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Bike Plan and Pedestrian Access Mobility Plan (PAMP)

Prepared for

Yass Valley Council

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Report prepared by Constructive Solutions Pty Ltd

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Executive Summary

The Yass Valley Council Bike Plan and Pedestrian Access and Mobility Plan (Bike Plan and PAMP) has been prepared to guide the future provision and management of pedestrian facilities within the Yass Valley Council (YVC) Local Government Area. The YVC PAMP and Bike Plan has been developed with reference to the NSW Roads and Maritime Services (RMS) documents '*How to Prepare a Pedestrian Access and Mobility Plan – An easy three stage guide (2002)' and* '*How to Prepare a Bike Plan (2012)'.*

The aim of the Bike Plan and PAMP is to develop a long-term strategy and action plan for the development of pedestrian facilities within Yass Valley in a coordinated and strategic approach that provides safe, convenient and connected pedestrian routes and infrastructure to the community.

Cycling and walking are activities which are synonymous with a healthy lifestyle and the Bike Plan and PAMP provide the framework for developing safe and convenient cycling and pedestrian routes for areas identified as important for enhanced sustainable safety, convenience and mobility.

The Bike Plan and PAMP includes a quantum of works totalling approximately **$1,730,000.00** (GST Exclusive) and the following recommendations are made:

- Adopt the schedule of works as provided in **APPENDIX 5** for the ongoing construction of cycling, pedestrian and access mobility facilities;
- Review and make recommendations with regards to the program of works for cycling, pedestrian and access mobility infrastructure for future Delivery Programs and Annual Operational Plans commensurate with the schedule of works in **APPENDIX 5** and subject to available funding;
- Where appropriate, apply to RMS for cycling, pedestrian and access mobility infrastructure funding;
- Provide sufficient funds in future Delivery Programs and Operational Plans for the ongoing maintenance of infrastructure;
- Ensure all cycling, pedestrian and access mobility infrastructure is either constructed or provided in accordance with the current guidelines and standards;
- Ensure that cycling, pedestrian and access mobility infrastructure is included in future land development commensurate with the YVC *'Section 94 Contributions Plan'*;
- Adopt an annual program for ongoing education with focus on rules and regulations and safety awareness with the YVC website, newsletter and offices to be used at various times for the dissemination of educational material to cyclists, motorists and pedestrians;
- Provide secure end-of-trip facilities (e.g. bike racks) at high end use locations;
- Where possible, provide a centreline on all two-way cycleways;
- Where possible, provide off-road shared paths which separate cyclists and pedestrians from motor vehicles, especially on designated heavy vehicle routes or roads with more than 5,000 vehicles per day; and
- Educate cyclists, pedestrians and motorists of the varying rights and responsibilities with regards to interaction with the other parties.

The following items are considered to be outside the scope which has been covered in this document and may be reviewed in future versions of the PAMP and Bike Plan. These items include the provision of lighting for footpaths and shared paths, main street considerations such as a permanent cycling provision, line marking and line of sight issues as well as master plans and documents which at the time of development of the PAMP and Bike Plan were still in draft including Councils Disability Inclusion Action Plan.

1 Introduction

The Yass Valley Council (YVC) Bike Plan and PAMP is a strategic document that has been prepared to guide the future provision and management of pedestrian access and mobility facilities, cycleways, establishes cycling objectives, and identifies the actions needed to achieve these objectives for Yass Valley. It has been developed with reference to the RMS document '*How to Prepare a Bike Plan 2012*' (referred hereon in as the RMS Bike Plan Guidelines), and '*How to Prepare a Pedestrian Access and Mobility Plan – An easy three stage guide (2002)'*.

The YVC bicycle network provides defined routes for cyclists to travel around numerous locations within Yass Valley in a safe manner. The bicycle network is comprised of off-road cycleways with shared facilities for both cyclists and pedestrians. The YVC Bike Plan and PAMP has been developed to identify locations where connectivity of the bicycle and pedestrian network is lacking in specific areas of the region.

Cycleways and pedestrian access and mobility facilities need to be safe, smooth and low maintenance. Adopting lower standards for the construction of the facilities is not cost beneficial and creates more work including an unwanted financial burden for YVC in the longer-term due to maintenance requirements to ensure that the infrastructure is safe and fit for purpose.

The YVC Bike Plan and PAMP sets out a long-term strategy for the ongoing development of the bicycle and pedestrian network within Yass Valley. These strategies include:

- Augmentation of the existing network;
- Provision for secure bike parking facilities particularly in the main urban areas;
- Improved signage including the provision of network signage at specific locations;
- Non-infrastructure programs such as community awareness programs;
- Appropriate facilities in particularly busy pedestrian areas;
- Improved access for mobility impaired persons;
- Reduced pedestrian injuries;
- Integrating with YVC's existing Development Control Plan and Master Plans for Sutton, Gundaroo and Murrumbateman; and
- Linking with existing transport, bike plan and pedestrian facilities for general improved access for all pedestrians.

The YVC Bike Plan and PAMP has been prepared with reference to the following National and State strategies:

- National Cycling Strategy 2011-2016 (Austroads 2010);
- NSW Long Term Transport Master Plan (NSW Government 2012);
- NSW 2021 – A Plan to Make NSW Number One (NSW Government 2011);
- NSW Bike Plan (NSW Government 2010); and
- South East and Tablelands Regional Plan 2016.

2 Study Area and Characteristics

2.1 Study Area

The study area for this PAMP and Bike Plan comprises the YVC Local Government Area (LGA), which is located on the southern tablelands of New South Wales and covers an area of 3,999 square kilometres, with an existing estimated population of 16,560. The main population centre in the region is the town of Yass, with other centres including Wee Jasper, Murrumbateman, Gundaroo, Sutton, Bowning, Bookham and Binalong.

Figure 1 Yass Valley Council Local Government Area

(Source: Google Maps)

2.2 Characteristics

Table 1 provides population figures from the Australian Bureau of Statistics State Suburbs within the YVC LGA based on 2016 census data.

Table 1 – Population figures for State Suburbs within the YVC LGA

Locality	Population	Locality	Population
Yass	6,506	Bowning	573
Wee Jasper	100	Bookham	161
Sutton	1660	Binalong	543
Murrumbateman	3219	Gundaroo	1146

(Source: Australian Bureau of Statistics 2017)

Bases on the 2016 census data and the current estimated population, the YVC LGA has experienced a growth of 9% in the last 5 years. This represents a challenge for YVC to provide appropriate infrastructure for a rapidly growing population.

2.3 Data and Accident Statistics

The Australian Bureau of Statistics collects information regarding cyclists as part of overall census data collection. Census data from Yass Valley indicates that in 2011 there were 10 commuter cyclists, and 300 people who exclusively walked to work out of a total of 6,069 commuters. At the time of the report, detailed data was not available to determine what changes, if any, there had been between 2011 and the 2016 census regarding commuter behaviour.

The NSW Transport Centre for Road Safety collates crash data collected via RMS, NSW Police and NSW Health and for the 6-year period from 2011 to 2016 (with the 2016 data being preliminary). During this period, there were 4 accidents involving cyclists being injured, and 6 incidents in which pedestrians were injured, two of which were fatal, one of which was a serious injury.

2.4 Public Transport

Public transport within the YVC LGA consists of trains, town buses and taxis which are generally focussed on the populated areas of Yass and Murrumbateman. In addition, community/patient transport buses and school buses operate throughout the LGA. Trains running to and from Sydney, Canberra and Melbourne are available at Yass Junction station.

2.5 Future Pedestrian and Cyclist Needs

It is anticipated that future pedestrian and cyclist needs will occur in areas which currently have or are anticipated to have large concentrations of pedestrian movements. Such areas include those around shopping and business centres, schools, medical facilities, and community facilities such as parks and sporting grounds.

Allowances for pedestrian and cycling facilities within new residential, commercial and industrial developments are generally included as specific development consent conditions and/or by the provision of Section 94 development contributions (e.g. shared path facilities for pedestrians and cyclists). It should also be noted that pedestrian and cycling facilities are also occasionally constructed as a result of developer initiatives to provide linkages with their developments and to enhance the appeal of the respective development itself.

3 Background

3.1 Aims and Objectives

One of the objectives and identified strategies from the '*Tablelands Regional Community Strategic Plan 2016 to 2036*' includes:

Objective: Maintain and improve road infrastructure and connectivity.

Strategy: To improve / develop pedestrian and cycle networks within villages and centres and encourage active transport in planning.

The aim of a Bike Plan and PAMP is to develop a long-term strategy for the development of safe cycling, pedestrian access and increasing levels of mobility within Yass Valley and to address the barriers to cycling by providing a pedestrian and bicycle network that has connectivity.

Cyclists include:

- Those who use bicycles for recreational purposes such as fun or fitness; and
- Commuters including school children cycling to school and adults cycling to their place of work.

A pedestrian includes:

- A person driving a motorised wheelchair that cannot travel at over 10 km/h (on level ground);
- A person in a non-motorised wheelchair;
- A person pushing a motorised or non-motorised wheelchair; and
- A person in or on a wheeled recreational device or wheeled toy.

This YVC Bike Plan and PAMP includes an overview of existing pedestrian and cycling infrastructure and proposed future infrastructure. The proposed infrastructure considers previous planning for cycling and pedestrian infrastructure and input from stakeholders. It will also consider bike security, safety habits and the ongoing education of pedestrians, motorists and cyclists.

Cycling is an activity which is synonymous with a healthy lifestyle and provides an early introduction for children to road safety. It is a non-polluting form of transport which does not deplete the planet's non-renewable resources and cycling infrastructure, such as cycleways and safe parking facilities, is significantly cheaper to construct and maintain than road infrastructure required for motorised transport such as cars.

This YVC Bike Plan and PAMP aims to provide safe and convenient pedestrian infrastructure in key areas of pedestrian generating activity. The provision of such infrastructure aims to encourage pedestrians to walk rather than use motorised transport.

The following targets have been developed to support the strategy and assist with achieving the overall objectives:

Bike Plan Targets:

Target 1: Develop a long-term strategy for improved safety for cyclists and for further development of cycling within Yass Valley that can be managed into the future and be updated on an annual basis and in line with YVC's 'Delivery Program' and 'Operational Plan'.

Target 2: Provide the necessary cycling infrastructure to ensure that an improved cycling environment is in place to link education institutions, sporting grounds and shopping centres. Addition of secure bicycle parking areas to encourage greater use of bikes.

Target 3: Promote cycling as a good form of exercise and an enjoyable leisure activity to improve the health and fitness of the community including advertising improvements in the bicycle network and supporting state and national initiatives for increasing the number of cyclists.

Target 4: Provide an improved bicycle network through the delivery of nominated infrastructure and non-infrastructure programs within YVC's budgetary and operational constraints with ongoing lobbying of State and Federal governments for funding assistance.

PAMP Targets:

Target 1: Facilitate improvements in the level of pedestrian access and priority, particularly in areas of high pedestrian movement and provide links with existing transport services, community facilities, cycleways, and public transport to better integrate land use;

Target 2: Reduce pedestrian access severance and enhance safe and convenient crossing opportunities on major roads, including the identification and resolution of pedestrian crash clusters;

Target 3: Provide improved facilities for those pedestrians who are aged, frail, or have a mobility difficulty via facilities that cater for all pedestrians. Ensure that all installations are undertaken in accordance with technical standards and relevant obligations under the *Commonwealth Disability Discrimination Act* 1996.

3.2 Plan Context

The YVC Bike Plan and PAMP has not been developed from just a local perspective but is part of a broader campaign at a state and national level to increase cycling activity amongst all Australians. The information provided in the following sections details the local, state and national strategies. Cycleway and pedestrian infrastructure forms an integral component of residential development, economic development, community mobility and cohesion, and assists in addressing community and YVC environmental concerns. YVC has developed several strategies to address these issues, with cycleway and pedestrian infrastructure being included as a priority in each plan.

3.3 Local Strategies

3.3.1 The Tablelands Regional Community Strategic Plan 2016-2036

This Community Strategic Plan identifies the aspirations of the community through a clear set of strategic priorities that achieve the region's vision for the future. The aim of the plan is to:

- Inform YVC's priority setting and decision making;
- Inform the decision making of other agencies and organisations, including the State and Federal Governments;
- Provide a rationale for any organisation pursuing grants and other resources for specific projects that can be shown to fit within a particular strategic priority outlined within the plan;
- Inform stakeholders of the community's long-term vision for the region; and
- Guide local and regional planning documents and initiatives.

Specific aims in relation to pedestrian and cycling infrastructure include to improve / develop pedestrian and cycle networks within villages and centres and encourage active transport in planning.

3.3.2 Yass Main Street Strategy 2014

The long-term goal identified in the *Community Strategic Plan 2013-2030* is to have main streets that are attractive, clean and pedestrian friendly with a range of outdoor dining options to choose from. The Yass Main Street Strategy and the associated action plan is the first step towards meeting that goal. The Strategy aims to integrate vehicle and pedestrian traffic flows efficiently and safely and that pedestrian safety is a concern for residents.

3.3.3 Operational Plan 2017/18

The Operational Plan for 2017/2018 plan nominates the following priorities regarding pedestrians and cyclists:

- Yass CBD to North Yass Cycleway Link feasibility further investigated and design commenced;
- Grants received for footpaths and cycleways;
- Paths maintained in a safe condition; and
- Expansion of the current footpath and cycleway network.

3.3.4 Road Safety Action Plan

The YVC Road Safety Action Plan responds to road safety issues that are prevalent in the YVC LGA. The plan reflects YVC's partnership with the NSW State Government through the Local Government Road Safety Program and will employ the Safe System approach to road safety, in line with the NSW Road Safety Strategy 2012 – 2021.

Actions targeting pedestrian and cyclist safety have been detailed in the plan, with targeted community awareness programs to be implemented in conjunction with NSW Government and Police programs.

3.3.5 Murrumbateman Masterplan 2031

The *Murrumbateman Masterplan 2031* identifies walking and cycling as high demand recreational activities. The commentary in the masterplan indicates that demand for these activities will greatly increase with the increase of population, increase of visitors to the area and the proposed re-alignment of the Barton Highway away from the town centre making the area a more pedestrian friendly zone.

The plan has identified areas for future residential and commercial development and suggests likely requirements for greenways, pedestrian, equestrian and cycleway connections based on future demand from development.

The proposed alignments for pedestrian, equestrian and cycling connections have been included in this PAMP and Bike Plan only so far as they are consistent with the proposed locations set-out in the *Section 94 Contributions Plan (2004)*. It is considered that the cycleways proposed in the Section 94 Contributions Plan are extensive enough for the intended period of the YVC PAMP and Bike Plan validity period. Further expansion of the proposed network in line with the Murrumbateman Master Plan is considered beyond the scope of this PAMP and Bike Plan.

3.3.6 Yass Valley Council Disability Inclusion Plan

At the time of preparing this plan, the *Yass Valley Council Disability Inclusion Plan* was under development and should be referred to when considering further revision to this PAMP and Bike Plan.

3.4 State Strategies

3.4.1 NSW Long Term Transport Master Plan (December 2012)

The *NSW Long Term Transport Master Plan* is an overarching framework that brings together land use planning with transport planning that integrates planning for freight and passenger movements. The plan includes actions for all modes of transport including road, rail, bus, ferries, light rail, cycling and walking. The specific actions with respect to cycling for Regional NSW include investment in local cycleways in partnership with local councils. The investment from the state government as described in the plan includes:

- Better information and infrastructure to support cycling in conjunction with regional local councils;
- As part of the Cycling Investment Program, prioritise opportunities for regional tourism in the assessment criteria and seek to connect cycling networks around major regional towns and centres;
- Working with councils to improve and enhance paths and cycling routes in regional centres to increase the number of people who choose to cycle (Many regional roads were built without suitable space for cycling. In some cases, these roads now carry high levels of vehicle traffic that deter young or inexperienced cyclists from riding);
- All new road projects or road network upgrades will be required to examine the feasibility of providing for cycling as an essential component of the project;

New measures relating to cycling will focus on safety (particularly around roads) and integration with public transport and include:

- Improved access to user-friendly bike trip information;
- A long-term NSW Cycling Investment Program to improve the planning, management and delivery of cycleway capital programs, supported by design solutions and standards to reflect customer needs;
- A program to increase and improve bike parking at public transport interchanges; and
- Enhanced cycling routes in regional centres to increase the number of people who cycle.

3.4.2 NSW Southern Regional Transport Plan

The *NSW Long Term Transport Master Plan* is supported by a number of detailed regional transport plans, modal plans and access strategies. The applicable transport plan for the YVC LGA is the *NSW Southern Region Transport Plan*. The plan identifies the current initiatives as being improvements to the drop off and pick up zone, new pedestrian crossing, and cycle facility and signage for the transport interchange at Yass. Further, the plan outlines a range of actions to improve walking and cycling for the YVC LGA as follows:

- Roll out the walking communities program – which will deliver state infrastructure investment and contribute to local government initiatives to help boost rates of walking;
- Connecting centres program – where the state government will work with councils to identify gaps and pinch points in the 5km catchments surrounding regional towns; and
- Roll out the cycling towns program – where the NSW government will select two regional towns to participate in bicycle network improvement to rapidly increase the rates of cycling in these areas.

The plan also outlines that the NSW Government will assist councils to integrate walking and cycling into their ten-year Community Strategic Plans.

3.4.3 NSW 2021 – A Plan to Make NSW Number One (September 2011)

The *NSW 2021 – A Plan to Make NSW Number One* has the following goals which relate to cycling:

- Goal 10 – Improve road safety;
- Goal 11 – Keep people healthy and out of hospital;
- Goal 20 – Build liveable centres;
- Goal 22 – Protect our natural environment; and
- Goal 27 – Enhance cultural, creative, sporting and recreation opportunities.

The provision of new and the maintenance of existing cycleways is not specifically identified, however YVC's approach to cycleways thus far has been commensurate with the goals as listed above.

3.4.4 NSW Bike Plan (May 2010)

Cycling is supported by the NSW Government as a healthy, low cost, environmentally friendly form of transport. Cycling offers a flexible and low impact alternative to the use of private motor vehicles for commuter, recreational, and general-purpose transport. The *NSW Bike Plan* provides the framework for the further development of cycling within NSW over a 10-year period to 2020.

The provision of cycleway infrastructure for recreational, commuter and general use in Yass Valley, as well as working with developers to ensure contributions for the construction of new cycleway infrastructure to service new residential developments, is consistent with the goals of the *NSW Bike Plan*.

3.5 National Strategies

3.5.1 National Cycling Strategy 2011-2016

The goal of the *National Cycling Strategy* is to effectively double the number of people across Australia cycling over the period of the plan. There are six priorities and objectives of the strategy as follows:

- **Cycling Promotion**: Promote cycling as both a viable and safe mode of transport and an enjoyable recreational activity;
- **Infrastructure and Facilities**: Create a comprehensive and continuous network of safe and attractive routes to cycle and end-of-trip facilities;
- **Integrated Planning**: Consider and address cycling needs in all relevant transport and land use planning activities;
- **Safety**: Enable people to cycle safely;
- **Monitoring and Evaluation:** Improve monitoring and evaluation of cycling programs and develop a national decision-making process for investment in cycling; and
- **Guidance and Best Practice**: Support the development of nationally consistent guidance for stakeholders to use and share best practice across jurisdictions.

Whilst it has been recognised that cycling has not been supported by a high level of investment, the strategy will provide tools for local and state governments to make the case for increased investment.

4 Public Consultation

4.1 Initial Consultation

A public survey was carried out in April 2017. The aim of the survey was to ascertain the needs and concerns of cyclists and pedestrians in the YVC LGA.

In order to ensure that relevant stakeholder views were represented a survey was distributed to the organisations as described below. A copy of the letter and questionnaire is provided in **APPENDIX 1**. The survey was also provided on YVC's Facebook page, disseminated through YVC, and available in hard copy from the YVC office in Yass.

- Andalini Special Education Unit
- Tafe Illawarra
- Neil O'Mara (Bus service)
- Bush's Yass Charter Services
- Yass Taxis
- Murrumbateman Taxi Service
- Yass Police Station
- Ngunnawal Community Care
- RSL Life Care
- Gwen Warmington Lodge
- Yass District Hospital
- Valmar Yass (Disability and aged)
- Horton House Nursing Home
- Berinba Primary School (Yass)
- Care4all
- Gundaroo Public School
- Mt Carmel School
- Yass High School
- Yass Public School
- Yass Junction Railway Station
- Montessori Pre-school

4.1.1 Result of Public Survey

At the end of the survey period, a total of 43 responses had been received.

The respondents for the survey were mainly located in Yass, accounting for 73.8% of respondents, followed by Sutton at 11.9% and the remaining 14.4% of respondents from Murrumbateman, Gundaroo, Bowning and Binalong.

Most respondents were in the age range of 26 to 55.

The data collected from the survey shows that respondents mainly travel to and from work, supermarkets / town centre, recreational areas and school. For these trips, 88% of respondents travel by car, 36% choose to walk and 17% cycle.

The survey revealed that 76% of respondents own or have access to a bicycle with over 25% of these respondents cycling at least once per week or daily. The primary reasons for cycling are recreation and fitness.

It was noted that the primary reason for respondents not cycling was due to the lack of adequate paths, land and end-of-trip facilities.

The data shows there is a strong desire in the community to walk and cycle for enjoyment, health and fitness. The limiting factors for cycling is a limited cycle network, the cycle network not connecting points of interest, not providing loops.

The majority of respondents provided further information with specific information regarding areas of interest, room for improvement and suggestions for new or improved paths. These comments have been considered when developing the proposal for future pedestrian and cycling facilities.

A full summary of survey results has been provided in **APPENDIX 1**

4.2 Ongoing Consultation

As per the RMS guidelines, it is a requirement that the final draft of the YVC Bike Plan and PAMP be placed on public display for a period of 55 days with the general public invited to view the plan and submit comments.

Public exhibition was undertaken during the period 3rd July to 28th August 2017 with 7 submissions received from the public.

A summary of suggestions received along with actions taken or appropriate comment for each section is shown in **Table 2.**

Table 2 - Public Exhibition Submissions and Responses

Item	Suggestion	Comment / Action
1	Path along Merryville Estate does not run the full length	Currently, there would not be sufficient benefit to the community to justify the significant outlay of funds required to extend the existing shared path the full length of Merryville Drive. This could be considered in future versions of the PAMP and Bike Plan.
2	The extension of the existing shared path on the unformed section of Vine Close be extended, to connect into the new paths formed in the Fairley Estate at Helen Street. As well as the deletion of the proposed share path in Hercules street into West Street to Connect to Fairley Estate	Note added to **Section 10.3.2.** *NB: Consideration could be given to linking the new shared path into Fairley Estate (Helen Street) via the unformed road reserve north of Hercules Street. However, it is noted that there will be requirements to work with land owners to relocate structures from the road reserve.*
3	Continuation of the McIntosh Circuit shared path until its meets with Scrubby Lane	Currently, there would not be sufficient benefit to the community to justify the significant outlay of funds required to extend the existing shared path to Scrubby Lane. This could be considered in future versions of the PAMP and Bike Plan.
4	Pedestrian refuges at Church Street and Lead Street and Crago Street/Mont Street and Merriman Drive	2 x additional pedestrian refuges to be included in PAMP and Bike Plan.
5	Include a path that joins Quartz Street to Victoria in Sutton	It is considered that the proposed Camp Street foot path will satisfy the need for a path between Quartz Street and Victoria Street.
6	River Path in Gundaroo Village	The PAMP and Bike Plan may need to be updated to reflect the adopted Gundaroo and Sutton Master Plan's when adopted. The update will need to include additional funding details for these projects.
7	Yass River to Gundaroo Park loop path	
8	Path required on Grampian Street from the High School to the farm	There is currently a path connecting the High School with "the farm" area. Additional paths could be considered providing a more direct link in future revisions of the PAMP and Bike Plan.
9	Path required from Grampian Street to the weir	There is currently an interconnecting path connecting the Grampian Street with "the weir" area. Additional path along Ford Street could be considered in future revisions of the PAMP and Bike Plan

5 The Bicycle Network

Bicycle networks are generally comprised of on-road and off-road cycleways incorporated as part of the road network and adjacent parklands and reserves.

Off-road – this type of cycleway is generally located on a road-related area parallel to a road or through parks and reserves or other public land not open to motor vehicle traffic (refer **Plate 1**).

Plate 1 – Typical off-road cycleway (shared path)

On-road – this type of cycleway forms part of the road such as a dedicated bicycle lane or a road shoulder shared with parked vehicles.

Plate 2 – Typical on-road cycleway

Yass Valley currently has off-road cycleways with the off-road facilities considered as **shared paths** as they are designated for use by both cyclists and pedestrians. In addition, these shared paths cater for two way movements of both pedestrians and cyclists. The desirable features of a bicycle network are detailed in **Table 3**.

Table 3 – Bicycle Network Features

Route Feature	Comments
Safety	Minimal risk of traffic-related injury, low perceived danger, space to ride, minimum conflict with vehicles.
Coherence	Infrastructure should form a coherent entity, link major trip origins and destinations, have connectivity, be continuous, signed, consistent in quality, easy to follow, and have route options.
Directness	Route should be direct, based on desire lines, have low delay through routes for commuting, avoid detours and have efficient operating speeds.
Attractiveness	Lighting, personal safety, aesthetics, integration with surrounding area, access to different activities.
Comfort	Smooth skid-resistant riding surface, gentle gradients, avoid complicated manoeuvres, reduced need to stop, minimum obstruction from vehicles.

(Source: Cycling Aspects of Austroads (2017))

Users of a bicycle network vary depending on the nature of their trip. Austroads has identified seven groups of cyclists, each with specific riding characteristics and network requirements as described in **Table 4**.

Table 4 – Categories of Cyclists and their Network Requirements

Category	Road Characteristics	Riding Environment
Primary school children	Cognitive skills not developed, little knowledge of road rules, require supervision.	Off-road path, footpath (where permitted) or very low volume residential street.
Secondary school children	Skill varies, developing confidence.	Generally use on-road facilities or off-road paths where available.
Recreational	Experience, age, skills vary greatly.	Desire off-road paths and quiet local streets, avoid heavily trafficked routes, more experienced will prefer to use road system for long journeys.
Commuter	Vary in age, skill and fitness, some highly skilled and able to handle a variety of traffic conditions.	Some prefer paths or low-stress roads, willing to take longer to get to destination, others want quick trips regardless of traffic conditions, primarily require space to ride and smooth riding surface, speed maintenance.
Utility	Ride for specific purposes (shopping), short length trips, routes unpredictable.	Not on highly trafficked roads, needs include comprehensive, low-stress routes, appropriate end of trip facilities.
Touring	Long distance journeys, may be heavily equipped, some travelling in groups.	Often route is similar to that of other tourists.
Sporting	Often in groups, two abreast occupying left lane, needs similar to commuters.	Travel long distances in training on arterials, may include challenging terrain in outer urban or rural areas, generally do not use off-road routes because of high speed and conflict with other users.

(Source: Cycling Aspects of Austroads (2017))

The purpose of a bicycle network is therefore to enable cyclists of all ages with varying degrees of skill and experience to travel safely to and from a desired destination. Cyclists in Yass Valley are likely to be attracted by the following:

- Schools;
- Places of employment;
- Sporting and recreational facilities; and
- Local shops.

The frequency and type of participation in cycling is largely dependent upon individual choice, location, availability of cycling infrastructure and safety concerns regarding the interaction between motor vehicles and cyclists.

5.1 Use of Cycleways

Recreational cycling is an important part of the YVC Bike Plan and PAMP and is to be encouraged in Yass Valley as it is a healthy lifestyle activity and likely to become even more popular as cycleways are extended and further linkages provided.

In order to encourage broad-scale use of cycleways, they must cater for a mixture of uses including:

- Recreational cyclists;
- Recreational users of wheeled devices such as skates, rollerblades and scooters;
- Commuter cyclists; and
- Pedestrians.

In order to achieve broad-scale use of cycleways, they should have the following features:

- Links to existing and proposed cycleways;
- Loops and circuits to provide for rides of various lengths;
- Attractive and enjoyable features, such as passing picnic areas, gardens and sporting fields;
- Access to toilets and drinking water; and
- Convenient access to and from vehicle parking areas.

6 Pedestrian Facilities

6.1 Classification and Types of Pedestrian Facilities

Pedestrians are vulnerable within the road and rail corridor and are therefore reliant on pedestrian facilities and traffic control devices to control and protect them. This can be achieved by implementing a number of pedestrian facilities with defined objectives as described in **Table 5.**

Table 5 – Classification of Pedestrian Facilities

Classification	Objective	Pedestrian Facility
Time separated facilities	To minimise conflict between pedestrians and vehicles by allotting short time periods for use of section of road by pedestrians, alternating with periods of use by vehicles.	• Pedestrian crossings (zebra) • Children's crossings • Pedestrian Actuated Traffic Signals (mid-block) • Pelican Crossings • Pedestrians at Signalised Intersections
Physical pedestrian facilities	To increase the safety of pedestrians by use of physical aids within the roadway so as to reduce conflict between pedestrians and simplify the decisions which both pedestrians and drivers have to make.	• Pedestrian refuges • Traffic islands • Medians • Kerb extensions • Loading islands • Safety zones • Pedestrian fencing
Grade separation	To increase the safety of pedestrians by eliminating conflict between vehicles and pedestrians.	• Underpasses and bridges
Warning signs	To warn of the presence of pedestrians or pedestrian facilities ahead.	

(Source: AS1742.10-2009)

Most pedestrian activity occurs within the verge of the road reserve. At locations where there is high pedestrian activity the verge is generally sealed with concrete or pavers to provide all weather access footpaths. These paved footpaths can vary in width from between 1.2 metres wide to the full width of the verge depending on the location. In Yass Valley, the width of paved footpaths varies but can be generally described as per **Table 6**.

Table 6 – Paved footpath widths in the YVC LGA

Location	Paved Footpath Width
Residential Areas	1.2 to 1.8 metres
Shared Paths (1)	1.5 to 2.5 metres
Commercial Areas	Full width of the verge

Note (1) - Some footpaths in Yass Valley are classified as shared paths for use by both pedestrians & cyclists.

The provision of kerb ramps at the interface of the verge and road pavement complements footpaths by allowing for the safe movement of pedestrians from the verge on one side of the road to the other. The kerb ramps also assist people with disabilities or those with young children to move safely, as the ramp allows wheeled mobility devices such as wheelchairs, walkers and prams to smoothly transition from one surface level to another.

Other pedestrian facilities, including cut-through access across median islands, and tactile ground surface indicators (tactile markers), combine with footpaths and kerb ramps to facilitate safe pedestrian movements. Details of the pedestrian facilities in place throughout Yass Valley are provided in **Table 7.**

Table 7 - Pedestrian facilities in the YVC LGA

Pedestrian Facility		
Footpaths and shared paths A paved area of varying width located within the road verge. Where provision is made for bicycles to use these footpaths, they are known as shared paths.		
Kerb ramps A section of kerb which is angled to as to provide a smooth transition from one surface level to another, allowing wheeled movements.		
Pedestrian Crossing (zebra) A section of road delineated by white stripes parallel to the centre line and associated signage. Pedestrian crossings require a warrant for installation. An alternative is the St George crossing which is delineated by white stripes on a red background.		

Pedestrian Facility		
Pedestrian Refuge An island located in the middle of the road whereby pedestrians can wait until traffic has passed. Generally installed where it difficult for pedestrians to cross the full width of the road in one attempt.		
Children's Crossing A section of road that has control devices in place to allow for the crossing of pedestrians (usually school children). The control devices are only in place during specific times of the day. A Children's Crossing Supervisor may also be present at those crossings which have satisfied RMS requirements. A Children's Crossing may also be located at a marked pedestrian crossing.		
Kerb Extensions Are constructed along a kerb to minimise the width of roadway to be crossed and to provide pedestrians with improved visibility of approaching traffic.		

Pedestrian Facility		
Pedestrian Fencing / Bollards Installed at the kerb to direct pedestrians to a crossing point or to prevent pedestrians from crossing at specific locations.		
Tactile Markers Plastic composite materials with raised 'bumps' are set into the pavement directly adjacent to pram ramps. The 'bumps' allow visibility impaired pedestrians to note upcoming crossings via canes.		

Pedestrian Facility		
Pedestrian Bridge A grade separation for pedestrians from traffic (road or rail) or for providing all weather access. This can include a separate bridge for pedestrians only or the inclusion of a pedestrian footpath incorporated in a road bridge. **There are currently no Pedestrian Bridge Facilities in the YVC LGA**		
Warning Signs Advanced warning signage for road users to warn of the presence of pedestrians or pedestrian facilities ahead. High Pedestrian Activity Zones use warning signs and reduced speed limits to inform drivers of higher pedestrian occurrence in these zones.		

7 Review of Existing Environment

Maps illustrating the locations of the existing bicycle network throughout Yass Valley are provided in the following section of this report.

YVC's asset management system database provides specific details of the cycling and pedestrian infrastructure currently in place which includes:

- Construction date;
- Surface type;
- Width and length;
- Street name; and
- Location in street.

Construction standards have changed over the years resulting in variable widths and types of cycleways and shared paths provided across the entire network. That said, each type of path is generally consistent through each town or village, i.e. Yass has mainly concrete pathways, whilst Murrumbateman consists mainly of bitumen pathways.

7.1 Existing Shared Path Network - Yass

Yass River North	
Location:	Commencing at Grampian Street and terminating at Dutton Street
Length:	3,000 metres
Linkage:	Yass River South, Yass Public School, Yass High School
Type:	Concrete
Width:	2 metres

Plate 3 – Yass River North, approaching Hume Bridge

Plate 4 –Warrambalulah Street

Plate 5 – Yass Gorge

Plate 6 – John Allen Park

Yass River South

Location: Commencing at Dutton Street and linking Yass River north path to Flat Rock Crossing. Additionally, a small section of 'gravel' path east of flat rock crossing into Yass Gorge.

Length: 1,200 metres

Linkage: Yass River North, CBD

Type: Concrete / Gravel

Width: 2 metres

Plate 7 – Riverbank Park

Plate 8 – Dutton Street Link

Plate 9 – Link to CBD

Plate 10 – to Rossi Street

Golf Course Precinct

Location: Commencing at the Meehan and Dutton Street intersection, traversing the disused railway line to access Short Street, Crago Street, Mont Street, Yeo Crescent and terminating at the golf course.

Length: 1,300 metres

Linkage: CBD

Type: Concrete and bitumen

Width: 2 metres

Plate 11 – Entrance to John O'Brien Park

Plate 12 – Mont Street

Comur Street, Waroo Road and Williamson

Location: Section of Comur Street, before traversing Waroo Road and terminating in Williamson Park

Length: 1,100 metres

Type: Concrete

Width: 2 metres

Plate 13 – Grand Junction Road to Waroo Road

Plate 14 – Williamson Park

7.2 Existing Shared Path Network - Murrumbateman

Murrumbateman Village

Location: Murrumbateman Village
Length: 5,900 metres
Type: Asphalt and concrete
Width: 2 metres

Plate 15 – Merryville Drive

Plate 16 – Merryville Drive

Plate 17 – McIntosh Circuit

Plate 18 – McIntosh Circuit

Murrumbateman Village

Plate 19 – Isabel Drive

Plate 20 – Isabel Drive

Plate 21 - Colonial Place

Plate 22 – Governor Drive

Plate 23 – South Street

Plate 24 - To Hercules Street

Jiparu Murrumbateman

Location: Jiparu Estate
Length: 2,800 metres
Type: Asphalt
Width: 2 metres

Plate 25 – Jiparu Drive

Plate 26 – Jiparu Drive

Fairley Village

Location: Fairley Village Murrumbateman
Length: 1,220 metres
Type: Concrete
Width: 2.1 metres

Plate 27 – Rose Street

Plate 28 – Rose Street Link

Plate 29 – North Street

Plate 30 – Camp Street Link

7.3 Existing Shared Path Network - Binalong

Binalong

Location: Binalong Village
Length: 1,510 metres
Type: Concrete and Asphalt
Width: 2 metres

Plate 31 – Queen Street

Plate 32 – Richmond Street

Plate 33 – Dickinson Street

Plate 34 – Stephen Street

7.4 Existing Pedestrian Facilities within the LGA

7.4.1 Pedestrian Crossings

Marked pedestrian crossings are only provided in locations accordance with the pedestrian crossing warrant as per RMS requirements. There are three marked pedestrian crossings located throughout Yass Valley as detailed below.

Table 8 – Pedestrian Crossings

Item	Location	Town
1	The ring road under Comur Street Bridge – west side	Yass
2	The ring road under Comur Street Bridge - east side	Yass
3	Waroo Road between Petit Street and Comur Street	Yass

7.4.2 Pedestrian Refuge

There are seven pedestrian refuges / cut-through median islands located in the YVC LGA as detailed below. These median islands have been constructed to separate traffic as well as to provide an area for pedestrians to wait whilst traffic has passed. They are typically located in the median islands on the approaches to a roundabout or in mid-block locations.

Table 9 – Pedestrian Refuges

Item	Location	Town
1	Meehan Street at Dutton Street intersection	Yass
2	Meehan Street between Comur Street and Church Street	Yass
3	Grampian Street at Glebe Street	Yass
4	Castor Street at Glebe Street	Yass
5	Pollux Street at Glebe Street	Yass
6	Church Street at Polding Street	Yass
7	Barton Highway opposite Murrumbateman Country Inn	Murrumbateman

7.4.3 School Zones

All roads fronting schools have a 40km/h speed limited school zone between the hours of 8:00am and 9:30am and 2:00pm and 4:30pm on designated school days in NSW as summarized in **Table 9**. Some schools also have part-time children crossings adjacent to the school as summarised in **Table 10**. Schools which fulfil RMS requirements may also have part-time children's crossing supervisors.

Table 10 – School Zones

Item	Location	Town
1	Mt Carmel School - Dutton Street between Rossi Street and Meehan Street	Yass
2	Mt Carmel School - Rossi Street between Comur Street and Dutton Street	Yass
3	Mt Carmel School - Meehan Street between Comur Street and Dutton Street	Yass

Item	Location	Town
4	Berinba Public School - Grand Junction Road between Barber Street and Comur Street	Yass
5	Berinba Public School - Petit Street between Comur Street and Pritchett Street	Yass
6	Yass Public School - Yass Public School access road off Laidlaw Street	Yass
7	Yass High School – Grampian Street between Glebe Street and Hume Street	Yass
8	Bowning Public School – Bowning Road between Bogolong Street and Red Hill Street	Bowning
9	Bowning Public School – Cossack Street between Red Hill Road and Airy Street	Bowning
10	Sutton Primary School – Victoria Street between Bywong Street and Moorong Street	Sutton
11	Sutton Primary School – Bywong Street between Victoria Street and Guise Street	Sutton
12	Gundaroo Public School – Lot Street between Morning Street and Cork Street	Gundaroo
13	Gundaroo Public School – Faithfull Street between Morning Street and Cork Street	Gundaroo
14	Binalong Public School – Dickinson Street from Queen Street to School	Binalong

Table 11 – School Crossing Locations

Item	Location	Town
1	Mt Carmel School - Rossi Street between Comur Street and Dutton Street	Yass
2	Berinba Public School - Petit Street between Comur Street and Pritchett Street	Yass

7.4.4 Traffic Signals

Signalised intersections allow safer pedestrian flow in high traffic areas. **Table 11** details the signalised intersections found in Yass Valley.

Table 12 – Traffic Signals

Item	Location	Town
1	Comur Street and Meehan Street intersection	Yass
2	Waroo Road near Comur Street (pedestrian only)	Yass

7.5 Existing Pedestrian Network

Yass River North

Locations: Traverses Yass north of the river
Length: 4,250 metres
Linkage: Yass River South, CBD
Type: Concrete
Width: 1.2 metres

Plate 35 – Pollux Street Pedestrian Refuge

Plate 36 – Bridge link Footpath

Plate 37 – Laidlaw Street Footpath

Plate 38 – Footpath to Tennis Courts

Yass River South

Location: Traverses Yass South of the River, and throughout the CBD

Length: 8,200 metres

Linkage: Yass River North

Type: Concrete and asphalt

Width: 1.2 metres

Plate 39 – Adele Street Footpath

Plate 40 – CBD Pedestrian Bollards

Plate 41 – Signalised Pedestrian Crossing CBD

Plate 42 - Meehan Street Pedestrian Refuge

Murrumbateman

Location: Murrumbateman
Length: 485 metres
Type: Concrete and Pavers
Width: 1.5 metres

Plate 43 - Barton Highway Pedestrian Refuge

Plate 44 - Kerb Ramps Hercules Street Murrumbateman

Binalong

Length: 420 metres

Type: Asphalt

Width: Full width of verge

Plate 45 – Fitzroy Street

Plate 46 - Fitzroy Street

Bowning

Length: 590 metres

Type: Concrete

Width: 1.2 to 3 metres

Plate 47 – Bowning Road

Plate 48 – Montem Street

Plate 49 – Cossack Street

Plate 50 – Leake Street

Sutton

Length: 100 metres

Type: Concrete

Width: 2 metres

Plate 51 – Victoria Street

Gundaroo

Length: 1,150 metres

Type: Formed Gravel

Width: 1.5 metres

Plate 52 – Cork Street

Plate 53 – Cork Street

Plate 54 – Faithfull Street

Plate 55 – Lot Street

8 Infrastructure Programs

8.1 Standards and Signage

The exposed nature of cycling means that cyclists are vulnerable to injuries resulting from accidents caused by poor construction standards for cycleways. Where cycleways are constructed using cheap, inferior surfaces (such as grass, gravel, or coarse textured bitumen) cyclists complain about the roughness and presence of loose stones. In such instances, cyclists will often refuse to use the cycleway, preferring to ride on smooth road surfaces instead.

Construction of cycleways to the recommended standards provided in the *'Cycling Aspects of Austroads Guides (Austroads 2017)'*, including the use of concrete, fine-textured bitumen or asphalt, assists in ensuring the safety of cyclists utilising cycleways.

Where economically feasible, YVC will use concrete, fine-textured bitumen or asphalt in the construction of cycleways in Yass Valley. Where ever possible all proposed new cycleways shall be constructed as off-road shared paths. Where traffic volumes exceed 5,000 vehicles per day, or are nominated restricted access vehicle routes, off-road shared paths are to be mandatory to ensure separation from road traffic.

Current RMS and Austroads guidelines specify that cycleway construction must have a minimum width of 2.5 metres wherever possible, however provision is made for areas where existing constraints necessitate the use of a 2-metre width. Due to internal standards, YVC will endeavour to provide 2.4-metre-wide cycleways where feasible, with a minimum width of 2 metres. Specific details regarding the design and construction standard for cycleways is provided in the Cement and Concrete Associations *'Guide to Residential Streets and Paths, 2004'*.

Appropriate bicycle path signs are to be erected, where not currently present, on the busiest cycling routes throughout the region. Signage is to be prepared and installed in accordance with the recommended standards provided in the *'Cycling Aspects of Austroads Guides (Austroads 2017)'*. For on-road cycleways where line marking may be absent or faded, line marking is to be carried out in accordance with the RMS delineation guidelines, *'Roads and Traffic Authority 2008, Delineation'*. It should be noted that all RMS guidelines are prepared in accordance with Australian Standards and the Austroads Guides.

Heavily trafficked roads and truck routes should be avoided as much as possible in the selection and development of on-road cycleways due to the safety concerns associated with the interaction of large volumes and/or large vehicles with cyclists. However, it is not always practical to avoid such roads because many have suitable surfaces for cycling and provide the shortest route between destinations, making them popular (particularly with commuter cyclists) regardless of the presence or absence of a cycleway.

9 Non-Infrastructure Programs

Road Safety Education programs are part of the National School Curriculum. RMS pamphlets are available for children, parents and other cyclists, as well as educational pamphlets for motorists. These pamphlets are regularly distributed via schools.

More needs to be done to ensure that motorists, cyclists and pedestrians all understand their rights and obligations and improvements need to be made to cycleway design and the inclusion of cycleways in future development throughout Yass Valley. As part of the YVC Bike Plan and PAMP, YVC may consider implementing the following non-infrastructure programs on an annual basis:

- Ongoing education of cyclists;
- Ongoing education of pedestrians;
- Appropriate design of recreational cycleways; and
- Appropriate recreational area development.

9.1 Ongoing Education of Cyclists, Pedestrians and Motorists

Ongoing education of cyclists will be facilitated by the Road Safety Officer with particular focus on the following:

- Rules and regulations; and
- Safety awareness.

The YVC website, newsletter and offices will all be used at various times for the dissemination of educational material to cyclists, motorists and pedestrians.

9.1.1 Rules and Regulations – Cyclists and Motorists

There is a need for cyclists to be made aware of the following rules regarding right of way from the NSW Government Road Rules, Part 15:

- **Rule 248:** The rider of a bicycle must not ride across a road, or part of a road, on a children's crossing or pedestrian crossing;
- **Rule 249:** The rider of a bicycle must not ride on part of a separated footpath designated for the use of pedestrians;
- **Rule 250**: The rider of a bicycle who is 12 years old or older must not ride on a footpath if another law of this jurisdiction prohibits the rider from riding on the footpath; and
- **Rule 251**: The rider of a bicycle riding on a bicycle path, footpath, or shared footpath, must keep to the left of any oncoming bicycle rider on the path.

Other cyclist specific rules and regulations are provided under the NSW Road Rules as follows:

- May ride two abreast, but no more than 1.5m apart;
- May overtake on the left-hand side of slow moving or stopped vehicles;
- May travel in Bus and Transit Lanes;
- May turn right from the left-hand side of a multi-lane roundabout with the proviso that they give way to the traffic entering the roundabout before them;
- May travel on road shoulders;
- Cannot ride across un-signalised pedestrian crossings;
- Cannot ride across signalised crossings unless there are special bicycle lights;

- Cannot travel in Bus Only Lanes;
- Must use provided bike lanes, where practicable; and
- Must have at least one working brake and a bell or horn.

When travelling at night must have:

- A steady or flashing white light that is visible for at least 200m from the front of the bike;
- A steady or flashing red light that is visible for at least 200m from the rear of the bike; and
- A red rear reflector that is clearly visible for at least 50m when light is projected onto it by a vehicle's headlight on low beam.

From 1 March 2016, the NSW Government have introduced new rules for road users to increase safety to cyclists on roads, they are, drivers who pass a bicycle rider must allow a distance of at least:

- 1 meter when the speed limit is 60km/h or less; and
- 1.5 meters when the speed limit is more than 60km/h

9.1.2 Safety Awareness

There is a need for cyclists to be made aware of the safety benefits of:

- Always wearing helmets when cycling;
- Wearing bright or reflective clothing when cycling;
- Undertaking visual checks when approaching parked vehicles to ensure that doors are not about to be opened into the path of the bike; and
- Cycleway etiquette for pedestrians and cyclists, including the requirement to keep left and always listen for the bell of an approaching cycle.

9.1.3 Rules and Regulations - Pedestrians

In many cases cycleways are provided as shared paths for the dual use of pedestrians and cyclists, with off-road cycleways in Yass Valley being shared paths. This shared use can result in conflicts and accidents between cyclists and pedestrians. Pedestrians complain that cyclists ride two abreast and don't make way for them, and cyclists complain that pedestrians will not move aside for them.

Adopting a minimum width of 2 metres for the future construction of cycleways, and providing centrelines, arrows and signage where appropriate can assist in reducing this conflict. Advising pedestrians of cycleway etiquette, such as keeping left on shared paths and listening for the bell of approaching bikes, via appropriate signage is another way of reducing this conflict.

There is a need for pedestrians to be made aware of Rule 239 from the Australian Road Rules regarding right of way:

(1) A pedestrian must not be on a bicycle path, or part of a separated footpath designated for the use of bicycles, unless the pedestrian:

a. Is crossing the bicycle path or separated footpath by the shortest safest route; and

b. Does not stay on the bicycle path or separated footpath for longer than necessary to cross the bicycle path or separated footpath safely.

(2) However, a pedestrian may be on a bicycle path, or part of a separated footpath designated for the use of bicycles, if:

a. The pedestrian is:

i. In or pushing a wheelchair; or

ii. On rollerblades, roller skates, or a similar wheeled recreational device; and

iii. There is no traffic control device, or information on or with a traffic control device, applying to the bicycle path or separated footpath that indicated that the pedestrian is not permitted to be on the bicycle path or the part of the separated footpath that is designated for the use of bicycles.

(3) A pedestrian who is crossing a bicycle path, or a part of a separated footpath designated for the use of bicycles, must keep out of the path of any bicycle, or any pedestrian which is permitted under sub-rule (2) to be on the bicycle path, or the path of the separated footpath designated for the use of bicycles.

(4) In the Australian Road Rules:

Bicycle path means a length of path beginning at a bicycle path sign or road marking, and ending at the nearest of the following:

a. An end bicycle path sign or end bicycle path road marking;

b. A separated footpath sign or separated footpath road marking;

c. A road except a road related area; and

d. The end of the path.

Separated footpath means a length of footpath beginning at a separated footpath sign or separated footpath road marking, and ending at the nearest of the following:

a. An end separated footpath sign or end separated footpath road marking;

b. A bicycle path sign or bicycle path road marking;

c. A no bicycle sign or no bicycles road marking;

d. A road (except a road related area); and

e. The end of the footpath.

9.2 Cycling Initiatives and Campaigns

As part of YVC's support for cycling within the region, YVC will provide information to the community of any state or national cycling initiatives that are proposed such as NSW Bike Week, Ride to Work Day and cycling safety campaigns such as 'a metre matters' for example.

These initiatives and campaigns will be advertised on the YVC website as well as the provision of notices in the local newspapers to inform the local community.

10 Proposed Augmentation Works

The proposed works have been identified by considering the following factors:

- Community feedback from the consultation process,
- Routes that provide additional safety,
- The connectivity a route provides,
- The existing and potential demand a route may have,
- The comfort a route may provide,
- The potential for a route to increase tourism to the area,
- The recreational value of the route, and
- The cost effectiveness of constructing the route.

Details of the proposed works are provided below with additional mapping of the proposed shared path network for provided in **APPENDIX 2**.

10.1 Qualitative Scoring Process

A qualitative scoring system has been developed to rank the proposed works in order of priority according to the desirable outcomes for YVC and the community. The scoring criteria is outlined in **Table 13.**

The route scores and rankings for each route are provided in **APPENDIX 3** along with a description of characteristics relating to each assessment criteria.

Due to the relatively small budget of $40,000 per year (inclusive of RMS funding) available for construction of infrastructure, the construction priority list has been reduced to the top 7 routes. These routes have been broken down and prioritised according to route priority and professional judgement of what will provide the best outcome for the community.

The remaining routes have been listed in order of ranking. Selected routes can be constructed subject to state or federal grants of funding from other sources.

Further details on the proposed schedule of works are provided in **APPENDIX 5.**

It should be noted that whilst the proposed locations of new shared paths are indicated on the plans in the following section of the report, the actual locations may be subject to change due to unforeseen limitations and restrictions as part of the future project development for each site.

Table 13 - Qualitative Scoring Criteria

Criteria	Description	Points	Maximum Points
Community Request	Notable feedback from community consultation	+10	10
Safety	Crash History Speed zone less than 80km/h +5 Most direct route Intersection crossing (per crossing) Potential use from vulnerable users; adjacent to schools or aged care facilities	+5 +5 +3 -1 +15 +5	20
Connectivity	Providing links to attractors and/or generators Enhance the network by filling in gaps	+10 +10	20
Existing/Potential Demand	Connection of small residential area Connection of medium residential area Connection of large residential area Potential future development in area	+3 +6 +9 +3	10
Comfort	Straight Level runs through parkland or reserve steep grade	+2 +3 +5 -3	10
Tourism	Potential to enhance tourism for the area	+10	10
Recreation	Provides longer rides or loop +7 Provides access to sporting facilities +5 Provides access to parks +3	+7 +5 +3	10
Cost Effectiveness	All new construction +0 All widening of existing footpath +8 Some widening of existing footpath +5 No kerb ramps required +2	+0 +8 +5 +2	10

10.2 Yass Town Shared Paths

10.2.1 Petit Street – Church Street to Comur Street

Location	Details
	**Location:** Widening of existing footpath to provide 2.4m shared path between Church Street and Comur Street **Length:** 208 metres **Linkage:** Connecting Berinba Public School with existing shared path facility to Nicholls Drive **Type:** Concrete **Width:** 2.4 metres **Estimate:** $30,059 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Church Street to Comur Street	208	$30,059	27

10.2.2 Waroo Road / Comur Street – Petit Street to Polding Street

Location	Details

Location: Widening of existing 1.2m wide footpaths along Waroo Road / Comur Street between Petit Street and Polding Street to provide 2.4m wide shared path.

Length: 265 metres

Linkage: Connecting the town centre with existing shared path facility to Nicholls Drive and proposed shared path to Berinba Public School

Type: Concrete

Width: 2.4 metres

Estimate: $34,736

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Brown Street to Adele Street	80	$9,792	4
Stage 2 - Petit Street to Brown Street	185	$24,944	5

10.2.3 Shaw Street – Petit Street to Aldi Supermarket

Location	Details

Location: Provision of new off-road shared path between Petit Street and Aldi Supermarket. This includes upgrading footpaths along Crago Street between Adele Street and Aldi Supermarket.

Length: 658 metres

Linkage: Connecting Aldi / town centre with residents up to the Petit Street area. Connection to proposed shared path along Petit Street.

Type: Concrete

Width: 2.4 metres

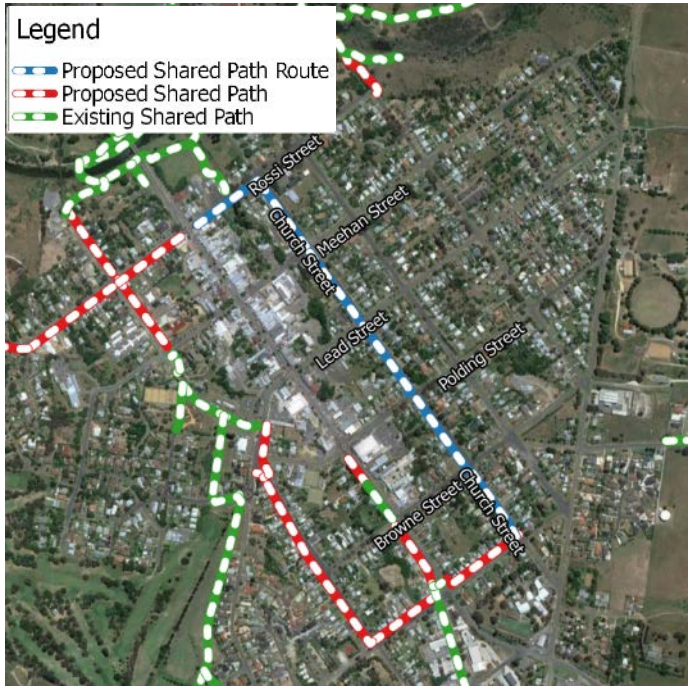
Estimate: $153,535

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Petit Street to Crago Street 0 to 100m	100	$26,780.00	31
Stage 2 - Petit Street to Crago Street 100 to 200m	100	$24,480.00	32
Stage 3 - Petit Street to Crago Street 200 to 300m	100	$24,480.00	33
Stage 4 - Petit Street to Crago Street 300 to 400m	100	$24,480.00	34
Stage 5 - Petit Street to Crago Street 400 to 540m	140	$36,572.00	35
Stage 6 - Shaw Street to Adele Street	44	$7,686	36
Stage 7 - Adele Street to Aldi Supermarket	74	$9,058	37

10.2.4 Church Street / Rossi Street – Petit Street to Comur Street

Location	Details



Location: Provision of new off-road shared path between Rossi Street and Comur Street. This includes upgrading the existing footpath along Church Street between Polding Street and Lead Street and along Rossi Street between Church Street and Comur Street.

Length: 1258 metres

Linkage: Connecting Berinba Public School with town centre and Riverbank Park.

Type: Concrete

Width: 2.4 metres

Estimate: $245,136

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Petit Street to Brown Street	215	$28,616	18
Stage 2 – Brown Street to Polding Street	211	$53,953	19
Stage 3 – Polding Street to Lead Street	218	$28,983	20
Stage 4 – Lead Street to Meehan Street	212	$56,498	21
Stage 5 - Meehan Street to Rossi Street	209	$53,463	22
Stage 6 - Church Street to Comur Street	193	$23,623	23

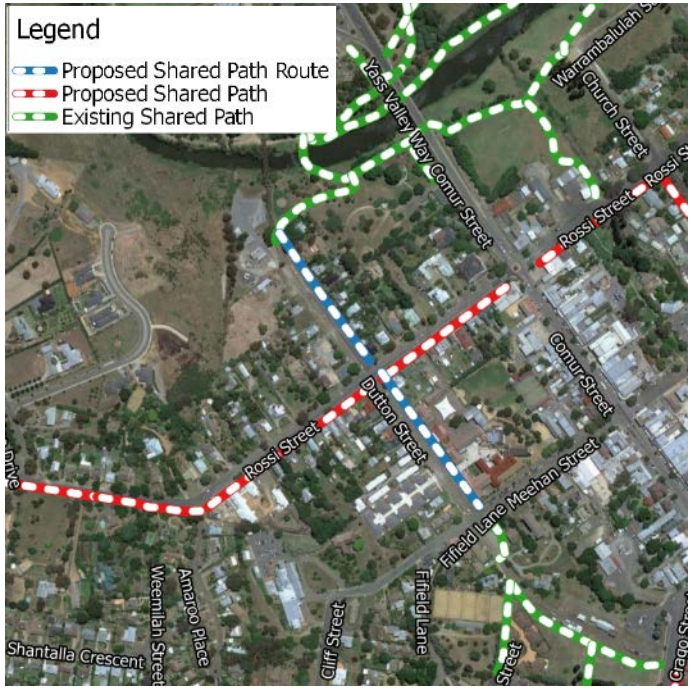
10.2.5 Yass River – Demestre to Warrambalulah Street

Location	Details
	**Location:** Provision of new off-road shared path between Demestre Street and Warrambalulah Street. **Length:** 221 metres **Linkage:** Connecting Yass High School and Riverbank Park with the south/east Yass area. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $54,101 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Warrambalulah Street to Rossi Street	221	$54,101	11

10.2.6 Dutton Street – Riverbank Park to Meehan Street

Location	Details



Location: Provision of new off-road shared path between Riverbank Park and Meehan Street. This includes upgrading the existing footpath along Dutton Street between Meehan Street and Rossi Street.

Length: 414 metres

Linkage: Connect existing shared path network running from Walker Park to Riverbank Park shared path network.

Type: Concrete

Width: 2.4 metres

Estimate: $77,576

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Rossi Street to Riverbank Park	201	$49,205	1
Stage 2 - Meehan Street to Rossi Street	213	$28,371	6

10.2.7 Rossi Street – Comur Street to Irvine Drive

Location	Details

Location: Widening existing footpath to new off-road shared path between Comur Street and Irvine Drive. This includes approximately 110m of new construction near Irvine Drive.

Length: 668 metres

Linkage: Connection of west Yass developments with town centre and Riverbank Park

Type: Concrete

Width: 2.4 metres

Estimate: $104,208

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Weemilah Street to Dutton Street	248	$32,655	7
Stage 2 - 126 Rossi Street to Weemilah Street	135	$18,824	8
Stage 3 - Irvine Drive to 126 Rossi Street	127	$31,090	9
Stage 4 - Hatton Drive to Irvine Drive	158	$21,639	10

10.2.8 Hovell Street – Yass River to Hovell Street

Location	Details
	**Location:** Provision of new off-road shared path between Munnagi Yerribi Path and Hovell Street. **Length:** 133 metres **Linkage:** Connection of north/east Yass with Yass River shared path network. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $32,558 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Connection from existing bike path to Hovell Street	133	$32,558	12

10.2.9 Hume Street – Grampian Street to Orion Street

Location	Details

Location: Provision of new off-road shared path between Grampian Street and Orion Street. This includes upgrading existing footpath between Grampian Street and Mount Street.

Length: 814 metres

Linkage: Connecting residents from North Yass to Yass High School and the Yass River shared path network. Connection of proposed footpath to aged care facilities in North Yass.

Type: Concrete

Width: 2.4 metres

Estimate: $189,638

Segments:

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Mount Street to Hope Street	118	$33,486	13
Stage 2 - Hope Street to Pollux Street	235	$62,128	14
Stage 3 - Pollux Street to Orion Street	232	$61,394	15
Stage 4 - Grampian Street to Mount Street	229	$32,630	16

10.2.10 Grampian Street – Hume Street to Glebe Street

Location	Details
	**Location:** Provision of new off-road shared path between Glebe Street and Yass Caravan Park entrance. **Length:** 68 metres **Linkage:** Connecting caravan park to shared path network. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $16,646 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Glebe Street to Caravan Park Entrance	68	$16,646	28

10.2.11 Petit Street – Comur to Shaw Street

Location	Details
	**Location:** Provision of new off-road shared path between Comur Street and Shaw Street **Length:** 193 metres **Linkage:** Connection between existing shared path from Nicholls Drive and proposed shared path on Shaw St **Type:** Concrete **Width:** 2.4 metres **Estimate:** $49,546 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Comur Street to Shaw Street	193	$49,546	30

10.3 Murrumbateman Shared Paths

10.3.1 Hercules Street – Middle Street to 52 Hercules Street

Location	Details
	**Location:** Provision of new off-road shared path between Middle Street and 52 Hercules Street. **Length:** 601 metres **Linkage:** Connect existing shared path network to the footpaths in the town centre. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $147,125 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Middle Street to Camp Street	119	$29,131	23
Stage 2 - Camp Street to West Street	117	$28,642	24
Stage 3 - West Street to Merriman Place	267	$65,362	25
Stage 4 - Merriman Place to Cemetery	98	$23,990	26

10.3.2 West Street – Hercules Street to North Street

Location	Details
	**Location:** Provision of new off-road cycleway (shared path) between Hercules Street and North Street. **Length:** 226 metres **Linkage:** Connection of shared paths from the new Fairley Estate development to the proposed Hercules street shared path **Type:** Concrete **Width:** 2.4 metres **Estimate:** $55,325 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Hercules Street to North Street	226	$55,325	29

NB: Consideration could be given to linking the new shared path into Fairley Estate (Helen Street) via the unformed road reserve north of Hercules Street. However, it is noted that there will be requirements to work with land owners to relocate structures from the road reserve.

10.4 Binalong Shared Paths

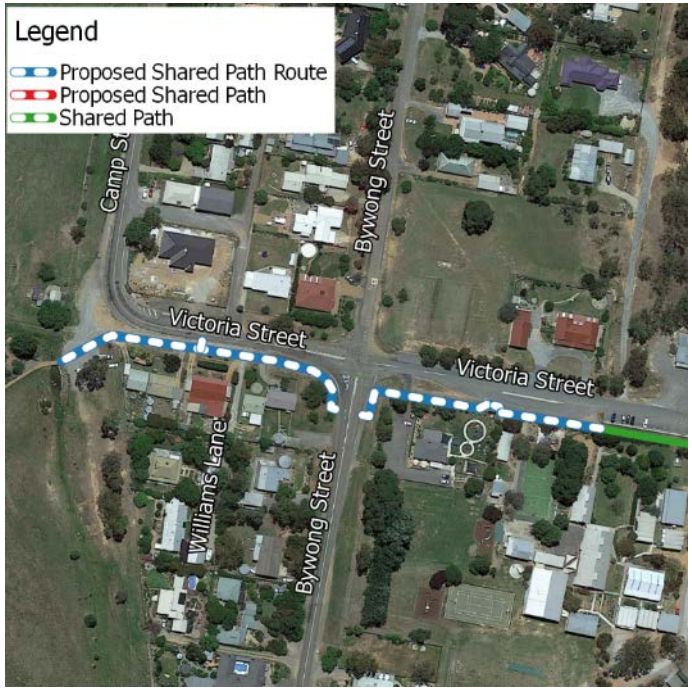
10.4.1 Queen Street – Fitzroy Street to Richmond Street

Location	Details
	**Location:** Provision of new off-road shared path between Fitzroy Street and Richmond Street. **Length:** 105 metres **Linkage:** Connecting existing shared path network with town centre. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $28,004 **Segments:**

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Fitzroy Street to Richmond Street	105	$28,004	38

10.5 Sutton Shared Paths

10.5.1 Victoria Street – Sutton Primary School to Camp Street

Location	Details
	**Location:** Provision of new shared path between Sutton Primary School entrance and Camp Street. **Length:** 298 metres **Linkage:** Connecting Sutton Primary School with Sutton Recreation Ground and Bakery. **Type:** Concrete **Width:** 2.4 metres **Estimate:** $77,550 **Segments:** Stage 1 - Sutton Primary School to Bywong St, 136 meters Stage 2 - Bywong St to Recreation Ground, 162 meters

Description	Length (m)	Cost ($)	Priority Ranking
Stage 1 - Sutton Primary School to Bywong Street	136	$35,593	2
Stage 2 - Bywong Street to Recreation Ground	162	$41,958	3

10.6 Yass Town Footpaths

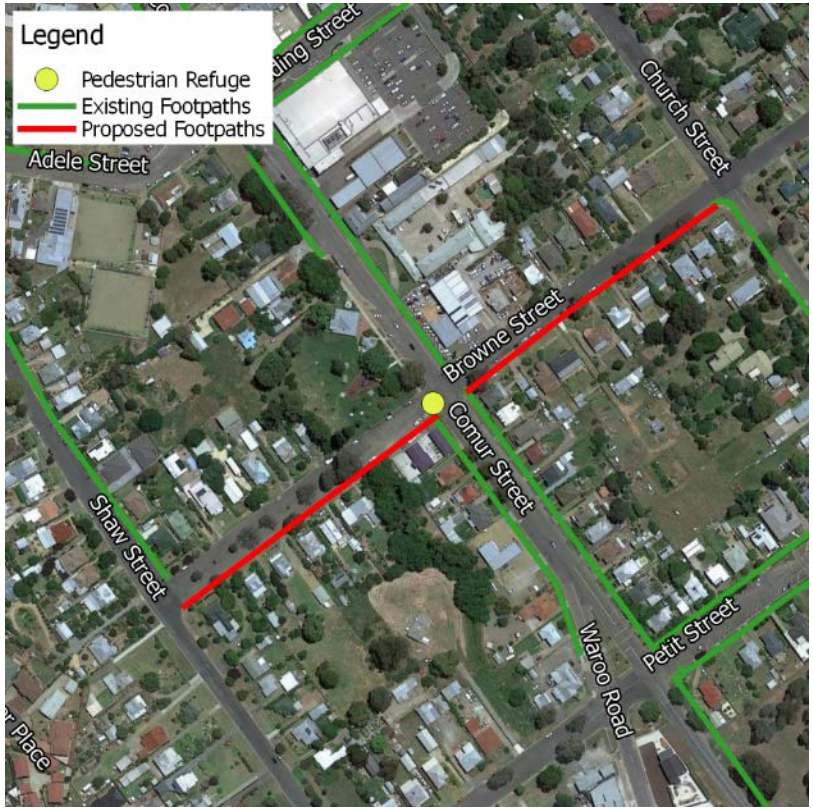
10.6.1 Polding Street – Pritchett Street to Church Street

Location	Details
	**Location:** Provision of new footpath inclusive of kerb ramps between Pritchett Street and Church Street. **Length:** 117 metres **Type:** Concrete **Width:** 1.5 metres **Estimate:** $21,272.50

Description	Length (m)	Cost ($)	Priority Ranking
Polding Street – Pritchett Street to Church Street	117	$21,272.50	9

10.6.2 Browne Street – Church Street to Shaw Street

Location	Details



Location: Provision of new footpath inclusive of kerb ramps between Church Street and Shaw Street.

Length: 409 metres

Type: Concrete

Width: 1.5 metres

Estimate: $65,182.50

Description	Length (m)	Cost ($)	Priority Ranking
Browne Street – Church Street to Comur Street	202	$31,085.00	8
Browne Street – Comur Street to Shaw Street	207	$34,097.50	7

10.6.3 Mount Street – Linton Village to Hume Street

Location	Details

Location: Provision for new footpath inclusive of kerb ramps from Linton Village to Hume Street.

Length: 151 metres

Type: Concrete

Width: 1.5 metres

Estimate: $23,817.50

Description	Length (m)	Cost ($)	Priority Ranking
Mount Street – Linton Village to Hume Street	151	$23,817.50	6

10.6.4 Castor Street – Horton House to Hume Street

Location	Details

Location: Provision for new footpath inclusive of kerb ramps connecting Horton House and Hume Street.

Length: 129 metres

Type: Concrete

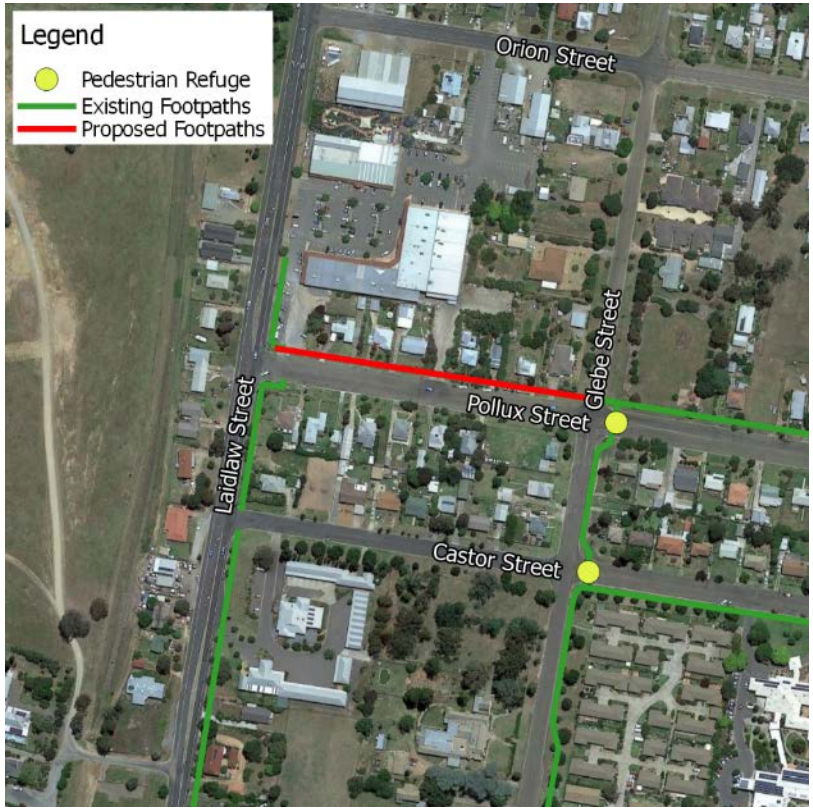
Width: 1.5 metres

Estimate: $20,682.50

Description	Length (m)	Cost ($)	Priority Ranking
Castor Street – Horton House to Hume Street	129	$20,682.50	5

10.6.5 Pollux Street – Glebe Street to Laidlaw Street

Location	Details



Location: Replacement of existing footpath between Glebe Street and Laidlaw Street along Pollux Street.

Length: 207 metres

Type: Concrete

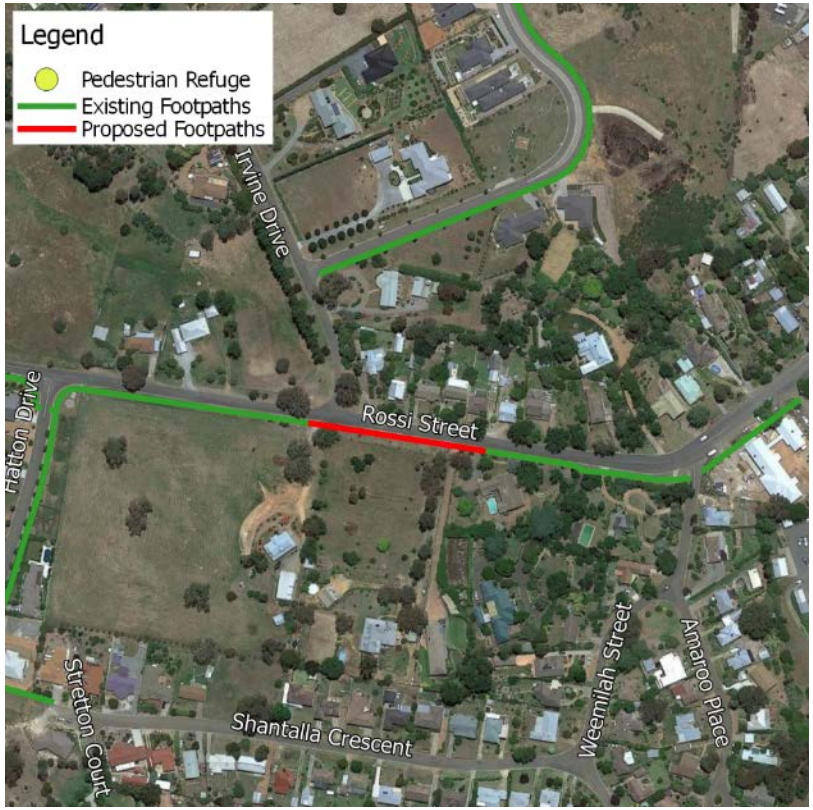
Width: 1.5 metres

Estimate: $31,797.50

Description	Length (m)	Cost ($)	Priority Ranking
Pollux Street - Glebe Street to Laidlaw Street	207	$31,797.50	1

10.6.6 Rossi Street – Irvine Drive to 126 Rossi Street

Location	Details



Location: Provision for new footpath along Rossi Street from Irvine Drive intersection to 126 Rossi Street

Length: 112 metres

Type: Concrete

Width: 1.5 metres

Estimate: $15,960.00

Description	Length (m)	Cost ($)	Priority Ranking
Rossi Street – Irvine Drive to 126 Rossi Street	112	$15,960.00	2

10.7 Bowning Footpaths

10.7.1 Bowning Road – Bus Stop Shelter to Existing Footpath

Location	Details

Location: Provision of new footpath connecting the existing bus stop shelter with the existing footpath outside the school gate.

Length: 28 metres

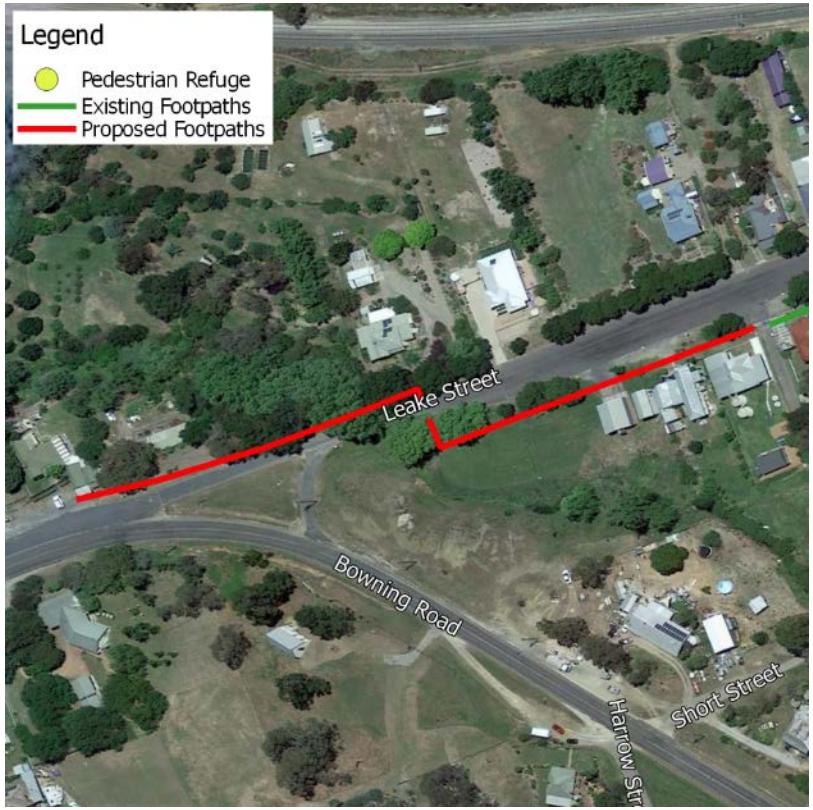
Type: Concrete

Width: 1.5 metres

Estimate: $3,990

Description	Length (m)	Cost ($)	Priority Ranking
Bowning Road – Bus Stop Shelter to Existing Footpath	28	$3,990.00	3

10.7.2 Leake Street – Post Office to Town Centre

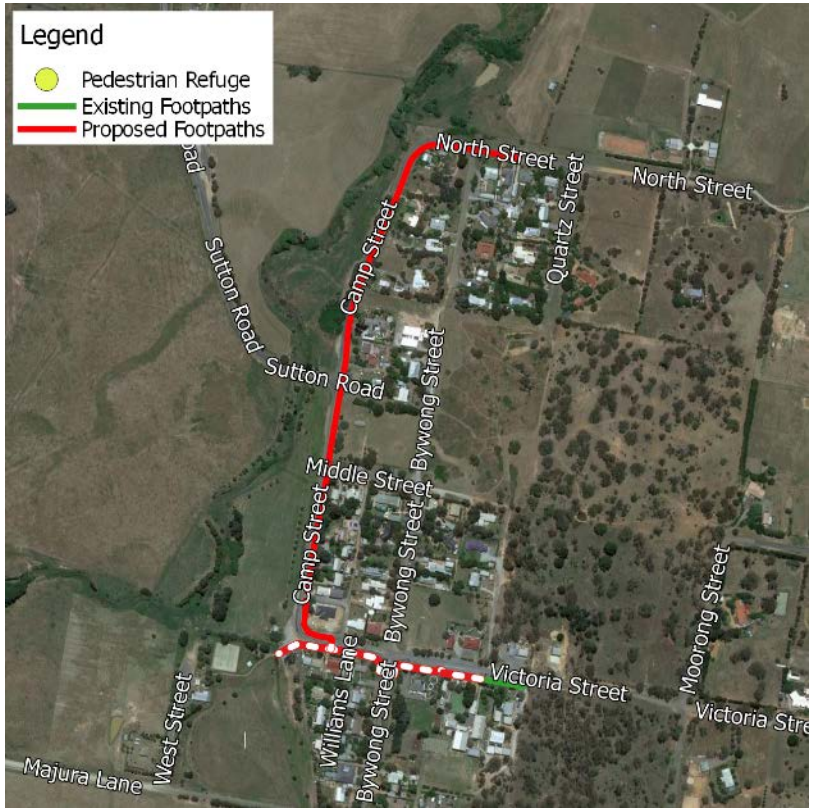
Location	Details
	**Location:** Provision for new footpath inclusive of kerb ramps connecting the Post Office with the Town Centre. **Length:** 257 metres **Type:** Concrete **Width:** 1.5 metres **Estimate:** $41,222.50

Description	Length (m)	Cost ($)	Priority Ranking
Leake Street – Post Office to Town Centre	257	$41,222.50	4

10.8 Sutton Footpaths

10.8.1 North/Camp/Victoria Street - Quartz Street to Victoria Street

Location



Details

Location: Provision of new footpath connecting residents along North Street and Camp Street from Quartz Street to the Bakery on Victoria Street.

Length: 807 metres

Type: Concrete

Width: 1.5 metres

Estimate: $114,997.50

Description	Length (m)	Cost ($)	Priority Ranking
Camp Street - Bakery to Victoria Street	80	$11,400.00	10
Camp Street - Middle Street to Bakery	158	$22,515.00	11
Camp Street - Bywong Street to Middle Street 400m to 514m	114	$16,245.00	12
Camp Street - Bywong Street to Middle Street 300m to 400m	100	$14,250.00	13
Camp Street - Bywong Street to Middle Street 200m to 300m	100	$14,250.00	14
Camp Street - Bywong Street to Middle Street 100m to 200m	100	$14,250.00	15
Camp Street - Bywong Street to Middle Street 0m to 100m	100	$14,250.00	16
North Street - Quartz Street to Bywong Street	55	$7,837.50	17

11 Proposed Works – Bike Security

Security of bicycles and end-of-trip facilities have not been previously given a high priority in the region and this may be a deterrent to cycling when considering the cost of stolen items and attempts to recover them.

The provision of secure end-of-trip facilities does not have to be a costly exercise. Generally, all that is required is a rack or rail to which a bicycle's frame and/or wheels can be secured. Cyclists normally supply their own chain and padlock (or other locking device) when using such facilities. More expensive facilities which provide for secure storage of both bikes and other items such as helmets and wet weather clothing include steel reinforced 'lockers'.

To continue to attract people to cycling, whether it be as a commuter or for recreation, end-of-trip secure storage facilities need to be considered. In order for these secure storage facilities to be effective they must be:

- Located in areas that are close to businesses, schools, or other areas which cyclists frequent;
- Easily accessible and within view;
- Located in well-lit areas;
- Appropriately signposted; and
- Well-maintained.

Cyclists will not utilise facilities where they feel they are in danger or that their bike many be the target of malicious damage, with inappropriate locations having an adverse effect upon the usage of such facilities. Suggested storage areas were determined based on:

- Effectiveness, as detailed above; and
- Site investigations into regularly frequented locations where cyclists would be likely to use end-of-trip facilities.

11.1 Proposed Works – Signage & Pavement Markings

Knowing the location of the bicycle network is important for cyclists and pedestrians. Appropriate route directional signage located at specific locations is proposed to alert cyclists and pedestrians. A typical example of route signage is shown in **Figure 2**.

Figure 2 – Route Directional Signage Example

(Source: NSW Bicycle Guidelines)

In addition to route signage, the installation of warning, advisory and regulatory signage, pavement markings and centre line marking, particularly for shared paths is also proposed to enhance the existing bicycle network. Examples of the different forms of signage for cyclists and road users are provided below.

Figure 3 – Regulatory Signage

(Source: NSW Bicycle Guidelines)

Figure 4 – Warning and Guidance Signage

(Source: NSW Bicycle Guidelines)

Pavement markings generally consist of broken and continuous separation lines as well as pavement symbols and colour as shown in **Plate 56**.

Plate 56 - Pavement Markings

Installation of shared path behavioural signage is recommended as this will also reinforce any education programs as described in Section 5 and encourage shared path users to behave in a co-operative manner. Examples of the behavioural signage and suggested layouts and grouping are provided in **Figure 5**.

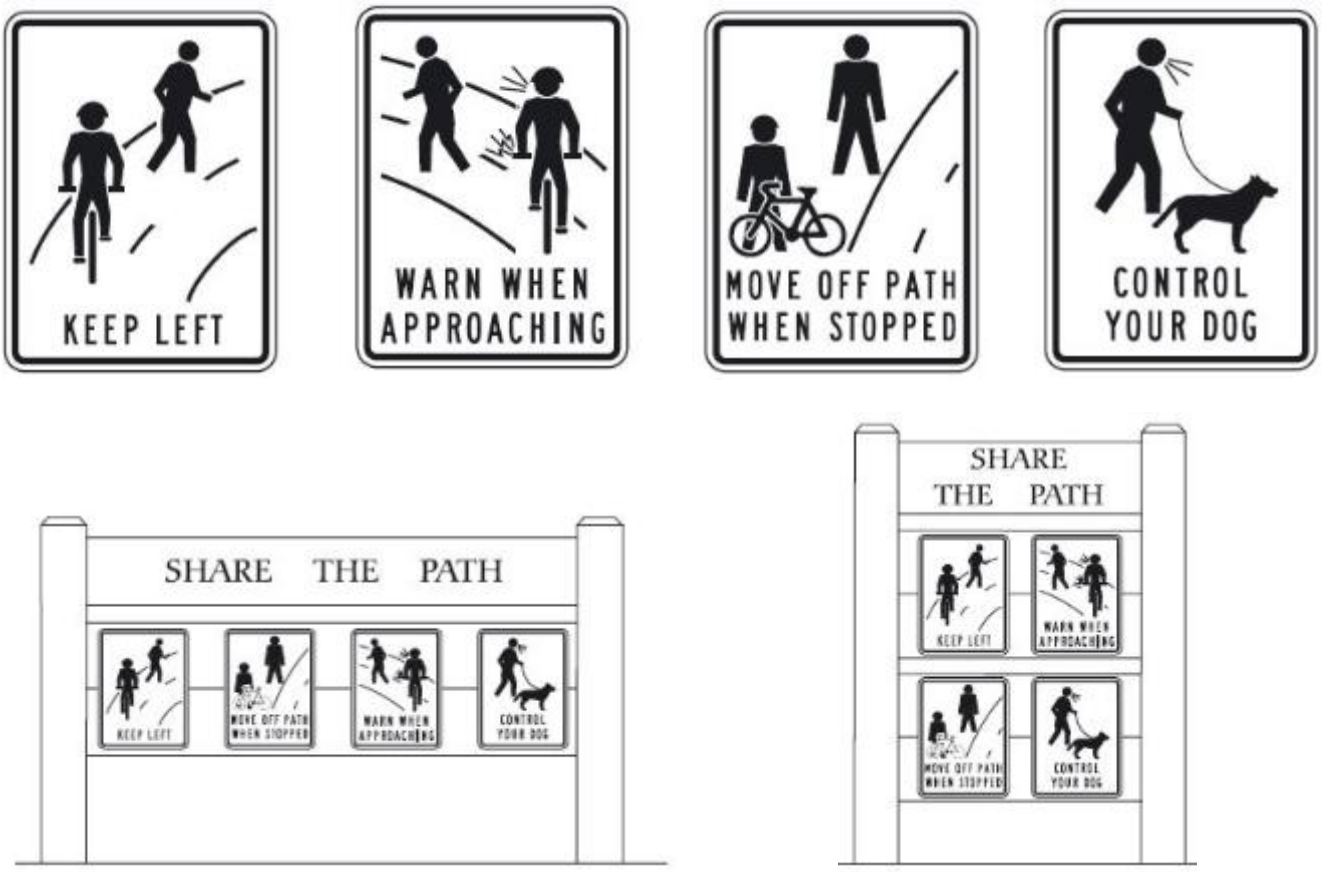


Figure 5 – Shared Path Behavioural Signage

(Source: NSW Bicycle Guidelines)

Furthermore, consistency with signage and pavement markings is also proposed which will require the replacement of existing signage at specific locations and the installation of new signage and pavement markings on the bicycle network.

It is anticipated that the required works for signage, pavement marking and centre line marking will be identified as part of the routine inspections to be undertaken by the relevant YVC officers.

NB: Any large 'Behavioural' signage to be located within existing Heritage Conservation areas in Yass, Bowning, Binalong and Gundaroo should be designed in consultation with Council's Heritage Advisor.

11.2 Proposed Works – Road Safety Bike Park

Learning to ride a bicycle is a lifelong skill, with recreational cycling a popular activity amongst children. To help children gain the skills and knowledge they need to cycle safely on roads many communities across Australia have constructed road safety bike parks. These parks simulate real life road conditions, allowing children to not only learn how to ride a bicycle in a safe environment but to also become familiar with road rules.

A typical road safety bike park would consist of:

- Sealed roadways;
- Road signs; and
- Line marking including intersections and pedestrian crossings.

Depending on available funding, road safety bike parks can be further enhanced to simulate real life conditions with the introduction of the following infrastructure:

- Roadside furniture including street seats, garbage bins and light poles; and
- Landscaping.

A typical road safety bike park is shown in **Plate 57** and **Plate 58**.

Plate 57

Plate 58

Use of road safety bike parks, combined with exposure to ongoing education programs for road safety, provides a good basis for children to develop knowledge of the road rules as they grow up. It is anticipated that YVC will investigate the most appropriate location for a road safety bike park within region subject to available funding.

12 Funding

12.1 Costs

All of the proposed shared path and footpath locations as detailed in Section 10 and indicated on the maps provided in **APPENDIX 2** have been inspected in terms of feasibility for the future expansion of the bicycle network for Yass Valley.

The costs of providing the infrastructure have been tabulated in **APPENDIX 5.**

12.2 Funding Sources - Construction

Funding for the construction of footpaths and shared path infrastructure and associated facilities is generally provided as per the funding arrangements as detailed in **Table 14**.

Table 14 – Funding Contributions for Cycleway Construction

Road Classification	RMS Contribution	YVC Contribution (1)
State Roads (including National Highway)	100%	Nil (2)
Local Roads	50% (3)	50% (3)

Note (1) – YVC contributions can comprise of funding sources including the General Fund, Restricted Reserves, Section 94 contributions and adjacent landholder contributions.

Note (2) – YVC contributions to cycleways on State Roads are provided on a case by case basis dependent on specific arrangements with RMS.

Note (3) – Whilst the 50/50 funding contribution is the typical funding arrangement, there is scope for YVC to request an increased contribution from RMS on a case by case basis.

In line with the NSW government objectives with regards to cycling, RMS has been actively encouraging councils to construct cycling infrastructure and proactively advise councils when funds are available for works as defined in the YVC Bike Plan and PAMP.

12.2.1 Development Contributions (Section 94)

In 2004, YVC adopted a '*Section 94 Contributions Plan'.* This Section 94 Plan has been prepared to satisfy the requirements of the Environmental Planning and Assessment Act (1979) and Regulation (2000), enabling YVC or an accredited certifier to levy contributions from development for the provision of community infrastructure including cycleway infrastructure.

The Section 94 Plan ensures that adequate community infrastructure is provided for future development and that the existing community is not burdened by the provision of community infrastructure required as a result of future development.

From time to time, developers offer to construct cycleway or shared use paths in lieu of payment of cycleway related contributions in conjunction with the construction of residential areas. These 'works in kind' offers or developer initiatives often receive favourable consideration as they can result in the timely and coordinated provision of infrastructure which also enhances the appeal of the respective development itself.

While a selection of routes from the Section 94 plan, concentrating on linking current and future routes, have been included in PAMP and Bike Plan, there are a significant number of routes that have been left out. The current budget constraints would not allow for funding of the broader network. Rather, it is expected that these routes would most likely be constructed as part of future estate developments.

12.2.2 Additional Funding Sources

Funding for the construction of footpaths and shared path infrastructure can also be derived from community partnership programs inclusive of in-kind support from local community organisations.

12.3 Funding Sources - Maintenance

Funding for the maintenance of footpaths and shared path infrastructure and associated facilities is generally provided from the YVC General Fund and/or Restricted Reserves. No specific funding is provided by RMS for maintenance activities associated with footpaths and shared path infrastructure and associated facilities.

The provision of funding for the maintenance of footpath and cycleway infrastructure and associated facilities is included with the overall funding provided for road and bridge maintenance. The amount allocated for footpath and shared path maintenance each year is commensurate with the required maintenance of deficiencies identified as part of routine inspections.

13 Implementation and Maintenance

13.1 Implementation Schedule

Given YVC's existing financial commitments it is unrealistic to expect that all of the proposed works nominated in the YVC Bike Plan and PAMP will be completed in the next 10 years. To do so would require a substantial increase in the funding for cycleways and pedestrian infrastructure in future budgets, potentially to the detriment of other facilities and services. As a consequence, it is proposed to use the schedule of works provided in **APPENDIX 5** to target infrastructure construction based on available funding over future years.

13.2 Maintenance

Following the investment of significant amounts of money in the construction of cycleways and pedestrian infrastructure, it is important that sufficient funds be budgeted on an annual basis to maintain these assets in a safe and usable condition. Maintenance costs will vary depending on the location and type of wearing surface. However, it is considered that the maintenance needs of the network within the Yass Valley region can be adequately managed via an annual allocation within the overall maintenance budget.

13.2.1 Weeds

Weeds, particularly the Cathead (*Tribulus terrestris*), are a genuine and serious concern for cyclists because they easily cause tyre punctures. Catheads can grow through poorly maintained bitumen pavements or are thrown onto cycleways (generally by mowers). In order to eliminate, or at least reduce, the impact of Catheads:

- Cycleways should be well-constructed;
- A program of weed removal (including spraying with selective herbicide) should be undertaken alongside cycleways;
- Grassing of cycleway verges should be encouraged to prevent the establishment of catheads; and
- Where possible, mowing adjacent to the off-road cycleway should be undertaken such that grass is thrown away from the cycleway.

13.2.2 Footpath and Shared Path Maintenance

Given that footpaths form the majority of pedestrian facilities throughout Yass Valley, pavement maintenance is a high priority. Footpaths and shared paths require regular inspection and routine maintenance to ensure that the pavement is maintained in a smooth and safe condition. Inspections resulting in a condition rating are undertaken by YVC Officers on an annual basis.

Concrete pavements should have cracks repaired, or whole sections repaired when the extent of cracking or failures is assessed as extreme. Well-constructed concrete paths could be expected to have an average useful life of 50 years.

For asphalt or bitumen footpaths, routine maintenance comprises of the repair of crack and potholes, with resurfacing required every five to ten years in accordance with condition assessment undertaken by YVC Officers.

For footpaths that have brick pavers, routine maintenance is comprised of the replacement of damaged pavers and the relaying of a section of pavers as necessary.

13.2.3 Maintenance of Other Pedestrian Facilities

Other pedestrian facilities are inspected by YVC Officers on an annual basis, or following receipt of a community complaint, to assess the condition of the asset and identify any maintenance that may be required.

13.2.4 Minimum Levels of Service

In order to provide safe and smooth pavement surfaces which cyclists will utilise a high standard of maintenance is required. In order to achieve this high standard, the following minimum levels of service are recommended:

Concrete Cycleways:

- Inspect annually or when notified of an issue by public submissions to YVC;
- Repair cracks when they appear;
- Replace sections that are badly cracked or deformed as required; and
- Spray weeds alongside cycleways on an annual basis.

Asphalt/Bitumen Cycleways:

- Inspect annually or when notified of an issue by public submissions to YVC;
- Repair cracks and potholes when they appear;
- Resurface with asphalt overlay every 15-20 years, depending on condition; and
- Spray weeds alongside cycleways on an annual basis.

13.3 Auditing of Existing and Proposed Pedestrian and Cycling Infrastructure

It is recommended that Yass Valley Council consider undertaking bicycle safety audits as per Austroads *"Guide to Road Design Part 6A"* for all existing cycling to ensure compliance with the relevant standards and to identify any relevant safety issues or concerns. Conducting an audit will help identify issues with:

- The general requirements of the path;
- Signage, delineation and lighting;
- The riding surface;
- Identification of maintenance requirements; and
- Identification of physical obstructions.

Furthermore, it is recommended that a bicycle safety audit be conducted during planning for and after construction of cycling and pedestrian infrastructure.

An example of a bicycle safety checklist is provided in Appendix D of Austroads *"Guide to Road Design Part 6A".*

13.4 Follow-up Activities

A review of the YVC's Bike Plan and PAMP will be undertaken as part of the development of YVC's future Delivery Programs and Operational Plans.

14 References

- Austroads 2017, Guide to Road Design Part 6A: Paths for Walking and Cycling,
- Austroads 2017, Cycling Aspects of Austroads Guidelines,
- Austroads 2010, National Cycling Strategy 2011-2016,
- Cement and Concrete Association 2004, Guide to Residential Streets and Paths,
- NSW Government December 2012, NSW Long Term Transport Master Plan,
- NSW Government December 2012, New England North West Regional Action Plan,
- NSW Government September 2011, NSW 2021 – A Plan to Make NSW Number One,
- NSW Government May 2010, NSW Bike Plan,
- NSW Government, Road Rules 2008,
- NSW Roads and Maritime Services 2012, How to Prepare a Bike Plan,
- NSW Roads and Traffic Authority 2008, Delineation,
- NSW Roads and Traffic Authority 2005, NSW Bicycle Guidelines,
- The Tablelands Regional Community Strategic Plan 2016-2036,
- Yass Main Street Strategy 2014,
- Operational Plan 2016/17,
- Draft Operational Plan 2017/18,
- Road Safety Action Plan,
- Murrumbateman Masterplan 2031,
- Section 94 Contributions Plan 2004.

Appendix 1: Public Survey Results

Respondent Demographic Data

Which town or village are you from?		
Answer Options	**Response Percent**	**Response Count**
Yass	73.8%	31
Murrumbateman	4.8%	2
Wee Jasper	0.0%	0
Gundaroo	2.4%	1
Sutton	11.9%	5
Bowning	2.4%	1
Bookham	0.0%	0
Binalong	4.8%	2
Other (please specify)	0.0%	0
	answered question	42
	skipped question	1

What is your gender?		
Answer Options	**Response Percent**	**Response Count**
Female	61.9%	26
Male	38.1%	16
	answered question	42
	skipped question	1

What is your age?		
Answer Options	**Response Percent**	**Response Count**
Less than 15	0.0%	0
16 to 25	4.8%	2
26 to 35	23.8%	10
36 to 45	23.8%	10
46 to 55	23.8%	10
56 to 65	14.3%	6
66 to 75	7.1%	3
75 or older	2.4%	1
	answered question	42
	skipped question	1

Respondent Trip Data

Where do you predominately travel to and from home(using any mode of transport)?		
Answer Options	**Response Percent**	**Response Count**
Work	74.4%	32
School	25.6%	11
Supermarket / Town Centre	62.8%	27
Sporting Facility	16.3%	7
Friend or relative's home	25.6%	11
Tourist Attraction	7.0%	3
Recreation Area (eg: park, pool)	41.9%	18
Other (please specify)	11.6%	5
	answered question	43
	skipped question	0

Which mode of transport do you most commonly use?		
Answer Options	**Response Percent**	**Response Count**
Walking	35.7%	15
Cycling	16.7%	7
Driving	88.1%	37
Public Transport	2.4%	1
Other (please specify)	2.4%	1
	answered question	42
	skipped question	1

How long do your trips usually take?		
Answer Options	**Response Percent**	**Response Count**
Less than 10 minutes	35.7%	15
10 to 30 minutes	35.7%	15
30 to 60 minutes	19.0%	8
More than 60 minutes	9.5%	4
	answered question	42
	skipped question	1

Respondent Bicycle Use Data

Do you own or have access to a bicycle?		
Answer Options	**Response Percent**	**Response Count**
Yes	76.2%	32
No	23.8%	10
answered question		42
skipped question		1

How frequently do you ride a bicycle?		
Answer Options	**Response Percent**	**Response Count**
Everyday	9.5%	4
At least once per week	14.3%	6
Every now and then	52.4%	22
Never	23.8%	10
answered question		42
skipped question		1

What is the primary reason why you do not cycle?		
Answer Options	**Response Percent**	**Response Count**
Safety	5.0%	2
Lack of adequate paths/lanes/end-of-trip facilities	42.5%	17
Lack of time	15.0%	6
Negative image associated with cycling	2.5%	1
Don't own/have access to a bicycle	2.5%	1
Unable to ride	2.5%	1
Weather	0.0%	0
Other modes of transport are more convenient	5.0%	2
Health	5.0%	2
Other (please specify)	20.0%	8
answered question		40
skipped question		3

What is to primary reason why you cycle?		
Answer Options	**Response Percent**	**Response Count**
Recreation	44.7%	17
Fitness	36.8%	14
Commuting	7.9%	3
Touring	0.0%	0
Other (please specify)	10.5%	4
answered question		38
skipped question		5

What are the major benefits you experience from cycling?		
Answer Options	**Response Percent**	**Response Count**
Health/Fitness	78.9%	30
Enjoyment	57.9%	22
Financial	13.2%	5
Convenience	15.8%	6
Freedom / independence	13.2%	5
Social	18.4%	7
Other (please specify)	18.4%	7
answered question		38
skipped question		5

What improvements would you like to see that would encourage you to walk or cycle more often?
More sealed roads, Yass valley has some fantastic roads, unfortunately most are dirt which prevents a lot of people riding them. It would be good to link up the shared paths in town. Currently they are not well linked.
Advertising campaign explaining some things to drivers, 1. the urge to drive close to a cyclist for a bit of a buzz can be scary when the consequence of contact are so unbalanced. 2. Riding far to left on main roads sometimes is not possible because of the amount of loose stones that are there. 3. Many cyclists pay over $300 for a licence. Note; The council could street sweep the shoulders of the main roads in town. Particularly the bridge.
More bike paths
flatter paths (sidewalk - e.g. from riverbank park up to the main street is angled uphill from the road) to push a pram on
Bike paths and a bike shop instead of having to go to Canberra and a mountain bike trail

A full loop connecting Yass' existing cycle paths would be amazing and encourage a lot more riding in the community. It would also be great to see some other general cycle paths joining the full distance between North and South Yass. Where possible, cycle paths should avoid crossing the roads as this decreases safety with lots of cyclists repeatedly forced to stop and start, and sometimes at dangerous places.
More cycle paths
I am unable to cycle outside of our street as it is too dangerous. Isabel Drive between Maryville and Woods Close is too narrow and there are too many cars and trucks that use it and there is no where to get off the road
More safe paths away from roads. Longer recreational routes suitable for families.
Extend paved track around to Joe O'Connor Park and connect other end to one of the footpaths in North Yass. More footpaths that connect to enable walking around town.
have the bicycle path extended at Binalong
More bicycle/footpaths on streets not connected to laidlaw/yass valley way.
Well connected pathways
completion of missing links in existing path networks
(Country) road verges
Cycle path on Comur St and bike racks near shops.
We need better paths in the village of Sutton along specifically Camp St. Victoria St & Bywong St. Children walking to school have to walk on the road its just not safe.
more dedicated bike paths!
More paths
Paths
Footpaths! There are no footpaths bar the one leading from near the bakery across to the toilets at the hall. I walk my dogs twice a day around the village and the lack of footpaths is a real issue because when the weeds are long the dogs end up being covered in grass seeds.
More footpaths and walking tracks
Safer routes, more pedestrian crossings, better road verges, cycle specific locations and events
Better roads with no loose gravel or potholes. Roads swept of debris - including highways.
Better and more connected paths all around town. More police presence monitoring helmet laws. Signage on the main bridge warning cars. Better maintenance of rubbish, dirt and grime on sides of road. Mostly flat path from north Yass to South Yass. A sealed path loop around town would be amazing.
pathways!
Safer routes with consistent off road or dedicated bike zone on road because as a mother I always have young cyclists with me age 3,5,10&13
Pathways
More pedestrian crossings. I live on Browne street and to get to the park next to the tourist office I have to walk into town and cross TE road with my child as it's unsafe to do so anywhere else
I walk approx. 5 Klms per day
I live on the outskirts of Murrumbateman so would only see benefit to people within the village area benefiting from cycle paths, however in saying that, would be fantastic to get the outer estates somehow connected to the village.
Tactile tile installation for the vision impaired and designated park benches along Glebe and Castor streets for resting while walking
Joined paths along Rossi st to Hatton gorge.
Cycle paths linking to other paths. IE path around river going on and linking to somewhere else like the service centre.

Do you have any further comments?
It would be a good investment to replace the footbridges on the river loop so they didn't become impassable with a moderate amount of rain.
The Wee Jasper road could have a sign just out of town that says watch for cyclists. Note: On the whole the vast majority of local drivers around Yass have been polite for many many years.
There are so many people who love to ride in yass- schools could use mountain bike trails as well as a bike club and a crit track - especially that there is very little in yass for young people
There are a lot of ute drivers in Yass who do no know the road rules when driving alongside cyclists. It might be helpful for a blitz on safe driving if new paths are built.
Would love to see some cycle routes between towns promoted, eg Yass - Gunning via Coolalie Rd
Same applies for the horses. Now that the track between The Woods Close and Maryville is overgrown it is impossible to use that facility to access the bridlepaths.
A rail trail in the Yass Valley would be a wonderful thing. Great tourism attraction and local recreation facility.
I have a physical impairment which means I have difficulty walking on grass and gravel.
Needs to also be on the left hand side of Stephen street and around the main town centre
Please include the Yass Gorge into the PAMP, so that it forms a part of the network.
If you add up the Kms and time spent on bicycles on the Yass local government area roads, the country road networks between Canberra and the surrounding villages would be top of the list. Many cyclists use Murrumbateman Rd (and the roads that lead to it) but it is a skinny Rd that, unlike other roads of exactly the same quality like Shingle Hill way, Macs Reef and Bungendore Rds, has no load limit. Cyclists have to share the Rd with 26 ton monsters and the damage they cause, all with no verge.Start with a free improvement of a 10 ton limit. I know it's an important emergency route to Canberra so make the limit not apply during a detour. Going via Federal and Barton Highways costs 7 minutes and 9 kms. Good for more than cyclists, including the council coffers.
Path and crossing along Victoria st for kids to travel safely to School is needed ASAP. A few of the Sutton school kids walk to school and need to be able to do this safely.
Yes, we need a footpath from Fire Station straight down to the Bakery and shop. A lot of people walk this way morning and night and it is dangerous how it is now. We live in 15 Victoria street and we are willing to put a granite footpath in front of our place for the school kids that ride and walk.
Recreation cycling is difficult with dirt roads.
Linking streets around cbd with consistent safe pathways all the way to schools, Main Street and parks/recreation bike routes will do more for increasing bike and pedestrian activity linked to economic and social benefits than any other action
Frail & aged + disabled are at risk of injury on footpaths due to youthful exuberance/lack of education/ inconsideration. Bicycles not placed appropriately outside stores when not in use . Thinking bicycle racks a good idea .
We really do need more paths and more crossings I love Yass and love the community would just love to see more available The street I live in is like a drag way. People doing 70-90km in our 50km zone, burnouts and more so walking anywhere on the road (have to as their are no pathways) is dangerous and uncomfortable
No!

Appendix 2: Proposed PAMP & Bike Plan Network Maps

200 0 200 400 600 800 m

Reddall Street
Discovery Drive
Cooks Hill Road
Coolalie Road
Orion Street
Glebe Street
Hume Street
Ford Street
Pollux Street
Castor Street
O'Brien Street
Hope Street
Mount Street
Laidlaw Street
Irvine Drive
Grampian Street
Church Street
Pritchett Street
Rossi Street
Conur Street
Meehan Street
Demestre Street
Lead Street
Plunkett Street
Theiry Street
Grand Junction Road

Legend

- Existing Footpaths
- Proposed Footpaths
- Proposed Shared Paths
- Existing Shared Path
- Pedestrian Refuge
- Proposed Pedestrian Refuge
- School Zones

NORTH YASS PROPOSED PAMP & BIKE PATH NETWORK

200 0 200 400 600 800 m

Comur Street
Rossi Street
Demestre Street
Lead Street
Plunkett Street
Meehan Street
Church Street
Dutton Street
Pritchett Street
Polding Street
Grand Junction Road
Mort Lane
Harrow Lane
Halton Drive
Shantalla Crescent
Links Road
Cliff Street
Ffrield Lane
Short Street
Crago Street
Mont Street
Adele Street
Browne Street
Colls Close
Morton Avenue
Larson Lane
R A G Holmes Lane
McKenna Avenue
Shearsby Crescent
Petit Street
Waroo Road
Mitchell Street
Julian Place
Shaw Street
Yeo Crescent
McBean Parade
Merriman Drive
Macdonald Street
Brennan Street
Cobham Street
Victoria Street
Perry Street
Grand Junction Road
Nicholls Drive
Yass Valley Way
River Avenue
Cottrell Close

Legend

- Existing Footpaths
- Proposed Footpaths
- Proposed Shared Paths
- Existing Shared Path
- Pedestrian Refuge
- Proposed Pedestrian Refuge
- School Zones

SOUTH YASS PROPOSED PAMP & BIKE PATH NETWORK

600 0 600 1200 1800 2400 m

Merryville Drive
Clydesdale Close
Barley Place
Merryville Drive
Govenor Drive
Marquess Place
Hercules Street
West Street
Camp Street
Rose Street
Barton Highway
Barton Highway
Hillview Drive
South Street
Vine Close
Vallance Drive
Dorset Drive
Merryville Drive
McIntosh Circuit
Woodleigh Drive
Davis Circuit
Broughton Circuit
Isabel Street
Woods Close
Dog Trap Road
Isabel Street
Grevillea Close
Nirta Drive
Sylvia Street
Lakeview Drive
McIntosh Circuit
Kinsman Drive
Crisps Lane
Ellington Close
Amblesside Avenue
Murrumbateman Road
Isabel Street
Scrubby Lane
Dog Trap Road
Barton Highway
Turton Place
Patemans Lane
Jiparu Drive
Rattenbury Close
Euroka Avenue

Legend

- Existing Footpaths
- Proposed Footpaths
- Proposed Shared Paths
- Existing Shared Path
- Pedestrian Refuge
- School Zones

MURRUMBATEMAN PROPOSED PAMP & BIKE PATH NETWORK

Legend

School Zones — Existing Footpaths

GUNDAROO PROPOSED PAMP & BIKE PATH NETWORK

100 0 100 200 300 400 m

Sutton Road
Sutton Road
Sutton Road
North Street
North Street
Camp Street
Bywong Street
Quartz Street
Bywong Street
Albert Street
Desalis Street
Middle Street
Middle Street
Camp Street
Bywong Street
Victoria Street
Victoria Street
Victoria Street
Williams Lane
Bywong Street
Moorong Street
West Street
Majura Lane
Majura Lane
Sutton Road
Guise Street

Legend

School Zones
Existing Footpaths
Proposed Footpaths
Proposed Shared Paths

SUTTON PROPOSED PAMP & BIKE PATH NETWORK

Legend

School Zones — Existing Footpaths — Proposed Footpaths

BOWNING PROPOSED PAMP & BIKE PATH NETWORK

Legend

Proposed Shared Path | Existing Shared Path | Existing Footpaths

BINALONG PROPOSED PAMP & BIKE PATH NETWORK

Appendix 3: PAMP & Bike Route Ranking

Shared Path Route Rankings

Route Name	Category / Max Score								Total	Rank
	Community Request	Safety	Connectivity	Existing/Potential Demand	Comfort	Tourism	Recreation	Cost Effectiveness		
	10	20	20	10	10	10	10	10	100	
Yass Town										
10.2.1 Petit St - Comur St to Shaw St		5	10	6	5	0	10	0		12
	0	5	10	6	5	0	10	0	26	
10.2.2 Waroo Rd / Comur St - Petit St to Polding St		22	20	9	5	0	7	8		1
	0	20	20	9	5	0	7	8	54	
10.2.3 Shaw St - Petit St to Aldi Supermarket		4	10	6	5	0	5	0		14
	0	4	10	6	5	0	5	0	25	
10.2.4 Church St / Rossi St - Petit St to Comur St		16	10	9	5	0	10	5		8
	0	16	10	9	5	0	10	5	40	
10.2.5 Yass River - Demestre St to Warrambalulah St		20	20	6	2	0	8	0		5
	0	20	20	6	2	0	8	0	48	
10.2.6 Dutton St - Meehan St to Riverbank Park		20	20	6	5	0	10	5		3
	0	20	20	6	5	0	10	5	51	
10.2.7 Rossi Street - Comur Street to Irvine Drive		19	20	9	5	0	10	5		2
	0	19	20	9	5	0	10	5	53	
10.2.8 Hovell St - Yass River to Hovell St		20	20	3	2	10	10	0		6
	0	20	20	3	2	10	10	0	45	
10.2.9 Hume St - Grampian St to Orion St		21	10	9	5	0	10	5		7
	0	20	10	9	5	0	10	5	44	
10.2.10 Grampian St - Glebe St to Caravan Park		8	10	3	7	10	8	0		11
	0	8	10	3	7	10	8	0	28	
10.2.11 Petit St - Church St to Comur St		18	10	3	5	0	0	8		10
	0	18	10	3	5	0	0	8	36	
Murrumbateman										
10.3.1 Hercules St - Middle St to Cemetery		5	20	9	5	0	7	0		9
	0	5	20	9	5	0	7	0	39	
10.3.2 West St - Hercules St to North St		5	10	6	5	0	7	0		12
	0	5	10	6	5	0	7	0	26	
Binalong										
10.4.1 Queen St - Fitzroy St to Richmond St		5	10	3	5	0	0	0		15
	0	5	10	3	5	0	0	0	23	
Sutton										
10.5.1 Victoria St - Sutton Primary School to Camp St	10	19	10	6	5	0	8	0		4
	10	19	10	6	5	0	8	0	50	

Footpath Route Rankings

Route Name	Category / Max Score								Total	Rank
	Community Request	Safety	Connectivity	Existing/Potential Demand	Comfort	Tourism	Recreation	Cost Effectiveness		
	10	20	20	10	10	10	10	10	100	
Yass Town										
10.6.1 Polding Street – Pritchett Street to Church Street	0	5	10	3	5	0	0	0		8
	0	5	10	3	5	0	0	0	23	
10.6.2 Browne Street – Church Street to Shaw Street	0	5	10	6	5	0	0	0		7
	0	5	10	6	5	0	0	0	26	
10.6.3 Mount Street – Linton Village to Hume Street	0	10	10	9	4	0	0	0		6
	0	10	10	9	4	0	0	0	33	
10.6.4 Castor Street – Horton House to Hume Street	0	10	10	9	5	0	0	0		5
	0	10	10	9	5	0	0	0	34	
10.6.5 Pollux Street - Glebe Street to Laidlaw Street	10	10	10	9	5	0	3	0		1
	10	10	10	9	5	0	3	0	44	
10.6.6 Rossi Street - Irvine Drive to 126 Rossi Street	0	8	20	12	5	0	10	2		2
	0	8	20	10	5	0	10	2	43	
Bowning										
10.7.1 Bowning Road – Bus Stop Shelter to Existing Footpath	0	20	10	6	5	0	0	0		3
	0	20	10	6	5	0	0	0	41	
10.7.2 Leake Street – Post Office to Town Centre	0	8	25	6	5	10	0	0		4
	0	8	20	6	5	10	0	0	39	
Sutton										
10.8.1 North/Camp/Victoria Street - Quarts Street to Victoria Street	10	3	0	3	5	0	0	0		9
	10	3	0	3	5	0	0	0	21	

Refer to APPENDIX 4 for route descriptions.

Refer to APPENDIX 5 for schedule of works.

Appendix 4: PAMP & Bike Route Descriptions

Shares Path Route Descriptions

Route	Description	Community Request	Safety	Connectivity	Existing/Potential Demand	Comfort	Tourism	Recreation
Yass Town								
10.2.1	Petit Street - Church Street to Comur Street		Potential use by students form Berinba Public School accessing town wanting to access town centre. Most direct route. Pedestrian Refuge for crossing Comur Street.	Connecting Berinba Public School with existing shared path facility to Nicholls Drive	Demand from Berinba Public School Students	Section of footpath is reasonably level	No tourism benefit	Not particularly attractive to recreational cyclists
10.2.2	Waroo Road / Comur Street - Petit Street to Polding Street		Potential use by students form Berinba Public School accessing town wanting to access town centre. Most direct route.	Connecting the town centre with existing shared path facility to Nicholls Drive and proposed shared path to Berinba Public School	Demand from Berinba Public School students and residents from the Nicholls Drive area	Area is straight and level	No tourism benefit	May encourage cycling to town rather than driving. Provide longer ride.
10.2.3	Shaw Street - Petit Street to Aldi Supermarket		Quiet Street with minimal intersection crossings	Connecting Aldi / town centre with residents up to the Petit Street area. Connection to proposed shared path along Petit Street.	Reasonably dense population area.	Area is straight and level	No tourism benefit	May encourage cycling to town rather than driving. Provides access to tennis courts
10.2.4	Church Street / Rossi Street - Petit Street to Comur Street		Quieter alternative to Comur Street	Connecting Berinba Public School with town centre and Riverbank Park.	Demand from Berinba Public School and Connects south/east Yass area residents.	Area is straight and level	No tourism benefit	Connection to the Riverbank Park area will encourage recreational use of new shared paths.
10.2.5	Yass River - Demestre Street to Warrambalulah Street	Additional shared paths in the Yass Gorge area were requested during community consultation.	Provide an off-road alternative for students travelling from south/east Yass to Yass High School.	Connecting Yass High School and Riverbank Park with the south/east Yass area.	Demand from Yass High School and south/east Yass residents.	The area is on a rocky hill.	Provide additional shared path to the Yass Gorge area.	This route will encourage residents from Demestre Street area to use the Riverbank Park shared path network.
10.2.6	Dutton Street - Meehan Street to Riverbank Park		Provide safer access from Mt Carmel School students/parents to Riverbank Park.	Connect existing shared path network running from Walker Park to Riverbank Park shared path network.	Demand from South Yass residents and residents wanting to access Walker Park.	Area is straight and level	Provide share path access to recreation facilities	This route will provide the most direct route for residents traveling from North Yass to Walker Park area via the shared path network. Also providing a link from the south Yass area to Riverbank Park.
10.2.7	Rossi Street - Comur Street to Irvine Drive		Off-road shared path with few intersection crossings.	Connection of west Yass developments with town centre and Riverbank Park	Existing use from recent developments and increasing demand from new development	Area is straight and level	No tourism benefit	Provide most direct route for access to town centre and Riverbank Park shared path network to western Yass developments.

Route	Description	Community Request	Safety	Connectivity	Existing/Potential Demand	Comfort	Tourism	Recreation
10.2.8	Hovell Street - Yass River to Hovell Street		Off-road shared path replacement of existing dirt track.	Connection of north/east Yass with Yass River shared path network.	Demand from north/east Yass residents	Path is hilly and uneven, however a shared path will greatly increase the comfort for users.	Increase access to the scenic views of the Yass River	Provide connectivity to the Yass River shared path network for residents
10.2.9	Hume Street- Grampian Street to Orion Street		Off-road shared path access to Yass High School. Has several intersection crossings.	Connecting residents from North Yass to Yass High School and the Yass River shared path network. Connection of proposed footpath to aged care facilities in North Yass.	High demand from existing residential. Potential demand from new developments in North Yass.	Area is straight and level	No tourism benefit	Provide connectivity to the Yass River shared path network for residents
10.2.10	Grampian Street - Glebe Street to Caravan Park		Off-road shared path with no intersection crossings providing connectivity to existing shared path network	Connecting caravan park to shared path network	Demand from tourists wanting to access recreational areas along Yass River	Area is straight and level	This will encourage visitors in the caravan park to access the shared path network and recreational facilities.	Access to Yass River and shared path network
10.2.11	Petit Street - Comur Street to Shaw Street		Off-road shared path	Connection between existing shared path from Nicholls Drive and proposed shared path on Shaw Street	Demand from local residents, small catchment	Section of footpath is reasonably level	No tourism benefit	Connection to the Riverank Park via proposed Shaw Street shared path
Murrumbateman								
10.3.1	Hercules Street - Middle Street to Cemetery		Off-road shared path with two intersection crossings and one road crossing	Connect existing shared path network to the footpaths in the town centre	Potentially large volume of users due to the extent of the adjoining shared path network	Straight and level verge with steady grade	No tourism benefit	Provide most direct route for cycling to town centre
10.3.2	West Street - Hercules Street to North Street		Off-road shared path through quiet street	Connection of shared paths from the new Fairley Estate development to the proposed Hercules Street shared path	Demand form residents from new residential estate	Area is straight and level	No tourism benefit	Provide connection to shared path network
Binalong								
10.4.1	Queen Street - Fitzroy Street to Richmond Street		Off-road shared path on quiet street	Connecting existing shared path network with town centre	Demand from local residents	Area is straight and level	No tourism benefit	Provide connection from town centre to existing shared path network
Sutton								
10.5.1	Victoria Street- Sutton Primary School to Camp Street	Raised during community consultation	Off-road shared path in front of Sutton Primary School	Connecting Sutton Primary School with Sutton Recreation Ground and Bakery	School students and local residents	Area is straight and level	No tourism benefit	Provide link to recreation grounds for school

Footpath Route Descriptions

Route	Description	Community Request	Safety	Connectivity	Existing/Potential Demand	Comfort	Tourism	Recreation
Yass Town								
10.6.1	Polding Street – Pritchett Street to Church Street		Quiet Street	Connection of existing footpath	Residents from Polding Street / Pritchett Street	Area is straight and level	NA	Walking
10.6.2	Browne Street – Church Street to Shaw Street		Quiet Street	Connecting Church Street to Comur Street. Close to service station, restaurant and information centre.	Residents from Browne Street / Church Street	Area is straight and level	NA	Walking
10.6.3	Mount Street – Linton Village to Hume Street		Quiet Street	Extension of existing footpath along Castor Street to connect with proposed shared path along Hume Street.	Residents from Castor Street. Horton House	Area is straight and level	NA	Walking
10.6.4	Castor Street – Horton House to Hume Street		Quiet Street	Extension of existing footpath facility to connect with proposed shared path facility on Hume Street.	Residents form Mount Street. Linton Village	Area is straight and level	NA	Walking
10.6.5	Pollux Street - Glebe Street to Laidlaw Street	Yes	The existing footpath along Pollux Street is too narrow for mobility scooters. Route is heavily used by residents of local aged care facilities for access to Yass IGA shopping precinct.	Replacement of existing footpath between Glebe Street and Laidlaw Street along Pollux Street.	Residents from Linton Village and Horton House.	Area is straight and level	NA	Walking
10.6.6	Rossi Street – Irvine Drive to 126 Rossi Street		Quiet Street	Fill gap in existing footpath network. Connecting developing areas to town.	Residents from estates adjoining Rossi Street. New developments connected to Rossi Street.	Area is straight and level.	NA	Walking
Bowning								
10.7.1	Bowning Road – Airy Street to Bus Stop		Within a school area	Connecting the existing bus stop shelter with the existing bitumen footpath outside the school access gate	School students	Area is straight and level	NA	NA
10.7.2	Leake Street – Post Office to Town Centre		Quiet Street	Connecting existing footpath near town centre to post office and bus stop	Residents commuting on bus. Students walking to town centre.	Area is straight and level	Connecting bus stop to town centre	Walking
Sutton								
10.8.1	North/Camp/Victoria Street - Quarts Street to Victoria Street	Yes	Busy Road	Connect residential area with town centre and proposed shared path	Residents walking to bakery	Area is straight and level	NA	NA

Appendix 5: Schedule of Works

Proposed Sub-standard Kerb Ramp Replacements

Intersection	Issue	QTY	Cost
Meehan Street / Pritchett Street	Non-standard	3	$6,900.00
Meehan Street / Demestre Street	Non-standard	3	$6,900.00
Lead Street / Townsend Place	Non-standard	2	$4,600.00
Lead Street / Demestre Street	Non-standard	4	$9,200.00
Polding Street / Church Street	Non-standard	1	$2,300.00
Polding Street / Pritchett Street	Non-standard	1	$2,300.00
Merriman Drive / Petit Street	Non-standard	2	$4,600.00
Yeo Cres / McBean Parade	Non-standard	2	$4,600.00
Shaw Street / Browne Street	No Kerb Ramp	1	$2,300.00
		Total	**$43,700.00**

Proposed New Pedestrian Refuges

Intersection	Type	QTY	Cost
Church Street / Lead Street	New Pedestrian Refuge Island crossing Church Street, north-west of intersection.	1	$7,100.00
Crago Street / Mont Street / Merriman Drive Roundabout	New Pedestrian Refuge Island crossing Crago Street, north of roundabout.	1	$7,100.00
		Total	**$14,200.00**

Proposed Footpath Cost Estimates

Priority	Route	Description	Town	Length (m)	Width (m)	Kerb Ramps (QTY)	Cost ($)
1	10.6.5	Pollux Street - Glebe Street to Laidlaw Street	Yass Town	207	1.50	1	$31,797.50
2	10.6.6	Rossi Street - Irvine Drive to 126 Rossi Street	Yass Town	112	1.50	0	$15,960.00
3	10.7.1	Bowning Road – Bus Stop Shelter to Existing Footpath	Bowning	28	1.50	0	$3,990.00
4	10.7.2	Leake Street – Post Office to Town Centre	Bowning	257	1.50	2	$41,222.50
5	10.6.4	Castor Street – Horton House to Hume Street	Yass Town	129	1.50	1	$20,682.50
6	10.6.3	Mount Street – Linton Village to Hume Street	Yass Town	151	1.50	1	$23,817.50
7	10.6.2	Browne Street – Comur Street to Shaw Street	Yass Town	207	1.50	2	$34,097.50
8	10.6.2	Browne Street – Church Street to Comur Street	Yass Town	202	1.50	1	$31,085.00
9	10.6.1	Polding Street – Pritchett Street to Church Street	Yass Town	117	1.50	2	$21,272.50
10	10.8.1	Camp Street - Bakery to Victoria Street	Sutton	80	1.50	0	$11,400.00
11	10.8.1	Camp Street - Middle Street to Bakery	Sutton	158	1.50	0	$22,515.00
12	10.8.1	Camp Street - Bywong Street to Middle Street 400m to 514m	Sutton	114	1.50	0	$16,245.00
13	10.8.1	Camp Street - Bywong Street to Middle Street 300m to 400m	Sutton	100	1.50	0	$14,250.00
14	10.8.1	Camp Street - Bywong Street to Middle Street 200m to 300m	Sutton	100	1.50	0	$14,250.00
15	10.8.1	Camp Street - Bywong Street to Middle Street 100m to 200m	Sutton	100	1.50	0	$14,250.00
16	10.8.1	Camp Street - Bywong Street to Middle Street 0m to 100m	Sutton	100	1.50	0	$14,250.00
17	10.8.1	North Street - Quartz Street to Bywong Street	Sutton	55	1.50	0	$7,837.50
						Total	**$338,922.50**

Proposed Shared Path Cost Estimate and Construction Priority

Route Segments Ranked in Priority

Priority	Route	Description	Town	Length (m)	Construction type	Kerb Ramps (QTY)	Width (m)	Cost ($)
1	10.2.6	Dutton Street - Rossi Street to Riverbank Park	Yass Town	201	New	0	2.4	$49,204.80
2	10.5.1	Victoria Street - Sutton Primary School to Bywong St	Sutton	136	New	1	2.4	$35,592.80
3	10.5.1	Victoria Street - Bywong St to Recreation Ground	Sutton	162	New	1	2.4	$41,957.60
4	10.2.2	Waroo Road / Comur Street - Brown Street to Adele Street	Yass Town	80	Widen	0	1.2	$9,792.00
5	10.2.2	Waroo Road / Comur Street - Petit Street to Brown Street	Yass Town	185	Widen	1	1.2	$24,944.00
6	10.2.6	Dutton Street - Meehan Street to Rossi Street	Yass Town	213	Widen	1	1.2	$28,371.20
7	10.2.7	Rossi Street - Weemilah Street to Dutton Street	Yass Town	248	Widen	1	1.2	$32,655.20
8	10.2.7	Rossi Street - 126 Rossi Street to Weemilah Street	Yass Town	135	Widen	1	1.2	$18,824.00
9	10.2.7	Rossi Street - Irvine Drive to 126 Rossi Street	Yass Town	127	Widen	0	1.2	$15,544.80
10	10.2.7	Rossi Street - Hatton Drive to Irvine Drive	Yass Town	158	Widen	1	1.2	$21,639.20
11	10.2.5	Yass River - Warrambalulah Street to Rossi Street	Yass Town	221	New	0	2.4	$54,100.80
12	10.2.8	Hovell Street - Connection from existing bike path to Hovell Street	Yass Town	133	New	0	2.4	$32,558.40
13	10.2.9	Hume Street - Mount Street to Hope Street	Yass Town	118	New	2	2.4	$33,486.40
14	10.2.9	Hume Street - Hope Street to Pollux Street	Yass Town	235	New	2	2.4	$62,128.00
15	10.2.9	Hume Street - Pollux Street to Orion Street	Yass Town	232	New	2	2.4	$61,393.60
16	10.2.9	Hume Street - Grampian Street to Mount Street	Yass Town	229	Widen	2	1.2	$32,629.60
17	10.2.9	Rossi Street - Church Street to Comur Street	Yass Town	193	Widen	0	1.2	$23,623.20
18	10.2.4	Church Street - Petit Street to Brown Street	Yass Town	215	Widen	1	1.2	$28,616.00
19	10.2.4	Church Street - Brown Street to Polding Street	Yass Town	211	New	1	2.4	$53,952.80

Priority	Route	Description	Town	Length (m)	Construction type	Kerb Ramps (QTY)	Width (m)	Cost ($)
20	10.2.4	Church Street - Polding Street to Lead Street	Yass Town	218	Widen	1	1.2	$28,983.20
21	10.2.4	Church Street - Lead Street to Meehan Street	Yass Town	212	New	2	2.4	$56,497.60
22	10.2.4	Church Street - Meehan Street to Rossi Street	Yass Town	209	New	1	2.4	$53,463.20
23	10.3.1	Hercules Street - Middle Street to Camp Street	Murrumbateman	119	New	0	2.4	$29,131.20
24	10.3.1	Hercules Street - Camp Street to West Street	Murrumbateman	117	New	0	2.4	$28,641.60
25	10.3.1	Hercules Street - West Street to Merriman Place	Murrumbateman	267	New	0	2.4	$65,361.60
26	10.3.1	Hercules Street - Merriman Place to Cemetery	Murrumbateman	98	New	0	2.4	$23,990.40
27	10.2.11	Petit Street - Church Street to Comur Street	Yass Town	208	Widen	2	1.2	$30,059.20
28	10.2.10	Grampian Street - Glebe Street to Caravan Park Entrance	Yass Town	68	New	0	2.4	$16,646.40
29	10.3.2	West Street - Hercules Street to North Street	Yass Town	226	New	0	2.4	$55,324.80
30	10.2.1	Petit Street - Comur Street to Shaw Street	Yass Town	193	New	1	2.4	$49,546.40
31	10.2.3	Shaw Street / Crago Street - Petit Street to Crago Street 0 to 100m	Yass Town	100	New	1	2.4	$26,780.00
32	10.2.3	Shaw Street / Crago Street - Petit Street to Crago Street 100 to 200m	Yass Town	100	New	0	2.4	$24,480.00
33	10.2.3	Shaw Street / Crago Street - Petit Street to Crago Street 200m to 300m	Yass Town	100	New	0	2.4	$24,480.00
34	10.2.3	Shaw Street / Crago Street - Petit Street to Crago Street 300m to 400m	Yass Town	100	New	0	2.4	$24,480.00
35	10.2.3	Shaw Street / Crago Street - Petit Street to Crago Street 400m to 540m	Yass Town	140	New	1	2.4	$36,572.00
36	10.2.3	Shaw Street / Crago Street - Shaw Street to Adele Street	Yass Town	44	Widen	1	1.2	$7,685.60
37	10.2.3	Shaw Street / Crago Street - Adele Street to Aldi Supermarket	Yass Town	74	Widen	0	1.2	$9,057.60
38	10.4.1	Queen Street - Fitzroy Street to Richmond Street	Binalong	105	New	1	2.4	$28,004.00
							Total	**$1,280,199.20**

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