th Street to Mildura Baptist College	Extend existing off road trail from Irymple	construct off road trail	1242.846	\$ 35.00	\$ 43,499.61
Karadoc Avenue	off road				signage	3.117527	\$ 500.00	\$ 1,558.76
Lake Hawthorn	off road	major	North, south and eastern sides of Lake Hawthorn		construct off road shared trail	3994.707	\$ 35.00	\$ 139,814.75
Lake Hawthorn	off road		North, south and eastern sides of Lake Hawthorn		signage	3.994707	\$ 500.00	\$ 1,997.35
Ouyen Reservoir	off road	major	Past Ouyen tennis and golf, around old reservoir.	Recreational trail	construct off road shared trail	1578.616	\$ 35.00	\$ 55,251.56
Ouyen Reservoir	off road	major	Past Ouyen tennis and golf, around old reservoir.	Recreational trail	construct off road shared trail	79.321	\$ 35.00	\$ 2,776.24
Ouyen Reservoir	off road				signage	1.657937	\$ 500.00	\$ 828.97
Riverside Avenue	on road	major	Riverside west of 11th		shoulder sealing and lane marking	75.667	\$ 105.00	\$ 7,945.04
Riverside Avenue	on road		Riverside west of 11th		Signs and road stencils	0.075667	\$ 900.00	\$ 68.10

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
'The Boulevard'	on road	major	San Mateo Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install zebra crossing	1	\$3,200.00	\$ 3,200.00
Thirteenth Street	on road	minor	13th between Ontario and Etiwanda	Midway between 11th and 14th priority routes	lane marking	2554.011	\$ 5.00	\$ 12,770.06
Thirteenth Street	on road	minor	13th between Ontario and Etiwanda	Midway between 11th and 14th priority routes	lane marking	2554.013	\$ 5.00	\$ 12,770.07
Thirteenth Street	on road		14th between Ontario and Etiwanda		Signs and road stencils	5.108024	\$ 900.00	\$ 4,597.22
Twelfth Street	on road	minor	12th between Ontario and Riverside		lane marking	874.315	\$ 5.00	\$ 4,371.58
Twelfth Street	on road	minor	12th between Ontario and Riverside		lane marking	753.833	\$ 5.00	\$ 3,769.17
Twelfth Street	on road		13th between Ontario and Riverside		Signs and road stencils	1.628148	\$ 900.00	\$ 1,465.33
								\$ 1,314,084.74

Long Term Priority								
Rail Reserve	off road	major	Rail reserve between 14th and 11th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1866.236	TBA	\$ -
Rail Reserve	off road	major	Rail reserve between Etiwanda and Benetook (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	791.05		\$ -
Rail Reserve	off road	major	Rail reserve between 11th and 7th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1031.054		\$ -
Rail Reserve	off road	major	Rail reserve between 7th and 11th (west)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	965.763		\$ -
Rail Reserve	off road	major	Rail reserve between Cherry Ave and Deakin Ave	Would need to be developed in conjunction with Mildura Murray Riverfront Central Precincts Feasibility	fence and off road trail construction	939.424		\$ -
Rail Reserve	off road	major	Rail reserve between 14th and 15th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1806.306		\$ -
Rail Reserve	off road	major	Rail reserve between 15th and Red Cliffs	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	7861.547		\$ -

Completed								
Benetook Avenue	on road	none	Benetook between Ellswood and Sarah	Works complete	none	277.223		\$ -
Benetook Avenue	on road	none	Benetook between 7th and 11th	Works complete	none	264.68		\$ -
Benetook Avenue	on road	none	Benetook between 11th and Black	Works complete	none	264.674		\$ -
Commercial St, Merbein	on road	none	Commercial Av, Merbein between Reilly St and Calder Hwy	Works complete	none	1381.25		\$ -
Commercial St, Merbein	on road	none	Commercial Av, Merbein between Reilly St and Calder Hwy	Works complete	none	1366.208		\$ -
Cureton Avenue (east)	on road	none	Cureton Ave nr Hugh King Drive	Works complete	none	168.304		\$ -
Cureton Avenue (east)	on road	none	Cureton Ave nr Hugh King Drive	Works complete	none	163.203		\$ -
Cureton Avenue (west)	on road	none	Cureton between Cherry and Washington (east side)	Works complete	none	596.283		\$ -
Cureton Avenue (west)	on road	none	Cureton between Washington and walking trail	Works complete	none	160.528		\$ -

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Cureton Avenue (west)	on road	none	Cureton between 6th and Washington	Works complete	none	454.166		\$ -
Deakin Avenue	off road	none	Deakin between 16th and 9th	Works complete	none	4144.691		\$ -
Eighth Street	on road	none	8th between Olive and Riverside (east)	Works complete	none	1363.322		\$ -
Eighth Street	on road	none	8th between Lemon and San Mateo	Works complete	none	247.587		\$ -
Eighth Street	on road	none	8th between Lemon and San Mateo	Works complete	none	247.588		\$ -
Eighth Street	on road	none	8th between Olive and Riverside (west)	Works complete	none	1363.334		\$ -
Eleventh Street	off road	none	11th between Flora and Riverside	Works complete	none	1120.762		\$ -
Eleventh Street	off road	none	11th between Madden and Etiwanda (SW side)	Works complete	none	1142.651		\$ -
Eleventh Street	on road	none	11th between Madden and Cowra (NE side)	Works complete	none	2351.279		\$ -
Eleventh Street	on road	none	11th between Walnut and Riverside (south)	Works complete	none	1146.054		\$ -
Eleventh Street	on road	none	11th between Walnut and Riverside (north)	Consider roundabout treatment if funding can be obtained	none	1245.851		\$ -
Eleventh Street	on road	none	11th between Flora and Riverside	Works complete	none	1250.124		\$ -
Eleventh Street	on road	none	11th between Madden and Cowra (north side)	Works complete	none	2403.623		\$ -
Etiwanda Avenue	on road	none	Etiwanda between 7th and 11th	Works complete	none	896.107		\$ -
Etiwanda Avenue	on road	none	Etiwanda between 7th and 11th	Works complete	none	896.107		\$ -
Etiwanda Avenue	on road	none	Etiwanda between 14th and 11th	Works complete	none	1352.979		\$ -
Etiwanda Avenue	on road	none	Etiwanda between 14th and 11th	Works complete	none	1374.546		\$ -
Fifteenth Street	off road	none	15th between Riverside and Rail Reserve	Works complete	none	185.959		\$ -
Fifteenth Street (north side)	off road	none	15th between rail reserve and midway between John and Holney	Works complete	none	157.426		\$ -
Fifteenth Street (north side)	off road	none	15th between rail reserve and Myrtle	Works complete	none	603.828		\$ -
Fifteenth Street (north side)	off road	none	15th between Irymple and Morpung	Works complete	none	631.746		\$ -
Fifteenth Street (north side)	on road	none	15th between Ontario and Deakin	Works complete	none	1249.541		\$ -
Fifteenth Street (north side)	on road	none	15th between Riverside and Ontario	Works complete	none	607.586		\$ -
Fifteenth Street (south side)	on road	none	15th between Ontario and Deakin	Works complete	none	1249.541		\$ -
Fifteenth Street (south side)	on road	none	15th between Riverside and Ontario	Works complete	none	610.648		\$ -
Mansell Reserve	off road	none	Mansell Reserve	Works complete	none	512.41		\$ -
Mansell Reserve	off road	none	Mansell Reserve	Works complete	none	40.08		\$ -
Mansell Reserve	off road	none	Mansell Reserve	Works complete	none	11.225		\$ -

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Mansell Reserve	off road	none	Mansell Reserve	Works complete	none	19.016		\$ -
Marina track	off road	none	Track from Etiwanda Wetlands to Dockside Drive	Works complete	none	405.531		\$ -
Marina track	off road	none	Track from Dockside Drive to Harbourside Way	Works complete	none	374.62		\$ -
Ontario Avenue	off road	none	Ontario between 14th and Endeavour	Works complete	none	547.958		\$ -
Ontario Avenue	off road	none	Ontario between Endeavour and 15th	Works complete	none	685.725		\$ -
Ontario Avenue	on road	none	Ontario between 7th and 11th (west)	Works complete	none	886.504		\$ -
Ontario Avenue	on road	none	Ontario between 13th and 14th	Works complete	none	846.499		\$ -
Ontario Avenue	on road	none	Ontario between 13th and 14th	Works complete	none	963.822		\$ -
Ontario Avenue	on road	none	Ontario between 7th and 11th (east)	Works complete	none	886.497		\$ -
Ontario Avenue	on road	none	Ontario between 14th and 15th	Works complete	none	1238.078		\$ -
Orange Avenue	on road	none	Orange between 9th and 10th	Works complete	none	207.088		\$ -
Orange Avenue	on road	none	Orange between 9th and 10th	Works complete	none	205.018		\$ -
Ranfurly Way	on road	none	Ranfurly Way	Works complete	none	2451.669		\$ -
Ranfurly Way	on road	none	Ranfurly Way	Works complete	none	2477.978		\$ -
Ranfurly Way	on road	none	Ranfurly Way	Works complete	none	3769.66		\$ -
Ranfurly Way	on road	none	Ranfurly Way	Works complete	none	3706.533		\$ -
Riverside Avenue	on road	none	Riverside between 8th and 11th	Works complete	none	658.056		\$ -
Riverside Avenue	on road	none	Riverside between 9th and 11th	Works complete	none	442.871		\$ -
San Mateo Avenue	on road	none	San Mateo between 15th and 16th	Bike lane shared with parking	none	1356.301		\$ -
San Mateo Avenue	on road	none	San Mateo between 15th and 16th	Bike lane shared with parking	none	1357.659		\$ -
San Mateo Avenue	on road	none	San Mateo between 15th and 12th	Create Clearway / shared bicycle lane	none	2496.485		\$ -
Seventh Street	on road	none	7th between Deakin and Chaffey	Works complete	none	750.418		\$ -
Seventh Street	on road	none	7th between Deakin and Chaffey (north side)	Works complete	none	709.048		\$ -
Tenth Street	on road	none	10th between Langtree and Riverside (west)	Works complete	none	1758.921		\$ -
Tenth Street	on road	none	10th between Madden and Etiwanda	Works complete	none	1119.304		\$ -
Tenth Street	on road	none	10th between Madden and Etiwanda	Works complete	none	1119.298		\$ -
Tenth Street	on road	none	10th between Langtree and Riverside (east)	Works complete	none	1758.914		\$ -
Twelfth Street	off road	none	12th crossing rail reserve	Works complete	none	98.062		\$ -

2.0 RECOMMENDED WORKS BY PRIORITY

Trail ID	located	Level of works	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Twelfth Street	on road	none	12th between Cedar and Sargent	Works complete	none	749.312		\$ -
Twelfth Street	on road	none	12th between Walnut and Deakin	Works complete	none	609.92		\$ -
Twelfth Street	on road	none	12th between Walnut and Deakin	Works complete	none	609.921		\$ -
Twelfth Street	on road	none	12th between Cedar and Sargent	Works complete	none	749.809		\$ -
Twelfth Street	on road	none	12th between Ontario and Joakim	Works complete	none	178.3		\$ -
Twelfth Street	on road	none	12th between Ontario and Joakim	Works complete	none	162.026		\$ -
Twelfth Street	on road	none	12th between Walnut and Rail Reserve	Works complete	none	353.644		\$ -
Twelfth Street	on road	none	12th between Walnut and Rail Reserve	Works complete	none	350.662		\$ -
Walnut Avenue	on road	none	Walnut between 7th and 14th	Works complete	none	2254.039		\$ -
Walnut Avenue	on road	none	Walnut between 7th and 14th	Works complete	none	2254.038		\$ -
								\$ 4,772,464.14

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

3.0 Recommended Works by Road / Location

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Benetook Avenue	on road	major	high	Benetook between 14th and Hector	Improve connection between tertiary schools and 11th and 14th Sts	shoulder sealing and lane marking	1064.625	\$ 105.00	\$ 111,785.63
Benetook Avenue	on road	major	high	Benetook between 7th and 11th	Improve access to growth area around The Crescent	shoulder sealing and lane marking	220.028	\$ 105.00	\$ 23,102.94
Benetook Avenue	on road	major	high	Bend joining 7th to Benetook	Access to CBD from Nichols Pt and common training route	shoulder sealing and lane marking	371.852	\$ 105.00	\$ 39,044.46
Benetook Avenue	on road	major	high	Bend joining 7th to Benetook	Access to CBD from Nichols Pt and common training route	shoulder sealing and lane marking	290.452	\$ 105.00	\$ 30,497.46
Benetook Avenue	on road	major	high	Benetook between 7th and 11th	Improve access for growth area around Ellswood	shoulder sealing and lane marking	239.687	\$ 105.00	\$ 25,167.14
Benetook Avenue	on road	major	high	Benetook near Ellswood	Improve access for growth area around Ellswood	shoulder sealing and lane marking	264.122	\$ 105.00	\$ 27,732.81
Benetook Avenue	on road	minor	high	Benetook between 7th and Cureton	Access to CBD from Nichols Pt	lane marking	538.581	\$ 5.00	\$ 2,692.91
Benetook Avenue	on road	minor	high	Benetook between 14th and 11th (south side)	Improve access between Tertiary schools and 11th St and 14th St	lane marking	1308.062	\$ 5.00	\$ 6,540.31
Benetook Avenue	on road	minor	high	Benetook between 7th and Cureton	Access to CBD from Nichols Pt	lane marking	572.52	\$ 5.00	\$ 2,862.60
Benetook Avenue	on road	minor	high	Benetook between Hector and 11th	Improve access between Tertiary schools and 11th St	lane marking	249.816	\$ 5.00	\$ 1,249.08
Benetook Avenue	on road	minor	high	Benetook between 7th and 11th	May need to use current truck parks	lane marking	66.794	\$ 5.00	\$ 333.97
Benetook Avenue			high	Benetook between 7th and 14th		Signs and road stencils	5.186539	\$ 900.00	\$ 4,667.89
Benetook Avenue	on road	major	low	Benetook between 14th and 15th		shoulder sealing and lane marking	1313.988	\$ 105.00	\$ 137,968.74
Benetook Avenue	on road	major	low	Benetook between 14th and 15th		shoulder sealing and lane marking	1313.994	\$ 105.00	\$ 137,969.37
Benetook Avenue			low	Benetook between 14th and 15th		Signs and road stencils	2.627982	\$ 900.00	\$ 2,365.18
Benetook Avenue	on road	none	none	Benetook between Ellswood and Sarah	Works complete	none	277.223		\$ -
Benetook Avenue	on road	none	none	Benetook between 7th and 11th	Works complete	none	264.68		\$ -
Benetook Avenue	on road	none	none	Benetook between 11th and Black	Works complete	none	264.674		\$ -
									\$ 553,980.47
Cocklin Avenue	off road	major	medium	Cocklin Ave between Fitzroy Ave and Nursery Ridge Rd, Red Cliffs	To connect satellite settlement to Red Cliffs East PS	construct off road shared trail	1252.712	\$ 35.00	\$ 43,844.92
Cocklin Avenue	off road		medium	Cocklin Ave between Fitzroy Ave and Nursery Ridge Rd, Red Cliffs		signage	1.252712	\$ 500.00	\$ 626.36
									\$ 44,471.28
Commercial St, Merbein	on road	none	none	Commercial Av, Merbein between Reilly St and Calder Hwy	Works complete	none	1381.25		\$ -
Commercial St, Merbein	on road	none	none	Commercial Av, Merbein between Reilly St and Calder Hwy	Works complete	none	1366.208		\$ -

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Commercial St, Merbein	on road	major	medium	Commercial Street in front of Merbein Secondary College	To provide a connection with the northern residential area of Merbein. Requires ongoing cost of crossing attendant.	install pedestrian crossing	1	\$ 6,200.00	\$ 6,200.00
									\$ 6,200.00
Cowra Avenue	off road	major	low	Cowra between Cureton and 11th		construct off road trail	1252.117	\$ 35.00	\$ 43,824.10
Cowra Avenue	off road	major	low	Cowra between 11th and 14th	Off road alternative connection from IGB extension	construct off road trail	1327.887	\$ 35.00	\$ 46,476.05
Cowra Avenue	off road		low	Cowra between Cureton and 14th		signage	2.580004	\$ 500.00	\$ 1,290.00
									\$ 91,590.14
Cureton Avenue (east)	off road	major	high	Cureton between 5th and Cowra	Access to CBD from Nichols Pt	construct off road trail	366.2	\$ 75.00	\$ 27,465.00
Cureton Avenue (east)	off road	minor	high	Cureton between 5th and Laurel	Access to CBD from Nichols Pt	resurface existing trail	763.122	\$ 20.00	\$ 15,262.44
Cureton Avenue (east)	off road		high			signage	0.3662	\$ 500.00	\$ 183.10
Cureton Avenue (east)	on road	major	high	Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	shoulder sealing and lane marking	306.873	\$ 105.00	\$ 32,221.67
Cureton Avenue (east)	on road	major	high	Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	shoulder sealing and lane marking	310.15	\$ 105.00	\$ 32,565.75
Cureton Avenue (east)	on road		high	Cureton between Benetook and Cowra	Access to CBD from Nichols Pt	Signs and road stencils	0.7634882	\$ 900.00	\$ 687.14
Cureton Avenue (east)	on road	none	none	Cureton Ave nr Hugh King Drive	Works complete	none	168.304		\$ -
Cureton Avenue (east)	on road	none	none	Cureton Ave nr Hugh King Drive	Works complete	none	163.203		\$ -
									\$ 108,385.09
Cureton Avenue (west)	on road	minor	medium	Cureton between Cherry and 6th		lane marking	157.014	\$ 5.00	\$ 785.07
Cureton Avenue (west)	on road		medium	Cureton between Cherry and 6th		Signs and road stencils	0.157014	\$ 900.00	\$ 141.31
Cureton Avenue (west)	on road	none	none	Cureton between Cherry and Washington (east side)	Works complete	none	596.283		\$ -
Cureton Avenue (west)	on road	none	none	Cureton between Washington and walking trail	Works complete	none	160.528		\$ -
Cureton Avenue (west)	on road	none	none	Cureton between 6th and Washington	Works complete	none	454.166		\$ -
									\$ 926.38
Deakin Avenue	off road	major	high	Deakin between 16th and Mildura Sth Primary	Complete connection with existing off road path on Deakin and 16th St	widen path to continue sharedway to 16th	135.984	\$ 75.00	\$ 10,198.80
Deakin Avenue	off road		high	Deakin between 16th and Mildura Sth Primary		signage	0.135984	\$ 500.00	\$ 67.99
Deakin Avenue	off road	major	high	At side streets on western side	Will provide more consistent elevation and safer road crossings	Raised pavement street crossing	8	\$ 5,000.00	\$ 40,000.00
Deakin Avenue	off road	none	none	Deakin between 16th and 9th	Works complete	none	4144.691		\$ -

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Deakin Avenue	on road	minor	high	Deakin between 16th and 17th	Strategic connection for Cabarita residents with Mildura CBD	lane marking	1308.876	\$ 5.00	\$ 6,544.38
Deakin Avenue	on road	minor	high	Deakin between 16th and 17th	Strategic connection for Cabarita residents with Mildura CBD	lane marking	1306.756	\$ 5.00	\$ 6,533.78
Deakin Avenue	on road	minor	high	Deakin between 14th and 15th	Carriageway wide enough for cycle lane	lane marking	1323.037	\$ 5.00	\$ 6,615.19
Deakin Avenue	on road	major	high	Deakin between 14th and 15th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1323.037	\$ 50.00	\$ 66,151.85
Deakin Avenue	on road	major	high	Deakin between 10th and 14th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1566.002	\$ 50.00	\$ 78,300.10
Deakin Avenue	on road	major	high	Deakin between 10th and 14th	Priority commuter route 1st priority	Resize vehicle lanes, mark cycle lane, bike boxes at intersections	1566.002	\$ 50.00	\$ 78,300.10
Deakin Avenue	on road	minor	high	Deakin between 10th and 7th (north side)	Priority commuter route 1st priority	lane marking	669.139	\$ 5.00	\$ 3,345.70
Deakin Avenue	on road	minor	high	Deakin between 10th and 7th (south side)	Priority commuter route 1st priority	lane marking	671.858	\$ 5.00	\$ 3,359.29
Deakin Avenue	on road	minor	high	Deakin between 15th and 16th		lane marking	1328.999	\$ 5.00	\$ 6,645.00
Deakin Avenue	on road	minor	high	Deakin between 15th and 16th		lane marking	1328.999	\$ 5.00	\$ 6,645.00
Deakin Avenue	on road		high	Deakin between 7th and 17th		Signs and road stencils	12.392705	\$ 900.00	\$ 11,153.43
									\$ 323,860.60

Eighth Street	off road	major	low	8th between Flora and Canterbury (south)		construct off road trail	488.927	\$ 35.00	\$ 17,112.45
Eighth Street	off road	major	low	8th between Flora and Canterbury (north)		construct off road trail	486.178	\$ 35.00	\$ 17,016.23
Eighth Street	off road		low	9th between Flora and Canterbury		signage	0.975105	\$ 500.00	\$ 487.55
Eighth Street	on road	minor	medium	8th between Canterbury and Riverside (west)	Will connect growth area around 8th Ave with CBD	lane marking	762.627	\$ 5.00	\$ 3,813.14
Eighth Street	on road	minor	medium	8th between Canterbury and Riverside (east)	Will connect growth area around 8th Ave with CBD	lane marking	766.634	\$ 5.00	\$ 3,833.17
Eighth Street	on road		medium	9th between Canterbury and Riverside (east)		Signs and road stencils	1.529261	\$ 900.00	\$ 1,376.33
Eighth Street	on road	none	none	8th between Olive and Riverside (east)	Works complete	none	1363.322		\$ -
Eighth Street	on road	none	none	8th between Lemon and San Mateo	Works complete	none	247.587		\$ -
Eighth Street	on road	none	none	8th between Lemon and San Mateo	Works complete	none	247.588		\$ -
Eighth Street	on road	none	none	8th between Olive and Riverside (west)	Works complete	none	1363.334		\$ -
									\$ 43,638.87

Eleventh Street	off road	major	high	11th between Belar and Kings Billabong	Priority commuter route 1st priority	construct off road trail	1016.285	\$ 35.00	\$ 35,569.98
Eleventh Street	off road	major	high	11th between Koorlong and Belar	Priority commuter route 1st priority	construct off road trail. 8m bridge req across channel.	2162.409	\$ 35.00	\$ 75,684.32
Eleventh Street	off road	major	high	Corner joining Flora and 11th	Will negate need for cyclists to go through roundabout	Construct off-road trail	177.269	\$ 35.00	\$ 6,204.42
Eleventh Street	off road	major	high	11th between Cowra and Koorlong	Priority commuter route 1st priority	construct off road shared trail	1901.462	\$	\$

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
								35.00	66,551.17
Eleventh Street	off road	major	high	11th between Koorlong and Channel	Priority commuter route	construct off road shared trail	296.584	\$ 35.00	\$ 10,380.44
Eleventh Street	off road	major	high	11th St - bridge over channel between Koorlong and Irymple	3m wide bridge at 10m long = 30 sq m	Construct trail bridge over channel	30	\$ 3,500.00	\$ 105,000.00
Eleventh Street	off road	major	high	11th between Walnut and Risbey	Priority commuter route 1st priority	widen footpath to create sharedway	853.007	\$ 75.00	\$ 63,975.53
Eleventh Street	off road	minor	high	11th between Walnut and Madden	Priority commuter route 1st priority	signs to direct cyclists from road lanes to off road path	778.824		\$ -
Eleventh Street	off road		high	11th between Flora and Belar		signage	7.21584	\$ 500.00	\$ 3,607.92
Eleventh Street	off road	none	none	11th between Flora and Riverside	Works complete	none	1120.762		\$ -
Eleventh Street	off road	none	none	11th between Madden and Etiwanda (SW side)	Works complete	none	1142.651		\$ -
Eleventh Street	on road	major	high	11th between Riverside and Bingara (south)	Priority commuter route 1st priority	shoulder sealing and lane marking	103.583	\$ 105.00	\$ 10,876.22
Eleventh Street	on road		high	12th between Riverside and Bingara (south)		Signs and road stencils	0.103583	\$ 900.00	\$ 93.22
Eleventh Street	on road	none	none	11th between Madden and Cowra (NE side)	Works complete	none	2351.279		\$ -
Eleventh Street	on road	none	none	11th between Walnut and Riverside (south)	Works complete	none	1146.054		\$ -
Eleventh Street	on road	none	none	11th between Walnut and Riverside (north)	Consider roundabout treatment if funding can be obtained	none	1245.851		\$ -
Eleventh Street	on road	none	none	11th between Flora and Riverside	Works complete	none	1250.124		\$ -
Eleventh Street	on road	none	none	11th between Madden and Cowra (north side)	Works complete	none	2403.623		\$ -
									\$ 377,943.20

Etiwanda Avenue	off road	major	medium	Etiwanda between wetland entrance and Baldwin Boats	Will provide short loop option with Chaffey River Trail	construct off road shared trail	1581.159	\$ 35.00	\$ 55,340.57
Etiwanda Avenue	off road		medium	Etiwanda between wetland entrance and Baldwin Boats		Signage	1.581159	\$ 500.00	\$ 790.58
Etiwanda Avenue	on road	major	medium	Etiwanda between Rodeo and 14th		shoulder sealing and lane marking	542.788	\$ 105.00	\$ 56,992.74
Etiwanda Avenue	on road	major	medium	Etiwanda between 14th and Ford dealership		shoulder sealing and lane marking	1167.277	\$ 105.00	\$ 122,564.09
Etiwanda Avenue	on road	minor	medium	Etiwanda between 15th and Rodeo		lane marking	648.238	\$ 5.00	\$ 3,241.19
Etiwanda Avenue	on road	minor	medium	Etiwanda near 14th		lane marking	123.905	\$ 5.00	\$ 619.53
Etiwanda Avenue	on road	minor	medium	Etiwanda nr 15th		lane marking	137.505	\$ 5.00	\$ 687.53
Etiwanda Avenue	on road	minor	medium	Etiwanda between 7th and wetlands	connect CBD with Etiwanda wetlands	lane marking	171.593	\$ 5.00	\$ 857.97
Etiwanda Avenue	on road	minor	medium	Etiwanda between 7th and wetlands	connect CBD with Etiwanda wetlands	lane marking	181.129	\$ 5.00	\$ 905.65
Etiwanda Avenue	on road		medium	Etiwanda between 15th and wetlands		Signs and road stencils	2.972435	\$ 900.00	\$ 2,675.19
Etiwanda Avenue	on road	none	none	Etiwanda between 7th and 11th	Works complete	none	896.107		\$ -
Etiwanda Avenue	on road	none	none	Etiwanda between 7th and 11th	Works complete	none	896.107		\$ -

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Etiwanda Avenue	on road	none	none	Etiwanda between 14th and 11th	Works complete	none	1352.979		\$ -
Etiwanda Avenue	on road	none	none	Etiwanda between 14th and 11th	Works complete	none	1374.546		\$ -
									\$ 244,675.01

Fifteenth Street (north side)	off road	major	medium	15th between Sandilong and Holney	Will complete safe connection between Irymple and Mildura	construct concrete shared path	967.105	\$ 100.00	\$ 96,710.50
Fifteenth Street (north side)	off road	major	medium	15th between John and Holney	Will complete safe connection between Irymple and Mildura	Widen path to north of service road to 'shared trail' size	83.962	\$ 75.00	\$ 6,297.15
Fifteenth Street (north side)	off road	minor	medium	15th between Myrtle and Irymple Ave	Will complete safe connection between Irymple and Mildura	surface existing path with crushed bluestone	100.758	\$ 20.00	\$ 2,015.16
Fifteenth Street (north side)	off road		medium			signage	1.151825	\$ 500.00	\$ 575.91
Fifteenth Street (south side)	off road	major	low	15th St between Etiwanda and The Good Guys	Will complete safe connection between Irymple and Mildura	construct off road shared trail	316.954	\$ 100.00	\$ 31,695.40
Fifteenth Street (south side)	off road	major	low	15th St between Benetook and Cowra	Will complete safe connection between Irymple and Mildura	construct off road shared trail	632.495	\$ 100.00	\$ 63,249.50
Fifteenth Street (south side)	off road	major	low	15th St in front of Spotlight/ Clive Peeters	Will complete safe connection between Irymple and Mildura	widen path to make shared trail	258.335	\$ 75.00	\$ 19,375.13
Fifteenth Street (south side)	off road	major	low	15th St in front of The Good Guys group of shops	Will complete safe connection between Irymple and Mildura	widen path to make shared trail	304.688	\$ 75.00	\$ 22,851.60
Fifteenth Street (south side)	off road	minor	low	15th St between Cowra and Irymple Primary School	Will complete safe connection between Irymple and Mildura	resurface off road trail	376.574	\$ 20.00	\$ 7,531.48
Fifteenth Street (south side)	off road		low			signage	1.889046	\$ 500.00	\$ 944.52
Fifteenth Street	off road	none	none	15th between Riverside and Rail Reserve	Works complete	none	185.959		\$ -
Fifteenth Street (north side)	off road	none	none	15th between rail reserve and midway between John and Holney	Works complete	none	157.426		\$ -
Fifteenth Street (north side)	off road	none	none	15th between rail reserve and Myrtle	Works complete	none	603.828		\$ -
Fifteenth Street (north side)	off road	none	none	15th between Irymple and Morpung	Works complete	none	631.746		\$ -
Fifteenth Street (south side)	on road	none	none	15th between Ontario and Deakin	Works complete	none	1249.541		\$ -
Fifteenth Street (north side)	on road	none	none	15th between Ontario and Deakin	Works complete	none	1249.541		\$ -
Fifteenth Street (south side)	on road	none	none	15th between Riverside and Ontario	Works complete	none	610.648		\$ -
Fifteenth Street (north side)	on road	none	none	15th between Riverside and Ontario	Works complete	none	607.586		\$ -
									\$ 251,246.35

Fifth Street	off road	minor	high	5th between Cureton and Cureton		Resurface existing path	2867.672	\$ 20.00	\$ 57,353.44
									\$ 57,353.44

Flora Avenue	off road	major	medium	Flora between 11th and 8th	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	construct off road trail	660.476	\$ 35.00	\$ 23,116.66
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3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Flora Avenue	off road	major	medium	Flora between 11th and 8th	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	Construct off-road trail	657.483	\$ 35.00	\$ 23,011.91
Flora Avenue	off road	major	medium	Flora between 8th and Cureton	Will be strategic connection to Chaffey River Trail when developed and to general river trails now	Construct off-road trail	609	\$ 35.00	\$ 21,315.00
Flora Avenue	off road		medium	Flora between 11th and Cureton		signage	1.926959	\$ 500.00	\$ 963.48
									\$ 68,407.04

Fourteenth Street	on road	major	low	14th between Cowra and Koorlong	2nd Priority commuter route	shoulder sealing and lane marking	1912.523	\$ 105.00	\$ 200,814.92
Fourteenth Street	on road	major	low	14th between Cowra and Koorlong and Karadoc	2nd Priority commuter route	shoulder sealing and lane marking	1912.523	\$ 105.00	\$ 200,814.92
Fourteenth Street	on road	none	high	14th between Ontario and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	999.814		\$ -
Fourteenth Street	on road	none	high	14th between San Mateo and Cowra	2nd Priority commuter route	Erect clearway signage	1405.828		\$ -
Fourteenth Street	on road	major	high	14th outside St Pauls Primary School	Need to indent parking bays to complete clearway	Indent parking bays	172.152	\$ 400.00	\$ 68,860.80
Fourteenth Street	on road	none	high	14th outside St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	172.131		\$ -
Fourteenth Street	on road	none	high	14th outside Mildura Senior College	2nd Priority commuter route	Erect clearway signage	301.564		\$ -
Fourteenth Street	on road	major	high	14th outside Mildura Senior College	Need to indent parking bays to complete clearway	Indent parking bays	306.997	\$ 400.00	\$ 122,798.80
Fourteenth Street	on road	none	high	14th between Mildura Senior College and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	950.878		\$ -
Fourteenth Street	on road	none	high	14th between Mildura Senior College and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	954.856		\$ -
Fourteenth Street	on road	none	high	14th between San Mateo and Cowra	2nd Priority commuter route	Erect clearway signage	1405.524		\$ -
Fourteenth Street	on road	none	high	14th between Ontario and St Pauls Primary School	2nd Priority commuter route	Erect clearway signage	1009.367		\$ -
Fourteenth Street	on road		high			Signs and road stencils	11.504157	\$ 900.00	\$ 10,353.74
									\$ 603,643.17

Irymple Green Belt	off road	major	medium	Irymple Green Belt between Karadoc and Sandilong		removal of citrus orchard, trail construction and tree planting	911.926	\$ 42.00	\$ 38,300.89
Irymple Green Belt	off road	major	medium	Irymple Green Belt between Koorlong and Karadoc		rubbish removal, backfill channel, trail construction and tree planting	979.658	\$ 42.00	\$ 41,145.64
Irymple Green Belt	off road	major	medium	Irymple Green Belt between Sandilong and Cowra		trail construction and tree planting	1041.573	\$ 42.00	\$ 43,746.07
Irymple Green Belt	off road	major	medium	Irymple Green Belt between Karadoc and Rail		trail construction, rail crossing	58.273	\$ 42.00	\$ 2,447.47
Irymple Green Belt	off road		medium			Rail crossing	1	\$ 4,000.00	\$ 4,000.00
Irymple Green Belt	off road	minor	medium	Irymple Green Belt between Koorlong and Karadoc		trail surfacing and tree planting	457.652	\$ 42.00	\$ 19,221.38
Irymple Green Belt	off road		medium			signage	3.450082	\$ 500.00	\$ 1,725.04
									\$ 150,586.49

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Karadoc Avenue	off road	major	low	Karadoc between 15th and 16th		construct off road trail	651.385	\$ 35.00	\$ 22,798.48
Karadoc Avenue	off road	major	low	Karadoc between 15th and 14th		construct off road trail	1223.296	\$ 35.00	\$ 42,815.36
Karadoc Avenue	off road	major	low	Karadoc Ave from 16th Street to Mildura Baptist College	Extend existing off road trail from Irymple	construct off road trail	1242.846	\$ 35.00	\$ 43,499.61
Karadoc Avenue	off road		low			signage	3.117527	\$ 500.00	\$ 1,558.76
									\$ 110,672.21
Koorlong Avenue	off road	major	high	Koorlong between 11th and 5th	Nichols Pt commuter route	construct off road shared trail	1338.201	\$ 35.00	\$ 46,837.04
Koorlong Avenue	off road		high	Koorlong between 11th and 5th		signage	1.338201	\$ 500.00	\$ 669.10
Koorlong Avenue	on road	major	medium	Koorlong between 15th and 11th	Connect Irymple and State Govt Office, IGB. Feed into on road trails on 14th and 11th	shoulder sealing and lane marking	2678.267	\$ 105.00	\$ 281,218.04
Koorlong Avenue	on road	major	medium	Koorlong between 15th and 11th	Connect Irymple and State Govt Office, IGB. Feed into on road trails on 14th and 11th	shoulder sealing and lane marking	2653.999	\$ 105.00	\$ 278,669.90
Koorlong Avenue	on road		medium	Koorlong between 15th and 11th		Signs and road stencils	5.332266	\$ 900.00	\$ 4,799.04
									\$ 612,193.10
Lake Hawthorn	off road	major	low	North, south and eastern sides of Lake Hawthorn		construct off road shared trail	3994.707	\$ 35.00	\$ 139,814.75
Lake Hawthorn	off road		low	North, south and eastern sides of Lake Hawthorn		signage	3.994707	\$ 500.00	\$ 1,997.35
									\$ 141,812.10
Mansell Reserve	off road	none	none	Mansell Reserve	Works complete	none	512.41		\$ -
Mansell Reserve	off road	none	none	Mansell Reserve	Works complete	none	40.08		\$ -
Mansell Reserve	off road	none	none	Mansell Reserve	Works complete	none	11.225		\$ -
Mansell Reserve	off road	none	none	Mansell Reserve	Works complete	none	19.016		\$ -
									\$ -
Ninth Street	on road	minor	medium	9th between Olive and Riverside (west)		lane marking	1360.712	\$ 5.00	\$ 6,803.56
Ninth Street	on road	minor	medium	9th between Olive and Riverside (east)		lane marking	1360.706	\$ 5.00	\$ 6,803.53
Ninth Street	on road		medium	10th between Olive and Riverside		Signs and road stencils	2.721418	\$ 900.00	\$ 2,449.28
									\$ 16,056.37
Ontario Avenue	off road	none	none	Ontario between 14th and Endeavour	Works complete	none	547.958		\$ -
Ontario Avenue	off road	none	none	Ontario between Endeavour and	Works complete	none	685.725		\$ -

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
				15th					-
Ontario Avenue	on road	major	medium	Ontario between 14th and 15th	Priority commuter route 3rd priority	shoulder sealing and lane marking	1329.424	\$ 105.00	\$ 139,589.52
Ontario Avenue	on road	major	medium	Ontario between Rita and 16th		shoulder sealing and lane marking	273.378	\$ 105.00	\$ 28,704.69
Ontario Avenue	on road	major	medium	Ontario between unnamed road and Sherring		shoulder sealing and lane marking	258.273	\$ 105.00	\$ 27,118.67
Ontario Avenue	on road	major	medium	Ontario between Ontario Park Dr and Ontario Park Dr		shoulder sealing and lane marking	104.066	\$ 105.00	\$ 10,926.93
Ontario Avenue	on road	minor	medium	Ontario between 15th and unnamed road		lane marking	529.261	\$ 5.00	\$ 2,646.31
Ontario Avenue	on road	minor	medium	Ontario between 16th and Ontario Park Dr		lane marking	152.151	\$ 5.00	\$ 760.76
Ontario Avenue	on road	minor	medium	Ontario between 11th and 13th	Priority commuter route 3rd priority	lane marking	432.467	\$ 5.00	\$ 2,162.34
Ontario Avenue	on road	minor	medium	Ontario between 11th and 13th	Priority commuter route 3rd priority	lane marking	432.467	\$ 5.00	\$ 2,162.34
Ontario Avenue	on road	minor	medium	Ontario between Ontario Park Dr and 15th		lane marking	1073.963	\$ 5.00	\$ 5,369.82
Ontario Avenue	on road	minor	medium	Ontario between Sherring and Rita		lane marking	269.403	\$ 5.00	\$ 1,347.02
Ontario Avenue	on road		medium			Signs and road stencils	4.854853	\$ 900.00	\$ 4,369.37
Ontario Avenue	on road	none	none	Ontario between 7th and 11th (west)	Works complete	none	886.504		\$ -
Ontario Avenue	on road	none	none	Ontario between 13th and 14th	Works complete	none	846.499		\$ -
Ontario Avenue	on road	none	none	Ontario between 13th and 14th	Works complete	none	963.822		\$ -
Ontario Avenue	on road	none	none	Ontario between 7th and 11th (east)	Works complete	none	886.497		\$ -
Ontario Avenue	on road	none	none	Ontario between 14th and 15th	Works complete	none	1238.078		\$ -
									\$ 225,157.73
Orange Avenue	on road	none	none	Orange between 9th and 10th	Works complete	none	207.088		\$ -
Orange Avenue	on road	none	none	Orange between 9th and 10th	Works complete	none	205.018		\$ -
									\$ -
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	170.579	\$ 35.00	\$ 5,970.27
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	1011.983	\$ 35.00	\$ 35,419.41
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	244.846	\$ 35.00	\$ 8,569.61
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	262.227	\$ 35.00	\$ 9,177.95
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	51.4	\$ 35.00	\$ 1,799.00
Ouyen Hospital	off road	major	medium	Vacant land south of Ouyen Hospital	Walking track for patients and town residents	construct crusher dust walking track	33.336	\$ 35.00	\$ 1,166.76
Ouyen Hospital	off road		medium			signage	1.774371	\$	\$

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
								500.00	887.19
Ouyen Reservoir	off road	major	low	Past Ouyen tennis and golf, around old reservoir.	Recreational trail	construct off road shared trail	1578.616	\$ 35.00	\$ 55,251.56
Ouyen Reservoir	off road	major	low	Past Ouyen tennis and golf, around old reservoir.	Recreational trail	construct off road shared trail	79.321	\$ 35.00	\$ 2,776.24
Ouyen Reservoir	off road		low			signage	1.657937	\$ 500.00	\$ 828.97
									\$ 121,846.93

Rail Reserve	off road	major	long term	Rail reserve between 14th and 11th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1866.236		\$ -
Rail Reserve	off road	major	long term	Rail reserve between Etiwanda and Benetook (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	791.05		\$ -
Rail Reserve	off road	major	long term	Rail reserve between 11th and 7th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1031.054		\$ -
Rail Reserve	off road	major	long term	Rail reserve between 7th and 11th (west)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	965.763		\$ -
Rail Reserve	off road	major	long term	Rail reserve between Cherry Ave and Deakin Ave	Would need to be developed in conjunction with Mildura Murray Riverfront Central Precincts Feasibility	fence and off road trail construction	939.424		\$ -
Rail Reserve	off road	major	long term	Rail reserve between 14th and 15th (east)	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	1806.306		\$ -
Rail Reserve	off road	major	long term	Rail reserve between 15th and Red Cliffs	Will require feasibility study and negotiation with Victrack	fence and off road trail construction	7861.547		\$ -
									\$ -

Ranfurly Way	on road	none	none	Ranfurly Way	Works complete	none	2451.669		\$ -
Ranfurly Way	on road	none	none	Ranfurly Way	Works complete	none	2477.978		\$ -
Ranfurly Way	on road	none	none	Ranfurly Way	Works complete	none	3769.66		\$ -
Ranfurly Way	on road	none	none	Ranfurly Way	Works complete	none	3706.533		\$ -
									\$ -

Riverside Avenue	on road	major	medium	Riverside between 8th and 9th		shoulder sealing and lane marking	201.387	\$ 105.00	\$ 21,145.64
Riverside Avenue	on road		medium	Riverside between 8th and 9th		Signs and road stencils	0.201387	\$ 900.00	\$ 181.25
Riverside Avenue	on road	major	low	Riverside west of 11th		shoulder sealing and lane marking	75.667	\$ 105.00	\$ 7,945.04
Riverside Avenue	on road		low	Riverside west of 11th		Signs and road stencils	0.075667	\$ 900.00	\$ 68.10
Riverside Avenue	on road	none	none	Riverside between 8th and 11th	Works complete	none	658.056		\$ -
Riverside Avenue	on road	none	none	Riverside between 9th and 11th	Works complete	none	442.871		\$ -
									\$ 29,340.02

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
San Mateo Avenue	on road	none	high	San Mateo between 11th and 7th	Create Clearway / shared bicycle lane	Erect Clearway signage	925.125		\$ -
San Mateo Avenue	on road	none	high	San Mateo between 11th and 7th	Create Clearway / shared bicycle lane	Erect Clearway signage	918.638		\$ -
San Mateo Avenue	on road	none	high	San Mateo between 15th and 12th	Create Clearway / shared bicycle lane	Erect Clearway signage	2500.383		\$ -
San Mateo Avenue	on road	major	high	San Mateo between 11th and 12th	Need to indent parking bays to complete clearway	Indent parking bays and erect clearway signage	187.5	\$ 400.00	\$ 75,000.00
San Mateo Avenue	on road	major	high	San Mateo between 11th and 12th	Need to indent parking bays to complete clearway	Indent parking bays and erect clearway signage	188.759	\$ 400.00	\$ 75,503.60
San Mateo Avenue	on road		high			Signs and road stencils	4.720405	\$ 900.00	\$ 4,248.36
San Mateo Avenue	on road	none	none	San Mateo between 15th and 16th	Bike lane shared with parking	none	1356.301		\$ -
San Mateo Avenue	on road	none	none	San Mateo between 15th and 16th	Bike lane shared with parking	none	1357.659		\$ -
San Mateo Avenue	on road	none	none	San Mateo between 15th and 12th	Create Clearway / shared bicycle lane	Erect Clearway signage	2496.485		\$ -
									\$ 154,751.96

Seventeenth Street	on road	minor	high	17th between McEdward and Deakin	Strategic connection for Cabarita residents with Mildura CBD	lane marking	3814.96	\$ 5.00	\$ 19,074.80
Seventeenth Street	on road	minor	high	17th between McEdward and Deakin	Strategic connection for Cabarita residents with Mildura CBD	lane marking	3826.501	\$ 5.00	\$ 19,132.51
Seventeenth Street	on road		high	18th between McEdward and Deakin		Signs and road stencils	7.641461	\$ 900.00	\$ 6,877.31
									\$ 45,084.62

Seventh Street	on road	minor	high	7th, Cherry, Cureton past lawn bowls and tennis	Connection from Ontario to Rio Vista Park	lane marking	983.194	\$ 5.00	\$ 4,915.97
Seventh Street	on road	minor	high	7th between Deakin and The Crescent	Access to CBD from Nichols Pt	lane marking	1677.377	\$ 5.00	\$ 8,386.89
Seventh Street	on road	minor	high	7th between Deakin and The Crescent	Access to CBD from Nichols Pt	lane marking	1677.377	\$ 5.00	\$ 8,386.89
Seventh Street	on road	minor	high	7th, Cherry, Cureton past lawn bowls and tennis	Connection from Ontario to Rio Vista Park	lane marking	990.58	\$ 5.00	\$ 4,952.90
Seventh Street	on road		high			Signs and road stencils	5.328528	\$ 900.00	\$ 4,795.68
Seventh Street	on road	none	none	7th between Deakin and Chaffey	Works complete	none	750.418		\$ -
Seventh Street	on road	none	none	7th between Deakin and Chaffey (north side)	Works complete	none	709.048		\$ -
									\$ 31,438.32

Sixteenth Street	on road	major	medium	16th between Deakin and San Mateo	High growth residential area. Connection to Deakin and San Mateo priority routes	shoulder sealing and lane marking	609.923	\$ 105.00	\$ 64,041.92
Sixteenth Street	on road	minor	medium	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.397	\$ 5.00	\$ 3,046.99
Sixteenth Street	on road	minor	medium	16th between Walnut and Deakin	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.404	\$ 5.00	\$ 3,047.02
Sixteenth Street	on road	minor	medium	16th between Deakin and San Mateo	High growth residential area. Connection to Deakin and San Mateo priority routes	lane marking	609.506	\$ 5.00	\$ 3,047.53

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Sixteenth Street	on road	minor	medium	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.397	\$ 5.00	\$ 3,046.99
Sixteenth Street	on road	minor	medium	16th between Ontario and Walnut	High growth residential area. Connection to Deakin and Ontario priority routes	lane marking	609.404	\$ 5.00	\$ 3,047.02
Sixteenth Street	on road		medium			Signs and road stencils	3.657031	\$ 900.00	\$ 3,291.33
									\$ 82,568.78

Spiders Web	on road	major	high	Cureton Ave near Belar Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	347.879	\$ 105.00	\$ 36,527.30
Spiders Web	on road	major	high	Cureton Avenue between Lancaster and Fern	Passing section for high use road training route	Shoulder sealing and lane marking	292.591	\$ 105.00	\$ 30,722.06
Spiders Web	on road	major	high	Cocklin Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	437.14	\$ 105.00	\$ 45,899.70
Spiders Web	on road	major	high	Cocklin Avenue	Passing section for high use road training route	Shoulder sealing and lane marking	216.008	\$ 105.00	\$ 22,680.84
Spiders Web	on road		high			Signage	4	\$ 150.00	\$ 600.00
									\$ 136,429.89

Tenth Street	on road	none	none	10th between Langtree and Riverside (west)	Works complete	none	1758.921		\$ -
Tenth Street	on road	none	none	10th between Madden and Etiwanda	Works complete	none	1119.304		\$ -
Tenth Street	on road	none	none	10th between Madden and Etiwanda	Works complete	none	1119.298		\$ -
Tenth Street	on road	none	none	10th between Langtree and Riverside (east)	Works complete	none	1758.914		\$ -
									\$ -

'The Boulevard'	off road	major	high	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	Install off road path across centre reserve	21.931	\$ 35.00	\$ 767.59
'The Boulevard'	on road	major	high	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install school crossing	1	\$ 4,200.00	\$ 4,200.00
'The Boulevard'	on road	major	high	Deakin Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install school crossing	1	\$ 4,200.00	\$ 4,200.00
'The Boulevard'	on road	major	low	San Mateo Avenue between 15th and 14th	To provide a connection between Ranfurly PS and residential areas east of the school	install zebra crossing	1	\$ 3,200.00	\$ 3,200.00
									\$ 12,367.59

Thirteenth Street	on road	minor	low	13th between Ontario and Etiwanda	Midway between 11th and 14th priority routes	lane marking	2554.011	\$ 5.00	\$ 12,770.06
Thirteenth Street	on road	minor	low	13th between Ontario and Etiwanda	Midway between 11th and 14th priority routes	lane marking	2554.013	\$ 5.00	\$ 12,770.07
Thirteenth Street	on road		low	14th between Ontario and Etiwanda		Signs and road stencils	5.108024	\$ 900.00	\$ 4,597.22
									\$ 30,137.34

Marina track	off road	none	none	Track from Etiwanda Wetlands to Dockside Drive	Works complete	none	405.531		\$ -
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3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
Marina track	off road	none	none	Track from Dockside Drive to Harbourside Way	Works complete	none	374.62		\$ -
									\$ -

Twelfth Street	off road	none	none	12th crossing rail reserve	Works complete	none	98.062		\$ -
Twelfth Street	on road	minor	high	12th between Sargent and Etiwanda	Will complete connection to Mildura Primary on 12th St	lane marking	289.255	\$ 5.00	\$ 1,446.28
Twelfth Street	on road	minor	high	12th between Sargent and Etiwanda	Will complete connection to Mildura Primary on 12th St	lane marking	286.073	\$ 5.00	\$ 1,430.37
Twelfth Street	on road		high	13th between Sargent and Etiwanda		Signs and road stencils	0.575328	\$ 900.00	\$ 517.80
Twelfth Street	on road	minor	low	12th between Ontario and Riverside		lane marking	874.315	\$ 5.00	\$ 4,371.58
Twelfth Street	on road	minor	low	12th between Ontario and Riverside		lane marking	753.833	\$ 5.00	\$ 3,769.17
Twelfth Street	on road		low	13th between Ontario and Riverside		Signs and road stencils	1.628148	\$ 900.00	\$ 1,465.33
Twelfth Street	on road	none	none	12th between Cedar and Sargent	Works complete	none	749.312		\$ -
Twelfth Street	on road	none	none	12th between Walnut and Deakin	Works complete	none	609.92		\$ -
Twelfth Street	on road	none	none	12th between Walnut and Deakin	Works complete	none	609.921		\$ -
Twelfth Street	on road	none	none	12th between Cedar and Sargent	Works complete	none	749.809		\$ -
Twelfth Street	on road	none	none	12th between Ontario and Joakim	Works complete	none	178.3		\$ -
Twelfth Street	on road	none	none	12th between Ontario and Joakim	Works complete	none	162.026		\$ -
Twelfth Street	on road	none	none	12th between Walnut and Rail Reserve	Works complete	none	353.644		\$ -
Twelfth Street	on road	none	none	12th between Walnut and Rail Reserve	Works complete	none	350.662		\$ -
									\$ 13,000.51

Walnut Avenue	on road	major	medium	Walnut between 16th and Lizlee		shoulder sealing and lane marking	77.019	\$ 105.00	\$ 8,087.00
Walnut Avenue	on road	major	medium	Walnut between 16th and John Monash Blvd	High growth residential area	shoulder sealing and lane marking	432.587	\$ 105.00	\$ 45,421.64
Walnut Avenue	on road	minor	medium	Walnut between Lizlee and 15th	High growth residential area	lane marking	2480.413	\$ 5.00	\$ 12,402.07
Walnut Avenue	on road	minor	medium	Walnut NE from 16th	High growth residential area	lane marking	133.082	\$ 5.00	\$ 665.41
Walnut Avenue	on road	minor	medium	Walnut between John Monash Blvd and 15th	High growth residential area	lane marking	2256.311	\$ 5.00	\$ 11,281.56
Walnut Avenue	on road		medium			Signs and road stencils	5.379412	\$ 900.00	\$ 4,841.47
Walnut Avenue	on road	none	none	Walnut between 7th and 14th	Works complete	none	2254.039		\$ -
Walnut Avenue	on road	none	none	Walnut between 7th and 14th	Works complete	none	2254.038		\$ -
									\$ 82,699.13

3.0 RECOMMENDED WORKS BY ROAD / LOCATION

Trail ID	located	Level of works	Priority	Location of section	Comments	Works detail	Quantity	\$/Unit	Subtotal
						Grand total			\$ 4,772,464.14

Active transport routes to schools and reserves



Mildura Rural City Council

Deakin Avenue Media

Birnie Park

Kalinda Park

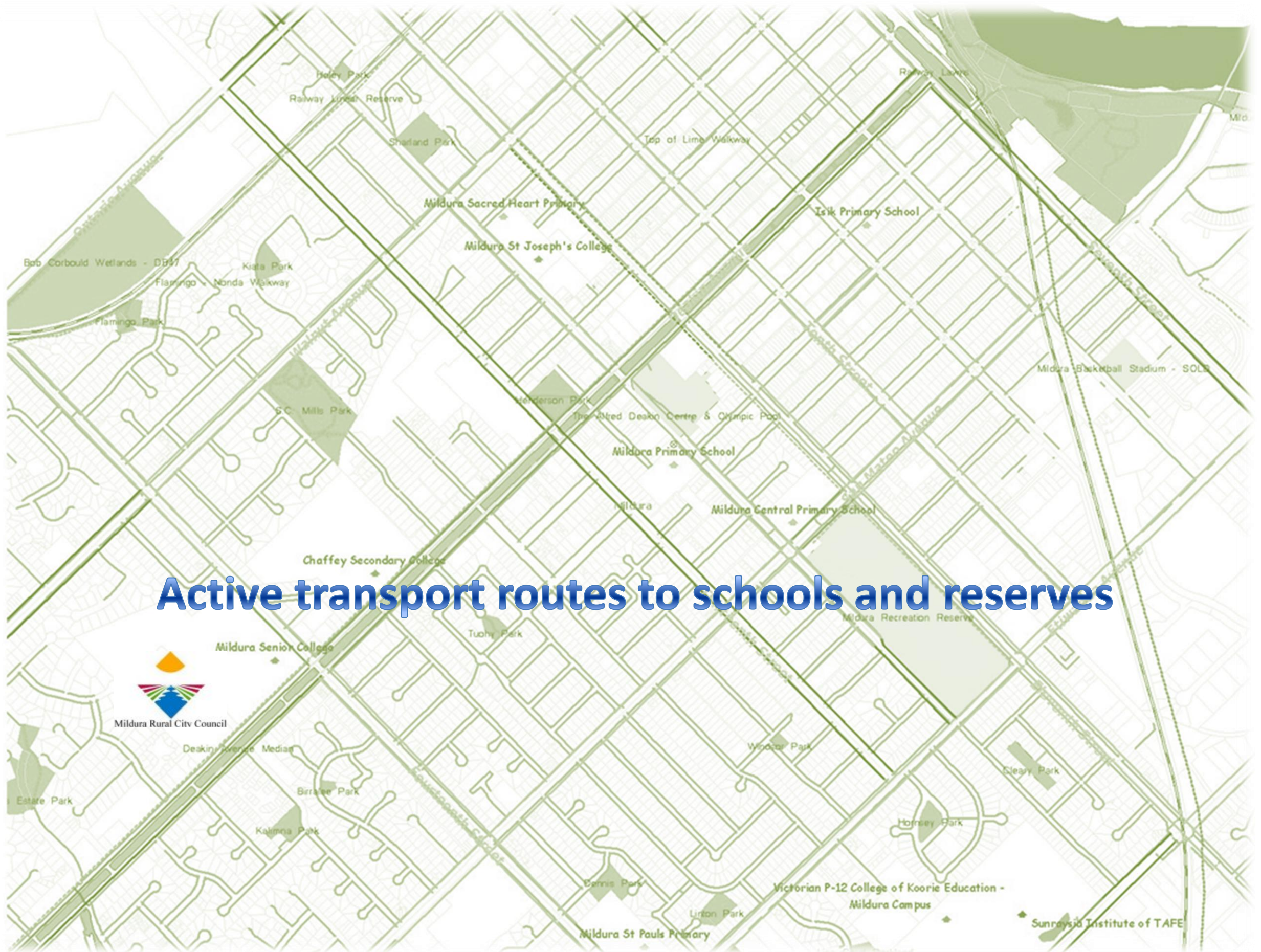
Bennis Park

Linton Park

Mildura St Pauls Primary

Victorian P-12 College of Koorie Education - Mildura Campus

Sunraysia Institute of TAFE



Contents	
Map 1	Mildura Central
Map 2	Mildura West
Map 3	Mildura South
Map 4	Irymple
Map 5	Red Cliffs
Map 6	Merbein
Map 7	Nichols Point, Cabarita, Werrimul
Map 8	Ouyen, Underbool, Walpeup
Map 9	Murrayville, Koorlong, Nangiloc

Active transport routes within Mildura Rural City Council.

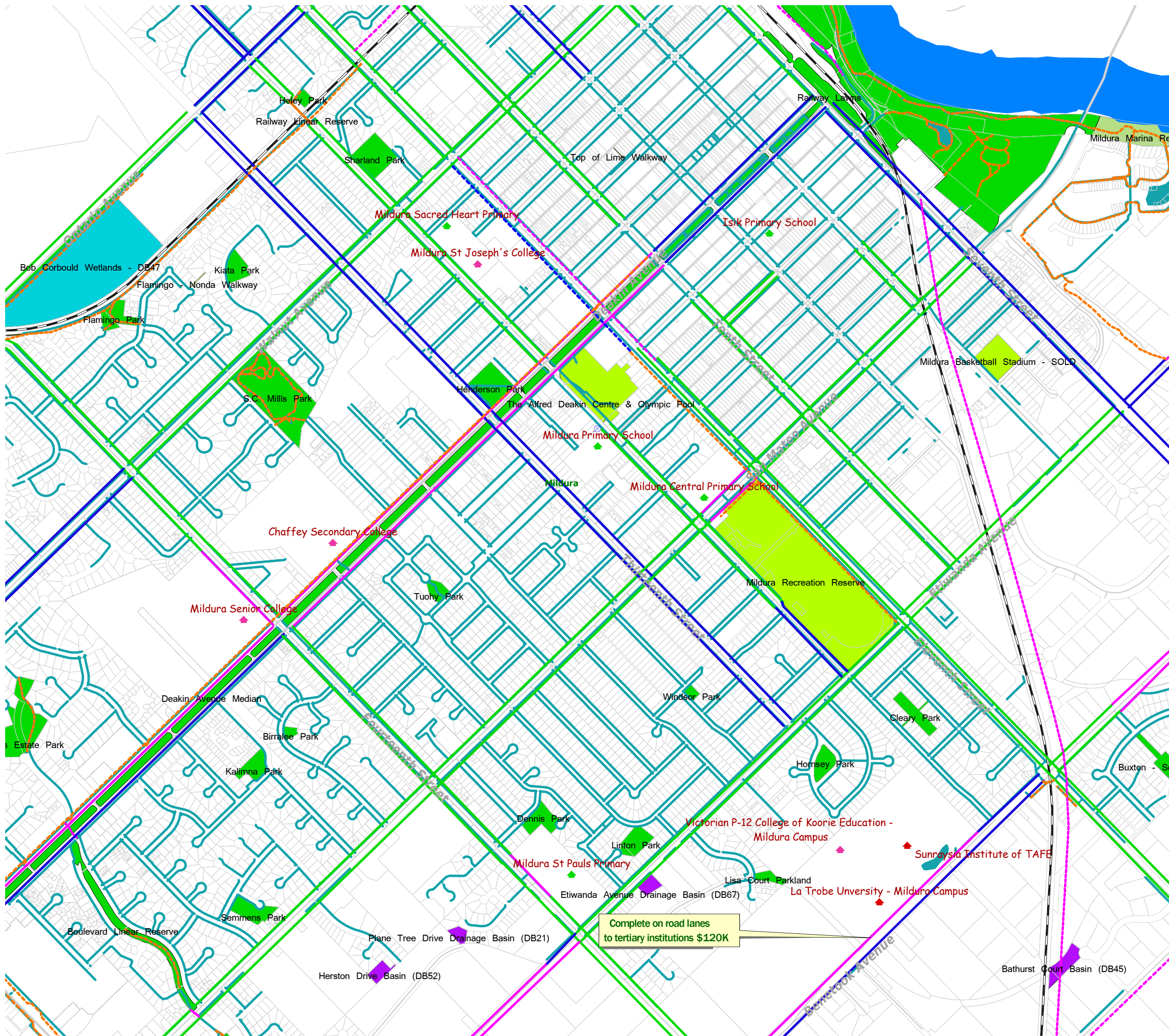
The series of maps following provide a graphical representation of the walking and/or cycling options to travel to schools and reserves within MRCC.

Existing footpaths, walking / shared trails and on road cycle lanes in most cases provide safe routes to these destinations for walkers and cyclists.

Recommended works still to be completed are clearly indicated as well as any gaps that reduce the safety or attractiveness of particular routes.

As recommended works are completed, this series of maps can be updated and ultimately promoted as the “*Active Transport to Schools*” map series.

Mildura Central



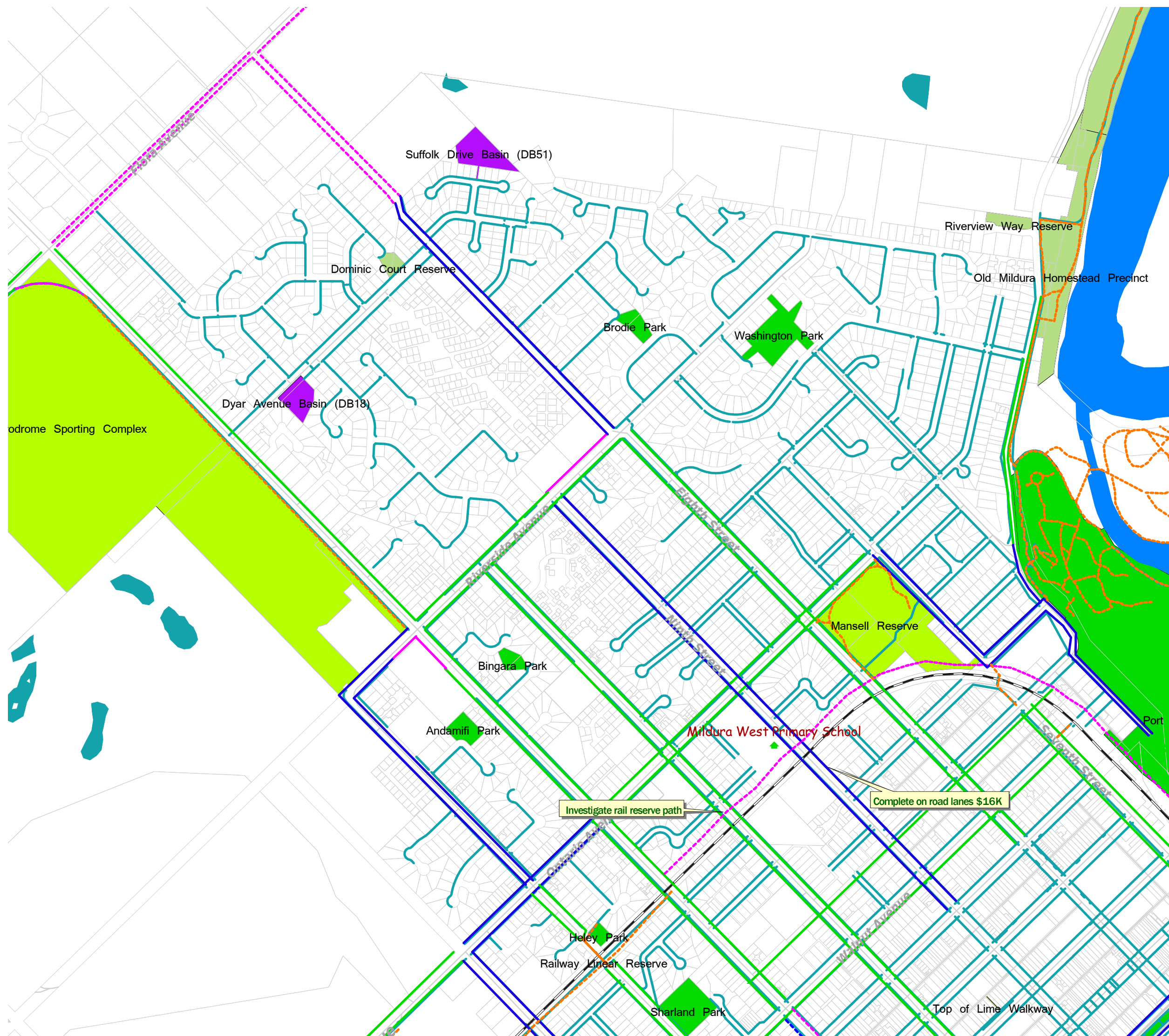
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- Schools
 - Primary
 - Primary / Secondary
 - Secondary
 - Tertiary
- Off Road Trails
- Carryover and new works
 - Off-road. Minor works required
 - Off-road. Major works required
 - On-road. Minor works required
 - On-road. Major works required
 - On-road. No works required
- Rail
- Footpaths
- Main roads
 - Major
 - Minor
- Properties
- Water bodies
 - River / Stream
 - Lake / Dam
 - Kings Billabong Park
- MRCC Recreation Sites
 - Sport facility
 - Park
 - Reserve
 - Wetland
 - Drainage Reserve
 - Walkway



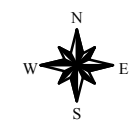
Safe Routes Schools and Reserves



Mildura West



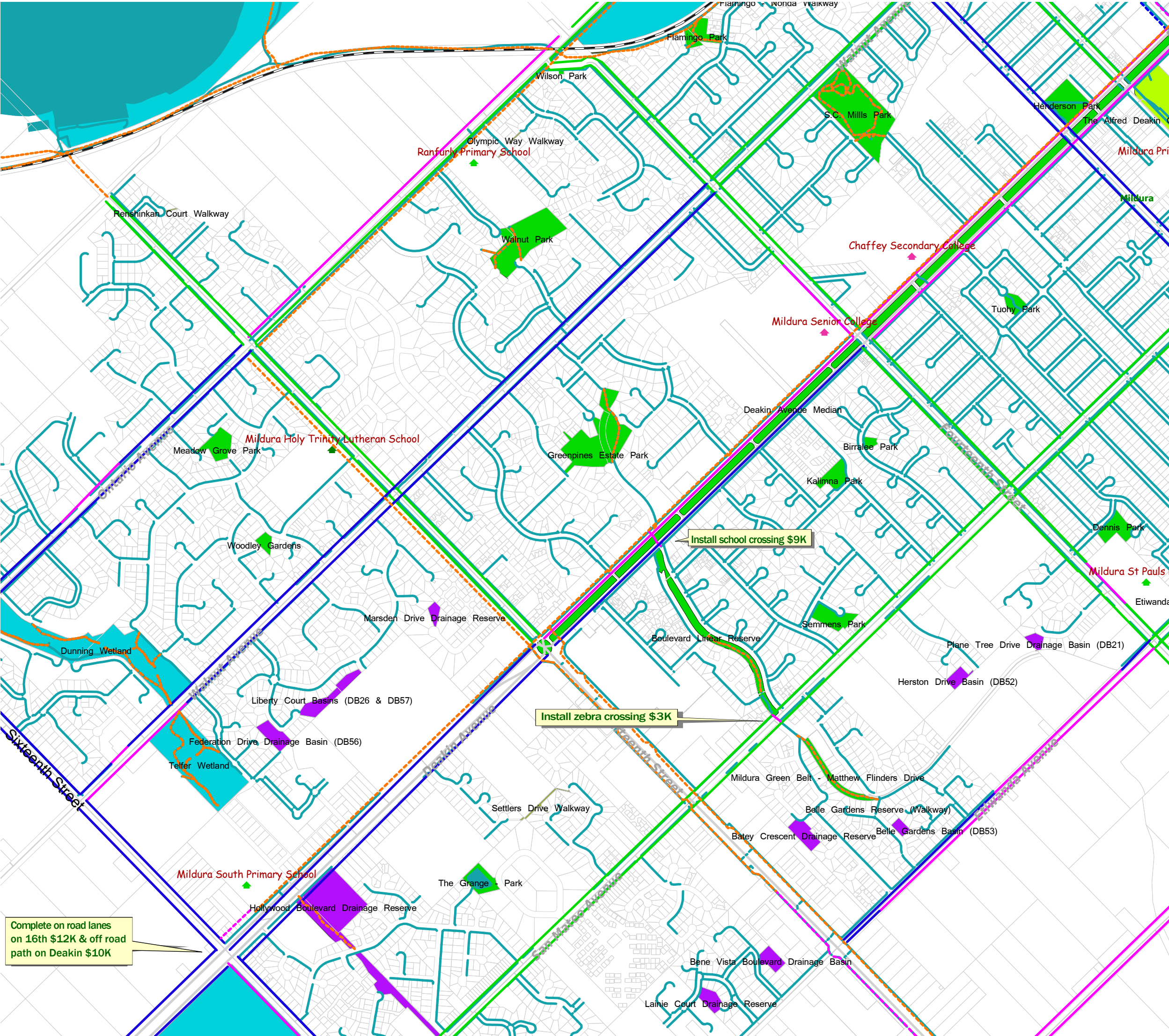
- Localities
- Schools
- Primary
- Primary / Secondary
- Secondary
- Tertiary
- Off Road Trails
- Carryover and new works
- Off-road. Minor works required
- Off-road. Major works required
- On-road. Minor works required
- On-road. Major works required
- On-road. No works required
- Rail
- Footpaths
- Main roads
- Major
- Minor
- Properties
- Water bodies
- River / Stream
- Lake / Dam
- Kings Billabong Park
- MRCC Recreation Sites
- Sport facility
- Park
- Reserve
- Wetland
- Drainage Reserve
- Walkway



Safe Routes Schools and Reserves



Mildura South



- Localities
- Schools
 - Primary
 - Primary / Secondary
 - Secondary
 - Tertiary
- Off Road Trails
- Carryover and new works
 - Off-road. Minor works required
 - Off-road. Major works required
 - On-road. Minor works required
 - On-road. Major works required
 - On-road. No works required
- Rail
- Footpaths
- Main roads
 - Major
 - Minor
- Properties
- Water bodies
 - River / Stream
 - Lake / Dam
 - Kings Billabong Park
- MRCC Recreation Sites
 - Sport facility
 - Park
 - Reserve
 - Wetland
 - Drainage Reserve
 - Walkway

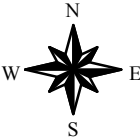


Safe Routes Schools and Reserves

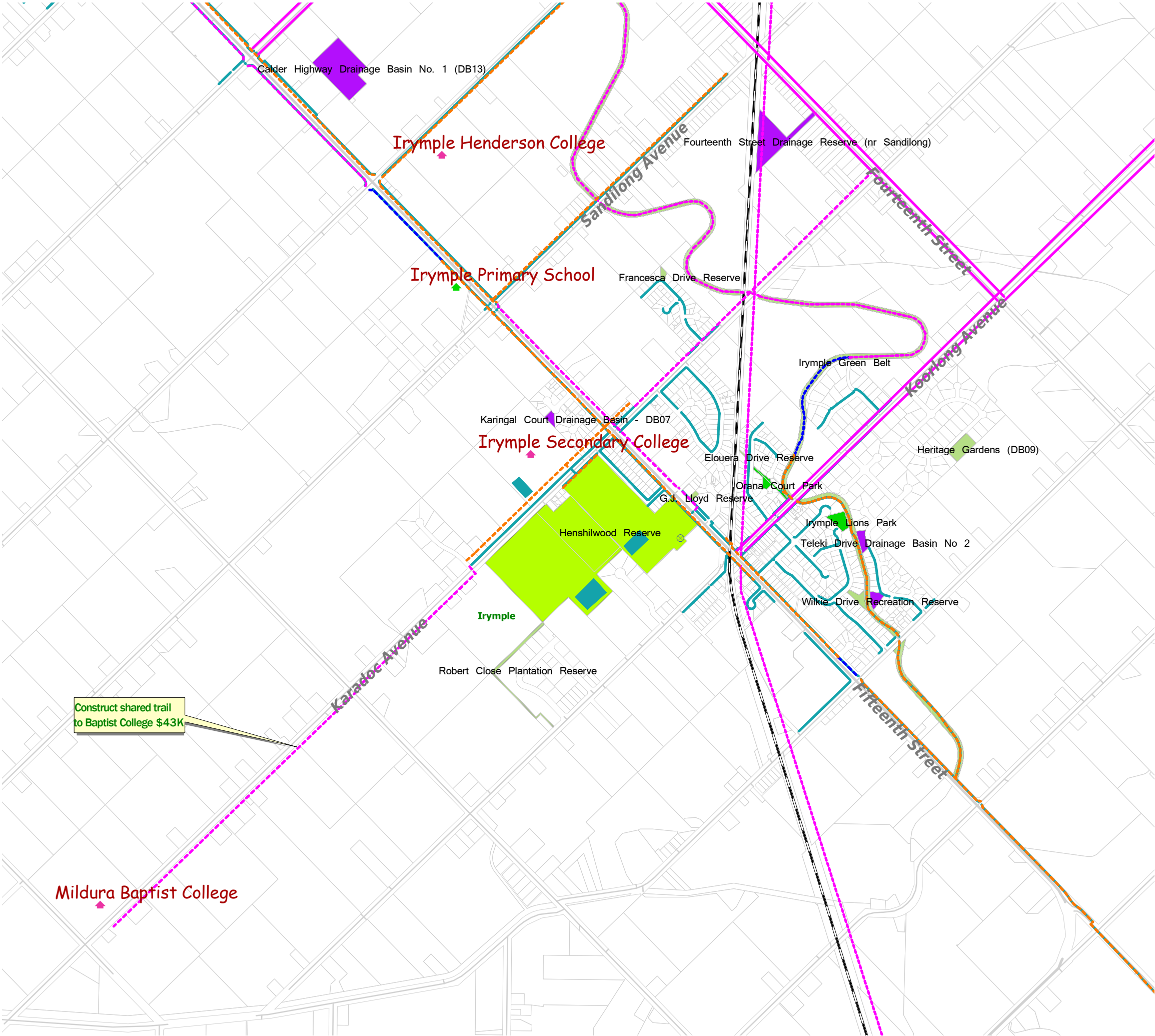


Irymple

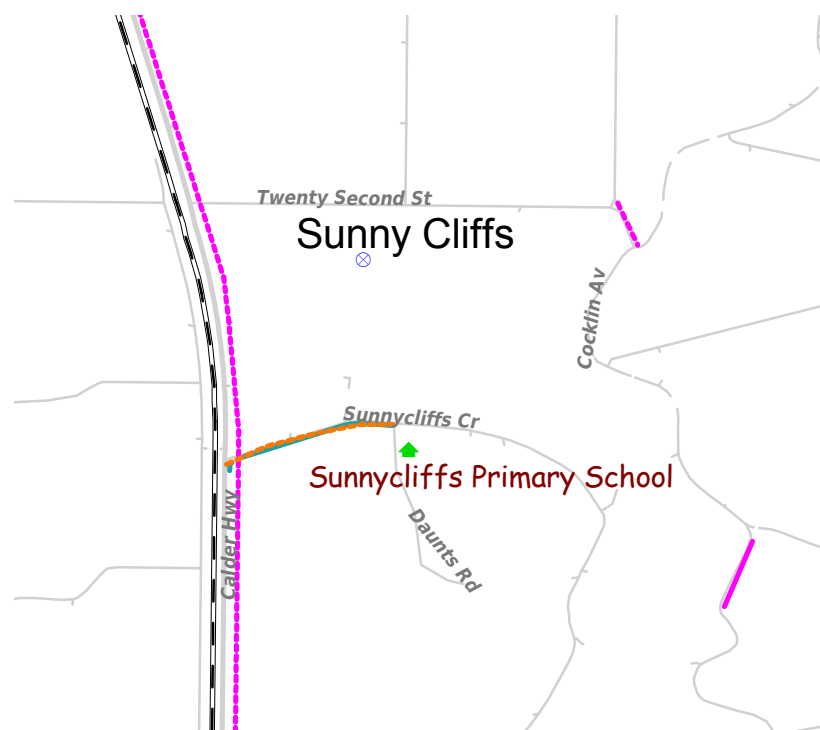
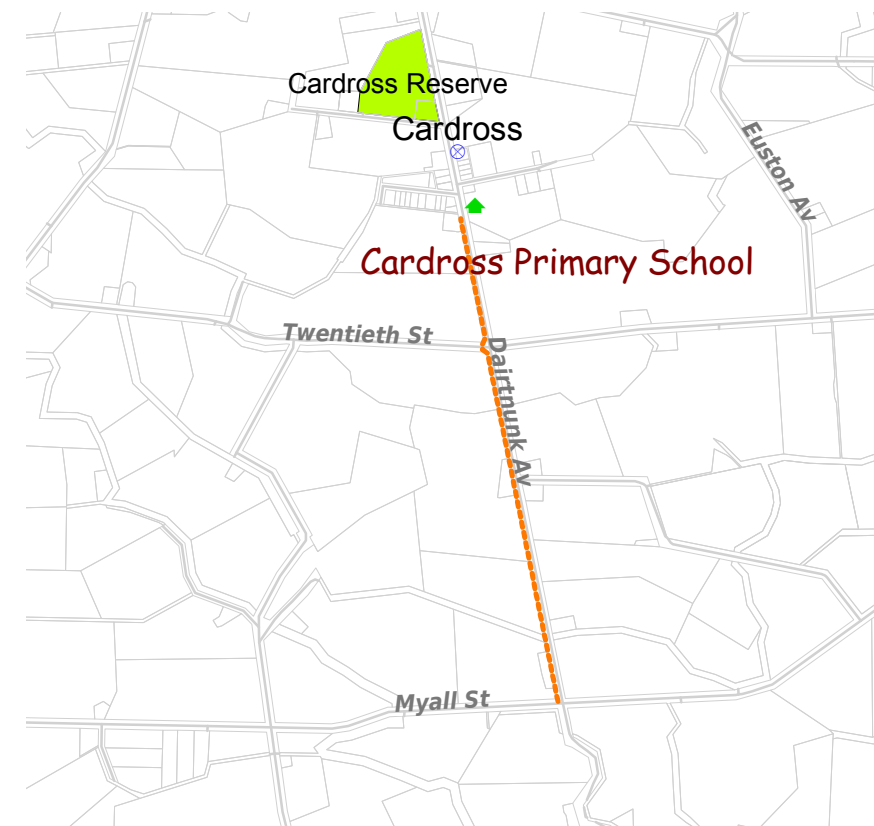
- Localities
- Schools
 - Primary
 - Primary / Secondary
 - Secondary
 - Tertiary
- Off Road Trails
- Carryover and new works
 - Off-road. Minor works required
 - Off-road. Major works required
 - On-road. Minor works required
 - On-road. Major works required
 - On-road. No works required
- Rail
- Footpaths
- Main roads
 - Major
 - Minor
- Properties
- Water bodies
 - River / Stream
 - Lake / Dam
 - Kings Billabong Park
- MRCC Recreation Sites
 - Sport facility
 - Park
 - Reserve
 - Wetland
 - Drainage Reserve
 - Walkway



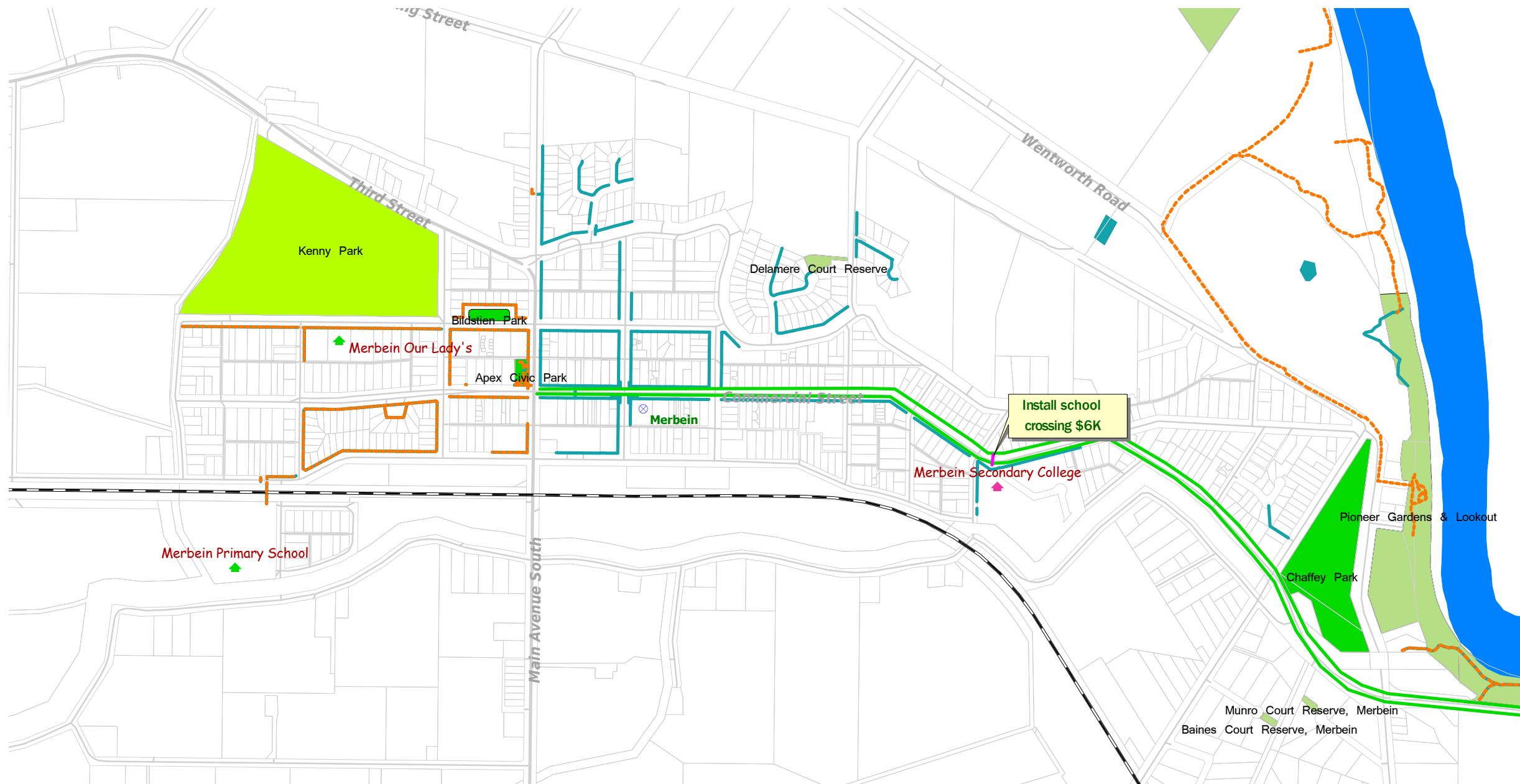
Safe Routes Schools and Reserves



Safe Routes Schools and Reserves



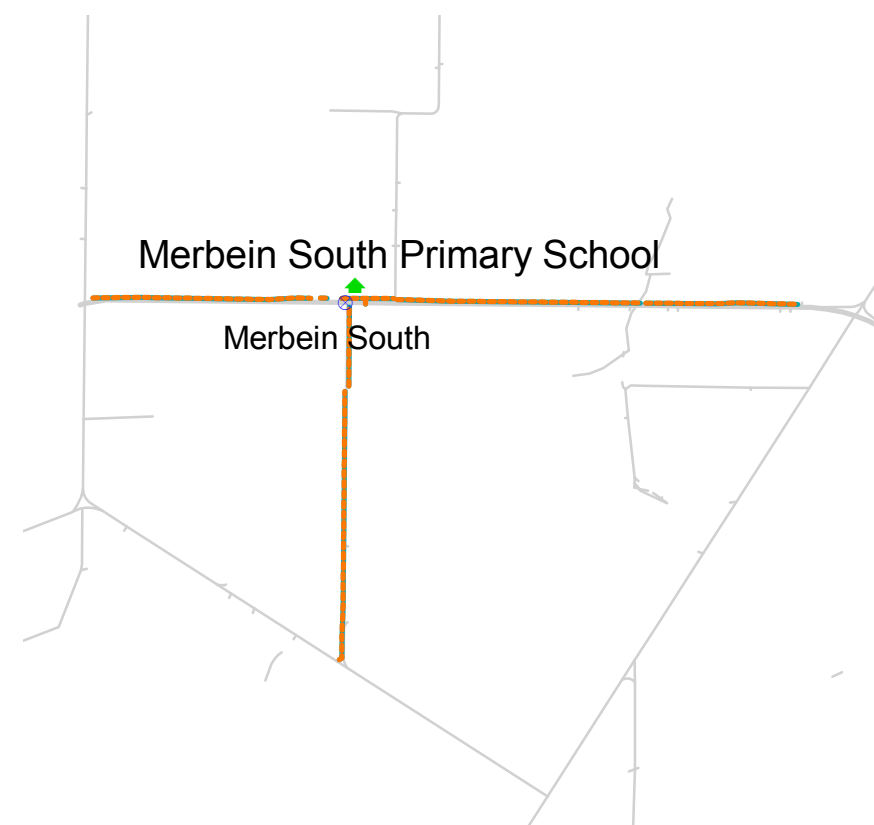
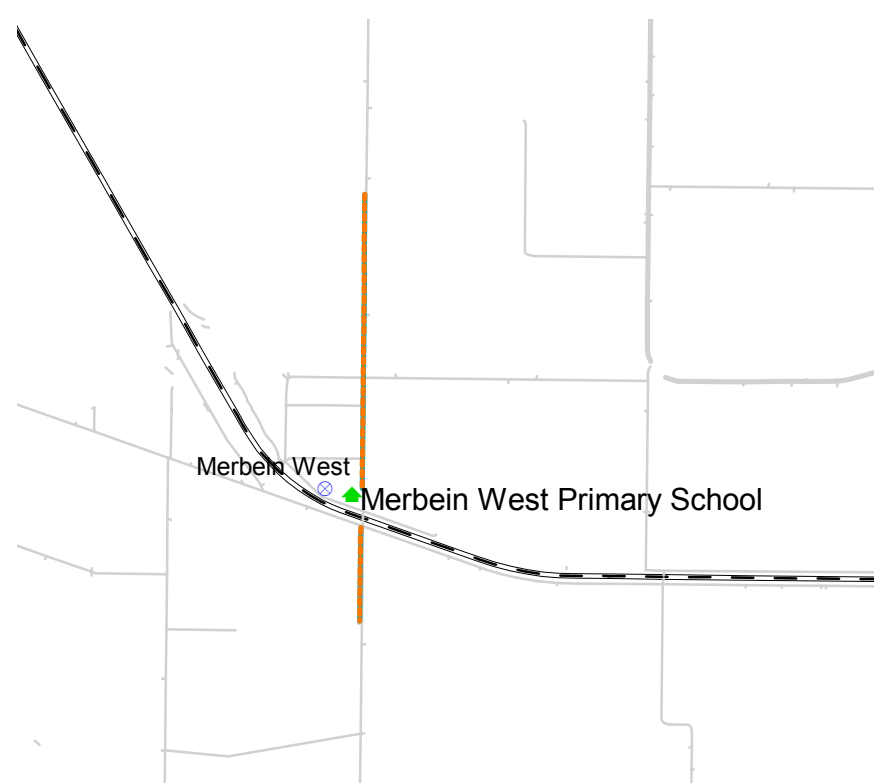
Merbein



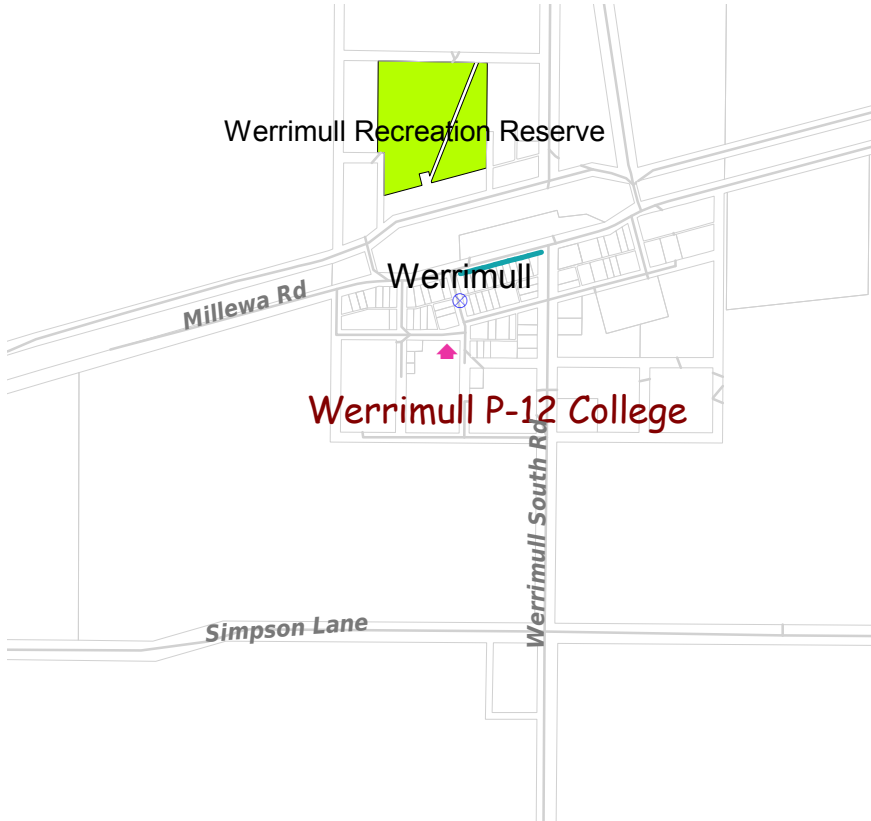
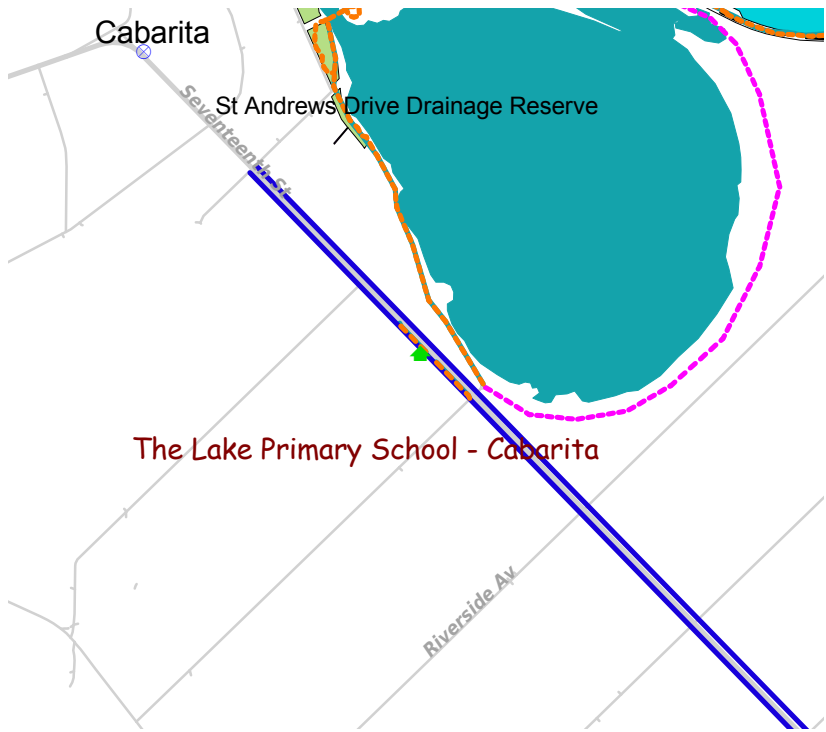
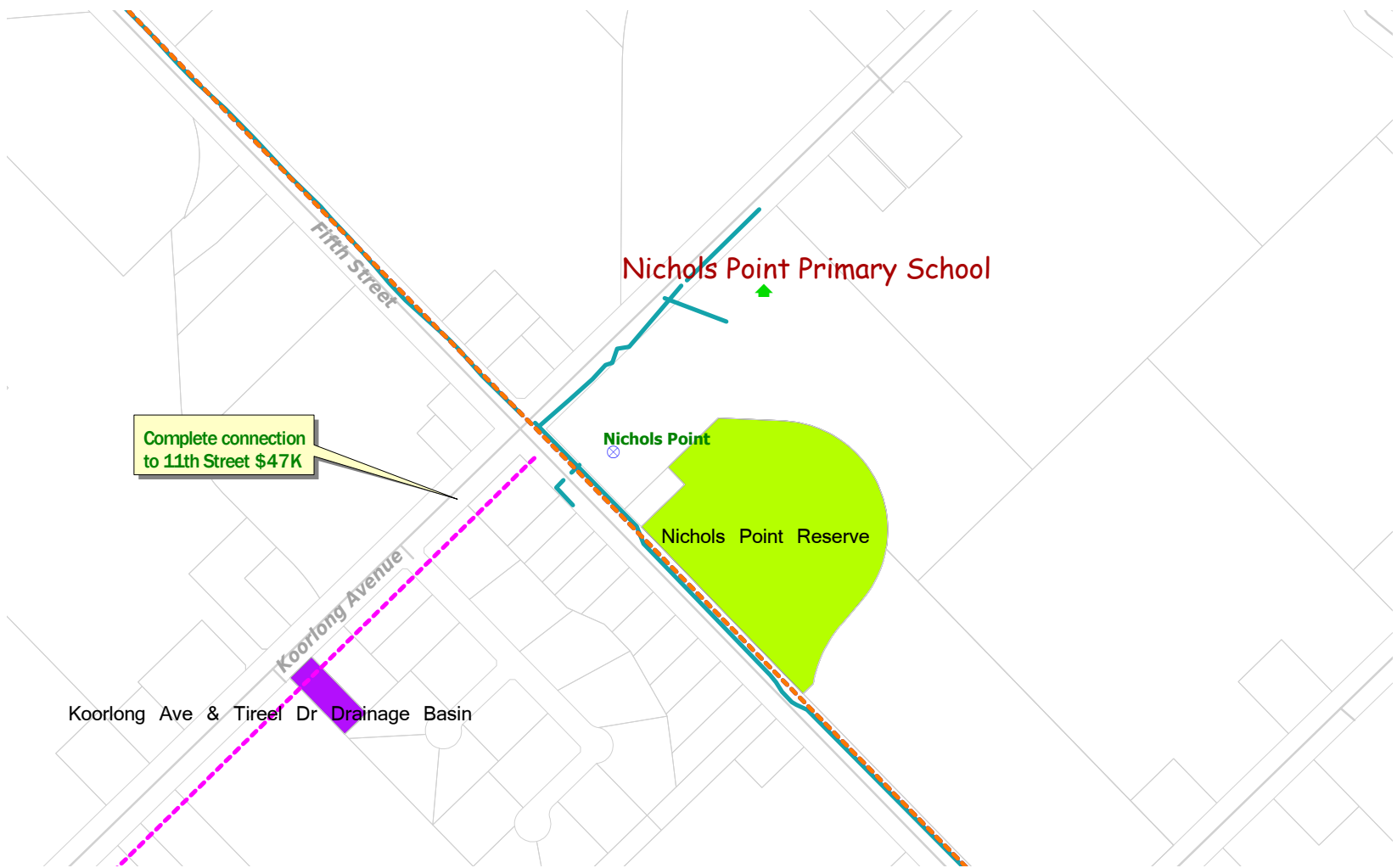
- Localities
- Schools
 - Primary
 - Primary / Secondary
 - Secondary
 - Tertiary
- Off Road Trails
 - Carryover and new works
 - Off-road. Minor works required
 - Off-road. Major works required
 - On-road. Minor works required
 - On-road. Major works required
 - On-road. No works required
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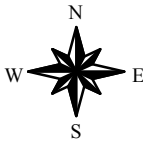
Safe Routes Schools and Reserves



Nichols Point Cabarita Werrimul



- ⊗ Localities
- Schools
 - ▲ Primary
 - ▲ Primary / Secondary
 - ▲ Secondary
 - ▲ Tertiary
- Off Road Trails
- Carryover and new works
 - ▲ Off-road. Minor works required
 - ▲ Off-road. Major works required
 - ▲ On-road. Minor works required
 - ▲ On-road. Major works required
 - ▲ On-road. No works required
- ⚡ Rail
- ⚡ Footpaths
- Main roads
 - ▲ Major
 - ▲ Minor
- Properties
- Water bodies
 - ▲ River / Stream
 - ▲ Lake / Dam
 - ▲ Kings Billabong Park
- MRCC Recreation Sites
 - ▲ Sport facility
 - ▲ Park
 - ▲ Reserve
 - ▲ Wetland
 - ▲ Drainage Reserve
 - ▲ Walkway



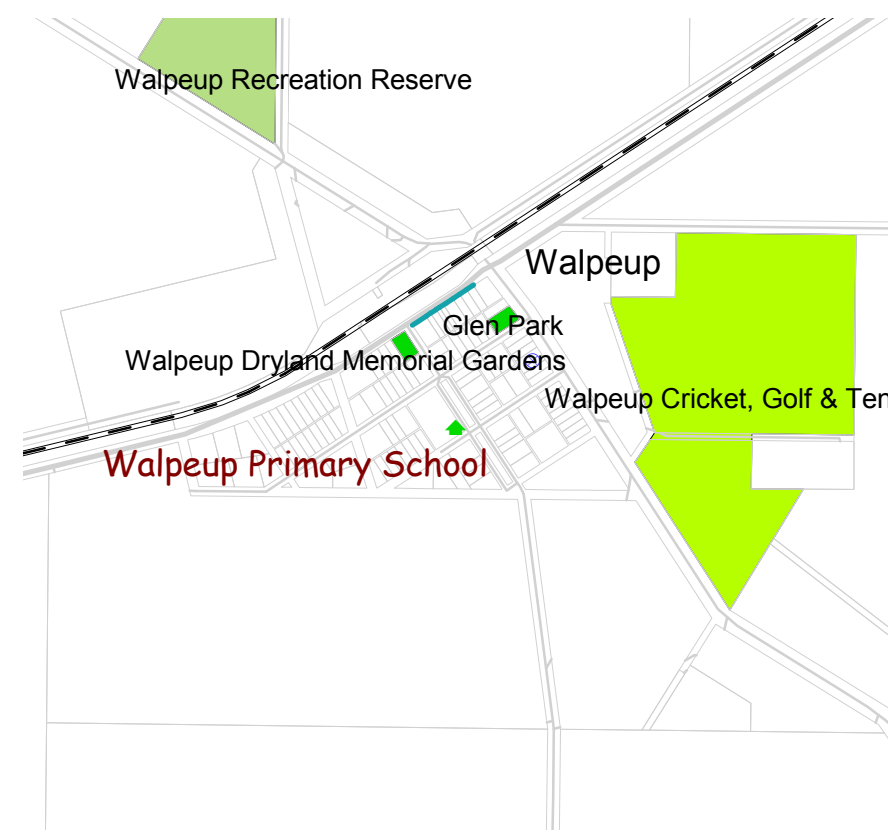
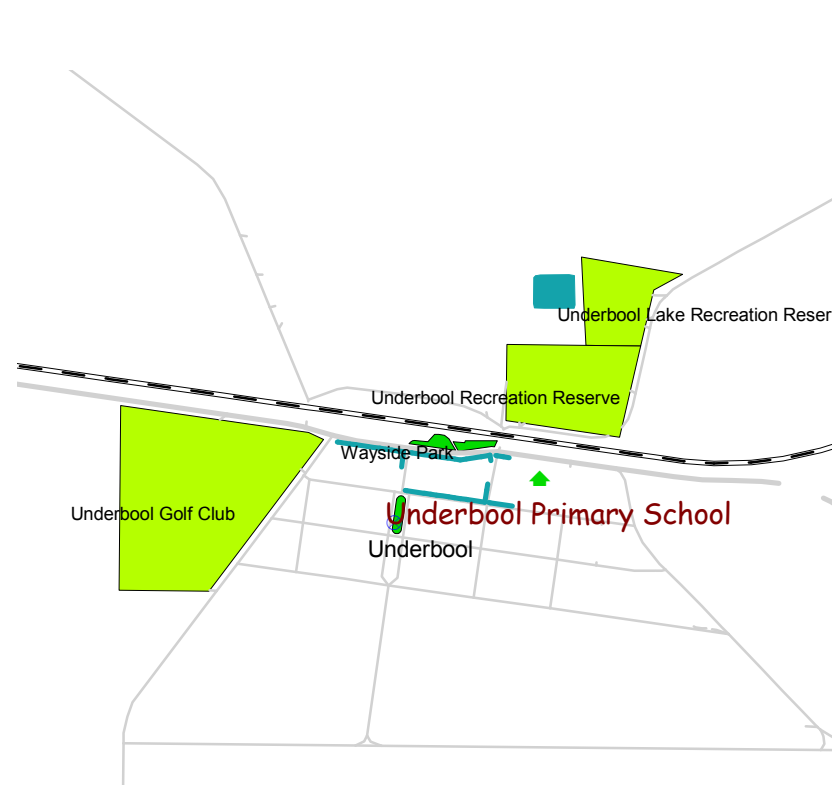
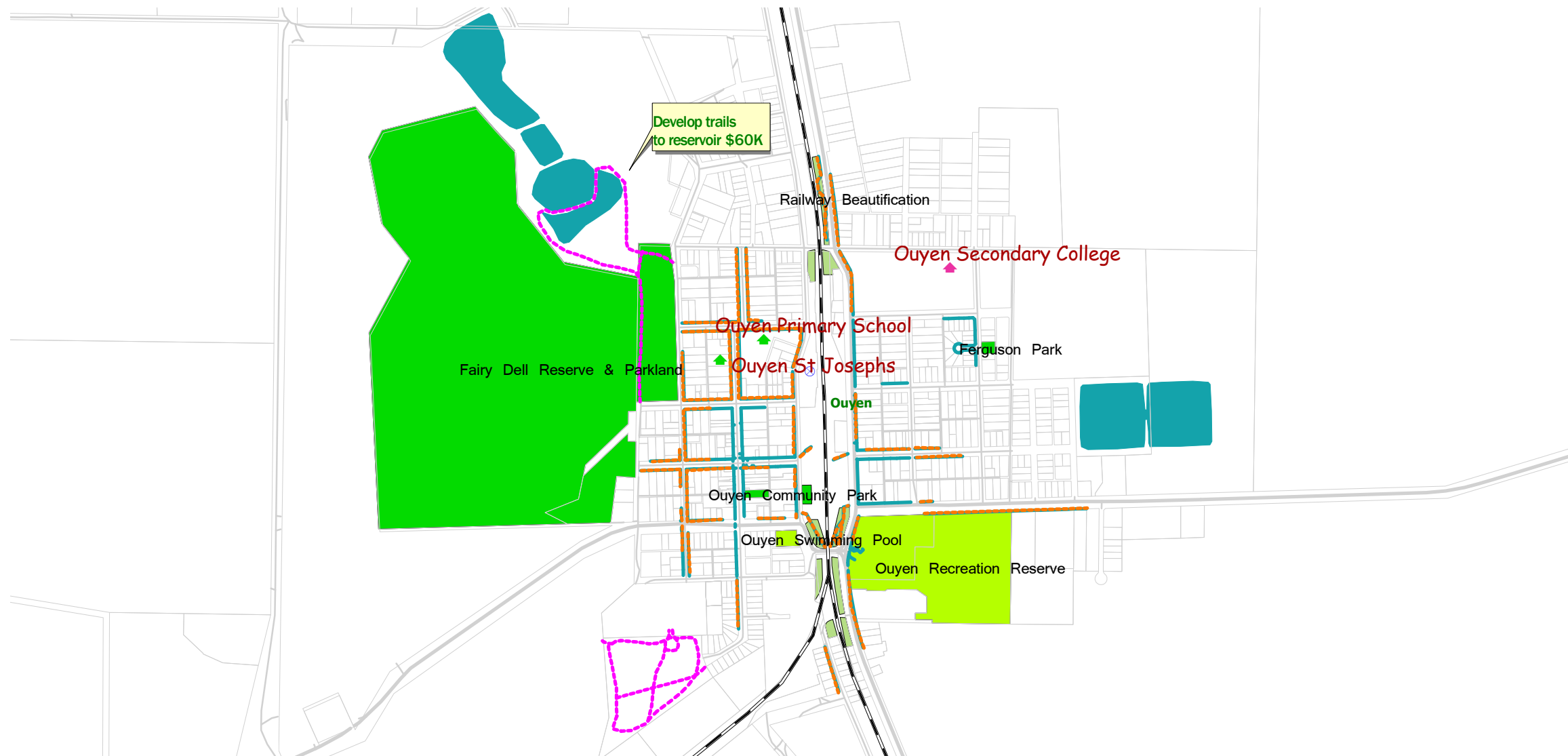
Safe Routes
Schools and Reserves

Ouyen Underbool Walpeup

- ⊗ Localities
- Schools
 - ▲ Primary
 - ▲ Primary / Secondary
 - ▲ Secondary
 - ▲ Tertiary
- Off Road Trails
 - Off-road. Minor works required
 - Off-road. Major works required
 - On-road. Minor works required
 - On-road. Major works required
 - On-road. No works required
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Safe Routes Schools and Reserves



Safe Routes Schools and Reserves

