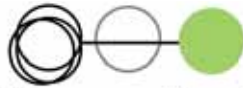




# **BICYCLE STRATEGY FOR MITTAGONG, BOWRAL AND MOSS VALE**

**SUPPORTING PHYSICAL ACTIVITY, ACTIVE  
LIVING, ACTIVE AGEING AND ACTIVE TOURISM**



**GTA consultants**

ABN 34 005 839 645

Level 10

815 Pacific Highway

Chatswood NSW 2067

PO Box 5254 - West Chatswood NSW 1515

p +61 2 8448 1800

f +61 2 8448 1810

[sydney@gta.com.au](mailto:sydney@gta.com.au)

[www.gta.com.au](http://www.gta.com.au)



**Jamieson Foley & Associates Pty Ltd**

ABN 14 003 860 277

Suite 405

5 Hunter Street

Sydney NSW 2000

p +61 2 9233 1277

f +61 2 9235 2490

[info@jamiesonfoley.com.au](mailto:info@jamiesonfoley.com.au)

[www.jamiesonfoley.com.au](http://www.jamiesonfoley.com.au)



**Sustainable Transport Consultants Pty Ltd**

ABN 19 101 162 716

PO Box 1601

BONDI JUNCTION NSW 1355

p +61 2 9386 4484

f + 61 2 9012 0793

[wsalomon@bigpond.net.au](mailto:wsalomon@bigpond.net.au)

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## **1 INTRODUCTION**

The Bicycle Strategy for Mittagong, Bowral and Moss Vale is a comprehensive plan for supporting physical activity, active living, active ageing and active tourism in Wingecarribee. This Strategy supports physical activity, active living, active ageing and active tourism, as promoted in Council's Social Plan and other council policy, strategy and planning instruments.

The Mittagong, Bowral and Moss Vale Bicycle Strategy builds on existing strengths in Wingecarribee such as:

- 🚲 Bong Bong Track
- 🚲 Mittagong Creek Trail
- 🚲 Existing and proposed pathway networks East Bowral and Renwick
- 🚲 Council's ongoing budget allocations for pathway network development
- 🚲 Eridge Park Velodrome
- 🚲 Hansen Street bicycle training facility
- 🚲 Extensive community and commercial interest:
  - Ben Mikic Foundation
  - Southern Highlands Bicycle User Group
  - CANWIN Climate Action Now Wingecarribee
  - Southern Highlands Cycle Club
  - a significant number of bicycle shops
  - Vaude Highlands Mountain Fling

**Figure 1.1 - Bong Bong Track at Wingecarribee River**



- 🚲 **Section 2** - Strategy objectives
- 🚲 **Section 3** - Background information, including methodology, potential for cycling, benefits and barriers, stakeholder vision, cycling and road safety, bicycle user categories
- 🚲 **Section 4** - Strategic context, including Council policies and global issues
- 🚲 **Section 5** - Developing the bicycle network
- 🚲 **Section 6** - Support program to increase bicycle use
- 🚲 **Section 7** - Implementation and evaluation
- 🚲 **Section 8** - Funding opportunities

The Bicycle Strategy reinforces the Wingecarribee Shire Council Mission statement and associated Visions:

**Mission**

*“To make the shire a better place in which to live”*

**Visions**

- 🚲 *Enhance the spirit, character and qualities of the Shire*
- 🚲 *Respond to challenges and opportunities*
- 🚲 *Retain the balance of rural and residential lifestyle*
- 🚲 *Pursue social and recreational opportunities*
- 🚲 *Ensure sustainability of the built and natural environments*
- 🚲 *Provide appropriate and responsive planning controls*

## **2 STRATEGY OBJECTIVES**

The main objectives for the Bicycle Strategy are to make cycling safer, easier and more attractive in Mittagong, Bowral, Moss Vale and their surrounding suburbs. The Bicycle Strategy will cater for all types of cyclists and trip types, including school students, commuter and recreational cyclists and others who may wish to use cycling infrastructure such as walkers, joggers and in some areas, equestrians.

Accordingly, the Strategy becomes a 'Path User Plan', which includes an element on planning for the next 10-20 years, the baby boomer phenomenon and increased numbers of people using motorised wheelchairs, sharing with pedestrians and cyclists.

With the pressure on funding sources, another key element of the Strategy is to identify ways to balance the cost of new facilities and upgrade old ones.

### **2.1 Bicycle Network Plan**

- 🚲 Prepare a map of existing and proposed on-road and off-road bicycle facilities;
- 🚲 Prepare a list of prioritised cost estimates for proposed bicycle facilities;
- 🚲 Build a coherent network consisting of a network of bicycle routes: regional routes for longer trips, local routes for localised trips and traffic calmed local streets for easy access to all destinations;
- 🚲 Provide a system of signage and network mapping for easy way-finding and place details to encourage and assist riders to better use the network;
- 🚲 Formulate a staged schedule of works consisting of standardised design solutions and specific design solutions;
- 🚲 Recommend an on-going monitoring system designed to track usage and to facilitate the removal of identified hazards;
- 🚲 Provide recommendations for improved bicycle access throughout the Council area through the incorporation of bicycle friendly design and construction criteria into:
  - streets, roads, intersections and crossings,
  - traffic calming and speed reduction schemes,
  - local residential streets and community facilities;
- 🚲 Make recommendations on integrating ongoing network development with Council's asset management systems and the wider planning processes and in particular Council's Social Plan;
- 🚲 Removal of old-style drainage grates;
- 🚲 Recommend a road repair and maintenance reporting system to respond to riders' needs; and
- 🚲 Recommend policies for cyclist provision during road works.



## **2.2 Bicycle-use Support Plan**

- 🚲 Inform Wingecarribee residents and workforce on the location of bicycle routes and facilities through paper and electronic PDF maps available on Council's web site as well as the Tourism Southern Highlands website. Publication-quality mapping will allow transport access guides to be easily produced for schools, major workplaces and shopping / commercial centres. All maps and promotional material will be available from the Visitor Information Centre;
- 🚲 Promote education and skills training to enable residents and visitors to increase their operating knowledge and skills, both on-road and off-road, for a wide range of age groups. Programs can be run either by Council or external training providers, possibly using the facility at Hansen Street or the Eridge Park Velodrome. Examples of programs include: ride to work, ride to school, adult and child skills training, group riding skills for fitness riders, etc;
- 🚲 Encourage the community and visitors to get out and enjoy bike riding by supporting a range of locally based bicycle events;
- 🚲 Encourage bicycle travel and tourism within the Local Government area, building on existing events and programs such as recently developed VAUDE Highland Fling / the Australian MTB Marathon Championships by Wild Horizons in Bundanoon;
- 🚲 Support for user group initiatives such as the programs being developed and promoted by the Ben Mikic Foundation (eg the Silent Ride, school based training program), the Picton to Mittagong Rail Trail (promoted by the Australian Cycling Sector);
- 🚲 Development of local action programs for State-wide and international health and environmental research initiatives such as the NSW SPANS Reports on Obesity (Booth 2006.1, 2006.2) and the Stern (2007) Report on Climate Change;
- 🚲 Require and encourage the private sector and government agencies to provide bicycle parking and end of trip facilities in and around their buildings; and
- 🚲 Improve and expand the level and quality of bicycle parking in the public domain.



## **3 BACKGROUND**

### **3.1 Methodology**

The key tasks for the Bicycle Strategy are to:

- 🚲 Review the current Bike Plan, existing facilities, mapping data, key destinations;
- 🚲 Conduct one or two workshops with Council staff, bicycle user groups and other stakeholders;
- 🚲 Conduct saddle surveys in Mittagong, Bowral and Moss Vale;
- 🚲 Develop and map a network of new and amended routes and associated facilities;
- 🚲 Prepare a map with an agreed bike network, routes and trip-end facilities;
- 🚲 Prepare a works program, cost estimates and priorities (matched to Council resources);
- 🚲 Provide a map with a yearly construction program;
- 🚲 Prepare detailed annual costing and works program for Years 1-3;
- 🚲 Report the priorities and rationale for the network and the works program;
- 🚲 Provide a map of the agreed Draft Bike Plan for public exhibition; and
- 🚲 Review the submissions and amend draft plan.

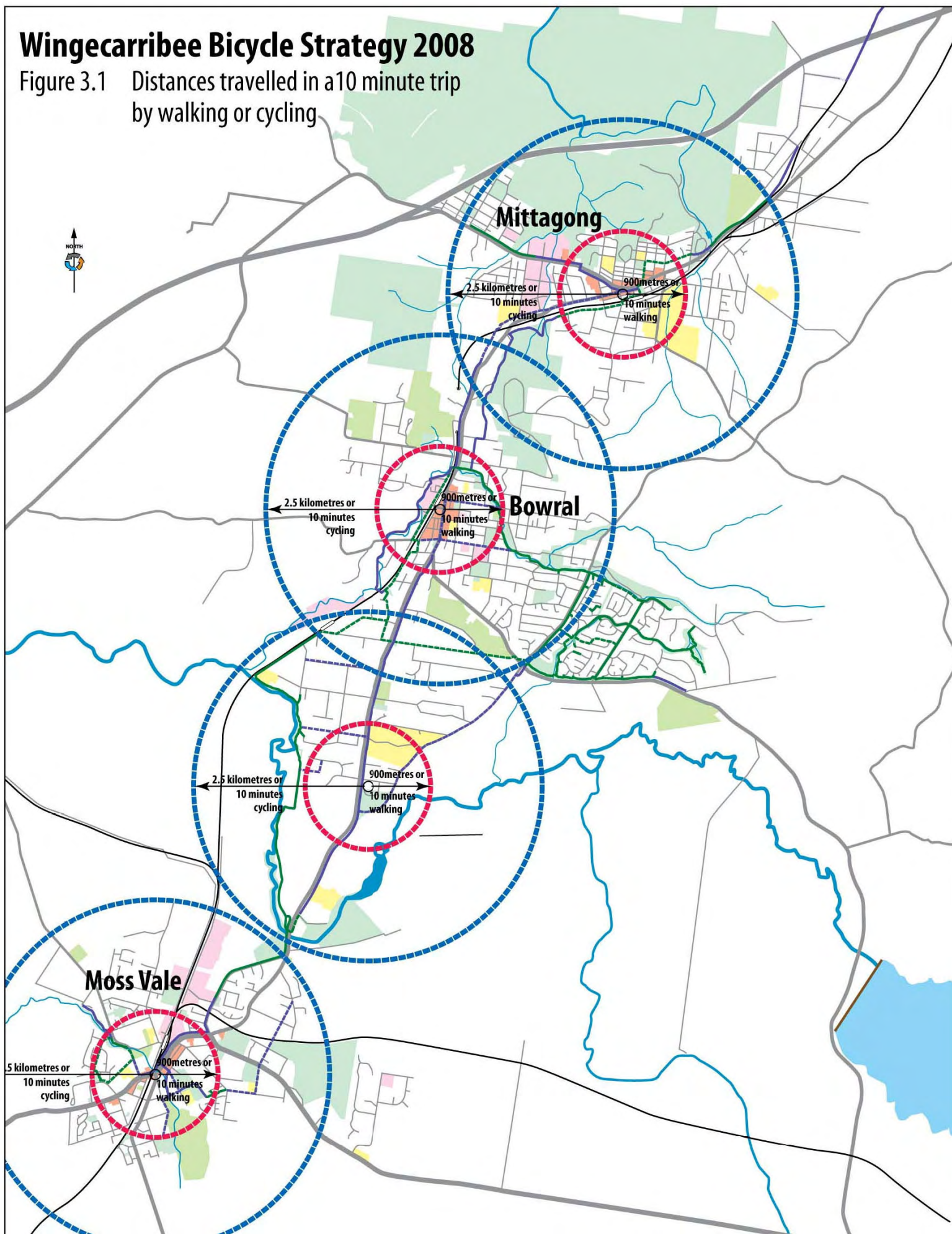
### **3.2 Potential for Cycling**

**Figure 3.1** shows that there is strong potential for cycling to become a serious mode of transport, i.e. the urban areas of Mittagong, Bowral and Moss Vale each are generally contained within a 15-minute cycling radius, which makes cycling a competitive and achievable mode of transport.

For many, cycling between the three towns and other villages is also feasible, pending the availability of suitable infrastructure.

# Wingecarribee Bicycle Strategy 2008

Figure 3.1 Distances travelled in a 10 minute trip by walking or cycling



### **3.3 Benefits and Barriers**

The Bicycle Strategy provides Council with a proactive policy to develop and increase the role of the bicycle as an important sustainable transport mode to benefit the health and economic wellbeing of the community. Bicycle travel also provides additional recreational activities and experiences for visitors.

The Strategy aims to build strategically on the positive characteristics of bicycle travel while removing barriers:

#### ***Community benefits***

- 🚲 The bicycle is an ideal vehicle for convenient, door to door travel. It is quick to start, easy to park and impervious to traffic congestion. It is particularly suited for trips up to 5km. This includes most local trips within each of the three towns (refer **Figure 3.1**);
- 🚲 Cycling travel times are predictable and reliable;
- 🚲 Construction of a workable bicycle network is relatively cheap and bicycle infrastructure can be easily (and cost effectively) included with road upgrades and maintenance works;
- 🚲 Bicycle traffic does not pollute, does not emit greenhouse gases, is not noisy and is a practical way of reducing dependency on oil;
- 🚲 Bicycles take up very little space either when being ridden or when parked;
- 🚲 Bicycle traffic has a humanising effect on neighbourhoods;
- 🚲 Cycling is good for staying in shape and is relaxing; and
- 🚲 Bicycle travel is affordable and accessible to almost all the community.

#### ***Barriers to cycling***

- 🚲 Fragmented cycling networks with a lack of continuity and connectivity;
- 🚲 Insufficient knowledge of available network facilities and alternative back street routes;
- 🚲 Limited number of safe and convenient opportunities to cross major roads;
- 🚲 Lack of end of trip and parking facilities;
- 🚲 Poor perception of cycling as a physical activity (too hard, too hot, too hilly, too dangerous, too difficult etc);
- 🚲 Poor integration with general road transport system - high speed and high volume roads along popular trip desire lines, threatening behaviour of motorists;
- 🚲 Lack of 'how to' knowledge on cycling as an activity eg where to ride, what to wear, what type of bike suits, equipment issues, navigation issues;
- 🚲 Lack of confidence and cycling experience;
- 🚲 Actual and perceived lack of safety;
- 🚲 Terrain and weather; and

- 🚲 Narrow and poorly maintained roads, shoulders and footpaths.

While some of these barriers are beyond intervention, a majority can be managed or addressed by individuals, communities and governments. The actions outlined in the Strategy seek to address these issues and create an environment with minimal barriers to cycling.

### **3.4 Stakeholder Vision**

A key element in the development of the Bicycle Strategy was the involvement and participation of key stakeholders. On 28 March 2008 a workshop was held to obtain feedback from the stakeholders and to gain an understanding of the broad principles that will guide the Strategy.

Stakeholder contact details are included in **Appendix A**. **Appendix B** includes a detailed overview of stakeholder feedback from both the workshop and through separate submissions.

The broad principles for the Bicycle Strategy as proposed by the stakeholders may be summarised as follows:

- 🚲 Establish an overarching, aspirational long term vision to position Wingecarribee Shire as 'The friendliest towards cyclists of any shire in NSW'. Take a leadership role in creating an environment in which a range of different user bike groups participate in a wide range of cycling activities, all underpinned by an ethic that has 'safety' as its watchword;
- 🚲 Bundanoon, Robertson and the outlying villages need to be included in any bike plan for the shire;
- 🚲 Supporting goals include:
  - A safer cycling environment,
  - A reduction in the number of accidents,
  - Increased cycling activity amongst the 7 key user groups within the local population
  - Increased tourist and visitor cycling activity across all user groups,
  - An increase in local business;
- 🚲 There is a strong community basis that supports cycling, including the Ben Mikic Foundation, the Southern Highlands Bicycle User Group, CANWIN Climate Action Now Wingecarribee, Southern Highlands Cycle Club and a significant number of bicycle shops with strong connections to regional tourism such as the VAUDE Highland Fling. The workshop concluded with the inauguration of a Council based working party;
- 🚲 There are strong global and local needs for improvements to the cycling and walking networks including peak oil, climate change, public health and the aging population. There is recognition of the need to choose cycling for transportation as well as recreation;



- 🚲 Transport equity is an issue, dispersed throughout the Shire;
- 🚲 Although there is a number of existing and well-regarded cycling links such as those in East Bowral and the Bong Bong Trail, much of the remaining network is patchy and in need of improvements including continuity, widening, maintenance, lighting, signage, maps (Transport Action Guides). The right infrastructure requires wider, safer paths; off road on busy streets; local streets need interconnected networks with good crossings at main roads; good connections into the heart of town. Due to the aging local population, pathways need to cater for increasingly complex user groups such as people with walking aids, motorized wheelchairs, mobility scooters, etc, as well as pedestrians and cyclists;
- 🚲 There is a strong perception that children want to come back to using bicycles, which needs support and encouragement, through both formal and informal activities such as Ride-2-School, Green Prescriptions, Bike Bus, Walking Bus, rides with BUGs and clubs;
- 🚲 Work with school principals to identify safe routes for kids to cycle to and from school;
- 🚲 Identify black spots in the shire for cyclists in conjunction with the SHCC and take action to remedy; and
- 🚲 Identify transport options for cyclists such as rail and bus connectivity both for connectivity and tourism:
  - Work with the local bus company to ensure bikes can be accommodated,
  - Identify train time table and usage issues for cyclists to connect with villages such as Bundanoon.

The stakeholder feedback also included ideas for network development at specific locations and for specific planning instruments, including:

- 🚲 Update DCP41 - Development Specifications to include a width increase of footpaths from "1.25m pathway" to "3.0m shared paths (2.0m absolute minimum)";
- 🚲 The old Great Southern Railway from Mittagong to Willow Vale, Colo Vale, Hill Top and Balmoral Village and then into Wollondilly (Buxton, Thirlmere, Picton). Extend to Moss Vale and Goulburn at a later date;
- 🚲 Ferguson Crescent in Mittagong - very busy for pedestrians, cyclists and joggers. People come from Mittagong and go along the Willow Vale bike track, cross over the highway and go back to town along Ferguson Crescent, which has a lot of space for a path on the highway side of the road. The only difficult part is the two railway bridges. This will be even busier when the new Renwick development goes ahead;

- 🚲 Mittagong to Bowral - one route proposes to use the existing fire trail tracks from the western end of Railway Parade, Mittagong to Soma Ave, Bowral. There are some fairly steep sections. However, it is a fair distance from civilisation, safety reasons, etc;
- 🚲 Mittagong to Bowral - new bike track parallel to the railway line to be reasonably level, although the 300m rail-only tunnel is a major barrier;
- 🚲 Mittagong to Bowral - along Bowral Road, widen and extend existing footpath with a barricaded off crossing over the bridge. A rest stop on top of the hill is required with a flat area and space for seats and a water bubbler. There is a sign welcoming all to Donald Bradman's Bowral, but it is a pretty unwelcoming with weeds and untidiness - new planting required;
- 🚲 East Bowral to Moss Vale. There some pockets of Council land adjacent to the Wingecarribee River, behind Eridge Park Road, but it is fragmented. Alternatively, there is the road reserve on Moss Vale Road;
- 🚲 Burradoo to Berrima - from the Oxley College end of the existing bike track, following the river to Berrima. On the southern side of the river there are only two different properties, then crown land which Council manages, which leads into Berrima;
- 🚲 Berrima to Medway - along a disused railway corridor to the Medway colliery;
- 🚲 Sutton Forest to Moss Vale along the Illawarra Highway. Good for tourists, nice flat grade, well known cycling route for professional cyclists who congregate at the Sutton Forest hotel;
- 🚲 Resolve the issue of traffic flow at the Bessemer Street/Bowral Road crossing;
- 🚲 Upgrade the Velodrome (to get kids off the roads and expand its usage by senior riders);
- 🚲 Expand areas for creating mountain bike tracks and work to make the Southern Highlands a mountain bike Mecca;
- 🚲 Establish a site for a future BMX track in the Highlands;
- 🚲 Provide safe opportunities for cyclists and pedestrians to cross major roads such as Moss Vale Road at Burradoo Road; and
- 🚲 Develop a cyclist's behavioural program for safe use of the roads, especially at night, such as lights, retro-reflective clothing, helmets, bell use on shared path, etc.

The draft Bicycle Strategy for Moss Vale, Bowral and Mittagong was placed on public exhibition for 28 days. The draft document and proposed route maps were placed on exhibition at Moss Vale Civic Centre plus the Mittagong, Bowral and Moss Vale Libraries. Documents were also located on the WSC website and [www.bangthetable.com.au](http://www.bangthetable.com.au). This interactive website allowed residents to lodge comments, discuss issues and vote on the ideas presented by other people.

A total of 40 written submissions were received at the Council. The 'BangTheTable' website recorded 544 unique visitors to the Bicycle Strategy webpage, where 24 comments were posted and 77 votes were made for these comments.

A description of the feedback received during the public exhibition period, along with a response from GTA Consultants on how the feedback has been addressed, is included in **Appendix C**.

The document has been updated to reflect the comments received during the public exhibition.



### 3.5 Cycling and Road Safety

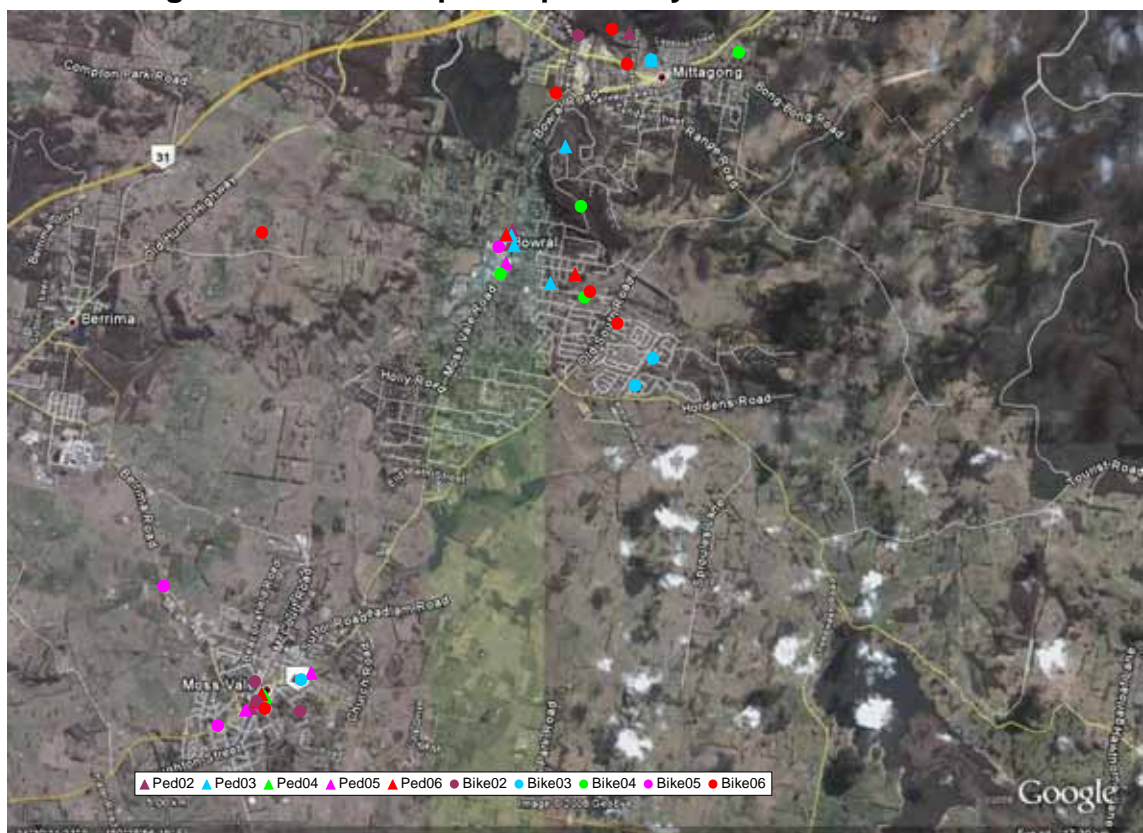
**Figure 3.2** shows the crash patterns for bicycles and pedestrians in the three towns for the 5 year period from 2002 to 2006 inclusive. The following comments are offered for consideration:

- 🚲 In the whole of the Local Government area, there was a total of 30 pedestrian crashes and 26 bicycle crashes;
- 🚲 Of these, 20 pedestrian crashes and 21 bicycle crashes occurred in the three towns;
- 🚲 Pedestrian and bicycle crashes are well-known to be under reported; and
- 🚲 Although the crashes are generally spread-out throughout the towns, there are some pedestrian crash concentrations in the Bowral and Moss Vale town centres.

#### **Recommendation**

- 🚲 The town centre pedestrian crash concentrations may justify further investigations as part of a 40km/h High Pedestrian Activity Area. RTA may provide (joint) funding for the research, plan development and infrastructure works.

**Figure 3.2 - Crash Spot Map for Bicycles and Pedestrians**



### 3.6 Pathway User Categories

In NSW the vast majority of pathways are developed for shared use by pedestrians and cyclists. By nature these pathways attract a wide range of community groups as shown in **Figure 3.3**:

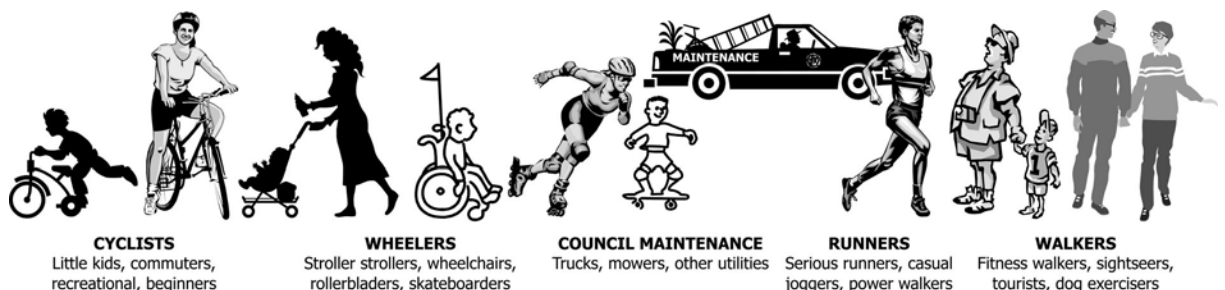
- 🚲 Commuter cyclists;
- 🚲 Recreational cyclists and families;
- 🚲 Roller bladers;
- 🚲 Strollers and prams;
- 🚲 Wheelchairs;
- 🚲 Council, RTA, Sydney Water and other service vehicles;
- 🚲 Emergency vehicles;
- 🚲 Families and tourists on foot; and
- 🚲 Older people on foot.

In addition to these groups in the general community, the stakeholder workshop also identified special interest groups, such as:

- 🚲 BMX riders (a trial Olympic event);
- 🚲 Mountain bike riders who train and race on mountain tracks;
- 🚲 Road racing cyclists who race and train on roads in the shire; and
- 🚲 Track cyclists who train and race at the Velodrome.

These groups are important for sport and tourism and generally require specialist facilities and arrangements such as formal events, marked or constructed tracks, velodrome. Although many road racers do informal training on the general road network, formal controlled events are required for the actual races.

**Figure 3.3 - Pathway User Groups**



## **4 STRATEGIC CONTEXT**

### **4.1 Council Policies and Plans**

This section provides an overview of the pedestrian and cycling issues as referenced in the various planning instruments in Wingecarribee Shire Council, including:

- 🚲 Social Plan - June 2006;
- 🚲 Pedestrian and bicycle plans;
- 🚲 LEP - 1989, 2008 draft;
- 🚲 Strategic Plan - October 2002;
- 🚲 Open Space, Recreation, Cultural and Community Facilities Study - 2004;
- 🚲 DCP12 Carparking RevE - April 2004;
- 🚲 DCP32 Mittagong - December 1998;
- 🚲 DCP40 Moss Vale - March 2000;
- 🚲 DCP46 Bowral - December 2002; and
- 🚲 Renwick (Heart Foundation presentation) - 2007.

#### **4.1.1 Social Plan - June 2006**

The Social Plan is the most up-to-date document and extensively references walking, cycling and public transport as part of Council's overall policy direction to create a healthy and active community and a sustainable environment. It refers to various other Council instruments and makes recommendations for revisions to these documents and related Council policies, in particular the LEP.

As shown in Table 4.1, the Social Plan has a strong focus on Active Living. A significant number of objectives relates to public transport improvements. Many of these can be (partially) achieved through improvements to walking and cycling facilities and the integration of these with Public Transport.

The plan emphasises that high growth non-metropolitan areas present challenges to the public transport industry, including for Wingecarribee. The Shire covers an area of over 2,500 square kilometres. Settlement patterns are predominantly rural with a population of over 42,000 residents dispersed across four towns, numerous villages and rural localities. In 2001, just under one fifth of Shire residents were rural dwellers, representing 7,769 persons. A further 6,664 residents live in Shire villages.

**Table 4.1 - Social Plan Bicycle and Pedestrian Related Strategies**

<b>Strategy</b>	<b>Issues and Objectives</b>	<b>Resource Implications</b>	<b>Time Frame 2006-2010</b>
2.1.1a Continued development of recreational pathways linking community services and facilities, playgrounds and recreational areas	To promote physical activity, active living and active ageing.	<i>Moderate</i> Roads and Traffic Branch	Pending grant funding and Sect 94 contributions
2.1.1b Facilities for shade, seating and access to public toilets along centrally located and highly utilised recreational pathways.	To promote physical activity, active living and active ageing.	<i>Moderate</i> Roads and Traffic Branch	Pending grant funding and Sect 94 contributions
2.1.8b Planning instruments for residential release and major civic or commercial development incorporate design guidelines on active living	To promote physical activity, social interaction and community participation.	<i>Minor</i> Strategic Planning Branch	Subsume into existing function
2.1.9c Safety upgrades are progressed to Council places, spaces, facilities and premise.	To promote public utilisation of and safety in public places. To comply with risk management and safety standards.	<i>Minor</i> Parks and Property Branch	Ongoing Existing function
3.1.1f Development contribution planning contributes to information products for new residents on community services and facilities, on pedestrian access and mobility routes and on public transport services.	To address new residents' needs for community information.	<i>Minor</i> Strategic Planning Branch	Existing function. Pending Planning Agreements.
3.1.2a Grant funding is sought annually for public transport infrastructure including access, safety and other facilities for pedestrians, cyclists and mobility scooters.	Continual improvement to public transport infrastructure and service development through Shire works.	<i>Minor</i> Roads and Traffic Branch	Annual Existing function
3.1.2b Grant funding is sought annually for Pedestrian Access and Mobility planning and implementation.	To advance pedestrian safety, particularly for people with a disability or other mobility restriction.	<i>Minor</i> Roads and Traffic Branch	Annual Existing function
3.1.2c Council's Annual Report quantifies public transport infrastructure improvements stemming from Shire works.	To inform the community about public transport infrastructure and service developments.	<i>Minor</i> Roads and Traffic Branch	Annual Subsume into existing function
3.1.2d The Shire CBD Mobility Map 2000 is updated and republished.	To promote pedestrian safety, particularly for people with a disability or other mobility restriction. To promote active living, active ageing and universal access.	<i>Major</i> Roads & Traffic Branch with Strategic Planning Branch	Dependent upon Council budget allocation
3.1.2e Developer Contribution Plans contribute to pedestrian access and mobility planning and implementation.	To advance pedestrian safety.	<i>Minor</i> Strategic Planning Branch	Existing function. Pending Planning Agreements.
3.1.2f Council's planning instruments require community access strategies for walking, cycling, mobility scooters and bus servicing, to inform the siting and design of new residential release, major civic or commercial development and redevelopment.	To maximise public transport utilisation, walking and cycling.	<i>Minor</i> Strategic Planning Branch	Subsume into existing function

#### **4.1.2 Pedestrian and Bicycle Plans**

The Wingecarribee Cycle Way Plan guides construction of shared pathways for pedestrians and cyclists within and linking population centres. Pedestrian Access and Mobility Plans (PAMPS) focus on pedestrian access in Mittagong, Bowral and Moss Vale business districts and along key routes within a 1.5km radius.

Pathways now link Moss Vale and Burradoo, Bowral and East Bowral, Welby and Mittagong. Pathways are also being constructed in Shire villages such as at Robertson, Bundanoon and Colo Vale.

Crossing points cater to the needs of people with mobility, aural or vision impairment and include kerb ramps and tactile ground surface indicators.

Key elements of the bicycle and pedestrian plans have included:

- 🚲 A works program to eliminate footpath trip hazards;
- 🚲 Upgrading of shire toilet facilities and MLAK system installation;
- 🚲 An annual budget allocation of \$10,000 for kerb ramp upgrades;
- 🚲 Publication of the Bowral, Moss Vale and Mittagong CBD Mobility Map;
- 🚲 During 2000/02 Council committed \$150,000 to addressing throughout the Shire, pedestrian trip hazards such as footpath cracks and tree root damage; and
- 🚲 In 2002/03 there was a Shire-wide upgrading and sign posting of accessible parking.

#### **4.1.3 Local Environment Plan**

In the draft LEP new medium density housing is constrained to town centres in proximity to public transport services. The draft LEP also makes provision for pedestrian access and mobility in all new major developments including provision of shared pathways for walking and cycling.

Siting and design of major residential release developments are not however assessed with respect to public transport access and provision except for new housing specifically intended for older people and people with a disability.

The 1989 LEP stipulates that Council must not grant consent to the subdivision or development of land unless the Council has considered the following matters in relation to the development:

- 🚲 The distribution of types of development on the land, including housing types, open space, and the pattern and phasing of development, including any indicative subdivision pattern;
- 🚲 Vehicular, cycle and pedestrian circulation networks; and
- 🚲 Particulars of the type, location and phasing of transport infrastructure and utility infrastructure.



#### **4.1.4 Strategic Plan**

The Council, whilst recognising a strong potential for many residents to be employed outside of the Shire, does not formally support the Shire taking on the role of a 'dormitory' suburb of the greater Sydney metropolitan area. The Council will promote the retention of the Shire's relatively high level of employment self-containment of around 70%. This is seen to be a more socially as well as an ecologically sustainable approach to managing future growth. Opportunities for employment growth must be provided.

The price of energy is set to increase and combined with concerns over greenhouse gas emissions, public attention will focus on integrating land use planning with:

- 🚲 transport planning; and
- 🚲 designing and constructing the built environment so as to minimise energy (fossil fuel base) consumption.

This means greater support for walking, cycling, public transport, and energy efficiency being incorporated into subdivision and housing design and construction.

The creation of such opportunities must take account of the community's capacity to 'pay' for growth and development. In this context, it is noted that the construction of walking and cycling infrastructure is significantly more cost-effective than new roads, off-street car parking and traffic relief routes.

The strategy also identifies the need for suitable small scale 'village business' zones for Wingello, Exeter, Burrawang, Hill Top, Yerrinbool, Colo Vale, Penrose and New Berrima that are located within a comfortable walking distance of approx 500 metres to most village households.

#### **4.1.5 Open Space, Recreation, Cultural and Community Facilities Study**

The Wingecarribee Open Space, Recreation, Cultural and Community Facilities Study recommends transport access strategies for all new major civic facilities with respect to pedestrians, cycling, public and private transportation. This study also recommends continued provision of shared pathways with facilities such as seating, shade and toilets particularly relevant to the needs of older people and people with a disability.

#### **4.1.6 Development Control Plans**

The DCPs reference walking and cycling to a varying extent.

The Bowral plan concludes that pedestrian connectivity across the centre is reasonable although the physical condition of major pedestrian paths requires upgrading. This is an important 'access' issue that references the needs of aging and less mobile community members.

Specific issues include:

- 🚲 conflicts at intersections between major pedestrian routes and car parks;
- 🚲 links between the main street and the Bendooley Street Cultural Precinct;
- 🚲 the link to the railway station; and
- 🚲 lack of cycle parking.

The Renwick plans have a strong focus on achieving a high degree of accessibility for pedestrians, cyclists and public transport. A presentation by the Heart Foundation identifies a number of potential issues:

- 🚲 connectivity to Mittagong, especially the station;
- 🚲 competitive advantages for Active Transport, i.e. not all internal roads are connected; and
- 🚲 need for accessibility mapping for all towns and town centres.

The Mittagong plans emphasise that it is important to build a network of pedestrian access across the town including:

- 🚲 links between Bowral Road and Ward Lane;
- 🚲 a link from Station Street to the Police Station Land;
- 🚲 a link from Main Street and Albert Lane; and
- 🚲 links from Main Street to Bowral Road.

The Moss Vale plans are similarly specific with a particular focus on extending and enhancing the Whites Creek Walkway.

The carparking DCP makes no reference to walking and cycling.

## **4.2 Global Issues**

Healthy and active transport includes walking and cycling as well as public transport, which invariably involves walking to and from bus stops and rail stations. There is substantive evidence that healthy and active transport provides a strong and effective policy response to five global public policy issues, including:

- 🚲 Transport Equity;
- 🚲 Congestion;
- 🚲 Public Health;
- 🚲 Climate Change; and
- 🚲 Peak Oil and Petrol Prices.

Investment in physical, social and organisational infrastructure to support healthy and active transport can deliver positive benefit:cost ratios for each of these five global policy issues individually, especially when considering externalities. The real benefit of investment in infrastructure for healthy and active transport, however, lies in recognition of the cross-disciplinary benefits.



It is noted that in August 2008, the former Minister for Roads Eric Roozendaal and former Minister for Environment and Climate Change Verity Firth announced that the Premier's Council on Active Living had been commissioned to start work on a new Bike Plan for NSW. Community comment on a new NSW Bike Plan to promote and encourage cycling is currently being sought. The press release detailing this announcement is included in **Appendix D**.

The following sections detail the five global public policy issues, referred to above.

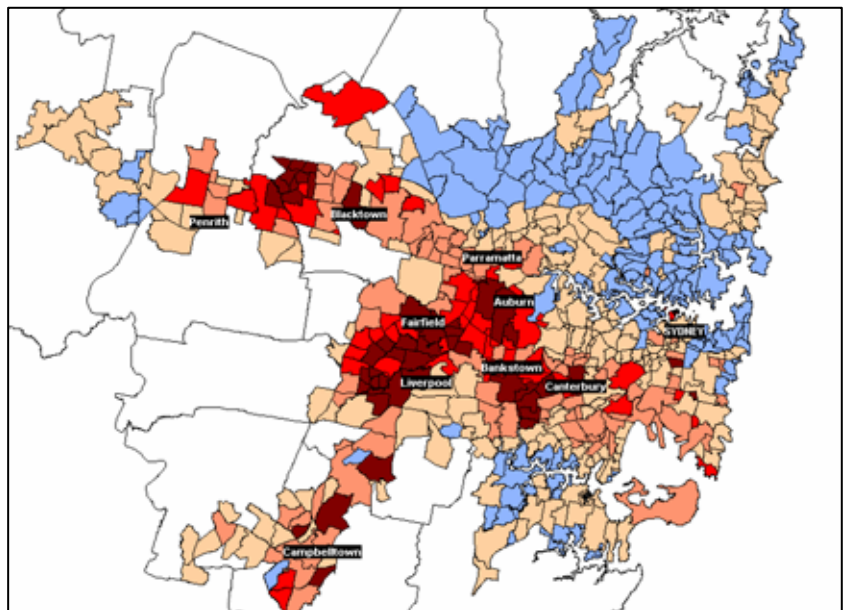
#### **4.2.1 Transport Equity**

Approximately 700,000 people in Western Sydney cannot reach essential services within a reasonable time, such as health care, employment, education and daily needs (Hurni 2006, **Figure 4.1**). The problems are broadly defined as being personal mobility factors (characteristics that affect individual's ease of travelling), transport accessibility factors (characteristics of the available transport services) and urban accessibility factors (characteristics of facilities, services and activities that individuals may need to access).

Examples of some transport disadvantaged groups include sole parents, young unemployed people and recently arrived humanitarian entrants.

A broader response to the travel needs of these groups is required including, inter alia, improvements to local accessibility through constructing and upgrading bus stops and shelters, foot paths, and cycleways.

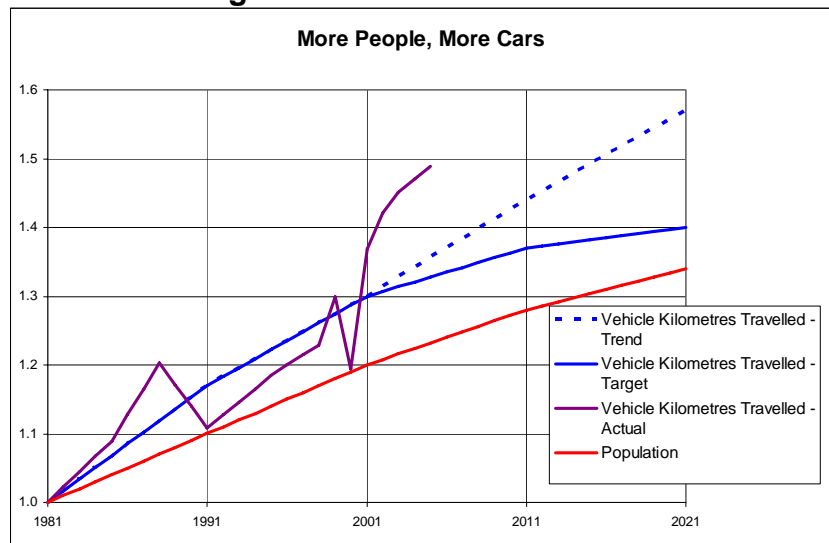
**Figure 4.1 - Transport and Access in Sydney**



### 4.2.2 Congestion

Research by the NSW Roads and Traffic Authority (RTA 1999.1-3) predicted a 600% increase in congestion on Sydney's roads unless vehicle usage trends were reversed. Current evidence is that RTA's strategies have been ineffective in achieving the required target (**Figure 4.2**). Similar problems are evident in other major cities in Australia and around the world. There is a strong need for renewed investment in environmentally friendly transport in cities, such as cycling, walking and public transport.

**Figure 4.2 - Increase in Travel**



### 4.2.3 Health

The obesity crises and the lack of exercise are well documented, eg the SPANS reports by NSW Health which indicate that walking and cycling to school have the potential to provide 50% of the daily physical activity requirement for children (**Figure 4.3**).

Less well known is the research flowing from the European Charter on Transport, Health and the Environment which shows that car-based air pollution kills twice as many people as car crashes (**Figure 4.4**).

Figure 4.3 - Trends in Walking and Cycling to School

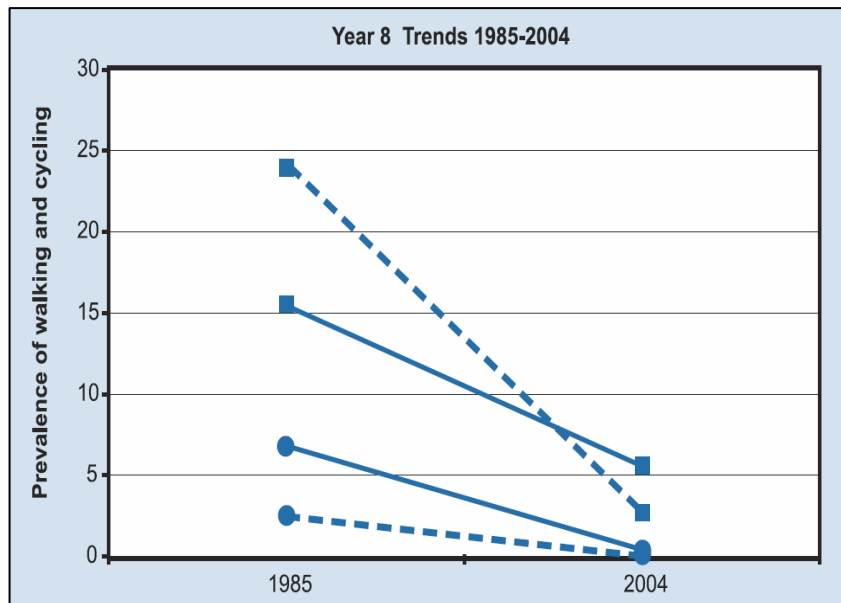
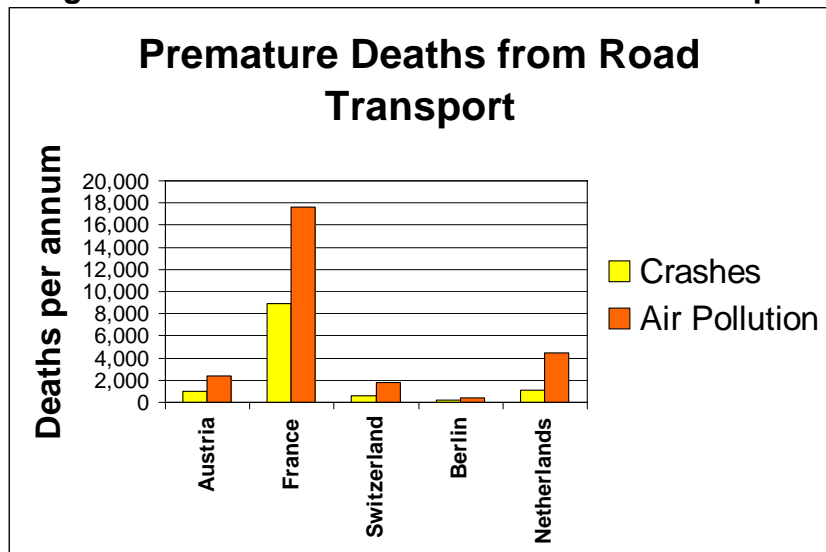


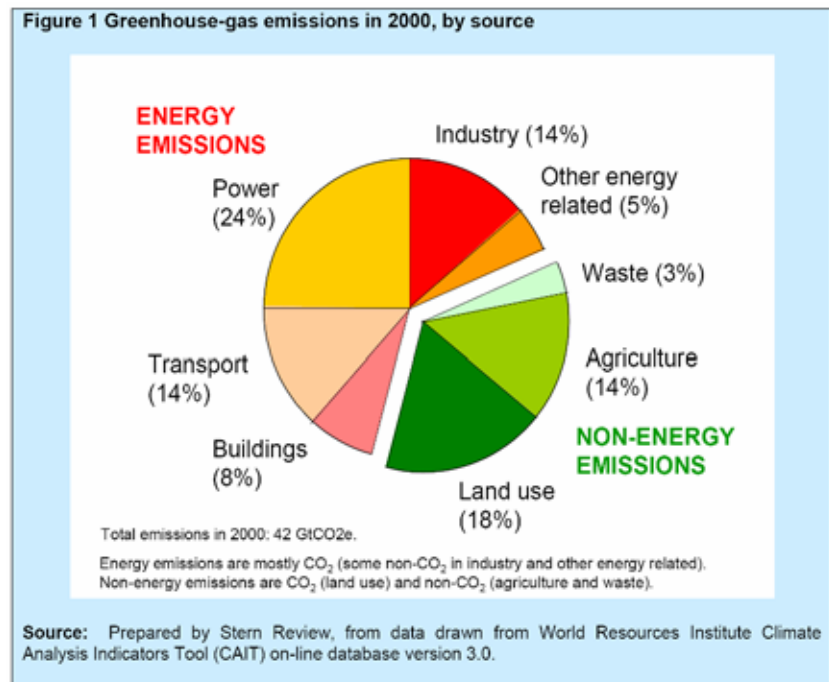
Figure 4.4 - Premature Deaths from Road Transport



#### 4.2.4 Environment and Climate Change

The Stern Review has now become the world's authoritative and conclusive document on this topic (**Figure 4.5**). While it acknowledges active transport as a key issue, it is weak on recommendations due to the complexity of the issue. It is clear, however, from other research both overseas and locally that there are strong opportunities to substantially increase the role of active transport, eg the City of Sydney has adopted a target of 20% of short trips by bike by 2016.

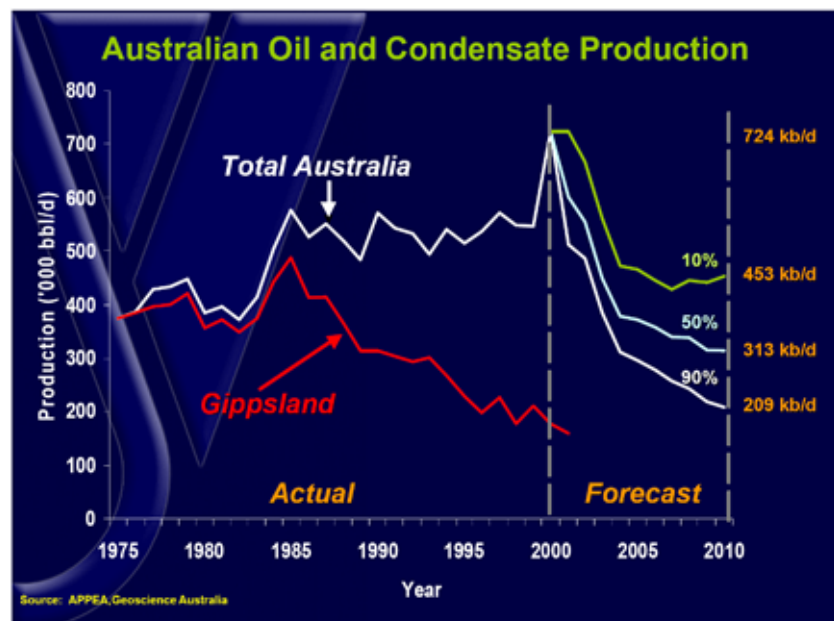
**Figure 4.5 - Transport and Climate Change**



#### 4.2.5 Peak Oil

Projections by Australian Government forecasting agencies indicate that Australia is facing a rapid decline in liquid petroleum production over the next decade. Liquids self-sufficiency is expected to decline from an average of 80-90% over the past decade to less than 40% by 2010 (**Figure 4.6**). On a global scale, the Arabian oil fields have reached their peak production levels. The world is at war over the next oil and gas fields. The Kimberley and Arctic seas are threatened with exploration.

**Figure 4.6 - Australian Oil Production**



## 5 DEVELOPING THE BICYCLE NETWORK

The Bicycle Strategy proposes a substantial upgrade of existing bicycle facilities to meet the future needs of the community. The proposed network is shown in **Maps 1 and 2**. **Appendix E** provides the maps for each of the three towns separately.

### 5.1 Bicycle Network Route Functions

The proposed Mittagong, Bowral and Moss Vale Bicycle Network consists of five elements:

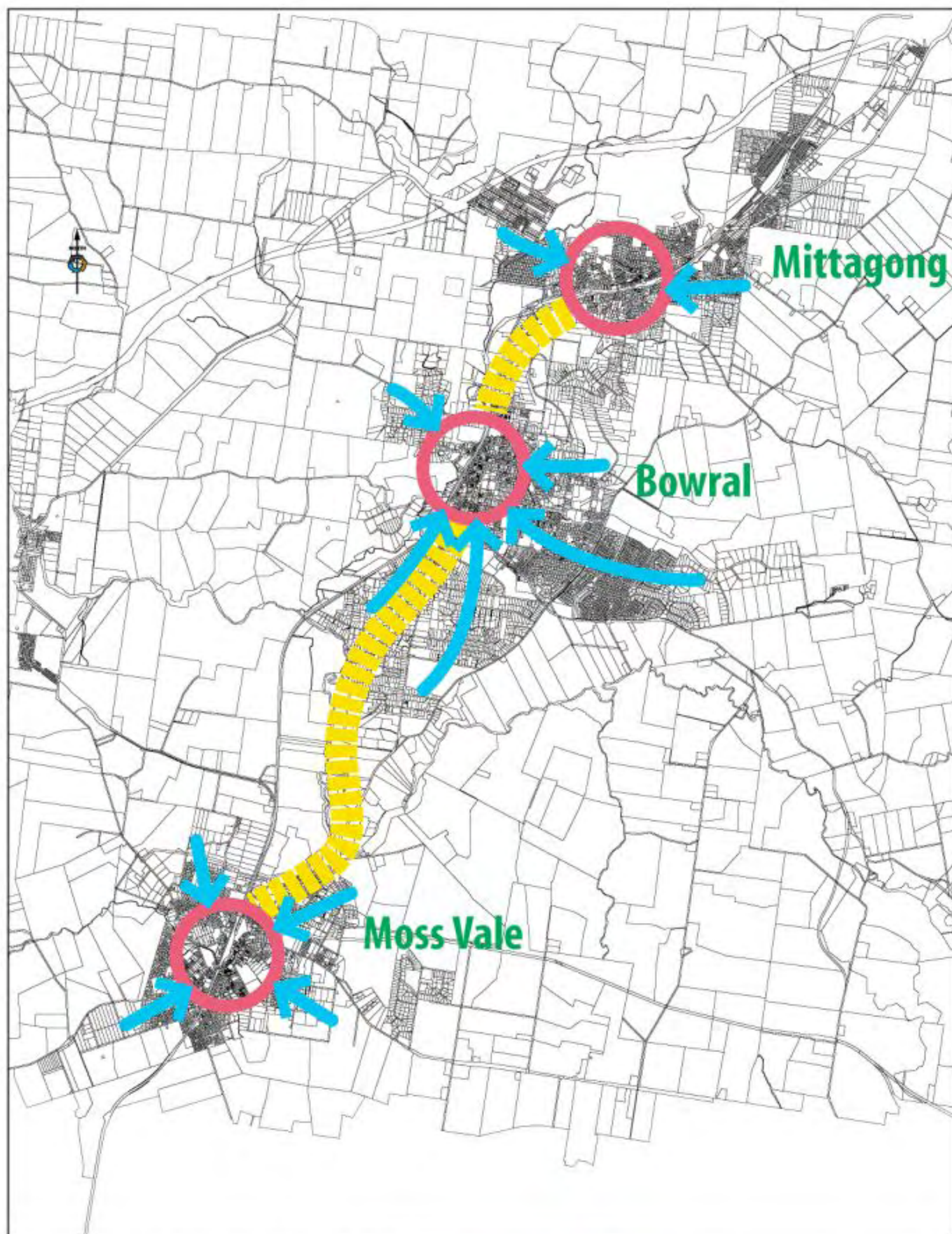
- 🚲 **Linking Mittagong, Bowral and Moss Vale.** In response to the Social Plan and the needs identified by the stakeholders, there is a clear need for a continuous shared path from Mittagong to Moss Vale. Some of the path exists, some of it needs upgrading, some of it is included in existing plans and some of it is newly identified in this plan. It will form the spine for pedestrian and bicycle access between the three towns;
- 🚲 **Main Feeder Routes.** Connecting routes branching off from the demonstration project to link Welby, Willow Vale, Renwick, East Bowral and Burradoo;
- 🚲 **Local Access Connections,** to link the demonstration project with key places of interest such as the schools, pools, playing fields, main shopping areas and main employment areas;
- 🚲 **Urban Recreational Routes,** to enhance and extend sections of the Bong Bong Track; and
- 🚲 **Regional Links and Tourism Routes,** including the development of the Mittagong to Picton Rail Trail and a series of routes to Berrima - the Berrima Double 8 Loop.

Specific details for these five route categories are provided in the following sections.

With regard to the urban routes, there are generally three types of routes with their own network function as shown in **Table 5.1**.

The Bicycle Strategy stresses the importance of separation as a key to providing much needed operating space for bicycles (**Figure 5.1**).





# Wingecarribee Bicycle Strategy 2008

## Map 1 Bicycle network strategic development

Version 1, May 2008

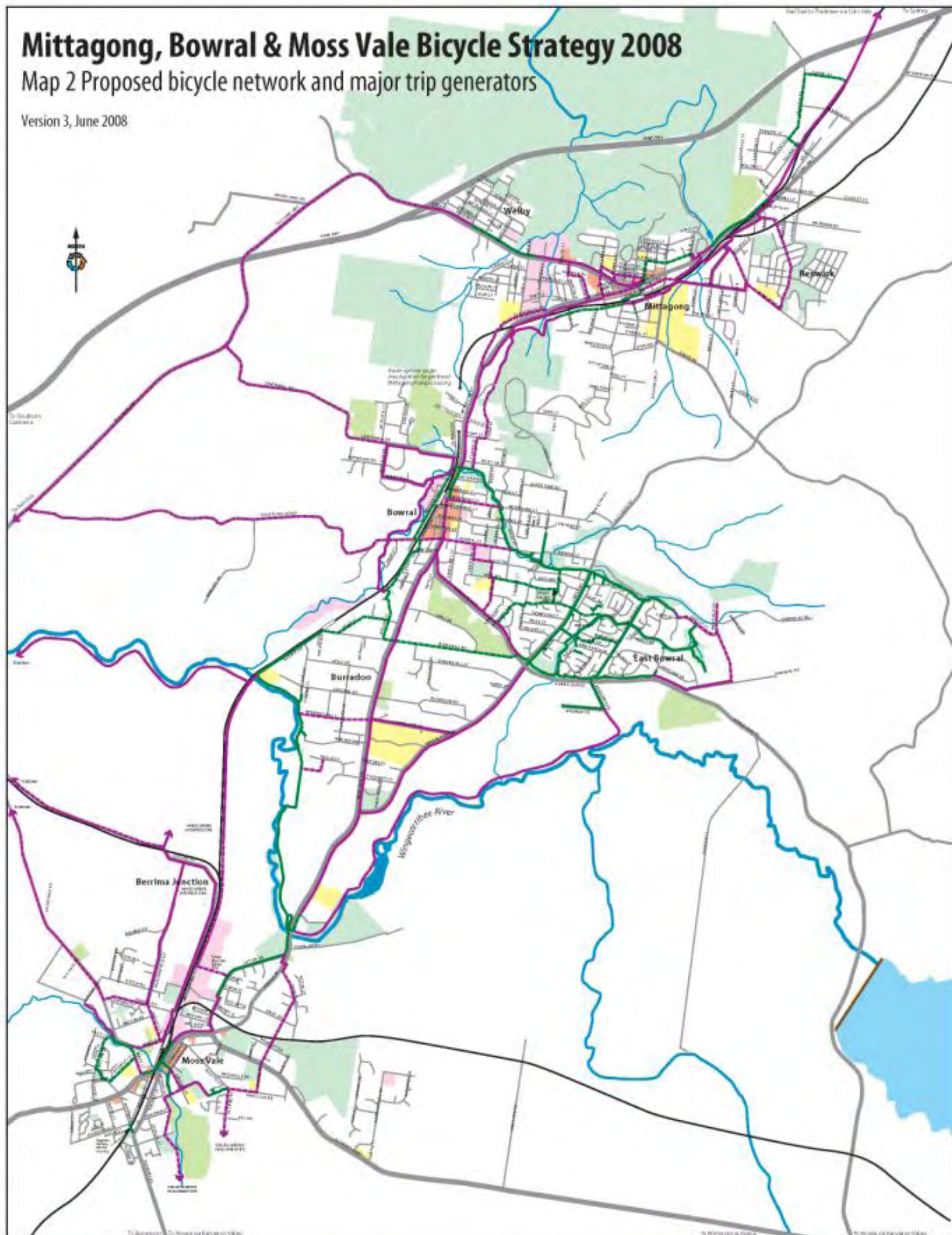




# Mittagong, Bowral & Moss Vale Bicycle Strategy 2008

## Map 2 Proposed bicycle network and major trip generators

Version 3, June 2008



### Legend

- Schools, colleges and universities
- Retail, cafes and entertainment
- Government, commercial, industrial
- Parks and privatised open space

- Roads and streets
- Route siting
- Path in park
- On-road lanes or path adj
- Off-road to road

### Existing bicycle routes

### Planned bicycle routes

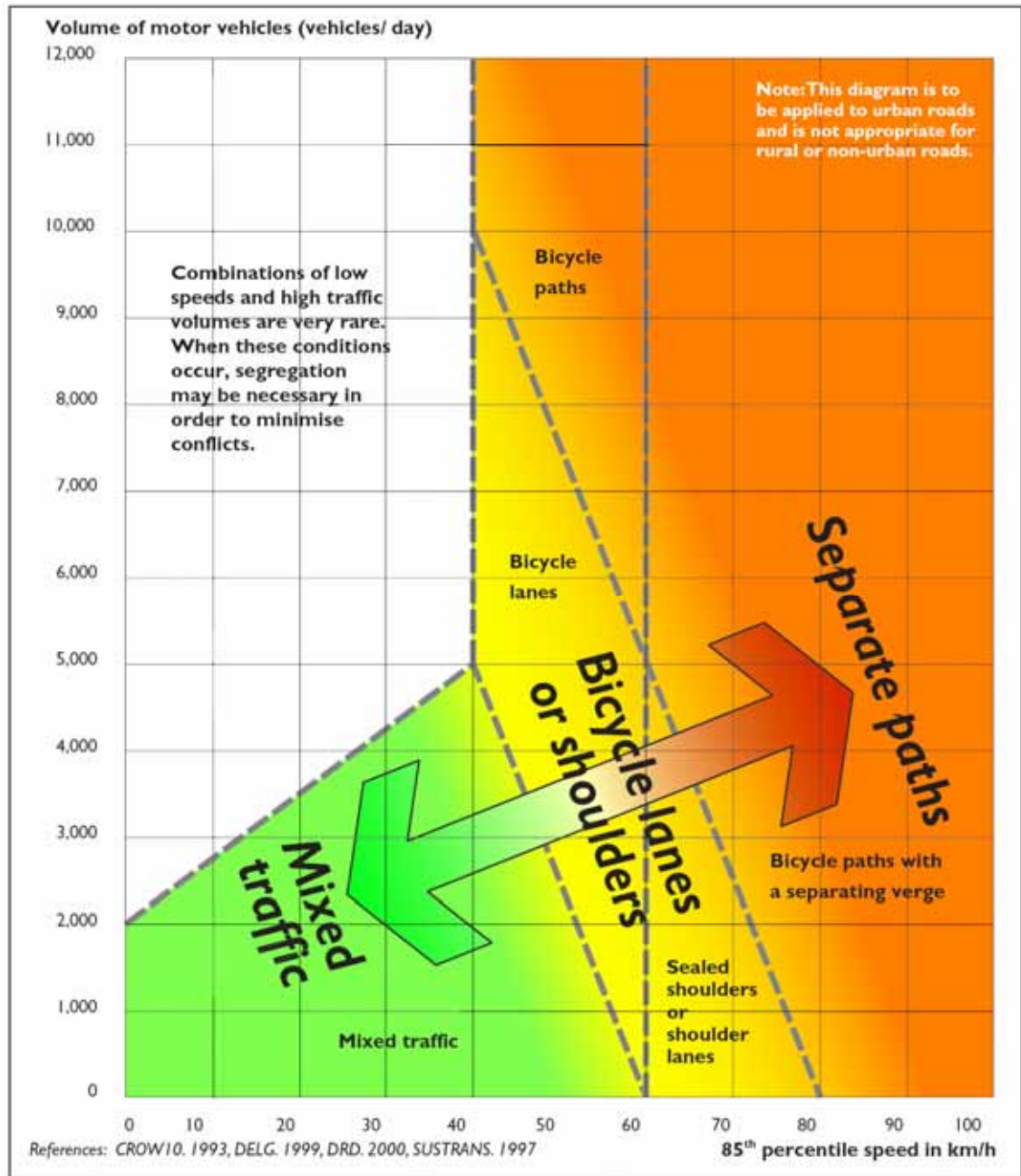
Scale (kilometres)



**Table 5.1 - Urban bicycle routes and their network function**

Parameter	Regional routes	Local routes	Bicycle friendly streets and neighbourhoods
Basic characteristics	High-quality, high-priority routes permitting quick unhindered travel between the major centres of the municipality and to key centres within the surrounding region	High quality routes connecting residential streets and trip generating locations to regional bicycle routes and providing circulation within the municipality.	Providing easy local access to local residences and trip destinations in a 'low stress' environment
Transport function	Movement primary, access secondary	Movement and access equal	Access primary, movement secondary
Priority	High	Medium	Low
Place connections	Regional centres and major transport nodes	Urban centres, employment, schools, entertainment, cultural, transport	Individual homes, buildings and open space
Spacing of facilities	500 – 800m	300 – 500m	Integrated with local street system
Choice of route	Choice of two routes.	Choice of two routes	Less than 250m to a local or regional route
Continuity of movement	High	Medium	Low
Service linkage to major transport nodes	High priority. Primary linkage may be via connecting local route	High priority	Linked though network
Operation	30 km/h or more.		
Dual on-road and off-road travel paths through intersections	20-30 km/h	Less than 20 km/h	
Target trip length	> 3km	0 – 3km	< 100m
User skill required	Low to high	Low to high	Low
Maintenance	Pavement maintenance similar to regional road standard	Pavement maintenance similar to local road standard	Depends on location and traffic load

**Figure 5.1 - Methods of Separation**



Source: NSW Bicycle Guidelines, RTA, 2003

## 5.2 Linking Mittagong, Bowral and Moss Vale

Linking the three towns of Mittagong, Bowral and Moss Vale will provide a strategic cycling corridor through the heart of the Wingecarribee Shire. This route will form one of the 'main roads' of the bicycle network by means of a continuous generally off-road facility. There is a need for with good crossing facilities at side streets.

Council has already made a strong commitment to the route, with a recent extension of the Bong Bong Track into Moss Vale along Suttor Road (**Figure 5.2**).

Within the town centres, on-road facilities may be appropriate as speeds are slower and shared paths are not suitable due to pedestrian movement patterns (**Figure 5.3**).

**Appendix F** details the proposed facilities for ***Linking Mittagong, Bowral and Moss Vale***. The following comments are offered for consideration:

- 🚲 The route generally consists of an off-road path on the eastern side of the main roads linking the three towns, including:
  - 1950m existing path of sufficient width, including the recently completed section along Suttor Road, Moss Vale, to be signed and marked for shared use;
  - 2650m of existing narrow path that needs to be widened to at least 2.0m and signed and marked for shared use;
  - 2000m of new shared path from Wingecarribee River to Eridge Park as part of current Council budget allocations for 2008/2009; and

**Figure 5.2 - Recently Completed Pathway, Suttor Road, Bong Bong**



- 8400m of new path (not currently budgeted), including a detour via Kangaloon Road and Eridge Park Road, which also serves as a Main Feeder Route from Bowral and Bong Bong to East Bowral.
- 🚲 The three town centres present difficult environments and each requires a different approach:
  - Approaches to Mittagong - mixed traffic on most local streets around the town centre to provide the required access; additional crossing facilities are required, possibly using traffic signals (the two main roads in the town centre present difficult cycling environments and no alternate facilities can be readily accommodated, although this would be desirable);
  - Bowral town centre - 450m bicycle shoulder lanes from Merrigang Street to Banyette Street;
  - Moss Vale town centre - 800m shared path on the western side of the Highway from Valetta Street to Watie Street, including significant improvements to crossing facilities at side streets, driveways and across the Highway at strategic locations; and
  - The works in the Bowral and Moss Vale town centres may be eligible for (joint) RTA funding through the 40km/h High Pedestrian Activity Area program (refer **Section 3.5**).

**Figure 5.3 - Potential for 40km/h High Pedestrian Activity Areas within the Town Centres (Argyle Street, Moss Vale)**





- 🚲 The proposal includes three alternate routes:
  - Mount Gibraltar Reserve - a mixture of mixed traffic along quiet residential streets and new path along the existing fire trail (Priority 3);
  - Old Bowral Road - bicycle shoulder lanes (Priority 3); and
  - Detour via Kangaloon Road and Eridge Park Road – short term shared path alternative to avoid the steep ascent and cutting south of Burradoo Road (Priority 1).
- 🚲 A fourth alternative includes the second railway tunnel between Mittagong and Bowral (**Figure 5.4**). The tunnel is currently in use for mushroom farming, with a long term lease. The merits of the various alternative route options will need to be researched in detail once the strategy has been adopted.
- 🚲 Other major works elements include:
  - Replacement of the two roundabouts in the Bowral town centre by traffic signals - pedestrians and roundabouts don't mix;
  - Widening of the bridge of Wingecarribee River at Bong Bong; and
  - Improvements for pedestrians and bicycles at the railway level crossing at Suttor Road.

**Figure 5.4 - Twin Railway Tunnels north of Bowral**



*Photo by Helmut Rohde, November 2005*

### 5.3 Main Feeder Routes

In network terms, the **Main Feeder Routes** supplement the link between the three towns to complete 'main roads' network of the bicycle network. Again, there generally is a need for off-road facilities due to traffic speeds, composition and volumes.

**Figures 5.5 and 5.6** show the existing pathway to East Bowral and the recently completed crossing facility on the Old Hume Highway at Mittagong.

**Appendix F** details the proposed facilities on the **Main Feeder Routes**. The following comments are offered for consideration:

- 🚲 There is a total of 9 links or groups of links, including:
  - Renwick Links,
  - Welby Link,
  - Burradoo Road,
  - Bong Bong to East Bowral River Trail,
  - Throsby Park Trail,
  - Berrima River Trail,
  - Whites Creek Trail,
  - Chelsea Gardens Link,
  - Moss Vale Enterprise Zone Loop;

**Figure 5.5 - Existing Pathway at East Bowral**



- 🚲 This involves a total of 29.5km of new pathway, 3.0km of which is included in current Council budget allocations (the Welby Link and part of the Throsby Park Trail);
- 🚲 The section along Ferguson Crescent (1.5km) has been allocated Priority 1 status due to its current usage levels;
- 🚲 The remaining links have been allocated Priority 2 or 3 status and have been included for strategic planning purposes. Early opportunities for implementation may arise such as through regular road and footpath maintenance and upgrading programs, developer contributions, grant programs, etc;
- 🚲 There is a further 6.0km of on-road facilities, generally as mixed traffic to guide cyclists through quiet back streets; and
- 🚲 The Moss Vale Enterprise Zone works include a new off-road path forming a loop on Lackey Road, Collins Road, Douglas Road, Beaconsfield Road, Garrett Street and Innes Road, along with an upgrade to the footpath on Lackey Road between Parkes Road and Argyle Street adjacent to the railway station.

**Figure 5.6 - Recently Completed Crossing Facility on the Old Hume Highway, Mittagong**





## **5.4 Local Access Connections**

**Local Access Connections** link the main link between the three towns and the main feeder routes with key places of interest such as the schools, pools, playing fields, main shopping areas and main employment areas.

They are normal streets and roads which have had minor engineering improvements made to them to enable bicycle riders to get to trip destinations more easily and with less stress than on the existing road network.

Local routes connect local streets to regional routes and extend the network 'web' further out into the municipality.

A bicycle route passing through a local street is beneficial to residents because of the humanising influence and greater level of citizen supervision from people on bicycles as opposed to noisy polluting motor vehicle through traffic.

Bicycle and pedestrian links between cul-de-sacs provide a competitive advantage and encourage travel on foot and by bike (**Figure 5.7 and 5.8**).

**Figure 5.7 - Existing Link between Cul-de-Sacs at East Bowral**



**Appendix F** details the proposed facilities on the **Local Access Connections**. The following comments are offered for consideration:

- 🚲 The proposed works mainly consist of mixed traffic facilities with signs and markings at intersections only;
- 🚲 In addition to a 2.9km long section of new pathway in Bowral (west) as part of a current development application (Priority 3), there are a number of other short sections of new off-road pathway which have been added, including:
  - Southey Street, Mittagong (extension of existing path),
  - Stanley Park, link from near existing cycleway bridge to Bowral Road,
  - Albert Street road reserve, link from Shepherd Street to Bowral Road and then to the existing path with a bridge over the rivulet to Farmborough Close,
  - Philip Street to the Bong Bong Track along the Wingecarribee River (included in current Council budget allocations, Priority 1),
  - Werrington Road to the Bong Bong Track along the Wingecarribee River,
  - Charlotte Street to Eridge Park Road adjacent to Chevalier College Catholic School and the playing fields (off-road due to busy on-road area),
  - Extension of the East Bowral pathway network further east along Kangaloon Road and Mansfield Road,
  - Argyle Street between Suttor Road and Church Road, Moss Vale,
  - Kirkham Street and Narellan Road, Moss Vale (behind the oval),
  - Crossing of railway line at Parkes Road (currently closed for safety but a candidate for investigation of suitability for signalised pedestrian crossing),
- 🚲 Local links to Bike Ed facility in Stephens Park have been provided which would predominantly involve signage together with on-road facilities including along the following roads:
  - Hansen Street,
  - Park Road,
  - Derby Street; and
- 🚲 Unless otherwise noted, all works have been allocated Priority 3 and have been included for strategic planning purposes. Early opportunities for implementation may arise such as through regular road and footpath maintenance and upgrading programs, developer contributions, grant programs, etc.

**Figure 5.8 - Potential Link between Communities across the railway at  
Young Street, Moss Vale**



## 5.5 Urban Recreational Routes

The proposals for urban recreational routes centre on improvements to and extensions of the Bong Bong track, including:

- 🚲 Improved signs and markings of the existing on-road section along Kirkham Road, Bowral Street, Station Street, Funston Street, Railway Parade, Nerang Street, Yean Street and Burradoo Road;
- 🚲 Long term provision of an off-road path west of the railway, linking the existing path end points at the pool and Nerang Street. Note that Brickworks have been conditioned to construct a section of the Oxleys Hill Road and Burradoo path; and
- 🚲 New and improved crossing facilities at strategic locations.

**Appendix F** details the proposed facilities on the ***Urban Recreational Routes***.

**Figure 5.9 - Bong Bong Track at Burradoo**





## **5.6 Regional Links and Tourism Opportunities**

Although the focus of this report is on the development of the bicycle network in Mittagong, Bowral and Moss Vale, the stakeholder workshop indicated a strong interest in regional cycling, both for tourism and general recreation. As a starting point, two key opportunities have been identified in close proximity to the three towns, including:

- 🚲 The Berrima Double 8 Loop; and
- 🚲 Mittagong to Picton Rail Trail (to LGA boundary).

These opportunities are summarised below, with further details shown in **Appendix F**.

### **Berrima Double 8 Loop**

This route follows the Old Hume Highway, Berrima Road, Douglas Road, Oxley Hill Road, Centennial Road and along the railway corridor between Collins Road, Moss Vale to the Bong Bong Track at the Wingecarribee River. New sections along this route are located predominantly on rural roads and would require works such as shoulder sealing and road resurfacing to upgrade this route to an acceptable condition. Once established, parts of this route could operate as closed circuits ideal for racing and training.

### **Mittagong to Picton Rail Trail**

This route includes a new path from Swan Street, Willow Vale to Government Road, Braemar and then along the railway corridor to Colo Vale, Hill Top and Balmoral Village and beyond the LGA boundary to Picton.

The development of the Mittagong to Picton Rail Trail provides a strategic tourism and recreational opportunity for the whole region and requires specific attention.

Similar trails in Victoria and Western Australia have been very successful and draw large numbers of people into all the surrounding towns, particularly during special horse riding, bicycle riding and walking events as well as in small quantities throughout the year.

It is understood that Tourism NSW is currently considering developing a rail trail strategy.

The Rail Trails Australia web site provides good resources for the development of the trail:

- 🚲 [www.railtrails.org.au](http://www.railtrails.org.au)

A preliminary analysis of the concept has been prepared by the Australian Cycling Sector as part of its HEAT Healthy and Active Transport proposal for the 2007 Federal Election campaign. **Appendix G** provides more detail.



It is understood that the NSW Rail Transport Museum has a long term lease of the rail corridor between Picton and Braemar Bridge. The rail line is owned by the Rail Infrastructure Corporation with the lease managed by ARTC. The lessee and lessor require that the corridor not be alienated from use for railway purposes. The NSW Rail Transport museum plans to restore the line to use heritage trains operated by the museum between Buxton and Colo Vale.

While on the surface the plans of the Railway Museum appear to be at odds with use for cycling and walking, these user groups are naturally complementary.

It is unlikely that a heritage railway will provide daily services. Cyclists and walkers could use the train during periods of operation, while they can travel on their own steam on other days. Clearly a good tourism management program is required in terms of marketing, mapping/brochures and in-field signs, markings and signalling.

Operationally, two cross sections could be considered:

- 🚲 wide cross section - separate parallel tracks for trains and walkers/cyclists (**Figure 5.10**); or
- 🚲 narrow cross section in cuttings and tunnels and on bridges - dual surface with a suitable in-lay between and beside the tracks for access by walkers/cyclist while keeping the tracks accessible for trains (**Figure 5.11**).

A dual use development program for shared use by trains and walkers/cyclists could attract significant interest from a number of sectors, with “cocktail funding” from various government agencies, such as Tourism NSW, RTA, Planning NSW, Tourism Australia and possibly the Federal Government’s recent “Infrastructure Australia” initiative ([www.infrastructure.gov.au/departement/infrastructureaustralia](http://www.infrastructure.gov.au/departement/infrastructureaustralia)).

**Figure 5.10 - Mittagong to Picton Rail Trail - Parallel Tracks at Braemar Road, Braemar**



**Figure 5.11 - Mittagong to Picton Rail Trail - Existing Motorway Underpass North of Braemar**



## 5.7 Route Development Summary

**Table 5.2** provides an overview of the Priority 1 items for construction during the 10 year plan period from 2008 to 2018. Details are discussed earlier in this section with the data being provided in **Appendix F**.

The following comments are offered for consideration

- 🚲 **Total cost of the Priority 1 works is \$8.2 Million**, which includes:
  - \$0.9 Million for currently budgeted works between 2008-2010, excluding the recently completed Suttor Road pathway,
  - \$6.6 Million for new and improved pathways and related facilities to link the three towns (17.6km in total), noting that in the 10 year plan period the path detours via Kangaloon Road and Eridge Park Road to avoid the steep ascent and the cutting,
  - \$0.6 Million for a new pathway along Ferguson Crescent and Inkerman Street, which currently carry significant pedestrian volumes,
  - \$33,000 for improvements to the on-road sections of the Bong Bong Track from Burradoo Road to the crossing of Bowral Road at Mittagong Creek,
  - \$85,000 for improved access to the Stephens Park Bike Ed facility;
- 🚲 Assuming 50-50 shared funding by Council, these works would require a Council budget allocation of \$410,000 per annum;
- 🚲 This level of budget allocation appears to be in line with Council's current program, which includes for example \$495,000 for the extension of the Bong Bong Track from the River to Eridge Park in 2008/2009, which is just below the three year average (**Table 5.3**). It is noted, however, that most of Council's funding allocations are available through Section 94 contributions rather than its own resources;
- 🚲 Priority 2 and Priority 3 items can be funded in the longer term. They have been included in **Appendix F** for strategic planning purposes. Early opportunities for implementation are likely to arise through a range of programs such as regular road and footpath maintenance and upgrading programs, formal planning instruments, grant applications, etc;
- 🚲 The Mittagong to Picton Rail Trail is a longer term opportunity, but deserves specific attention through tourism development programs with Tourism NSW. The Australian Cycling Sector HEAT proposal (**Appendix G**) details further opportunities for collaboration;



- 🚲 The cost estimates are indicative and suitable only for strategic budgeting purposes. There may be opportunities for cost reduction by providing narrower paths (minimum 2.0m), reducing signs and markings or by using alternate path surfaces. Unsealed surfaces, such as decomposed granite are much cheaper to install, while still providing a smooth riding and walking surface. However, such surfaces have high annual maintenance costs and life-cycle costing appears to offer negative long-term benefit (refer Table 8.2, NSW Bicycle Guidelines, RTA 2003); and
- 🚲 Feedback received during community consultation indicated a desire for local and sustainable materials to be used in the construction of bicycle paths. This was suggested due to environmental concerns as well as the lower cost of installation allowing more routes to be established for the same cost. As noted above, natural unsealed surfaces are cheap to install but have high maintenance costs. Each new path location in the bicycle strategy will require an individual assessment taking these issues on board.

### ***Recommendations***

- 🚲 Investigate the provision of sufficient funds for the construction of the Priority 1 works over the plan period from 2008 and 2018, including regular Council budget allocation and external funding sources such as grants, joint funding programs, etc (refer **Section 8**);
- 🚲 Develop suitable management programs to recognise early implementation opportunities for Priority 2 and 3 works as they arise, eg through regular road and footpath maintenance and upgrading programs, formal planning instruments, etc;
- 🚲 Establish an inter-agency project team to explore and guide the development of the Mittagong to Picton rail trail; and
- 🚲 Expand the Bicycle Strategy to include the whole of the LGA, including other towns, links between towns and regional recreational, tourism and sporting routes and rides.

**Table 5.2 - Bicycle Strategy, Priority 1 Items 2008-2018**

Route	Section	Description	Total Distance (m)	Priority 1 Item Cost (2008-2018)
<b>Linking Mittagong, Bowral and Moss Vale</b>				
Mittagong - Bowral - Moss Vale Route	Mittagong - Murray Vale Track, extend from Hawkins Dr to Beatrice St	widen pathway, crossing at Beatrice St	400	\$117,820
	Mittagong - Murray Vale Track, Alfred St & Alice St	mixed traffic, intersection treatments, signs and markings	1,100	\$9,930
	Mittagong Town Centre	improved area-wide bicycle access with signalised bike / ped crossings at Old Hume Hwy and Bowral Rd	2,150	\$342,690
	Mittagong (Bessemer St) to Bowral (Merrigang St)	shared pathway, part existing, path widened, part new, new crossing facilities	4,100	\$1,358,210
	Bowral Town Centre	Bicycle shoulder lanes; replace roundabouts with signals at Merrigang St and Banyette St	450	\$614,140
	Bowral (Banyette St) to Moss Vale (Valletta St), via Kangaloon Rd and Eridge Park Rd	shared pathway, part existing, path widened, part new, new crossing facilities, Wingecarribee River Bridge widening	10,590	\$4,320,830
	Moss Vale Town Centre	Valletta St to Watie St - shared path west side, including localised widening, signs and markings at driveways, crossing facilities on side streets and of the Hwy	800	\$324,120
<b>Total - Linking Mittagong, Bowral and Moss Vale</b>			<b>19,590</b>	<b>\$7,087,740</b>
<b>Main Feeder Routes</b>				
Renwick Links	existing high use section along Ferguson Cr	new path	1,500	\$617,240
Welby Link	Old Hume Hwy	develop pathway in accordance with Council plans and budget (part existing, part new/improved)	2,500	\$200,000
Throsby Park Trail	Illawarra Hwy from Argyle St to James St	budgeted new path	500	\$124,000
<b>Total - Main Feeder Routes</b>			<b>4,500</b>	<b>\$941,240</b>
<b>Local Access Connections</b>				
Bowral	Stephens Park Bike Ed Facility	mixed traffic, intersection treatments, signs and markings	1,100	\$84,900
Burradoo	Philip St	pathway to River	300	\$82,500
<b>Total - Local Access Connections</b>			<b>1,400</b>	<b>\$167,400</b>
<b>Urban Recreational Routes</b>				
Bowral	Bong Bong Trail Improvements	Improved signs, markings and crossing facilities	3,800	\$33,100
<b>Total - Urban Recreation Routes</b>			<b>3,800</b>	<b>\$33,100</b>
<b>Total - Regional Links and Tourism Routes</b>			<b>-</b>	<b>\$-</b>
<b>GRAND TOTAL</b>			<b>29,290</b>	<b>\$8,229,480</b>



**Table 5.3 – Summary of Council Pathway Budget 2007/2008 to 2009/2010**

<b>Year Provided</b>	<b>Location</b>	<b>Proposed Works</b>	<b>S.94</b>	<b>Council</b>	<b>Total</b>
<i>Mittagong, Bowral and Moss Vale</i>					
2007/08	Moss Vale	Construct cycleway from Existing Bong Bong Track to CBD along Suttor Rd – 1,650m	\$410,000	\$-	\$410,000
2008/09	Burradoo	Phillip St pathway link to Bong Bong Track shared pathway	\$82,500	\$-	\$82,500
2008/09	Burradoo	Bong Bong Track cycleway link to Eridge Park (2 km)	\$495,000	\$-	\$495,000
2008/09	Mittagong	Stage 1 shared pathway link extension from Welby to CBD & Lake Alexandra	\$200,000	\$200,000	\$400,000
2009/10	Moss Vale	Recreation pathway along Illawarra Hwy to James St 500m	\$124,000	\$-	\$124,000
<b>Subtotal</b>			<b>\$1,311,500</b>	<b>\$200,000</b>	<b>\$1,511,500</b>
<i>Other Areas</i>					
2007/08	Bundanoon	Stage 1 shared pathway extension from Oval to railway pedestrian crossing and missing link along Ellsmore Rd – 500m	\$124,000	\$-	\$124,000
2007/08	Robertson	Pathway from Hampden Park to High St along Caalong St - 700m	\$129,000	\$-	\$129,000
2008/09	Berrima/ New Berrima	Gravel Pathway linking the villages (Previous plan funds - not in s.94 plan)	\$30,000	\$-	\$30,000
2009/10	Bundanoon	Stage 2 shared pathway linkages from Bundanoon Oval along Old Wingello Rd – 1.2km.	\$289,000	\$-	\$289,000
<b>Subtotal</b>			<b>\$572,000</b>	<b>\$-</b>	<b>\$572,000</b>
<b>GRAND TOTAL</b>			<b>\$1,883,500</b>	<b>\$200,000</b>	<b>\$2,083,500</b>

## **6 SUPPORTING INCREASED BICYCLE USE**

### **6.1 Support Program**

Supporting increased bicycle use is the “software” component of the bicycle strategy which helps bicycle riders to use the “hardware” - the bicycle network and the road system generally. The Bicycle Strategy proposes a five-point support program designed to assist both the community and visitors to the region to share in the benefits of cycling (and walking) in and around the Shire and ensure a thorough and coordinated implementation of the Strategy as a whole.

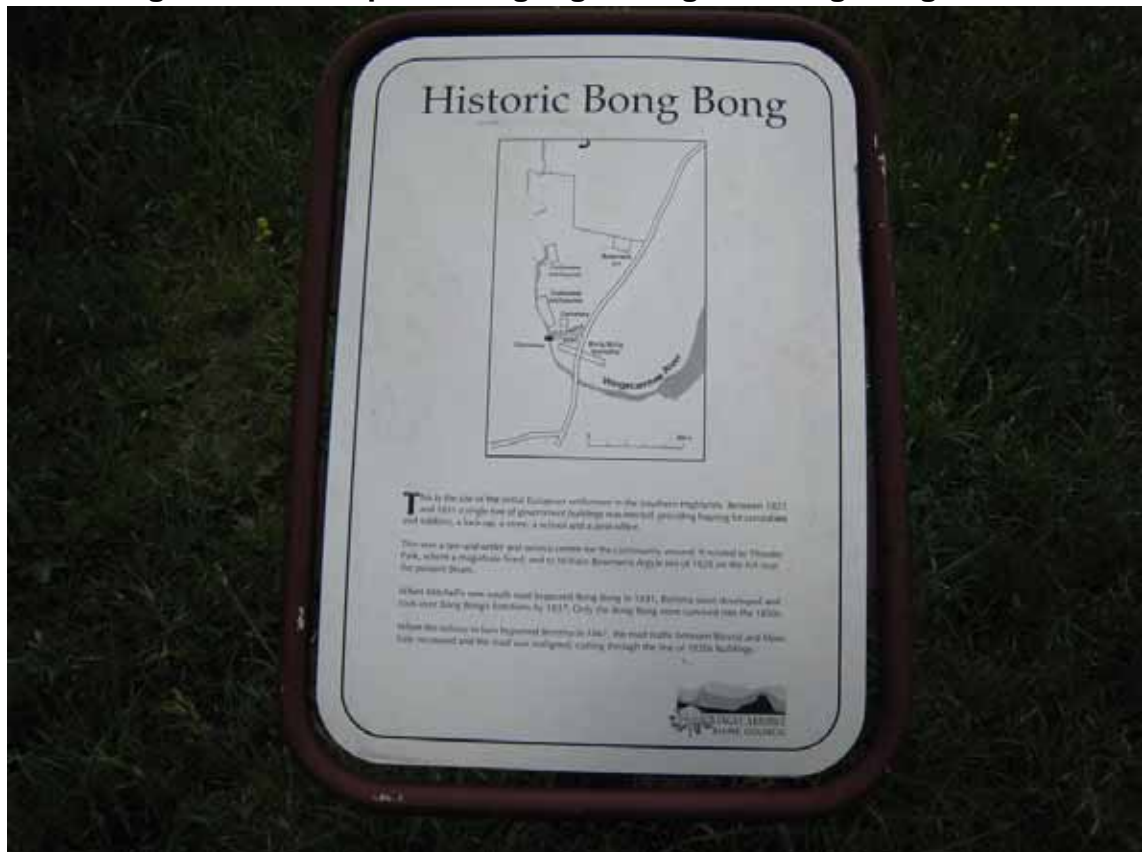
A number of these recommended programs and initiatives support and encourage cycling by seeking to improve the operating skills of new and existing bicycle riders of all ages. Other programs provide support in the form of practical information such as maps and guides while others encourage and celebrate cycling in the region with events and activities.

Some programs and initiatives will be directly undertaken by Council in partnership with external organisations and the community while others will be undertaken by third party organisations with encouragement from Council.

Further to the above, the community consultation process identified strong support for the consideration of the needs of other cyclist types, including mountain bikers, BMX riders, road cyclists and track cyclists. Council has noted that it prioritises facilities for these riders, such as BMX tracks and criterion tracks, based on the interest shown by the community along with public safety. Any proposals for establishment of new track facilities would need to be investigated further through consultation with interest groups.

**Table 6.1** provides a detailed overview of the recommended support program.

**Figure 6.1 - Interpretive Signage along the Bong Bong Track**



**Figure 6.2 - Ben Mikic Foundation Ride of Silence**



**Table 6.1 - Support Program**

Objective	Recommended program or initiative	Partners*
<b>1. To increase community and visitor information, education, awareness and basic skills</b>	<b>Wingecarribee Cycling Central</b> - An information-rich web based resource for cycling in the Southern Highlands, which aims to provide links to the Strategy's support programs and initiatives. A good opportunity exists through Council's tourism website, <a href="http://www.southern-highlands.com.au">www.southern-highlands.com.au</a> , which could also include downloadable cycling maps.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> </ul>
	<b>Bicycle Map</b> - showing recommended bicycle routes. Available in printed paper or downloadable from Council's website	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> </ul>
	<b>Ride to the shop</b> - maps showing recommended routes to get to the "Main Street" shops in Mittagong, Bowral and Moss Vale	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Chamber of Commerce</li> </ul>
	<b>Ride for fun</b> - a guide to outdoor recreational facilities (bike paths, parks, reserve etc) easily accessible by bike or walking. Including bicycle-friendly parks and places to ride.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Dept of Sport &amp; Rec</li> <li>o Health Promotion Services, South Western Sydney Area Health</li> </ul>
	<b>Getting fit in Wingecarribee</b> - a guide to fitness and recreational sites in Wingecarribee accessible by bicycle and walking. This would also refer to recommended road/training routes centred on the Southern Highlands.	<ul style="list-style-type: none"> <li>o Fitness industry companies</li> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o Local bicycle businesses</li> </ul>
	<b>Introduction to cycling - 'give it a go!'</b> - a series of 'experiences' for beginners to introduce them to the joys of cycling and to address their issues and concerns.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o private trainers</li> <li>o BNSW</li> <li>o racing clubs</li> </ul>
	<b>Ride a Bike</b> - promoting courses for children and adults to train and improve riding skills. Improvement of kids' bike education track in Hansen Street. Other opportunities include the Bong Bong Track and the East Bowral route.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o private trainers</li> <li>o TAFE/Education Dept</li> <li>o Health Promotion Services, South Western Sydney Area Health</li> </ul>
	<b>Signs and Art Work in parks</b> to promote safe cycling and the work by local artists	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Local artists</li> </ul>
	<b>Wingecarribee Heritage Trail</b> - a self guided bicycle tour of historic sites in and around Mittagong, Bowral and Moss Vale. Interpretive signage is a key element (Figure 6.1).	<ul style="list-style-type: none"> <li>o Wingecarribee Library</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o local historic society</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> </ul>
	<b>Driver education</b> - Promote to motorists the road rules and responsibilities for sharing the road with cyclists.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o RTA</li> <li>o Police</li> </ul>
<b>2. To encourage practical use of the bicycle as transport to school and work</b>	<b>Ride to Work</b> - based on the successful BV program which encourages workplaces to set up self help groups	<ul style="list-style-type: none"> <li>o BNSW</li> <li>o Bicycle Victoria</li> <li>o business community</li> <li>o unions</li> </ul>



**Bicycle Strategy**  
**For Mittagong, Bowral and Moss Vale**


Objective	Recommended program or initiative	Partners*
	<b>Ride to school - TAGs Transport Access Guides</b> (bicycle and walking map for schools) showing suggested routes and other sustainable transport information. Based on stakeholder feedback during the consultation process there appears to be strong interest from the local area health service. RTA's website provides valuable guidance for the development of TAGs: <ul style="list-style-type: none"> <li>o <a href="http://163.189.7.150/doingbusinesswithus/managingtraveldemand/transportaccessguides/index.html">http://163.189.7.150/doingbusinesswithus/managingtraveldemand/transportaccessguides/index.html</a></li> </ul>	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o private and public schools and P&amp;Cs</li> <li>o RTA and other State Govt depts</li> <li>o Health Promotion Services, South Western Sydney Area Health</li> </ul>
	<b>Ride to work - TAGs Transport Access Guides</b> for major employment areas showing suggested bike routes and other sustainable transport information.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o major corporations</li> <li>o chamber of commerce</li> <li>o Comm Dept of Workplace Rels</li> </ul>
	<b>Wingecarribee Bike Buddies</b> - a simple self help scheme to assist individuals to get going on their cycle to work	<ul style="list-style-type: none"> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o BNSW</li> </ul>
	<b>Wingecarribee Shire Council - leading by example.</b> Council to set up a program to encourage staff to ride to work and for short work trips. This has been successful in Sydney, Brisbane and many other places of work. Wingecarribee is ideally suited to this due to the very high proportion of local employment. Also, refer <b>Figure 3.1</b> for cycling and walking catchment areas.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o City of Sydney pilot program</li> <li>o BNSW</li> </ul>
	<b>Ride to School</b> - Getting kids back on bikes and parents cars off the streets. The NSW Government SPANS program provides a valuable resource for the local health services. The Premier's Council on Active Living may be able to assist: <ul style="list-style-type: none"> <li>o <a href="http://www.pcal.nsw.gov.au">www.pcal.nsw.gov.au</a></li> </ul>	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Education Dept</li> <li>o Health Promotion Services, South Western Sydney Area Health</li> <li>o Aust Govt agencies</li> </ul>
<b>3. To provide opportunities for the community to ride in Wingecarribee<sup>#</sup></b>	<b>Ride around Wingecarribee<sup>#</sup></b> - Small group rides in the area hosted by the Southern Highlands Bicycle User Group in conjunction with the Southern Highland Cycle Club and the Ben Mikic Foundation. The Ben Mikic Foundation's Ride of Silence is a good example ( <b>Figure 6.2</b> )	<ul style="list-style-type: none"> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> </ul>
	<b>Bike Sunday (Cyclovía)<sup>#</sup></b> - Wingecarribee's Annual bike day (possibly but not necessarily during bike week) to encourage the whole community to get out and enjoy their towns on a bike. The basic concept is a ride to breakfast and is promoted through cafes and restaurants. Could be rotated around the towns or in all towns simultaneously. Main Streets in each town could be car-free for a significant part of the day.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o business community</li> <li>o café and restaurant owners</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highland Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o RTA</li> </ul>
	<b>Bicycle sport events<sup>#</sup></b> in and through the Wingecarribee LGA	<ul style="list-style-type: none"> <li>o Cycling Australia</li> <li>o Southern Highlands Cycle Club</li> <li>o Sports promoters</li> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o NSW Institute of Sport</li> <li>o Racing clubs</li> </ul>

**Bicycle Strategy**  
**For Mittagong, Bowral and Moss Vale**

Objective	Recommended program or initiative	Partners*
<b>4. To improve and expand bicycle parking and supporting infrastructure</b>	Improve and expand the level and quality of <b>bicycle parking</b> in the public domain (refer <b>Section 5.3</b> )	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highland Cycle Club</li> <li>o Ben Mikic Foundation</li> </ul>
	Enable <b>wider community participation</b> in Council's bicycle rack installation program, eg: BIKEast provided detailed advice to the City of Sydney on bicycle rack locations based on extensive field-work; sponsor a bike rack.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highland Cycle Club</li> <li>o Ben Mikic Foundation</li> </ul>
	Require and encourage the private sector and government agencies to provide <b>bicycle parking and end-of-trip facilities</b> in and around their buildings	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o State Govt agencies</li> <li>o private sector (major employers)</li> </ul>
	Develop effective strategies to <b>reduce bicycle theft</b> including: <ul style="list-style-type: none"> <li>▪ Availability of secure bike parking facilities</li> <li>▪ The use of high security locking devices by bike riders</li> <li>▪ Effective stolen bike recovery system and policing</li> <li>▪ Lack of a ready market for stolen bikes.</li> </ul> If and when bicycle theft becomes an issue, a joint program is required with Council, the Bicycle User Group and the Police.	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o Police</li> </ul>
<b>5. Promote Bicycle Tourism, Sport and Events</b>	<b>Velodrome Upgrade</b> to Australian standard	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Cycle Club</li> <li>o Cycling Australia</li> <li>o NSW Institute of Sport</li> </ul>
	Encourage and support the development of <b>bicycle tourism and sporting facilities</b> , either as fully private initiatives or as PPP Public-Private Partnerships. Opportunities could include: <ul style="list-style-type: none"> <li>▪ BMX Track</li> <li>▪ Mountain Bike Range</li> <li>▪ On-road circuits for recreational and training cyclists</li> </ul>	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highlands Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o CANWIN</li> <li>o Cycling Australia</li> <li>o NSW Institute of Sport</li> <li>o Tourism NSW</li> <li>o Bicycle shops</li> <li>o Commercial operations (land-owners, motels, cycle tour operators, racing clubs, etc)</li> </ul>
<b>6. To integrate support for the Bicycle Strategy into all areas of Council operation</b>	<b>Ensure coordination and integration of cycling within Council's policies and operations</b> - GIS, internal policies, planning instruments (DCPs and LEPs), tourism strategies, staff training (refer <b>Section 5.4</b> )	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Southern Highlands Visitor Information Centre</li> </ul>
	<b>Maintenance, repair and roadworks</b> - Hazard reporting scheme. Regular maintenance, provision for cyclists in road works (refer <b>Section 5.5</b> )	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o RTA</li> </ul>

Objective	Recommended program or initiative	Partners*
	<b>Cycle Plan Working Party</b> - monthly or quarterly meetings to discuss and develop the bicycle infrastructure and support plan and bicycle tourism	<ul style="list-style-type: none"> <li>o Wingecarribee Council (Road Safety, Traffic, Social Planning)</li> <li>o Southern Highlands Visitor Information Centre</li> <li>o Southern Highlands Bicycle User Group</li> <li>o Southern Highland Cycle Club</li> <li>o Ben Mikic Foundation</li> <li>o CANWIN</li> <li>o Bicycle shops</li> <li>o Police</li> <li>o RTA</li> </ul>
	<b>Expand the Bicycle Strategy</b> to include other villages and rural areas	<ul style="list-style-type: none"> <li>o Wingecarribee Council</li> <li>o Cycle Plan Working Party</li> </ul>
<p>* <b>Appendix A</b> provides details of key stakeholders with an interest in assisting with the development of the Support Program</p> <p># All organised events require formal applications and approvals, such as Traffic Management Plans, Planning approvals and Local Traffic Committee approvals.</p>		

### **Recommendation**

-  Conduct a detailed review of the Support Program, set target dates and allocate suitable financial and staffing resources, noting that many items are low-cost management programs or “low hanging fruit”.

## **6.2 Improving and Expanding Bicycle Parking**

People who ride regularly or casually need more than a network of bicycle routes. They also need secure places and parking facilities to store their bicycles at either end of the trip. Where riders use their bikes to get to work over longer distances they also need end of trip facilities such as change rooms and showers.

Improving the availability of bicycle parking and end of trip facilities is a critical element in achieving the overall objectives of the Bicycle Strategy.

Council is responsible for parking within the public domain and within its buildings. It provides parking facilities for bicycle riders as a means of encouraging sustainable transport use and as a direct response to the unsustainable growth of on-street car parking demand.

Schools and business have a responsibility for providing parking for their staff, students and customers. Council has a role to promote cycling in the area and to assist them in developing positive parking programs.

**Table 6.2** lists proposed priority bicycle parking sites and their construction details. **Figure 6.3** provides an example of low cost bicycle parking retro-fitted to existing public infrastructure.

**Figure 6.3 - Bicycle Parking Fitted to Existing Infrastructure**



**Table 6.2 - Bicycle parking recommendations**

Type	Location	Comments
Priority area	"Main Street" shopping strip	Survey existing and make recommendations for upgrade of facilities
Spot locations in the public domain	Parks, pools, recreation centres, Council buildings	Survey existing and make recommendations for upgrade of facilities
Spot locations on private land	Large schools, large workplaces, recreational businesses such as private health facilities, gyms and pools	Encourage land owners to install racks and to encourage their students, employees and patrons to ride

### 6.3 Statutory Planning Requirements for Bicycle Facilities

The provision of bicycle facilities as part of new development approvals can be regulated by a number of Council statutory planning instruments, including:

- 🚲 Strategic Plan;
- 🚲 Local Environmental Plan;
- 🚲 Various Development Control Plans;
- 🚲 Section 94 Contributions Plan;
- 🚲 "Standard" consent conditions; and
- 🚲 Social Plan.

It is understood that some of these plans are currently under development, which provides important opportunities for inclusion of bicycle and pedestrian facilities, both for network development and for trip end facilities, both as part of public infrastructure and within private developments. Integration with public transport is also important.

Early discussions with Council's consultants and a preliminary review of the available draft documents indicate that these opportunities have not yet been realised and there is a need for a more detailed review.



In addition to the above Council planning instruments, the Planning department within Council should ensure that future developments make allowance for through ways at the end of cul-de-sacs and easement allowances for tracks.

The NSW Planning Guidelines for Walking and Cycling (DoP 2004) provides useful information to assist in this process. For bicycle parking, it advocates a methodology based on the number of people using buildings - employees, customers, guests, students etc. There are strong planning guidelines for pedestrian and cycling catchment mapping, which help determine urban densities and thus the viability of businesses and community facilities within walking and cycling range (**Figure 6.4**).

**Figure 6.4 - Planning NSW Pedestrian Catchment Mapping**



## **6.4 Integration with Council Operations/Processes**

It is a vitally important outcome of any formal planning process that projected bicycle infrastructure works and programs are integrated with other Council plans and procedures. Proper and detailed planning often results in cost savings to the Council and residents when works can be carried out as part of major new capital works construction, periodic maintenance or infrastructure upgrades.

To ensure the maximum integration of cycling provision across all operational departments of Wingecarribee Shire it is recommended that:

- 🚲 All bicycle routes and recommendations for physical infrastructure improvements be included in Council's geographic information system (GIS) to ensure all future works are coordinated with other street improvements, including road resealing and maintenance works. Council are to coordinate with the RTA to ensure that this also applies to works undertaken within the Shire by the RTA;

- 🚲 Key Council staff be progressively encouraged to attend the RTA training courses, “Designing for Bicycles and Pedestrians” for technical staff, and “Bicycles and Pedestrians for Managers” as part of their normal training requirement;
- 🚲 Review Council’s road and path based engineering standards to ensure that bicycle riders are always included and implicitly planned for. This is to ensure that roads and facilities which are potentially hazardous to bicycle riders are not inadvertently installed. This particularly applies to road-lane widths, intersection layouts, path clearances/widths etc;
- 🚲 Inclusion of provision for cycling in all future Council plans and developments;
- 🚲 Council review all its draft statutory planning instruments to include provision for cycling and walking as discussed in **Section 6.3**;
- 🚲 Develop internal process and procedures whereby all Council departments can coordinate and support the development and delivery of their separate cycling programs and projects;
- 🚲 Continue and promote Council’s existing “Report-a-Hazard” scheme to ensure infrastructure defects are fixed promptly and efficiently in response to riders’ needs;
- 🚲 Implement a regular cycleway and footpath maintenance program to ensure that all facilities are kept in good repair;
- 🚲 Continue the Council program of removal of old-style drainage grates;
- 🚲 Develop a Council policy on provision for road works that includes cyclists regardless of the existence of marked bicycle routes (refer Section 10, NSW Bicycle Guidelines, RTA, 2003); and
- 🚲 Integrate cycle tourism into Wingecarribee Council’s Tourism Plan.

## **7 IMPLEMENTATION AND EVALUATION**

The implementation of the bicycle network will need to be closely coordinated with the implementation of the support sections of this strategy. This coordination is essential to ensure that mutually supporting programs are delivered in a timely manner with an adequate level of funding and community support.

A program to monitor implementation of the Bicycle Strategy is recommended. Such a program will feed back into the ongoing development of the Bicycle Strategy and ideally will permit improvements and cost savings. An investigation of bicycle strategy monitoring programs used elsewhere has determined that this process would be valuable and provide feedback for Council and the community. As good as monitoring programs may seem, they require effort, involvement and commitment from Council and the cycling community. Inevitably there are additional costs.

A number of international monitoring schemes were selected for evaluation. Common to all programs is the need to have a comprehensive scheme which will report on a range of issues covered by the Bicycle Strategy, such as:

- 🚲 Engineering works programmes;
- 🚲 Bicycle use;
- 🚲 Modal share;
- 🚲 Bicycle crashes;
- 🚲 User satisfaction levels;
- 🚲 Condition of bicycle facilities;
- 🚲 Network implementation; and
- 🚲 Level of service improvements (LTSANZ 2004).

Similarly a UK assessment process (ERCDT 2004) devised for local government recommends ten criteria for monitoring and assessment:

- 🚲 Local Transport Plan and Cycling Strategy;
- 🚲 Annual Progress Report;
- 🚲 Council Commitment;
- 🚲 Infrastructure;
- 🚲 Cyclist Training;
- 🚲 Marketing and Promotion;
- 🚲 Stakeholder Engagement;
- 🚲 Wider Engagement;
- 🚲 Planning for Cycling; and
- 🚲 Targets and Monitoring.

What many of these schemes have in common is that they have been designed as an evaluation methodology to fit the broadest range of situations, i.e. to monitor bicycle use in LGAs which often do not have a bicycle strategy in place.

In The Netherlands, where the development of networks and supporting programs is much more advanced, the national cycling organisation with substantial governmental support has developed its Cycle Balance scheme (Fietzersbond 2001) for providing an objective assessment of the physical network. The project involves riding a specially equipped bicycle fitted with sensors and recording equipment over the existing network and measuring the results.

***Recommendation***

- 🚲 The UK methodology mentioned above, Local Authority Assessment Progress Review 2004 – Guidelines and Matrices for Assessment (ERCDDT 2004) has the most relevance to the monitoring of the Bicycle Strategy implementation. It is recommended that this scheme be further assessed and modified to suit the Council's direct needs.



## **8 FUNDING OPPORTUNITIES**

The list below provides an overview of potential funding opportunities for both the physical infrastructure and the related social plan.

There are two websites that provide further detail:

🚲 <http://www.cyclingresourcecentre.org.au/7/Funding>

🚲 <http://www.cyclingpromotion.com.au/content/view/28/51/>

### ***Council***

- 🚲 Annual allocation for walking and cycling infrastructure; and
- 🚲 Section 94 contributions.

### ***RTA***

- 🚲 Regional Road Block Grants;
- 🚲 Pedestrian Access and Mobility Plan;
- 🚲 Black-spots and “black-areas”;
- 🚲 NSW Bike Week Funding;
- 🚲 Co-Funding Program for bicycle infrastructure; and
- 🚲 Bicycle User Support.

### ***Premiers Department***

- 🚲 Premiers Council on Active Living.

### ***Sport and Recreation***

- 🚲 Grants and financial assistance;
- 🚲 Fundraising; and
- 🚲 Sponsorship.

### ***NSW Health***

- 🚲 Various scholarships, grants, funding.

### ***DITRD LG***

- 🚲 AusLink Roads to Recovery Program;
- 🚲 AusLink Black Spot Program;
- 🚲 Strategic Regional Program;
- 🚲 Regional Partnerships;
- 🚲 Financial Assistance Grants;
- 🚲 Infrastructure Australia fund ([www.infrastructure.gov.au/departments/infrastructureaustralia](http://www.infrastructure.gov.au/departments/infrastructureaustralia)); and
- 🚲 Sustainable Cities.

### ***Environment & Water Resources***

- 🚲 Many new programs being developed.

### ***IPWEA***

- 🚲 Road Safety Strategy (with MAA/RTA).

***Business and Clubs***

- 🚲 Advertising (ped bridges, bus shelters);
- 🚲 Clubs NSW - CDSE funding ([www.clubsnsw.com.au/AM/ContentManagerNet/HTMLDisplay.aspx?ContentID=11935&Section=Community\\_Support](http://www.clubsnsw.com.au/AM/ContentManagerNet/HTMLDisplay.aspx?ContentID=11935&Section=Community_Support)); and
- 🚲 Developers.

***Cycling Promotion Fund***

- 🚲 Innovative projects to promote and encourage cycling.

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## APPENDIX A - STAKEHOLDER CONTACT DETAILS

# Wingecarribee Bicycle Strategy

5606

Attending	Name	Organisation
<b>Consultants</b>		
Yes	Dick van den Dool	Jamieson Foley
yes	Warren Salomon	Sustainable Transport Consultants
<b>Wingecarribee Shire Council</b>		
	Councillor Jim Clark	Wingecarribee Shire Council
	Councillor Nick Campbell-Jones	
Yes	Michael Brearley	Director Technical Services
No	Scott Lee	Director Environment and Planning
Yes	Mark Roebuck	Roads and Traffic Manager
Yes	Frank Perger	Traffic Engineer
Yes	Charmaine Cooper	Road Safety Officer
No	Dominic Lucas	Design and Projects Manager
Yes	Frank Iacono	Design Engineer
Yes	Peter Bowmer	Parks and Property Manager
No	Mark Pepping	Strategic Planning
Yes	Margo McClelland	Strategic Planning
Yes	Steve Rosa	Tourism Manager
Yes	Miles Lockhead	Resource Recovery Manager
<b>Government Agencies</b>		
No	Danny Bennedetti	Road Safety & Traffic Officer - RTA Sthn
Yes	Rob Reynolds	Road User Safety Manager, RTA Southern Region
No	Carolyn New (Cycling)	Health Promotion Services, South Western Sydney Area Health
Yes	Alison Dunshea (TAGs etc)	Health Promotion Services, South Western Sydney Area Health
Yes	Sgt Dave Black	Mittagong Highway Patrol, NSW Police
<b>Community and Stakeholders</b>		
No	Robin Murray	Southern Highlands News
Yes	Greg Searle	SHBUG (Southern Highlands Bicycle User Group)
No	Richard Vollebregt, President	Southern Highland Cycle Club
No	Peter Tomlinson, Club Commissaire	Southern Highland Cycle Club
Yes	Phil Herd, Chairperson	Ben Mikic Foundation for Young Cyclists
Yes	Michele O'Byrne, Secretary	Ben Mikic Foundation for Young Cyclists
No	Schymitzek	Ben Mikic Foundation for Young Cyclists
Yes	Lynne Vaughan, Director	Ben Mikic Foundation, Outdoor Education Group
Yes	David Browning	CANWIN Climate Action Now Wingecarribee
Yes	Judy Nash	Bong Bong Cycles
Yes	Huw Kingston	Wild Horizons
No	Rod McGee	McGee's Cycling Store
No		Legend Cycles
No		Moss Vale Sports and Toys
Yes	Karen Wilson	Ye Olde Bicycle Shoppe
Yes	Geoff Duxfield	Southern Highland Cycle Club
Yes	Stuart May	Southern Highland Cycle Club
	Roger Bloor	Bloor Plans
<b>24 Total People Attending, incl Council and Consultants</b>		

## APPENDIX B - STAKEHOLDER FEEDBACK

- B1 Workshop Notes**
- B2 Staff Response Summary**
- B3 Submission from Ben Mikic Foundation**
- B4 Event Details for Mountain Bike Marathon**

## **B1      WORKSHOP NOTES**

### **B1.1      Bicycle User Group**

- 🚲 All towns
- 🚲 All regional areas
- 🚲 Four user groups:
  - roadriders
  - Families/recreation
  - Velodrome
  - MTB

### **B1.2      Ben Mikic Foundation**

- 🚲 All schools contacts
- 🚲 Safety to schools
- 🚲 Mountain biking
- 🚲 Silent Ride
  - Remembrance
  - Share the road
- 🚲 Promote good driver and rider behaviour
- 🚲 Council Goal - "Most cycle friendly city"

### **B1.3      CANWIN**

- 🚲 Peak oil
- 🚲 Climate change
- 🚲 Bio-fuel, fossil fuel shortage
- 🚲 Health – next decade drop in life-expectancy
- 🚲 Connection all the way into the heart of town
- 🚲 Power assisted bikes

### **B1.4      Community participation**

- 🚲 Active aging
- 🚲 Cycling in seniors week
- 🚲 Southern Highlands Cycle Club
  - 170 members
  - Local riders
  - Coffee shops
  - Bike hire (4 now)

### **B1.5      Education**

- 🚲 Legal/regulatory framework
- 🚲 Lighting
- 🚲 Encourage
- 🚲 Teaching to ride

- 🚲 Continuity about the network/facilities: look, feels, including path widths and signage.

## **B1.6 Schools**

- 🚲 Part of general encouragement
- 🚲 Included in health, and encourages active living and healthy eating
- 🚲 Park bikes
- 🚲 Safe routes – Transport Action Guides
- 🚲 Neighbourhood information
- 🚲 Lighting and pathways
- 🚲 Adult roles include:
- 🚲 Policies and progress
- 🚲 Lots of activities such as ride to school/work, training

## **B1.7 Tourism**

- 🚲 Tourism strategy being developed separately by Council in Conjunction with Wild Horizons
- 🚲 Needs to tie in with infrastructure
- 🚲 Promote shire wide
- 🚲 VAUDE Highland Fling
  - MTB marathon
  - 1500 people
  - Major growth

## **B1.8 Population Aging**

- 🚲 Higher proportion are older
- 🚲 Overall effects strong
- 🚲 Chose cycling for transportation rather than recreation
- 🚲 Older drivers and road safety
- 🚲 Right infrastructure:
  - Wider
  - Safer
  - Off road on busy streets
  - Local streets – need networks
- 🚲 Conflicts on paths due to motorised wheelchairs and scooters
- 🚲 Social events
- 🚲 Bicycle parking and security
- 🚲 Pockets of transport poor
- 🚲 Neighbourhood issues

## **B1.9 Other issues**

- 🚲 Social change marketing



- 🚲 Mobile scooters and footpaths
- 🚲 Enforcement – parking fees
- 🚲 Encouragement
  - BUG rides
  - Kids want to come back
  - Events: ride 2 school/work
- 🚲 Health benefits - Green Prescriptions, CANWIN
- 🚲 More groups and schools
  - Bike bus
  - BUGs and clubs
  - Walking bus
  - Via bike shops
  - Council based working party

## **B2      STAFF RESPONSE SUMMARY**

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The old Great Southern Railway from Balmoral to Mittagong - where it is no longer used. The path is already laid and, aside from the blue metal and sleepers obstructing the path could be easily 'covered over' with concrete paving blocks held in place with wedges. The people from Balmoral to Mittagong would love to use/see it - as I'm fairly sure they would have thought of it as well and, with not too steep a grade through some wonderful rarely seen scenery, it would very definitely be used.

---

I would like to see a bike track from Mittagong through to Bowral. I guess it would have to run somewhere parallel with the railway line (to be a reasonable level for most users (especially us "oldies" who cant do hills too well...)) but it would be good to be able to cycle from Willow Vale through to Bowral eventually!!

---

With the huge increase in senior citizens moving into this area we will need wider better footpaths and those footpaths should be capable of carrying motorized wheelchairs along the routes to and from those retirement facilities.

---

A cycle path from Sutton Forest village to Moss Vale along the Illawarra Highway would be great. Good for tourists, nice flat grade, and on a well known cycling route for professional cyclists who congregate at the Sutton Forest Hotel as a stop off enroute. RTA may be interested too?

---

We really need to continue the path from the Bong Bong Common area right around to East Bowral. Council has previously secured some strips of land but it's all a bit fragmented and a long way from being realised.

---

This needs to be a policy of Council and will require a report on the issue. Council will want to appreciate the budget implications and need to rank the idea with other funding priorities. At Baulkham Hills Council we did increase the width of ALL new footpaths, but only to 1.5m.

Unfortunately council simply does not have the funds to make all paths 2.0m. It is also difficult to fit a 2m path in some locations with trees, services, ground slope considerations.

As part of the cycleplan we need to carefully assess which paths are "shared paths". The minimum width for a shared path is 2.0m and this will also allow us to apply for RTA part funding but again - the RTA have very limited funds. There should be opportunities to widen "1.25m pathway" to "2.0m shared paths" in certain locations. So where new paths are identified (eg in PAMPs) and there is also a need to accommodate cyclists then sure, make them 2.0m

These sort of requirements should also be included in DCP41 - Development Specifications.

---

We have had a bit of a look previously along the river heading east from Bong Bong Bridge to link to Eridge Park, but National Parks were not too receptive to the idea at the time. Alternatively, there is the road reserve on Moss Vale Rd which is a bit difficult until you get over the hill at the Briars where the reserve widens out.

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Eridge Park Road.

The local cycle club have a tendency to be out after dark, and instead of travelling in single file, they're often bunched up in a pack two and three abreast. This may be fine on a track or some other controlled environment, but a bit hazardous in traffic that approaches them at 70km/hr in darkness. To get them off, or at least to the edge of the road would be better for all.

Mittagong to Bowral - There is already a fire trail system that can be travelled from Mittagong to Bowral, and with a little work, it could be used by all cyclists (not just mountain bikers). Only draw back is there are some fairly steep pinches along the way. The tracks run from the western end of Railway Parade, Mittagong to Soma Ave, Bowral, which is a stones throw from the pool.

---

East Bowral to Moss Vale - There are some pockets of council land adjacent to the Wingecarribee river, behind Eridge Park Road, that could be joined up. However, there are probably a few landholders to deal with for the rest of the track. The first pocket of land is adjacent to Cecil Hoskins nature reserve, on the northern side of the river, with another about a km or two upstream.

---

Burradoo to Berrima - Another for the river, would be from the Oxley college end of the existing bike track, following the river to Berrima. I've had some dealings with the landholders down there treating willows along the river. On the southern side of the river there are only two different properties, then crown land which council manages, which leads into Berrima.

---

Willow Vale to Hilltop - Either on or along the old loop line. This would also take in Colo Vale. If you were really keen, it would be possible to go to Balmoral.

---

Berrima to Medway - Again along an old rail way line, this time the one that used to go out to the colliery.

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A very busy road for pedestrians, cyclists and joggers is Ferguson Crescent in Mittagong. People come from Mittagong and go along the WillowVale bike track, cross over the highway and go back to town along Ferguson Cres (from the Inkerman Road end), when they exit Ferguson Crescent they then continue along the existing path on the Highway past the Tourist centre. The Willow Vale people go the opposite way. Ferguson Crescent has a lot of space for a path on the highway side of the road. The only difficult part is the two railway bridges which can be a bit scary. This will be even busier when the new Renwick development goes ahead.

---

The proposed connection between the end of Railway Parade Mittagong and the south western side of the Rail Bridge on the way to Bowral, appears to snake a fair distance south into the bush, due I guess to the lay of the land at that point, it is a fair distance from civilisation, safety etc

Whilst acknowledging Bowral Rd Mittagong is very busy with traffic, could the existing partial track that follows the road from the Bowral Rd/Old Bowral Rd Intersection (where the new lights are just south west of Ireland's Caltex) to the rail bridge not be amended and utilised, with a barricaded off crossing over the bridge prior to joining again

I doubt very much (and your plan does not propose this) it would be a safe proposal to have the path follow Bowral Rd all the way over into Bowral due to the amount of traffic that really zoom up that road. As a regular traveller, it is extremely rare to see a motorist stick to 70kph once over that bridge and heading up the straight

I like the idea of the route taking you up behind those properties and into Bowral the safer way, although the return trip up the slopes of Clarke, Cliff and Soma is going to be a killer on the legs.....but that is why we ride, no pain, no gain

Do you think a rest stop on top of the hill beside the 'Welcome to Bowral' sign could be a possibility. It is about halfway, a flat area and there is space for a couple of seats and maybe even a water bubbler. There is an area there which at present is overgrown and just a sad mess, whilst also a sign exists welcoming all to Donald Bradman's Bowral. It is a bit of an oxymoron welcoming people to the Town, when it is a pretty unwelcoming sight with weeds and untidiness, even planting of a few native plants and bushes (less likely to be removed by the crazies, and capable of surviving without too much costly care) would raise the appeal and make it look like the locals actually care

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## **B3 SUBMISSION FROM BEN MIKIC FOUNDATION**

Working on the principle that if you don't shoot for gold, you finish up as an also ran, the Ben Mikic Foundation (BMF) [www.benmikicfoundation.org.au](http://www.benmikicfoundation.org.au) would like to make the following suggestions in regard to the future bike strategy. Firstly to establish an overarching goal which sets out to position Wingecaribbee Shire as 'The most friendly towards cyclists of any shire in NSW', and with this aspirational goal set in stone, take a leadership role in creating an environment in which a range of different user bike groups participate in a wide range of cycling activities, all underpinned by an ethic that has 'safety' as its watchword. And importantly to promote the principle that vehicle drivers and cyclists have a responsibility to respect other users and share the roads equally and safely.

The BMF also suggests that Bundanoon, Robertson and the outlying villages – Welby, Braemar and Hill Top need to be included in any bike plan for the shire.

Suggested user groups that need to be catered for:

- 🚲 Family cyclists and children who use the bike tracks
- 🚲 Road racing cyclists who race and train on roads in the shire
- 🚲 General cyclists (locals and tourists) who ride on the roads in the shire
- 🚲 Mountain bike riders who train and race on mountain tracks
- 🚲 General bikers (locals and tourists) who ride on the mountain tracks
- 🚲 Track cyclists who train and race at the Velodrome
- 🚲 BMX riders (a trial Olympic event)

In an ideal world all of these groups need to be catered for and if the shire is to become 'the friendly shire for cyclists', the needs of these different groups will need to be assessed, before strategies are considered for implementation. Some of these groups have common needs, although there are differences that need to be recognised.

This proposal is obviously a considerable expansion on the original brief outlined for the Bicycle Plan and Pathway Development Strategy, but if the suggested long term goal is accepted, strategies that set out to achieve this goal would or should produce a number of benefits. For example:

- 🚲 A safer cycling environment
- 🚲 A reduction in the number of accidents
- 🚲 Increased cycling activity amongst the 7 key user groups within the local population
- 🚲 Increased tourist and visitor cycling activity across the 7 key user groups



🚲 An increase in local business

And the image of Wingecarribee Shire would be enhanced when its reputation as 'the Shire most friendly to cyclists' became more widely known.

Without thinking too deeply about potential strategies that could be implemented to address the needs of the key user groups and to begin working towards the achievement of the suggested goal for the shire; as a start the BMF would like to request that consideration is given to the following actions:

- 🚲 As a priority establish a safe cycle track from Mittagong to Bowral
- 🚲 Identify black spots in the shire for cyclists in conjunction with the SHCC and take action to remedy
- 🚲 Display signs stating: law says cyclists can ride 2 abreast
- 🚲 Display signs stating law in regard to roundabouts
- 🚲 Resolve the issue of traffic flow at the Bessemer St/Bowral Rd crossing
- 🚲 Upgrade the Velodrome (to get kids off the roads and expand its usage by senior riders)
- 🚲 Expand areas for creating mountain bike tracks and work to make the Southern Highlands a mountain bike mecca (to get kids off the roads and cater for the different categories of mountain bikers)
- 🚲 Establish a site for a future BMX track in the Highlands (to get kids off the roads and interest young riders in alternative cycling activities)
- 🚲 Work with school principals to identify safe routes for kids to cycle to and from school (examining this issue alone will highlight the extent to which car usage, driver attitudes and driver behaviour dominate our culture and as a consequence it will highlight just how 'unfriendly' this culture, these attitudes and behaviours have become towards biking and cycling and even walking).
- 🚲 Put Picton/Mittagong cycle track along old rail line on Bike Plan agenda; and consider adding the Moss Vale – Goulburn track at a later date. (NSW is playing catch up with Victoria and SA and we are light years behind the Northern Hemisphere in terms of establishing 'safe' family friendly bike tracks).

## B4 EVENT DETAILS FOR MOUNTAIN BIKE MARATHON



**8 / 9 November 2008, Southern Highlands, NSW**

The VAUDE Highland Fling is a mountain bike marathon to challenge you all. It offers a scenic and challenging route through forests and farmland in the Southern Highlands of NSW. A mix of singletrack, forest tracks, dirt road and less than 2km of blacktop.

Do the Full Fling (approx 110km), the Half Fling (approx 55km), the relay Flinging Threesomes or take an even bigger challenge on the 100 Mile Fling!

The main race is on Sunday 9 November but there's plenty happening on Saturday 8 too, including the Bundanoon Dash, a fundraising 6km 'sprint' race (it's not compulsory!).

In 2008 we will also introduce the Casual Fling, a 16km ride for those feeling not up to the Half or Full Fling.



Source:  
<http://www.wildhorizons.com.au/highlandfling/index.html> (4/05/2008)

## APPENDIX C - PUBLIC EXHIBITION PERIOD FEEDBACK

# Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments

Item	Comment	GTA Response and Action
<b>Letter to Council</b>		
	The SHCC is growing rapidly, with over 200 members using public roads in the Southern Highlands NOW. Strong support given for the plan. The following points are added for priority planning:	
1	Construction of criterion track in Eridge Park	Report updated (Section 6.1). Criterion Track proposals need further investigation and consultation with interest groups.
2	Upgrade of velodrome track at Eridge Park	Included as Support Plan Objective 5.
3	Lighting for the velodrome	Included as Support Plan Objective 5.
4	Increased signage of routes, road rules and road marking	Noted
5	Safer verges including lane marking	Noted
6	Construction of BMX track	Report updated (Section 6.1). BMX track proposal needs further investigation and consultation with interest groups.
7	Bike parking facilities in all towns	Parking an initiative in Strategy - Section 6.2
8	Encouragement of school students	Ride to School initiatives in Support Program - Objective 2
9	Link between the river and Eridge Park Road near Hartzer Park Convent for those seeking a shorter cycle but would also love to see the path out past Bong Bong racecourse one day!	Bong Bong Bridge to Eridge Pk Rd being constructed in 08/09. The priority of the proposed path from bridge to near Eridge Park along river is to be reduced as it follows a parallel route to that being constructed. As such, no link would be considered unless the river route is established.
10	Link the trail from Burradoo Rd to the swimming centre at Oxley Drive by following the Mittagong Rivulet then create a circuit flowing through Old Bowral, East Bowral and out to the Wingecarribee River heading back past the convent to the Moss Vale Bridge.	Included. Urban recreational route Priority 3
11	Priority for Eridge Park Road cycleway linking Moss Vale Rd to East Bowral.	Noted. Listed as Priority 1
12	Short east/west link connecting Eridge Park to the riverside path	Bong Bong Bridge to Eridge Pk Rd being constructed in 08/09. The priority of the proposed path from bridge to near Eridge Park along river is to be reduced as it follows a parallel route to that being constructed. As such, no link would be considered unless the river route is established.
13	Opposed to Charlotte St, Burradoo being onroad as area is busy with bus interchange etc in school hrs	Agree. Map and report (Section 5.4) changed to show as an off-road facility.
14	Refuge suggested for Charlotte St crossing of Moss Vale Road, Burradoo	Included. Priority 3 Local Access
15	Stanley Park bikepath is inaccessible for 153/155 Bowral Street residents as a stormwater pip discharges in the middle of the park near the timber bridge across the Mittagong Rivulet. A small branch off from near the timber bridge o the corner of Stanley Park (100m) is requested. This would also serve to link the 2 preschools in the area to the bike trail.	Update report
16	Requests a link from Bowral swimming centre, under the rail line and up Centennial Road, to at least the Country Club	New section proposed on west side along river (Priority 3)
17	Bike parking facilities requested	Parking an initiative in Strategy - Section 6.2
18	Funding – Council should not bias its transport and road funding solely to motor vehicles... to treat bike paths as optional extras is short-sighted at a time when many people are looking at alternative forms of transport...	Noted
19	Open up the existing subway under the railway line at Lackey Rd to allow access into the industrial area	Council advised that the railway doesn't support reopening this. Not high enough and prone to inundation.
20	Support for Loop Line and join up to existing path at Willow Vale	Noted
21	...do not believe that every km needs to be of the high standard currently being installed. Smooth compacted gravel would be adequate in many places, cheaper and more environmentally sustainable. Upgrades to higher standards can come later.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
22	More secure bicycle racks	Parking an initiative in Strategy - Section 6.2
23	Crossing of railway line at end of Parks Rd, MV	Report updated (Section 5.4). Railway closed for safety. A candidate for a signalised pedestrian crossing. Demand to be investigated.
24	Shire wide strategy is needed.	Noted. Outside of scope in this instance.
25	The plan does not recognize the huge growth in cycling as a community activity in the Southern Villages around Bundanoon and does not address what could be done to support this activity. Bundanoon area needs a cycle plan with consultation of the community	Noted. Outside of scope in this instance.
26	The almost negligible mention of mountain bike and BMX riding in the strategy is a major deficiency.	Report updated (Section 6.1). BMX track proposal needs further investigation and consultation with interest groups.
27	We have reservations on an overarching vision to position WSC as the 'friendliest towards cyclists of any shire in NSW'... laudable but only worthwhile if it is much more than a slogan.	Report updated (Section 1). Vision proposal removed and replaced with text about link to Council's vision as a whole.
28	Interested in representation on planning group.	Noted
29	Support for plan, particularly the Rail Trail and tourism opportunities and safety improvements arising from it.	Noted
30	Suggest use of OLSH site at the bottom of Mount Road, Bowral for bike track use	Report updated (Section 5.5). DCP for OLSH site to be checked for cycle facility options and LUA applications checked for inclusion of cycleway. Note that Brickworks have been conditioned to construct section of the Oxleys Hill Rd and Burradoo path
31	Supports the Mittagong to Bowral link as top priority	Noted
32	Suggests selling off designated land and use the funds to build a shire wide bicycle track	Residents have voted against sale of land for funding of recreation facilities at 2008 local government election.
33	Suggest use of OLSH site for a track following the Mittagong Rivulet, linking it with existing bike tracks at Burradoo. This could also avoid cyclist/car conflict at the intersection of Centennial and Kirkham if path cut across the OLSH site and came out further up Centennial Road	Included in Bike Plan Priority 3 Urban recreational route
34	The plan reinforces the WSC motto – "making this Shire a better place in which to live".	Report updated (Section 1). Vision proposal removed and replaced with text about link to Council's vision as a whole.
35	Prefer off road shared paths and on minor routes a marked lane is needed.	Noted
36	Happy with 'rider dismount' option for narrow locations or squeeze points rather than the 'don't have a path at all' option.	Noted

# Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments

Item	Comment	GTA Response and Action
37	Support for Rail Trail concepts and suggests that Exeter to Bundanoon would be a good route. Moss Vale to Exeter could be along the Illawarra Highway and Exeter Road as terrain is fairly flat but needs a clean up of road side verges.	Noted. Outside of scope in this instance.
38	Not happy with concrete paths as it is a man made material which emits greenhouse gases related to climate change.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
39	Rammed earth trails should be considered, like Victorian networks, with maintenance an opportunity for volunteers to undertake. 'Adopt a Trail' is common in many countries.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board. Mountain bike facilities can be constructed differently.
40	Wet or swampy areas could have concrete paths.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
41	Strongly supports the linking of towns with as much off-road as possible. Also Rail Trail idea.	Noted
42	Extension of Bong Bong track from Cecil Hoskins Reserve is a lower priority.	Noted
43	Congratulations on a wonderful initiative. This is a wonderful opportunity to do something really worthwhile & long lasting for the area and has my strong support. Don't do it half-heartedly. Go for it!	Noted
44	Supports majority of initiatives with the Rail Trail concept to be moved up the list of priorities to eliminate the present unsafe conditions on Wilson Drive, Hill Top for cyclists.	Outside of scope. However, is covered in Villages PAMP
45	Fast track the Mittagong to Bowral route too.	Noted. Listed as Priority 1
46	The Bicycle Strategy has gained prominence at the same time as the Transition Shire project	Noted
47	Acknowledges the good work continued from the previous 1996 Wingecarribee Bicycle Plan.	Noted
48	The Mittagong to Bowral link, while remaining the highest priority, will remain one of the hardest objectives to meet both in engineering and fiscal terms.	Noted
49	A Bicycle Strategy Working Party is welcomed but unlikely given the WSC rationalisation of committees.	Noted
50	It is therefore essential that the strategy be a high priority for the new Council... staff need to actively promote and use it.	Noted
51	The implementation of this document is very important. The cycling potential in our Shire is considerable and should be promoted given the health and social benefits of cycling...	Noted
52	Important to create and promote safe cycling routes to schools	Ride to School initiatives in Support Program - Objective 2
53	Bike plan should include the entire Shire.	Noted. Outside of scope in this instance.
54	Dedicated cycle lanes and/or improved road shoulders are needed	Noted
55	Improve road shoulders when road resealing is done, e.g. links from Bundanoon and Moss Vale or Penrose.	Report updated (Section 6.4). Maintenance to take cyclist requirements into consideration for all works. Note that Council is due to send letter to RTA re: maintenance program so that Council can give feedback to reseal works.
56	Promote cycling routes in and around Bundanoon	Noted. General promotion initiatives included in Support program in report.
57	Support for Bicycle Committee and education campaign to promote the legitimate use of roads by cyclists	Support program initiatives
58	Support for use of OLSH site for a shared path to link Centennial Road, West Bowral	Report updated (Section 5.4). Shared path loop around OLSH - Change to Priority 3 (was Priority 1) Local access connection, includes off-road link adjacent to Kirkham Rd on east side of OLSH site
59	Suggest a bike track from the swimming pool into the OLSH site and along the Mittagong Rivulet as far west as it can go to link with Bong Bong Track	Included in Bike Plan Priority 3 Urban recreational route
60	A website with a specific heading of 'Cycle Routes' is needed.	Support program initiatives - Objective 1
61	The Bong Bong Track is poorly signposted for visitors to find. Side streets in Burradoo with entry to the track should be signposted.	Included Priority 1 Urban recreational route
62	When you exit Burradoo Dr, near the Old Sth Rd/Kangaloon Rd roundabout there is no ramp on the other side of the road. To enter the new Kangaloon Rd path (narrower than the RTA minimum) one has to dismount or cycle over rutted rough ground to cross near the roundabout. A seamless link with appropriate refuges is needed.	Included. Urban recreational route Priority 1
63	Appreciate the Bong Bong Track and hope that a similar path will be built along Argyle Street, Moss Vale	Included. Moss Vale Town Centre Linking towns Priority 1
64	Council supported a Greenhouse Gas Reduction Strategy in 2003. Within the strategy one identified action was the encouragement of use of alternative modes of transport. This comprehensive strategy proposed most definitely supports this action.	Noted
65	I would ask that Council make available within 12 months, the funding for the development of a whole of shire Bicycle Strategy that can sit above the Mittagong, Bowral and Moss Vale Strategy.	Noted
66	The vision presented by the Ben Mikic Foundation, whilst laudable, is only worthwhile if Council adopts it, believes in it and fully funds it.	Noted
67	A huge proportion of cyclists are mountain bikers and I do not believe the Strategy addresses the needs of this group. There is nothing in the strategy that talks about Council actively developing trail networks on their land suitable for recreational mountain biking. Or of Council supporting existing networks on land under other tenures such as the trail network in Wingello State Forest.	Report updated (Section 6.1). Council to consider mountain bike facilities in consultation with interest groups.
68	I fully support the strategy objective of increasing cycling as a mode of transport in and between the 3 largest towns of the Shire.	Noted
69	A full strategy should look at all the options for recreational/tourism across the shire and decide on a coordinated approach to developing them.	Noted. Outside of scope in this instance.
70	The Support Programme needs to be prioritised and fully costed rather than 'remain a tempting lolly bag of thoughts'.	Recommendation already included to cost and allocate staff to implementing the Support Program



# Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments

Item	Comment	GTA Response and Action
71	If the OLSH site at Centennial Road, Bowral is reinstated as recreational land for the community then extending the bike path adjacent to the Riparia corridor of the Wingecarribee Rivulet should be considered.	Included in Bike Plan Priority 3 Urban recreational route
72	I would suggest a cycleway running between holly Road and Burradoo Road using the 'unformed' Ranleigh Road, running north from Holly Road... a track is existing now and used for walking and cycling by locals.	Low volume and therefore low priority.
73	I agree that establishing links to the main towns and destinations is a priority.	Noted
74	I think a link is missing from Suttor Road to Berrima (linking Suttor Rd to Lackey Rd)	Report (Section 5.3) and plans updated. Moss Vale bypass to facilitate this link.
75	Having looked at the planned bike routes I have o say they would be some of the least cost-effective expenditures imaginable in these cash-strapped days... These tracks would benefit a tiny proportion of the population and even a small number, along fields and away from traffic, should even be considered.	Noted
76	Residents of Elizabeth St, Phillip St, St James Close, Westminster Place and Bedford Place would benefit from an access to the Bong Bong Track.	Phillip St link included in proposed plan
77	Strongly support the proposal to develop a network of bike paths joining the 3 main towns.	Noted
78	The Transition Shire Wingecarribee initiative of CANWIN members is looking into ways to reduce energy consumption... with a network of bike paths and good public transport being essential components.	Noted
79	It is important to enable villages to connect and consider the environmental impact of materials used in the bike paths, e.g. concrete is highly unsustainable. We encourage you to research and select these materials, including newly developed substances, that provide a solid path but with minimal impact in production, use and disposal.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
80	In view of the urgent need for this network of safe routes I would suggest that the standard could be more variable so that at least the routes can be established. This may mean spending money on bridges over culverts and drains and leaving the track as a pad for the present in many places.	Report updated (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
81	It may be worthwhile checking into the Travelling Stock Routes to help with connections and off road linkages.	Noted
82	It's important to have numerous central bicycle parking spaces.	Parking an initiative in Strategy - Section 6.2
83	Submitted material previously about Missoula, Montana USA as an example of a similar bicycle network.	Noted
84	The Planning section should ensure that future developments have through ways at the end of the cul de sacs and easement allowances for tracks. This should apply to Sepp 5 seniors places too.	Report updated (Section 6.3).
85	It would be practical to negotiate use of the railway service tracks for bicycle routes as they are direct and usually a good gradient and would save some duplication.	Noted
86	It has been a source of frustration that we have not had a safe route to get from Bowral to Mittagong. The path over the Gib is a winner and no.1 priority.	Noted
87	Linking the 3 townships via a safe dedicated bike path is the next priority.	Noted. Priority 1 is to connect the 3 townships via majority off-road facilities
88	Impressed with paths away from roads, e.g. the Berrima route (fantastic) and the bike route from East Bowral to the Bong Bong Track.	Noted
89	Please provide a short link between the proposed East Bowral/River route and Eridge Park Road, especially if the leisure centre goes ahead at this site	Bong Bong Bridge to Eridge Pk Rd being constructed in 08/09. The priority of the proposed path from bridge to near Eridge Park along river is to be reduced as it follows a parallel route to that being constructed. As such, no link would be considered unless the river route is established.
90	An extensive network of bike paths will attract visitors who want to make a day or two of it and cycle around the area visiting shops etc.	Noted
91	Having a 'critical mass' of tracks is important in getting people out on their bikes - i.e. the more tracks there are the more people will recognise the attractiveness of this option.	Noted
92	Council should concentrate on providing for and encouraging LOCAL and frequent uses of bikes rather than REGIONAL such as inter-urban and essentially recreational users.	Noted
93	Attention should be given to ways in which public transport can be adapted to carry bikes and providing secure bike racks at public transport interchanges.	Parking at public transport interchanges part of Support Program
94	In Bowral, rather than directing school kids onto bike ways that use lightly trafficked streets to get them between schools, CBD, and homes on the east side of town, the routes proposed would take them down busy main roads. Alternatively it would be possible to identify and mark with paint, quiet on-road routes in Bowral e.g. between Bowral High and the CBD.	Noted
95	No bike routes are currently linked to the Bike Ed facility and signposting to it is needed.	Report (Section 5.4) and maps updated.
96	Council needs a comprehensive transport and mobility strategy.	Noted. Outside of scope in this instance.
97	We are ratepayers and bike riders and would like to use this form of transport more regularly for maintenance of fitness, pleasure and increasingly as a contribution to reducing our carbon footprint. However the current safety level of the main access roads severely limits our use...	Noted
98	The main priority is to establish a safe link between Bowral and Mittagong.	Noted. Listed as Priority 1
99	In the interim smaller and less expensive initiatives could be taken such as providing more bike parking facilities and promoting motorists responsibilities for sharing the road with cyclists.	Parking an initiative in Strategy - Section 6.2. Report updated (Table 6.1) to include comment on driver behaviour.
100	Congratulate WSC on its support of the Transition Town Project and feel the speedy adoption of the bike plan supports this transition towards a less carbon dependent community.	Noted
101	Pleased to see the Bong Bong Track from the river to Eridge Park is high on the agenda - a link is needed between the 2 paths near the convent.	Bong Bong trail improvements Urban recreational Priority 1

**Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments**

Item	Comment	GTA Response and Action
102	Would also be good if there was an entirely off road circuit that could be done around Bowral – it's almost there now between existing and proposed paths – but the section along Kirkham Road that is an on-road section leaves a fair bit to be desired. Would be good if a dedicated path between there and Burradoo following the railway line.	New off-road section proposed on west side along river (Priority 3)
103	In regard to the proposed routes from Mittagong to Bowral using the Mount Gibraltar Reserve peripheral fire trails (Lower Gib East and Gib West), the group is supportive and believes the use of fire trails is suitable and logical.	Noted
104	The group would like to be involved in any planning and suggests that with minor work the trails could be used as an immediate interim connection, providing that a clear responsibility and maintenance plan is in place.	Noted
105	Shared signs for the reserve access routes and bicycle track could minimise the number of signs require.	Noted. Review of signage.
106	It would be necessary to retain the 5 locked gates across the fire trail entrances.	Noted
107	As there are some steep sections occasional off-track rest spaces may be required.	Noted
108	Acacia Park, Moss Vale has a plan for the construction of a path to address wet spring areas which limit access by walkers and cyclists.	On council's cycleways priority list
109	The bike strategy looks great. Bring it on!	Noted
110	<ul style="list-style-type: none"> <li>Strongly suggest that the priority set at the workshop to establish a safe cycle track from Mittagong to Bowral be upheld.</li> </ul>	Noted. Listed as Priority 1
111	<ul style="list-style-type: none"> <li>It also needs to be recognised that implementation of the plan will essentially satisfy the needs of one user group (family cyclists and children) and there are at least 7 other user groups that need to be catered for: <ul style="list-style-type: none"> <li>o Family cyclists and children who use bike tracks</li> <li>o Road racing cyclists who race and train on roads in the shire</li> <li>o Young road racing cyclists who need a safe training circuit</li> <li>o General cyclists (locals and tourists) who ride on roads in the shire</li> <li>o Mountain bikers who train and race on mountain bike tracks</li> <li>o General bikers (locals and tourists) who ride on the mountain tracks</li> <li>o Track cyclists who train and race at the Velodrome</li> <li>o BMX riders (a trail Olympic event)</li> </ul> </li> <li>The following strategies are supported:</li> </ul>	Report updated (Section 6.1). It is acknowledged that there are a wide variety of cyclists with differing experience levels and interests: Bike track users - road cyclists - mountain bikers - track cyclists - BMX riders Council prioritises each facility based on interest shown by the community and safety
112	o As a priority establish a safe cycle track from Mittagong to Bowral	Noted. Listed as Priority 1
113	o Promote road rules relating to sharing the road with cyclists	Report updated (Table 6.1).
114	o Upgrade the Velodrome	Included as Support Plan Objective 5.
115	o Establish a 1km closed cycling circuit (criterium) for racing and training	Report updated (Section 5.6 and 6.1). It is acknowledged that there are a wide variety of cyclists with differing experience levels and interests: Bike track users - road cyclists - mountain bikers - track cyclists - BMX riders Council prioritises each facility based on interest shown by the community and safety Berrima Double 8 loop could provide closed circuit facilities
116	o Expand areas for creating mountain bike tracks	Report updated (Section 6.1). It is acknowledged that there are a wide variety of cyclists with differing experience levels and interests: Bike track users - road cyclists - mountain bikers - track cyclists - BMX riders Council prioritises each facility based on interest shown by the community and safety
117	o Establish a site for future BMX track.	Report updated (Section 6.1). It is acknowledged that there are a wide variety of cyclists with differing experience levels and interests: Bike track users - road cyclists - mountain bikers - track cyclists - BMX riders Council prioritises each facility based on interest shown by the community and safety
118	o Work with schools to identify safe routes for kids to cycle to and from school	Ride to School initiatives in Support Program - Objective 2
119	o Put the Picton/Mittagong cycle track along the old rail line on the Bike Plan agenda and consider use south of Moss Vale	Included. Noted

**Bang the Table Website**

Mittagong		
120	I would like to see links from the proposed and existing cycle paths to the recently upgraded Lake Alexandra, which is now regularly used by families. At present most users drive to the lake and then ride their bikes around the pathway.	This area has low traffic volumes so no facilities to be built. Could be signposted.
121	We regularly use, and see other families negotiating the narrow part of range road next to Sturt Gallery. I would like to see more designated bikeways on the southern side of the town (Oxley drive/Spencer Street) which can eventually link up with Lake Alexandra.	Could be signposted. No facility construction.
Bowral		
122	I commend the proposed cycleways included in the strategy. I would like to see a link to the existing cycleway along Mittagong Rivulet included. This link would join McDonald Street (off Bowral Street) to the cycleway. A bridge or graded path though the creek would be needed. It is currently a well used dirt path that is very difficult to negotiate when wet as it becomes muddy and slippery (or with a pram at any time). I look forward to seeing this link included in the strategy. Moo	A good idea that needs investigation. problems bridging creek due to flooding
123	I am glad to have this opportunity to comment on the Bike Strategy. I would like the Phillip Street, Burradoo access path to the Bong Bong track completed. It is marked on the Bowral Recreational Paths brochure produced by Wingecarribee Shire Council, but it does not exist. Residents living in Elizabeth Street (west), St James Close and Phillip Street are only able to access the Bong Bong Track via Moss Vale Road, which is dangerous with small children on bikes and prams, as there are no footpaths or room for paths of any kind. This would also provide access to Eridge Park for those riding or walking along the track from Bowral or Moss Vale.	Phillip St link included in proposed plan
Moss Vale		

# Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments

Item	Comment	GTA Response and Action
124	Make so one can ride a cycle under the Lackey Road under pass towards the lime works and then have it so cars can go under as before Also reopen McCourt road to the bong bong bike track if possible or as far as possible that is along the Rail track Much of this is a safer than normal bike area even now and notices to be careful would help Bikers	Network of cycleways proposed for the Moss Vale Bypass which will give access to the Enterprise Zone. This will resolve this idea. Map updated to show facility on east side of railway line. VERY lowest priority as Suttor Road will link this area when bypass goes through. Map also updated to show Moss Vale bypass
125	Also, repair Lackey road between Parkes Road and Argyle street and install a cycle lane on the railway side.	Partly included in plan. Plan and report (Section 5.3) updated to show off-road section (footpath widening) on south end past the station.
126	Cycleways will need to be added and enhanced in Moss Vale to keep cyclists off the roads, before the Moss Vale inland port becomes a reality.	Noted
127	Reopen the rail gates that were in mc-caught road and have bike and pedestrian gate for bicycles (there is many other reasons for this and the suspicion is moss vale do not matter); there are many other places in the shire where such crossings are available; Lights and information are cheap now (the 21st century) to make them all safer too. Bike tracks do not have to be concrete and base material should come from a shire owned quarry (one up the back of our place) The yarrowa road end of moss vale has a pedestrian crossing that needs the same attention. No reason why just a centre mark of inlaid stone or other to mark these tracks, say each 30 meters.	Plan updated to show Yarrowa Road and Yarrowa Street path link. Crossing exists and should be upgraded. Report updated re: track material (Section 5.7). Each route and location will require an individual assessment taking these comments on board.
Connecting the three main towns		
128	Go to be the crown in the jewel - the route from Mittagong to Bowral may be the most technically difficult and expensive but a cycle spine from Mittagong to Bowral to Moss Vale that separates cars and bikes gets my vote.	Noted
129	I agree it would be a real tourist attraction as well as being great for us.	Noted
130	I commend the bike plan. As a regular recreational cyclist in the area, it has been a source of frustration that we have not had a safe route to get from Bowral to Mittagong. The path over the Gib is a winner. I am also impressed by the proposed paths away from the road, eg. the Berrima route (fantastic) and the bike route from East Bowral to the Moss Vale end of the existing bike track, running along the edge of the river. These are tremendous tourism drawcards, as is the rail trail to Colo Vale (and hopefully beyond). I am a regular user of Eridge Park Road and parts of the road can be dangerous and the road edge narrow and slippery. The completion of the bike path into Moss Vale is also appreciated. Further suggestions I think that a short link between the proposed east Bowral / river route and the Eridge Park Road would be practical, especially if the proposed leisure centre goes ahead (although I still think the centre should be built on the site of the existing Bowral Pool). I guess it is now a matter of prioritising the improvements. I'd place a safe route from Bowral to Mittagong as No. 1. At present this is	Bong Bong Bridge to Eridge Pk Rd being constructed in 08/09. The priority of the proposed path from bridge to near Eridge Park along river is to be reduced as it follows a parallel route to that being constructed. As such, no link would be considered unless the river route is established.
131	I agree especially with the Berrima route and the rail trail. After all why not link all the towns up? (see also my comments on Tourism). Alan	Noted
Connecting people and places		
132	railway lines run thru our shire much can be done to make crossings that exist safer and provide more crossings particularly the old now lost and new ones in sensible good vision places (making use of lights and communication and suitable times	ARTC have a level crossing program. Outside of Council control
Tourism		
133	I'd be really interested to talk with the relevant officer with your council about the process of getting the rail trail up and running. My name is Suzie Coulston - I am the Economic Development Officer with Kyogle Council in northern New South Wales and we are looking at the pro's and con's of this in our area.	Noted
134	Hi my name is Alan Willock and I am a member of BARBUG cycling group. I also work for the Wollondilly Shire Council in the Visitor Information Centre. I am often asked by locals and tourists alike for new places to ride bikes (both mountain and road bikes). The thing about cycling is it doesn't take long to get fairly fit in a short time and that 6 km ride in the park soon becomes nothing more than a warm up. I have been cycling for just over 1 year now and I am now looking to go in my second Gong Ride (90 km). So when I think bicycle paths, I like to think of the paths enjoyed by the South Coast or the M7 Cycleway etc. These cycleways not only provide safe access to town facilities such as schools and sporting facilities, they also provide a tourist attraction for cyclists from other areas as well as a safe venue for fund raising cycling events. Finally the ultimate benefit is cleaner air and lower medical costs to the community (both for the exercise benefits and the clean air) as well as fuel savings.	Noted
135	The Wingecarribee villages along the Loop Line are not served by weekend public transport and the main road is narrow, mostly 100km an hour and extremely dangerous for bicycle riders. It should be a priority, not a long term plan for the Loop Line tourist bike track to be built to allow for safe passage of bike riders and pedestrians and the youth of the northern villages between villages and through to the main townships. There would also be economic benefits to the Northern Villages through the creation of this trail as there are a number of points of interest along the trail which have to date not been recognised.	Outside scope of report. Covered by Villages PAMP
Supporting bicycle use		
136	The Wingecarribee villages along the Loop Line are not served by weekend public transport and the main road is narrow, mostly 100km an hour and extremely dangerous for bicycle riders. It should be a priority, not a long term plan for the Loop Line tourist bike track to be built to allow for safe passage of bike riders and pedestrians and the youth of the northern villages between villages and through to the main townships. There would also be economic benefits to the Northern Villages through the creation of this trail as there are a number of points of interest along the trail which have to date not been recognised.	Repeated from above
Budget implications		
137	\$400k a year really is nothing. I know that council is a bit strapped for cash but how much does it propose to spend on the leisure centre? Bike paths and facilities would be much more useful to more people. Cycling facilities are one of the cheapest ways to improve quality of life and sustainability in an LGA and Council has the power and capacity to do this without State or Federal help.	Noted

**Wingecarribee Bicycle Strategy - GTA Response to Public Exhibition Comments**

Item	Comment	GTA Response and Action
138	When you see the number people that use the Path along Sutor rd and the Wingecarribee River it is a excellent example that if a safe area is provide for exercise people will use it.	Noted
139	Perhaps money would be better spent across several different cycleways rather than focusing on one well established path. Adding new or enhanced cycleways is only the first step. These cycleways need to be maintained and repaired to ensure that cyclists continue to use them. The cost of maintaining the cycleways into the future needs to also be accounted for.	Noted
Other areas of the shire		
140	I would like to see more consideration given to the width and markings of some of the major roads that link our towns, villages and rural localities to encourage the use of bicycles rather than always depending on the car. Our outlying areas have no bus services (other than school bus)- and therefore the only alternative is to bike it. Most of these major routes are frequented by large trucks that make an option of cycling very dangerous given the width of the road (a good example is Wombeyan Caves Road between High Range and the Old Hume Hwy). Children who have grown up in the more rural areas of the shire have few alternatives to get around to friends places or even go to town. They either have to wait for a lift or risk it on the only road that was designed to cater for two cars passing each other - not even considering two large trucks passing each other on the bends. Also note that the cycling clubs tend to use these major roads regularly for training and races during the summer months. Why do they choose these roads? They seem to be a preferred route due to the challenges that they offer and the sc	Not within the scope of this plan.
141	Given that we rate payers in villages pay the same amount of rates in most instances as the three main towns, it would be nice to see some of our rates being spent in those villages. A classic example is the amount of cyclists that are constantly around exeter, bundanoon and robertson on any given weekend. So how about sharing the resources about and giving us back something in return for our rates. Some more shared footpaths and cycleways would be excellent. At the moment we have next to none. Bowral may have the greater population but that does not mean that we should miss out on EVERYTHING. They already have excellent paths and cycleways we in the villages have none!!!!!! We get to push our prams and wheelchairs on the roads (which is now illegal) and fight with cars on the roads with our bikes.....	Noted. Outside of scope in this instance.
142	While seeing the proposed planned routes around the shire, Eg Moss Vale , Bowral, Mittagong and Berrima is encouraging I was wondering if the plan included any widening of these roads in certain spots. As being a regular rider on these roads it is a rare occurrence that you are not subject to some sort of abuse or near mishap due to the narrow nature of these roads. A good example is from the Bong Bong Bridge to Eridge Park it gives plenty of room to stay away from traffic without impeding traffic flow.	Report updated (Section 6.4). Request RTA to incorporate cycle lanes in any maintenance or road works.
Vision - "the friendliest towards cyclists of any shire in NSW"		
143	A mission statement from the WSC web site is; "To make the Shire a better place in which to live". Cycleways are adding value here. I feel a marketing statement is more appropriate than a vision. You need to sell our shire and what you are doing. "Wingecarribee - we care for our cyclists".	Report updated (Section 1) with new vision.

## APPENDIX D - BIKEPLAN 2020 PRESS RELEASE





Verity Firth  
Minister for Environment  
Minister for Climate Change



Eric Roozendaal  
Minister for Roads  
Minister for Commerce

## MEDIA RELEASE

# Mapping out Sydney's cycling future

**30 August 2008**

The lemma Government is calling for community comment on a new NSW Bike Plan to promote and encourage cycling.

Minister for Roads Eric Roozendaal and Minister for Environment and Climate Change Verity Firth today said the Premier's Council on Active Living had been commissioned to start work on a new Bike Plan for NSW, with an in-depth study of current cycling patterns across the state being the first step.

"The NSW Government is committed to promoting cycling and improving cycling facilities as part of a balanced transport system for NSW," Mr Roozendaal said.

"The new Bike Plan will be the blueprint for the future of cycling in NSW.

"The Plan will map out the new events, new facilities and new programs needed to support the development of cycling as both a recreation activity and a commuting option.

"Since 1999, an average of 233km of cycleways have been built annually and today we have more than 4,100km of cycleways across the state, including 2,000km in Sydney."

Ms Firth said cycling had considerable environmental benefits.

"It makes sense to encourage more people to consider cycling as an environmentally-friendly and healthy means of transportation, particularly for short trips," Ms Firth said.

"Just one person who switches from driving to cycling to work during the week over a 10km trip each way saves around 1.3 tonnes of greenhouse gas emissions a year.

"And cycling doesn't just help reduce pollution, it also cuts down on traffic congestion and gets people fit.

"Last year, NSW residents purchased around 430,000 new bicycles, outstripping the number of new vehicles registered in the same period by 75,000.

"In Sydney alone, bicycle use has grown by 23 per cent on weekdays and 58 per cent on weekends since 2001."

Mr Roozendaal said the NSW BikePlan would build on current Government commitments.

“The Government is funding more than \$47 million of bicycle initiatives this financial year,” Mr Roozendaal said.

“Most cycling takes place on local roads, which is why the Government is contributing funding towards 91 local bicycle projects, matched by funding from local councils.

“The Government is also committed to building off-road shared paths, where possible, when new roads are built.

“For example, last financial year the Government provided \$14.8 million towards shared cycling/walking or on-road cycling facilities as part of major road construction projects including the construction of the Blacktown to Parklea T-Way and as part of the Great Western, Hume and Pacific Highway upgrades.”

Ms Firth said the NSW BikePlan would develop clear directions for future promotion and development of cycling across the state.

“Community consultation is a key component of developing this NSW BikePlan,” Ms Firth said.

“We want to hear from the community about ways in which people could be encouraged to take up cycling.

“The NSW BikePlan project team will be consulting widely with local councils, major employers, bicycle user groups, and other peak organisations with an interest in improving safe and sustainable transport options.”

Individuals are encouraged to put forward their ideas and views via email to [Bike\\_Plan@rta.nsw.gov.au](mailto:Bike_Plan@rta.nsw.gov.au).

## APPENDIX E - INDIVIDUAL TOWN MAPS

## Mittagong Bicycle Network

Existing and proposed bicycle routes

- Legend**
- Schools, colleges and universities
  - Retail, cafes and entertainment
  - Government, commercial, industrial
  - Parks and privatised open space

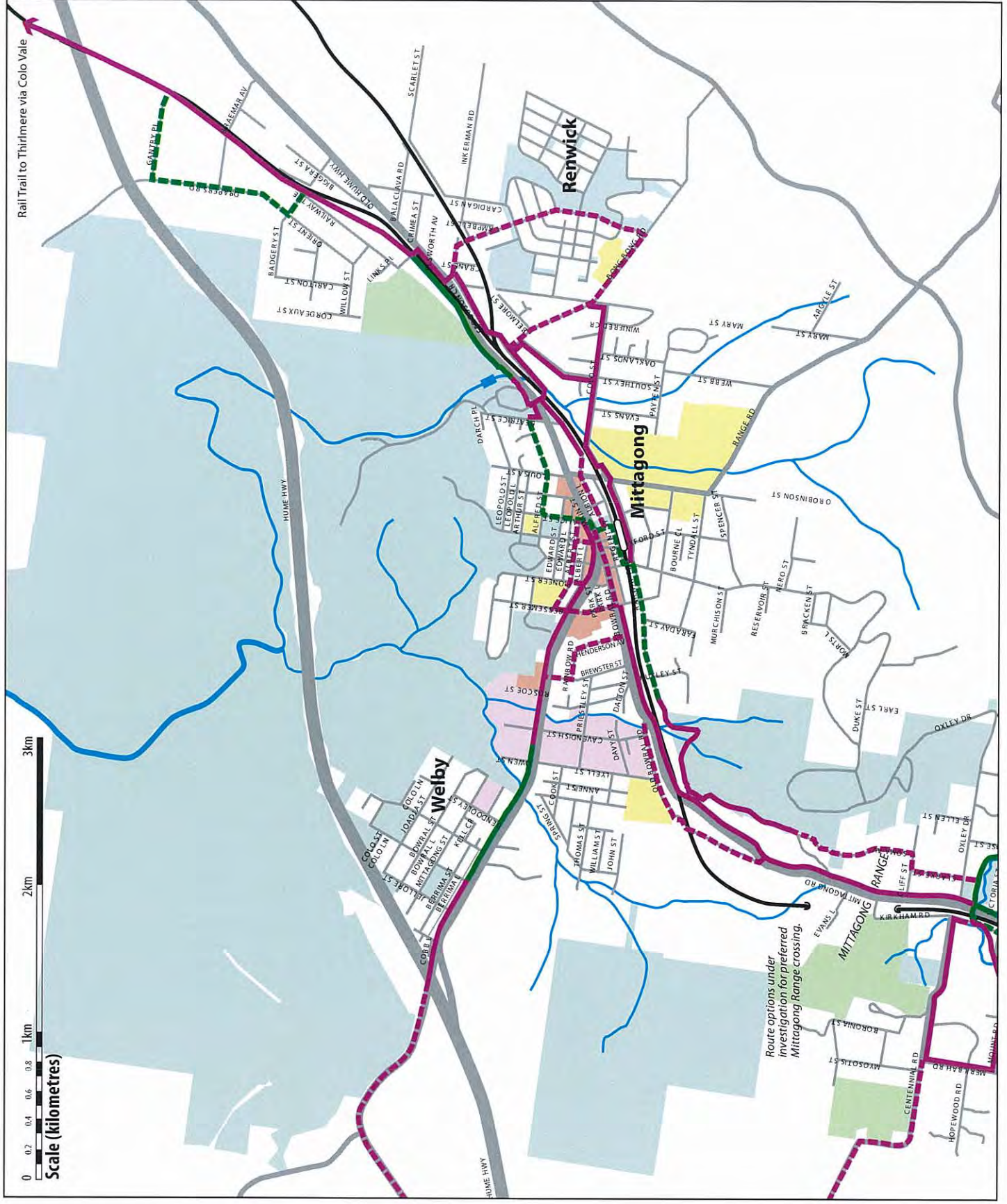
Roads and streets

Route siting

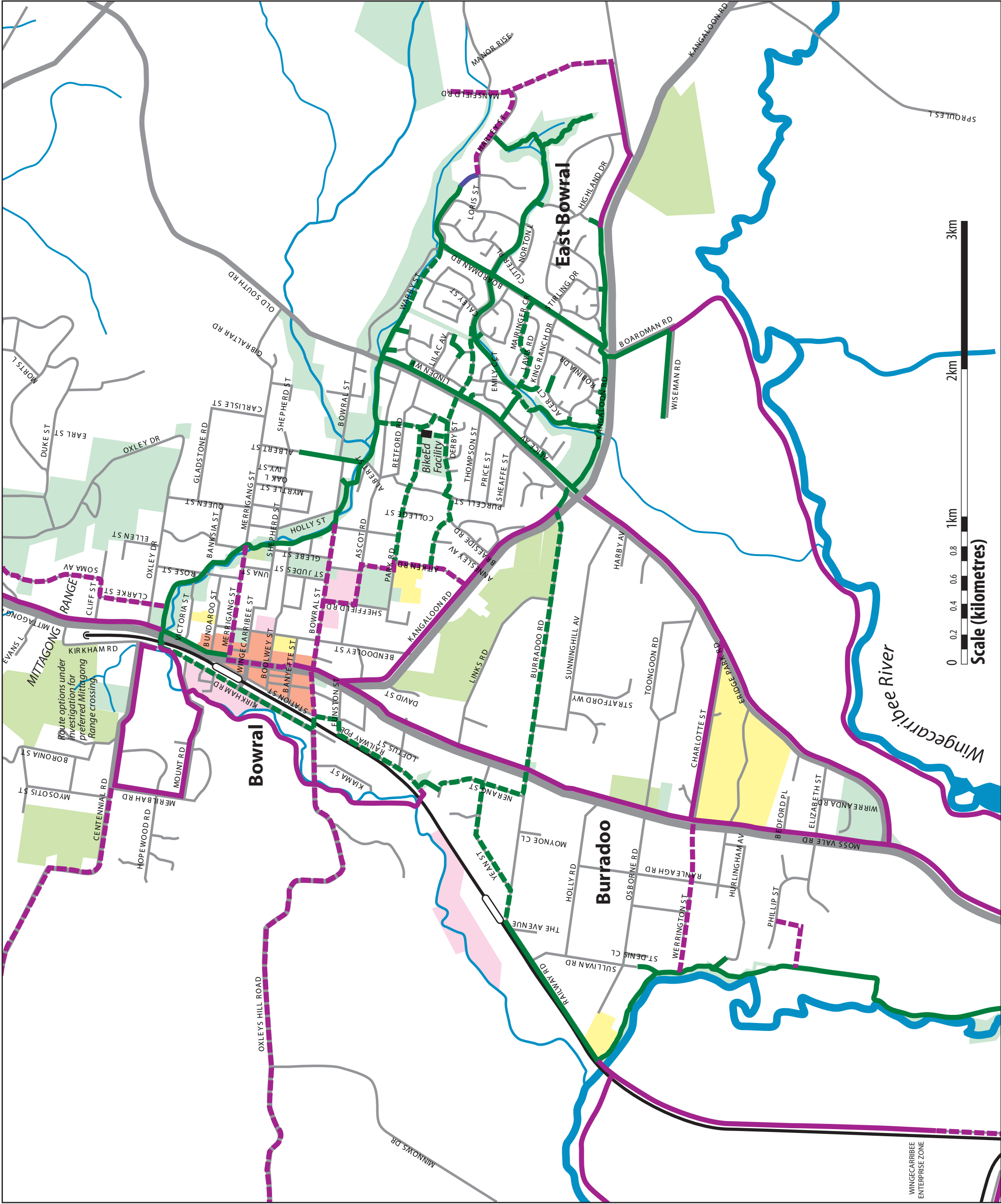
On-road Off-road  
Path in park lanes or path adj  
shared to road

Existing bicycle routes

Planned bicycle routes







Wingecarribee Bicycle Strategy

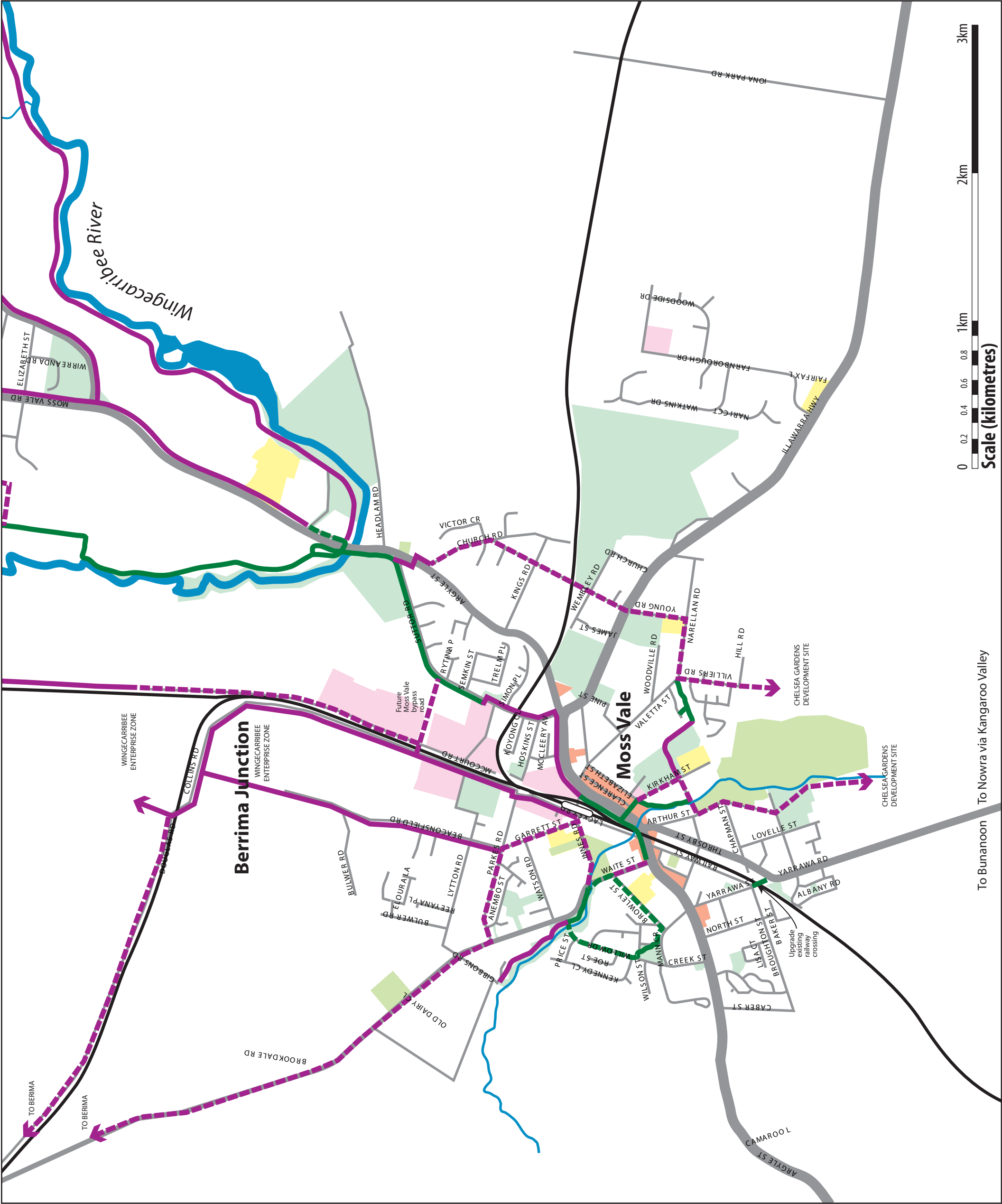
# Bowral Bicycle Network

Existing and proposed bicycle routes

- Legend**
- Schools, colleges and universities
  - Retail, cafes and entertainment
  - Government, commercial, industrial
  - Parks and privatised open space

- Roads and streets
- Route siting
- On-road Off-road Path lanes or path adj in park shared to road
- Existing bicycle routes
- Planned bicycle routes





Wingecarribee Bicycle Strategy

# Moss Vale Bicycle Network

## Existing and proposed bicycle routes

- Legend**
- Schools, colleges and universities
  - Retail, cafes and entertainment
  - Government, commercial, industrial
  - Parks and privatised open space

- Roads and streets
- Route siting
- Path
- On-road Off-road
- in park lanes or path adj
- shared to road
- Existing bicycle routes
- Planned bicycle routes

APPENDIX F - ROUTE DEVELOPMENT DETAILS AND  
COST ESTIMATES

*NOTE: refer to pages 32 to 43 for further details*

Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

Summary - Route Lengths (m)

Section Ref	Existing Length	Priority 1 Length	Priority 2 Length	Priority 3 Length	Total Length
Linking Mittagong, Bowral and Moss Vale	-	19,590	-	10,030	29,620
Main Feeder Routes	-	4,500	12,230	19,750	36,480
Local Access Connections	-	1,400	-	18,010	19,410
Urban Recreational Routes	-	3,800	-	2,800	6,600
Regional Links and Tourism Routes	-	-	-	55,900	55,900
blank	-	-	-	-	-
blank	-	-	-	-	-
GRAND TOTAL	-	29,290	12,230	106,490	148,010
Note. The existing length only includes sections that do not require any upgrading work. Although Council has built long sections of paths and bicycle lanes, most require some upgrading, new linemarking, directional signage, pavement repairs, etc					

Summary - Route Costs

Section Ref	Base Cost	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost	check sum
Linking Mittagong, Bowral and Moss Vale	\$ 6,482,097	\$ 7,087,740	\$ -	\$ 4,424,210	\$ 11,511,950	\$ 11,511,950
Main Feeder Routes	\$ 7,998,285	\$ 941,240	\$ 3,169,520	\$ 7,545,350	\$ 11,656,110	\$ 11,656,110
Local Access Connections	\$ 2,608,530	\$ 167,400	\$ -	\$ 5,968,860	\$ 6,136,260	\$ 6,136,260
Urban Recreational Routes	\$ 856,898	\$ 33,100	\$ -	\$ 1,233,210	\$ 1,266,310	\$ 1,266,310
Regional Links and Tourism Routes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
blank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
blank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GRAND TOTAL	\$ 17,945,809	\$ 8,229,480	\$ 3,169,520	\$ 19,171,630	\$ 30,570,630	\$ 30,570,630
check sum \$ 17,945,809 \$ 8,229,480 \$ 3,169,520 \$ 19,171,630 \$ 30,570,630						

Summary - Route Costs per km

Section Ref	Priority 1 Length	Priority 2 Length	Priority 3 Length	Total Length
Linking Mittagong, Bowral and Moss Vale	\$ 362,000	#DIV/0!	\$ 441,000	\$ 389,000
Main Feeder Routes	\$ 209,000	\$ 259,000	\$ 382,000	\$ 320,000
Local Access Connections	\$ 120,000	#DIV/0!	\$ 331,000	\$ 316,000
Urban Recreational Routes	\$ 9,000	#DIV/0!	\$ 440,000	\$ 192,000
Regional Links and Tourism Routes	#DIV/0!	#DIV/0!	\$ -	-
blank	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
blank	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GRAND TOTAL	\$ 281,000	\$ 259,000	\$ 180,000	\$ 207,000
Notes compare with cost for regional bike routes in last worksheet - "North Shore Extract"				
Other projects				
average \$ 1,340,000				
min \$ 340,000				
max \$ 3,220,000				

Summary - Costs by Item Type

Reference	Description	Type of Works	Base Cost Per Item 2007	Unit	Priority 1	Priority 2	Priority 3	Total	check sum
GENERAL									
0	Existing facilities or works included in current budget allocations	EXISTING	\$0		\$0	\$0	\$0	\$0	\$0
1	Other jurisdictions	OTHER JURISDICTIONS	\$0		\$0	\$0	\$0	\$0	\$0
2	Strategic link for inclusion in future planning control	PLANNING	\$0		\$0	\$0	\$0	\$0	\$0
Subtotal - General					\$0	\$0	\$0	\$0	\$0
CIVIL WORKS									
17	Civil - Bicycle Refuge / LATM / Traffic Facilities	CIVIL	\$10,950 each		\$729,280	\$32,410	\$1,158,930	\$1,920,620	\$0
37	Civil - Burradoo (2008/2009) Bong Bong Track cycleway link to Eridge Park (2 km)	CIVIL	\$495,000 each		\$495,000	\$0	\$0	\$495,000	\$1,920,620
36	Civil - Burradoo (2008/2009) Phillip St pathway link to Bong Bong Track shared pathway	CIVIL	\$82,500 each		\$82,500	\$0	\$0	\$82,500	\$495,000
16	Civil - Kerb Ramp	CIVIL	\$572 each		\$0	\$0	\$0	\$0	\$82,500
38	Civil - Mittagong (2008/2009) Stage 1 shared pathway link extension from Welby to CBD & Lake Alexandra	CIVIL	\$200,000 each		\$200,000	\$0	\$0	\$200,000	\$0
39	Civil - Moss Vale (2009/2010) Recreation pathway along Illawarra Hwy to James Street 500m	CIVIL	\$124,000 each		\$124,000	\$0	\$49,600	\$173,600	\$200,000
24	Civil - raised priority crossing	CIVIL	\$20,833 each		\$0	\$0	\$0	\$0	\$173,600
10	Civil - remove existing landscaping and replace	CIVIL	\$20,000 each		\$0	\$0	\$0	\$0	\$0
29	Civil - steel mesh protective fence	CIVIL	\$61 m		\$0	\$0	\$0	\$0	\$0
20	Parking - Bicycle Locker	CIVIL	\$2,761 each		\$0	\$0	\$0	\$0	\$0
7	Parking - Bike Parking U-rail	CIVIL	\$912 each		\$0	\$0	\$0	\$0	\$0
32	Pavement - fibre glass planks	CIVIL	\$1,025 m		\$0	\$0	\$0	\$0	\$0
13	Pavement - Footpath - Bitumen (2.0m two-way) - LOW KEY	CIVIL	\$278 m		\$4,073,780	\$3,086,200	\$16,544,340	\$23,704,320	\$0
12	Pavement - Footpath - Concrete (3.0m, two-way)	CIVIL	\$515 m		\$0	\$0	\$0	\$0	\$23,704,320
14	Pavement - Footpath - Widen existing, Concrete (1.0m)	CIVIL	\$172 m		\$673,170	\$0	\$1,302,810	\$1,975,980	\$0
8	Pavement - Footpath reseal	CIVIL	\$42 m		\$0	\$0	\$0	\$0	\$1,975,980
21	Pavement - Green Pavement	CIVIL	\$105 m		\$0	\$0	\$0	\$0	\$0
15	Pavement - new car park - bitumen seal	CIVIL	\$288 m2		\$0	\$0	\$0	\$0	\$0
31	Pavement - sealed shoulder, 1.5m	CIVIL	\$67 m		\$0	\$0	\$0	\$0	\$0
9	Road Safety Audit	CIVIL	\$5,000 each		\$0	\$0	\$0	\$0	\$0
26	Signals - Bike Lamps at Signals per pair	CIVIL	\$1,687 pair		\$0	\$0	\$0	\$0	\$0
27	Signals - Pedestrian Signals	CIVIL	\$101,238 each		\$299,660	\$0	\$0	\$299,660	\$0
28	Signals - Traffic Signals	CIVIL	\$202,476 each		\$599,320	\$0	\$0	\$599,320	\$299,660
Subtotal - Civil Works					\$7,276,710	\$3,118,610	\$19,055,680	\$29,451,000	\$599,320
STRUCTURES									
34	Structure - Bus Shelter	CIVIL	\$9,101 each		\$0	\$0	\$0	\$0	\$0
11	Structure - Cut and cover tunnel	CIVIL	\$209,912 each		\$0	\$0	\$0	\$0	\$0
33	Structure - General Bridge Cost	CIVIL	\$2,774 m2		\$799,410	\$0	\$0	\$799,410	\$0
19	Structure - Retaining wall	CIVIL	\$356 m		\$0	\$0	\$0	\$0	\$799,410
22	Structure - Solar Street Lighting	CIVIL	\$122 m		\$0	\$0	\$0	\$0	\$0
23	Pavement - contra flow lane and mixed traffic	CIVIL	\$115 m		\$0	\$38,990	\$0	\$38,990	\$0
Subtotal - Structures					\$799,410	\$38,990	\$0	\$838,400	\$38,990
SIGNS AND MARKINGS									
18	Signs & Markings - Bicycle Logo	LINE	\$97 each		\$0	\$0	\$0	\$0	\$0
30	Signs & Markings - Linemarking	LINE	\$5 m		\$0	\$0	\$0	\$0	\$0
4	Signs & Markings - Edgeline, Laneline, Bike Logos every 100m, signs at 200m - on road, both sides	LINE	\$25 m		\$14,820	\$0	\$49,400	\$64,220	\$0
3	Signs & Markings - Centreline, Bike & Ped Logos each way every 100m, signs at 200m - off road	LINE	\$10 m		\$0	\$0	\$0	\$0	\$0
25	Signs & Markings - low key intersection improvements	LINE	\$747 each		\$121,560	\$11,920	\$66,550	\$200,030	\$0
35	Signs & Markings - low key shared path, regulatory signs and logos at 200m	SIGN	\$207 each		\$0	\$0	\$0	\$0	\$200,030
5	Signs & Markings - Directional Signs	SIGN	\$391 each		\$16,980	\$0	\$0	\$16,980	\$0
6	Signs & Markings - Regulatory, Warning, Advisory Signs	SIGN	\$248 each		\$0	\$0	\$0	\$0	\$16,980
Subtotal - Signs and Markings					\$153,360	\$11,920	\$115,950	\$281,230	\$0
Total					\$8,229,480	\$3,169,520	\$19,171,630	\$30,570,630	\$281,230
					check against "Itemised cost total"				
					\$8,229,480	\$3,169,520	\$19,171,630	\$30,570,630	\$30,570,630

Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

Route	Section	Description	Priority	Total Distance (m)	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost
<b>Linking Mittagong, Bowral and Moss Vale</b>								
Mittagong - Bowral - Moss Vale Route	Mittagong - Murray Vale Track, extend from Hawkins Dr to Beatrice St	widen pathway, crossing at Beatrice St	1	400	\$ 117,820	\$ -	\$ -	\$ 117,820
	Mittagong - Murray Vale Track, Alfred St & Alice St	mixed traffic, intersection treatments, signs and markings	1	1,100	\$ 9,930	\$ -	\$ -	\$ 9,930
	Mittagong Town Centre	improved area-wide bicycle access with signalised bike/pedestrian crossings across Old Hume Hwy and Bowral Rd	1	2,150	\$ 342,690	\$ -	\$ -	\$ 342,690
	Mittagong (Bessemer St) to Bowral (Merrigang St)	shared pathway, part existing, path widened, part new, new crossing facilities	1	4,100	\$ 1,358,210	\$ -	\$ -	\$ 1,358,210
Bowral Town Centre		Bicycle shoulder lanes; replace roundabouts with signals at Merrigang St and Banyette St	1	450	\$ 614,140	\$ -	\$ -	\$ 614,140
Bowral (Banyette St) to Moss Vale (Valletta St), via Kangaloon Rd and Eridge Park Rd		shared pathway, part existing, path widened, part new, new crossing facilities, Wingecarribee River Bridge widening	1	10,590	\$ 4,320,830	\$ -	\$ -	\$ 4,320,830
Moss Vale Town Centre		Valetta St to Watie St - shared path west side, improvements to existing path, including localised widening, shared path signs and markings esp at driveways, localised widening, crossing facilities on side streets and of the Highway at strategic locations (13 off)	1	800	\$ 324,120	\$ -	\$ -	\$ 324,120
Alternate Rte via Mount Gib		Regent St to Mittagong Creek - part on street, part new path	3	4,430	\$ -	\$ -	\$ 722,800	\$ 722,800
Alternate Rte via Old Bowral Rd		bicycle shoulder lanes	3	1,500	\$ -	\$ -	\$ 81,810	\$ 81,810
Moss Vale Rd - missing link from Kangaloon Rd to Eridge Park Rd		shared pathway, part existing, path widened, part new, new crossing facilities	3	4,100	\$ -	\$ -	\$ 3,619,600	\$ 3,619,600
<b>Total - Linking Mittagong, Bowral and Moss Vale</b>				<b>29,620</b>	<b>\$ 7,087,740</b>	<b>\$ -</b>	<b>\$ 4,424,210</b>	<b>\$ 11,511,950</b>



Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

Route	Section	Description	Priority	Total Distance (m)	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost
Main Feeder Routes								
Renwick Links	existing high use section along Ferguson Crescent	new path	1	1,500	\$ 617,240	\$ -	\$ -	\$ 617,240
			3	2,100	\$ -	\$ 864,130	\$ 864,130	
Welby Link	Bong Bong Rd, Colo St and Railway Pde Old Hume Hwy	new path develop pathway in accordance with Council plans and budget (part existing, part new/improved)	1	2,500	\$ 200,000	\$ -	\$ -	\$ 200,000
			2	230	\$ -	\$ 38,990	\$ -	\$ 38,990
Burradoo Rd	full length	contra flow lane along southern side of main street, in service road upgrade existing mixed traffic facilities along Burradoo Rd, Nerang St and Yean St, new crossing facilities at Moss Vale Rd and Kangaloon Rd	2	4,500	\$ -	\$ 44,330	\$ -	\$ 44,330
			2	7,500	\$ -	\$ 3,086,200	\$ -	\$ 3,086,200
Bong Bong to East Bowral River Trail	trail along the River	new path (distances vary depending on alignment)	2	500	\$ 124,000	\$ -	\$ -	\$ 124,000
Throsby Park Trail	Illawarra Hwy from Argyle St to James St	budgetted new path	1	200	\$ -	\$ -	\$ 49,600	\$ 49,600
	Illawarra Hwy from James St to Young St	new path (pro rata to item 2.9 above)	3	5,700	\$ -	\$ -	\$ 2,345,510	\$ 2,345,510
Berrima River Trail	Wingecarribee River, from Railway Rd to Old Hume Highway	path along the River, pending negotiations with landowners	3	1,400	\$ -	\$ -	\$ 624,710	\$ 624,710
Whites Creek Trail	Mack St to Gibbons Rd	extend off-rd path and provide missing links, with crossing facilities at Argyle St, Lackey Rd and Watie St	3	2,900	\$ -	\$ -	\$ 664,350	\$ 664,350
Chelsea Gardens Link	Mack St, Arthur St, Spencer St, Yarrawah Rd	part mixed traffic, part new path	3	7,450	\$ -	\$ -	\$ 2,997,050	\$ 2,997,050
Moss Vale Enterprise Zone Loop	Lackey Rd, Collins Rd, Douglas Rd, Beaconsfield Rd, Garrett St, Innes Rd	new path and crossing facilities	3					
Total - Main Feeder Routes				36,480	\$ 941,240	\$ 3,169,520	\$ 7,545,350	\$ 11,656,110

Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

Route	Section	Description	Priority	Total Distance (m)	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost
<b>Local Access Connections</b>								
Mittagong	Henderson Ave, Rainbow Rd, Brewster St	mixed traffic, intersection treatments, signs and markings, crossing at Bowral Rd	3	720	\$ -	\$ -	\$ 20,180	\$ 20,180
Bowral	Southey St	extend existing path	3	440	\$ -	\$ -	\$ 181,060	\$ 181,060
	Merrigang St, Bowral St	mixed traffic, intersection treatments, signs and markings	3	2,160	\$ -	\$ -	\$ 16,890	\$ 16,890
	Mount Rd, Meridah Rd, Centennial Rd, Kirkham Rd loop	new path, crossing facilities	3	2,900	\$ -	\$ -	\$ 1,258,150	\$ 1,258,150
	Stephens Park Bike Ed Facility	mixed traffic, intersection treatments, signs and markings	1	1,100	\$ 84,900	\$ -	\$ -	\$ 84,900
	Stanley Park	Link from near existing cycleway bridge to Bowral Road	3	60	\$ -	\$ -	\$ 74,740	\$ 74,740
Burradoo	Albert Street road reserve	link from Shepherd Street to Bowral Rd and then to the existing path with a bridge over the rivulet to Farnborough Close	3	530	\$ -	\$ -	\$ 1,385,620	\$ 1,385,620
	Werrington St, Charlotte St - Wingecarribee River to Eridge Park Rd	part new path, part mixed traffic, crossing facilities at Bowral Rd and Eridge Park Rd	3	3,700	\$ -	\$ -	\$ 1,742,370	\$ 1,742,370
	Philip St	pathway to River	1	300	\$ 82,500	\$ -	\$ -	\$ 82,500
East Bowral	Kangaloon Rd, Hordens Rd, Mansfield Reserve, Mansfield Rd - St Martins Grove to Mittagong Creek	new path, crossing facilities	3	2,100	\$ -	\$ -	\$ 896,540	\$ 896,540
Moss Vale	Argyle St, Church Rd, Young Rd, Narrellan Rd, Kirkham St, Park Rd, Innes Rd, Gibbons Rd loop	part new path, part mixed traffic, crossing facilities, railway level crossing	3	5,400	\$ -	\$ -	\$ 393,310	\$ 393,310
<b>Total - Local Access Connections</b>				<b>19,410</b>	<b>\$ 167,400</b>	<b>\$ -</b>	<b>\$ 5,968,860</b>	<b>\$ 6,136,260</b>
<b>Urban Recreational Routes</b>								
Bowral	Bong Bong Trail Improvements	Improved signs, markings and crossing facilities	1	3,800	\$ 33,100	\$ -	\$ -	\$ 33,100
	Bong Bong Trail Extension	pathway extension, crossing facilities, railway level crossing	3	2,800	\$ -	\$ -	\$ 1,233,210	\$ 1,233,210
<b>Total - Urban Recreation Routes</b>				<b>6,600</b>	<b>\$ 33,100</b>	<b>\$ -</b>	<b>\$ 1,233,210</b>	<b>\$ 1,266,310</b>
<b>Regional Links and Tourism Routes</b>								
Mittagong to Picton Rail Trail (to LGA boundary only)	Willow Vale to LGA Boundary	new path	3	22,300	\$ -	\$ -	\$ -	\$ -
Berrima Double 8 Loop	Old Hume Hwy, Berrima Rd, Douglas Rd, Oxley Hill Rd, Centennial Rd, rail trail	part new path, crossing facilities, part bicycle shoulder lanes, part mixed traffic	3	33,600	\$ -	\$ -	\$ -	\$ -
NOTE All regional routes require detailed assessment and road safety audits prior to commencement. All events require formal Traffic Control Plans with approvals from all relevant authorities.								
<b>Total - Regional Links and Tourism Routes</b>				<b>55,900</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>GRAND TOTAL</b>				<b>148,010</b>	<b>\$ 8,229,480</b>	<b>\$ 3,169,520</b>	<b>\$ 19,171,630</b>	<b>\$ 30,570,630</b>
				<i>148,010</i>	<i>\$ 8,229,480</i>	<i>\$ 3,169,520</i>	<i>\$ 19,171,630</i>	<i>\$ 30,570,630</i>

Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

Section Ref	Works Ref	Route Name	Route Description	Item	Priority	Works Type	Standard Cost Ref	Total Distance (m)	On-Road Distance (m)	Multiplier*	Base Cost	Contingencies	Maintenance and Repairs	Minor Utility Adjustments	Landscaping & Urban Design	Work Under Traffic	Design Fees	Total Mark Up	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost	check sum	
Linking Mittagong, Bowral and Moss Vale																								
1	1	Mittagong - Bowral - Moss Vale Route	Mittagong - Murray Vale Track, extend from Hawkins Dr to Beatrice St	widen pathway	1	CIVIL	14	400	400	400	\$68,656	30%	5%	10%	0%	0%	3%	48%	\$101,610	\$0	\$0	\$101,610 ok		
1	2		crossing of Beatrice St		1	CIVIL	17			1	\$10,950	30%	5%	10%	0%	0%	3%	48%	\$16,210	\$0	\$0	\$16,210 ok		
1	3		Mittagong - Murray Vale Track, Alfred St & Alice St	improved traffic, intersection treatments, signs and markings	1	LINE	25	1,100	1,100	10	\$7,470	10%	20%	0%	0%	0%	3%	33%	\$9,930	\$0	\$0	\$9,930 ok		
1	4		Mittagong Town Centre	improved area-wide bicycle access, incl mixed traffic facilities in Albert St, Victoria St, Queen St, Pioneer St, Princes St, Regent St	1	LINE	25	2,150	2,150	27	\$20,168	10%	20%	0%	0%	0%	3%	33%	\$26,820	\$0	\$0	\$26,820 ok		
1	5			Signalised pedestrian crossings at Queen St/Old Hume Hwy and at Princes St/Bowral Rd	1	CIVIL	27			2	\$202,476	30%	5%	10%	0%	0%	3%	48%	\$299,660	\$0	\$0	\$299,660 ok		
1	6			Bessemer St intersection upgrade, include bike lamps, kerb ramps, signal adjustments	1	CIVIL	17			1	\$10,950	30%	5%	10%	0%	0%	3%	48%	\$16,210	\$0	\$0	\$16,210 ok		
1	7		Mittagong (Bessemer St) to Bowral (Merrigang St)	existing path	1	EXISTING	-	600		600	\$0	10%	0%	0%	0%	0%	3%	13%	\$0	\$0	\$0	\$0 ok		
1	8			widening existing footpath	1	CIVIL	14	1,550		1,550	\$286,041	30%	5%	10%	0%	0%	3%	48%	\$393,740	\$0	\$0	\$393,740 ok		
1	9			new path, 2m, blumen	1	CIVIL	13	1,950		1,950	\$542,169	30%	5%	10%	0%	0%	3%	48%	\$802,410	\$0	\$0	\$802,410 ok		
1	10			crossing facilities at strategic locations	1	CIVIL	17			10	\$109,499	30%	5%	10%	0%	0%	3%	48%	\$162,060	\$0	\$0	\$162,060 ok		
1	11		Bowral Town Centre	Merrigang St - replace roundabout by traffic signals	1	CIVIL	28			1	\$202,476	30%	5%	10%	0%	0%	3%	48%	\$299,660	\$0	\$0	\$299,660 ok		
1	12			bicycle shoulder lanes - Merrigang St to Banyette St	1	LINE	4	450	450	450	\$11,142	10%	20%	0%	0%	0%	3%	33%	\$14,820	\$0	\$0	\$14,820 ok		
1	13			Banyette St - replace roundabout by traffic signals	1	CIVIL	28			1	\$202,476	30%	5%	10%	0%	0%	3%	48%	\$299,660	\$0	\$0	\$299,660 ok		
1	14		Bowral (Banyette St) to Moss Vale (Valeetta St)	existing path	1	EXISTING	-	150		150	\$0	10%	0%	0%	0%	0%	3%	13%	\$0	\$0	\$0	\$0 ok		
1	15			widening existing footpath - Banyette St to Kangaloon Rd	1	CIVIL	14	200		200	\$34,328	30%	5%	10%	0%	0%	3%	48%	\$50,810	\$0	\$0	\$50,810 ok		
1	16			widening existing footpath - Kangaloon Rd to Eridge Park Rd	3	CIVIL	14	1,500		1,500	\$257,459	30%	5%	10%	0%	0%	3%	48%	\$381,040	\$0	\$381,040	\$381,040 ok		
1	17			new path, 2m, blumen - Kangaloon Rd to Eridge Park Rd	3	CIVIL	13	2,600		2,600	\$722,893	30%	5%	10%	100%	100%	103%	348%	\$0	\$3,238,560	\$3,238,560	\$3,238,560 ok		
1	18			Eridge Park Rd to River	1	CIVIL	37	2,000		1	\$495,000	0%	0%	0%	0%	0%	0%	0%	\$0	\$0	\$0	\$495,000 ok		
1	19			Bridge over Wingcarabee River - widen footpath	1	CIVIL	33	90		180	\$540,141	30%	5%	10%	0%	0%	3%	48%	\$799,410	\$0	\$0	\$799,410 ok		
1	20			Sutor Rd - existing	1	EXISTING	-	1,200		1,200	\$0	10%	0%	0%	0%	0%	3%	13%	\$0	\$0	\$0	\$0 ok		
1	21			Sutor Rd - extend path, but on northern side	1	CIVIL	13	850		850	\$236,330	30%	5%	10%	0%	0%	3%	48%	\$349,770	\$0	\$0	\$349,770 ok		
1	22			Sutor Rd - improve railway level crossing	1	CIVIL	17			2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$32,410	\$0	\$0	\$32,410 ok		
1	23			Argyle St - Sutor Rd to Valeetta St, widen path western side	1	CIVIL	14	500		500	\$85,820	30%	5%	10%	0%	0%	3%	48%	\$127,010	\$0	\$0	\$127,010 ok		
1	24			crossing facilities at strategic locations	1	CIVIL	17			10	\$109,499	30%	5%	10%	0%	0%	3%	48%	\$162,060	\$0	\$0	\$162,060 ok		
1	25		Moss Vale Town Centre	Valeetta St to Waile St - shared path west side, improvements to existing path, including localised widening, shared path signs and markings esp at driveway, localised widening, crossing facilities on side streets and of the Highway at strategic locations (13 off)	1	CIVIL	17	800	800	20	\$218,998	30%	5%	10%	0%	0%	3%	48%	\$324,120	\$0	\$0	\$324,120 ok		
1	26		Alternate Rte via Mount Glib	Regent St and Railway Pde - mixed traffic, intersection treatments, signs and markings	3	LINE	25	1,400	1,400	7	\$5,229	10%	20%	0%	0%	0%	3%	33%	\$0	\$6,950	\$6,950	\$6,950 ok		
1	27			upgrade path - seal existing fire trail with 2m wide blumen (excl lighting)	3	CIVIL	13	1,600		1,600	\$444,857	30%	5%	10%	0%	0%	3%	48%	\$0	\$658,390	\$658,390	\$658,390 ok		
1	28			Soma St and Clarke St - mixed traffic, intersection treatments, signs and markings	3	LINE	25	1,300	1,300	4	\$2,988	10%	20%	0%	0%	0%	3%	33%	\$0	\$3,970	\$3,970	\$3,970 ok		
1	29			Clarke St link to Mittagong Creek Trail	3	CIVIL	13	130		130	\$36,145	30%	5%	10%	0%	0%	3%	48%	\$0	\$53,490	\$53,490	\$53,490 ok		
1	30		Alternate Rte via Old Bowral Rd	bicycle shoulder lanes	3	LINE	4	1,500	1,500	1,500	\$37,141	10%	20%	0%	0%	0%	3%	33%	\$0	\$0	\$0	\$49,400 ok		
1	31			crossing facilities at strategic locations	3	CIVIL	17			2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$0	\$32,410	\$32,410	\$32,410 ok		
1	32			Short Term alternative to avoid the ascent and cutting south of Burradoo Rd	1	CIVIL	13	2,200		2,200	\$611,678	30%	5%	10%	0%	0%	3%	48%	\$905,280	\$0	\$0	\$905,280 ok		
1	33			new path along western side of Eridge Park Rd	1	CIVIL	13	3,400		3,400	\$945,321	30%	5%	10%	0%	0%	3%	48%	\$1,399,080	\$0	\$0	\$1,399,080 ok		
Total - Linking Mittagong, Bowral and Moss Vale								29,620			\$6,462,097								\$7,087,740	\$0	\$4,424,210	\$11,511,950 ok		

Bicycle Strategy for Mittagong, Bowral and Moss Vale

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Section Ref	Works Ref	Route Name	Route Description	Item	Priority	Works Type	Standard Cost Ref	Total Distance (m)	On-Road Distance (m)	Multiplier*	Base Cost	Contingencies	Maintenance and Repairs	Minor Utility Adjustments	Landscaping & Urban Design	Work Under Traffic	Design Fees	Total Mark Up	Priority 1 Item Cost	Priority 2 Item Cost	Priority 3 Item Cost	Total Item Cost	check sum
Main Feeder Routes																							
2	1	Henwick Links	existing high use section along Ferguson Crescent	new path	1	CIVIL	13	1,500		1,500	\$417,053	30%	5%	10%	0%	0%	3%	48%	\$817,240	\$0	\$0	\$0	\$617,240 ok
2	2	Bong Bong Rd		new path	3	CIVIL	13	700		700	\$194,625	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$288,040 ok
2	3	Coco St and Railway Pde		new path	3	CIVIL	13	1,400		1,400	\$389,250	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$576,090 ok
2	4	Welby Link		dedicated pathway in accordance with Council plans and budget (part existing, part new/improved)	1	CIVIL	38	2,500		1	\$200,000	0%	0%	0%	0%	0%	0%	0%	\$200,000	\$0	\$0	\$0	\$200,000 ok
2	5		contra flow lane along southern side of main street, in service road		2	CIVIL	23	230	230	230	\$26,346	30%	5%	10%	0%	0%	3%	48%	\$0	\$38,990	\$0	\$0	\$38,990 ok
2	6	Burradoo Rd	full length	upgrade existing mixed traffic facilities along Burradoo Rd, Nerang St and Yeart St	2	LINE	25	4,500	4,500	12	\$8,964	10%	20%	0%	0%	0%	3%	33%	\$0	\$11,920	\$0	\$0	\$11,920 ok
2	7			crossing facilities at Moss Vale Road and Kangaroo Rd	2	CIVIL	17			2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$0	\$32,410	\$0	\$0	\$32,410 ok
2	8	Bong Bong to East Bowral River Trail	trail along the River	new path (distances vary depending on alignment)	2	CIVIL	13	7,500		7,500	\$2,085,267	30%	5%	10%	0%	0%	3%	48%	\$0	\$3,086,200	\$0	\$0	\$3,086,200 ok
2	9	Throsby Park Trail		budgeted new path	1	CIVIL	39	500		1	\$124,000	0%	0%	0%	0%	0%	0%	0%	\$124,000	\$0	\$0	\$0	\$124,000 ok
2	10			new path (pro rata to Item 2.9 above)	3	CIVIL	39	200		40%	\$49,600	0%	0%	0%	0%	0%	0%	0%	\$0	\$0	\$0	\$0	\$49,600 ok
2	11	Berrima River Trail	Wingecarribee River, from Railway Rd to Outhouse Highway	path along the River, pending upgrade to a dedicated path	3	CIVIL	13	5,700		5,700	\$1,584,803	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$2,345,510 ok
2	12	Whites Creek Trail	White Highway	dedicated off-path and provide missing links	3	CIVIL	13	1,400		1,400	\$389,250	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$576,090 ok
2	13			crossing facilities at Argyle St, Lackey Rd and Waite St	3	CIVIL	17			3	\$32,650	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$48,620 ok
2	14	Chelsea Gardens Link	Mack St, Arthur St, Spencer St	mixed traffic, intersection treatments, signs and markings	3	LINE	25	1,300	1,300	6	\$4,482	10%	20%	0%	0%	0%	3%	33%	\$0	\$0	\$0	\$0	\$5,960 ok
2	15		Yarrowa Rd to Mount Broughton Rd	new path	3	CIVIL	13	1,600		1,600	\$444,857	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$658,330 ok
2	16	Moss Vale Enterprise Zone Loop	Lackey Rd, Collins Rd, Douglas Rd, Beaconsfield Rd, Garrett St, Innes Rd	new path	3	CIVIL	13	6,500		6,500	\$1,807,231	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$2,674,700 ok
2	17		Lackey Road between Parkes Road and Argyle Street adjacent to the railway station	upgrade to the footpath	3	CIVIL	14	950		950	\$163,057	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$241,320 ok
2	18			crossing facilities at strategic locations	3	CIVIL	17			5	\$54,749	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$81,030 ok
Total - Main Feeder Routes								35,490			\$7,998,265								\$941,240	\$3,169,520	\$7,545,350	\$11,656,110 ok	ok

Local Access Connections																							
3	1	Mittagong		mixed traffic, intersection treatments, signs and markings	3	LINE	25	720	720	4	\$2,888	10%	20%	0%	0%	0%	3%	33%	\$0	\$0	\$0	\$0	\$3,970 ok
3	2		Handerson Ave, Rainbow Rd, Brewster St	intersection treatments, signs and markings	3	CIVIL	17			1	\$10,950	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$16,210 ok
3	3		Southey St	extend existing path	3	CIVIL	25	336		440	\$122,336	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$181,080 ok
3	4	Bowral	Merrigang St - Bong Bong St to Mittagong Creek	mixed traffic, intersection treatments, signs and markings	3	LINE	25	760	760	5	\$3,735	10%	20%	0%	0%	0%	3%	32%	\$0	\$0	\$0	\$0	\$4,970 ok
3	5		Bowral St - Station St to Mittagong Creek	mixed traffic, intersection treatments, signs and markings	3	LINE	25	1,400	1,400	12	\$8,964	10%	20%	0%	0%	0%	3%	33%	\$0	\$0	\$0	\$0	\$11,920 ok
3	6		Mount Rd, Weiridah Rd, Centennial Rd, Kirkham Rd loop	new path	3	CIVIL	13	2,900		2,900	\$806,303	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$1,193,330 ok
3	7			crossing facilities at strategic locations	3	CIVIL	17			4	\$43,800	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$64,820 ok
3	8		Stephens Park Bike Ed Facility	mixed traffic, intersection treatments, signs and markings	1	LINE	25	1,100	1,100	21	\$15,687	10%	20%	0%	0%	0%	103%	333%	\$67,920	\$0	\$0	\$0	\$67,920 ok
3	9			directional signage in Hansen St, Park Rd and Derby St	1	SIGN	5			6	\$2,349	10%	10%	0%	0%	0%	203%	623%	\$16,980	\$0	\$0	\$0	\$16,980 ok
3	10		Stanley Park	Link from near existing cycleway bridge to Bowral Road	3	CIVIL	13	60		60	\$16,682	30%	5%	10%	0%	0%	103%	348%	\$0	\$0	\$0	\$0	\$74,740 ok
3	11		Albert Street road reserve	link from Shepherd Street to Bowral Rd and then to the existing path with a bridge over the rivulet	3	CIVIL	14	530		530	\$90,969	30%	5%	10%	0%	0%	203%	648%	\$0	\$0	\$0	\$0	\$680,450 ok
3	12			crossing facilities at strategic locations	3	CIVIL	17			1	\$10,950	30%	5%	10%	0%	0%	303%	948%	\$0	\$0	\$0	\$0	\$114,750 ok
3	13			crossing facility at Bowral Rd	3	CIVIL	17			4	\$43,800	30%	5%	10%	0%	0%	403%	1248%	\$0	\$0	\$0	\$0	\$590,420 ok
3	14	Burradoo		low cost bridge across rivulet	3	CIVIL	13	350		350	\$97,212	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$144,020 ok
3	15		Werrington St, Charlotte St - Wingecarribee River to Eridge Park Rd	new path to River	3	CIVIL	23			1,250	\$347,545	30%	5%	10%	0%	0%	103%	348%	\$0	\$0	\$0	\$0	\$1,557,000 ok
3	16			new path along Charlotte St	3	CIVIL	13	1,250		9	\$6,723	10%	20%	0%	0%	0%	3%	33%	\$0	\$0	\$0	\$0	\$8,940 ok
3	17			mixed traffic, intersection treatments, signs and markings	3	LINE	25	2,100	2,100	2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$32,410 ok
3	18		Philip St	crossing facilities at Bowral St and Eridge Park Rd	3	CIVIL	17			2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$32,410 ok
3	19	East Bowral	Kangaroo Rd, Hordens Rd, Mansfield Reserve, Mansfield Rd - St Martins Grove to Mittagong Creek	pathway to River	3	CIVIL	36	300		1	\$82,500	0%	0%	0%	0%	0%	0%	0%	\$82,500	\$0	\$0	\$0	\$82,500 ok
3	20			new path	3	CIVIL	13	2,100		2,100	\$563,875	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$864,130 ok
3				crossing facilities at Carisbrooke Row and Harley St	3	CIVIL	17			2	\$21,900	30%	5%	10%	0%	0%	3%	48%	\$0	\$0	\$0	\$0	\$32,410 ok

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**NOTE** All regional routes require detailed assessment and road safety audits prior to commencement. All events require formal Traffic Control Plans with approvals from all relevant authorities.

Total - Regional Links and Tourism Routes	55,900
blank	

average  
over 10yrs  
at 50/50



Bicycle Strategy for Mittagong, Bowral and Moss Vale

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Standard Costs

Reference	Description	Type of Works	Cost 2003 (some other years)	Cost 2008	Unit	Source	Comment
0	Existing facilities or works included in current budget allocations	EXISTING	\$ -	\$ -	-		Waverley Council, Sydney City., Botany Council, Centennial Park, UNSW, PoW , private developers
1	Other jurisdictions	OTHER JURISDIC	\$ -	\$ -	-		eg Masterplans, Park Plan of Management, S94, LEP, DCP, etc
2	Strategic link for inclusion in future planning control	PLANNING	\$ -	\$ -	-		2 Thermoplastic, combination of Line Items 6, 18 & 30; plus back to back shared path sign every 200m
3	Signs & Markings - Centreline, Bike & Ped Logos each way every 100m, signs at 200m - off road	LINE	\$ 8.39	\$ 10.21	m		2 Thermoplastic, combination of Line Items 6, 18 & 30
4	Signs & Markings - Edgeline, LaneLine, Bike Logos every 100m, signs at 200m - on road, both sides	LINE	\$ 20.35	\$ 24.76	m		2 Supply and install, includes one stem with two plates
5	Signs & Markings - Directional Signs	SIGN	\$ 321.75	\$ 391.46	each		2 Supply and install, includes one stem with single plate
6	Signs & Markings - Regulatory, Warning, Advisory Signs	SIGN	\$ 203.50	\$ 247.59	each		3 at least two per site, incl sign and logo. Alternative is multi-space bike racks vs U-rail. Also used as generic item for seating provision.
7	Parking - Bike Parking U-rail	CIVIL	\$ 750.00	\$ 912.49	each		1 1.5m wide
8	Pavement - Footpath reseal	CIVIL	\$ 34.65	\$ 42.16	m		-- Nominal fee based on Jamieson Foley experience
9	Road Safety Audit	CIVIL	\$ 5,000.00	\$ 5,200.00	each		10 Canterbury Racecourse, Casuarinas
10	Civil - remove existing landscaping and replace	CIVIL	\$ 20,000.00	\$ 20,800.00	each		7 specific dimensions detailed in attached worksheet
11	Structure - Cut and cover tunnel	CIVIL	\$ 172,532.48	\$ 209,912.15	each		1
12	Pavement - Footpath - Concrete (3.0m, two-way)	CIVIL	\$ 423.23	\$ 514.92	m		1
13	Pavement - Footpath - Bitumen (2.0m two-way) - LOW KEY	CIVIL	\$ 228.53	\$ 278.04	m		1
14	Pavement - Footpath - Widen existing, Concrete (1.0m)	CIVIL	\$ 141.08	\$ 171.64	m		1
15	Pavement - new car park - bitumen seal	CIVIL	\$ 236.78	\$ 288.07	m2		1
16	Civil - Kerb Ramp	CIVIL	\$ 470.25	\$ 572.13	each		1 Lipless
17	Civil - Bicycle Refuge / LATM / Traffic Facilities	CIVIL	\$ 9,000.00	\$ 10,949.88	each		1 2 concrete islands, 2.5mX10m, linemarking, signage, 2 kerb crossings. These costs have also been applied to other minor civil works.
18	Signs & Markings - Bicycle Logo	LINE	\$ 79.83	\$ 97.13	each		2 Thermoplastic
19	Structure - Retaining wall	CIVIL	\$ 250.00	\$ 355.83	m		8 Assume 1.0m high, backfilled with earth and planting re-established
20	Parking - Bicycle Locker	CIVIL	\$ 2,269.00	\$ 2,760.59	each		4 Vertical locker fits 1 bike. Horizontal locker fits 2 bikes. Includes site establishment costs, slab and supply and delivery of locker by DoT nominated contractor LEDA.
21	Pavement - Green Pavement	CIVIL	\$ 86.34	\$ 105.05	m		5 1.5m wide
22	Structure - Solar Street Lighting	CIVIL	\$ 100.00	\$ 121.67	m		7
23	Pavement - contra flow lane and mixed traffic	CIVIL	\$ 94.15	\$ 114.55	m		-- green pavement 1.5m wide, PLUS combination of Line Items 6, 18 & 30, PLUS bike lane sign every 100m
24	Civil - raised priority crossing	CIVIL	\$ 17,123.20	\$ 20,832.99	each		1,2 6.6x6m concrete platform, signs and markings, 2 kerb crossings
25	Signs & Markings - low key intersection improvements	LINE	\$ 613.96	\$ 746.98	each		1 includes continuity lines, holding line, giveaway sign, 20m wide, bike logos
26	Signals - Bike Lamps at Signals per pair	CIVIL	\$ 1,500.00	\$ 1,687.30	pair		11
27	Signals - Pedestrian Signals	CIVIL	\$ 90,000.00	\$ 101,237.76	each		11 includes minor civil works, such as kerbramps as well as signage
28	Signals - Traffic Signals	CIVIL	\$ 180,000.00	\$ 202,475.52	each		11 includes minor civil works, such as kerbramps as well as signage
29	Civil - steel mesh protective fence	CIVIL	\$ 50.00	\$ 60.83	m		7
30	Signs & Markings - Linemarking	LINE	\$ 4.18	\$ 5.09	m		2 Thermoplastic
31	Pavement - sealed shoulder, 1.5m	CIVIL	\$ 55.07	\$ 67.00	m		1
32	Pavement - fibre glass planks	CIVIL	\$ 1,025.00	\$ 1,152.99	m		9 Use fibre glass panels such as those provided by "Anderson Products" in Newcastle (cf John Whitton Bridge). Panels are 0.6mX6.0m and cost \$1230 (2005) each. Assume 5 panels wide and divide by 6m to get linear metre costs.
33	Structure - General Bridge Cost	CIVIL	\$ 2,774.39	\$ 3,000.78	m2		6
34	Structure - Bus Shelter	CIVIL	\$ 7,480.00	\$ 9,100.56	each		1 Relocate
35	Signs & Markings - low key shared path, regulatory signs and logos at 200m	SIGN	\$ 169.84	\$ 206.63	each		3 Thermoplastic, combination of Line Items 6 & 18, using existing posts, powerpoles and sign stems
36	Civil - Burradoo (2008/2009) Phillip St pathway link to Bong Bong Track shared pathway	CIVIL	\$ 82.500	\$ 82,500.00	each		12
37	Civil - Burradoo (2008/2009) Bong Bong Track cycleway link to Eridge Park (2 km)	CIVIL	\$ 495,000	\$ 495,000.00	each		12
38	Civil - Mittagong (2008/2009) Stage 1 shared pathway link extension from Welby to CBD & Lake Alexandra	CIVIL	\$ 200,000	\$ 200,000.00	each		12
39	Civil - Moss Vale (2009/2010) Recreation pathway along Illawarra Hwy to James Street 500m	CIVIL	\$ 124,000	\$ 124,000.00	each		12

Notes

- 1 all costs for supply and install
- 2 25% discount applied to all pavement works, based on Council schedule due to economies of scale (>30M<sup>2</sup>)
- 3 15% discount applied to all other works, based on Council schedule due to economies of scale (>30M<sup>4</sup>)
- 4 CPI 4%

Sources

- 1 Leichhardt Council Annual Cost Schedule for 2003/2004 (JFT&T Ref #4736, attached)
- 2 Quotes for Leichhardt Council by HVS Services on three separate occasions (JFT&T Ref #4736)
- 3 Information provided by South Sydney Council based on recent projects
- 4 DoT / Bicycle NSW Locker Program (attached)
- 5 Internal RTA advice re costs of green pavement from Peter Mann dated 11 October 2002 (attached)
- 6 Bridges and Paths Averages worksheet(attached)
- 7 JFA/STC North Shore Cycleway Rpt, July 2003, p65 (attached)
- 8 Rawlinsons Australian Construction Handbook Seventeenth Edition 1999
- 9 Verbal quotation obtained by Jamieson Foley in Feb 05
- 10 Experience by The Environment Works Pty Ltd, Jan 2006
- 11 Verbal advise from RTA 4 April 2005
- 12 Wingecarribee Works Program 2007- 10

# Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

## Pathway Projects

Year	Provider/Location	Proposed Works	S.94	Council	Total	Annual Average		
<i>Mittagong, Bowral and Moss Vale</i>								
2007/08	Moss Vale	Construct cycleway from Existing Bong Bong track to CBD along Suttor Rd – 1,650m	\$	410,000	\$	410,000		
2008/09	Burradoo	Phillip St pathway link to Bong Bong Track shared pathway	\$	82,500	\$	82,500		
2008/09	Burradoo	Bong Bong Track cycleway link to Eridge Park (2 km)	\$	495,000	\$	495,000		
2008/09	Mittagong	Stage 1 shared pathway link extension from Welby to CBD & Lake Alexandra	\$	200,000	\$	400,000		
2009/10	Moss Vale	Recreation pathway along Illawarra Hwy to James Street 500m	\$	124,000	\$	124,000		
<b>Subtotal</b>			<b>\$</b>	<b>1,311,500</b>	<b>\$</b>	<b>1,511,500</b>		
<i>Other Areas</i>								
2007/08	Bundanoon	Stage 1 shared pathway extension from Oval to railway pedestrian crossing and missing link along Ellismore road – 500m	\$	124,000	\$	124,000		
2007/08	Robertson	Pathway from Hampden Park to High Street along Caalong Street - 700m	\$	129,000	\$	129,000		
2008/09	Berrima/New Berrima	Gravel Pathway linking the villages (Previous plan funds - not in s.94 plan)	\$	30,000	\$	30,000		
2009/10	Bundanoon	Stage 2 shared pathway linkages from Bundanoon Oval along Old Wingello Road – 1.2km.	\$	289,000	\$	289,000		
<b>Subtotal</b>			<b>\$</b>	<b>572,000</b>	<b>\$</b>	<b>572,000</b>		
<b>GRAND TOTAL</b>			<b>\$</b>	<b>1,883,500</b>	<b>\$</b>	<b>2,083,500</b>		
				<b>\$</b>	<b>200,000</b>	<b>\$</b>	<b>190,667</b>	
							<b>\$</b>	<b>694,500</b>

Bicycle Strategy for Mittagong, Bowral and Moss Vale

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Base Costs of Works from Leichhardt Council 2003/2004

WORKS AND SERVICES							
Line Reference	DESCRIPTION	GST Position	PROPOSED FEE 2003/2004			PRIOR YEAR FEE	
			Inclusive Amount	GST Amount	Exclusive Amount	Inclusive Amount	Basis of Fee
886	<b>ROAD AND FOOTPATH OPENINGS</b> Deposits and Charges Permit Fee (non refundable) plus Deposit - refundable on full payment of restoration amount plus <i>Calculated cost of road and footpath restoration (in accordance with rates below):-</i> <b>Road Openings - Per m2</b> (Note: 25% discount for openings exceeding 30m2) Asphalt (Bitumen, Tar) Asphalt resheet only (25mm thick) Asphalt on concrete base Concrete <b>Footpath Openings - Per m2</b> (Note: 25% discount for openings exceeding 30m2) grass verge Asphalt (Bitumen, Tar) Asphalt resheet only (12mm thick) Asphalt on concrete base Concrete (or concrete, brick or block paving) Precast concrete slab  <b>Crossings -</b> 115mm residential 150mm industrial 200mm industrial  <b>Other</b> Concrete Kerb only or Gutter only - per meter Sandstone Kerb only - per meter Concrete Kerb and Gutter - per meter Sandstone Kerb and Concrete Gutter - per meter Hole in Kerb - per hole Laying 100mm stormwater pipe - per meter Saw cutting - establishment fee 25mm run - per meter Minimum charge Minimum charge will be one unit of area or length except sawcutting. Charge will be calculated to nearest 0.2 unit of area or length. Mainstreet Footpath Paver - per m2  <b>Example :</b> <i>To open a trench 0.5m wide across a 3.6m wide footpath (half concrete, half grass) and 6m into asphalt roadway.</i> Permit Fee Deposit (refundable) Path concrete 1.8 x 0.5 = 1m2 (up to nearest 0.2) Grass 1.8 x 0.5 = 1m2 (up to nearest 0.2) Concrete Kerb and Gutter 0.5 = 0.6m ( up to nearest 0.2) Asphalt Road 6 x 0.5 = 3m2 Payment Required Important Note 1 : On final inspection the cost of any restoration for areas in excess of nominated areas will be deducted from the deposit or charged separately to the applicant. The applicant must return permit to Council before restoration will proceed.	Exempt	62.00	0.00	62.00	60.00	Full
887		Nil	611.00	0.00	611.00	590.00	Deposit
888		Taxable	315.70	28.70	287.00	304.70	Full
889		Taxable	48.95	4.45	44.50	47.30	Full
890		Taxable	387.20	35.20	352.00	374.00	Full
891		Taxable	382.80	34.80	348.00	369.60	Full
892		Taxable	42.35	3.85	38.50	40.70	Full
893		Taxable	152.35	13.85	138.50	147.40	Full
894		Taxable	30.80	2.80	28.00	29.70	Full
895		Taxable	182.05	16.55	165.50	176.00	Full
896		Taxable	188.10	17.10	171.00	181.50	Full
897		Taxable	298.65	27.15	271.50	288.20	Full
898		Taxable	248.60	22.60	226.00	239.80	Full
899		Taxable	315.70	28.70	287.00	304.70	Full
900		Taxable	449.90	40.90	409.00	434.50	Full
901	<b>Other</b> Concrete Kerb only or Gutter only - per meter Sandstone Kerb only - per meter Concrete Kerb and Gutter - per meter Sandstone Kerb and Concrete Gutter - per meter Hole in Kerb - per hole Laying 100mm stormwater pipe - per meter Saw cutting - establishment fee 25mm run - per meter Minimum charge Minimum charge will be one unit of area or length except sawcutting. Charge will be calculated to nearest 0.2 unit of area or length. Mainstreet Footpath Paver - per m2  <b>Example :</b> <i>To open a trench 0.5m wide across a 3.6m wide footpath (half concrete, half grass) and 6m into asphalt roadway.</i> Permit Fee Deposit (refundable) Path concrete 1.8 x 0.5 = 1m2 (up to nearest 0.2) Grass 1.8 x 0.5 = 1m2 (up to nearest 0.2) Concrete Kerb and Gutter 0.5 = 0.6m ( up to nearest 0.2) Asphalt Road 6 x 0.5 = 3m2 Payment Required Important Note 1 : On final inspection the cost of any restoration for areas in excess of nominated areas will be deducted from the deposit or charged separately to the applicant. The applicant must return permit to Council before restoration will proceed.	Taxable	169.95	15.45	154.50	163.90	Full
902		Taxable	224.40	20.40	204.00	216.70	Full
903		Taxable	242.55	22.05	220.50	234.30	Full
904		Taxable	291.50	26.50	265.00	281.60	Full
905		Taxable	85.25	7.75	77.50	82.50	Full
906		Taxable	36.30	3.30	33.00	35.20	Full
907		Taxable	231.00	21.00	210.00	223.30	Full
908		Taxable	26.40	2.40	24.00	25.30	Full
909		Taxable	413.60	37.60	376.00	399.30	Full
910		Taxable	93.50	8.50	85.00	0.00	Full
911		Exempt	62.00	0.00	62.00	59.00	Full
912		Nil	611.00	0.00	611.00	587.00	Full
913		Taxable	188.10	17.10	171.00	181.50	Full
914		Taxable	42.35	3.85	38.50	40.70	Full
915		Taxable	145.53	13.23	132.30	140.80	Full
916	<b>Vehicle Crossings &amp; Associated Works</b> Application fee for vehicular crossing	Taxable	947.10	86.10	861.00	914.10	Full
917		Taxable	2063.38	187.58	1,875.80	1,923.10	Full
918		Taxable	57.20	5.20	52.00	55.00	Full
919		Taxable					
920		Taxable					
921		Taxable					
922		Taxable					
923		Taxable					
924		Taxable					
925		Taxable					
926		Taxable					
927		Taxable					
928		Taxable					
929		Taxable					
930		Taxable					
931		Taxable					
932		Taxable					
933		Taxable					
934		Taxable					
935		Taxable					
936		Taxable					
937		Taxable					
938		Taxable					
939		Taxable					

WORKS AND SERVICES							
Line Reference	DESCRIPTION	GST Position	PROPOSED FEE 2003/2004			PRIOR YEAR FEE	
			Inclusive Amount	GST Amount	Exclusive Amount	Inclusive Amount	Basis of Fee
940	- 115mm residential	Taxable	248.60	22.60	226.00	239.80	Full
941	- 150mm industrial	Taxable	315.70	28.70	287.00	304.70	Full
942	- 200mm industrial	Taxable	449.90	40.90	409.00	434.50	Full
943	Minimum charge	Taxable	922.90	83.90	839.00	891.00	Full
944	Concrete Kerb only/Gutter only	Taxable	169.95	15.45	154.50	163.90	Full
945	Sandstone Kerb only	Taxable	224.40	20.40	204.00	216.70	Full
946	Concrete Kerb and Gutter	Taxable	242.55	22.05	220.50	234.30	Full
947	Sandstone Kerb and Concrete Gutter	Taxable	291.50	26.50	265.00	281.60	Full
948	Footpath concrete	Taxable	188.10	17.10	171.00	181.50	Full
949	Footpath asphalt	Taxable	152.35	13.85	138.50	146.30	Full
950	Relaying stormwater drainage	Taxable	36.30	3.30	33.00	35.20	Full
951	Relaying grass verge	Taxable	42.35	3.85	38.50	40.70	Full
952	Landscaped garden beds	Taxable	102.30	9.30	93.00	99.00	Full
953	Asphalt resheet to gutter	Taxable	81.95	7.45	74.50	79.20	Full
954	Kerb Ramps	Taxable	627.00	57.00	570.00	605.00	Full
955							
956	<b>EXCAVATION</b>						
957	Rock excavation (allows for removal of spoil)	Taxable	392.15	35.65	356.50	378.40	Full
958	Excavation other than rock (allows for removal of spoil)	Taxable	192.50	17.50	175.00	185.90	Full
959	Rock excavation (allows for reuse of materials)	Taxable	354.20	32.20	322.00	342.10	Full
960	Excavation other than rock (allows for reuse of materials)	Taxable	161.70	14.70	147.00	156.20	Full
961							
962	<b>DRAINAGE WORKS</b>						
963	Construction of standard gully pit with extended kerb inlet	Taxable	3644.30	331.30	3,313.00	3517.80	Full
964	Supply and installation of extended kerb inlet	Taxable	892.10	81.10	811.00	861.30	Full
965	Construction of a concrete manhole or standard gully pit	Taxable	3037.10	276.10	2,761.00	2931.50	Full
966							
967	<b>Excavation Supply and laying of reinforced concrete pipes in other than rock</b>						
968	* 300mm dia RCP	Taxable	311.30	28.30	283.00	300.30	Full
969	* 375mm dia RCP	Taxable	361.35	32.85	328.50	348.70	Full
970	* 450mm dia RCP	Taxable	427.35	38.85	388.50	412.50	Full
971	* 525mm dia RCP	Taxable	546.70	49.70	497.00	528.00	Full
972	* 600mm dia RCP	Taxable	660.00	60.00	600.00	636.90	Full
973							
974	<b>DISCOUNTS (Applied to total for each site)</b>						
975	For accounts up to \$3,000						Full
976	- Nil						Full
977	For accounts > \$ 3,000 up to \$ 4,000						Full
978	- 2.5%						Full
979	For accounts > \$ 4,000 up to \$ 5,000						Full
980	- 5.0%						Full
981	For accounts > \$ 5,000 up to \$ 6,000						Full
982	- 7.5%						Full
983	For accounts > \$ 6,000 up to \$15,000						Full
984	- 10%						Full
985	- 15%						Full
1085	<b>Removal of street furniture including cost of restoring original site.</b>						
1086	Seat	Taxable	330.00	30.00	300.00	0.00	Full
1087	Bin	Taxable	330.00	30.00	300.00	0.00	Full
1088	Bus Shelter	Taxable	3850.00	350.00	3500.00	0.00	Full
1089	J C Decaux phone booth	Taxable	1650.00	150.00	1500.00	0.00	Full
1090							
1091	<b>Relocation of street furniture including cost of restoring original site &amp; installation at alternative position</b>						
1092	Seat	Taxable	495.00	45.00	450.00	0.00	Full
1093	Bin	Taxable	495.00	45.00	450.00	0.00	Full
1094	Bus Shelter (includes relocation of communications & electricity connections)	Taxable	8800.00	800.00	8000.00	0.00	Full
1095	J C Decaux phone booth (includes capping off of communications & electricity)	Taxable	3850.00	350.00	3500.00	0.00	Full

# Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

## Bridge Construction Cost

CPI

4%

Location	Length	Width	Cost Est	Year	Cost 2006	Cost 2006 per Square Metre
<b>Ex North Shore Cycleway 2003</b>						
Falcon Street Ramp & Bridge	210	4.0	\$ 1,600,000	2003	\$ 1,799,782	\$ 2,143
Ernest Street Underpass (cut and cover tunnel)	75	4.0	\$ 170,000	2003	\$ 191,227	\$ 637
West Street Ramp	108	4.0	\$ 1,000,000	2003	\$ 1,124,864	\$ 2,604
Brook Street Ramp & Bridge	184	4.0	\$ 1,250,000	2003	\$ 1,406,080	\$ 1,910
Triple Bridges over Park Street and Drainage Channels	110	4.0	\$ 800,000	2003	\$ 899,891	\$ 2,045
Brand Street Circular Ramp	159	4.0	\$ 1,000,000	2003	\$ 1,124,864	\$ 1,769
Mowbray Road Underpass	86.5	4.0	\$ 420,000	2003	\$ 472,443	\$ 1,365
<b>Total</b>	<b>932.5</b>	<b>4.0</b>	<b>\$ 6,240,000</b>		<b>\$ 7,019,151</b>	<b>\$ 1,882</b>
<b>Ex Bay Run Cycle Way 1999</b>						
Iron Cove Bridge - Bridge Path	470	4.4	\$ 6,204,000	1999	\$ 8,164,041	\$ 3,948
Iron Cove Bridge - Southern Abutment Underpass	30	3.8	\$ 342,000	1999	\$ 450,049	\$ 3,948
Iron Cove Bridge - Northern Cycleway Ramp	150	3.8	\$ 1,710,000	1999	\$ 2,250,243	\$ 3,948
Iron Cove Creek - new structure	22	5.0	\$ 308,000	1999	\$ 405,307	\$ 3,685
<b>Total</b>	<b>672</b>	<b>4.3</b>	<b>\$ 8,564,000</b>		<b>\$ 11,269,640</b>	<b>\$ 3,938</b>
<b>GRAND TOTAL</b>	<b>1604.5</b>	<b>4.1</b>	<b>\$ 14,804,000</b>		<b>\$ 18,288,791</b>	<b>\$ 2,774</b>

## Major Pathways Construction Cost

Project	Cost / km (2003)	Cost / km (2006)
Currently Preferred Route (North Shore Cycleway)	\$2,650,000	\$2,980,890
Previously Preferred Route (North Shore Cycleway)	\$280,000	\$314,962
Western Sydney Orbital	\$1,250,000	\$1,406,080
Bay Run Cycleway	\$1,070,000	\$1,203,604
Sirathfield to Eastwood (rail corridor)	\$400,000	\$449,946
Parramatta to Liverpool (rail corridor)	\$700,000	\$787,405
M4 Viaducts	\$2,166,667	\$2,437,205
Prospect Cycleway	\$950,000	\$1,068,621
M5 East Motorway	\$450,000	\$506,189
<b>Average</b>	<b>\$1,101,852</b>	<b>\$1,239,433</b>
	min	\$310,000
	average	\$1,240,000
	max	\$ 2,980,000

Sources

JFA/STC North Shore Cycleway Rpt, July 2003, p65

JFA/STC Bay Run Cycleway Rpt, Nov 1999, p31

# Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

## Sample Locker/Site Costings Provided by Bicycle NSW

Costs calculated on proposed supply tender contract costs as at Sept 03.  
Assumes metro location, no travel costs. No GST.

Basic Costs	Sample Site - 6 Boxes	
	Horizontal	Vertical
Locker Unit	\$1,407.00	\$1,342.00
Slab Cost	\$810.00	\$810.00
Numbering	\$52.00	\$26.00
Cost	\$2,269.00	\$2,178.00
No. of Bikes	2	1
Cost per bike	\$1,134.50	\$2,178.00
Additional Items		
Lighting	\$1,450.00	\$1,450.00
Site Signage	\$158.00	\$158.00
Muliple Lockers		
Cost per 4 bikes	\$4,538.00	\$8,712.00
Cost per 6 bikes	\$6,807.00	\$13,068.00
Cost per 8 bikes	\$9,076.00	\$17,424.00
Cost per 10 bikes	\$11,345.00	\$21,780.00
Cost per 12 bikes	\$13,614.00	\$26,136.00
Cost per 18 bikes	\$20,421.00	\$39,204.00

Sample Site - 6 Boxes		
	Horizontal	Vertical
6 Lockers	\$6,807.00	\$13,068.00
Light	\$1,450.00	\$1,450.00
Signage	\$158.00	\$158.00
Total Cost	\$8,415.00	\$14,676.00



# Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

## Green Pavement Costs

**From:** PICONE Robert  
**Sent:** Friday, 11 October 2002 14:40  
**To:** SHERWIN Stephen; MORAN Craig; VARGA Keith; MARGISON Phil; DONALDSON Brad; LUNSMANN Rolf  
**Subject:** FW: red SMA7  
[FYI.](#)

I had previously calculated the red SMA to be \$28.00 per square metre based on the \$500 per tonne rate that I was given by SCS. It is now nearly double at \$53.22 per square metre. Notwithstanding, still cheaper that the epoxy overlay product at about \$60.  
53.22  
[Regards](#)  
[RP](#)

-----Original Message-----

**From:** MANN Peter  
**Sent:** Friday, 11 October 2002 14:27  
**To:** PICONE Robert  
**Subject:** red SMA7

Robert

I've been going through Boral's alternative tender for the last asphalt contract. They actually priced the red SMA7 at \$53.22 (GST inclusive)/m2. Given the surface voids of SMA and the thickness of only 25mm, the bulk density of the compacted asphalt is closer to 2 tonne/m3 instead of 2.4 for dense grade asphalt with basalt aggregate. This equates closer to \$1000/tonne than the \$500 you have previously used. I'd pay more attention to the square metre rate which is what the coaters use. This rate is in the same ball park as the better coatings (on new work only).

regards  
Peter

# Bicycle Strategy for Mittagong, Bowral and Moss Vale

Job No 5606  
Date Oct-08

## Extract - North Shore Cycleway Report

North Sydney to Chatswood

4419  
Jun-03

### Preliminary Cost Estimates

Section	Length (m)	New Pavement	Pavement Repairs	New Jersey Barrier	Protective Fence	Bridge Structures	Retaining Walls	Priority Bicycle Intersection	Lighting	Signposting and Linemarking	Contingencies	Total
<i>Cost rate per linear metre</i>												
<b>Warringah Expressway Corridor</b>												
Falcon Street to Ernest Street <sup>1)</sup>	240		\$4,800	\$72,000	\$9,600	\$1,600,000				\$4,800	\$507,360	<b>\$2,198,560</b>
Ernest Street to Miller Street <sup>7)</sup>	450		\$9,000	\$135,000	\$18,000	\$170,000				\$9,000	\$102,300	<b>\$443,300</b>
Miller Street to West Street <sup>2)</sup>	250		\$5,000	\$75,000	\$10,000	\$1,000,000				\$5,000	\$328,500	<b>\$1,423,500</b>
West Street to Brook Street <sup>3)</sup>	400	\$6,400	\$8,000	\$120,000	\$16,000	\$1,250,000		\$30,000		\$8,000	\$431,520	<b>\$1,869,920</b>
Brook Street to Merrenburn Avenue <sup>4)</sup>	490		\$9,800	\$147,000	\$19,600					\$9,800	\$55,860	<b>\$242,060</b>
<b>Subtotal Warringah Expressway Corridor</b>	<b>1,830</b>	<b>\$6,400</b>	<b>\$36,600</b>	<b>\$549,000</b>	<b>\$73,200</b>	<b>\$4,020,000</b>	<b>\$0</b>	<b>\$30,000</b>	<b>\$0</b>	<b>\$36,600</b>	<b>\$1,425,540</b>	<b>\$6,177,340</b>
<b>North Shore Railway Corridor</b>												
Chelmsford Avenue to Burra Street <sup>4)</sup>	810	\$129,600			\$40,500	\$800,000			\$81,000	\$16,200	\$320,190	<b>\$1,387,490</b>
Burra Street to Brand Street <sup>5)</sup>	410	\$32,800	\$4,100		\$20,500	\$1,000,000			\$41,000	\$8,200	\$331,980	<b>\$1,438,580</b>
Brand Street to Mowbray Road <sup>6)</sup>	350	\$56,000			\$17,500	\$420,000			\$35,000	\$7,000	\$160,650	<b>\$696,150</b>
Mowbray Road to Nelson Street	150	\$24,000			\$7,500		\$150,000	\$30,000	\$15,000	\$3,000	\$68,850	<b>\$298,350</b>
Nelson Street to Chatswood Oval Underpass	380	\$60,800			\$19,000		\$190,000		\$38,000	\$7,600	\$94,620	<b>\$410,020</b>
<b>Subtotal North Shore Railway Corridor</b>	<b>2,100</b>	<b>\$303,200</b>	<b>\$4,100</b>	<b>\$0</b>	<b>\$105,000</b>	<b>\$2,220,000</b>	<b>\$340,000</b>	<b>\$30,000</b>	<b>\$210,000</b>	<b>\$42,000</b>	<b>\$976,290</b>	<b>\$4,230,590</b>
<b>GRAND TOTAL</b>	<b>3,930</b>	<b>\$309,600</b>	<b>\$40,700</b>	<b>\$549,000</b>	<b>\$178,200</b>	<b>\$6,240,000</b>	<b>\$340,000</b>	<b>\$60,000</b>	<b>\$210,000</b>	<b>\$78,600</b>	<b>\$2,401,830</b>	<b>\$10,407,930</b>

#### Sources

- 1) Rawlinsons (1999). Australian Construction Handbook. 17th edition. Figures increased by 4% per annum to 2003.
- 2) Jamieson Foley et al (1998). Two Regional Bicycle Routes. North Sydney to Chatswood. North Sydney to Macquarie. Final Report
- 3) Bridge cost estimates provided by Max Brand Consulting specifically for this project

#### Notes

- 1) Includes bridge structure over existing / modified northbound off-ramp; excludes realignment of pathway from Ridge Street excludes realignment of pathway from Ridge Street
- 2) Includes bridge structure on southern approach to West Street
- 3) Includes bridge structure over Brook Street on-ramp
- 4) Excludes works proposed under Lane Cove Tunnel project such as pathway north of Merrenburn Avenue, pathway south of Gore Hill Freeway, pedestrian bridge amplification at Willoughby Road excludes proposed modifications to Lane Cove Tunnel project at pedestrian overbridge and Chelmsford Avenue includes triple bridges at Park Street over "camel's humps"
- 5) Includes bridge structure at Brand Street excludes works adjacent to Artarmon Railway Station
- 6) Includes bridge structure at Mowbray Road
- 7) Includes cut&cover tunnel at Millar Street off-ramp, as calculated by Jamieson Foley

Summary Table

Section	Length (m)	Pavement & New Jersey Barriers	Bridge Structures	Other Costs	Total
<b>Warringah Expressway Corridor</b>					
Falcon Street to Ernest Street(1)	240	\$76,800	\$1,600,000	\$521,760	\$2,198,560
Ernest Street to Miller Street(7)	450	\$144,000	\$170,000	\$129,300	\$443,300
Miller Street to West Street(2)	250	\$80,000	\$1,000,000	\$343,500	\$1,423,500
West Street to Brook Street(3)	400	\$134,400	\$1,250,000	\$485,520	\$1,869,920
Brook Street to Merrenburn Avenue(4)	490	\$156,800		\$85,260	\$242,060
<b>Subtotal Warringah Expressway Corridor</b>	<b>1,830</b>	<b>\$592,000</b>		<b>\$1,565,340</b>	<b>\$6,177,340</b>
<b>North Shore Railway Corridor</b>					
Chelmsford Avenue to Burra Street(4)	810	\$129,600		\$1,257,890	\$1,387,490
Burra Street to Brand Street(5)	410	\$36,900		\$1,401,680	\$1,438,580
Brand Street to Mowbray Road(6)	350	\$56,000	\$420,000	\$220,150	\$696,150
Mowbray Road to Nelson Street	150	\$24,000		\$274,350	\$298,350
Nelson Street to Chatswood Oval Underpass	380	\$60,800		\$349,220	\$410,020
<b>Subtotal North Shore Railway Corridor</b>	<b>2,100</b>	<b>\$307,300</b>	<b>\$420,000</b>	<b>\$3,503,290</b>	<b>\$4,230,590</b>
<b>GRAND TOTAL</b>	<b>3,930</b>	<b>\$899,300</b>	<b>\$420,000</b>	<b>\$5,068,630</b>	<b>\$10,407,930</b>

Cost Comparison

Project	Cost / km (2008)	Cost / km (2003)	Cost / km (1998)	Relative Costs	Length	Total Cost
Currently Preferred Route (North Shore Cycleway)	3,220,000	\$2,650,000		1.00		\$ -
Previously Preferred Route (North Shore Cycleway)	340,000	\$280,000	\$230,000	9.46	40	\$ 50,000,000
Western Sydney Orbital	1,520,000	\$1,250,000		2.12	7	\$ 7,490,000
Bay Run Cycleway	1,300,000	\$1,070,000	\$880,000	2.48	8	\$ 3,200,000
Strathfield to Eastwood (rail corridor)	490,000	\$400,000	\$325,487	6.63	17	\$ 11,900,000
Parramatta to Liverpool (rail corridor)	850,000	\$700,000		3.79	6	\$ 13,020,000
M4 Viaducts	2,640,000	\$2,170,000		1.22		\$ -
Prospect Cycleway	1,160,000	\$950,000		2.79		\$ -
M5 East Motorway	550,000	\$450,000	\$370,000	5.89	16	\$ 7,200,000
<b>Average</b>	<b>1,340,000</b>	<b>1,100,000</b>	<b>450,000</b>			
<i>CPI 4%</i>						

Cost of Cut & Cover Tunnel at Miller Street off Ramp

Element	volume	unit	rate	cost
cut - 5m wide, 3m high, 15m wide (sandstone)	225	m3	120	\$27,000
cover - 5m long, 15m wide road bridge	75	m2	1380.4331	\$103,532
path - 3m wide, 15m long	15	m	160	\$2,400
approaches - 30m path each side	60	m	160	\$9,600
landscaping & miscellaneous		say		\$30,000
				<b>\$172,532</b>

## APPENDIX G - PICTON TO MITTAGONG RAIL TRAIL

## **Picton to Mittagong Rail Trail, NSW - Sample Project**

**Wollondilly Shire Council and Wingecarribee Shire Council  
Federal Electorate: Hume**

### **The project**

From Picton to Mittagong there exists a section of what used to be the main southern railway. This section has been by-passed by a newer straighter section of railway. The section from Picton to Thirlmere is still used by the Thirlmere Rail Museum to run Tourist Train excursions on an irregular basis. A short section of rail extends to Buxton. From there it continues on to Mittagong. Most of this section is still in good condition and without rail being in place. In this section is located what is believed to be the deepest railway cutting in Australia.



Recently the NSW Government allocated \$14.6 million to the museum to upgrade the facilities to enable the heritage rolling stock, including locomotive 3801, which is presently housed at Everleigh to be relocated to Thirlmere.

Wollondilly Shire Council has recently initiated a Cycle Tourism project and the Rail Trail will be a cornerstone of the initiative. Wingecarribee Shire Council has expressed interest in participating in the project.

### **The benefits**

This Rail Trail will contribute to increased tourism numbers. Picton is in close proximity to Sydney - a short drive or train trip. Trains service both Picton and Mittagong. In addition the Rail Museum plans to increase the number of tourist trips to and from Sydney. Cycle tourism is a growing market, attracting local, national and overseas tourists. This project would form a critical section of a Sydney to Melbourne Cycling Route, and link into planned Tourist Rides within Wollondilly Shire.

The value to local communities of cycle tourism is well documented, and the Southern Highlands has much to offer. This project will provide the impetus to drive a healthy, non-polluting and enjoyable recreational activity that will enhance the local communities.

This project would provide incentive and momentum for the expansion of the cycle tourism network in both local government areas, creating a much needed boost to their economies.

### Consultation and support

A local committee has been formed consisting of members of the local Chambers of Commerce, the Wollondilly Tourism Association, local cycling clubs, interested community members and a council representative. Discussions have commenced with the Thirlmere Rail Museum. Local Newspapers have publicised the initiative and community support is evident.

### Costing

The proposal is for a 3m gravel pathway, separated by an appropriate fence from the active rail section, commencing at Picton and following the existing railway corridor. The length of the trail would be approximately 30km. The estimated cost of the project is \$5 million. This could be covered by a \$2million grant to each Council, with the communities to raise the additional funds.

