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Executive Summary
Executive Summary

Many people in Cowra Shire walk to work or school and to other local destinations such as their local shops, cafes, club, post office and town swimming pool. Others walk or run on a regular basis for fun and fitness. Bicycle riding, whilst much less prevalent in the Cowra Shire, is becoming increasingly popular as a form of transport and recreation.

The Cowra Shire Pedestrian and Cycling Plan demonstrates Cowra Shire Council’s desire to support healthy living and sustainable active transport for all members of the community. The focus is to make pedestrian and cycling activities a safe, healthy and attractive travel option.

The Cowra Shire Pedestrian and Cycling Plan is a culmination of extensive research and community engagement, where input has been sought from a wide range of transport professionals, educators, medical practitioners, community groups as well as pedestrian and cycling enthusiasts.

Like all road traffic accidents, bicycle and pedestrian collisions should not be accepted as inevitable because in many situations they are both predictable and preventable. The Cowra Shire Pedestrian and Cycling Plan identifies a range of infrastructure improvements and social initiatives aimed at enhancing pedestrian and cycling safety. Given there are limited funds available to undertake this work, the Plan proposes targeted improvements or ‘interventions’ that are assessed to have the greatest benefits and user support.

A summary of the key sections of the Cowra Shire Pedestrian and Cycling Plan is provided on this page.

Background Studies

The Cowra Shire Pedestrian and Cycling Plan reviews two existing access plans; the Cowra Pedestrian Access and Mobility Plan 2002 and the Cowra Cycleways Strategy 2005. This review process also involved research of mainstream reports and policies that support the development of a new combined pedestrian and bicycle plan for Cowra Shire.

Cowra Context & Setting

Nestled on the banks of the Lachlan River, Cowra Shire benefits from an outstanding natural setting. The road network becomes quite busy, particularly on the State roads and at summer harvest, central business and school zones times and around weekend sporting and community events. Transport planning needs to focus on providing for the needs of motorists, pedestrians and cyclists.

Existing Facilities

Cowra has a large network of constructed footpaths and a smaller cycling network. Public amenities, watering points, bicycle racks, directional signage and other facilities support this network. In the villages and rural areas, the constructed paths network is patchy. The focus is to enhance the network in Cowra Shire over the next 10 years.

Community Consultation

Community input has been captured through surveys, workshops and meetings with various agencies, interest groups and residents. It suggests the community is supportive of a more comprehensive and safer footpath and cycling network throughout the Cowra Shire, but not necessarily at the expense of other transport initiatives.

Proposed Improvements

The Cowra Shire Pedestrian and Cycling Plan proposes a systematic approach to improving the pedestrian and cycling network. A suite of achievable targets that focuses efforts in areas of highest importance has been prepared for consideration by Cowra Shire Council. The delivery plans will assist Council to program, forecast and apply for funding for new facilities into the future.

Tourism, Promotion and Marketing

The Cowra climate and setting lends itself to a range of outdoor recreational and tourist orientated activities. The Cowra Shire Pedestrian and Cycling Plan focuses on promoting walking and cycling to tourists seeking healthy holiday experiences.

Planning / Engineering Response

Changes to Council’s Planning and Engineering Standards and Contributions Plans are suggested to accommodate best practice pedestrian and bicycle approaches. A draft Disability Action Plan has also been prepared for consideration by Council.

Behaviour Change

There is a need for young rider facilities and education. Key recommendations include the construction of a free public bicycle and pedestrian education facility at Cowra, including a circuit simulating road conditions. It is also proposed to encourage schools within the Shire to provide more bicycle facilities and programs. Greater awareness and understanding of road safety initiatives is suggested in the Cowra Shire Pedestrian and Cycling Plan.

Funding

The Cowra Shire Pedestrian and Cycling Plan identifies potential sources of external and internal funding that Council could utilise for funding of new pedestrian and bicycle facilities. The Roads and Maritime Services (RMS) will continue to be an important funding partner to assist with improvements to the pedestrian and cycling network. Council will need to consider increasing the funding allocated to the construction of new facilities and the associated support facilities, including the establishment of reserves for larger (special) projects and as part of specific Section 94 Contribution Plan Areas.
1.0 Introduction
Introduction

The Cowra Shire is located in the Central West of NSW and covers an area of 2,808 square kilometers. The Shire is located approximately 4 hour’s drive from Sydney, 2 hours from the ACT and 1 hour from Bathurst and Orange.

With its 9,700 residents, Cowra is the main urban centre and the hub to several State roads which carry the majority of cars and trucks when compared to local roads. A number of smaller towns and villages are located in the Cowra Shire, which are generally inter-connected by sealed State and local roads.

The road network in Cowra Shire can become quite busy, particularly on the State roads and in summer harvest, peak shopping times, school zones times and around weekend sporting and community events. While it is critical for transport planning to continue to focus on providing for the needs of motorists, it is important that the road network and built environment also caters to the needs of pedestrians and cyclists.

Pedestrians and cyclists are considered ‘at risk road users’ due to their lack of protection against motor vehicles in the event of a crash (NSW Road Safety Strategy 2012-21). It is important for road safety reasons that facilities are available for pedestrians and cyclists that minimise exposure to potential conflict with motor vehicles. It is also important for our health and wellbeing that opportunities are available to incorporate exercise into our daily routine. Active transport facilities, such as footpaths, bicycle lanes and shared paths provide many benefits, including:

- Encouraging healthy lifestyles.
- Improved community health and wellbeing of residents.
- A sustainable alternative transport system.
- Contributing to reducing traffic congestion, noise, and air pollution caused by motor vehicles.
- Improved access and sociability within communities.
- An important recreational activity.

Increasing the visibility of pedestrian and cycling facilities throughout the Cowra Shire will help to encourage the use of these facilities and improve the quality of life of the local community.

The Cowra Shire Council Operational Plan identifies the need to review the Cowra Shire Pedestrian Access and Mobility Plan 2002 and Cowra Shire Cycleways Strategy 2005. This Cowra Shire Pedestrian and Cycling Plan represents the findings of Council’s review, and includes research into the latest trends and initiatives for pedestrians and cyclists.

It is intended that the finalised Plan will be the primary guiding document for the construction of footpaths and cycleways in the Cowra Shire. It will assist Council to program, forecast and apply for funding for footpaths, cycleways, shared paths and associated infrastructure into the future.

Throughout the later part of 2013 and into 2014, preliminary consultation was undertaken to gain insight about walking and cycling conditions and opportunities in the Cowra Shire. The public exhibition of the Cowra Shire Pedestrian and Cycling Plan forms the next step in providing new pedestrian and cycling facilities across Cowra Shire.
1.1. Definitions and Terms

The following definitions and terms are used throughout the Cowra Shire Pedestrian and Cycling Plan.

**Arterial road** means a road that predominantly carries through traffic from one region to another.

**Bicycle** means a vehicle with two or more wheels that is built to be propelled by human power. For the purposes of this Plan, ‘bike’ and ‘bicycle’ means the same thing.

**Bicycle facility** means a public facility especially constructed for bicycle traffic. This term has broad use and can refer to any part of a bicycle route, path, lane, associated signage or parking equipment.

**Bicycle lane** is a marked lane used by bicycles and ending at the nearest of the following:
- An end bicycle lane sign applying to the lane.
- An intersection (unless the land is at the unbroken side of the continuing road at a T-intersection or continued across the intersection by broken lines).
- A dead end – the end of the road.

**Bicycle rider** is a person who is riding a bicycle. Other words used in this Plan (cyclist, rider, bike rider) means the same thing. The Australian Road Rules also define a rider as a motorcycle rider or the driver of an animal drawn vehicle but these definitions do not apply within this Plan.

**Canes** There are three main types of Cane:

1. **Long Cane** – used by people with reduced or no vision, this cane is designed to be one step ahead of its user – it detects obstacles, hazards, ground level changes and stairs.

2. **Identification Cane** – used by people with low vision, this cane can check the height of stairs and any ground level changes.

3. **Support Cane** – Used by people with low vision who also need support, this cane can provided when walking and check the height of stairs.

**Collector road** means a non-arterial road that collects and distributes traffic in an areas as well as serving abutting property.

**Contributions plans** are council plans that specify the circumstances in which a council may impose developer charges.

**Crutches** are a mobility aid that transfers weight from the legs to the upper body. They are used by people who cannot use their legs to support their weight, for reasons ranging from short-term injuries to life-long disabilities. They are commonly used in Cowra Shire by persons recovering from lower limb surgery, such as total knee or hip replacement or from a lower limb injury such as a sprained ankle or bone fracture.

**Cycleway** is a generic term used to describe a bicycle route, lane, path or that part of a separated path used by bike riders.

**Electric bike** also known as an e-bike, is a bicycle with an integrated electric motor which can be used for propulsion. E-bikes use rechargeable batteries and the lighter varieties can travel up to 25km/h. In some overseas markets, E-bikes are gaining in popularity and taking some market share away from conventional bicycles, fossil fuel-powered Mopeds and small motorcycles.

**Footpath** means a sealed path for use by pedestrians only. The width of the footpath in the Cowra Shire is generally 1.2m (existing paths) in low traffic areas and up to 3.5m in the Cowra CBD.

**Intersection** is an area where two or more roads meet. In this Plan an intersection is also the area where an off road bicycle path or shared path intersects with a road or other bicycle path, shared path or footpath.

**Kick scooter** has a simple handlebar, deck and wheels that is propelled by a rider pushing off the ground. They are ridden on roads and footpaths and in skate parks. There are many children in Cowra Shire that use scooters to travel around their house, town, school and at the Cowra Skate Park.

**Local road** means a road or street primarily maintained by Cowra Shire Council and used for access to abutting properties.

**Mobility scooter** has a seat over three or four wheels, a foot plate for the feet, and handlebars in front to control direction and speed. They are usually battery powered, recharged from standard electric power. Mobility scooters provide important advantages to people with mobility problems and are generally more affordable than powered wheelchairs. There are many people in Cowra Shire that use a mobility scooter.
Mountain bike is a bicycle created for off-road cycling. Mountain bikes are typically ridden on purpose built tracks, fire trails, and other unpaved environments. Because of their toughness, mountain bikes are regularly used by children and some adults as part of their everyday transport. The most noticeable differences from other bikes are the inclusion of suspension on the frame and fork, larger knobby tires, more durable heavy duty wheels, more powerful brakes, and lower gear ratios needed for steep grades. Mountain bike riding is growing a support base in Australia, with many events being developed in recent years. In Cowra Shire a moderate number of children and recreational riders ride mountain bikes.

Pedestrian often describes a person travelling by foot or walking rather than travelling in a vehicle. In this Plan a pedestrian also refers to a person that uses one of the following devices to move about:
- Motorised wheelchair that cannot travel over 10 km/h on ground level.
- Non-motorised wheelchair.
- Bicycles, where the rider is 12 years old or younger.
- Bicycles, where the adult rider is supervising a young rider or carrying a child 10 years old or younger.
- Other wheeled recreational devise, such as kick scooters, skateboards or toys.

On-road route means a route on the road and may form part of the road shoulder for use by cyclists only. The on-road route may be line-marked, may have the bicycle symbol painted on the road surface and signposted as appropriate.

Road network comprises the following:
- Motorways and freeways.
- State roads.
- Regional roads.
- Local roads.

Road is an area that is open to or used by the public for the driving or riding of motor vehicles.

Road bike or racing bike is built for traveling at speed on paved roads. The tires are narrow, high-pressure, and smooth to decrease rolling resistance. They usually use derailleur gears to tackle all types of topography. A strong sporting culture underpins road bike riding in Cowra Shire, stimulated by competitive riding events in the region and wider afield. A growing number of road bike riders regularly ride their bicycles in Cowra Shire, either on their own or in small to large groups.

Road reserve or road corridor means the total parcel of public land on which a road or path is located.

Separated bicycle lane means an on-road bicycle lane with physical separation from other motor traffic.

Separated path means a length of path where an exclusive bicycle path is laid adjoining a footpath.

Shared path means a sealed path for use by pedestrians and cyclists. The width of the path is generally 2.5m wide, is signposted as a shared path and is an off-road route.

Shoulder includes any part of the road that is not designed to be used by motor vehicles in travelling along the road.

Squeeze point describes a location where a constriction in the normal road carriageway width forces a cyclist out into the main traffic stream and hence into a potential conflict situation. A narrow bridge, reduction in pavement width and intersections where additional lanes are marked onto the same pavement widths are examples of squeeze points.

Tactile surface or tactile paving can be used to convey important information to visually impaired pedestrians about their environment, for example hazard warning, directional guidance, grade change, or the presence of an amenity.

Time trial bike is similar to a road bike, but is more streamlined in function and appearance. The tires are narrow, high-pressure, and smooth to decrease rolling resistance. They can have carbon disk wheels for further aerodynamics. The handlebars are also different and include “time-trial bars” to allow the rider to assume a more aerodynamic position on the bike. In Cowra Shire you will see time trial bikes ridden at race events organised by the Cowra Triathlon Club.

Track bike is a bicycle optimised for racing at a velodrome or outdoor track. They are fixed-gear bikes; thus, it has only a single gear and has neither a free-wheel nor brakes. Tires are narrow and inflated to very high pressure to reduce rolling resistance. A track sprinting frame is as rigid as possible, while those for general racing are as aerodynamic as possible. The nearest velodromes are at Bathurst and Orange.

Unicycle is a single wheeled bike, with the rider sitting over the wheel on a seat. It takes skill and good balance to ride a unicycle. It can be very entertaining and spectacular to watch a person riding a unicycle. They are ridden at home, school and circus events and at other special events.

Walking frame is a tool for people who need additional support to maintain balance or reduce energy requirements while walking. The basic design consists of a frame that is height adjustable to allow the user to maintain a slight bend in their arms. It is common to see wheels or glides on the back legs of a walker. A walking frame is a good tool for those who are recuperating from leg or back injuries. They are commonly used in Cowra Shire by elderly persons having problems with walking or with mild balance problems.

Wheelchair is a chair with wheels that is used by people who cannot walk because they are disabled, sick, or injured. Wheelchairs come in two major designs – manual or electric. Manual wheelchairs can be folding or rigid and require human power to move them. An electric-powered wheelchair is moved via the means of an electric motor and navigational controls, usually a small joystick mounted on the armrest. An increasing number of electric wheelchairs are being used in Cowra Shire by mobility impaired persons. Manual wheelchairs are often used outdoors in Cowra Shire where there is a carer available to help propel the wheelchair.
1.2. **Scope**

The scope of the Cowra Shire Pedestrian and Cycling Plan is to provide Cowra Shire Council with a local-level understanding of:

- The existing pedestrian and cycling network across the Cowra Shire.
- The key issues of concern and interest with regard to existing pedestrian and cycling activities, safety and demographics.
- Recommendations of potential improvements to the existing pedestrian and cycling network infrastructure, catering for various user groups.
- Suggested behavioural change strategies to encourage an increase in active transport in Cowra Shire.

1.3. **Objectives**

The Cowra Shire Pedestrian and Cycling Plan provides the framework for the development and coordination of pedestrian and cyclist facilities in the Cowra Shire. The specific objectives of the Cowra Shire Pedestrian & Cycling Plan are to:

- Establish a vision for cycling and walking on formed paths in the Cowra Shire.
- Identify the needs of all types of pedestrians and cyclists, including people with a disability, seniors, children, commuters, fitness and tourists.
- Facilitate improvements in the level of pedestrian/cyclist access and priority, particularly in areas of high concentrations of these groups.
- Improve the pedestrian and cycling network through the provision of on-road and off-road facilities that fill gaps in the network, address safety concerns, caters for high demand areas and raises community awareness and participation.
- Identify opportunities for the provision of end-of-trip facilities such as bicycle racks, water points, seating, toilets, maps, user guides and route signage.
- Complement the existing and proposed networks located in adjoining local government areas and land administered by other government agencies.
- Identify strategies that raise awareness of the merits of active transport within Cowra Shire.
- Ensure pedestrian and cycling facilities are employed in a consistent and appropriate manner.
- Propose prioritised measures, with associated costs, which can be realistically implemented over a 10 year period.
- Identify potential sources for funding.

1.4. **Vision**

The vision is that Cowra will be recognised as a bicycle and pedestrian friendly Shire, with quality formed footpaths and cycleway facilities which provide safe, convenient and enjoyable experiences.
1.5. Report Structure

The Cowra Shire Pedestrian and Cycling Plan details background information, site observations, recommended treatments and the likely cost of such treatments.

The Plan also suggests a number of strategies to achieve behavioural changes to improve pedestrian and cycling safety and increase the attraction of these modes of transport.

Each is dealt with in detail in various sections of the report as shown in the Table to the right.

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<td>Introduces the need for pedestrian and bicycle facilities in the Cowra context and provides a review of background information including existing local, state and national policy.</td>
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<td>Planning for Pedestrians and Cyclists</td>
<td>Provides introductory guidance on planning for pedestrians and cyclists and describes the methodology used for identifying user needs.</td>
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<td>Design Standards and Principles</td>
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<td>Proposed Improvements</td>
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<td>Supporting a Culture of Active Transport</td>
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<td>12</td>
<td>Key Recommendations</td>
<td>Outlines the recommended actions for Council, including new programs and initiatives and updates to planning and engineering guidelines and standards.</td>
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2.0 The Study Area
2.1. The Region

The Cowra Shire is located in the Central West Region of NSW, which has a regional population of approximately 273,000 (Central West Regional Transport Plan 2013).

The region has strong east to west road and rail connections across the Blue Mountains to Sydney, through the Lower Hunter Valley to Newcastle, and to the Western region through Dubbo and Parkes. There are also strong north to south links to the New England, Southern and Murray-Murrumbidge regions by road along the Mitchell, Newell and Olympic highways.

The Central West region is a major agricultural, industrial and commercial region, rich in natural resources and spanning the Central Tablelands and Plains.

The region has a varied range of major regional centres including Orange (36,000), Dubbo (34,000), Bathurst (33,000) and Lithgow (12,000) (ABS 2011). Other major towns in the region are Cowra, Forbes, Mudgee, Parkes and Wellington. The rest of the population is dispersed across many small settlements. This lends itself to travel patterns that are dispersed across the region.

Much of the region’s economic activity occurs within the regional centres of Bathurst, Dubbo and Orange. As well as having the highest proportion of population, these centres are hubs for health and education. As a result these centres serve regional residents as their closest major centre with higher order services.

The population of the Central West region is expected to experience slower growth over the next 20 years than regions closer to Sydney. The region’s population is ageing, with the only age group forecast to increase in proportion being the 65 and over group. The proportion of the population aged 65 or over will increase from 17 percent in 2001 to 26 percent in 2013 (Central West Regional Transport Plan 2013).

Approximately 93% of all trips in the region, including journey to work, are by private vehicle. Walking and cycling comprises approximately 6% of all trips, while public transport use is less than one percent.

Poor access to transport contributes to social disadvantage and accessibility issues associated with long distances and limited public transport options. Economic growth in the region and transport connections to major centres and services are key priorities.

2.2. The Cowra Shire

The Cowra Shire is located in the Central West region and covers an area of approximately 2,808 square kilometers.

The main urban centre, Cowra is nestled on the banks of the Lachlan River and is located approximately 304 kilometers west of Sydney, 190 kilometers north-west of Canberra, 92 kilometers from Orange and 106 from Bathurst. Higher order commercial, education and employment activities in the Shire are available mainly in Cowra, with some facilities provided in Gooloogong, Woodstock and Wyangala.

The location of the Cowra Local Government Area and local towns and villages are shown in the Figure below.

A breakdown of the demographic structure of the Cowra Shire is detailed in the following pages.
2.3. Demographic Snapshot

The Economy

The mainstay of the Cowra Shire economy continues to be agriculture, with more people employed in this sector than any other industry type (2011 ABS Census). This lends itself to travel patterns that are dispersed across the Shire.

The majority of other employment opportunities tend to be available in Cowra Township. There are four key employment precincts within Cowra, which includes the Cowra Central Business District (CBD), the West Cowra Industrial Precinct, Redfern Street and the Industrial Precinct north-west of Cowra. Outside these areas, employment is generated at isolated facilities such as the Cowra Health Centre, TAFE, schools and aged care facilities.

The Cowra CBD is the main shopping precinct for the Cowra Shire. The CBD is currently dominated by motor vehicles and parking for vehicles. Main road traffic presents a number of challenges for pedestrians in the CBD, particularly those wishing to cross Kendall Street (Cowra CBD Traffic Management and Redevelopment Master Plan 2012). The CBD is reasonably well connected to the other parts of town with footpaths. There are no formal bicycle routes marked within the CBD and few bike facilities.

The industrial estate and trade centres of Cowra are dominated by manufacturing and service industries, with the majority of employees currently choosing to drive to work. The pedestrian and cycleways network to industrial areas and more isolated employment generators is patchy.

Tourism is a growing industry sector, with visitors attracted to the Shire and for its food and wine, recreation opportunities, attractive settling, events, and to catch up with friends.

Population

The Cowra Shire has an estimated resident population of approximately 12,500 people. The Cowra Township is the largest urban centre and comprises some 9,700 residents (2011 ABS Census). The balance of the community lives in the villages of the Shire and on rural properties (CSC Issues Paper 2008).

The Cowra Shire community is predominately an adult population with approximately 76% of all persons aged over 18 years. The average age of the Cowra population is 45 years, which is 7 years above the Australian average (2011 ABS Census).

Similar to many other areas in the Central West region, the demographic structure of Cowra Shire is expected to become significantly older. Currently about 21% of local residents are over the age of 65. The number of people in Cowra Shire over the age of 65 is expected to increase by another 6% by 2031 (2011 ABS Census).

The projected ageing of the population in Cowra Shire means that, over time, disability access and safety issues related to older road users will have a greater impact.

Access to support services and a long-term focus on improving active transport and mobility options are important issues to cater to the needs of existing and future residents.

Rural and Village Areas

The rural villages within the Cowra Shire are generally all connected via sealed public roads.

Gooloogong, Woodstock and Wyangala retain some higher order commercial facilities, such as hotels, shops and post offices. The villages of Billimari, Darbys Falls, Noonbinna, Morongla and Wattamondara have no commercial facilities and operate as dispersed residential satellite areas.

There are no formal pedestrian or cycle routes connecting towns and villages in the Shire, however Cowra and Noonbinna form part of a sign-posted cyclist route, known as the Chiverton Loop.

Cycling along rural roads is particularly popular, via a number of well-established routes known to local cyclists. Touring cyclists who also ride in other regions comment favourably on the good riding conditions in Cowra Shire, including the low traffic volumes, beautiful countryside, quality road surfaces and the ‘loop’ rides available along many rural roads.

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

Recreation Areas

There are a number of recreation areas in the Cowra Shire that are visited by tourists and locals seeking recreational, sporting and other outdoor activities. The Wyangala Waters State Park, Cowra Peace Precinct, Lachlan River Precinct, Cowra Rose Gardens, Cowra War Cemetery and Garden, and Europa Park are the most popular destinations for recreational users and tourists.

A number of open spaces and recreational areas have formal walking and cycling paths. The connections between parks and the wider pedestrian and cycleways network is patchy.
Transport

The Cowra community is considered to have high car dependency for both work and leisure. Every family household in the Cowra Shire has an average of 1.7 motor cars at their disposal (2011 ABS Census).

The dominance of vehicle dependency is reflected in the method of travel to work with 70% of people in Cowra Shire using a vehicle to travel to work compared to 63% across NSW generally. Only a small proportion of the community use alternative methods to travel to work, with walking being the most preferred with almost 5% of people walking to work (2011 ABS Census). This dependency on motor vehicles is largely the result of limited public transport coverage and the large distances between origins and destinations.

There are a large number of State and local road routes in Cowra Shire that support the freight industry sector. Demand for freight services is expected to almost treble in Australia by 2050, with a likely flow on effect on the local freight industry sector (Infrastructure Australia National Land Freight Strategy Discussion Paper 2011).

Sharp increases in fuel costs over recent years continues to have an influence on travel patterns and consumer choice. In Cowra Shire it would appear that it has given rise to an increased popularity of smaller, more fuel-efficient vehicles.

Crash data from 2008 to 2012 for the Cowra Shire was obtained from the NSW Transport Centre for Road Safety.

The recorded crash data shows that 136 crashes occurred in the urban areas of Cowra Shire, with the majority (86%) involving cars. No crashes in the urban areas were fatal but 42% of all urban crashes recorded injuries. 8% of all recorded urban crashes were pedestrian crashes and 4% involved cyclists, with 100% of these crashes resulting in injury.

All recorded urban crashes involving cyclist and pedestrians occurred in Cowra, with the crash locations shown in the Figure to the right.

In the non-urban areas of the Shire, 147 crashes were recorded, with 4.8% resulting in a fatality and 64% recording an injury.

No crashes in the non-urban areas involved pedestrians or cyclists.

Walking and Cycling

Conditions at Cowra are ideal for walking and cycling transport. Over 90% of the town population lives within easy walking or cycling distance of the Cowra CBD, schools and workplaces. Many of the streets in Cowra are quite wide and have lower traffic volumes than in larger regional centres, which makes walking and cycling safer and more convenient transport options. The parks in Cowra, particularly the Cowra Peace Precinct and the parks in the Lachlan River Precinct, offer ideal conditions for residents and tourists seeking active transport activities.

The villages in the Cowra Shire have smaller and more dispersed populations than Cowra and limited facilities and employment opportunities. This accounts for less pedestrian and cycling trips. Due to the wide village streets and low traffic volumes, many residents walk or cycle on the actual road carriageway or along the grassed verge. The main villages of Gooloogong, Woodstock and Wyangala continue to provide commercial, education, employment and community facilities, and are the villages requiring improved pedestrian and cycling conditions. Traffic conditions at Gooloogong and Wyangala may change in the near future, with the opening of new bridges and road routes near these villages.
3.0 Identifying Pedestrian & Cyclist Needs
Identifying Pedestrian & Cyclist Needs

3.1. Pedestrian Needs

Everyone is a pedestrian, be it walking 30 metres from the car to a place of work, walking to school or the shops, or running for fitness. Basic pedestrian needs are a smooth, hazard-free footpath surface, however the needs of cyclists can be more complicated.

Pedestrians account for 14% of the NSW road toll (NSW Road Safety Strategy 2012-21). Pedestrians are considered ‘at risk road users’ due to the severe outcomes that can occur when they come into conflict with motor vehicles.

There is a strong desire within State and local governments for pedestrian safety across the entire road network. This is reflected in a range of road safety programs as well as the provision of 40km/h High Pedestrian Activity Areas, School Zones and 10km/h Shared Zones and other infrastructure treatments.

Pedestrian activity and movement is by its very nature difficult to plan for. Unlike motor vehicles that travel along designated road carriageways and generally follow the Australian Road Rules, the movement of pedestrians is composed of a range of random, individual movements.

Achieving separation between pedestrians and motor vehicles is an important road safety objective. To allow for this, separate footpaths and a reduction in vehicle speeds where pedestrians and motorists come into contact is important.

The footpath environment also accommodates a range of non-walking users, such as young cyclists, roller skaters, scooter and skate board riders, wheelchair and mobility scooters. When you add carers with prams and strollers, dog walkers, joggers, vehicles negotiating driveways as well as workers accessing street trees and utility services, footpaths can become a very busy part of the road environment. It is important to note that footpaths are often shared by many different users.

The needs of pedestrians should therefore be considered as part of the footpath ‘environment’ rather than a series of separate walking paths required for one particular user. It follows that pedestrian needs are better assessed by considering areas of ‘high pedestrian activity’ rather than ‘pedestrian routes’.

3.2. Cyclist Needs

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

Cyclists are also considered ‘at risk road users’ due to the severe outcomes that can occur when a rider crashes their bike or when they come into conflict with motor vehicles. Most cyclists are very aware of their vulnerability on the road network and use safety lights, helmets, bells and high visibility gear when riding.

Cyclist’s basic needs are a smooth, hazard-free riding surface and enough operating space to avoid conflict with other road users. Recent survey work (Cowra Cycling Survey 2013 and Sydney Cycling Survey 2011) indicates that key needs of cyclists are safety, reduced motor vehicle speed, adequate separation from motor vehicles, off-road paths, signage and bicycle parking facilities.

State and local governments are committed to increasing the level of bicycle riding and safety. To achieve this, infrastructure must be appropriate to allow for the safety of bicycle riders, together with respect from other road users. A combination of infrastructure and behavioral education campaigns is needed to support safe cycling.

In Cowra Shire there are certain areas and links that attract higher levels of bicycle usage than in other areas. Due to the relative high costs in providing physical infrastructure that specifically caters to cyclists, these ‘high use activity areas’ will determine where improvements and upgrades are most needed.
### 3.3. Disabled and Aged Access Needs

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

An aging demographic means that many people in our community will require greater assistance to move about in the future. Age is related to a variety of characteristics and skills that influence the risk of traffic injury. These age-related characteristics can also affect the way in which people of different ages interact with pedestrian safety measures and therefore require unique attention when planning interventions.

As shown by Job RFS, *Pedestrians at Traffic Light Controlled Intersections: Crossing Behaviour in the Elderly and Non-elderly*, several factors work together to increase the risk of older people:

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

In the 2010 NSW Health Falls Prevention Baseline Survey, 26.7% of older people, aged 65 and older, reported limiting their walking because of fear of falling whilst walking over rough or uneven surfaces, steps or stairs.

The ageing population is projected to increase in Cowra Shire over the next decade (2011 ABS Census).

A key focus of the Cowra Shire Pedestrian and Cycling Plan is to provide mobility and access facilities for disabled and older persons in our community, particularly in high activity areas such as the Cowra CBD.

### 3.4. Young Children

Infant and primary school aged children need their parents or other adult supervision when they travel on the road network, but they also need our confidence to explore their environment and learn how to do things independently. Infant and primary school aged pedestrians and cyclists have undeveloped cognitive skills, lack good peripheral vision, and have little knowledge of road traffic rules (*NSW Road Safety Strategy 2012-21*). They therefore require adult supervision when travelling on busy public roads and/or require off-road paths and facilities in order to remain safe.

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

- Easily distracted and focus only on one aspect of what is happening.
- Are smaller and harder for drivers to see, and less predictable than other pedestrians.
- Cannot accurately judge the speed and distance of moving vehicles.
- Cannot accurately predict the direction that sounds are coming from.
- Unable to cope with sudden changes in traffic conditions.
- Do not understand abstract ideas, such as road safety.
- Are unable to identify safe places to cross the road.
- Tend to act inconsistently in and around traffic.

An extensive network of structured sporting activities is available to children in Cowra Shire that helps to keep them active and engaged. There are also a number of areas where children can go ‘off-road’ and explore the environment and practice skills on their own or with friends. The Wyangala Waters State Park, Cowra Peace Precinct, Lachlan River at Cowra and Gooloogong, Cowra Skate Park and Europa Park are important open space resources for passive recreation.

A key focus of the Cowra Shire Pedestrian and Cycling Plan is to link areas of active and passive recreation to residential areas and the wider network, as well as provide opportunities for off-road play and learning facilities.
4.0 Review of Supporting Policies
Review of Supporting Policies

The initial stage of the Cowra Shire Pedestrian and Cycling Plan involved a review all of the mainstream reports, strategies and policies that support the development of a ‘Cowra specific plan’. The review of supportive documents serves the following purposes:

- To ensure the Cowra Shire Pedestrian and Cycling Plan aligns with regional, state and national policy directions in relation to the development of pedestrian access, bike plans and mobility plans.
- To ensure the Cowra Shire Pedestrian and Cycling Plan aligns with the wider context of transport and land-use planning policy directions.
- To understand the projects, links and network connections being planned in adjoining local government areas that might benefit the Cowra Shire Pedestrian and Cycling Plan.
- To help understand the correct methodology and approach when preparing the Cowra Shire Pedestrian and Cycling Plan.
- To help identify any deficiencies within the current network and existing policies that may hinder its success.

A brief summary of key points from existing reports, strategies and policies is provided in the Table on the next page. These documents have been used as reference points throughout the project to ensure the Cowra Shire Pedestrian and Cycling Plan remains focused on the strategic directions and addresses key deficiencies within the network in a manner that is consistent with the wider network.
## Table: Review of Supporting Policies

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<th>Policy</th>
<th>Policy Review</th>
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<tr>
<td>WHO Pedestrian Safety Manual 2013</td>
<td>The World Health Organization (WHO) has published Pedestrian Safety: A Road Safety Manual for Decision Makers and Practitioners 2013. The Manual provides information for use in developing and implementing measures to improve pedestrian safety. Many of the guiding principles can also be applied to planning for bicycles and other active transport modes. The manual provides useful information that can be used when designing and implementing road safety interventions.</td>
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<tr>
<td>Getting there – on foot, by cycle: A strategy to advance walking and cycling in New Zealand 2005</td>
<td>This strategy aims to ensure that supportive walking and cycling environments are provided in New Zealand communities, that safety is improved for pedestrians and cyclists, and that people walk and cycle more as part of their day-to-day transport mix. The strategy provides useful guidance on combining pedestrian and cyclists interests to drive changes in active transport. In New Zealand, the development of walking and cycling is integral to achieving the five transport targets within the New Zealand Transport Strategy, which comprises:</td>
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<td>• Ensuring environmental sustainability.</td>
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<td>• Assisting economic development.</td>
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<td>• Assisting safety and personal security.</td>
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<td>• Improving access and mobility.</td>
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<td>• Protecting and promoting public health.</td>
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<tr>
<td>National Road Safety Strategy 2011-2020</td>
<td>The National Road Safety Strategy aims to reduce the annual number of fatalities and serious injuries occurring in Australia by at least 30 per cent by 2020. The strategy promotes the ‘Safe Systems Approach’ as the guiding principles for road safety programs in Australia. The strategy aims to elevate Australia’s road safety ambitions through the coming decade and beyond. As part of the National Strategy, the NSW government has committed to addressing the actions detailed in the one to three year action plan.</td>
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<tr>
<td>National Cycling Strategy 2011-2016</td>
<td>The National Cycling Strategy is a strategic document with a vision to double the number of people cycling by 2016. The strategy advocates that an increased use of bicycles could dramatically increase the health benefits and therefore quality of life of many Australians. It states that in conjunction with the promotion of cycling as a safe and viable method of transport, the improvement of connectivity and end-of-route facilities should encourage a growth in regular cycling. The Australian Bicycle Council (which consists of representatives of state, territory and local governments, cycling industry and bicycle users) coordinates and implements the National Cycling Strategy.</td>
</tr>
<tr>
<td>Walking, Riding and Access to Public Transport – draft report for discussion 2012</td>
<td>This draft report was prepared by the Federal Department of Infrastructure and Transport to explore how Australian governments can work with businesses and the community to increase the mode share of walking, riding and public transport.</td>
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<tr>
<td>Australian Pedestrian Charter 1999</td>
<td>The Australian Government does not have a specific walking strategy or policy. However, the Pedestrian Council of Australia promotes pedestrians at a national level through the Australian Pedestrian Charter. This Charter aims to promote benefits of walking as a safe, healthy, enjoyable and accessible form of transport as well as encourages the planning of safe, attractive and convenient walking conditions.</td>
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<td>The Charter principles cover the topics of:</td>
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<td>- Accessibility that considers the design of facilities for the most vulnerable pedestrians, such as older people, children and those with disabilities.</td>
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<td>- Sustainability and the environment with walking as the most environmentally sustainable form of transport to replace short car trips that contribute to air pollution.</td>
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<td>- Health and well-being with walking as a low-impact form of exercise to counter the modern sedentary lifestyle. It is highly accessible, available for all age groups, and is a proven method of promoting better health.</td>
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<td>- Safety and personal security with places for walking designed to maximise personal security with good sightlines and better lighting scaled to pedestrian needs. ‘Safety in numbers’ will be achieved by encouraging more street activity and the natural surveillance of pedestrian space by other walkers and by neighbours.</td>
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<td>- Equity with walking as the only transport mode available to almost everybody at any time and without charge.</td>
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<tr>
<td>Austroads, Cycling Aspects of Austroads Guides 2014</td>
<td>This publication contains key information that relates to the planning, design and traffic management of cycling facilities and is sourced from Austroads Guides, the Guide to Road Design, the Guide to Traffic Management and the Guide to Road Safety.</td>
</tr>
<tr>
<td>Austroads, The Guide to Traffic Engineering Practice Part 13: Pedestrians</td>
<td>This guide is the key national traffic engineering guideline for design of pedestrian facilities. It includes detailed design information on footpath materials, widths and grades, road crossings, building entrances and the like. Of particular relevance to councils are the chapters on “pedestrian considerations in land-use planning”, “pedestrian access to buildings” and “pedestrian access to public transport”.</td>
</tr>
<tr>
<td>Austroads, The Guide to Traffic Engineering Practice Part 14: Bicycles</td>
<td>This guide is the key national traffic engineering guideline for design of cycling facilities. Of particular relevance to councils are the chapters on “planning for cyclists” and “end-of-trip facilities”.</td>
</tr>
<tr>
<td>The National Charter for Integrating Land Use &amp; Transport</td>
<td>The National Charter is a Commonwealth-level agreement committing to a set of good-practice planning principles, including ‘route continuity through local streets for pedestrians, cyclists and public transport’.</td>
</tr>
<tr>
<td>The National Greenhouse Strategy 1998</td>
<td>This strategy includes a number of greenhouse reduction modules, one of which is ‘efficient transport and sustainable urban planning’. Within this module is an aim to ‘encourage greater use of public transport, walking and cycling’.</td>
</tr>
<tr>
<td>NSW Long Term Transport Master Plan 2012</td>
<td>Transport for NSW has developed a Transport Master Plan to address the transport challenges over the next 20 years. The plan identifies solutions and actions that integrate, modernise and manage the transport system in the short term, medium term and the longer term for NSW. The Transport Master Plan advocates for the uptake of cycling and development of connected networks and infrastructure for cycling and improved pedestrian access and amenity across the network.</td>
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<td>State Policies</td>
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<td>Central West Regional Transport Plan 2013</td>
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<td>NSW Road Safety Strategy 2012-21</td>
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<td>NSW Bike Plan (NSW Government) 2010</td>
<td>The NSW Bike Plan complements and builds on the (Sydney) Metropolitan Transport Plan 2010 by looking at methods of implementation and delivery. An objective of the plan is that by 2016, 5% of all journeys under 10 kilometres will be by bike. It commits funding over 10 years to fill gaps in the cycleways network. The plan also focuses on the need for education to support the development of such a network such as weekly cycling and ride to school groups. The plan emphasises the need of connectively not only to key community facilities but also within the network.</td>
</tr>
<tr>
<td>The NSW Bicycle Guidelines 2005</td>
<td>This guide aims to improve traffic engineering practice for cycling. It includes good practice information on all aspects of cycleway design, such as lane widths, intersection treatments, signage, surface treatments and parking at public transport interchanges.</td>
</tr>
<tr>
<td>Action for Bikes: Bikeplan 2010</td>
<td>This strategy is the NSW Government’s policy on cycling. It includes a bicycle masterplan that describes the Government’s cycleway construction program. It also includes a four-point cycling action plan: “improving the bike network”, “making it safer to cycle”, “improving personal and environmental health” and “raising community awareness”.</td>
</tr>
<tr>
<td>How to Prepare a Bikeplan 2012</td>
<td>This guide provides a step-by-step process for NSW councils to prepare a local bikeplan. Step 8, “local land use planning regulation and management”, identifies the various planning policies that can lend planning support for the bikeplan and vice versa.</td>
</tr>
<tr>
<td>How to Prepare a Pedestrian Access &amp; Mobility Plan (PAMP) 2202</td>
<td>This guide aims to assist NSW councils to provide safe, convenient and connected pedestrian routes that encourage people to walk. Two of the document’s guiding objectives are “to facilitate improvements in the level of pedestrian access and priority, particularly in areas of pedestrian concentration” and “to reduce pedestrian access severance”.</td>
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<tr>
<td>Planning Guidelines for Walking &amp; Cycling 2004</td>
<td>These guidelines aim to assist land-use planners to improve consideration of walking and cycling in their work. When making planning instruments, councils are encouraged to integrate relevant State and local policies related to walking and cycling, particularly bicycle and pedestrian plans. The guidelines have been designed to provide a walking and cycling focus to the NSW Government’s Integrating Land Use &amp; Transport Planning Policy Package. They are also designed to provide a planning complement to the RMS’s facilities-focused policies and actions.</td>
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<tr>
<td>The Guide to Traffic Generating Developments</td>
<td>This guide is currently under review, but is still an important transport planning tool. Whilst it covers all road users, it includes useful design information for walking and cycling, such as bicycle parking provision rates.</td>
</tr>
<tr>
<td>Simply Active Everyday: A Plan to Promote Physical Activity in NSW 1998</td>
<td>This action plan aims to promote physical activity, including walking and cycling. It was prepared by the NSW Physical Activity Task Force, a committee comprising government agencies and non-government organisations such as the National Heart Foundation. A key action of the plan is development of the Creating Active Communities guidelines.</td>
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<tr>
<td>Creating Active Communities 2001</td>
<td>Creating Active Communities is a guidelines document designed to assist councils to encourage physical activity in their areas, including walking and cycling. Three of its aims have relevance to councils; “to promote the philosophy of physical activity”, “to encourage integrated planning” and “to encourage monitoring and evaluation”.</td>
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<td><strong>State Policies</strong></td>
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<tr>
<td>Metropolitan Plan for Sydney 2036 (NSW Government, 2010)</td>
<td>While specifically for Sydney, the Metropolitan Plan builds on the concept of planning for a more connected, multi-centred urban areas. For the first time the Plan includes an active transport target to raise the mode share of bicycle trips in the greater Sydney region at a local and district level to 5% by 2016 (currently at 1%).</td>
</tr>
<tr>
<td>NSW National Parks and Wildlife Cycling Policy 2011</td>
<td>The National Parks cycling policy was released in 2011 and sets the framework for providing and managing cycling experience in parks in NSW.</td>
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<tr>
<td>NSW Sustainable Mountain Biking Strategy 2011</td>
<td>The NSW Office of Environment and Heritage released this strategy in 2011 for National Parks and Reserves.</td>
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<tr>
<td><strong>Local Policies</strong></td>
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<tr>
<td>Cowra Pedestrian Access and Mobility Plan 2002</td>
<td>The Cowra PAMP evaluates the pedestrian needs of local residents and presents a program for the provision of improved pedestrian facilities in Cowra Shire. The aim of the Cowra Shire Pedestrian and Cycling Plan is to review, update and replace the Cowra PAMP.</td>
</tr>
<tr>
<td>Cowra Cycleways Strategy 2005</td>
<td>The Cycleways Strategy has been prepared for the town of Cowra and identifies a network of cycling facilities to help make cycling safer. The aim of the Cowra Shire Pedestrian and Cycling Plan is to review, update and replace the Cowra Cycling Strategy.</td>
</tr>
<tr>
<td>Cowra Shire Strategic Plan 2006-2036</td>
<td>The Cowra Shire Strategic Plan 2006-2036 was developed by the Cowra Shire Council in consultation with key community members. The vision for Cowra is, “In 2036 we will be a leading, innovative and creative community, proud of our place in history, offering opportunity with the best of country living.”</td>
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<tr>
<td>Cowra Shire Land-use Strategy 2009</td>
<td>This document provided the necessary strategic framework to guide the preparation of the Cowra Local Environmental Plan 2012. It also presented an integrated land-use and transport strategy for the Cowra Shire, and recommended more detailed consideration of heavy vehicle bypass issues as well as greater consideration of pedestrian and bicycle issues.</td>
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<tr>
<td>Cowra Heavy Vehicle Bypass Report, 2013</td>
<td>This report was prepared for Cowra Shire Council and presents the methodology used to identify and evaluate a range of alternative routes for heavy vehicle traffic passing through Cowra.</td>
</tr>
<tr>
<td>Cowra CBD Traffic Management and Redevelopment Master Plan 2012</td>
<td>The Master Plan provides a framework to guide the future development of the Cowra CBD over a 20 year timeframe. Implementation of the CBD Structure Plan will significantly increase walking and cycling opportunities and safety in the commercial activity areas of Cowra.</td>
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<tr>
<td>Cowra Peace Precinct Master Plan 2010</td>
<td>The Master Plan made a number of recommendations which have relevance to the Cowra Shire Pedestrian and Cycling Plan, including the provision of a network of new walking and cycling paths at the Cowra Peace Precinct.</td>
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<td>Local Policies</td>
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<td>Lachlan River Precinct Master Plan 2012</td>
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<td>Cowra Shire Council Contributions Plan (94 &amp; 94A)</td>
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<td></td>
<td>Blayney Bike Plan and Pedestrian Access &amp; Mobility Plan 2008</td>
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<td>Draft Bathurst Regional Cowra Shire Pedestrian and Cycling Plan 2011</td>
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<td>Cabonne Bicycle Plan 2005 and Cabonne PAMP Final Report 2007</td>
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<td>Young PAMP 2005 and Young Bike Plan 2005</td>
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<td>Forbes Report for PAMP and Bike Plan 2009</td>
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<td><strong>Tourism Strategies</strong></td>
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<tr>
<td>Victorian Cycle Tourism Action Plan 2011-2015</td>
<td>This strategy was released in 2011 by Tourism Victoria. It aims to position Victoria as the leading state for cycle tourism, and outline how the Government will leverage and enhance opportunities in cycle tourism.</td>
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<tr>
<td>Cycle Tourism Resource Kit for Regional and Rural Communities</td>
<td>The Cycle Tourism Resource Kit was produced by the Australian Bicycle Council (which coordinates and implements the National Cycling Strategy). The kit is designed as a ‘one stop shop’ to provide the key information, planning templates and contacts that regional and rural communities will need to develop cycling tourism in their area.</td>
</tr>
<tr>
<td>Cowra to Eugowra Rail Trail</td>
<td>Approximately 10 years ago a group of local residents advocated for the development of a rail trail linking Cowra, Canowindra and Eugowra. A PowerPoint presentation is available at Cowra Council about this proposal.</td>
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<td>cyclingresourcecentre.org.au</td>
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<td><a href="http://www.walk.com.au">www.walk.com.au</a></td>
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<td>rms.nsw.gov.au</td>
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<td>roadsafety.transport.nsw.gov.au</td>
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<td><a href="http://www.bicycleinfo.nsw.gov.au">www.bicycleinfo.nsw.gov.au</a></td>
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<td>kidsafensw.org.au</td>
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<td>austcycle.org.au</td>
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<td>amygillett.org.au</td>
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5.0 Existing Facilities Audit
Existing Facilities Audit

An audit of existing pedestrian and cycling conditions across the Cowra Shire was undertaken for the Cowra Shire Pedestrian and Cycling Plan. The audit was undertaken by means of a desktop review of local data as well as drive-through, walk-through and saddle surveys of the study area.

The audits were not meant to gather a comprehensive inventory of pedestrian and cycling assets in the Cowra Shire. The emphasis of the audits was on identifying gaps in the network as well as the barriers to people using the network.

Audits were conducted of all settlement areas and main routes. Audit findings were particularly focused in Cowra, Gooloogong, Woodstock and Wyangala, as the areas of highest pedestrian and cyclist activity.

The audits revealed a variety of pedestrian and cycling facilities provided in Cowra Shire, in varying conditions. Expectedly, the audits identified a number of deficiencies and barriers in the network, which are discussed in this section.

Where minor deficiencies were observed, such as concrete footpath surface cracking or overhanging branches creating obstacles, they were reported to Cowra Shire Council for rectification. Audit investigators used the 'Snap Send Solve' APP and telephone to report minor deficiencies.
5.1. Cowra Audit Findings

The audits that were undertaken in Cowra involved driving and walking routes as well as saddle surveys. Overall, the audits revealed a relatively extensive footpath network in fair to good condition and a less extensive cycling network in good to excellent condition. The Cowra audits identified a number of deficiencies and barriers in the network, which are illustrated and discussed in general terms to the right.

- **Cycleways and shared paths** - There are no on-road cycling lanes or off-road cycleways in Cowra, other than the shared paths recently constructed at the Cowra Peace Precinct. The lines marked green on the map shows parts of the road network that are being regularly used by cyclists but do not have cycling facilities. In particular, the routes along Grenfell Road, Canowindra Road, Binni Creek Road, Lachlan Valley Way, Sydney Road and Young Road and were noted for their lack of continuous cycleways or shared paths.

- **Footpaths** - The grey lines on the map show the existing network of concrete footpaths in Cowra. The lines marked red on the map show parts of the road network that are being readily used by pedestrians that do not have constructed footpaths. In particular, the routes along Grenfell Road, Lachlan Valley Way, Young Road, Sydney Road, Mulyan Street and Pridham Street were noted. The routes to Europa Park, Cowra Peace Precinct and the Lachlan River Precinct were also noted for their lack of continuous footpaths or shared paths. A narrow footpath (900mm wide) was observed on Edge Hill Park, which is too narrow for the pedestrians and cyclists that use this route.

- **Kerb ramps** - There are a number of kerb ramps that need to be provided or need replacing due to poor alignment, grade or condition. The use of roll top kerbs without kerb ramps was observed to create problems for some pedestrians, especially people using wheelchairs on formed footpaths that cross roll top kerbs.

- **School zones** - Schools in Cowra are generally provided with constructed footpaths. Additional constructed footpaths or shared paths would be beneficial at Cowra High School.

- **Obstacles** - No street furniture, signs or other structures were observed to present major obstacles or hazards to pedestrians on constructed footpaths. Low overhanging tree branches and bushes were observed as obstacles on some constructed footpaths, especially along residential streets in the more established areas of Cowra and near the Cowra CBD.

- **Trip hazards** - Footpath cracking and sections of broken paving were observed on some footpaths in the Cowra CBD. Some residential streets also showed signs of footpath deterioration or damage, such as cracks and raised concrete edges.

- **Excessive cross-fall** - An area where cross-fall presents a problem is on Brisbane Street and Macquarie Street. The purple lines on the map show problem areas.

- **Road crossings** - The pedestrian crossing at the intersection of Kendal and Brisbane Streets is difficult to safely cross by pedestrians. The pedestrian crossings near the roundabout intersection of Vaux and Brisbane Streets are difficult to cross by pedestrians. The time provided for pedestrians to cross roads at traffic lights may be too short to allow all pedestrians to safely cross the road. Additional road crossings are required in Kendal Street to minimise random crossing behaviour of pedestrians. There is minimal use of kerb extensions and bollards to reduce effective road carriageway width and provide more effective road crossing points.

- **Waterway crossings** - The Low Level Bridge over the Lachlan River is too narrow to accommodate existing pedestrian and motor vehicle movements and has wide gaps in the timber deck that presents an obstacle to cyclists wishing to use this route. The Bridge over the Waugoola Creek on the Darbys Falls Road has wide gaps in the timber deck that presents an obstacle to cyclists that regularly use this route.

- **Railway crossings** - A footpath crossing the Cowra to Eugowra Railway that links Brisbane Street to Brisbane Avenue is finished to a poor standard and presents an obstacle to pedestrians and cyclists that regularly used this route.

- **Lighting** - The Cowra Bridge underpass area is regularly used by pedestrians at night and is poorly lit.

- **Tactile indicators** - Not all intersections and grade changes in the Cowra CBD are provided with tactile indicators.

- **Bicycle parking facilities** - The blue dots show the locations where bicycle racks are provided.

- **Shared path line marking and signage** - Some sections of the shared paths at the Cowra Peace Precinct lack clear line marking and signage.
5.2. Gooloogong Audit Findings

The Gooloogong audits revealed a number of gaps, deficiencies and barriers in the network, which are illustrated and discussed in general terms below:

- **Footpaths** - The lines marked red on the map shows parts of the road network that are being readily used by pedestrians but do not have constructed footpaths.
- **Kerb ramps** - The green dots show the roads in Gooloogong where kerb ramps could be provided. The yellow dots show the existing kerb ramps that need replacing due to poor alignment, grade or condition.
- **School zones** - Additional constructed footpaths / shared paths are required at Gooloogong Public School.
- **Cycleways and shared paths** - There are no on-road cycling lanes or off-road cycleways in Gooloogong that would benefit children and other people that cycle local road routes. The lines marked green on the map shows parts of the road network that are being regularly used by cyclists but do not have cycling facilities.
- **Waterway crossings** – Holman Bridge near Gooloogong on Nanima Road across the Lachlan River is a long, narrow timber bridge that has wide gaps in the timber deck that presents an obstacle to cyclists that regularly use this route. The bridge is in the process of being replaced under the NSW Bridges for the Bush Program.
5.3. Woodstock Audit Findings

The Woodstock audits revealed a relatively extensive but aging footpath network that has a number of gaps, deficiencies and barriers, which are illustrated and discussed in general terms below:

- **Cycleways and shared paths** – There are no on-road cycling lanes or off-road cycleways in Woodstock that would benefit children and other people that cycle local road routes.
- **Railway crossings** – The footpath crossing the Blayney to Demondrille Railway that links Woodstock CBD to Lions Park presents an obstacle to pedestrians and cyclists that regularly use this route.
- **Kerb ramps** – The green dots show the roads in Woodstock kerb ramps could be provided.
- **Obstacles** - Low overhanging tree branches and bushes were observed as obstacles on constructed footpaths.
- **Trip hazards** - Footpath cracking and sections of broken and raised paving were observed on concrete footpaths.
5.4. Wyangala Audit Findings

The audits that were undertaken in Wyangala revealed an absence of a footpath/cycling network.

The Wyangala audits identified a number of projects to create a serviceable network, which are illustrated and discussed in general terms below:

- **Footpaths** - There are no constructed footpaths in Wyangala. The lines marked red on the map show parts of the road network that are being readily used by pedestrians but do not have constructed footpaths. In particular, the routes in front of the Wyangala Public School, tennis courts park and to the Wyangala Country Club were noted.

- **Cycleways and shared paths** – There are no on-road cycling lanes or off-road cycleways in Wyangala that would benefit children and other people that cycle local road routes.

- **School zones** – There are no constructed footpaths that service the Wyangala Public School. Additional constructed footpaths/shared paths are required at Wyangala Public School.

- **Lighting** – The new alignment of Trout Farm Road through Wyangala will mean that more through traffic will travel along this road, shown in light grey.

- **Waterway crossings** – A new bridge over the Lachlan River, downstream of Wyangala village has recently been opened. The new bridge currently has horizontal gaps in the concrete deck that may present a hazard for cyclists. With the opening of the new bridge it is expected that the road traffic route across the Wyangala Dam may be closed. The remnants of a concrete footway bridge exist over the Creek at Wyangala Village. Consideration should be given to the removal / reuse of redundant bridge crossings.

- **Trip hazards** – Without constructed footpaths, the hilly topography at Wyangala presents a number of trip hazards.

- **Excessive cross-fall** – The hilly topography of Wyangala and the lack of constructed footpaths presents a number of cross-fall problems.
5.5. Audit Findings in other Villages and Rural Areas

The audits that were undertaken of the rural areas and other villages revealed a relatively good network of sealed roads that interconnected the villages to many parts of the Cowra Shire. The actual road carriageway on village streets and grassed verges are being used by pedestrians and cyclists. Many of the road routes through villages are being used by road bike cyclists and cycling tours. The Figure to the right shows the main cycling routes regularly used by locals and touring cyclists.
6.0 Consultation
Consultation

Cowra Shire Council conducted a series of workshops throughout November and December 2013, to which over 70 participants attended. Interested community members also completed surveys, and the Principals of schools in Cowra Shire also completed a school survey.

The emphasis of the consultation was on identifying gaps in the network as well as barriers to walking and cycling in the Cowra Shire.

Much of the community feedback focused on improvements and new routes within Cowra and connecting the rural villages and rural localities. A large number of missing links in Cowra were identified together with access issues for people with a disability, seniors and school age children. A high proportion of responses related to the requirements for safety and support facilities such as visibility, signage, increased driver awareness, bicycle racks and water stations.

The workshops conducted at Gooloogong, Woodstock and Wyangala suggested improvements and new routes to be included in the investigations.

A separate Community Consultation Report is included in Appendix A at this end of the Plan.
6.1. The Consultation Process - Overview

Stakeholder Workshops

On 27 November 2013 Cowra Shire Council held a Planning Focus Meeting for the Cowra Shire Pedestrian & Cycling Plan. Invitees to the Planning Focus Meeting included representatives from the Roads and Maritime Services, Cowra Access Committee and the Local Traffic Committee. While many local community and sporting groups were invited, they did not necessarily provide specific comments to the consultation process. Over 50 people attended the Planning Focus Meeting.

12 workshops were also held in Cowra, Gooloogong, Woodstock and Wyangala during the period 11 December 2013 to 19 December 2013. The workshops were structured around a series of local area maps. Questions were then asked about the pedestrian and cycling network and local conditions that led the conversation to allow for problems, solutions, suggested routes and feedback to be covered within the allocated workshop.

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

More details of the stakeholder workshops are provided in the Consultation Report.

Online Surveys

Council conducted a series of online surveys which were distributed via Council’s website and through workshop participants. The online surveys were divided into 3 distinct groups; School Principals, Pedestrians and Cyclists.

Cyclist Surveys

Council received 78 survey responses in relation to the use of the existing cycleway network.

Pedestrians

Council received 26 survey responses from those in the community who use the footpath network.

School Principals

A School Survey was developed to better understand the number of students and staff walking and cycling to and from school as well as the enablers and barriers to walking and cycling to school and the types of facilities available to and from school.

The School Survey was distributed to the Principals of all schools, with 5 surveys being completed.

All schools that responded reported many students walk to and from school, with significantly fewer students riding bicycles to school. At Cowra High School more students ride scooters to school than bicycles. Gooloogong Public School had the largest proportion of students cycling to school.

The Principals that responded were all supportive of increased active transport initiatives and suggested that safer pedestrian and cycling routes to school may encourage more pedestrian and cycling activity.

Promotion

A number of promotional activities were undertaken to encourage participation in the preliminary consultation phase for the Cowra Shire Pedestrian & Cycling Plan. Media releases were made available to local newspapers and interviews given on local ABC Radio about the launch of the project, surveys and workshops. Council’s website featured details about the project, surveys and workshops. Information Posters were distributed and hung in various locations around the Cowra Shire. More details are provided in the Consultation Report.
6.2. Key Consultation Findings

The key findings of the consultation activities have been summarised below:

- The desire for more dedicated footpaths, bicycle lanes and shared paths.
- Improved safety conditions for pedestrians, cyclists and drivers including better maintained paths and road markings and warning signs.
- Only a small proportion of students in Cowra Shire cycle to school. Gooloogong had the highest proportion of students cycling to school. In Cowra more students walk or use scooters and skateboards.
- Safety was the greatest concern for schools and parents of school age children. Improved safety conditions for students is a high priority in Cowra.
- More bicycle paths and shared paths may improve cycling safety perceptions and may encourage parents to allow their children to ride more often and more extensively through the network.
- Better cycling conditions along main roads was a key gap identified in the cycling network, with the existing cycling routes on the Grenfell Road and the Lachlan Valley Way (leading in and out of Cowra) being most used.
- Improving driver awareness of pedestrians and cyclists was a common outcome across all consultation activities.
- Improved pedestrian facilities are required at Gooloogong and Wyangala.
- Cowra Shire is an ideal place for cycling tours because of its good cycling conditions, beautiful scenery and loop rides to interesting places.
- If you build it they will come.

A large number of respondents indicated that they would prefer more dedicated footpaths and bicycle paths around the Cowra. An interesting point to note about this key finding was that respondents identified as being either potential or non-cyclists stated that new paths and improved safety conditions could encourage them to walk / cycle more. Similarly, infrequent pedestrian and cyclists stated that the implementation of dedicated paths to key attractions or centres would influence their behavior.

Safety was a key issue identified by pedestrian respondents in the Cowra area and at Gooloogong. The main safety concerns were in relation to the speed of cars and trucks on the road and the lack of facilities or signs that would alleviate existing safety issues.

Frequent cyclists stated that the installation of bicycle lanes along main highways and local roads as well as the maintenance of existing cycling routes would help to improve current safety conditions. Similarly, the installation of more signs that warn of cyclists in the area would also improve conditions.

Specific consultation findings from the workshops held at Cowra, Gooloogong, Woodstock and Wyangala are presented in the following maps:
6.3.  Cowra Township

A map summarising the comments and suggestions made at the Cowra workshops is presented in the Figure shown over page.

- **Children cycling** - Not as many children ride to school or around town. More paths and skills development may encourage more cycling.
- **Cowra walking routes** - There are a number of routes regularly used by recreational walkers and joggers, tourists and commuters that have gaps in the network.
- **Cowra Health Service** - The footpaths and kerb ramps in surrounding areas are not all to standard.
- **Parklands** - Shared path routes to Europa Park, Cowra Peace Precinct and Lachlan River Precinct are needed.
- **New sub-division** - There are not many new footpaths linking to the existing path network.
- **Cowra CBD** - Limited designated crossings in the Cowra CBD. People cross Kendal Street at will, which is a road safety issue. Need more / safer crossings of Kendal Street.
- **Low level crossing** - Used as a pedestrian crossing and swimming spot. Recreation walkers and tourists cross the bridge as part of a walking route and to access facilities. Need more / safer crossing(s) of Lachlan River.
- **Cycling on the Lachlan Valley Way** - The section of the highway from Noonbinna Road to Cowra is regularly used by cyclists, who don’t feel safe and report near misses on this route.
- **Obstacles** - Overhanging tree branches are obstacles and there needs to be a better system to report / fix problems in the network.
- **Timber bridge** - The bridge on the Darbys Falls Road and the low level bridge are obstacles to riding because of the wide gaps in the timber deck.
6.4. Gooloogong

A map summarising the comments and suggestions made at the Gooloogong workshop is presented in the Figure to the right.

- **Walking routes** – There is a gap in the footpath between the CBD and the Gooloogong Public School.
- **Cycling** – Children still cycle Gooloogong streets and ride to school. There is a need for more footpath and cycling facilities.
- **Gooloogong tourism** – The Caravan Park and Lachlan River are attracting tourists. Gooloogong would benefit from better links to the Lachlan River and the Country Club.
- **Holman bridge** – The bridge at Gooloogong is an obstacle to riding because of the wide gaps in the timber deck.
- **Intersection** – The intersection of Binda Street, East Street and Kangarooby Road is a concern for pedestrians.
6.5. Woodstock

A map summarising the comments and suggestions made at the Woodstock workshop is presented in the Figure to the right.

- **Footpaths** - A link to Lions Park is required.
- **Obstacles** - Overhanging tree branches and some of the existing footpath surfaces present obstacles and require maintenance.
- **Walking routes** – There is a walking route to the north of Woodstock around the railway line used by some residents. The showground is also used for walking.
6.6. Wyangala

A map summarising the comments and suggestions made at the Wyangala workshop is presented in the Figure to the right.

- **Footpaths in Wyangala** – There are no footpaths in Wyangala. The Public School needs footpaths and better links to the open space facilities at the Wyangala Country Club are required.
6.7. Regional Routes

A map showing the regional riding routes that are regularly used are summarised in the Figure to the right. This map also highlights the main active transport and tourism opportunities raised at the workshops.

Regional Cycling Routes and Opportunities

- **Cowra Shire Cycling Map** - A map of ‘loop’ rides in the Shire may benefit tourism and cycling.
- **Timber bridges** - The bridge at Gooloogong and on the Darbys Falls Road are obstacles to riding because of the wide gaps in the timber deck.
7.0 Planning for Pedestrians & Cyclists
7.1. The Approach and Methodology

Pedestrians and cyclists are far more attuned to the environment in which they are moving. Planning for pedestrians and cyclists does not follow the same logic as motor traffic planning, which normally involves a ‘car’ - ‘trips’ - ‘routes’ - ‘traffic network’. Pedestrians and cyclists move more freely through an ‘environment’, requiring an understanding of a number of elements in order to provide a high quality pedestrian and cycling environment. These include an understanding of the following:

- The types of existing / potential pedestrians and cyclists.
- Where pedestrians and cyclists are going and why.
- The traffic environment (speed and volume) that pedestrians and cyclists must deal with.
- The most appropriate design options that meet their needs, including standard and innovative options.

The approach of the Cowra Shire Pedestrian and Cycling Plan (10 year plan) is to build upon existing infrastructure and address the key issues and aspirations identified by the community consultation and audits. This will contribute to the longer term objective, which is to create a network of interconnecting pedestrian and cyclist facilities supported by quality programs, information and infrastructure.

The following section outlines the key directions Cowra Shire Council will take to achieve this approach.

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Setting achievable targets

Funds are available from Cowra Shire Council as well as other authorities to assist in the provision of pedestrian and bicycle facilities. Unfortunately, these resources are limited and it is not possible to undertake all of the improvements identified. The Cowra Shire Pedestrian and Cycling Plan needs to focus on specific targets that are achievable by the Council. There is no sense in developing a Plan that proposes excessive expenditure beyond the means of the community. It is better to set targets that can be realistically achieved over the intended 10 year implementation period. Should extra funding become available and targets are met earlier, it is a relatively simple task of reviewing this Plan to set more goals and targets.

Focusing efforts in areas of highest importance

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

Focusing on Potential Pedestrian and Cyclists

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

Develop Effective Infrastructure to Improve Conditions

The Cowra Shire Pedestrian and Cycling Plan should aim to develop innovative infrastructure interventions, based on the NSW guidelines and other applicable guidelines and standards.
### 7.2. Principles of Network Provision

Pedestrians and cyclists move around the public domain in different ways to motor vehicles. Key elements underpinning an efficient and useable network can be best summed up in principles reproduced in the Table below:

<table>
<thead>
<tr>
<th>Principle</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coherence</strong></td>
<td>Coherence refers to the extent of coverage and completeness of the facilities. Coherence can be characterised by the completeness of the network or the completeness of connecting routes. A cohesive network should be continuous and it should be clear to the user where the path leads. Clear, well-placed sign-posting and line-marking should indicate major destinations as well as the ‘serious transport intent’ of sections of road routes. The quality of network facilities should be consistent throughout the length of the route regardless of whether the facility uses a separate or shared road profile. End of trip facilities, such as seating, watering stations, toilets, change room facilities, bicycle racks and storage facilities should also be integrated into the cohesive network.</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Perceived and actual safety is very important to pedestrians and cyclists. Pedestrians of all ages and genders need to feel that it is safe to walk, whenever they choose to do so. Route safety and security is important to pedestrians, who desire well-lit pathways and open-to-viewer routes. Road crossings present the greatest danger to pedestrians. Therefore, safe crossing locations need to be provided at regular intervals along major streets or at the location where key desire lines cross major streets. Pedestrians will rarely walk along an indirect route to access safe crossing points, so frequent crossing points must be provided. Cyclists travel faster than pedestrians and therefore are less concerned about personal security. Cyclists are slower and smaller than cars and trucks, making them less likely to be seen. When they do come into conflict, cyclists have little protection in a collision. On-road paths and off-road paths reduce the risk of collision with motor vehicles, but still endanger cyclists at squeeze points and intersections with roads. They can also involve potential conflict with pedestrians where the off-road facility is a shared path. The general principles of predictability and clear priority remain important for off-road paths, including directional segregation and high visibility for all users.</td>
</tr>
<tr>
<td><strong>Directness</strong></td>
<td>Pedestrians and cyclists do not like to travel out of their way to reach a destination. This is a natural response to avoid the extra effort involved in walking or riding extra distances. Paths serving desire lines between activity areas need to be direct and legible in order to provide for and encourage walking and riding trips. Wherever possible, barriers should be overcome, with slight deviations or additional safe crossing points. A careful balance must be found between providing a direct route and also one free of delays, excessive energy expenditure, or safety concerns.</td>
</tr>
<tr>
<td><strong>Amenity</strong></td>
<td>People are more likely to walk or cycle in an attractive environment because it is enjoyable. Areas with high volumes of vehicular traffic, excessive noise and poor pavements may discourage walking and cycling. Urban areas should be maintained at a human scale that provides an attractive and safe environment. Pedestrian and cycling facilities should be designed to fit into the surrounding environment so that the enjoyment of the experience is enhanced. The route should be scenic, quiet, and free of heavy traffic and traffic travelling at high speeds. The best walking and cycling environments are often found along quiet rural roads, in urban parklands or residential areas that have been traffic calmed.</td>
</tr>
<tr>
<td><strong>Suitability for All Users</strong></td>
<td>Quality environments must be available to all who choose to use them. Paths and facilities must have appropriate gradients (including ramps) and be continuous and free of obstructions such as signage, street furniture and overhanging tree branches. The needs of hearing and vision-impaired users must be considered and provided for, especially where user safety is an issue.</td>
</tr>
</tbody>
</table>
7.3. Identifying User Types

There are a number of different path users within the community, each of which has varying expectations, characteristics and skills that need to be provided for. An indication of the variety of users includes:

- **Cyclists** - Commuters, fitness, utility riders, students, children, recreation and tourists.
- **Pedestrians** – Commuters, students, utility, joggers, walkers, dog walkers, people pushing prams, elderly, families, people with a disability (visual, cognitive, hearing and mobility impaired).
- **Other wheel vehicles** – Wheelchairs, electric scooters, skate boarders, roller skates and scooters.

The footpath, bicycle and shared pathway network needs to take into consideration the needs of all potential users of formed paths.

A summary of the main user types is provided to the right.

**Recreation and tourists**

Recreational pedestrians and cyclists place a high value on enjoying the experience. They often travel in a group and are usually less constrained by time and vary widely in skill and experience. Popular recreation destinations include routes along rivers, natural corridors and reserves, as well as attractive road routes with low traffic volume and speed. They prefer good surfaces, minimal gradients (where possible), a high degree of safety and personal security, routes that are pleasant, attractive and interesting and circuitous routes with multiple route options. On-road lanes or shared paths are suitable for recreational users.

**Commuter**

Commuters comprise adults and secondary students who use the footpath/cycling network mainly as a mode of transport for journeys to and from a workplace, school or TAFE. They prefer the fastest safe route between their origin and destination and are generally more skilled and experienced. On-road lanes and footpaths are suitable for commuters. Commuters value end of trip facilities, such as change rooms, showers, lockers and bicycle racks.

**Fitness**

Sports people use the road environment to access sporting events and for fitness and training purposes. They often travel in groups seeking long distances for training purposes which can take them onto busier roads. Fitness cyclists generally do not use off-road routes because of their higher speed and conflict with other users. Fitness pedestrians prefer shared paths but will use any path if necessary. They value quality end of trip facilities, such as cafes and seating areas.

**Utility / shopping**

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

**Secondary / tertiary school students**

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

**Infants / primary school students**

Infant and primary school aged pedestrians and cyclists have undeveloped cognitive skills, lack good peripheral vision, and have little knowledge of road traffic rules. They require adult supervision and/or off-road paths and facilities.
7.4. Identifying Activity Generators

There are certain areas of the Cowra Shire that generate significantly more pedestrian and bicycle activity than other areas.

Identifying activity generators is particularly important to consider in the Cowra Shire Pedestrian and Cycling Plan.

The different activity generators have been divided into four main groups as described to the right.

As the centre generating the majority of pedestrian and cycling trips, a map showing the generators in Cowra is presented in this section on the next page to the right.

Primary Activity Area

The primary activity areas in Cowra Shire are considered to be the Cowra Central Business District and Redfern Street Cowra.

Throughout the day, pedestrians and cyclists are attracted to these areas from surrounding areas. They are therefore important trip destinations and attractors for commuters, shoppers and tourists. To a lesser extent they also attract recreation and sport cyclists seeking short term services such as banking or cafés.

Due to the high levels of activity occurring within these areas, safety, amenity and suitability for all users are important design goals.

End of trip facilities, particularly toilets, water points, seating and bicycle parking facilities should also be provided in primary activity areas.

Secondary Activity Generators

These include shops, schools, popular sporting and recreational facilities, clubs, hospitals and community facilities such as the larger congregation churches that are not centrally located within primary activity areas.

Again, the secondary activity generators in Cowra Shire are considered to be located in Cowra Township.

These land-uses are busy places at certain times of the day or week. Safety and end of trip facilities are important design goals for secondary activity generators.

Primary Routes

These are routes from residential areas to the primary activity areas and secondary activity generators.

They are collector level routes, which do not reach every property but instead form a network of routes that are accessible to a significant catchment of population.

These routes take account of the existing street network and topographical constraints, aiming to provide a direct and convenient route to the major trip generators.

Hazard Areas

Through the analysis of crash data and consultation undertaken, there are a number of areas / routes that have been noted from accident reports or from road users as being potentially dangerous or particularly stressful places for pedestrian and cyclists, including:

- Cowra CBD.
- Cowra Low Level Bridge.
- School zones.
- Lachlan Valley Way, from Noonbinna East Road to Cowra Township.
Cowra Township Activity Generators

LEGEND

- Primary Activity Areas
- Secondary Activity Generators
- Primary Pedestrian Routes
- Primary Cyclist Routes
- Other Attractors

- Schools
- Commercial Precincts
- Cowra Airport
- Passive Recreation Uses
- Active Recreation Uses (Sporting Grounds & Parks)
- Main Highway Routes
- Cowra Hospital
- Erambie Mission
### 7.5. Identifying Effective Path Type

As discussed earlier, there are a number of different types of path users within the community, each of which has varying skills and expectations that need to be provided for.

The Table to the right identifies the key destinations in Cowra Shire and describes the users most likely to access these destinations and specifies the type of path which best suits their skills.

<table>
<thead>
<tr>
<th>Key Attractors &amp; Generators</th>
<th>Primary Locations</th>
<th>Primary Users</th>
<th>Recommended Path Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Open space, sport and recreation facilities</strong></td>
<td>Wyangala Waters State Park, Cowra Peace Precinct, Lachlan River Precinct, Cowra Showground, Col Stinson Park, Cowra PCYC, Cowra Tennis Courts, Cowra Aquatic Centre, Woodstock Swimming Pool, Cowra Skate Park, as well as other sports grounds, golf courses, showgrounds and racecourses.</td>
<td>Recreation and tourists, infant and primary age children with their carers, secondary and tertiary students.</td>
<td>Footpaths, shared paths.</td>
</tr>
<tr>
<td><strong>Community facilities</strong></td>
<td>Cowra Library and Art Gallery, Cowra Civic Centre, Cowra Neighbourhood Centre, Woodstock Hall, Gooloogong Log Cabin as well as places of worship and emergency services.</td>
<td>Utility and shopping, recreation and tourists, infant and primary age children with their carers, secondary and tertiary students.</td>
<td>Footpaths, shared paths, tactile surfaces on road crossings and level changes</td>
</tr>
<tr>
<td><strong>Shopping precincts</strong></td>
<td>Cowra CBD, Redfern Street and West Cowra shops as well as corner shops.</td>
<td>Utility and shopping, tourists, infant and primary age children with their carers, secondary and tertiary students.</td>
<td>Footpaths, tactile surfaces on road crossings, intersections and level changes</td>
</tr>
<tr>
<td><strong>Educational Institutions</strong></td>
<td>Cowra High School, St Raphael’s Catholic School, Cowra TAFE, Cowra Public School, Mulyan Public School, Holmwood Public School, Cowra MET School, Holman Place, Woodstock Public School, Wyangala Public School, Gooloogong Public School.</td>
<td>Infant and primary age children with their carers, secondary and tertiary students.</td>
<td>Footpaths, shared paths, tactile surfaces</td>
</tr>
<tr>
<td><strong>Employment zones</strong></td>
<td>Sarajane Furniture, Cowra Shire Council Depot, Cowra Abattoir, West Cowra Industrial Area, North-west Cowra Industrial Area and other industrial commercial businesses</td>
<td>Commuter, utility and shopping.</td>
<td>Footpaths, on-road bicycle lanes, shared paths</td>
</tr>
<tr>
<td><strong>Medical facilities</strong></td>
<td>Cowra Health Service, Cowra Medical Centre and other GP’s, medical specialists/consulting rooms.</td>
<td>Utility and shopping.</td>
<td>Footpaths, shared paths, tactile surfaces</td>
</tr>
</tbody>
</table>
7.6. Identifying Effective Safety Interventions

Improvement to pedestrian and cyclist safety requires a balanced approach that includes both engineering measures and behaviour-change measures. A summary of the key safety measures is presented in the Table below, with each broad category of measures being associated with a number of specific interventions. The table has been developed from a number of sources, including the WHO Pedestrian Safety Manual 2013, Cycling Aspects of Austroads Guidelines 2014 and the Handbook of Road Safety Measures 2009.

<table>
<thead>
<tr>
<th>Key Measures</th>
<th>Intervention</th>
<th>Merits of Intervention</th>
<th>Relevance in Cowra Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Pedestrian and Cyclist Exposure to Vehicular Traffic</td>
<td>Provide footpaths</td>
<td>Dedicated footpaths separate pedestrians from motorised vehicles as well as bicycles. They provide space for different types of pedestrians to walk, run, play, meet and talk. Walking increases where tracks for walking are constructed.</td>
<td>Cowra township has a comprehensive network of footpaths, with relatively few gaps in the network. The Cowra CBD Master Plan provides opportunities to address pedestrian issues, including the provision of additional crossings on Kendal Street, wheelchair access and the wider use of tactile surfaces. The Lachlan River Precinct Master Plan and the Cowra Peace Precinct Master Plan will also drive a number of pedestrian and shared path projects that will have tourism, recreation and health benefits. The other towns and villages have less complete footpath networks, with additional footpaths required in Gooloogong, Woodstock and Wyangala. The villages footpath network should be extended to include all high activity areas and routes, such as Woodstock CBD, Wyangala Public School and Gooloogong Public School.</td>
</tr>
</tbody>
</table>
|                                            | Provide on-road bicycle lanes     | Bicycle lanes aim to improve cyclist safety by providing separation from other motor vehicles whilst maintaining directness of travel and priority at intersections. The provision of a painted line between the motor vehicle lane and bicycle lane together with bicycle pavement symbols at frequent intervals has a number of advantages, including:  
  - Clearly defining the road space provided for use by each mode.  
  - Motor vehicles not blocking the progress of cyclists where traffic queues exist.  
  - Providing lateral separation and improved safety when motor vehicles in the adjacent lane are moving.  
  - Greater awareness in the minds of motorists that a cyclist may be present.  
On-road bicycle lanes also improve accessibility and connectivity of the bicycle network and promote the use of alternative modes of transport. | Many urban roads in Cowra Shire are relatively wide, providing adequate width for bicycle lanes, in addition to the motor vehicle carriageway and footpaths. In local streets it is usually not necessary to make special provision for cyclists as the lower speed of motor traffic should enable cyclists to safely share the road with other users. However, along the main roads and collector roads in Cowra township, the volume and speed of traffic makes it necessary to ensure that adequate space exists for cyclists to share the road safely and comfortably. The consultation undertaken suggests that road safety and fear of traffic is the biggest issue for existing cyclists and a major deterrent to potential cyclists. A cohesive network of on-road bicycle lanes on collector roads in Cowra township, particularly those roads that form part of the regional road network, would assist in separating cyclists from other road users. The delineation of on-road bicycle lanes by line-marking and signage is a relatively inexpensive intervention that would help to address road safety issues, and may encourage more people to ride bicycles in Cowra Shire. On-road bicycle lanes should be provided on both sides of the road where possible so that use is in the same direction as motor vehicle traffic. |
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<th>Key Measures</th>
<th>Intervention</th>
<th>Merits of Intervention</th>
<th>Relevance in Cowra Context</th>
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<tr>
<td>Reduce Pedestrian and Cyclist Exposure to Vehicular Traffic</td>
<td>Provide shared paths</td>
<td>Share paths are appropriate where demand exists for both a pedestrian path and a bicycle path, but where the intensity of use is not expected to be sufficiently great to provide separate facilities.</td>
<td>Many urban footpaths in Cowra township have sufficient width and have relatively low pedestrian use to allow their modification to also provide for cyclists. Conversion of footpaths to shared paths has merit nearer to the Cowra CBD, particularly as a link between on-road bicycle lanes and bicycle parking facilities. An example of an existing footpath conversion is the footpath along the northern side Redfern Street, from the curve in the road adjoining the Australian Hotel to Lachlan Street, opposite St Raphael’s Catholic Church. New shared paths should be used for important links where footpaths don’t exist and there is adequate width on the footpath and no major amenity impacts on adjoining residential premises. An example is the opportunity to provide a shared path along the northern side of Fridham Street, linking Cowra High School to residential housing to the west and south-west. The link between Woodstock CBD and Lions Park is another new shared path project worthy of consideration. Shared paths are ideal for use along recreation and tourism destinations and routes, such as the Cowra Peace Precinct and the Lachlan River Precinct.</td>
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<td>Provide sealed shoulders</td>
<td>Where a road is un-kerbed and provision for cyclists is required a smooth sealed shoulder is the preferred treatment. There are many instances in semi-urban and rural roads where the sealing of shoulders is justified specifically to make roads safer for cycling.</td>
<td>The Chiverton Road cycling loop includes sections of the Grenfell Road and the Lachlan Valley Way that would benefit from widened shoulders. The consultation undertaken showed strong support from road cyclists for road safety improvements on these roads.</td>
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<td>Provide Bus/Bicycle Lane</td>
<td>Examples exist in larger cities where bicycles have successfully shared in the use of bus lanes.</td>
<td>The number of and frequency of buses in Cowra Shire does not justify separate bus lanes that could be used by commuting cyclists.</td>
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<td>Provide pedestrian refuge islands</td>
<td>Pedestrian islands allow a safe point for pedestrians to negotiate wide or busy roads. Refuges are of benefit to pedestrians as they allow for a staged crossing of a road. They also provide a visual cue for motorists that pedestrians can be expected in the vicinity of a refuge. Provision for the standing of pedestrians, prams, wheelchairs, mobility scooters and bicycles at the crossing mid-point is important. Pedestrian islands should only be used in limited applications, such as high activity areas and routes, subject to site specific assessment. Where a safe point for pedestrians to cross wide/busy roads is required it is preferred to use road narrowing initiatives.</td>
<td>The pedestrian refuge island in Liverpool Street, in front of Cowra Health Services is a good example of a well-designed island crossing. The reduced visibility and high speed of motorists exiting the nearby roundabout, made it necessary to provide a pedestrian refuge island crossing.</td>
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| Reduce Pedestrian and Cyclist Exposure to Vehicular Traffic | Install marked crossings (zebra crossing) | The purpose of a marked crossing is to indicate the optimal or preferred location for pedestrians to cross and indicate pedestrian right-of-way at these points. There are several important issues to consider when installing crossings:  
  - Crossing markings are unlikely to increase pedestrian safety, without related enhancements such as raised crossing islands and traffic signals.  
  - Marked crossings are not appropriate where traffic speed is high.  
  - Marked crossings on roads with more than two lanes may increase the risk of pedestrian / vehicle crashes.  
  - Crossing locations should be convenient for pedestrians and accessible for pedestrians in wheelchairs.  
  
  Zebra crossings should only be used in very limited applications, such as high activity areas and routes, subject to site specific assessment. Where a safe point for pedestrians to cross wide / busy roads is required it is preferred to use road narrowing initiatives. Where the crossing is located in a school zone, it may be more appropriate to provide a schools safety supervisor.  | The zebra crossing in Kendal Street Cowra is intended to be replaced with a signalised crossing.  
  Consideration should also be given to replacement of the zebra crossings on Vaux Street and Brisbane Street Cowra, next to Cowra Public School, with alternative initiatives. |
| | Construct raised pedestrian crossings | Raised pedestrian crossings force vehicles to slow to speeds low enough that a pedestrian would survive a collision. Reductions in pedestrian crashes of around 40% could be expected from the installation of a raised crossing. | For inclusion in the Cowra CBD Master Plan, as a means to cross Kendal Street. |
| | Install signalised Crossings | Signalised crossings separate pedestrians from vehicular traffic for a brief time period while they cross the street. It is important to ensure that the time allowed for crossings is adequate to cater for all users. | For inclusion in Cowra CBD Master Plan. |
| | Provide road narrowing (kerb extensions, widening footpaths) | Road narrowing has a double benefit of reducing vehicular traffic speeds and allowing a safe point for pedestrians to negotiate wide or busy roads. Treatments that include widening footpaths have the additional benefit of providing higher quality facilities for pedestrians. Provision for the standing of bicycles at crossings is important. Where road narrowing is proposed to cross roads that form part of an on-road bicycle lane, consideration should be given to potential squeeze points which can be addressed by providing cycle bypass through the road narrowing device. | The consultation undertaken showed strong support from road narrowing initiatives as a means to cross busy roads.  
  For inclusion in the Cowra CBD Master Plan 2010 and around high activity areas and busy road routes. |
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<tr>
<td>Reduce Pedestrian and Cyclist Exposure to Vehicular Traffic</td>
<td>Provide vehicle restriction / diversion measures</td>
<td>Road diversions are in order where high volumes of traffic, including heavy vehicle traffic, comes into conflict with primary activity areas.</td>
<td>The need for alternative routes for heavy vehicle traffic has been highlighted in the Cowra Shire Land-use Strategy 2009, Cowra CBD Master Plan 2010 and the Cowra Heavy Vehicle Bypass Report 2013. While there is widespread community and government stakeholder support for a Cowra bypass and the upgrading of the Cowra CBD, the projects are expensive and may take some years to progress. Whilst heavy vehicles and through traffic continue to travel along Kendal Street Cowra, it is necessary to carefully manage traffic issues in the Cowra CBD. For example, Kendal Street is considered too busy and congested to encourage more cycling along this road at peak times. The goal for the Cowra CBD should be to provide strategic destination points in the CBD for cyclists to enter and park their bicycle and then navigate the footpath network as a pedestrian.</td>
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<td>Install overpasses / underpasses</td>
<td>Pedestrian overpasses and underpasses are bridges and tunnels that allow for uninterrupted flow that is separate from vehicular traffic. This measure is used primarily in areas with high pedestrian volumes. Installation is expensive and they can be obtrusive and not suitable for all users.</td>
<td>Local conditions do not justify construction of new overpasses / underpasses in Cowra Shire. The low level bridge environment underneath the Cowra Bridge provides ideal conditions for a network of shared path underpasses that cross the Lachlan River and link to important tourism, recreation and commuter destinations. Provision of a shared path facility at or near the existing low level bridge was a key recommendation of the Lachlan River Precinct Master Plan.</td>
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<td>Reduce traffic volumes</td>
<td>A reduction in traffic volumes generally involves their replacement with other transport modes such as public transport, walking or cycling.</td>
<td>The low level of available public transport and current pedestrian/cycling behavior does not allow for significant reductions in vehicular traffic in the short to medium term.</td>
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<td>Reduce Vehicle Speed</td>
<td>Reduce speed limit</td>
<td>One of the most effective ways to improve pedestrian and cyclist safety is to reduce the speed of motor vehicles. Speed management is much more than setting and enforcing appropriate speed limits. It employs a range of measures in engineering, enforcement and education with the aim of balancing safety and efficient vehicle speeds on the road network.</td>
<td>The Cowra CBD Master Plan provides opportunities to address vehicle speed, by introducing traffic calming and pedestrian management interventions in this area. The current speed limits along some road environments in Cowra township should be reviewed, including: 40km/h along Kendal Street in the Cowra CBD Redevelopment. 10km/h in the Railway Lane Redevelopment. 40km/h along Sakura Avenue, servicing the Cowra Peace Precinct. Traffic speed along Main Street Gooloogong was raised in consultation. The construction of the new Bridge at Gooloogong has potential to increase regional traffic volumes, particularly truck freight movements. A review of traffic speed along Main Roads in Gooloogong may be necessary during the first 12 months of operation of the new Lachlan River Bridge. The new ‘through-road’ at Wyangala (Trout Farm Road) may also require a review of traffic speed during the first 12 months of operation.</td>
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<tr>
<td>Implement road-narrowing measures</td>
<td>Road narrowing initiatives such as kerb extensions and half road closures assist in reducing vehicular traffic speeds. They also provide a visual cue for motorists that pedestrians can be expected in the vicinity of a road narrowing initiative.</td>
<td>For inclusion in the Railway Lane Redevelopment. Introduce narrower road standards in Council subdivision standards.</td>
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<td>Install speed management measures at road sections</td>
<td>Traffic calming measures such as speed humps, pedestrian humps, road narrowing, blisters and tree plantings assist in reducing vehicle traffic speeds. They also provide a visual cue for motorists that they are travelling through more urbanised environments where pedestrians and cyclists can be expected.</td>
<td>For inclusion in the Cowra CBD Master Plan and the Railway Lane Redevelopment. Introduce traffic calming standards in Council subdivision standards. Speed management measures in Gooloogong and Wyangala may also be necessary, depending on the findings of traffic analysis after completion of the Trout Farm Road bypass at Wyangala and the Lachlan River Bridge at Gooloogong.</td>
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<td>Install speed management measures at intersections</td>
<td>Traffic calming at intersections can reduce the speed of motor vehicles travelling through and exiting from intersections. This measure is used primarily in areas with high pedestrian volumes. Installation of additional traffic management initiatives can be expensive and they can be obtrusive.</td>
<td>The Cowra CBD Master Plan provides opportunities to review intersection design and determine if there are any intersections along Kendal Street requiring additional management initiatives. The roundabouts in Vaux Street and Liverpool Street should be reviewed to either reduce vehicle speed or improve the cycling and pedestrian conditions at these intersections.</td>
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<td>Provide school route improvements</td>
<td>Reduced speed limits in school zones and dedicated school crossings provide effective measures to control vehicle speed and increase pedestrian and cyclist safety if properly enforced. Additional initiatives may be required at school crossings. Zebra crossings should only be used in very limited applications, subject to site specific assessment. Where a safe point for student pedestrians to cross is required it is preferred to use road narrowing initiatives, raised pedestrian crossings or provide a school safety supervisor. Where road narrowing is proposed to cross roads that form part of a bicycle route, consideration should be given to potential squeeze points which can be addressed by providing cycle bypass through the road narrowing device. Roundabouts near school zones should be avoided where possible.</td>
<td>The roundabout at the intersection of Vaux and Brisbane Street and Vaux and Macquarie Street should be reviewed to improve the cycling and pedestrian conditions for Cowra Public School students at these intersections. The zebra crossings on Vaux and Brisbane Streets, servicing Cowra Public School, should also be reviewed in collaboration with the school community to determine the optimum school exit and road crossing points. A shared path network is required to the west and south-west of Cowra High School to improve student safety. Additional footpaths are required to service Gooloogong and Wyangala Public Schools.</td>
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<tr>
<td>Improve Pedestrian and Cyclist Visibility</td>
<td>Provide crossing enhancements</td>
<td>Road crossing enhancements such as raised pedestrian crossings, pedestrian humps, blisters and kerb extensions reduce vehicular traffic speeds and provide a visual cue for motorists that pedestrians can be expected in the vicinity of a road narrowing initiative. Pedestrian and cyclists at these points are therefore more visible to motorists.</td>
<td>For inclusion in the Cowra CBD Master Plan and the Railway Lane Redevelopment. Introduce traffic calming standards in Council subdivision standards. Crossing enhancements in Goolooogong and Wyangala may also be necessary, depending on the findings of traffic analysis after completion of the Dam Bypass along Trout Farm Road and the Lachlan River Bridge at Goolooogong.</td>
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<td>Implement lighting / crossing illumination measures</td>
<td>Lighting at crossings is used primarily in areas with high pedestrian and cyclist volumes at night. Installation is expensive and they can be obtrusive and should be limited to high activity areas that are used at night.</td>
<td>For inclusion in the Cowra CBD Master Plan, the Railway Lane Redevelopment and potentially at the Cowra Low Level Bridge underpass area. Consultation and observations confirm that most cyclists travelling in the dark are using effective lighting and high visibility gear to illuminate their way and make them more visible to other road users.</td>
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<td>Reduce or eliminate obstruction by physical objects including parked vehicles</td>
<td>Action to remove physical obstructions on pedestrian and cycling routes can help to reduce accidental falls as well as collisions with other users of the road environment. Parked vehicles can be a hazard for cyclists travelling along on-road cycling lanes, particularly people opening car doors.</td>
<td>The consultation undertaken suggests footpath obstructions such as low overhanging tree branches and uneven footpath surfaces is an issue in Cowra and to a lesser extent in Woodstock. The existing footpath network in Cowra Shire should be reviewed to ensure that obstructions are minimised. Council subdivision standards and footpath maintenance repair and problem reporting systems should be reviewed to eliminate obstructions and hazards as quickly as possible. Consultation and research also reveals that road safety and fear of traffic is the biggest issue for existing cyclists and a major deterrent to potential cyclists. Cyclists become nervous when passing too closely to parked cars, particularly in areas of high parking and pedestrian activity – as every cyclist is concerned they will collide with an opening car door. Adequate separation between parking lanes and on-road bicycle lanes is necessary to eliminate obstructions and hazards around parked cars. Where existing footpaths are converted to shared paths, consideration should be given to both ground and overhead obstructions such as streetlight and power poles, footpath signage, street furniture, tree branches and footpath surfaces to ensure the routes are suitable for higher speed cyclists traffic. Obstructions on shared paths should be reviewed or clearly delineated by ‘hazard ahead’ type signage.</td>
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<td>Install signals to alert motorists of crossings</td>
<td>Signals to alert motorists of crossings are used primarily in school zone situations or areas with high pedestrian and motor vehicle traffic. Installation is expensive and they can be obtrusive.</td>
<td>Signalised signage is provided at the Holmwood Public School, located on the Sydney Road. Signals are currently not considered necessary at any other school zone, however conditions along the Canowindra Road near the Cowra High School should be monitored to determine if signals are required to address future issues. Other timely intervention measures such as a shared path network west and south-west of the High School may alleviate any need for signals. Conditions at the Cowra CBD are reaching a critical stage where signals may be necessary, if nothing else is done to improve pedestrian safety. The Cowra CBD should be monitored to determine if signals are required to</td>
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<tr>
<td>Improve Pedestrian and Cyclist Visibility</td>
<td>Install signage to alert motorists of pedestrian and cyclist routes</td>
<td>Signage can be used to alert motorists of high activity pedestrians and cyclist routes. It provides a visual cue for motorists that pedestrians and/or cyclists can be expected along the route.</td>
<td>School zone signs are currently provided at all school zones. It is not considered necessary to provide additional signage at schools at this stage.</td>
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<td>Conditions at the Cowra CBD are reaching a critical stage where extra signs alerting motorists of pedestrians may be necessary, if nothing else is done to improve pedestrian safety. The Cowra CBD should be monitored to determine if signs are required to address on-going pedestrian safety concerns in the future. However, it is considered that timely intervention measures at the Cowra CBD (refer Cowra CBD Master Plan 2010 and the Cowra Heavy Vehicle Bypass Report 2013) may alleviate need for signs.</td>
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<td>The ‘cyclists’ signage erected along the Chiverton Road Route in 2013 have proven very successful in alerting motorists that cyclists can be expected. Consultation suggests that over-use of cyclists signage on rural routes may reduce its effectiveness, and should be limited to routes that are more regularly used.</td>
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<td>All on-road bicycle lanes and shared paths should be provided with signage in accordance with relevant Australian Standards.</td>
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<td>Encourage cyclists to wear high visibility clothing and lights</td>
<td>One of the most effective ways to improve cyclist safety is to make them more visible to motor vehicles. If riding at night, a bicycle must also have:</td>
<td>Consultation and observations confirm that most road cyclists travelling in the dark in Cowra are using effective lighting and high visibility gear to illuminate their way and make them more visible to other road users.</td>
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<td>* A steady or flashing white light that is clearly visible for at least 200 metres.</td>
<td>The use of lights, reflectors and high visibility gear by commuting and student cyclists is patchy.</td>
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<td>* A flashing or steady red light that is clearly visible for at least 200 metres from the rear of the bike.</td>
<td>Programs should be developed at encouraging greater use of lights and high visibility gear.</td>
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<td>* A red rear reflector that is clearly visible for 50 metres when light is projected onto it by a vehicle’s headlight on low beam.</td>
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<td><strong>Encourage pedestrians to wear high visibility clothing when getting about</strong></td>
<td>Increased visibility of pedestrians at night can significantly improve road safety outcomes. The use of higher visibility clothing is recommended for all pedestrians travelling at night. The use of higher visibility gear, reflective clothing and flashing lights is recommended for people walking or running at night for fitness. Pedestrians using wheelchairs and mobility scooters, kick scooters and skate boards are advised to use similar lighting and reflectors as for cyclists.</td>
<td>The use of lights, reflectors and high visibility by pedestrians is patchy. Programs should be developed at encouraging greater use of lights and high visibility gear.</td>
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<td><strong>Provide educational information in local media and schools</strong></td>
<td>A number of programs are available to support road safety education and awareness in schools and local media, including funding for road safety officers and for Bike Week. A great deal of road safety information is available to assist with road safety education and awareness, including the RMS website.</td>
<td>Investigate employment of a road safety officer for Cowra Shire or for a number of local government areas in the region. Programs should be developed to increase greater participation at Bike Week.</td>
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<td><strong>Provide a training facility for pedestrians and cyclists</strong></td>
<td>There are a number of purpose built pedestrian and cyclist training facilities operating in Australia that provide important skills for new users and are a great family activity. For example, Campbelltown’s Bicycle Education and Road Safety Centre provides education for cycling and pedestrian safety in a fun and safe environment. With real working traffic lights, round-a-bouts, stop signs and pedestrian crossings, it really is a purpose-built circuit that simulates real road conditions. There is a junior track for toddlers, under cover climbing equipment, a picnic area and lots of trees to put the picnic blanket down and make a great day of it.</td>
<td>A training facility could be achieved in a park in Cowra with extra community support.</td>
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| **Enforce traffic laws** | Rules have been established for the safety of all road users. Unfortunately not everyone follows the rules, or some people choose to follow only some of the rules. Common problems include:  
  - Motorists speeding, drink driving, not wearing seatbelts and using mobile phones. | Adhering to the Australian Road Rules is important for road safety reasons. Consultation and extended research reveals that not all road users are aware of the rules, especially relating to pedestrians and cyclists. Education and awareness of the rules can assist in developing better understanding and tolerance between different road users. |
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<td>● Motorists not obeying school zone, parking, school bus zones and drop-off rules.</td>
<td>A strong policing presence is required to enforce the Australian Road Rules.</td>
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<td>● Cyclists riding without helmets, lighting and a bell.</td>
<td>Educational information in local media, at work sites and in schools could assist more people in understanding the rules as well as the different characteristics and behaviors of different road users.</td>
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<td>● Cyclists riding through red traffic lights.</td>
<td>A training facility at Cowra would assist in providing a wide cross section of the community with the opportunity to learn more about the road rules and the different road users.</td>
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<td>● Older cyclists riding on footpaths.</td>
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<td>● Erratic and dangerous behavior of younger cyclists, skateboarders and kick scooter users seeking fun/challenges over road safety considerations.</td>
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<td>● Random ad hoc pedestrian movements and jay walking.</td>
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<td>● Misuse of disabled parking spaces.</td>
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7.7. Network Planning

The Cowra Shire Pedestrian and Cycling Plan aims to create a pedestrian and cycling network throughout Cowra Shire.

In Cowra, the aim is to connect primary activity areas, secondary attractors and residential areas via an integrated network of footpaths, on-road cycling lanes and shared paths. The Figure below illustrates the function of paths and identifies the principles on which the Cowra network will be planned and developed. Key elements of the enhanced network are:

- The network proposed for Cowra builds upon the existing infrastructure and where practical, utilises the highly developed existing road and footpath network.
- Links to primary activity areas consist of high quality, high-priority routes which will generally provide the most direct means of travelling between the key attractors and generators.
- Feeder links will provide connections to primary routes and in many instances may also provide an indirect means of travelling to the key attractors and generators.

Network Planning Model

In the villages and along rural routes the aim is to enhance the existing network and connections to Cowra and local attractors. Village linkages will provide the key connections between communities via sealed roads. They are essential in developing an inter-connected shire wide network.

7.8. Planning the Appropriate Path

The selection of the appropriate path type treatment depends on a combination of factors, which may include the level of demand for the path, the conditions present in the surrounding environment (traffic speed and volume), the availability of space in which to provide the path, and whether path usage is for exclusive pedestrian or cycle use or shared use.

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

- **Footpaths** - Suitable for a wide range of pedestrian situations.
- **Shared Paths** - Shared use paths are a type of off-road facility that allows common use of the facility by both cyclists and pedestrians. According to the AUSTROADS Guide, a shared use path may be appropriate where:
  - Demand exists for both a pedestrian path and a bicycle path but where the intensity of use is not expected to be sufficiently great to provide separate facilities.
  - An existing low-use footpath can be modified to provide also for cyclists by satisfying legal requirements and as necessary upgrading the surface, width and kerb ramps.
  - There is an existing road nearby which caters well for faster cyclists (e.g. has on-road bicycle lanes), to limit the extent of user conflict on the shared path.
- **Exclusive Off-Road Cycle Paths** – According to the AUSTROADS Guide, exclusive bicycle paths are most appropriate under the following conditions:
  - There is a significant cycling demand and very few pedestrians desire to use the path or a separate footpath is provided.
  - There is very limited motor vehicle access across the path.
  - It is possible to achieve an alignment that generally allows cyclists uninterrupted and safe travel at a relatively high constant speed (say 30 km/h).
- **On-Road Cycle Paths** – Paths can either be on-road, which are essentially “bicycle lanes” alongside motor vehicle traffic on a roadway within the road corridor, or off-road paths, which are separated from the road corridor. They include physically separated bicycle lanes, visually separated footpaths and bicycle lanes and wide sealed road shoulder paths.

7.9. Planning End of Trip Facilities

Cyclist and pedestrians facilities can be important mid-way and end of trip resources for pedestrians and cyclists. They include a range of supporting infrastructure such as bicycle parking, seating / rest stops, water, amenities, shade and signage.
7.10. Planning for Disabled and Older Pedestrians

Older people are over represented in pedestrian crashes. People aged 70 years and older represent around 10% of residents in NSW, however they account for around one third of pedestrian fatalities (Central West Regional Transport Plan 2013).

The following measures have been adapted from the WHO Pedestrian Safety Manual 2013 and can be implemented to improve the safety, comfort and amenity of elderly pedestrians:

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

7.11. Planning for Children

Children are highly vulnerable road users. Children can use the same facilities as adults, however they are at risk from traffic for many reasons, such as:

- They may lack the ability to distinguish between safe and unsafe crossing gaps and sites, putting them at risk as they cross the road.
- They may lack understanding of the dangers presented under different conditions, such as wet weather.
- They are smaller and may not be as visible to motor vehicle traffic.
- They themselves may be distracted or are at risk from distracted drivers using their mobile phones.
8.0 Design Standards & Principles
**Design Standards and Principles**

This section details the main design features that should be considered when developing pedestrian and cyclists facilities throughout the Cowra Shire.

As this is a strategic document, detailed design issues have not been considered comprehensively. These issues would need to be addressed at the design stage of each proposed project. The major guidance documents for the design of pedestrian and bicycle facilities include:

- Australian Standard 1428 suite of Australian Standards.

Where feasible, facilities should comply with current standards and also taking into account local conditions.

The overall topography of Cowra Shire has a mix of flat, undulating and steep landscape. Elements of the urban areas have steep streets making provision of footpaths and bicycle routes important for general mobility, particularly in wet weather. This however may make it difficult to install facilities according to Australian Standards, particularly kerb ramps. The overall goal is to install facilities that are safe, practical and that fit a solution to the topography and nature of the facility.
8.1. Footpaths

Footpaths are required to be designed and built to meet minimum dimension requirements. Design elements of footpaths include width, gradient, pavement materials that are slip resistant, type of kerb and adequate setback distance of the footpath from the roadway. The Austroads Guide to Traffic Engineering Practice Part 13 – Pedestrians states that:

“The general minimum footpath width of 1.2m is adequate for most road and street situations except in commercial and shopping environments. A footpath wider than the minimum may also be necessary at locations where pedestrians gather such as at the entrance to schools and associated crossings, at recreation facilities and at important bus stops etc. In these cases a width of up to 5m may be appropriate.”

The Table to the right identifies the recommended path widths and clearances for footpaths.

Pavement materials commonly used include:

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

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

- **Loose surface material** - These materials such as exposed aggregate, gravel, soil, sand, grass and tanbark should be avoided along heavily used routes. They can be very difficult to walk on and make it difficult for people in wheelchairs.

Ideally footpaths should be free of obstructions and therefore should not include steps, stairways or obstacles that affect the safety of pedestrians, in particular people with a disability.

Grades of footpaths are important as they affect the usability and safety of pedestrian facilities. Long sections of high grade footpath can be extremely difficult for mobility impaired users to negotiate.

Technical advice on footpath design is provided in:

- AS 1428.1 – Design for Access and Mobility.

<table>
<thead>
<tr>
<th>Table: Recommended Footpath Widths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local access path</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td><strong>Desirable path width</strong></td>
</tr>
<tr>
<td><strong>Lateral clearance</strong></td>
</tr>
<tr>
<td><strong>Typical features of use</strong></td>
</tr>
</tbody>
</table>

(Adapted from Austroads Guide to Road Design Part 6A: Pedestrians and Cyclists Paths 2009)
8.2. Kerb Ramps

With all pedestrian facilities, access must be provided to the road providing a continuous accessible path of travel allowing access to wheelchairs, prams and trolleys, and pedestrians with impaired mobility.

High grade drop kerbs can cause safety issues for mobility impaired users. Users can become vulnerable to general traffic as they attempt to enter / leave the carriageway and proceed up / down steep ramps. When crossing a road, people who have impaired vision often use the kerb ramp to align themselves and then walk in a straight line to the other side. If the ramp does not align squarely with the kerb, it can lead people on an angle into the roadway, rather than directly across the street.

It is important that Kerb ramps:

- Maintain standard grades.
- Incorporate tactile surfaces for all primary activity areas.
- Align squarely with the direction of road traffic.
- Directly align with the kerb ramp on the other side of the road.
- Align with pedestrian refuge islands.

Constructed properly, kerb ramps provide a smooth change in the level between the footpath and the roadway. The difference in the level between the footpath and the roadway is a common situation that poses difficulties for disabled and older pedestrians, particularly with mobility and vision impairments. The Austroads Guide to Traffic Engineering Practice Part 13 – Pedestrians states that:

"A minimum footway width of 1.200m should be provided beyond the top of the ramp, to ensure that users of the footway along the street are not inconvenienced by the ramp."

The general dimensions of a kerb ramp are illustrated in the diagram to the right.

A blended kerb is one in which there is no significant drop from the footpath to street level; the path simply flows onto the road. While blended kerbs provide easy transition for sighted people with mobility difficulties, they can be an issue for people who are blind or have impaired vision, as these people rely on traditional kerbs and kerb ramps to indicate where the footpath ends and the road begins. With a blended kerb, they can find themselves in the middle of the road without knowing that they have left the footpath. One way to improve safety in this scenario is to install tactile ground surface indicators (TGSI) between where the footpath ends and the road begins. This will alert people who have impaired vision that they are about to step onto a road.
8.2.1. Signalised Pedestrian Crossings

Audio-tactile push-button signals (ATS) are located at signalised crossings and are used to indicate when traffic lights have changed to a walk phase. These signals are particularly useful for people who are blind or have impaired vision.

The tactile signal is detected through the plate immediately above the push button. When the pedestrian walk signal is red or in the “Don’t Walk” phase, it emits slow beeps and the tactile plate pulses slowly. When the pedestrian walk signal is green or in the “Walk” phase, the control emits faster beeps and the tactile plate pulses rapidly.

The tactile information is useful when ambient noise levels are high, or when the person using the signal does not have good hearing.

When installing the push button control on a pole, the pole should be placed within easy reach of the kerb ramp or crossing point wherever possible. The directional arrow on the push plate provides information to the person who is unable to see the direction of the crossing and therefore should be positioned within easy reach. If the push button is located away from the crossing, the audio signal may not be able to be heard.

8.3. Pedestrian Crossings

A pedestrian crossing is a designated point on a road at which some means are employed to assist pedestrians wishing to cross. They are designed to keep pedestrians together where they can be seen by motorists, and where they can cross under the most optimal traffic conditions.

8.4. Pedestrian Refuges

A pedestrian refuge island is a small concrete or paved island in the middle of a road that allows people to cross in stages. They allow a safe point for pedestrians to ‘store’ mid-way across a wide or busy road. The general dimensions of a pedestrian refuge are illustrated in the Figure to the right.

Austroads Guide to Traffic Engineering Practice Part 13 – Pedestrians states that: “Street lighting in accordance with AS 1158.1 should also be provided.” The guide also recommends a refuge width of at least 2m to allow storage for a person with a pram, bicycle or wheelchair.

If the pedestrian island is the same level and surface as the road, people who have impaired vision may be unable to identify where the refuge ends and the road starts. Tactile ground surface indicators (TGSI) provide information that enables people who have impaired vision to locate a refuge island either tactually or using their residual vision.
8.5. Stairs

Unexpected “drop-offs” are among the biggest fears of older people and people who have impaired vision. The drop can be a step, stair or platform edge at a railway station. Effective design and construction will assist people to negotiate stairs and other drop-offs safely and independently. When designing and maintaining stairs, important considerations include:

- Regularity of stair construction.
- All steps and stairs should have their nosing (the front edge of the tread) marked with an appropriate contrasting strip, as per Australian Standard 1428.1.
- Correct placement of TGGI, to indicate the beginning of stairs.
- Sufficient lighting or illumination.
- Appropriately positioned handrails, as per Australian Standard 1428.2. It should also extend horizontally beyond the end of the stairs and curve under on the ends to avoid collision.
- Stairs should not be positioned immediately inside or outside doorways, as people who have vision impairment may not have enough time to detect them when walking through the doorway.
- Stairs should not be open. Australian Standard 1428.1 says that stairs require an opaque riser.
- The underneath of stair cases should be enclosed to prevent a head-height hazard for people who have impaired vision.

For more detailed information on stair and step construction, refer to Australian Standard 1428.1.
8.6. On-road Bicycle Lanes

In some cases a bike lane located on the road may be the most feasible option to provide a cycling facility. Where this is the case, an assessment needs to be undertaken and all practicable measures taken to ensure safety of users. The Tables on this page provide guidance on the criteria to assess the suitability of on-road bicycle lanes.

**Table: Recommended On-road Bicycle Lane Widths**

<table>
<thead>
<tr>
<th>Road Speed</th>
<th>60km / h</th>
<th>80km / h</th>
<th>100km / h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Width (Desirable)</td>
<td>1.5m</td>
<td>2.0m</td>
<td>2.5m</td>
</tr>
<tr>
<td>Lane Width (Accepted Range)</td>
<td>1.2m – 2.5m</td>
<td>1.8m – 2.7m</td>
<td>2.0 – 3.0m</td>
</tr>
</tbody>
</table>

(Adapted from Austroads Guide to Road Design Part 6A: Pedestrians and Cyclists Paths, 2009)

**Table: Methods for including bicycle operating space on roads**

<table>
<thead>
<tr>
<th>No.</th>
<th>Method</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removal or remarking traffic and/or parking lanes</td>
<td>Resizing road lanes to provide visually separated bicycle lanes.</td>
</tr>
<tr>
<td>2</td>
<td>Upgrading service roads</td>
<td>Marking service roads to include visually separated bicycle lanes/operating space.</td>
</tr>
<tr>
<td>3</td>
<td>Bicycle lanes on one side of road only</td>
<td>On uphill roads with limited width a bicycle lane is provided on the uphill side only. Bicycle riders especially need separated operating space when climbing.</td>
</tr>
<tr>
<td>4</td>
<td>Sealing shoulders</td>
<td>On rural and un-kerbed roads. Bicycle shoulder lanes can also be fitted to kerbed urban roads with parking provisions.</td>
</tr>
<tr>
<td>5</td>
<td>Converting footpaths to shared paths</td>
<td>For off – road bicycle/pedestrian route within the road corridor.</td>
</tr>
<tr>
<td>6</td>
<td>Indenting car parking</td>
<td>Where footpath space is available. Preserve parking and permits straight through kerbside bicycle lanes at intersections.</td>
</tr>
<tr>
<td>7</td>
<td>Car parking on one side of the road only</td>
<td>By removing a parking lane from one side of road only to create bicycle operating space.</td>
</tr>
<tr>
<td>8</td>
<td>Road – widening at medium</td>
<td>Move other lanes into median space to create bicycle space.</td>
</tr>
<tr>
<td>9</td>
<td>Road – widening at the kerb</td>
<td>Increased width provides for new bicycle lane or widening of existing bicycle lanes.</td>
</tr>
<tr>
<td>10</td>
<td>Creating an off-road bicycle path</td>
<td>Two-way on one side of the road or one way both sides of the road. Beneficial where traffic speeds and volumes are high.</td>
</tr>
</tbody>
</table>

(Adapted from NSW RTA Bicycle Guidelines, 2005)
8.7. Shared Paths

It is not uncommon to see shared use of pedestrian areas with bikeways. These are either a ‘shared footpath’ or a ‘segregated footpath’. A shared footpath is a path which pedestrian and bikes mix; however the cyclist must give way to pedestrians.

Table: Recommended Shared Path Widths

<table>
<thead>
<tr>
<th>Desirable path width</th>
<th>Local access path</th>
<th>Recreation and Utility</th>
<th>Recreation and Commuting</th>
<th>Major recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5m</td>
<td>3.0m</td>
<td>3.5m</td>
<td>4.0m</td>
</tr>
</tbody>
</table>

| Lateral clearance    | 0.5m – 1.0m       | 0.5m – 1.0m            | 0.5m – 1.0m              |

| Typical features of use | Regular use | Regular use | Heavy + concurrent use in both directions | Heavy + concurrent use in both directions | Low speed due to congestion |

(Adapted from Austroads Guide to Road Design Part 6A: Pedestrians and Cyclists Paths, 2009)
8.8. Surface Treatment

On-road bicycle surfaces and shared paths should be smoother than those acceptable for motor vehicles due to road bicycles having narrow tyres inflated to high pressure, having no suspension systems and can travel at speeds over 25km/h. Hard surfaces such as asphalt and concrete are the most functionally appropriate materials to meet the different needs of the various users of formed bicycle lanes and shared pathways.

Technical advice on surface tolerances is provided in:


The cost of constructing paths and shared pathways varies considerably according to the type of construction material used. The Table below shows the typical construction costs and the on-going maintenance costs.

**Table: Typical Construction Costs for On-road Bicycle Lane + Shared Pathways**

<table>
<thead>
<tr>
<th>Material</th>
<th>Construction Cost (per km)</th>
<th>Maintenance Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt (a)</td>
<td>$120,000</td>
<td>High maintenance costs, easy to replace and restore heavy construction vehicles need access</td>
</tr>
<tr>
<td>Concrete (b)</td>
<td>$250,000</td>
<td>Minimal ongoing maintenance required, costly to repair, heavy construction vehicles need access to the trail corridor</td>
</tr>
<tr>
<td>Concrete boardwalk (b)</td>
<td>$2,000,000</td>
<td>Life expectancy unknown, costly to repair heavy construction vehicles need access to the trail corridor</td>
</tr>
<tr>
<td>Recycled plastic (b)</td>
<td>$2,000,000</td>
<td>Life expectancy unknown, costly to repair, construction vehicles will need access to the trail corridor</td>
</tr>
</tbody>
</table>

(Source: Wyong Shire Council, 2010).

Notes:
- a Assuming 1.6m wide lane, 1 km, line marking inclusive
- b Assuming a 2.50m wide path, 1 km, no structures.

The picture below shows a poorly surfaced on-road bicycle lane.

The picture below shows a quality surface on-road bicycle lane.
8.9. Line Marking

Identifying on-road and off-road operational space in a manner which is clear to motorists, cyclists and pedestrians is essential to providing a safe network. A key technique in achieving this is via line marking.

8.10. Off-road paths

Bicycle lanes and shared pathways should be line-marked for good route coherence, connectivity, to manage use and reduce conflict.

The use of a green surface for bicycle lanes which draws motorists’ attention to the presence of bicycles is recommended at busy or higher-speed locations and areas where the road layout is complex. The picture to the right shows line marking on a shared pathway.

8.11. On-road paths

The safe passage of cyclists on the approach and through road intersections is essential in delivering a usable on-road bicycle network, which can be achieved by line marking. Bicycle lanes should not abruptly end prior to an intersection. A clear path which is identifiable to both motorists and cyclists is required. The use of line-marking and green surface treatments is recommended to mark the preferred path through complicated intersections. Advanced bicycle waiting areas which allow cyclists to position themselves ahead of traffic vehicles at signalised intersections is recommended.

Technical advice and design solutions are provided in:

- NSW RTA Bicycle Guidelines 2005 (Section 7 - Bicycle facilities at intersections and Section 8: Intersection of paths with roads).
- Vic Roads Cycle notes – Head start storage areas at intersections, 2000.
- Vic Roads Cycle notes No. 16 – Safe road crossings for off-road paths, 2005.
- Austroads Guide to Traffic Engineering Practice Part 6: Intersections, Interchanges and Crossings; and
- Austroads Guide to Traffic Engineering Practice Part 14: Bicycles, 1999 (Section 5 – Road intersections and Section 6.7 Intersections of paths with roads).

Kerb side car parking should be line-marked to defined this operating space and reduce potential conflict with opening of car doors. The NSW RTA Bicycle Guidelines 2005 provides line marking guidance for both on-road and off-road pathways. Additional guidance on the locations for the application of green surface paint can also be found in Section 7 and Section 8 of the NSW RTA Bicycle Guidelines and Vic Roads Cycle notes No. 14 – Coloured surface treatments for bicycle lanes, 2005.

The Pictures below show intersection treatments where advanced bicycle waiting areas are provided.

The Picture below shows a road crossing linking two shared way pathways containing rolled kerbs, surface paint and line marking treatment linking two shared pathways.
8.12. Supporting Infrastructure

For footpaths, on-road bicycle and shared pathways to be usable, a range of supporting infrastructure needs to be considered, including signage, lighting, seating / rest stops, water, shade and facilities for people with a disability.

Technical advice on the provision of supporting infrastructure is provided in:

- NSW RTA Bicycle Guidelines, 2005 (Section 10: Maintenance and provision at worksites);
- Austroads Guide to Traffic Engineering Practice Part 14: Bicycles, 1999 (Section 10: End of trip facilities);

8.12.1. Signage

Signage and or markings should be provided throughout the entire network to guide pedestrians and cyclists use of the bicycle and shared path network.

Signage and / or markings should include both directional and informative information and be designed to be easily identifiable and consistent across both on-road and off-road networks. They will inform users of the direction and distance to key destinations, provide warning of approaching hazards and provide clear travel pattern advice, which is particularly important at intersections.

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

Technical advice on signage and marking treatments is provided in:

- NSW RTA bicycle Guideline (Section 9 – Signage and network information);

Many people who have impaired vision have some residual vision and some are able to read print signage. It is necessary, therefore, to provide alternatives to ensure effective communication. These may include tactile symbols, verbal announcements or one-on-one assistance for locating a specific location.

Some examples of providing printed information in alternate formats include:

- Train arrival/departure/destination information provided in both print and audio formats
- Audio-tactile traffic signals
- A person seeking assistance from a help point or from another person.

Signage currently falls into two basic categories for people with vision impairment. Print signs that are useful for people with residual vision and tactile and Braille signs that are useful for people unable to read print. The following factors assist in choosing the correct sign:

Tactile and Braille Signage - Tactile signs consist of raised shapes, for example the raised shape of a woman on a toilet door. As not all people with vision impairment read Braille, it is important to provide both Braille and tactile signage. Braille uses raised writing in the form of a cell of dots which is read by touch. Different combinations of raised dots within a cell signify different letters, abbreviations and words.

Font / Writing Style - A sign’s readability is highly affected by its font and print case. Though there are currently no standards for print type, Blind Citizens Australia currently recommends the use of Sans Serif font types.

Symbols - Simple lettering, distinctive logos and symbols can help convey information effectively where print may be difficult to use e.g. male and female symbols for toilets are instantly recognisable. Many symbols are internationally recognised, such as the wheelchair sign to indicate facilities for people with a disability.

Colour - Low contrast signage can be difficult to locate and read clearly. Printed information should contrast with the sign’s background surface.

Positioning Signs - Signs should be positioned so that they are clearly visible from both seated and standing positions. When positioning signage, important considerations include:

- Distance at which a person with vision impairment must stand to see the sign.
- Length of time required to read the sign by a person with vision impairment.
- Consistent placement of signs.

Placement of overhead signs should be at least 2000mm above the ground level but preferably 2400mm above the ground level.

Signage is best placed on the wall beside the door in a position where a person with vision impairment can read it without blocking the path of other pedestrians. Within a building, all signs should be placed in the same position and at the same height beside each door where information is required.

Lighting of signs - When positioning and lighting signage, important considerations include:

- Direct and indirect lighting levels throughout the day e.g. afternoon sun may cause glare, making signage unreadable.
- Readability in both natural and artificial light.
- Use of non-reflective materials for signage and viewing background.
8.12.2. Lighting

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

Where footpaths, bicycle lanes and shared pathways carry a substantial number of pedestrians and cyclists during periods of darkness, consideration should be given to the provision of path lighting. Lighting will increase both actual and perceived safety along the network and should be targeted along key pedestrian routes and activity zones (Austroads, 2009).

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

The main objective of cycleways lighting is to ensure adequate lighting is provided so that cyclists, travelling at reasonable speed are able to avoid potholes and any other traffic hazards (AUSTRoads “Bicycles” part 14 p.104). Generally provision for public lighting for bicycles may occur where:

- Paths for cycling associated with promenades or a centre for night-time activity.
- Paths for cycling used for commuting by workers or students.
- Lighting should be placed along key routes, key crossing points, intersections and places where people congregate. Direction and height of illumination, background land illumination levels are key considerations that should be addressed within the design.

Austroads Guide to Road Design Part 6A: Pedestrians and Cyclists Paths, 2009 (Section 6.5 and 7) provides further guidance on the key considerations for the lighting of pathways. All path lighting should be designed in accordance with AS/NZS 1158.3.1:2005, Pedestrian area (category P) lighting – performance and design requirements and the design principles identified in Crime Prevention through Environmental Design Safer by Design (C.E.P.T.E.D).

8.12.3. Landscape Design

Landscape works which are poorly planned and designed can have negative impact on pathway use. It is important that landscaping is designed, constructed and managed to:

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


8.12.4. Maintenance of Network

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

Technical advice on a hazard reporting system templates and pathway safety checklists is provided in:

- The NSW RTA Bicycle Guidelines, 2005.
8.12.5. **Tactile Ground Surface Indicators**

Tactile ground surface indicators (TGSI) are raised domes and stripes placed in patterns on the ground to provide tactile information. Their colour and luminance contrast provides information to people with vision impairment about hazards and directions.

Two types of TGSI are currently used in Australia, under Australian Standard 1428.4.

- **Warning Tiles** - These indicate hazards such as platform edges, stairs and overhead obstacles. They also inform people about changes in the direction of path of travel.
- **Directional Tiles** - These assist people to negotiate difficult environments such as wide open spaces or busy, dynamic spaces or to locate specific objectives such as the entrance and exit of train stations.

When installed properly, TGSI can provide useful clues to people with vision impairment. The consistent use and placement of TGSI is a key consideration during installation, however TGSI should not be overused.

Tactile ground surface indicators can be installed as:

- **Integrated units** - Tile-like units, where the background and raised domes are made of the same material.
- **Discrete units** - Separate domes installed to provide the effect of a tile on an existing surface. The raised domes are inserted into the background surface.

There are specific requirements for TGSI including contrast, hardness and dome height and spacing.

Public road environments that provide TGSI that benefit people with impaired vision include:

- Busy footpath environments.
- Road crossings.
- A continuous accessible path of travel.
- Stairs.
- Road / footpath hazards.
- Accessible public transport

8.12.6. **Design and Access**

Good environmental design benefits the community as a whole, not just those with a disability. It is essential that the pathway network is suitable for all users, including older persons and people with a disability.

Consistency of design assists people with vision impairment in being independent and empowers them as they make their way through their world.

Specific guidelines for access in the built environment can be found in the 1428 suite of Australian Standards.

Technical advice on disabled access provision is provided in:

- *AS 1428.1 – Design for Access and Mobility.*

The following diagram describes some of the minimum design features for footpaths:
9.0 Proposed Improvements
Proposed Improvements

The facilities and treatments required to create a cohesive, safe, direct and attractive network forms the basis of the proposed infrastructure improvements.

The identified locations for pedestrian and cycle improvements are presented in this section. These projects have been developed through an interactive process between Cowra Shire Council and its Access and Traffic Committees, the Pedestrian and Bicycle Working Groups created for this project and others in the community.

The recommended interventions are the result of the consideration of a number of variables that have been examined in previous sections. A series of questions were asked and given a ranking score to reflect their importance in pedestrian and bicycle planning outcomes. These questions include:

- Does it fill a gap in the network?
- Was it identified in consultation, surveys, audits or inspections?
- Will it benefit more than one user type? (recreation, commuter, fitness, shopping / short trips, student)
- Will it be suitable for all users? (safe, direct, comfortable, coherent)
- Is it located in a high activity area? (primary activity area, secondary activity generator, primary routes)
- Is it located in a hazard area? (In a black spot, or near miss area, arterial or collector road, school zone, a place visited at night, or place where alcohol is available)
- Will it lead to an appropriate reduction in vehicle speed?
- Does it improve pedestrian/cyclist visibility?
- Does it improve motorist, pedestrian, cyclist safety awareness behaviour?
- Is it the right type of facility/path?
- Would it be supported by experts / professionals in other areas of the country considering similar issues, problems, ideas and innovations?
- Is it practical in the Cowra Context?
- Is it cost effective?

Given the limited resources available to Cowra Shire Council to undertake improvements during the life of the Cowra Shire Pedestrian and Cycling Plan (10 years) a score higher than 35 is a high priority, that may be able to be achieved.
## Table: Proposed Improvements

<table>
<thead>
<tr>
<th>Project No</th>
<th>Assessment Criteria</th>
<th>Weighted Scores (max)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Does it fill a Network Gap?</strong></td>
<td>5 5 10 10 5 10 5 10 10 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Has it been identified in Consultation?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Has it been identified in Audits?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it suitable for All Users?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it in a Primary Pedestrian or cyclists Route?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it in a Secondary Activity Zone?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it in a Tertiary Activity Generator?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it on a Primary Pedestrian or cyclists Route?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Is it in or near a Hazard Area?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Will it reduce Speed?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Will it separate pedestrian and cyclists from vehicles?</strong></td>
<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>5 5 10 10 6 6 6 6 10 10 5 5 5 5 5 5 5 5 5 111</td>
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### Cowra

- **C1**: Upgrade the Cowra CBD in accordance with the CBD Structure Plan and ensure all pedestrian and bicycle facilities comply with relevant design standards. **Score**: 111

- **C2**: Construct a shared path network connecting both sides of the Lachlan River. **Score**: 111

- **C3**: Provide a shared zone environment at Railway Lane from Brisbane Street to Darling Street. **Score**: 102

- **C4**: Construct a concrete footpath or shared path on Railway Lane from Darling Street to Fitzroy Street. **Score**: 95

- **C5**: Construct a concrete shared path from the Lachlan River to the Erambie Mission (on Legh Street, Lachlan Valley Way and Edgel Park Cowra from Waratah Street to the Cowra Bridge). **Score**: 94

- **C6**: Stencil / line-mark arterial roads and collector roads, including:
  - Young Road from Grenfell Road to Boundary Road. **Score**: 92
  - Fitzroy Street, Brouhman Street, and Darbys Falls Road from Kendal Street to the Darbys Falls Bridge.
  - Redfern Street from Lachlan Street to Doncaster Avenue.
  - Mulyan Street from Redfern Street to Glen Logan Road.
  - Binni Creek Road Cowra from Pitt Street to Doncaster Road.
  - Sydney Road from Fitzroy Street to the Sydney Road Bridge.
  - Vaux Street Cowra from Fitzroy Street to Lachlan Street.
## Assessment Criteria

| Project No | Project Description | Does it fill a Network Gap? | Has it been identified in Consultation? | Has it been identified in Audit? | Are Users Frustrated? | Is it suitable for All Users? | Is it in a Primary Activity Zone? | Is it in a Secondary Activity Zone? | Does it serve a Tertiary Activity Generator? | Is it on a Primary Pedestrian or cyclists Route? | Is it in or near a Hazard Area? | Will it reduce Speed? | Will it separate pedestrian and cyclists from vehicles? | Will it increase pedestrian and cyclist Visibility? | Will it increase Safety Awareness? | Would it be peer supported? | Is it practical? | Is it cost effective? | Weighted Scores (max) | Total |
|------------|---------------------|-----------------------------|----------------------------------------|---------------------------------|----------------------|-----------------------------|---------------------------------|-----------------------------------|--------------------------------------|----------------------------------------|--------------------------------|----------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            |                     | 5                           | 5                                      | 10                               | 10                   | 5                           | 5                               | 10                                | 10                                   | 10                                     | 5                           | 10             | 10                                             | 10                                             | 10                                             | 10                                             | 10             |----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| C7         | Construct a concrete footpath or shared path across the Cowra to Eugowra Railway, connecting Brisbane Street to Brisbane Avenue. | 5                           | 2                                      | 5                                | 7                    | 5                           | 0                               | 0                                 | 3                                   | 9                                     | 4                           | 2                           | 4                                             | 3                                              | 3                                              | 4                                             | 9                           | 8             | 73               |
| C8         | Construct a concrete footpath on Mulyan Street from Victor Street to Logan Street. | 5                           | 2                                      | 4                                | 6                    | 5                           | 0                               | 0                                 | 3                                   | 9                                     | 4                           | 3                           | 5                                             | 5                                              | 3                                              | 3                                             | 7                           | 6             | 70               |
| C9         | Construct a concrete shared path on Sydney Road and Campbell Street from Short Street to Europa Park | 3                           | 4                                      | 5                                | 5                    | 5                           | 0                               | 0                                 | 2                                   | 8                                     | 5                           | 2                           | 4                                             | 3                                              | 3                                              | 7                                             | 8                           | 6             | 68               |
| C10        | Construct a concrete shared path network to the west and south-west of Cowra High School (on Priddham Street, Redfern Street, Evans Street and Victor Street). | 3                           | 2                                      | 4                                | 6                    | 5                           | 0                               | 0                                 | 4                                   | 4                                     | 4                           | 2                           | 5                                             | 5                                              | 3                                              | 4                                             | 7                           | 6             | 64               |
| C11        | Widen the bitumen sealed shoulder on the western side of the Lachlan Valley Way from Noonbinna Road to Grenfell Road and the southern side of Grenfell Road from Cowra Showground to Chiverton Road. | 2                           | 5                                      | 8                                | 1                    | 1                            | 1                              | 0                                 | 1                                   | 9                                     | 9                           | 3                           | 3                                             | 3                                              | 4                                              | 2                                             | 6                           | 6             | 64               |
| C12        | Erect pedestrian fencing and new pedestrian crossings at the roundabout intersection at Vaux and Brisbane Streets. | 2                           | 4                                      | 7                                | 1                    | 1                            | 1                              | 0                                 | 1                                   | 2                                     | 9                           | 7                           | 3                                             | 3                                              | 3                                              | 4                                             | 2                           | 6             | 61               |
| C13        | Erect warning signage and trial gap free surface on the Darbys Falls Bridge Cowra (timber decked structure) to allow cyclists to safely cross the bridge. | 1                           | 2                                      | 5                                | 1                    | 1                            | 0                              | 0                                 | 0                                   | 0                                     | 3                           | 7                           | 1                                             | 1                                              | 1                                              | 1                                             | 2                           | 2             | 42               |
| C14        | Construct a bitumen sealed shared path on Farm Road from the Cowra POW Camp car park to Binni Creek Road. | 2                           | 2                                      | 2                                | 6                    | 2                            | 0                              | 0                                 | 2                                   | 4                                     | 0                           | 1                           | 2                                             | 2                                              | 3                                              | 2                                             | 5                           | 4             | 39               |
| C15        | Extend the shared path network at the Cowra Peace Precinct by utilising part of the road carriageway on Sakura Avenue. | 1                           | 2                                      | 2                                | 3                    | 2                            | 0                              | 0                                 | 4                                   | 2                                     | 0                           | 4                           | 3                                             | 3                                              | 3                                              | 3                                             | 2                           | 5             | 40               |
## Assessment Criteria

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**Project**

- **C16**: Construct a child safety awareness training facility at Europa Park.
- **C17**: Construct a concrete shared path on Yarrabilly Drive from Binni Creek Road to Sakura Avenue.
- **C18**: Construct a concrete shared path on Mees Street and Lyall Street from Legh Street to Young Road.
- **C19**: Construct a concrete footpath on Bourke Street from Nangar Street to Redfern Street.
- **C20**: Construct a concrete footpath on Logan Street from Mulyan Street to Redfern Street.
- **C21**: Construct a concrete footpath on Macassar Street from Redfern Street to Scenic Drive.
- **C22**: Construct a concrete footpath on Lyall Street from Hartley Street to Young Road.
- **C23**: Construct a concrete footpath on the southern side of Dowell Street from Redfern Street to Lachlan Street.
- **C24**: Construct a concrete footpath on Macquarie Street from Liverpool Street to Macassar Street.
- **C25**: Construct a concrete shared path on Amaroo Road from Binni Creek Road to the end of the existing shared path adjoining Amaroo Road.
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<tr>
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<td>C26</td>
<td>Construct a bitumen sealed shared path on Binni Creek Road, Doncaster Road and Canowindra Road from Saburo Nagakura Park to Evans Street.</td>
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<td>Construct a concrete shared path on Redfern Street and Evans Street from Acacia Circuit to Dowell Street.</td>
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<td>Construct a concrete shared path on Neila Street from Taragala Street to Brisbane Avenue (rail crossing).</td>
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<td>Construct a concrete shared path on Taragala Street from Neila Street to Baronga Street.</td>
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<td>Construct a concrete shared path on the drainage reserve behind London Drive from the existing shared paths to Dowell Street.</td>
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<td>C31</td>
<td>Construct a concrete footpath on Hartley Street from Grenfell Road to Lyall Street.</td>
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<td>C32</td>
<td>Construct a concrete footpath on Darling Avenue from Dungowan Street to Taragala Street.</td>
<td>2 0 1 1 3 0 0 0 0 0 1 2 1 1 1 3 1 17</td>
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<td>C33</td>
<td>Review subdivision design standards to ensure that all new Arterial and Collector Roads are constructed with a bicycle route facility on at least one side of the road.</td>
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<td>C34</td>
<td>Review subdivision design standards to ensure compliance with relevant pedestrian and cycling design standards.</td>
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## Assessment Criteria

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<td>Does it fill a Network Gap?</td>
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<td>C35</td>
<td>Construct a new Pedestrian / Bicycle Bridge over the Lachlan River upstream of existing Cowra Bridge.</td>
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<td>C35</td>
<td>Construct a concrete footpath on Keswick Street from Redfern Street Cowra to Macquarie Street.</td>
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<tr>
<td>C36</td>
<td>Construct a bitumen sealed shared path on the Cowra to Eugowra Railway Reserve.</td>
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<tr>
<td>G1</td>
<td>Construct concrete footpaths and kerb ramps on the Grenfell-Orange Road from Forbes Street to Cowra Street.</td>
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<tr>
<td>G2</td>
<td>Construct main street pedestrian improvements.</td>
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<tr>
<td>G3</td>
<td>Stencil / line-mark an on-road bicycle lane on Cowra Street, Forbes Street and the Grenfell-Orange Road.</td>
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<tr>
<td>G4</td>
<td>Construct a bitumen sealed shared path on East Street and the Grenfell-Orange Road from the Gooloogong Country Club to southwestern corner of the Gooloogong Primary School.</td>
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<tr>
<td>G5</td>
<td>Provide bicycle racks next to the bus stop on the Grenfell-Orange Road near the Gooloogong General Store and Post Office and at the Gooloogong Country Club.</td>
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<tr>
<td>G6</td>
<td>Construct a bitumen sealed shared path on Lachlan Valley Way, Nanima Road and the TSR adjoining Bank Street.</td>
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<tr>
<td>W1</td>
<td>Construct a concrete footpath and kerb ramps on Parks Street from Noyeau Street to Lions Park.</td>
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<td>W2</td>
<td>Construct new Footpath Installations on Rankin and Parkes Street.</td>
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<td>W3</td>
<td>Undertake maintenance improvements in Woodstock CBD.</td>
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<td>W4</td>
<td>Construct a bitumen sealed footpath linking Lions Park, North Street, Tucker Road, Noyeau St footpath loop including seating in Noyeau Street</td>
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<td>W5</td>
<td>Construct a gravel surface shared path around the Woodstock showground.</td>
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<tr>
<td>WY1</td>
<td>Construct a concrete footpath on Waugoolo Road from the southern end of Wyangala Public School to the tennis court park.</td>
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<td>WY2</td>
<td>Construct a bitumen sealed shared path on First Avenue Wyangala from the tennis court park to the Wyangala Country Club.</td>
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### Projects

- **Villages / Rural Routes**

- **WY3**
  - Install street lighting on Trout Farm Road from the new bridge to Waugoola Road.

- **WY4**
  - Construct a bitumen sealed shared path on Trout Farm Road Wyangala from Wyangala Primary School to Dissapator Park.

- **VRR1**
  - Publish a tourism / directional map showing cycling routes around Cowra Shire, including routes to Billimari, Darby Falls, Morongla, and Wattamondara.

- **VRR2**
  - Publish a tourism / directional map showing Mountain Bike (MTB) trails located in the Wyangala and Mt McDonald area.

- **VRR3**
  - Continue to investigate with Cabonne Shire Council the merits of providing a cycling route between Cowra and Canowindra / Eugowra.
**Project C1 - Cowra Central Business District Pedestrian and Bicycle Upgrades**

**LEGEND**
- Existing Concrete Footpath
- Proposed Median Strip
- Proposed Median Crossing
- Improve Existing Laneway surface & lighting
- Improve / Install Tactile Ground Surface Indicators
- Review Existing Pedestrian Crossings
- Existing Light Controlled Pedestrian Crossing
- Proposed Bike Parking Locations
- Traffic Light Locations
- Key Attractions
- Improve Cycling Link
- Existing Street Crossing
- Street lights with bicycle rack attachment

**Project Description**
Cowra CBD Pedestrian and Bicycle Upgrade

**Project Scope**
As part of the upgrading of the Cowra CBD, make provision for traffic calming, pedestrian crossing and bicycle parking facilities.

**Estimated Cost**
Subject to detailed design and costing currently being undertaken by Cowra Shire Council.

**Project Action List**
- Confirm funding availability and source
- Undertake an audit of each intersection and design suitable pedestrian crossings and include works in final CBD design.

**Reference Drawings / Photos**
Project C2 - River Park to Edgell Park Link

**Legend**
- Existing Concrete Footpath 1.2 m wide
- Proposed Concrete Shared Path 2.5m wide
- Proposed Crossing Over Low Level Bridge
- Existing Footpath to be used as a Shared Path
- Install new footpath layback
- Layback direction
- Main Roads
- River Park
- Edgel Park
- Threshold

**Project Description**
This project provides a low level pedestrian and cycling link between River Park and Edgell Park as well as west Cowra and the Cowra CBD. It will provide a strategic cohesive link to the on-road cycling routes.

**Project Scope**
- 160 metres of on-road shared path including stencils along Vaux Street in front of the Caravan Park.
- 270 metres of shared path from caravan park to low level bridge and to Redfern Street.
- 55 metre long x 2.5 metre wide bolt on structure or piers structure on side of existing low level bridge.
- 100 metres of shared path on western side of bridge to join to other pathways.
- Relocate / sign post obstacles on the existing footpath in Redfern Street proposed to be used as a shared path.
- Relocate caravan park fencing (NE corner).

**Estimated Cost**
- Bridge works $250,000.
- Other works $133,000.

**Project Action List**
- Obtain regulatory authority approvals for bridgework.
- Liaise with caravan park operator to determine design requirements for relocated fence.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.

**Shared Path Link between River Park and Edgell Park**
Conceptual drawing of the on-road shared path stencils along Lachlan Street adjacent to the Cowra Van Park and linking to River Park.

**Bolt on Pedestrian / Bicycle Bridge**
Conceptual drawing of a typical bolt on pedestrian / cyclist bridge attached to the Low Level Bridge over the Lachlan River, with shared path links to River Park and Edgell Park.
Project C3 - Railway Lane Pedestrian and Bicycle Upgrade

**Project Description**
Railway Lane Pedestrian and Bicycle Upgrade.

**Project Scope**
As part of the upgrading of the Railway Lane shared zone project, make provision for traffic calming, pedestrian access and bicycle parking facilities.

**Estimated Cost**
Subject to detailed design and costing currently being undertaken by Cowra Shire Council.

**Project Action List**
- Undertake an audit of the footpath / road environment and design suitable pedestrian works for mobility impaired and visually impaired people.
- Undertake construction.
Project Description

Provide footpath on the northern side of Railway Street, linking existing commercial, medical and retail activities.

Project Scope

- Install 3 new laybacks.
- Construction 210 metres of new concrete footpath 1.2m wide.

Estimated Cost

$29,300.

Project Action List

- Undertake site inspection
- Confirm scope of works
- Confirm funding availability and source
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
**Project Description**

Provide 1800 metres of shared path from the low level bridge to the Erambie Mission located at Legh Street.

**Project Scope**

- Construction 1800 metres of shared path using a continuous paver.
- Erect associated signage.

**Estimated Cost**

$296,000

**Project Action List**

- Confirm scope of works
- Confirm funding availability and source
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction

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**Reference Drawings / Photos**

- 2.5m wide concrete shared path
  - Conceptual drawing of a typical 2.5m wide concrete shared path
Project C6 - On-road Bicycle Stencil & Line Marking

**Project Description**
This project will provide on-road stencilling to the main collector roads suitable for on-road stenciling linking facilities and providing safer cycling routes and other road user awareness.

**Estimated Cost**
$68,000

**Project Scope**
- 34.4km of on road cycling stencilling at intersections and regular intervals, estimated at 1 stencil per 200 metres on each side of the roadway.
- 20km of lineworking on main roads.
- Awareness campaign.

**Project Action List**
- Undertake site inspection
- Confirm scope of works
- Plan works and safety requirements
- Confirm funding availability and source
- Media Campaign
- Undertake construction

**On-road bicycle stencil - minor roads**
Conceptual drawing of a typical on-road bicycle stencil layout for a minor road

**On-road bicycle stencil and line marking - Major Roads**
Conceptual drawing of a typical on-road bicycle stencil layout for a major road
**Project Description**
This project will formalise the pedestrian crossing across the disused Eugrowra Railway line providing a safer and improved access crossing & linkage to existing-feeder footpath networks.

**Project Scope**
- 65 metres of new footpath
- Relocate existing bollards and provide a 1200mm concrete footpath
- Provide a flush concrete deck at the rail crossing

**Estimated Cost**
$9,000

**Project Action List**
- Obtain regulatory authority approvals for railway crossing.
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.
Project C8 - Mulyan Street Footpath Intersection Treatment

Reference Drawings / Photos

Enhance Mulyan / Watt Street Pedestrian Crossing (Realignment)
Conceptual drawing of the proposed realignment of the pedestrian street crossing at the intersection of Watt Street & Mulyan Street.

Layback Improvement / Installation
Conceptual drawing of a typical footpath layback with sharp transition from the street gutter to the layback entrance (no lip)

LEGEND
- Proposed Concrete Footpath 1.2m wide
- Existing Concrete Footpath 1.2 m wide
- Remove existing section of concrete footpath
- Install new footpath layback
- Layback direction

Project Description
This project realigns the pedestrian street crossing facilities to enable a safer and more appropriate pedestrian pathway across the four way intersection, as well as extends the footpath on Mulyan Street.

Project Scope
- 5 metres of new footpath on Mulyan Street
- 6 new laybacks
- Removal of 10 metres of footpath & reinstatement of kerb over layback.
- Construction of 475 metres of new concrete footpath (1.2m wide) from on Mulyan Street.

Estimated Cost
- $9,500 for intersection works.
- $63,000 for footpath link.

Project Action List
- Undertake site inspection
- Confirm scope of works
- Confirm funding availability and source
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
Project C9 - Europa Park Shared Path Link

LEGEND
- Proposed Concrete Footpath 1.2m wide
- Existing Concrete Footpath 1.2 m wide
- Proposed Concrete Shared Path 2.5m wide
- Proposed Rail Crossing Treatment
- Install new footpath layback
- Layback direction
- Main Road
- Beltview Hill
- Waugoolo Creek
- ** Railway Tracks

Project Description
This project provides a pedestrian and bicycle link from Cowra township to Europa Park encouraging the use of Council facilities and healthy lifestyle. Links with stencil project and creates links between primary and secondary zones.

Project Scope
- 750 metres of concrete shared path
- 56 metres of new concrete footpath.
- 24 metres of 375 diameter stormwater pipe at railway crossing.
- Minor earthworks and reshaping of embankments at railway crossing.
- 2 new laybacks at Short Street.
- Line marking and warning signage at bridge crossing adjacent to Europa Park.

Estimated Cost
$200,000.

Project Action List
- Obtain regulatory authority approvals for railway crossing.
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Undertake dial before you dig search.
- Plan works and safety requirements.
- Undertake construction.

Reference Drawings / Photos

Footpath Installation
Conceptual drawing of a typical 1.2m wide concrete footpath

2.5m wide concrete shared path
Conceptual drawing of a typical 2.5m wide concrete shared path.
Project C10 - Pridham Street Shared Paths

Reference Drawings / Photos

2.5m wide concrete shared path
Conceptual drawing of a typical 2.5m wide concrete shared path with grassed verge adjacent to kerb & gutter

2.5m wide concrete shared path
Conceptual drawing of a typical 2.5m wide concrete shared path built to the kerb & gutter

Project Description
This project aims to provide a pedestrian and cycling link from Cowra High School to existing and developing residential areas.

Project Scope
- Install 9 kerb ramps.
- Construct 1250 metres of 2.5m wide concrete shared path using a continuous paver.
- Install associated signage.

Estimated Cost
$304,000.

Project Action List
- Confirm scope of works.
- Confirm funding availability and source.
- Undertake dial before you dig search.
- Plan works and safety requirements.
- Undertake construction.
Project Description

Provide an on-road cycling lane on the Main Road sections of the Chiverton Loop.

Project Scope

- Stage 1: provide a sealed shoulder on the southern side of Grenfell Road to cater for road cyclists travelling along the Chiverton Loop.
- Stage 2: provide a sealed shoulder on the western side of Boorowa Road to cater for cyclists travelling along the Chiverton Loop.

Estimated Cost

- Stage 1: $632,500
- Stage 2: $851,000

Project Action List

- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.
Project C12 - Vaux St / Brisbane St Intersection Upgrade

Reference Drawings / Photos

**Proposed Pedestrian Crossing and Pedestrian Fencing**
Conceptual drawing of the Brisbane St / Vaux St intersection with new pedestrian crossing and pedestrian fencing.

Project Description
Provide additional safety fencing and crossings at the intersection of Vaux Street and Brisbane Street.

**Project Scope**
- Replace existing bollards and chain fencing with a minimum 1.2 metre high palisade fence and install new crossing on Vaux Street.

**Estimated Cost**
- Fencing - $25,000.
- New Crossing - $8,000.

**Project Action List**
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Undertake dial before you dig search.
- Plan works and safety requirements.
- Undertake construction.
- Media awareness campaign.
Project C13 - George Campbell Bridge Treatment (Darby Falls Rd)

Project Description
Upgrade road surface and signage at the George Campbell Bridge on Darby Falls Road to improve cyclist safety.

Project Scope
- Install 4 signs.
- Reseal timber deck on bridge and approach works.

Estimated Cost
$9,000

Project Action List
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.
- Review / monitor surface condition.

Reference Drawings / Photos

George Campbell Bridge Treatment
Conceptual drawing of the proposed treatment to the George Campbell Bridge on Darby Falls Road

Proposed Signage
RMS signage to warn cyclists of an approaching bridge with hazardous surface.
Project C14 - Farm Road Pedestrian & Cyclist Loop

Reference Drawings / Photos

LEGEND

- Proposed 2.5m wide gravel shared path
- Sign post existing walking route
- Main Roads
- Open Space Areas

Project Description
This project will provide a quiet rural setting walking and cycling route for locals and tourists on a currently well used walking road. This will improve safety for all users.

Project Scope
- Construct a 900 metre x 2.5m wide gravel path linking Saburo Nagakura Park to Farm Road.
- Install signage along walking route.

Estimated Cost
$70,000.

Project Action List
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.
Project C15 - Sakura Avenue Shared Path

**Project Description**
Create a shared path / one way traffic lane on Sakura Avenue.

**Project Scope**
- Linemark 1750 metres of roadway and shared paths.
- Associated signage.
- Media / awareness campaign.

**Estimated Cost**
$21,000

**Project Action List**
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake line marking.
- Media / awareness campaign.

Reference Drawings / Photos

Sakura Avenue Shared Path
Conceptual drawing of Sakura Avenue divided into a one way lane for traffic and 2.5m wide shared path for pedestrian and bicycle traffic.
Project C16 - Europa Park Child Safety Education Facility

Reference Drawings / Photos

Project Description
Provide a child safety education facility at Europa Park which will allow children to learn about road rules and improve cycling safety.

Project Scope
- Install a child safety education facility at Europa Park.

Estimated Cost
- Detailed costings to be carried out by Council.

Project Action List
- Visit existing child safety education facility in Campbeltown.
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
Cowra Township Community Access & Pedestrian Strategy Map
Project G1 - Link School to Commercial Precint

Legend
- Proposed Concrete Footpath 1.2m wide
- Existing Concrete Footpath 1.2m wide
- Existing School Crossing Location
- Improve existing footpath layback
- Install new footpath layback
- Layback direction

Project Description
This project will link the Goolongong Primary School to the Goolongong commercial precinct providing a safer access for school children and the community.

Project Scope
- 138m Footpath East side of King St
- 120m Footpath West side King St
- Replace 3 kerb laybacks

Estimated Cost
- $35,000.

Project Action List
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction

Reference Drawings / Photos

Layback Improvement / Installation
Conceptual drawing of a typical footpath layback. In this example, a double layback crossing is shown.

Footpath Improvement / Installation
Conceptual drawing of a typical 1.2m wide concrete footpath.

Images: Linking School to Commercial Precinct.
Project G2 - Main Street Pedestrian Improvements

Reference Drawings / Photos

Footpath Installation - To Log Cabin
Concept drawing showing the proposed extension of the kerb & guttering and installation of a footpath and layback joining Warraderry Way and the Gooloogong Log Cabin

LEGEND
- Proposed Concrete Footpath 1.2m wide
- Existing Concrete Footpath 1.2m wide
- Remove existing layback
- Improve existing footpath layback
- Install new footpath layback
- Existing Layback
- Layback direction

Project Description
This project will improve safety and connectivity in the Gooloogong CBD, allowing improved access for all users.

Project Scope
- 16 metres of new footpath.
- Remove 2 laybacks.
- Improve 1 layback.
- Install 1 new layback.

Estimated Cost
$6,900

Project Action List
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
Project G3 - Bike Lane Stencil Project

Reference Drawings / Photos

LEGEND

- Proposed on-road Bicycle Lane
- Gooloogong Commercial Precinct
- Gooloogong Log Cabin

Project Benefits / Purpose
This project will provide on-road stencils around the central area of the Gooloogong village. This will encourage cycling in the town precinct. The primary school is planning purchasing a number of bikes in order to teach and train the school children cycle skills. This project will provide a safer environment for travel to/from school and provide a safer cycling loop for the community.

Project Scope
- On road bike stencils on Forbes Street and Cowra Streets
- Option for shoulder widening on East and Bank Street

Estimated Cost
$3,200

Project Action List
- Confirm funding availability and source
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake line marking.

Proposed on-road bicycle lane
Concept drawing of proposed on-road bicycle lane with stencil
Project G4 - Gooloogong Country Club Shared Path Link

Reference Drawings / Photos

2.5m wide sealed shared path
Conceptual drawing of a typical 2.5m wide sealed share path

LEGEND

Project Description
This project will provide a link to the Gooloogong Country Club (which includes rugby, tennis, lawn bowls, golf, horse racing facilities) from Gooloogong Public School, providing a link from the Gooloogong commercial centre to this secondary activity zone.

Project Scope
415 metres of sealed share path

Estimated Cost
$60,000

Project Action List
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
**Project G5 - Goolongong Bike Racks**

**LEGEND**
- Goolongong Public School
- Commercial Precinct
- Goolongong Country Club

**Project Description**
This project will provide bicycle stabling facilities to the commercial precinct and for the Goolongong Country Club allowing better access and encouraging the community to ride their bikes.

**Project Scope**
- 2 of twin bicycle parking racks at the King St Bus Stop
- 2 of twin bicycle parking racks at the Goolongong Country Club

**Estimated Cost**
- 2 of twin bicycle parking racks at the King St Bus Stop
- 2 of twin bicycle parking racks at the Goolongong Country Club
- Concrete slab at country club
- Project Management
- Contingency

**Project Action List**
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction

**Reference Drawings / Photos**

1. **King Street Bus Stop Bike Racks**
   - Concept drawing of proposed bike racks located either side of the existing bus stop structure.

2. **Goolongong Country Club Bike Rack**
   - Conceptual drawing of proposed bike racks located adjacent to the existing brick storage structure.
Project G6 - Gooloogong Shared Paths

Reference Drawings / Photos

2.5m wide sealed shared path
Conceptual drawing of a typical 2.5m wide sealed shared path.

2.5m wide gravel shared path
Conceptual drawing of a typical 2.5m wide gravel shared path.

LEGEND
- Proposed 2.5m wide sealed shared path
- Proposed 2.5m wide gravel shared path
- Commercial Precinct
- Gooloogong Log Cabin
- Gooloogong Caravan Park & Reserve

Project Description
This project will provide a system of shared paths linking the Gooloogong commercial precinct to the Lachlan River and other environs. Part of this project is understood to form part of the new bridge construction works being undertaken by the RMS.

Project Scope
- Construct 670 metres of gravel shared path.
- Construct 1320 metres of sealed shared path.
- Install associated signage.

Estimated Cost
$238,000.

Project Action List
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
Project W1 - Parkes St / Lions Park Footpath Link

**LEGEND**
- Proposed Concrete Footpath 1.2m wide
- Install Bike Rack
- Install new footpath layback
- Layback direction
- Lions / Memorial Park
- Woodstock Commercial Precinct
- Existing Railway Tracks

**Project Description**
Provide a footpath link from the Woodstock commercial precinct to Lions Park. The project will link the secondary activity zones and feeder roads to the two sides of the railway line creating access for all users.

**Project Scope**
- 92 metres of concrete footpath.
- Install 4 new laybacks.
- Bicycle racks.

**Estimated Cost**
$24,400.

**Project Action List**
- Obtain regulatory authority approvals for railway crossing.
- Undertake site inspection.
- Confirm scope of works.
- Confirm funding availability and source.
- Plan works and safety requirements.
- Undertake construction.

**Reference Drawings / Photos**

**Footpath Improvement / Installation**
Conceptual drawing of a typical 1.2m wide concrete footpath

**Bike Rack Installation**
Conceptual drawing of a typical bike rack installation at Memorial Park, Woodstock

Photo of the existing footpath and layback arrangement on the corner of Parkes and Rankin Street

Photo showing the location of the proposed bike rack at Lions / Memorial Park

Photo of the area between the Woodstock Pub and the Lions Park to be linked with a 1.2m wide concrete footpath
Project W2 - Footpath Installations

Reference Drawings / Photos

Footpath Installation
Conceptual drawing of a typical 1.2m wide concrete footpath

LEGEND

- Proposed Concrete Footpath 1.2m wide
- Existing Concrete Footpath
- Woodstock Commercial Precinct
- Woodstock Public School

Project Description
The project will replace a dilapidated section of the Woodstock footpath network, improving coherence and removing safety hazards.

Project Scope
- Install 30 metres of concrete footpath 1.2m wide.

Estimated Cost
$5,000

Project Action List
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
Project W3 - Maintenance Improvements

**Project Description**

The project will remove some safety hazards in the pedestrian network of Woodstock. These basic improvements will allow all user groups improved access through the village.

**Project Scope**

- Remove overhanging branches.
- Improve 2 existing laybacks.
- Cover unsafe stormwater pit.

**Estimated Cost**

$8,000

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**Reference Drawings / Photos**

**Layback Improvement / Installation**

Conceptual drawing of a typical footpath layback with sharp transition from the street gutter to the layback entrance (no lip)

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**Project Action List**

- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction
Woodstock Implementation Map - All Projects

Reference Drawings / Photos
Project WY1 - Waugoola Street Footpath Installation

Project Description

This project will provide a much needed path in front of the Wyangala Public School improving the safety and appearance of the School.

Project Scope

- 250 metres of new concrete footpath 1.2m wide.
- 250 metres of roll top kerb.

Estimated Cost

$61,800.

Project Action List

- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction

Reference Drawings / Photos

Footpath & Roll Top Gutter Installation

Conceptual drawing of a typical 1.2m wide concrete footpath built to the road edgeline with roll top kerb & gutter.
Project Description
This project will provide linkages in Wyangala between the school, sporting facilities including lawn bowls, cricket pitch, basketball court, golf course, tennis courts, the country club and the residential area of Wyangala village.

Project Scope
- 455 metres of concrete shared path.
- Replace pedestrian bridge

Estimated Cost
$134,000.

Project Action List
- Confirm funding availability and source
- Undertake site inspection
- Confirm scope of works
- Undertake dial before you dig search
- Plan works and safety requirements
- Undertake construction

2.5m wide concrete shared path
Conceptual drawing of a typical 2.5m wide concrete shared path
10. Funding
10.1. Funding

This section relates to the identification of funding opportunities that exist for both the construction of infrastructure and hosting events within NSW. The key recommendations will be the future guiding actions for Cowra Shire Council in relation to funding the expansion of the pedestrian and cycleways network.

RMS Funding

The main opportunities for funding come from the NSW Roads and Maritime Services (RMS). The Cowra Shire Pedestrian and Cycling Plan will be used by Cowra Shire Council to apply for funding through the RMS for projects which improve the existing pedestrian and cycleways network.

Some of the main funding opportunities include:

- **Cycling Towns Program** – according to the Central West Regional Transport Plan 2013, two regional centres will be selected for initial investment.
- **Major Works Program** - infrastructure for pedestrian and cycling should be considered in all major works programs.
- **Traffic Management and Road Safety Program** - pedestrian and cyclist road safety concerns and promotion of road safety can be addressed under this program.
- **Central West Road Network Maintenance Program** - maintenance of pedestrian and cycling infrastructure should be considered.
- **RMS Council Co-Funding Programs** - infrastructure projects which are funded by both Council and the RMS.
- **RMS Cycleway Program** - funds design and construction of on and off-road cycleways by local councils in line with the NSW Bike Plan 2010.
- **Bicycle Facilities Grants Program** - funds council improvements to the operation of existing cycleways.
- **Bike Week Funding Grants Program** - funding is not for a fixed amount and is only provided for the promotion and advertising component of an event’s budget.
- **Bicycle User Support Grants Program** - this program funds the increased use of cycling through research, training and promotion, including the preparation of maps.
- **Local Government Road Safety Program** – funding is available for the appointment of a designated Road Safety Officer in Council or for the funding of road safety behaviour-change projects.

**Section 94 Contribution Plans**

Include the construction of footpaths, cycleways and shared paths and support facilities into future Section 94, 94A contribution plans.

**Key Recommendations:**

- Include cycleways and footpaths as part of the Cowra Shire Council Section 94 Contributions Plan and Section 94A Contributions Plan.
- Council to require developers to install footpaths and / or cycleways as required.
- Review Section 94 Contribution Plans to include those paths and strategic access routes identified in this Plan.
- Council accept the construction of Footpaths and Cycleways as part of any proposed Voluntary Planning Agreement.

**Other sources of funding**

- The Australia Federal Government’s Healthy Communities Initiative opened for grants in 2011. The project supports local governments across Australia to increase the number of adults engaging in physical activity and healthy eating programs and activities.
- The NSW Office of Communities, Sport and Recreation Participation and Family Program assists with the funding of local and regional level sport and recreation facilities, such as improved sporting facilities, skate parks etc.
- NRMA provide road safety grants each year and a number of councils have been successful in obtain funding support under this program.
- Local businesses may wish to sponsor the production of the route maps.
- Community Groups may wish to contribute to the enhancement of parkland and network facilities.

**Key Recommendations:**

- Investigate opportunities for external funding for footpaths and cycleways, additional facilities and promotion and marketing within the Cowra Shire.
- Investigate opportunities for local businesses to produce the route maps.
11. Supporting a Culture of Walking & Cycling
Supporting a Culture of Walking & Cycling

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

According to the **WHO Pedestrian Safety Manual 2013**, safe road-user behavior and increasing user support depends on a number of factors, including:

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

Road safety cannot be delivered, it must be practiced. Broad community involvement is necessary to develop a culture where road safety is highly valued. Providing opportunities for community participation in road safety is beneficial to the community and imperative to the success of the road safety program (Orange City Council website).

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

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

### Road safety, education and training

Road safety education is an adjunct to other measures, rather than a stand-alone intervention. For example, road safety educational programmes may include:

- **Raising awareness** - This can include informing drivers about care, prudence, kindness, consideration, speed, pedestrian and cycling right-of-the-way and traffic rules.
- **School-based education** - Such programmes help children acquire knowledge and skills for pedestrian safety. While these are important life skills and all children should be taught the rules of the road, school-based traffic education will only result in reduced pedestrian collisions when combined with other interventions (WHO Pedestrian Safety Manual, 2013).

The engagement and / or employment of a Road Safety Officer would establish the role of a road safety educator in the community, with a focus on behavior-change programs to facilitate safer road user practices.

The **RMS Road Safety Officer Program** is one of the chief instruments of pedestrian policy and programs at a local level. The staff in these positions are the link between local governments and the RMS. The RMS funds 50% of the RSO position.

Where a local council is unable to match the funding for the role, or where the road safety matters in the area do not warrant a full-time staffed position, this may be a part time role or the RSO may be shared between another local council.

Alternatively, Council can now obtain RMS funding to undertake specific road safety behaviour-change projects.

Under the guidance of an RSO, Programs could be developed and implemented to address local road safety issues.

### Media campaigns

These can be used to inform the public about pedestrian and cyclist safety legislation, risk factors, impact of collisions and solutions available.

Targeted and planned media and social marketing campaigns that inform the public about pedestrian and bike safety laws and risk factors are necessary to improve driver, pedestrian and cyclist behaviour and enhance understanding of traffic issues such as traffic signs, road rules and right-of-way for all road users. Information alone is rarely sufficient to bring about changes in road user behavior.

Raising the profile of issues by an RSO and community leaders is also suggested.

### Code of Conduct

There may be benefits in creating a local code of conduct. The code does not necessarily require everyone to sign up, but could involve agreement by main users. For example, the code could be signed by the main truck transport and bus companies operating in the Cowra Shire and aim for all heavy vehicle drivers to undertake training and awareness of rights of motorists, cyclists and pedestrians.

### Traffic law enforcement

Traffic laws affecting pedestrian and cyclist safety are largely aimed at controlling behaviour at intersections, crossings and other locations. Driver, pedestrian and cyclist compliance with other laws relating to speed, drink driving, jay walking, riding on footpaths, illegal parking in disabled parking spaces and bus zones, and aggressive behavior are also important.

The Amy Gillett Foundation advocates a 1m clearance between motor vehicles and cyclists.

In addition to enforcement of speed limits by the police, there are also physical measures, such as traffic calming, that can be implemented to assist with law enforcement.
Promoting Health Benefits

There are many positive health and social benefits to active transport. Promotional campaigns could aim at promoting the health and lifestyle benefits. The following ideas could be further explored and promoted:

Quality family time - Spend quality time with family and friends while keeping fit at the same time! Take a picnic to the local park, explore your local area or cycle to visit family and friends. Walking and cycling is great to keep the whole family fit.

Healthy lifestyle - Walking and cycling is a fun way to get children away from electronic games and indoor entertainment and outdoors in the fresh air. Making exercise fun will encourage and teach children to live an active, healthy lifestyle.

Education - Carers can teach children how to ride a bike safely and share the path with others. Learning how to cycle at a young age may encourage children to use cycling in the future as a means of transport.

Independence - Walking and cycling can give you the independence and freedom to get around, at low cost. Why not get outdoors and explore your local area, walk or cycle to visit friends or go to the local shops.

Walking and cycling is for all ages - If you are not confident to cycle on a two-wheeled bicycle there are tricycles available. This can help you keep your balance, gain confidence and feel safe while still gaining the enjoyment and benefits cycling has to offer. Cycling also has low impact on joints and therefore is a great form of exercise for all ages and fitness levels.

Socialise - Walking and cycling is not just a great form of exercise but a fun way to catch up with friends and meet new people. Walking, running and riding with friends and family, commuting to work with mates or participating in fitness events are all great ways to socialise while also keeping fit!

Save your money - Walking and riding to work is great value for money - you gain fitness, fun and transport all in one. It is also less expensive than a car, so you can save some of your hard earned dollars.

Reduce your carbon footprint - Walking and cycling is not only good for you but also for the environment. Taking up active transport will allow you to cut the greenhouse gases and noise pollution produced by driving, and reduces the number of cars on the road.

Health - The many health benefits of walking and cycling, a low stress, physical activity choice, include:

- Just 30 minutes of exercise a day can halve your risk of diabetes and obesity.
- Walking and cycling uses major muscle groups and gets your heart rate up.
- Walking and cycling helps prevent heart disease, stroke and high blood pressure.
- Walking and cycling reduces the risk of developing type II diabetes and some cancers.
- Helps build and maintain healthy bones, muscles and joints reducing the risk of injury.
- Promotes physical well-being.
- Maintaining or improving physical function and independent living.
- Improving social interaction, quality of life and reduces the risk of depression.
- Building and maintaining healthy bones, muscles and joints, and reducing the risk of injuries from falls.
- Reducing the risk of heart disease, stroke, high blood pressure, type II diabetes and some cancers.
12. Key Recommendations
12.1. Key Recommendations

Long Term Goals
- Provide new routes as per the Delivery Plans included in Section 9 of the Cowra Shire Pedestrian and Cycling Plan.
- All education establishments, recreation areas and shopping centres should be linked with footpaths and cycleways.
- Towns and villages in Cowra Shire should be connected by on-road cycling routes and identified by signage maps.

Funding and Grants
- Investigate and apply for funding of pedestrian, bicycle, health and lifestyle grants as per Section 10 of the Cowra Shire Pedestrian and Cycling Plan.
- Consider increasing the funding allocated to the construction of new cycleways and footpaths and the associated support facilities to achieve the Delivery Plans included in Section 9.
- Consider allocating a separate budget line item for the maintenance of the footpaths and cycleways, including a control program of Caltrope (Catheads).
- Consider engagement of a Temporary Road Safety Officer as well as road safety promotion and education programs.
- Investigate opportunities for partnerships (external funding/in-kind support) from community groups for footpaths, cycleways, additional facilities and promotion within the region.

Youth Rider Education
- Investigate the construction of a free public pedestrian and bicycle education facility, including a road circuit simulating road conditions such as the Campbelltown Bicycle Education Centre.
- Encourage schools to actively run cycle education programs and continue to investigate new opportunities to provide support facilities for cycling students.
- Develop specific ‘Young Rider Friendly’ routes and maps that identify safe, low traffic volume on-road routes and cycleways.

Youth Rider Education
- Investigate the construction of a free public pedestrian and bicycle education facility, including a road circuit simulating road conditions such as the Campbelltown Bicycle Education Centre.
- Encourage schools to actively run cycle education programs and continue to investigate new opportunities to provide support facilities for cycling students.
- Develop specific ‘Young Rider Friendly’ routes and maps that identify safe, low traffic volume on-road routes and cycleways.

Planning Guidelines
- Footpaths to be required in new subdivisions on arterial and collector roads, as defined in amended DCP work.
- Use the existing drainage reserves for pathways, where practical.
- Integrate equitable access in amended DCP work.
- Identify the footpaths and cycleways to be constructed in amended DCP work.
- Require gutter ramps to be installed within roll-over kerbs for the identified strategic routes.
- Require the construction of the footpath or cycleway prior to subdivision release or seek funding for the construction of the path under a relevant Section 94 Contribution Plan.
- Review road width standards for new subdivisions where a DCP map shows a new cycleway to increase the footpath width.

Engineering Guidelines
- Amend the Cowra Shire Council Engineering Standards to require gutter ramps to be installed within roll-over kerbs for the identified strategic routes.
- Amend the Cowra Shire Council Engineering Standards to include the support facilities (seats, directional / distance signage, lighting, shade trees, dog tidy bag dispensers, toilets) where appropriate, for new footpath and shared path construction.
- Amend Cowra Shire Council’s Engineering Standards to make provision for Tactile Ground Surface Indicators within the existing footpath network, particularly in and around the Cowra CBD.
- Amend Cowra Shire Council’s Engineering Standards to provide appropriately designed gutter ramps to ensure that the grade of ramps is not too steep and the camber of footpaths is appropriate.
- Amend Cowra Shire Council’s Engineering Standards to ensure new roundabout designs consider footpath and cycleway connectivity and safety.

Tourism Opportunities
- Develop guided walking trails, associated maps and interpretive signage for Cowra.
- Develop bicycle trails, associated maps within the Cowra Shire for tourist loops or routes with a specific theme.
- Develop a road cycle map of popular routes in Cowra Shire.
- Make all maps available for visitors and residents via Council’s corporate and tourism websites, Visitor Information Centre, Library, bicycle shops, commercial accommodation establishments, aquatic centre, coffee shops and service stations.
- Encourage the development of a bicycle hire business in the Cowra Shire.
- Promote the Cowra Shire as a pedestrian and cycle friendly town through brochure development.
- Encourage cycle tourism through the development of regional cycling loops and themed rides.
- Investigate the feasibility of providing a rail trail between Cowra and Canowindra, in collaboration with Cabonne Shire Council and relevant rail and other government and community stakeholders.
- Encourage cycle tours with different genres (e.g. food and wine, heritage or general) to visit Cowra.
- Promote cycle trails to other Bicycle User Groups throughout the state.
12.2. Key Recommendations (Continued)

Network Maintenance

- Develop a Policy for receiving and dealing with ad hoc requests for works to the footpath and cycleway environment, which are not programmed or form part of this Plan.
- Develop policy / procedures to ensure that footpaths and cycleways are to be regularly monitored and maintained.
- Investigate the options for periodically pruning of low over-hanging trees.
- Investigate the options for selective / periodic control of catheads adjacent to the cycleway network.

Events promotion

- Organise specific media groups (e.g. cycling magazines) to the region to experience pedestrian / bicycle friendly activities.
- Promote the existing bicycle activities associated with B2B, Tour de Greenthorpe, Bike Week and other cycling events held in the region.
- Promote the Cowra Shire at other major running, cycling and triathlon events through either team gear / participation, display stand, banners.
- Promote walking and cycle trails to other user groups throughout the State.
- Investigate the opportunities for a bicycle event in Cowra.
- Encourage visitors to enter in the local and regional walking, running and cycle events.

Bike Racks

- Promote awareness of the importance of bicycle facilities with installation of the public art ‘branchrack’ donated by Artist Deb Jones.
- Signpost the existing and future bicycle racks within the Cowra Shire.
- Install new bicycle parking at Council owned facilities and within the footpath environment or in prominent locations within the Cowra CBD.
- Incorporate bicycle parking requirements in amended DCP work.
- Investigate options for temporary bicycle parking at community events.
- Bicycle racks to be co-located with all existing and future public toilets, particularly those located in recreation reserves and along footpaths, cycleways and shared paths.
- Encourage existing major businesses to install on-site bicycle parking for their employees.
- Encourage the schools within the Cowra Shire to provide bicycle parking facilities.

Support Facilities

- Install directional signage, distance markers as part of the network.
- Consult with Essential Energy to investigate options, including solar lighting and motion sensors, for installing lighting underneath the Cowra Bridge.
- Provide seating and shade at points of interest along the pedestrian and cycleways network.
- Provide public toilets at key recreation areas and parks, including the Cowra Peace Precinct.
- Highlight ‘potable water stations’ where they exist on pedestrian and cycling routes, through signage and maps.

Education Programs

- Develop a community education program for drivers, pedestrians and cyclists highlighting each other’s responsibilities (e.g. Share the Road type campaigns).
- Link into cycle events for major education programs.
- Implement parts of the ‘Sharing the Road’ program to assist the education of cyclists, motorists and pedestrians about their respective obligations while using public roads.
- Encourage the acceptance of the Code of Conduct for heavy vehicle truck drivers and cyclists.
- Promote walking and cycle trails to other user groups throughout the State.
- Investigate the opportunities for a bicycle event in Cowra.
- Encourage visitors to enter in the local and regional walking, running and cycle events.
Appendix A - Consultation Report
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1.1. Introduction


The Cowra Shire Pedestrian and Cycling Plan provides the framework for the development and coordination of pedestrian and cyclist facilities in the Cowra Shire. The focus is to make pedestrian and cycling activities a safe, healthy and attractive travel option.

Cowra Shire Council conducted preliminary consultation in late 2013 and through 2014 to obtain input from key stakeholders and the community about the Pedestrian and Cycling Plan.

The consultation involved a successful launch of the project, with over 50 interested people in attendance. Meetings were held with the Local Traffic Committee and the Cowra Access Committee as well as other transport, medical and community based professionals. Community workshops were conducted in Cowra, Gooloogong, Woodstock and Wyangala. Pedestrian and cycling surveys were conducted and a survey of School Principals was undertaken. Interviews were also conducted with cyclists from the Bike North BUG during their ‘Tour de Cowra’ held over the Easter Long Weekend 2014.

The emphasis of the consultation was on identifying gaps in the network as well as barriers to walking and cycling in the Cowra Shire.

The focus of this report is to record the outcomes of the consultation activities including the community surveys, stakeholder workshops and the schools survey. The report also highlights the key insights and main feedback outcomes of the consultation undertaken so far.

The Consultation Report will be used as reference points throughout the project to ensure the Cowra Shire Pedestrian and Cycling Plan remains focused on stakeholder and community feedback and leverages off the opportunities identified.

The survey results also assist in the development of a behaviour-change strategy, which will be important in removing barriers and enabling residents to become more physically active in the Shire.
1.2. Consultation Methodology

Cowra Shire Council conducted the following consultation activities to seek stakeholder and community input into the development of the Pedestrian and Cycling Plan.

Promotion

A number of promotional activities were undertaken to encourage participation in the preliminary consultation phase for the Pedestrian and Cycling Plan. Media releases were made available to local newspapers and interviews given on local ABC Radio about the launch of the project, surveys and workshops. Council’s website also featured details about the project, surveys and workshops. A sample copy of the promotional material is in Appendix A.

Stakeholder Workshops

Cowra Shire Council invited a range of key stakeholders to a Planning Focus Meeting held on Wednesday 27 November 2013. Attendees included representatives from the NSW Roads and Maritime Services (RMS), local health, transport, education, sporting and community groups. The purpose of the Planning Focus Meeting was to launch the Pedestrian and Cycling Plan as a new project, brief stakeholders on the new project and its process, and invite preliminary ideas and input to help shape the development of the Plan. A sample copy of the Planning Focus Meeting invite material is in Appendix B.

Out of this meeting, a Pedestrian and Cyclist Working Group was formed to assist with the development of the Plan. The Working Group Members List is in Appendix C.

A number of workshops were conducted in December 2013 at Cowra, Gooloogong, Woodstock and Wyangala. These workshops were aimed at identifying and understanding the current pedestrian and cycling conditions within the Cowra Shire, including current facilities. In addition the workshops provided an opportunity to identify key locations and constraints to improve the pedestrian and cycling network within Cowra Shire. A copy of the Stakeholder Workshop timetable is in Appendix D.

A luncheon meeting with friends of the Cowra Community and Neighbourhood Centre, Cowra Special Needs and Cowra Meals on Wheels was held on Wednesday 22 January 2014. An overview presentation was given at the luncheon and a game of ‘PAMP Bingo’ played with attendees. Valuable feedback was obtained at the luncheon meeting on key destinations / attractors and improvements to the network.

Community Surveys

Community-based Pedestrian and Cycling Surveys were developed to capture the views of the broader community about the current pedestrian and cycling conditions and issues in the Cowra Shire.

The surveys were developed in both online and hard copy formats and were made available to the community from 27 November 2013 until 17 January 2014. The online surveys were developed using Survey Monkey and a link to the surveys was available from Council’s website.

Separate surveys were available specifically dealing with pedestrian issues or cycling issues. The information captured in the two surveys provided valuable insights into the local conditions in Cowra Shire, including:

- Pedestrian and cycling behaviours.
- Barriers to active transport modes (walking, jogging, cycling).
- Enablers for greater participation.
- Feedback on the facilities and routes that could be improved.

A total of 104 completed surveys were received by Council; comprising 26 Pedestrian Surveys and 78 Cycling Surveys. A copy of the Pedestrian Survey questionnaire is in Appendix E and the Cycling Survey questionnaire is in Appendix F.

School Survey

A School Survey was also developed to better understand the number of students and staff walking and cycling to and from school as well as the enablers and barriers to walking and cycling to school and the types of end of trip facilities available at schools.

The School Survey was distributed to the Principals of all schools within the Cowra Shire on 6 December 2013 and schools had until 31 January 2014 to complete the survey. The Principals were asked to complete the 16 survey questions on behalf of the school. Questions asked how many students (approximately) walk or ride bicycles to and from school and asked for reasons why students didn’t ride their bicycles or walk to school. The survey prompted Principals to ask their own questions of students and teachers, in an attempt to capture as wide a response as possible. A copy of the School Survey questionnaire is in Appendix G.

Cycle North BUG Interviews

A number of interviews were conducted with cyclists from the Bike North Bicycle User Group (BUG) from Sydney, who were cycling their ‘Tour de Cowra’, which has been held over the Easter Long Weekend for the past 17 years. Of the 70 cyclists involved in the ride, 15 random interviews were conducted to learn more about the routes ridden in the Cowra Shire, the duration of their stay, their average expenditure, barriers they encountered to cycling and facilities they use / require while visiting Cowra. The information captured in the interviews provided valuable insights into the conditions of cycling for tourists and the needs of active transport tourists.
1.3. Results

1.3.1. Planning Focus Meeting

At the Planning Focus Meeting attendees were invited to present their ideas and goals for the Cowra Shire Pedestrian and Cycling Plan. The goals which were identified as the highest priority included:

- Fully connected cycling routes within Cowra Shire.
- Improved walking / shopping environments, especially at the Cowra CBD.
- Implement the Master Plans for the Cowra CBD, Peace Precinct and Lachlan River Precinct to improve pedestrian and cycling conditions.
- Improved cycling conditions and safety in / around Cowra, especially on Main Roads.
- Networks that are safe for children, older pedestrians and all cyclists.
- Increasing car / truck driver awareness and consideration of pedestrians and cyclists.
- Improving safety for children walking, scootering or cycling to schools.
- Promoting the positive health and social outcomes of physical activity as a way of promoting walking and cycling.
- Making Cowra a destination of choice for cyclists and tourists as a way of promoting tourism and new business.

1.3.2. Key Stakeholder Workshop Outcomes

At the community workshops in Cowra participants were presented with a series of shire and town maps and invited to highlight opportunities, constraints and priorities for pedestrian and cycling route connections in the Shire. Maps of the Cowra Township and the villages of Woodstock, Gooloogong and Wyangala showing the ‘marked-up’ suggestions have been included on the following pages.
1.4. User Group Survey Outcomes

Limitations of Surveys

The community surveys received a total of 104 responses, comprising 26 pedestrian surveys and 78 cycling surveys. A copy of the Pedestrian Survey Questionnaire is in Appendix E and the Cycling Survey Questionnaire is in Appendix F.

There are a number of limitations to consider with respect to the results of the survey. A significant amount of effort was taken to mitigate these limitations during the development and distribution of the surveys. The limitations of the survey are:

Interpreting response options

Evident throughout the surveys was the high level of interpretation that could be implied to the answer options for each question. This was particularly the case for quantitative questions whereby respondents could interpret the answer options differently. In order to ensure that the options provided were not restrictive, an ‘other’ option was provided for most quantitative questions. This open-ended answer option allowed respondents to accurately specify their response if they felt the options available did not suit them. By not framing a response, participants were able to state their views or provide an elaborated response to the question.

Categorisation of qualitative responses

For the open ended question responses a thematic analysis was undertaken. The biggest limitation with this approach was the high level of interpretation required to allocate a category to each response. A total number of comments for each theme was then calculated based on the frequency of the statement being raised within each individual response. This figure does not imply that one theme is more important than another, but instead provides an indication of prevalence of the statement amongst the survey respondents. Where specific comments are referred to in this report, the comments have been recorded as they were expressed by the respondent.

Survey logic and targeted questions

In order to ensure a broad range of opinions were captured and for the surveys to make sense, it was important for the surveys to contain logic whereby responses were filtered. For example, respondents that identified themselves as non-cyclists would be taken to questions that asked them why this was the case.

Distribution and promotion of the survey

The community surveys were broadly promoted both online and in hard copy format. A link to the online surveys was provided on the Cowra Council website. Hard copies were made available at key community locations and contact was made with existing walking, jogging and bicycle riding groups and stakeholders to encourage participation in the consultation activities. As a result of the numerous responses received from members of cycling groups, clubs and networks, there is a higher representation of regular cyclists. The limitation this presents is that the survey responses over represent regular cyclists in the community and under represent responses from pedestrians as well as infrequent, potential and non-cyclists.
1.5. Cyclist Survey Questions Responses

The following section is an analysis of the Cycling Survey responses collated from the community and survey broken down into the individual questions asked. Each survey question contains a detailed analysis of the responses.

**Question 1: Which age category do you belong to?**

The Figure above indicates the age category for each of the survey respondents and the number of respondents that answered the question. The largest majority of respondents were aged 35 to 49, representing 58 per cent of all 78 respondents. The groups that were under represented included the 17 and under (5%), 18-24 (5%) and 70 and over (1%) age groups.

In order to try and alleviate this over representation, a school survey was also conducted as well as a seniors luncheon meeting. The results of the school survey can be located in Section 4 and the feedback from the seniors meeting has been reported in the general findings of this report.

**Question 2: What gender are you?**

The cycling survey drew more female respondents (64%) than male (36%). As a result, an overall overrepresentation of female respondents has been noted in the analysis of the community survey data.
Question 3: Which of the following statements best describes you?

The Figure above is a representation of the different cyclist types identified by the survey respondents. The greatest number of respondents owned a bicycle and used it most weekdays (39%) or at least once a month (21%). These cyclist types have been divided based on the definitions provided in the answer options and have consequently split the survey respondents (as explained below).

**Survey Split**

From this section onwards, the survey splits into questions targeting specific respondents. These respondents have been categorised into the following:

- Regular cyclists
- Infrequent cyclists
- Potential cyclists
- Non-cyclists

While the survey was split to ensure that the correct cyclist type was given the appropriate question, respondents that selected ‘other’ were taken to Question 4, regardless of their answer. As mentioned above, this presented another limitation whereby a small number of non-cyclists may have been captured in the questions intended for regular/infrequent cyclists.

Question 4: What do you think are the benefits of bicycle riding on a regular basis? (Please select all that apply)

The Figure above is a representation of reasons why regular and infrequent cyclists ride their bicycles.

A total of 24 respondents answered this question, which allowed multiple answer responses (i.e. respondents could select more than one reason for riding their bicycle). As indicated in the graph, the two most common reasons for riding a bicycle were “for fitness and health reasons” (21 respondents) and “because it is fun and enjoyable” (14 respondents).
Question 5: Please indicate why you don’t ride a bicycle. (Please select all that apply)

The Figure above indicates the main reasons why respondents do not ride a bicycle. 23% of respondents do not ride because they don’t have a bicycle. 19% of respondents indicated they don’t ride because they didn’t think the available routes were safe or comfortable enough to ride on.

Question 6: If you think that the available routes are unsafe or are uncomfortable to ride on, please select the reasons why from the list below. (Please select all that apply)

The above Figure is representative of the key reasons why respondents consider existing bike paths to be unsafe or uncomfortable. This question contained a specific type of logic that allowed only the respondents that selected “I don’t think the available routes are safe or comfortable enough to ride on” as their answer to question 5, to answer this question.

Question 7: Why do you ride your bicycle? (Please select all that apply)

As indicated above, the main reason why cyclists did ride their bicycles was for fitness, health and fun.

Question 8: What type of cycling do you take part in most often?

As indicated above, most cycling was undertaken for recreational purposes and sport.
Question 9: Which of the following are reasons why you don't ride your bicycle more regularly for everyday local trips or for commuting to work or study? (Please select all that apply)

- I only ride my bicycle for leisure or recreational purposes or as a sporting activity
- I don't feel fit enough to ride more often
- I don't want to be sweaty when I get to my destination
- There aren't any convenient routes for me to get to my destination
- I don't think the available routes are safe or comfortable enough to ride on
- I don't like wearing a helmet
- I'm not confident in my bicycle riding skills
- I'm not confident I know how to look after my bicycle
- There is nowhere for me to take a shower or change at the end of my trip
- There is nowhere to park my bicycle at my destination
- None of the above

As indicated above, the main reason why cyclists did not ride their bicycles more regularly was because they only ride for recreational and sporting purposes or they did not think the routes were safe or comfortable enough.

Question 10: If you think that the available routes are unsafe or are uncomfortable to ride on, please select the reasons why from the list below. (Please select all that apply)

- The routes are too hilly
- The road has no marked bicycle lane
- The paths I can use are not comfortable to ride on (e.g. poorly maintained)
- There aren't enough (or any) physically separated bicycle paths
- There aren't enough (or any) dedicated bicycle lanes on roads and streets
- I do not feel comfortable sharing the available offroad paths with pedestrians
- There is too much traffic to ride on the road
- There are too many cyclists on the bicycle paths

As indicated above, the main reason why cyclists thought the available routes were unsafe was because there weren't enough dedicated / line marked bicycle paths and lanes.
Question 11: When you are riding your bike (inside or outside of the Shire) what path/s do you prefer to ride on? (Please select all that apply)

This question was a two-part question. The first part of the question asked respondents to identify the type of path they usually ride their bicycle on, with most preferring on road lanes.

Of the 33 respondents who selected ‘On road lanes marked by a painted line’, 14 described why they used this type of path in the list below.

- Safety reasons - In some cases only available route.
- I enjoy riding out of town for fitness reasons.
- I prefer to ride where I cause as little inconvenience to motor traffic as possible.
- You are not likely to come across potholes in the roadway. Safer and easier on the legs.
- Smooth tar, wide verge, low traffic.
- Main preferred place is away from speeding cars......or at least so they can’t whizz past 5 cm away from your handle bars!!
- I mostly ride with my 2 sons aged 8 and 10 so we always look for a safe route to accommodate their riding abilities.
- Safest and good road surface.
- Safer, wider lane to avoid idiots nearly knocking you off your bike.
- Because this is the only option there is on offer in this town.

Of the 32 respondents who selected ‘On the road with no marked bicycle lane’, 8 described why they used this type of path as listed below.

- Safety reasons - In some cases only available route.
- I enjoy riding out of town for fitness reasons.
- Quiet country lanes eg next to railway lines.
- Less traffic.
- Smooth tar, wide verge, low traffic.
- Main preferred place is away from speeding cars......or at least so they can’t whizz past 5 cm away from your handle bars!!
- I ride with a group each week and our loop takes us on both marked and unmarked roads.
- Happy to share.

Of the 22 respondents who selected ‘Off road path for exclusive use of bicycles’, 13 described why they used this type of path as listed below.

- Logically it is much safer.
- Safety reasons -- In some cases only available route.
- I enjoy riding out of town for fitness reasons.
- On a separated, bicycle specific cycle lane. One that does not include pedestrians. One that is separated from road traffic. This is what they do in Europe - specifically Germany & Austria where I have travelled.
- I prefer to ride where I cause as little inconvenience to motor traffic as possible.
- You are not likely to come across potholes in the roadway. Safer and easier on the legs.
- Purely safety. I am a little uncomfortable about riding on the road with traffic.
- Main preferred place is away from speeding cars......or at least so they can’t whizz past 5 cm away from your handle bars!!
Because it is safer for cyclists to be off the road away from cars (the driver/cyclist rivalry) and because it's safer for pedestrians to have their own path as well (unless the path is extra wide, in which case have a bike lane and a pedestrian lane).

- Because it is safer to ride on so u don’t get run over.
- Safer from traffic.
- I will ride anywhere for fun and fitness. Feel unsafe on roads with no bike lane.
- Some drivers do not understand that bike riders also have right of way on roads. They sometimes do not acknowledge there is a rider on the road and the lines help the drivers keep a safe distance from the riders.

Of the 12 respondents who selected “Off road path shared with pedestrians”, 6 described why they used this type of path as listed below.

- Safety reasons - In some cases only available route.
- Less traffic and bigger trucks.
- You are not likely to come across a pothole in the roadway. Safer and easier on the legs.
- It is safer to ride up and down my driveway as the traffic is terrifying if you are a bike rider.
- I will ride anywhere for fun and fitness. Feel unsafe on roads with no bike lane.
- Happy to share.

Of the 8 respondents who selected “Off road path shared with pedestrians”, 4 described why they used this type of path as listed below.

- Logically it is much safer.
- You are not likely to come across a pothole in the roadway. Safer and easier on the legs.
- Quiet country lanes eg next to railway lines.
- I will ride anywhere for fun and fitness. Feel unsafe on roads with no bike lane.

Question 14: What are your top three most common journeys by bicycle (Please provide start and end point)?

This question received a total number of 33 respondents with 75 different journeys identified by these respondents which take various routes throughout the Cowra Shire. What these results indicate is that a large number of respondents ride throughout the LGA and that multiple routes are taken in this process. The majority of the respondents stated they used a number of different cycling routes that started at Cowra and looped through various villages / towns within the LGA. The Main Roads connecting Cowra and the outer lying villages / towns have been highlighted as key thoroughfares travelled along. In particular:

- Grenfell Road (23 responses).
- Boorowa Road (20 responses).
- Binni Creek Road (10 responses).
- North Logan Road (6 responses).
- Sydney Road (5 responses).
- Canowindra Road (4 responses).
- Darbys Falls Road (4 responses).
Various out of town roads within the LGA, connecting the main roads were also highlighted as key thoroughfares travelled along, in particular: Chiverton Road, Belubula Way, George Russell Drive, Reids Flat Road, Morongla Road, Broula Road, Chardonnay Road, Reg Hailstone Way and Porters Mount Road.

What can be observed from these responses is that the majority of bicycle users are cycling for fitness / recreation and are travelling large distances around Cowra Shire. The top five journeys identified were:

**Cowra / Noonbinna loop (26 responses)**
Respondents stated that they used a number of different cycling routes that travelled from Cowra and through Noonbinna. A large number of these respondents highlighted the Main Roads connecting the villages / towns as key thoroughfares travelled along. In particular, the Young Road, Boorowa Road and Grenfell Road were used along with various other local roads including Chiverton, Broula, Chardonnay, Morongla and Reids Flat Roads.

**Cowra to Canowindra / Mandurama / Billimari / Woodstock (loop) - via Binni Creek Road (11 responses)**
Respondents stated that they used a number of different cycling routes that travelled through various villages within the northern side of the Shire. A large number of these respondents highlighted the Main Roads connecting the villages as key thoroughfares travelled along, including Sydney Road, Lachlan Valley Way and Canowindra Road along with various other local roads including Binni Creek Road, Belubula Way, Darbys Falls Road, North Logan Road and George Russell Drive.

**Cowra to Woodstock / Wyangala via Sydney and Darbys Falls Roads (9 responses)**
Respondents stated that they used a number of different cycling routes that travelled from Cowra through Woodstock and Wyangala Dam. A large number of these respondents highlighted the Main Roads connecting the villages as key thoroughfares travelled along. In particular, Sydney Road, with various other local roads used connecting the main roads, including Reg Hailstone Way and Darbys Falls Road.

**Cowra to Billimari (loop) via North Logan and Lachlan Valley Way (7 responses)**
Respondents stated that they used a number of different cycling routes that travelled between Cowra and Billimari. A large number of these respondents highlighted the Main Roads connecting the villages as key thoroughfares travelled along. In particular, the Lachlan Valley Way and Forbes Road and Grenfell Road with various other roads used connecting the main roads.

**Cowra North**
Respondents stated that they used a number of different cycling routes that they travelled along throughout North Cowra. A large number of these respondents highlighted the roads connecting various sites and / or town roads connecting the main roads, in particular, Evans Street, Farm Road, Binni Creek Road.
Question 15: Please identify the top three bike destinations that you would like to see developed or improved in the future. Consider Cowra CBD (street names, cross roads), hospital, schools, recreational facilities, parks, swimming pool, picnic areas, showground etc.) and any other regional links in the Cowra area.

The above table is a representation of the key locations identified by the respondents as current gaps within the existing network. Of these, the top five gaps identified were:

- Cowra to Canowindra (10 responses)
- Chiverton Road Loop (8 responses)
- A Bicycle lane on the bridge (7 responses)
- Cowra to Billimari (3 responses)

The most frequently mentioned route was between Cowra and Canowindra (10 respondents). Of these respondents 3 indicated they would like to see a bicycle path along the existing inactive rail corridor. Other respondents also would like to see long distance bike paths with various towns included in a Cowra to Canowindra loop including Eugowra, Billimari and Woodstock. Other comments received on this question were:

- "I would prefer bike routes averaging 30km so that I can use them for fitness as well as for recreation with my children."
- "A smaller bike loop at River Park and sports fields on other side of pool with sports equipment dotted around under the trees at river park making it a great fitness area for kids, teenagers, adults and seniors, pool is close, swings and playground equipment is already there......makes it a great area."
- "A bicycle track connected all the way round town. Join the Sakura drive one with Europa park through to Oliver Oval along the river around to bulkhead road boundary road back to the Cowra bridge, then over to Mulyan Street to Pridham Street and back to Evans street."

As shown above, respondents indicated that one of the biggest ‘gaps’ in the Cowra network was the “cycle paths between villages”. As indicated in the results to previous questions, most respondents cycled for recreational and sport purposes which may have over-represented the preference for on-road routes travelling large distances throughout the Shire. It is possible that should the respondents of this survey included a more proportionate number of infrequent, potential and non-cyclists the enablers for cycling more often may have been different.
Question 16: Please indicate whether the following changes would make you more likely to cycle on a regular basis for everyday local trips or to commute to work/study (Please provide an answer for each option):

In this question respondents were provided with a list of changes and they were asked to identify whether these changes would encourage greater participation in cycling.

The Figure below indicates that the availability of physically separated bicycle paths would be the greatest enabler for cycling more. The availability of dedicated bicycle lanes on roads and streets was the change identified by the second largest number of respondents as enabling them to cycle more often, followed by increased driver awareness of bicycle safety and road sharing.

Whilst fewer respondents identified improved bicycle riding skills and increased knowledge of bicycles and bicycle maintenance as enablers for cycling, the results should be read within the context of the large number of recreational and sport cyclists who responded to this survey. It is possible that should the respondents of this survey included a more proportionate number of infrequent, potential and non-cyclists the enablers for cycling more often may have been different.

Question 17: Do you have any children under the age of 15

The Figure above indicates that 43% of respondents have children under the age of 15 and 57% of respondents do not.

Survey Split

This question contained another filter whereby the respondents who said they did have children under the age of 15 were directed to answer Question 18 and 19 relating to the cycling behaviour of children. If respondents did not have children under the age of 15 they were prompted to skip to Question 20.
Question 18: Do your children ride a bicycle?

This question was made up of two parts. The first part of the question asked whether the respondent’s children ride a bike and where they ride. A total of 26 respondents answered this question. Respondents were asked to choose one of three options provided with the most common response being “Yes, but they only ride around the park or in our driveway/yard” (50%).

The second part of the question asked respondents to provide more details about why they ride or don’t ride. This part of the question was answered by 12 respondents who provided multiple barriers to children cycling in Cowra, as identified below:

- My children are too young for the road (2 responses).
- Cycling along roads too dangerous as highways are 100km/h (7 responses).
- Lack of safe bicycle paths in the LGA, prefer specific bike paths (1 response).
- It is too far to ride to school or other destinations (2 responses).
- Cowra is too hilly (1 response).
- Friends don’t ride (1 response).
- My children use bike paths only (1 response).
- My children do not have any street/road sense (1 response).

Other comments received on this question were:

- We live out of town so too far to ride to town, they don’t have a lot of street/road sense so not willing to take them on the road….would love to take them on a specific, safe bike path.
- We live on Darbys Falls Road which is a very fast and busy road. We have ridden from our house to Savages Lane and back just for fun but Darbys Falls Road is scary for young kids on bikes especially during summer when there are a lot of boats heading to the dam.
- Very hilly, therefore hard to ride.
- My oldest child rides everywhere but my youngest doesn’t as it’s not safe.
- I have 2 children who participate in local triathlon, with the cycle leg being on Taragala Street. One of them also rides in local group rides on the Chiverton Loop.
- They don’t ride in town because their friends don’t ride in town.
- Will only ride up to the old tip area to do some mountain bike riding. No riding around the streets due to traffic and no bike paths.
Question 19: Is there anything that would help you to encourage your children to ride their bicycles more often to get to school or around the local area?

This qualitative question was answered by 18 respondents. Some respondents indicated more than one category in their response that would help them to encourage their children to ride more often to get to school or around the local area. None of the categories have been ranked but rather the Figure below indicates the frequency of responses received.

Other comments on this question about the enablers that would encourage more children to cycle are listed below:

- Safety.
- A dedicated Bicycle path would be much safer for children and a lot more fun for them to ride to school or the park.
- Marked cycle lanes on the roads.
- Better roads and bicycle lanes etc. Reg Hailstone Way is too dangerous for bikes.
- Dedicated paths, education / classes for them.
- Not really, as we live within walking distance and I think they are safer walking to school rather than riding.
- Safer road areas and bike paths.
- Safety.
- n/a.
- More dedicated bicycle paths.
- Safe bike paths where I was sure they would be safe and there would not be any cars...they could go at their own pace and their mother wouldn't feel like a train wreck afterwards and everyone would be active, happy and healthy.

- More time in our lifestyle to do this.
- Safer routes.
- We should be spending money on more important projects like roads & things for youth not bike tracks & kids won’t use this.
- Yes bike paths with not traffic on them.
- Definitely bike baths on commonly used roads would make it much safer, not only for my children but especially for less confident riders.
- More bike paths off the street. More kids riding bikes.
Question 20: Do you have any further comments about cycling in Cowra or about the new Bike Plan?

This question was an optional qualitative question and was responded to by 29 respondents. The comments made were categorised for analysis into key themes. The Key themes identified in the open-ended responses:

- Bubblers for pow camp paths.
- Great plans for Cowra bike enthusiasts!
- I like the cyclist sign on the Grenfell Road.
- Lights and bike / footpaths in Wyangala village would make cycling a lot safer.
- Would be good to see improvement of out of town roads for cycling.
- Make definitive bicycle lanes. A painted line that splits some narrow margin on the road is NOT a bicycle lane.
- Good luck with it, it is a great initiative.
- Promote, promote, promote. The town is wonderful for cycling.
- Test survey.
- Definitely need safer paths especially around schools, along Redfern Street (less hills). Support for bike group (eg BUG in Cowra). Thank you.
- My only concern is that the local triathlon / cycling / semi pro group will take over the bike path and frighten "we leisure riders" off it. As evidenced by the use of Macquarie Street near the pool for time trials, that are not forewarned nor signposted clearly.
- Do your Best ... Get everyone riding safely.
- It would be good for the community to improve health and safety.
- Bicycle riders learning and abiding by the road rules and being identifiable. e.g. cars have registration plates. Helmets are a bit ridiculous, most riders will never do enough speed for a helmet to make any difference - motorbike riders, that’s a different matter - they do.

Bicycle riders also need to decide whether they a rider or pedestrian and not swap and change to suit. Cyclists should wear high visibility vest / clothing and have a mirror to see what is coming up behind them. That being said, I seriously think the road rules should be revised for cyclists to ride FACING the oncoming traffic, as pedestrians are meant to walk. That way they can SEE approaching cars or other hazards.

- Bring it on!!!!..... If you could also get council to install exercise equipment around river park...under the trees for example (like they have along the path near Richmond Air Base and like other councils are installing) we will decrease our weight issues, diabetes ,heart, hypertension problems etc.)
- I think it’s a fantastic initiative that I hope will encourage a lot more people to start cycling.

- Great to see planning but I do worry with Michael Carter leaving his position the drive and momentum may stall.
- Improved road surfaces, improved edges of road on popular cycle routes would be great.
- Maintained bike lanes in more rural roads to help do longer rides. The roads around town are good and wide for my ride to work. More areas to park your bike would be great.
- I would like a bike path around the Chiverton loop
- Great idea hope we get some around Cowra will make it a lot safer for us all. A path from Cowra to Canowindra would be great also :)
- Anything that will encourage more people, especially children to ride is a huge positive.
- The more signs that are placed means less chance of a cyclist being hit by a car as they hopefully will be more aware.
- The Chiverton Loop is dangerous on the main roads. There needs to be a wider shoulder on the main roads going in/out of Cowra.
- Very very happy with the new bike and pedestrian path around the POW area, need more of these around Cowra for runners and walkers too.
- I would like to see bike safety courses at school and in the community so that cyclists from a young age better understand the road rules, and that drivers are also given more information in relation to cyclist requirements.
- I have to ride a bike at work not doing it when I get back home to Cowra.
- Motorists have enough problems on the road without the added worries of arrogant cyclists who disobey road rules and should have to register their bikes to use the road.
- Ensure plan focuses on all users, not just road riders. Council’s actions appear to be focused on the road riding elite, as indicated by the Noonbinna Rd signage, which benefits only a small group. Explore long term development of the Eugowra Rail Line as a Bike Path.
1.6. Pedestrian Survey Questions Responses

The following section is an analysis of the Pedestrian Survey responses, broken down into the individual questions asked. Each survey question contains a detailed analysis of the responses.

**Question 1: Which age category do you belong to?**

As demonstrated in the Figure above, the largest majority of respondents were aged 35 to 49, representing 35 per cent of all 26 respondents. The groups that were under represented included the 18 and under (0%), 18-24 (4%) and 70 and over (4%) age groups.

**Question 2: What gender are you?**

As demonstrated in Figure above, the pedestrian survey drew more female respondents (64%) than male (36%).
Question 3: Which of the following statements best describes you?

As indicated in the Figure above, the greatest number of respondents walked or navigated along the footpath network at least two times per week as part of their daily exercise (44%) or walked / navigated the footpath network to get to a local destination (35%).

Question 4: What do you think are the benefits of walking/navigating the pedestrian/footpath network on a regular basis?

The Figure above is a representation of the benefits of walking / navigating the pedestrian network on a regular basis, with the two most common reasons were “for fitness and health reasons” and “because it is fun and enjoyable”.

Question 5: Do you have access to a motor vehicle?

As also shown in journey to work data (ABS 2011 Census) most people surveyed have access to a motor vehicle. A shown in the Figure below most people walk for fitness and to get to local destinations.

Question 6: What type of pedestrian movements do you typically do?

The Figure above is a representation of the benefits of walking / navigating the pedestrian network on a regular basis, with the two most common reasons were “for fitness and health reasons” and “because it is fun and enjoyable”.

As per the Figure above, the greatest number of respondents walked or navigated along the footpath network at least two times per week as part of their daily exercise (44%) or walked / navigated the footpath network to get to a local destination (35%).

The Figure above is a representation of the benefits of walking / navigating the pedestrian network on a regular basis, with the two most common reasons were “for fitness and health reasons” and “because it is fun and enjoyable”.

As also shown in journey to work data (ABS 2011 Census) most people surveyed have access to a motor vehicle. A shown in the Figure below most people walk for fitness and to get to local destinations.

The Figure above is a representation of the benefits of walking / navigating the pedestrian network on a regular basis, with the two most common reasons were “for fitness and health reasons” and “because it is fun and enjoyable”.

As per the Figure above, the greatest number of respondents walked or navigated along the footpath network at least two times per week as part of their daily exercise (44%) or walked / navigated the footpath network to get to a local destination (35%).

The Figure above is a representation of the benefits of walking / navigating the pedestrian network on a regular basis, with the two most common reasons were “for fitness and health reasons” and “because it is fun and enjoyable”.

As also shown in journey to work data (ABS 2011 Census) most people surveyed have access to a motor vehicle. A shown in the Figure below most people walk for fitness and to get to local destinations.
Question 7: How often would you walk/travel over one kilometre to access work, school, sport, social events, shops etc? (Please select all that apply)

- Everyday: 41%
- More than two times per week: 27%
- Less than once per week: 18%
- Not often: 14%

The Figure above indicates that most respondents (55%) travel along the pedestrian network everyday or at least two times per week. However, the results also show that a relatively large proportion of respondents (45%) don’t regularly walk / travel long distances of over a kilometer.

Question 8: Please select the reasons that discourage you from using the footpaths and pedestrian networks more often. (Please select all that apply)

- The paths are too flat: 17%
- The road has no marked or dedicated footpath: 12%
- The paths I use are poorly maintained: 12%
- I feel uncomfortable / unsafe walking along the route: 12%
- There is too much traffic along the roads: 12%
- Lack of safe pedestrian crossings at busy roads: 12%
- Distance is too long to walk: 12%
- Aggressive animals (mynas, dogs): 8%
- Weather (too hot or too wet): 8%
- No footpath access from end of Evans Street along Canowindra Road to meet up at Dowell Street, bad lighting: 8%
- Snakes are a hazard at times: 8%
- Lack of time: 8%
- No friends to motivate me to walk: 8%
- I walk all day at work do not want to do this when I get home or have time off: 8%

A total of 26 respondents answered this multiple response question with the total number of responses reaching 70. 5 respondents also chose other, and stated:

- No footpath access from end of Evans Street along Canowindra Road to meet up at Dowell Street, bad lighting.
- Snakes are a hazard at times.
- Lack of time.
- No friends to motivate me to walk.
- I walk all day at work do not want to do this when I get home or have time off.
Question 9: Which areas in the Cowra Shire Council area do you typically move to/from or within as a pedestrian? (Please select all that apply)

26 respondents answered and provided multiple answers reaching 153 responses:

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>34.6%</td>
<td>9</td>
</tr>
<tr>
<td>CBD</td>
<td>73.1%</td>
<td>19</td>
</tr>
<tr>
<td>Swimming Pool</td>
<td>19.2%</td>
<td>5</td>
</tr>
<tr>
<td>Mulyan Residential Area</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>North Cowra Residential Area</td>
<td>42.3%</td>
<td>11</td>
</tr>
<tr>
<td>West Cowra Residential Area</td>
<td>15.4%</td>
<td>4</td>
</tr>
<tr>
<td>Cowra Showground</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>West Cowra Industrial area</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>POW camp / Sakura Avenue</td>
<td>42.3%</td>
<td>11</td>
</tr>
<tr>
<td>Japanese Garden</td>
<td>38.5%</td>
<td>10</td>
</tr>
<tr>
<td>River Park Sporting Facilities</td>
<td>19.2%</td>
<td>5</td>
</tr>
<tr>
<td>Edgell Park Sporting Facilities</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>Brougham Park Recreation Area</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>Cowra Hospital</td>
<td>26.9%</td>
<td>7</td>
</tr>
<tr>
<td>Lachlan River Precinct</td>
<td>15.4%</td>
<td>4</td>
</tr>
<tr>
<td>Lachlan River (Low Level Bridge)</td>
<td>23.1%</td>
<td>6</td>
</tr>
<tr>
<td>Eramble</td>
<td>3.8%</td>
<td>1</td>
</tr>
<tr>
<td>Cowra Golf Course</td>
<td>3.8%</td>
<td>1</td>
</tr>
<tr>
<td>Mulyan Oval</td>
<td>3.8%</td>
<td>1</td>
</tr>
<tr>
<td>Rodwell Park</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Apex Park</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Europa Park</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Cowra Skate Park</td>
<td>23.1%</td>
<td>6</td>
</tr>
<tr>
<td>Sid Kallas Oval</td>
<td>3.8%</td>
<td>1</td>
</tr>
<tr>
<td>Cowra Public School</td>
<td>15.4%</td>
<td>4</td>
</tr>
<tr>
<td>Cowra High School</td>
<td>19.2%</td>
<td>5</td>
</tr>
<tr>
<td>Mulyan Public School</td>
<td>19.2%</td>
<td>5</td>
</tr>
<tr>
<td>SI Raphaels Catholic School</td>
<td>7.7%</td>
<td>2</td>
</tr>
<tr>
<td>Holman Place Public School</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>M.E.T School</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Wyangala State Recreational Park</td>
<td>7.7%</td>
<td>2</td>
</tr>
<tr>
<td>National Parks</td>
<td>11.5%</td>
<td>3</td>
</tr>
<tr>
<td>Goolongong shops/hotel/club/other</td>
<td>3.8%</td>
<td>1</td>
</tr>
<tr>
<td>Woodstock shops/hotel/club/other</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Wyangala shop/golf course/club</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Cowra Cemetery</td>
<td>26.9%</td>
<td>7</td>
</tr>
<tr>
<td>Dog leash free areas</td>
<td>26.9%</td>
<td>7</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Four also chose other, stating: Walking Dogs, Boundary Road, Cowra Medical Centre, and “I walk along Gem Road everyday as I live out of town. Occasionally we go into town to do one of the walks in there.”

Question 10: Please identify gaps in the Cowra pedestrian network that you would like to see improved in the future (street names/cross roads/suburbs)?

12 respondents answered this open ended question and provided the following responses:

- Entering the swimming pool off Taragalar Street, corner of Railway Lane and both Darling and Fitzroy Street, Pitt Street turning on to Col Stinson Park.
- Macassar Street, Keswick Street.
- To and from Erambie, West Cowra.
- Pedestrian crossing at corner of Brisbane and Vaux Street, pedestrian crossings / safe crossing along Binni Creek Road.
- From end of Evans Street along Canowindra Road to meet Dowell Street.
- No bypass for boundary Road as I walk this route nearly everyday.
- Walking tracks around Lachlan River.
- No access to water, poor lighting.
- None.
- Pathway from Sakura Park along Binni Creek Road to the cemetery, walking along Canowindra Road is pretty scary when you want to walk to the cemetery.
- No easy way up or around the town hill.
- Binni Creek Road between Evans Street and Guards Place.
Question 12: Do you have any further comments about walking in Cowra or about the new Pedestrian Access Plan?

This question received a total number of 12 respondents:

- Start by improving the current footpaths.
- I think it is a great idea and would encourage more to become active.
- Please include Erambie WEST Cowra.
- It sounds great! Well done!
- Signposted routes with return distances.
- Lack of footpaths, poor quality footpaths, lack of lighting after dark.
- Bypass will ruin my walking path and that of many many residents.
- Need to get more people to do it in couples or in groups to help with motivation. It needs to be more social.
- It should be mailed out to every household.
- Very happy about the opening of the new path at POW camp will be using this often for running walking and biking. Hoping there are plans for water access in the future.
- Very few use the pedestrian crossings anyway, any further crossings would be a waste of money.
1.7. School Survey

The school survey was completed by a number of schools in the Cowra Shire. The Table below outlines the responses received by the schools that responded to questions 1-4. Of the 5 responses received 4 related to primary aged children or younger (3-12 year olds) and 2 related to secondary school aged children (12-18 year olds).

Table - School Survey responses Q 1-4

<table>
<thead>
<tr>
<th>School</th>
<th>Number of students at school</th>
<th>Number of staff at school</th>
<th>Age range of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cowra Public School</td>
<td>330</td>
<td>40</td>
<td>5-12 years</td>
</tr>
<tr>
<td>Cowra High School</td>
<td>686</td>
<td>75</td>
<td>12-18 years</td>
</tr>
<tr>
<td>Gooloogong Public School</td>
<td>27</td>
<td>5</td>
<td>5-12 years</td>
</tr>
<tr>
<td>Mulyan Public School</td>
<td>364</td>
<td>24</td>
<td>5-12 years</td>
</tr>
<tr>
<td>St Raphael's Catholic School</td>
<td>480</td>
<td>40</td>
<td>5-16 years</td>
</tr>
</tbody>
</table>

As all students walk to school (be it from a bus, car or home) most questions related to cycling conditions and barriers to cycling to and from school. The following summarises answers to the main questions:

Do staff ride a bike or walk to school?

Of the 5 schools who responded to the survey, no staff rode to school and only 2 staff regularly walked to St Raphael’s Catholic School.

Does the school prohibit cycling?

None of the schools surveyed prohibit teachers or students from cycling to and from school.

Does the school encourage walking or cycling?

Of the 5 schools surveyed, 4 schools indicated that they encourage walking and cycling, with Cowra High School advising they did not actively encourage cycling. Cowra Public School advised they have a bike safety day during the year and also provide a lock-up area. St Raphael’s Catholic School advised that walking and cycling is in the PDHPE program at both Stage 3 and Stage 4. Gooloogong Public School advised that in Term 1 and Term 4 they do a week of bike education and conduct activities on school grounds and around the village. Mulyan Public School advised that it held an annual bike day in conjunction with Cowra PCYC and have also done it for sport in previous years.

Does the school have bike parking facilities?

All 5 schools have bike parking facilities. Cowra High School advised they have 20 spaces for students and staff, or staff can secure their bikes in staffrooms. Cowra Public School advised they have a lock-up area that is accessible in the mornings and afternoon. St Raphael’s Catholic School advised that it can expand to as many as needed. Gooloogong Public School advised that limited spaces are available. Mulyan Public School advised that they have minimal (6).

Does the school have any other end of trip facilities?

4 schools advised that they have no end of trip facilities. St Raphael’s Catholic School advised that they have staff end of trip facilities.

Do you think there are dangerous routes or intersections for students and staff to cycle to school?

Cowra High School answered yes and advised their students cover all areas of town and outskirts, so it was difficult to name them all. St Raphael’s Catholic School answered yes and advised that Macquarie Street is hazardous. Cowra Public School answered yes and advised that Vaux Street and Brisbane Streets are both very busy. Gooloogong Public School answered yes and highlighted the Main Highway and arterial to Grenfell. Mulyan Public School answered yes and highlighted Redfern, Myall and Lachlan Streets.

How many students cycle to and from school?

Of the 5 responses received 4 students ride to St Raphael’s Catholic School. 4 students ride to Cowra Public School. 6 students ride to Gooloogong Public School. 4 students ride to Mulyan Public School.

Reasons why students do not cycle to and from school?

The main reasons nominated for this question related to the high traffic volumes and dangerous routes to and from school. Gooloogong Public School answered that parents were scared to let children ride on roads without supervision. Cowra Public School answered students are not confident bike riders, there is too much traffic to ride on the road, and because the school is so close to the main street of town many children and parents may be afraid of the traffic. St Raphael’s Catholic School felt that parents were over protective. Cowra High School advised that bike riding is not popular with youth, but pointed out that 10 to 20 students a day ride scooters and skateboards to school. Mulyan Public School cited dangerous routes to and from school and students living out of town as the main reasons why students do not cycle to and from school.

Do you have any other comments about cycling to and from school or about the new Bike Plan for Cowra?

4 out of the 5 schools chose to add other comments. St Raphael’s Catholic School advised that we need to encourage it and raise the level of engagement. Mulyan Public School commented that there is a need for designated cycle / walk paths in and around Cowra. This would encourage cycling. Gooloogong Public School said they would be very keen to increase bike awareness and school bike activities within the school setting and around town. Cowra Public School said they would love to see more children bike riding to school.
1.8. Cycle North BUG Interviews

A number of interviews were conducted with cyclists from the Bike North Bicycle User Group (BUG), who were cycling their "Tour de Cowra", which has been held over the Easter Long Weekend for the last 17 years. Of the 70 cyclists involved in the ride, 15 interviews were randomly conducted to learn more about cyclists experiences during their visit to Cowra Shire. The following summarises answers to the main questions:

- **How many Cycle North BUG riders are there?**
  70 registered participants.

- **How long are you staying in Cowra Shire?**
  Mostly 4 night stay - arrived Thursday night and will leave Monday afternoon. 2 survey respondents were staying until Tuesday morning.

- **Where are you staying while residing in Cowra Shire?**
  Around half of respondents were staying at the Cowra Caravan Park, while the other half were staying in various motels in Cowra.

- **How much have you budgeted for your stay in Cowra Shire … How much will you spend?**
  On average $500 per person for the duration of the stay.

- **Why do you come to Cowra?**
  Quiet roads, beautiful scenery, good road surfaces and cycling conditions, holiday, get out of Sydney.

- **What routes have you been riding in Cowra Shire?**

- **What barriers are there to cycling in Cowra Shire?**
  Conditions are ideal for riding so few barriers. Timber bridges at Gooloogong and Darbys Falls Road have gaps that are a hazard for cyclists. Catheads are causing a lot of flat tyres. There is no bicycle shop in Cowra so we have to bring a lot of spare tyres, tools etc. It would be good to know what food premises and other services are available over public holidays, school holidays and weekends.

- **What improvements could be made to enhance your tour?**
  Maps showing local cycling routes and distances, water points, toilets and shops / food.
1.9. Summary of Key Findings

The key findings of the consultation activities have been summarised below:

- The desire for more dedicated bicycle lanes and shared paths.
- Improved pedestrian and cycling conditions and safety in / around Cowra, especially at the CBD, schools and on Main Roads.
- Implement the Master Plans for the Cowra CBD, Peace Precinct and Lachlan River Precinct to improve pedestrian and cycling conditions.
- Improved safety conditions for pedestrians, cyclists and drivers including better maintained paths and road markings and warning signs were identified as a significant barrier to pedestrians and cyclists riding more regularly for everyday local trips or for commuting to work/study.
- Only a small proportion of students cycle to school. Gooloogong has the highest proportion of students cycling to school. In Cowra more students walk or use scooters and skateboards.
- Safety was the greatest concern for schools and parents of school age children. Improved safety conditions for pedestrians is a high priority in Cowra and the villages.
- More bicycle paths and shared paths may improve cycling safety perceptions and may encourage parents to allow their children to ride more often and more extensively through the network.
- Better connectivity of cycling routes within the Cowra Shire network.
- There are no constructed footpaths in Wyangala and at least concrete paths in front of the Wyangala Public School should be provided.
- Better cycling conditions along main roads was a key gap identified in the cycling network.
- The existing cycling routes on the Grenfell Road and the Lachlan Valley Way (leading in and out of Cowra) are well used and are considered hazardous to ride on.
- Improving driver awareness of pedestrians and cyclists was a common outcome across all consultation activities.
- A lot of residents don’t walk / ride regularly or very far.
- Promoting the positive health and social outcomes of physical activity as a way of promoting walking and cycling.
- Cowra Shire is an ideal place for cycling tours because of its good cycling conditions, beautiful scenery and loop rides to interesting places.
- Making Cowra a destination of choice for cyclists and tourists as a way of promoting tourism and new business.
- If you build it they will come.

A large number of people consulted indicated that they would prefer more dedicated footpaths, bicycle paths and shared paths around the Cowra. An interesting point to note about this key finding was that respondents identified as being either potential or non-cyclists stated that paths and improved safety conditions could encourage them to become more. Similarly, infrequent cyclists stated that the implementation of dedicated cycle paths to key attractions or centres would influence their cycling behaviour.

Safety was a key issue identified by respondents in Cowra and Gooloogong. The main safety concerns were in relation to the speed of cars and trucks travelling along roads and the lack of facilities or signs that would alleviate existing safety issues.

Frequent cyclists stated that the installation of bicycle lanes along main highways and local roads as well as the maintenance of existing paths would help to improve current safety conditions. Similarly, the installation of more signs that warn of cyclists in the area would also improve conditions.

Touring cyclist groups appear to be a lucrative niche market, with around $35,000 being directed into the local economy over the Easter Long Weekend by one annually visiting BUG.
1.10. Conclusions and next steps

The consultation activities undertaken have allowed a better understanding of the pedestrian and cycling behaviours of the Cowra Shire community and others visiting the Shire. The consultation has also provided insights into the current enablers and barriers to active transport, gaps in the existing network and opportunities for improving pedestrian and cycling conditions, facilities and connectivity.

A range of barriers and enablers for current and potential users in Cowra Shire have been identified. Participants in the consultation activities have indicated a strong desire for more shared paths and dedicated bike paths and safer cycling routes and conditions within the Cowra Shire. Unsafe routes were the barrier identified most frequently by active transport users. Traffic speed and trucks on the road were the key reasons identified by respondents for why the available routes were considered unsafe.

It is interesting to note that the availability of more footpaths and dedicated bicycle lanes and shared paths was the change mentioned by the greatest number of respondents that would encourage more people to become active.

The safety of bike routes was the greatest concern for cyclists, potential cyclists and parents of school children that participated in the consultation activities. Traffic, unsafe intersections and roundabouts, hilly terrain and the lack of dedicated bike and shared paths were identified as the key concerns by parents and schools.

The findings from consultation activities also highlighted that cyclists ride throughout the Shire taking a large number of routes.

From an outsiders perspective the Cycle North Bug are attracted to Cowra Shire because of the ideal cycling conditions.

The findings from these consultation activities will help inform the preparation of the Cowra Shire Pedestrian and Cycling Plan.

A draft Pedestrian & Cycling Plan will be placed on public exhibition later this year and the community will have an opportunity to provide further comments and feedback on this Plan to ensure it meets current and future pedestrian / cycling needs.
Appendix A – Promotional Material

Join in the discussion and have your say on the new Cowra Bike Plan

Join in the discussion and have your say on the new Cowra Bike Plan

Council invites your input on two exciting new community projects

Be a part of two exciting new projects aimed at improving pedestrian and bike facilities within your community — the Cowra Shire Bike Plan and Pedestrian Access and Mobility Plan (PAMP).

Completion of the new bike Plan and PAMP will enhance Council’s ability to obtain extra funding from other agencies to support community cycling and pedestrian network projects.

Workshops have now been held to inform residents of the details of the projects and to offer the opportunity to contribute to the outcome of the plans.

Cowra Council encourages members of the community to get involved and share ideas by:

1. Attending a scheduled community workshop near you!

<table>
<thead>
<tr>
<th>When</th>
<th>Where</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, December 18</td>
<td>Parkes Golf Club</td>
<td>10am</td>
</tr>
<tr>
<td></td>
<td>Woodstock CWA Hall</td>
<td>11am</td>
</tr>
<tr>
<td></td>
<td>Warragamba Country Club</td>
<td>5pm</td>
</tr>
<tr>
<td>Thursday, December 19</td>
<td>Cowra Chambers</td>
<td>11am</td>
</tr>
<tr>
<td></td>
<td>PAMP</td>
<td>11:30am</td>
</tr>
<tr>
<td></td>
<td>Bike Plan</td>
<td>5pm</td>
</tr>
<tr>
<td></td>
<td>Council Chambers</td>
<td>6:15pm</td>
</tr>
<tr>
<td>Tuesday, December 17</td>
<td>Snap-on Display</td>
<td>11am</td>
</tr>
<tr>
<td>Tuesday, January 14</td>
<td>CFM Kendal &amp; Macquarie Sts</td>
<td>10am-2pm</td>
</tr>
</tbody>
</table>

2. Undertaking an on-line survey at:

www.surveymonkey.com/s/cowrabikeplan

and/or

www.surveymonkey.com/s/cowrapamp
Appendix B – Focus Meeting / Workshop Invites & Agenda

14th November 2013

Name
Name 1
Address 1
Address 2
Address 3

Dear Name,

You are invited to a Mobility and Access Planning Focus Meeting to be held at Cowra Shire Council Chambers at 5.30pm on Wednesday 27 November 2013.

The purpose of the meeting is to brief important stakeholders on the Council's plans to update its Pedestrian Access Mobility Plan (PAMP) and Bike Plan to bring them into line with current circumstances, opportunities and community expectations.

Council is preparing the PAMP and Bike Plan with technical assistance from expert consultants GhD.

We have identified you as a key person who could have important knowledge and influence in relation to cycling and mobility issues relevant to the Cowra Shire community.

It would be great if you could attend the meeting on 27 November 2013, to help us 'kick-start' the project and help set the direction of the new Bike Plan and PAMP.

Please find attached an agenda and flyer inviting you to attend.

Please RSVP to Cassandra Gailey at CGailey@cowra.nsw.gov.au to let us know if you are able to attend.

Yours Faithfully,

Michael Carter
Director - Environmental Services
Cowra Shire Council
Appendix C – Workshop Group Members List

- Jeremy Ryan
- Andrew Fisher
- Vanessa Fisher
- David Richmond
- Chair – Cowra Shire Council Access Committee
- Chair – Cowra Shire Council Traffic Committee

Appendix D – Stakeholder Workshop Timetable

<table>
<thead>
<tr>
<th>When</th>
<th>What</th>
<th>Where</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 Dec 13</td>
<td>Bike Plan</td>
<td>Council Chambers</td>
<td>12.00pm</td>
</tr>
<tr>
<td></td>
<td>PAMP</td>
<td>Council Chambers</td>
<td>1.15pm</td>
</tr>
<tr>
<td></td>
<td>Bike Plan</td>
<td>Council Chambers</td>
<td>5.00pm</td>
</tr>
<tr>
<td></td>
<td>PAMP</td>
<td>Council Chambers</td>
<td>6.15pm</td>
</tr>
<tr>
<td>12 Dec 13</td>
<td>Bike Plan Audit and Awareness</td>
<td>P.O.W Car Park</td>
<td>7.30am</td>
</tr>
<tr>
<td>18 Dec 13</td>
<td>Bike Path and PAMP</td>
<td>Goolongong Log Cabin</td>
<td>10.00am</td>
</tr>
<tr>
<td></td>
<td>Bike Path and PAMP</td>
<td>Woodstock CWA Hall</td>
<td>1.00pm</td>
</tr>
<tr>
<td></td>
<td>Bike Path and PAMP</td>
<td>Wyangala Country Club</td>
<td>5.00pm</td>
</tr>
<tr>
<td>19 Dec 13</td>
<td>Bike Plan</td>
<td>Council Chambers</td>
<td>12.00pm</td>
</tr>
<tr>
<td></td>
<td>PAMP</td>
<td>Council Chambers</td>
<td>1.15pm</td>
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<tr>
<td></td>
<td>Bike Plan</td>
<td>Council Chambers</td>
<td>5.00pm</td>
</tr>
<tr>
<td></td>
<td>PAMP</td>
<td>Council Chambers</td>
<td>6.15pm</td>
</tr>
<tr>
<td>10 Dec 13</td>
<td>Shopfront Display</td>
<td>Cnr Kendall &amp; Macquarie St</td>
<td>10.00am – 2pm.</td>
</tr>
</tbody>
</table>
### Appendix E – Pedestrian Survey Questionnaire

**COWRA PEDESTRIAN ACCESS AND MOBILITY SURVEY**

Cowra Shire Council is preparing a new Pedestrian Access Plan (PAMP) to provide opportunities and facilities that cater for the needs of pedestrians, including children, recreation and fitness walkers and runners, commutes, seniors and persons with a disability.

Your feedback will allow us to understand issues that are important to you when moving around our streets, footpaths and other public areas. It will also provide us with information to identify opportunities for improving the pedestrian footpath network in the Cowra Shire.

Please complete this survey by Friday 17th January 2014 by submitting it or posting it to PAMP Survey, Cowra Shire Council, 116 Kendal Street, Cowra 2794.

If you have any questions about the Cowra Pedestrian Access Plan or this survey, please call Michael Carter, Director of Environmental Services on 6340 2045 or our PAMP advisor Steve Martin on 6393 6430.

1. **Age:**
   - [ ] 12 and under
   - [ ] 13 to 18
   - [ ] 19 to 24
   - [ ] 25 to 34
   - [ ] 35 to 49
   - [ ] 50 to 59
   - [ ] 60 to 69
   - [ ] 70 and over

2. **Gender:**
   - [ ] Male
   - [ ] Female

3. **Which of the following statements best describes you?**
   - [ ] I walk/navigate the footpath at least two times per week as part of my daily exercise
   - [ ] I walk/navigate the footpath network to get to work, school, sport, social events, shops
   - [ ] I prefer to ride a bicycle or scooter to get to work, school, sport, social events, shops
   - [ ] I don’t have times to walk/navigate the footpath network to get to work, school, sport social events, shops
   - [ ] I own a motor vehicle and prefer to drive to work, school, sport, social events, shops

4. **What do you think are the benefits of walking/navigating the pedestrian/footpath network on a regular basis?**
   - [ ] Saves time it is quicker to walk / navigate to some destinations than to use other modes of transport
   - [ ] Save money on petrol, car or transport costs
   - [ ] It is good for the environment
   - [ ] It is good for fitness and health
   - [ ] It is fun and enjoyable
   - [ ] Reduces road congestion (less motorised traffic)
   - [ ] I don’t think there are any benefits
   - [ ] I don’t know

5. **Do you have access to a motor vehicle?**
   - [ ] Yes
   - [ ] No

6. **What type of pedestrian movements do you typically do?**
   - [ ] Recreational (fitness, leisure or bush walking)
   - [ ] Commuter (get to/from home to work, school, or other education provider)
   - [ ] Get to/from local shops
   - [ ] Around the house only

7. **How often would you walk/travel over one kilometre to access work, school, sport, social events, shops, etc? (Please select all that apply)**
   - [ ] Everyday
   - [ ] More than two times per week
   - [ ] Less than once per week
   - [ ] Not often

8. **Please select the reasons that discourage you from using the footpaths and pedestrian networks more often. (Please select all that apply)**
   - [ ] The paths are too hilly
   - [ ] The road has no marked or dedicated footpath
   - [ ] The paths I can use poorly maintained
   - [ ] I feel uncomfortable/unsafe walking along the route
   - [ ] There is too much traffic along the roads
   - [ ] Lack of safe pedestrian crossings at busy roads
   - [ ] Distance is too long to walk
   - [ ] Aggressive animals (magpies, dogs)
   - [ ] Weather (too hot or too wet)
   - [ ] Other please specify:
9. Which areas in the Cowra Council area do you typically walk to / from or within as a pedestrian? (Please select all that apply)

- Hospital
- CBD
- Swimming pool
- Mulyan Residential Area
- North Cowra Residential Area
- West Cowra Residential Area
- Cowra Showground
- West Cowra Industrial Area
- POW camp / Sakura Avenue
- Japanese Gardens
- River Park Sporting Facilities
- Edgel Park Sporting Facilities
- Brougham Park Recreation Area
- Cowra Hospital
- Lachlan River Precinct
- Lachlan River (Low Level Bridge)
- Eramble
- Cowra Golf Course
- Mulyan Oval
- Rodwell Park
- Apex Park
- Europa Park
- Cowra Skate Park
- Sid Kallis Oval
- Cowra Public School
- Cowra High School
- Mulyan Public School
- St Raphaels Catholic School
- Holman Place Public School
- M.E.T School
- Wyangala State Recreational Park
- National Parks
- Goondiwindi shops/hotel/club/other
- Woodstock shops/hotel/club/other
- Wyangala shops/golf/course/club
- Cowra Cemetery
- Dog leash free areas
- Other please specify:

10. Please identify gaps in the Cowra pedestrian network that you would like to see improved in the future (street names/cross roads/suburbs)?

11. Please indicate whether the following changes would make you more likely to walk on a more regular basis for everyday local trips or to commute to work/study: (Please provide an answer for each option)

<table>
<thead>
<tr>
<th>I would definitely use the network more</th>
<th>I might use the network more</th>
<th>It would make no difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased knowledge of pedestrian routes</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Availability of footpaths roads and streets</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Better quality footpaths</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Additional road crossings for pedestrians (signals, footbridge etc.)</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Is there anything else that would encourage you to walk more or to walk on a more regular basis?

12. Do you have any further comments about walking in Cowra or about the new Pedestrian Access Plan?

13. If you would like to be kept informed about the progress of the Cowra Pedestrian Access and Mobility Plan or to be entered in the draw to win a pair of movie tickets, please provide your contact details below.

Name: __________________________
Access group, organisation or other group represented: __________________________
Address 1: __________________________
Address 2: __________________________
Suburb: __________________________
State: __________________________
Postcode: __________________________
Phone: __________________________
Email: __________________________

Thank you for taking the time to complete this survey. We will keep you informed of the progress of the new Pedestrian Access and Mobility Plan for Cowra and will inform you if you have won a pair of movie tickets.
Appendix F – Cyclist Survey Questionnaire

Cowra Bike Plan Survey

Cowra Council is preparing a new Bike Plan to provide opportunities and facilities that cater for the needs of cyclists.

Whether you are an active cyclist, or are unsure about jumping on a bike, we would appreciate your feedback on the issues that are important to you when you think about cycling in Cowra Shire. It will also provide us with information to identify opportunities for improving cycling conditions in Cowra Shire.

Please complete this survey by Friday 17th January, 2014 by submitting it or posting it to Bike Plan Survey, Cowra Council City Centre, 116 Kendal Street, Cowra 2794.

If you have any questions about the Cowra Bike Plan or this survey, please call Michael Carter, Director of Environmental Services on 6340 2045 or Stephen Martin, Bike Plan advisor on 6393 6430.

1. Age:
   - 12 and under
   - 13 to 17
   - 18 to 24
   - 25 to 34
   - 35 to 49
   - 50 to 59
   - 60 to 69
   - 70 and over

2. Gender:
   - Female
   - Male

3. Which of the following statements best describes you?
   - I own a bicycle and use it most weekdays
   - I own a bicycle and use it at least once a month
   - I own a bicycle and use it less than once a month
   - I own a bicycle but I don’t use it* Please go to Question 13
   - I don’t own a bicycle but would be interested in cycling if conditions for cycling improved* Please go to Question 13
   - I don’t own a bicycle and would not be interested in cycling even if conditions for cycling improved. * Please go to Question 13
   - Other, please specify

4. What do you think are the benefits of bicycle riding on a regular basis? (Please select all that apply)
   - Saves time as it is quicker to ride to some destinations than to use other modes of transport
   - Save money on petrol, car or transport costs
   - It is good for the environment
   - It is good for fitness and health
   - It is fun and enjoyable
   - Reduces road congestion (less motorised traffic)
   - I don’t think there are any benefits
   - I don’t know

5. Please indicate why you don’t ride a bicycle. (Please select all that apply)
   - I don’t have a bicycle
   - I don’t like wearing a helmet
   - I’m not confident in my bicycle riding skills
   - My bicycle is broken and I don’t know how to fix it
   - I don’t feel fit enough to ride a bicycle
   - I don’t want to be sweaty when I get to my destination
   - There is nowhere for me to take a shower or change at the end of my trip
   - I don’t think the available routes are safe or comfortable enough to ride on
   - There is nowhere to park my bicycle when I get to my destination
   - I’m not allowed to ride a bicycle
   - It’s not cool to ride a bicycle
   - I am worried my bike will get stolen or damaged
   - I would rather drive or use another form of transport

6. If you think that the available routes are unsafe or are uncomfortable to ride on, please select the reasons why from the list below. (Please select all that apply)
   - The routes are too hilly
   - The road has no marked bicycle lane
   - The paths I use are not comfortable to ride on (e.g. poorly maintained)
   - There aren’t enough (or any) physically separated bicycle paths
   - There aren’t enough (or any) dedicated bicycle lanes on roads and streets
   - I do not feel comfortable sharing the available off road paths with pedestrians
   - There is too much traffic to ride on the road
   - There are too many cyclists on the bicycle paths
   - There is a lack of awareness of bicycle safety and road sharing amongst other road users

Other, please specify
7. Why do you ride your bicycle? (Please select all that apply)
- To save time as it is quicker to ride my bicycle than to use other modes of transport
- To save money on petrol, car or transport costs
- Because it is fun and enjoyable
- Because it is convenient or practical (e.g. all my trips are to places where there are bicycle parking facilities)
- To save money on petrol, car or transport costs
- Because it is fun and enjoyable
- For fitness and health reasons
- For relaxation or reducing stress
- Because it helps reduce road congestion (less motorised traffic)
- Because it is good for the environment

8. What type of cycling do you take part in most often?
- Recreational (riding for fun, fitness or leisure)
- Commuter (travel to / from work)
- Commuter (travel to / from school, TAFE or other education provider)
- Sport (training, racing or serious mountain bike riding)

9. Which of the following are reasons why you don't ride your bicycle more regularly for everyday local trips or for commuting to work or study? (Please select all that apply)
- I only ride my bicycle for leisure or recreational purposes or as a sporting activity
- I don't like wearing a helmet
- I'm not confident in my bicycle riding skills
- I am not confident I know how to look after my bicycle
- I don't feel fit enough to ride more often
- I don't want to be sweaty when I get to my destination
- There aren't any convenient routes for me to get to my destination
- I don't think the available routes are safe or comfortable enough to ride on
- There isn't anywhere for me to take a shower or change at the end of my trip
- There is nowhere to park my bicycle at my destination
- None of the above

Skip to Question 8 unless you answered that you think the available routes are unsafe or uncomfortable in response to Question 6 above.

10. If you think that the available routes are unsafe or are uncomfortable to ride on, please select the reasons why from the list below. (Please select all that apply)
- The routes are too hilly
- The road has no marked bicycle lane
- The paths I can use are not comfortable to ride on (e.g. poorly maintained)
- There aren't enough (or any) physically separated bicycle paths
- There aren't enough (or any) dedicated bicycle lanes on roads and streets
- I do not feel comfortable sharing the available off-road paths with pedestrians
- There is too much traffic to ride on the road
- There are too many cyclists on the bicycle paths
- There is a lack of awareness of bicycle safety and road sharing amongst other road users

11. When you are riding your bike (inside or outside of the Shire) what path(s) do you prefer to ride on? (Please select all that apply)
- On road lane marked by a painted line
- On the road with no marked bicycle lane
- Off road path for exclusive use of bicycles
- Off road path shared with pedestrians
- Off road cycle trails (including mountain bike and recreational routes e.g. National Park)

Please describe why this is your preferred type of path to ride on.

12. Do you ever ride with other people?
- No, I prefer to ride on my own
- Yes, I ride with others

13. Why do you ride with others?
- To accompany my children because they are not able to ride unsupervised
- To socialise
- Because I feel safer riding in a group
- To improve training / performance

14. What are your top three most common journeys by bicycle? (Please provide start and end point)

15. Please identify the top three bike destinations that you would like to see developed or improved in the future. Consider Cowra CBD (street names, cross roads), hospital, schools, recreational facilities (parks, swimming pool, picnic areas, showground etc.) and any other regional links in the Cowra area.

* Please go to Question 17.
17. Please indicate whether the following changes would make you more likely to cycle on a regular basis for everyday local trips or to commute to work/study: (Please provide an answer for each option)

<table>
<thead>
<tr>
<th>Change</th>
<th>I would definitely cycle more</th>
<th>I might cycle more</th>
<th>It would make no difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased knowledge of bicycles and bicycle maintenance</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Improved bicycle riding skills</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Availability of physically separated bicycle paths</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Availability of dedicated bicycle lanes on roads and streets</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Availability of shower and changing facilities at my destination</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Availability of bicycle parking at my destination</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>If there were more bicycle riders on the road</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Increased driver awareness of bicycle safety and road sharing</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Do you have any children under the age of 15?

☐ Yes
☐ No * Please go to Question 20

18. Do your children ride a bicycle?

☐ Yes, they ride to school or around the local area
☐ Yes, but they only ride around the park or in our driveway / yard
☐ No, they don’t ride a bicycle

Please provide details as to why (e.g. they don’t know how to ride a bicycle yet, it is too far for them to ride to school so they only ride in the park)

19. Is there anything that would help you to encourage your children to ride their bicycles more often to get to school or around the local area?

20. Do you have any further comments about cycling in Cowra or about the new Bike Plan?

21. If you would like to be kept informed about the progress of the Cowra Bike Plan or to be entered in the draw to win a pair of movie tickets, please provide your contact details below.

<table>
<thead>
<tr>
<th>Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike group, organisation or other group represented:</td>
</tr>
<tr>
<td>Address 1:</td>
</tr>
<tr>
<td>Address 2:</td>
</tr>
<tr>
<td>Suburb:</td>
</tr>
<tr>
<td>State:</td>
</tr>
<tr>
<td>Postcode:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>

Thank you for taking the time to complete this survey. We will keep you informed of the progress of the new Bike Plan for Cowra and will inform you if you have won of a pair of movie tickets.
Appendix G – School Survey Questionnaire

Have your say on walking and cycling to school

Cowra Shire Council is currently preparing a new Bike Plan and a Pedestrian Access and Mobility Plan (PAMP) for Cowra Shire. As part of the development of these plans we would like to understand more about cycling and walking behaviour and trips to and from school by both staff and students.

Please return your completed survey by Monday 16th December 2013.

If you have any questions about the Cowra Bike Plan or the PAMP or would like to speak to someone in person about the project, please call Michael Carter, Director of Environmental Services at Cowra Shire Council on 02 6340 2000 or Steve Martin, Bike Plan / PAMP advisor on 6393 6400.

1. Name of School:

2. Number of students currently enrolled at school:

3. Number of staff:

4. Age range of students:

5. Do staff ride bikes to school?
   - Yes. Approximately how many?
   - No.

6. Do staff walk to school?
   - Yes. Approximately how many?
   - No.

7. Does the school prohibit cycling or walking to / from School?
   - Yes. Please outline for what reasons:
   - No. We encourage it

8. Does the school encourage walking or cycling to school?
   - Yes. Please outline the reasons why cycling is encouraged and whether or not your school has any cycling programs to promote cycling to school:
   - No.
9. Does the school have bike parking facilities?

- [ ] Yes. Please indicate how many spaces and who these spaces are for (staff or students or both.)
- [ ] No.

10. Does the school have any other end of trip facilities (e.g. Showers, lockers etc.)?

- [ ] Yes. Please specify the end of trip facilities available at your school?
- [ ] No.

11. Do you think there are dangerous routes or intersections for students and staff cycling or walking to school? If so, please specify.

- [ ] Yes. Please specify routes, intersections or roads.
- [ ] No.

12. How many students cycle to and from school? (Approximately)

13. What are the reasons for why students do not cycle to and from school?

- [ ] Don’t own bikes
- [ ] Students are not confident bike riders.
- [ ] Dangerous routes to and from school.
- [ ] Lack of bike parking facilities.
- [ ] Lack of end of trip facilities such as showers and lockers.
- [ ] There is too much traffic to ride on the road.
- [ ] Other (please specify)

14. How many students walk to and from school? (Approximately)

15. What are the reasons for why students do not walk to and from school?

- [ ] Time available.
- [ ] Distance between home and school.
- [ ] Dangerous routes to and from school.
- [ ] The health and safety of children.
- [ ] Lack of end of trip facilities such as showers and lockers.
- [ ] There is too much traffic to walk on the footpath network.
- [ ] The footpath network is not suitable or available to walk to / from school.
- [ ] Other (please specify)
16. Do you have any other comments about cycling and/or walking to and from school or about the new Bike Plan or PAMP for Cowra?

Thank you for completing this survey. Your feedback will assist us with the development of the new Bike Plan.
Appendix B - Cost Estimates
## Cowra Township

**Project Cost Estimates**

Cost Estimates have been prepared to carry out all of the identified works for each project proposed to be carried out in the Cowra Township.

Details of the cost estimates have been included in the following tables on a project by project basis.

### Project C1 – Central Business District Upgrades

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15% Contingency
Total Cost

### Project C2 – River Park to Edgell Park Link

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15% Contingency
Total Cost

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15% Contingency
Total Cost

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## Project C7 – Brisbane St / Brisbane Av Railway Crossing

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## Project C8 – Watt St / Mulyan St Intersection Treatment

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## Project C9 – Europa Park Shared Paths

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## Project C10 – Pridham Street Shared Paths

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15% Contingency | $111,000

Total Cost | $851,000

### Project C12 – Vaux St / Brisbane St Intersection

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15% Contingency | $4,320

Total Cost | $33,120

### Project C13 – George Campbell Bridge– Option 2

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15% Contingency | $8,000

Total Cost | $16,000

### Project C13 – George Campbell Bridge– Option 1

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15% Contingency | $1,140

Total Cost | $18,740

### Project C14 – Farm Road Loop

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15% Contingency | $60,500

Total Cost | $69,575
### Project C15 – Sakura Avenue Shared Path

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### Project C16 – Child Safety Education Facility

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<td></td>
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<tr>
<td>Sealed Path</td>
<td>sqm</td>
<td>By Council</td>
<td></td>
<td></td>
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<tr>
<td>Linemarking</td>
<td>lm</td>
<td>By Council</td>
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<tr>
<td>Bike Stencils</td>
<td>ea</td>
<td>By Council</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New or repair Layback</td>
<td>ea</td>
<td>By Council</td>
<td></td>
<td></td>
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<tr>
<td>375mm pipe</td>
<td>m</td>
<td>By Council</td>
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<tr>
<td>Earthworks</td>
<td>item</td>
<td>By Council</td>
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<tr>
<td>Signage</td>
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<tr>
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### Project – VRR1 & VRR2, Cycling Route Maps (Road & MTB)

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<tr>
<td>Investigate routes / associated cycling facilities audits / draft maps / risk assessments</td>
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<tr>
<td>Ride all road and MTB routes and document on Mapmyride and Strava</td>
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<td>Mock-up Maps / Booklets</td>
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Gooloogong Project Cost Estimates

Cost Estimates have been prepared to carry out all of the identified works for each project proposed to be carried out in the Village of Gooloogong.

Details of the cost estimates have been included in the following tables on a project by project basis.

### Project G1 – Link School to Commercial Precinct

<table>
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### Project G2 – Main Street Pedestrian Improvements

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### Woodstock Project Cost Estimates

Cost Estimates have been prepared to carry out all of the identified works for each project proposed to be carried out in the Village of Woodstock.

Details of the cost estimates have been included in the following tables on a project by project basis.

#### Project W1 – Parkes St / Lions Park Footpath Link

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Wyangala Project Cost Estimates

Cost Estimates have been prepared to carry out all of the identified works for each project proposed to be carried out in the Village of Woodstock.

Details of the cost estimates have been included in the following tables on a project by project basis.

### Project WY1 – Waugoola Street Footpath Installation

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<td><strong>Total Cost</strong></td>
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### Project WY2 – First Avenue Shared Path

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<tr>
<th>Item</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Cost</th>
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<tr>
<td>1200mm Footpath</td>
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<td>2500mm shared path</td>
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<td>$1,500.00</td>
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<td>Gravel path</td>
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<td>$25.00</td>
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<tr>
<td>Sealed Path</td>
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<td>$50.00</td>
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<tr>
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<tr>
<td>New or repair Layback</td>
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<tr>
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<td>New bridge works</td>
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