Riverina Highlands Rail Trails Feasibility Study

Prepared for

Riverina Regional Development Board

RIVERINA naturally

By

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Planning and Design

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June 2006

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EXECUTIVE SUMMARY

The future use of the disused railway lines between Wagga Wagga and Tumbarumba and between Tumut and Batlow has been the subject of considerable discussion over recent years – especially over the proposal to develop recreational trails along the corridors.

Most of the Wagga Wagga to Tumbarumba line closed in 1974 and for much of the last 30 years alternative uses have been made of the corridor, including a range of agricultural uses such as grazing and the storage of farm machinery and produce. The Tumut to Batlow line closed in 1984 though for a short time in the late 1980's and early 1990's a tourist railway was operating on a section of the line.

The railways remain in public ownership, with the Australian Rail Track Corporation Ltd managing the corridors on behalf of Rail Corporation New South Wales (RailCorp).

Some farmers have taken out leases to utilise sections of the corridor for the grazing of their cattle or sheep, for the movement of machinery and stock or for the storage of equipment and/or produce. However, some sections of the corridors have been unused and grasses, weeds and bush have grown within the corridors.

The Wagga Wagga to Tumbarumba line passes through three local government areas: the City of Wagga Wagga (Wagga Wagga to the Downfall Road), the Greater Hume Shire Council (in the area of the Carabost State Forest) and the Tumbarumba Shire Council. A significant area passes through natural and plantation forests, in the area known as The Downfall, and therefore managed by State Forests of NSW.

The Tumut to Batlow line is located entirely within the Tumut Shire Council area.

The Wagga Wagga to Tumbarumba railway was opened in 1917 (Wagga Wagga to Humula) and 1921 (Humula to Tumbarumba). The Gilmore to Batlow branch line was opened in December 1923.

The Wagga Wagga to Tumbarumba railway line travels through some spectacular country, with magnificent views of hills and mountain ranges, creeks and forests.

It is understood that at that time there was considerable discussion and debate over the alignment of the railway – particularly the Wagga Wagga to Tumbarumba line. Having a railway close to one's farm was considered a significant advantage as it meant less distance to have to transport goods, produce and stock. Having a railway station, platform or siding was an even bigger advantage – for the same reasons. Consequently, there was much argument over the precise alignment of the railways, with farmers actually wanting the railways to pass through, and sidings located on, their properties. Close proximity to the line and the sidings increased the value of a farm.

The winding nature of the Wagga Wagga to Tumbarumba line is said to be a direct outcome of the desire to please as many farmers as possible at that time, as a straight line would have been the most efficient and cheapest construction method (topography notwithstanding).

It is understood that both railways were constructed as 'unfenced lines' – a situation that is reasonably unique as most railways elsewhere in Australia were fenced to prevent trespass or the straying of stock on to the railway tracks. In some cases Parliament decided to dispense with the obligation to erect fencing on some country lines in NSW. This situation is particularly important to the discussion of whether recreation trails can and should be constructed on the formations of the former railways, as many of the adjoining farms have stock that either freely travel across the corridors on a daily basis, or stock that require separation from people passing by.

Some important reminders of the former railways do remain. Classic railway buildings still exist; old signals are still in place and switches are still readily found. The Ladysmith station has been restored to its former glory, and the Tumba Rail group is in the process of resuming a tourist 'trike' operation. At Tumut the station and several other buildings remain in place.

Many relics of the railways exist along both corridors including various signs, station buildings, platforms and of course the cuttings and embankments – all adding to the attraction of the rail trail experience.

At other station sites, goods sheds and platforms remain. Along both corridors numerous bridges, culverts and assorted railway paraphernalia can still be seen. Mile pegs are a common sight and, especially on the Wagga Wagga to Tumbarumba line, deep cuttings and high embankments are a feature.

The Wagga Wagga to Tumbarumba line is approximately 129 kilometres and has 32 timber bridges ranging in size from 3.0 metres to over 60 metres (over Keajura Creek).

The Tumut to Batlow line is approximately 32 kilometres long and has 22 bridges ranging in size from 1.5 metres to 66 metres (over the Gilmore Creek).

Each of the corridors, like so many other disused railway corridors around Australia, has faced an uncertain future since the closure of the lines. The short term leasing of sections of the corridors to adjoining farmers, and others, has resulted in the ongoing maintenance of the corridor being 'shared' between many people.

There is no overall management plan, nor a maintenance program, in place. However, it is the policy of the New South Wales government that the railway corridors will remain in public ownership.

This being the case, a future use that sees the corridors being used and actively managed will be of benefit to everyone. Many see the development of recreation trails on each corridor as the ideal use. The purpose of this feasibility study is to examine that very issue. While it might physically be possible to construct a trail along a disused railway formation, it is not necessarily a given that doing so is in the best interests of the community – due to the expense, the expected use of the proposed trail and a host of other factors. This feasibility study examines a wide range of factors that determine whether a trail on one or both railway corridors is indeed feasible.

In the years following closure of the railways considerable deterioration of the assets of the corridors has occurred. Some bridges have been washed away, the corridors have become overgrown with weeds and grasses in some locations, some sections of the track have been removed, bridge decking and structural components have been removed or have rotted, and little remains of the infrastructure within some of the station areas.

Reconstruction and re-decking of the old bridges along each railway is likely to be one of the most expensive of the construction items.

However, over the years many of the neighbouring landowners have leased portions of the corridor and/or stations for a variety of uses including grazing and storage of farm machinery and equipment. The embankments of the former railways are now used in some cases to provide vehicular access to properties, or access from paddock to paddock. The old railway formations have also been used for the movement of farm machinery (such as tractors), as they provide a dry all-weather route. Farmers also herd their stock along and/or across the corridors, from one paddock to another. The unfenced nature of the corridors means that stock freely move across the corridors to watering points and feed locations.

In the time since the lines were closed a number of new residences and sheds have been built close to the railway corridors. Nearby residents and farmers have become accustomed to the fact that there has been little or no public usage of the railways since passenger and goods services ceased many years ago.

As the corridors were originally unfenced, and much of the length of the corridors remain unfenced, stock have been free to wander and graze without limitation – thereby providing an active management of weeds and grasses.

Despite some sections of the railway corridors being used by adjoining farmers, not all of the corridors have been well managed. Long stretches of the corridors are unused, and waist high grasses and weeds have become prevalent.

The proposal to develop trails on the disused railway corridors has been around for a few years, with mixed reactions. Many farmers living and working alongside the corridors are greatly concerned about the prospect and the possible disruption to long established farming practices, and the possible invasion of their privacy.

On the other hand, many others in the communities through which the railways once passed are welcoming the prospect of a recreation trail as the evidence shows that rail-trails are becoming very popular throughout Australia and with them come a range of benefits which studies have shown far outweigh the disadvantages.

There has not, until now, been a concerted effort to discuss in detail the concerns of farmers, and the possible solutions. This feasibility study has included 5 community meetings to ascertain the feelings of people in the community, and a considerable amount of fieldwork undertaken including assessment of the corridors and on-site discussions with several adjoining landowners.

The scenery of the Gilmore Valley from the railway corridor between Tumut and Batlow is stunning, and is one the reasons why this potential rail trail could become one of the best – if not the best – in Australia

Given the tremendous success of trails on other disused railways elsewhere in Australia (especially in Victoria, Tasmania and Western Australia), and overseas, this Feasibility Study was commissioned by the Riverina Regional Development Board to establish whether the development of 'rail-trails' along each of the corridors was feasible and, if so, what the development costs of each 'rail-trail' would be.

The task of this 'feasibility' study was to attempt to balance all factors and arrive at recommendations that would produce the greatest positive benefits for the broadest cross-section of the community.

The main tasks of this study were to:

- Provide an overview history of rail trail developments in NSW and other States and give an outline of the basic concepts and features of existing rail trail developments.
- Provide a description of the corridor.
- Undertake an economic evaluation of the project including the expected benefits and costs associated with the complete rail trail development.
- Identify and discuss the main issues concerning the proposed development and give recommendations concerning the subsequent approval and implementation process.

In this feasibility study the 'community' was defined to be not only the 'local community' (ie. people living and working alongside each of the railway corridors), but also all those people living in the wider local government areas and the Riverina as a region - and the whole of the population of NSW, the Australian Capital Territory and Victoria, too. Naturally, those living alongside the corridor have a direct and often very personal interest in the corridor, but it must be remembered that it is 'public land' and is in fact 'owned' by everyone in NSW.

Extensive field work – and the voices of many landowners who attended the five community meetings (Forest Hill, Humula, Tumbarumba, Batlow and Tumut) – made it quite clear that over time many people have taken on a de-facto management role of 'their' section of the corridor. In a not-inconsiderable number of cases the corridor has been 'absorbed' into neighbouring farm land and has become an intrinsic part of farming operations.

Naturally, these people – some of whom have formal leases to sections of the railway corridor – are disturbed about the prospect of change to a situation that they have grown accustomed to. The proposal for a recreation trail along each of the railway corridors has aroused quite understandable concerns – concerns that mirror those raised in numerous similar 'rail-trail' conversion situations right around the world.

These concerns include:

- Fire risk; and safety of users in the event of a fire
- Theft of property
- Reduced privacy
- Stock theft and disturbance
- Hindrance to farming practices
- Loss of farming land
- Gates left open
- Farm safety
- Litter
- Dogs bothering stock
- Decreased property values
- Vandalism
- Spray drift
- Possible loss of disease-free accreditation
- Possible need for fencing and the impacts on farming practices
- Weed control
- Unauthorised usage (such as by motor bikes)

Fortunately there is a wealth of experience from other very similar situations around the world (including numerous examples in Victoria and elsewhere around Australia). Almost without exception that experience suggests that trails along disused rail corridors do not cause the problems and issues that are commonly anticipated.

The Rails to Trails Conservancy (RTC) in the USA provides a huge volume of background information from which we can learn. The RTC has overseen the development of nearly 1200 rail-trails nation wide (for a total of 12,535 rail-trail miles – 20,180 kilometres).

Numerous studies have been conducted and all provide evidence that the problems feared by adjoining landowners rarely, if ever, actually occur. In fact, more often than not, people living next to rail-trails (who were originally opposed to the project) discover that active management of the corridor is better in the overall than ongoing neglect and uncertainty. Indeed, many of these people – former opponents of a rail-trail conversion – become strong supporters as they find the benefits actually outweigh the costs.

This is certainly the case for the Lilydale to Warburton Rail Trail in Victoria, an area where the predominant neighbouring land use is grazing of cattle – similar to the situation along significant sections of both railway corridors under examination.

This is not to say that the concerns raised by landowners in this case are not worthy of attention. In fact, quite the opposite is true. Many of these concerns are legitimate and warrant careful consideration. No doubt, some landowners will have to change the way they have done things, should one or both rail-trails proceed. Compromises will need to be made. The process of determining case-by-case resolution of practical issues then becomes central to this scenario.

This is not then so much a case of people raising unfounded issues – rather, it is a case of people raising issues that need to be (and can be) resolved. Should enough of these issues have been considered insurmountable this Feasibility Study would have produced a different outcome.

In balancing these concerns and issues it has to be recognised that as recreational trails, the former railway corridors between Wagga Wagga and Tumbarumba and between Tumut and Batlow have quite outstanding potential. They have the capacity to provide long distance 'linear parks' through interesting and extraordinarily scenic landscapes – and such opportunities do not arise often.

From a trail perspective, the former railway corridors are very attractive:

- the corridors (especially the Batlow to Tumut line) are set in highly scenic landscapes, full of variety and interest (though local people who have farmed this area for decades do not realise the inherent beauty of the landscape);
- both corridors commence and finish in towns, and in the case of the Wagga Wagga to Tumbarumba line passes through several smaller towns;
- they are situated in relatively close proximity to sizeable populations including 60,000 in Wagga Wagga and the 325,000 of the ACT, and are easily accessible by car from a wide ranging area (including, potentially, Sydney and Melbourne);
- the major elements of the railway infrastructure remain (formation, cuttings, embankments and most of the bridges and culverts);
- despite the passage of time, the continuity of the former railway corridor is excellent – there being no discontinuities (other than the short section which passes through the RAAF base and airport at Forest Hill);

- the railway formation (through cuttings and along embankments) provides a gentle gradient, suitable for all types of cyclists, walkers, and where appropriate, horse riders;
- sponsorship from the corporate sector is highly likely, given the proximity of several major companies, notably cardboard and packaging companies and timber millers; and
- each of the corridors provide for an excellent length ride or walk and offer great flexibility of use options (long, medium or short walks and rides). In particular, the Batlow to Tumut line (32 km) provides an ideal length for a full day's cycle ride. The Wagga Wagga to Tumbarumba line (130 km) has several smaller towns and other accommodation options (existing and proposed) and lends itself to a multi-day recreational experience.

There are substantial benefits to be gained by the development of recreational trails along the former railways. These benefits include:

- economic benefits accruing to businesses in the towns which are connected by the trails, through expenditure by visitors using the trails;
- health benefits, gained by anyone in the community who uses the trails for fitness, leisure and exercise;
- environmental benefits, through a concerted effort to eradicate weeds and undertake other landcare projects along the corridors; and
- improved fire management, through a more concerted effort at control of grasses, bridge reconstruction and unhindered access for emergency vehicles along the corridors.

A fuller discussion of the many benefits of trails, including rail-trails, is presented within this feasibility report.

Rail-trails, by their very nature, have become very popular with numerous rail-trails already existing in Australia and many more on the 'drawing boards'. Why is this so? And why, as many opponents to the proposal have suggested, not develop cycle trails on the local road system?

Rail-trails have become very popular attractions all over the world for very good reasons and, as stated earlier, there are now well over 1,200 rail trails in the USA alone. Rail-trails have several important advantages over other walk/cycle trail experiences:

- they provide a motor vehicle free route, suitable therefore for people of all ages and abilities;
- the railway formations provide a gentle gradient and sweeping bends, suitable for a range of different user groups (cyclists, walkers, parents with prams, elderly people in gophers, etc);
- they are easily accessibility to large population centres both for visitors and as a stimulus for local demand;

- they provide a unique experience and through good interpretation of the heritage values on the trail (such as historic stations, bridges, tunnels) they add significantly to the user's experience;
- the railway corridors are usually located in highly scenic surrounds, with spectacular views of the surrounding landscapes full of variety and interest;
- they have natural termini in major centres/towns (as the trains started and ended in towns); and there are usually intermediate towns easily accessible along the trail – critical when a trail is long; an added bonus when the trail is short; and
- rail-trails have interesting historic railway features – tunnels (sometimes), high embankments, deep cuttings, railway buildings, stations, goods sheds, sidings, platforms, switches, signals, mile posts. These are unique features not found anywhere else in the urban or rural landscapes and, accordingly, are the very reason why rail-trails have become so popular around the world.

The cost of developing a trail along the Wagga to Tumbarumba corridor has been estimated at $4.98 million (plus GST). The cost of developing a trail along the Tumut to Batlow corridor has been estimated at $0.93 million (plus GST). Though this might seems excessive, and well beyond the reach of the combined Councils' financial resources, that construction cost must be taken in context. Roads, especially freeways, cost many millions. This project will provide significant health benefits to the many thousands of potential users. The trails will also stimulate economic benefits to the towns through which they pass – if the experience of other trails (including rail-trails) is any guide. Funds spent on these rail-trails will provide financial benefits to the region by future trail users, if projected expenditure by visitors is reliable.

One source of funds for much of the construction may come from the sale of salvageable materials from within the corridors. External funding sources, such as AusIndustry's *Australian Tourism Development Program*, could also provide a significant contribution to construction of the trails.

This feasibility study recommends that the development of trails on the disused railway corridors be a staged process over a number of years, enabling the community an opportunity to gauge the use and success of, and any issues associated with, the initial stages.

The recommended staging is as follows:

1. Wagga Wagga (Equex Centre) to Forest Hill
2. Equex Centre to Wagga Wagga Station
3. Entire Batlow to Tumut line
4. Tumbarumba to Rosewood
5. Rosewood to Umbango
6. Umbango to Humula
7. Humula to Tarcutta
8. Forest Hill to Ladysmith
9. Ladysmith to Tarcutta

There are ways of reducing the costs of the projects. Full commercial rates have been applied to all aspects of trail construction. It may be beneficial for the Committee of Management to follow a suggestion of this report which is for the project to supply fencing materials, and for the adjoining farmers to install the new fences in their own time – where required and appropriate. This has worked successfully on other rail-trail projects where adjoining farmers have been co-operative and have seen the advantages of becoming involved in the project.

Funding for these trails is available from a wide range of sources – as outlined in this report. Of particular significance is the proximity of 3 or 4 major corporate entities alongside the trails, in the towns, or within the region, which augurs well for major corporate sponsorship of these important community facilities.

Low cost labour sources are available too, including volunteers and prison crews from the Mannus Prison, which would significantly reduce some of the costs involved in this project.

In summary, the railway corridors offers an uncommon array of advantages to future trail conversions. These advantages – and the benefits that can flow from them – have been weighed against the concerns raised by adjoining landowners, and the other issues associated (cost, maintenance etc) to deliver the outcome set out in the Feasibility Statement below.

FEASIBILITY STATEMENT

Following due consideration of all issues pertaining to the development of trails within the former railway corridors, and taking into account the views of *all* stakeholders consulted, this Study recommends that both railway corridors be the subject of rail-trail conversions, *subject to a number of conditions being met*.

These conditions should be considered an integral part of the 'package', and this must be recognised by the Riverina Regional Development Board, the Riverina Highlands Rail Trails Committee, all local governments involved and other key stakeholders when considering whether or not to move forward with this recommendation.

The conditions upon which both rail-trail conversions should proceed are:

1. A Committee of Management, comprising representatives of each local government, State Forests, Lands Department, current members of the Riverina Highlands Rail Trails Committee ***and adjoining landowners***, be formed to guide the ongoing planning, design and construction, management and maintenance of the proposed rail trails and the former railway corridors.
2. Detailed trail design development plans for each rail-trail be prepared, which will involve a thorough examination of each corridor, the preparation of detailed works lists and cost estimates, as well as detailed one-on-one discussions on-site with all affected adjoining landowners to ascertain their individual concerns and to work out together solutions to each issue raised.
3. The preparation of community-driven Corridor Management Plans before construction, including a comprehensive maintenance program for each trail and corridor;
4. The preparation of Bush Fire Risk Management Plans for each corridor;
5. The preparation of a maintenance program, as part of the Corridor Management Plan, detailing the ongoing maintenance of the trails;
6. The Committee of Management (CoM) for the rail-trails and corridors, together with several additional representatives of the adjoining landowners, work closely with CoM's of other rail-trails and assemble information pertinent to the development of the rail-trails and on-going management and maintenance issues. In order to become more familiar with other rail-trails (such as the Murray to the Mountains and the Lilydale to Warburton) and to gain awareness of issues and solutions, it is recommended that the CoM hire a bus and visit those other trails and meet on-site with the CoM's and adjoining landowners;
7. A comprehensive program of one-on-one in the field consultation with affected landowners, to resolve *together* all pertinent issues;
8. The CoM give its support for the relocation of side fences (where they exist) and/or the erection of new fences (should they be required) to create a narrower trail corridor, allowing adjoining farmers to enjoy a long-term lease of the 'surplus' corridor land;
9. The cost of fencing and (reasonable) privacy screening are not to be the sole responsibility of landowners. New, renovated and relocated fencing costs (where required by landowners) to be shared between the trail proponent and adjoining landowners;

10. Grazing and various other existing uses of the corridor to be considered on their merits, and suitable solutions found to enable the activity to continue where reasonably achievable;
11. The trail to be located within the corridor to achieve the lowest impact on privacy (in proximity to houses) even if this means going off the formation itself (and using adjoining road reserves);
12. Council/State agencies are to assume liability responsibility for trail users and are to take all actions possible to mitigate potential claims against landowners and neighbours;
13. A policy decision is to be implemented to make the majority of each trail 'no dogs' – though the section between Wagga Wagga and Forest Hill and the section between Tumut and Gilmore could be declared 'dogs on leads';
14. 'Wide' sections of each railway corridor (such as at former station and siding sites) to be available for long term licence arrangements where appropriate with adjoining landowners, or others, with the trail to be located along one 'edge';
15. A trail-user monitoring / feedback program is to be established, whereby the numbers of different trail users are recorded and the views of trail users are sought so that suggestions for improvements can be acted upon; and
16. The Committee of Management give consideration to the appointment of a trail manager so that landowners have a direct point of contact for issue resolution. Further, a survey of neighbours is to be undertaken following development of the initial stages.

This is a substantial – and complex – project. Several agencies, State Government departments and several local governments, are already involved – or need to be involved in the future. In addition, there are many other stakeholders, both private and public, all with a strong interest in this project.

While the Riverina Regional Development Board, and its Riverina Highlands Rail Trails Committee, has been the primary 'driver' of this phase of work it is important to consider whether it is appropriate for the Board to continue to be the driving force into the next stages of the project.

In Victoria, the appointment of a Committee of Management (CoM) has been a common technique for ensuring the ongoing management of the railway corridor and the implementation of a trail development plan. The CoM is vested with the legal responsibility for management of the railway corridor.

Therefore, it would seem that one alternative for moving this project forward would be for a CoM to be appointed, working in cooperation with the Development Board, to seek funding for the progressive implementation, and the issues raised in this report (particularly the one-on-one consultation with affected landowners).

Of course, it remains an option for the existing Riverina Highlands Rail Trails Committee to continue to take a lead role into the next phase of the project. The Committee has now developed a detailed understanding of many of the issues and opportunities, and may wish to continue to facilitate future stages.

It is strongly recommended that the trail development be a staged process, with the first stages being those between Wagga Wagga and Forest Hill. These two sections would service local people (including RAAF personnel) as well as visitors, and

provide a good sense of how future stages might develop. These two sections (Equex to Forest Hill and Wagga Wagga to Equex) should ideally be sealed, with red asphalt being the recommended option. By doing so, these trail sections will attract a wider range of users, including RAAF personnel riding to and from the base, school children walking and riding to the Forest Hill school, people with disabilities using wheelchairs and gophers, and visitors to the area.

The entire Batlow to Tumut corridor is probably the stand-out trail section. As stated, it is located in an incredibly scenic location, is ideal in length (32 kilometres), has a strong 'anchor' (a town) at both ends and is continuous (with no missing pieces of the corridor).

It will serve as an ideal test-bed for construction of a rail trail through a rural environment of the region.

Following the construction of these initial stages, a thorough assessment of the use and impact of the trail sections should be made, with surveys being undertaken of trail users and neighbouring landowners to ascertain issues and potential new solutions to any problems that arise.

Providing feedback from trail users is positive, usage levels are strong and any issues raised by neighbouring landowners can be resolved the conversion program should then proceed in an orderly progression, as set out in this report.

Providing the above conditions above are accepted, this Study concludes that a staged conversion of both rail corridors to multi-use recreation and heritage trails is feasible and desirable.

Recommendations:

It is recommended that the Riverina Regional Development Board:

1. Resolve to endorse the Riverina Highlands Rail Trails Feasibility Study and seek to implement recommendations contained therein.
2. Make this feasibility report available for public scrutiny, and invite submissions from the community on the findings and proposals of this study.
3. Refer this feasibility report to the City of Wagga Wagga, the Tumut Shire Council, the Tumbarumba Shire Council and the Greater Hume Council for consideration and comment, and request that each local government make budget allocations for the ongoing development of the trails.
4. Refer this feasibility report to the Australian Rail Track Corporation Ltd for consideration and comment.
5. Refer this feasibility report to State Forests for consideration and comment.
6. Refer this feasibility report to the Department of Lands for consideration and comment.
7. Refer this feasibility report to the NSW Rural Fire Service (Riverina Zone) for consideration and comment.
8. Refer this feasibility report to the Base Commander of the RAAF base at Wagga Wagga with a request for comment, together with a letter formally seeking assistance from the RAAF, via its *Defence Assistance to the Civil Community* program, towards the implementation of the Wagga Wagga to Equex and Equex to Forest Hill sections of the proposed trail.
9. Make arrangements for the cessation of leases along the railway corridors, with the prospect that leases of land ('surplus' to the requirements of the rail-trails along each corridor) may be available after construction of the trails.
10. Make an annual budget allocation to commence preparation of the rail-trail development plan.
11. Immediately seek funds from other sources and funding programs for the development of the rail-trail – and in particularly the Australian Tourism Development Program (which closes on June 28th).
12. Make arrangements for representatives of the Council, the Committee of Management and interested landowners to make a bus trip to the Lilydale-Warburton Rail Trail to investigate first hand the innovative design solutions used along the trail and to speak with adjoining landowners and the Committee of Management of that trail.
13. Purchase multiple copies of the "Rail Trail Videos" DVD from RailTrails Australia, and make these available to members of the public for viewing, as it contains compelling stories and interviews with landowners adjoining the Lilydale-Warburton Rail Trail, and a New Zealand rail-trail.
14. The Committee of Management (when formed), in partnership with the Councils, make approaches to major corporate entities in the region, including Visy, Carter Holt Harvey, Weyerhaeuser Australia Pty Ltd, the Hyne Mill, and others regarding sponsorship of the project.

SECTION 1 – INTRODUCTION

The NSW Railway was the first government-owned railway in the British Empire – the Sydney Railway Company was formed in 1848. The first line in NSW was a 22 kilometre line opened in September 1855. From this initial network, NSW now has over 11,000 kilometres of rail network.

In the first decade after the opening of the initial line (1855-1865), rail spread slowly beyond Sydney. The late 1870's and 1880's were the great railway boom, when the rail systems (across Australia) reached maturity. Between 1878 and 1883, the route distance of rail in NSW doubled as the golden west is reached with rail. Between 1878 and 1888, rail coverage went from 1,108 kilometres to 3,495 kilometres. Passenger traffic went from 3.7 million to 14.8 million and goods tonnage doubled (from 1.6 million tons to 3.4 million tons). The railway boom ended in 1890, not only in Australia but across the world. However, investment in rail continued until the Second World War, though not with the same enthusiasm as in the late 1800's (*Railcorp website; Australian Heritage Commission website*).

The railway was the lifeblood of many small rural communities, not only providing essential freight and passenger services, but creating a very real sense of connection between peoples often considerably geographically dispersed.

The Downfall, on the Wagga Wagga to Tumbarumba, is one of the most spectacular pieces of railway engineering in Australia, one would without doubt be the highlight of this rail trail experience.

As road transport became steadily more efficient during the 1950s, the railways began to lose their primary function. Throughout the following decades, scores were abandoned. Many of these corridors remain in public ownership. In NSW, railway lines cannot be closed without a specific Act of Parliament; consequently, many rail lines are classified as disused. The condition of these railway reserves varies widely, but many are still intact as 'linear corridors' in public ownership. This is the case with the both the Wagga Wagga to Tumbarumba rail line (130 kilometres) and the Batlow to Tumut rail line (32 kilometres). The line between Batlow and Kunama has been legally closed and land sold to adjoining land owners. The corridors are generally 20 metres wide and in public ownership (though parts of the corridors are leased for farming purposes).

This study details the overall feasibility of establishing rail-trails on both former rail lines. Whilst the report examines the two rail corridors as separate entities, there are significant common elements. Relevant sections of the report discuss the rail corridors separately; whilst other sections of the report are general and consider the two corridors together.

SECTION 2 – BACKGROUND

2.1 History of the Wagga Wagga to Tumbarumba Line

In 1884, 710,000 pounds was voted for the construction of the Wagga Wagga to Tumbarumba line. After much investigation and cost estimates and route and construction revisions, the Wagga Wagga to Tumbarumba Railway Act #18 was passed by the NSW Parliament in November 1911 to build the Railway. It is understood that the passing of this act of Parliament brought the rail corridor land into public ownership – a situation that remains the case today. Construction commenced from Wagga Wagga in February 1912. The line between Wagga Wagga and Humula opened in May 1917, while the Humula to Tumbarumba section was opened in May 1921.

Operations beyond Ladysmith ceased in October 1974 due to a number of factors including fuel restrictions and a washaway (although the washaway happened a month after the service was stopped due to fuel restrictions). All rail operations along the remaining section of the line ceased in December 1988.

2.2 History of the Batlow to Tumut Line

The railway from Mt Horeb to Gilmore and Tumut was opened in 1903 and extended to Batlow in 1923 (under the Gilmore to Batlow Railway Act #20 of 1919). It is understood that the passing of this act of Parliament brought the rail corridor land into public ownership – a situation that remains the case today. Very little information is available concerning the reasons for the construction of the branch line to Batlow. Speeches in the NSW Parliament at the time referred to the magnificent forests of mountain ash and other gums servicing an already-developed timber industry. There is also reference to the need to not “isolate” the soldier settlers in the Batlow district.

When the line was operational, all services commenced and finished in Tumut, as Gilmore was a name only (*The Australian Railway Historical Society 1954*).

Passenger services between Gilmore and Batlow were discontinued in December 1972 (*Australian Railway Historical Society NSW Division*). Operations ceased in 1984, though a tourist train ran on the Batlow to Tumut section around 1989. This licence was subsequently forfeited by the company which held it.

The Tumut to Batlow section climbs over 500 metres to Batlow (which is some 780 metres above sea level). The corridor has the longest section of 1 in 25 grade of any NSW rail line, as well as having the sharpest curves. Consequently, the line offers excellent views across the Gilmore Valley during the climb.

2.3 An Overview of the Current Situation

Both corridors have not been used for some time – around 20 years in the case of the Wagga Wagga to Ladysmith section, and the Batlow to Tumut line, and over 30 years in the case of the Ladysmith to Tumbarumba section. However, rail infrastructure still remains. Much of the steel track remains (although some has disappeared) – an estimate of 15,000 tonnes of steel has been made. Ballast remains and many of the 57 bridges (the total number on both lines according to historical documents) are still intact (though their condition varies greatly). Railway

signage has all but disappeared and station platforms are mostly gone. Some goods sheds remain - in use by adjoining farmers or simply still standing on the railway land (again, their condition varies). Some sections of line on the Batlow to Tumut corridor have been subject to land slip and are suspended above the ground with no earth underneath the line.

The Ladysmith Station has been restored and is the “base” of Tumba Rail, a group dedicated to running trike trips along sections of the old rail line in the vicinity of Ladysmith. The Tumut Railway Station Group of buildings is on the State Rail Authority s.170 Register (listed in 1997 and 1999) and on the NSW State Heritage Register (listed in 1999). The Batlow Railway Station and Yard Group are on the State Rail Authority s.170 Register (listed in 1999). While the Tumut buildings appear in good repair, the Batlow station buildings do not appear to be in very good condition.

Land in both rail corridors is still owned by the State Government. As stated above, rail corridor lands are in public ownership as a result of the passing of legislation in the early 1900s. Some people at various public meetings challenged that the land had been acquired at that time without adequate compensation. Whether this claim has merit or not, the position of this study and advice to the Riverina Regional Development Board is that the land is publicly owned.

The lines are currently managed by the Australian Rail Track Corporation (ARTC). In 2004, the ARTC took a 60 year lease from the NSW Government (specifically the NSW Government owned rail entities, the State Rail Authority of NSW and the Rail Infrastructure Corporation) on the main interstate rail lines in NSW. As part of the agreement, the ARTC assumed management of the residual rail network (including disused lines). Both the Wagga Wagga to Tumbarumba and the Batlow to Tumut lines are officially classified as disused lines. It is understood that the lease agreements allow the ARTC to manage the main interstate lines on a commercial basis. On the disused network, the ARTC does what the owner (the NSW Government) directs. The disused network is leased on a rolling 12 month basis, but any lease can be stopped on a 3 monthly basis.

The ARTC still has the responsibility for corridor maintenance on the rail land but is happy for adjoining owners to spray weeds and carry on other land management activities. This has been identified as a source of contention with adjoining land holders; many do not think the ARTC is undertaking the necessary level of maintenance and weeds have become a significant problem (though it is acknowledged that many of these weeds were carried in with the trains and have flourished over the last 20-30 years). An extended drought has contributed to limited growth of grasses on the corridor as has the unfenced nature of the corridors; consequently, a significant portion of both corridors are not substantially overgrown with grasses as is the case in many other disused rail corridors.

The rail corridors remain a remarkable resource and the cuttings, embankments and most of the original formations appear to be in good condition (noting the limited inspections that were undertaken). Both corridors are largely intact.

It is understood that both railways were constructed as ‘unfenced lines’ – a situation that is reasonably unique as most railways elsewhere in Australia were fenced to prevent trespass or the straying of stock onto the railways. In some cases Parliament decided to dispense with the obligation to erect fencing on some country

lines in NSW. This situation is particularly important to the discussion of whether trails can and should be constructed on the formations of the former railways, as many of the adjoining farms have stock that either freely travel across the corridors on a daily basis, or stock that require some means of separation from people passing by.

2.4 Current Leases of the Corridors

Along the Wagga Wagga to Tumbarumba railway corridor there are 18 persons or organisations that have a lease over a portion of the corridor and/or railway station or siding areas.

These records are not included within this report for privacy purposes.

2.5 What is a Rail Trail?

The project brief requests that the issue of “what is a rail trail?” be addressed. A brief history of the development of rail-trails follows. This will help explain the nature of rail-trails and the potential user groups.

2.5.1 History of Rail Trails in America

The rails-to-trails movement began in the USA in the mid-1960s. Local people came up with the idea to convert abandoned or unused rail corridors into public trails. Once the rail tracks were removed, people naturally walked along the old grades, socialising, exploring, discovering railroad relics, marvelling at the industrial facilities such as bridges, tunnels, abandoned mills, sidings, switches and whatever else they could find. The predominant activity was walking. At this point in their evolution, none of the trails were paved or even graded - they were simply abandoned stretches of land.

"Rails-to-Trails" is what people called the phenomenon. The name was catchy and descriptive enough to give the concept a tiny niche in the fledgling environmental movement that was gathering momentum. However, it was destined to move into the mainstream of the conservation and environmental movements. After all, it had all the ingredients: recycling, land conservation, wildlife habitat preservation and non-automobile transportation - not to mention historical preservation, physical fitness, recreation access for wheelchair users and numerous other benefits.

Today, more than 40 years later, rail-trails have made a significant mark in America, with over 12,535 miles of trail on nearly 1,200 rail-trails, and around 100 million users per year. There is another 1,159 rail-trails being planned and/or developed for a total of 16,861 trail miles (Rails-to-Trails Conservancy website).

In Seattle, more than 1,200 people a day cycle along the 16 mile Burke-Gilman Trail, near Lake Washington, while in Florida over 100,000 people stroll, skate and cycle along the 22 mile Pinellas Trail every month. In Washington D.C. the easy grades and varied topography of the 45 mile Washington and Old Dominion Railroad attract nearly two million users annually, including cyclists, runners, equestrians, people with disabilities, skaters and cross-country skiers.

2.5.2 History of Rail Trails in Australia

In Australia, conversion of corridors to rail-trails is a recent phenomenon driven by the closure of many railways in the 1980s and 1990s (though as pointed out in the

introduction, rail closures have been occurring continuously since the end of the Second World War).

In its 1995 report, the WA Ministerial Taskforce on Trails Network recognised many of the attributes of rail-trails, noting (P. 9):

"Disused rail reserves have exceptional potential for recreation and non-motorised transport – they encourage access by all population and user groups due to their gentle gradients and the absence of motor vehicles. Outdoor recreation has many positive attributes including community, physical health, and mental health, economic and social benefits."

The most notable example of a rail-trail in Western Australia is the Railway Reserves Heritage Trail in the Shire of Mundaring, in the hills above Perth, 30km from the CBD. The rail-trail was established primarily for horse riders and walkers some 30 years ago, making it one of the earliest known rail-trail conversions in Australia. Subsequent upgrading of the trail surface has made it a true multi-use trail, catering for walkers, mountain bike riders and horse riders.

The Lilydale to Warburton Trail in the Yarra Valley of Victoria caters for all users– for much of the journey, users can gaze on the spectacular Yarra Ranges.

It is in Victoria that rail-trail conversions have proven most popular. The Victorian Trails Strategy 2005-2010 reports that there are currently 463 kilometres of rail-trail in Victoria on 18 trails, while the 2nd edition of *Rail-Trails of Victoria and South Australia* lists 22 rail-trails throughout Victoria. Some listed in the Guidebook are still under construction or require signage and/or publicity materials, though they are in use. Since the publication of the guide, more rail-trails have been opened and many more are currently in the planning stages.

One of the best known of Victoria's rail-trails is the Lilydale to Warburton Rail Trail which is situated some 68km east of Melbourne. This trail caters for all types of bikes, walking, horse riding and wheelchairs (for some segments) due to the outstanding surface material used. The trail passes by wineries, cafes, pubs and restaurants following the Yarra River valley.

Many people who attended the various public meetings had some experience of the Murray to the Mountains Rail Trail in northern Victoria. The rail-trail is the most developed of all Victorian rail-trails with a sealed surface for its entire distance (97 kilometres). The trail follows the picturesque Ovens Valley and has views of Mt Buffalo and a good climb to historic Beechworth.

In South Australia, the Riesling Trail is perhaps the best known rail-trail. This trail is located in the Clare Valley, 130 km north-east of Adelaide. The trail passes several

wineries and offers spectacular views from numerous points along the trail. The 27 kilometre long Riesling Trail allows visitors to experience the Clare Valley from end to end by foot or from the saddle of a bicycle.

The Riesling Trail in the Clare Valley of South Australia is a very popular tourist attraction – constructed along a former railway line.

The idea for the trail is attributed to local business people (winemakers) who saw the potential for the disused railway line from Riverton to Spalding that ran through their region. While the closure of the railway in the 1980's was regarded as a major loss to the area, the conversion of the former railway corridor into one of Australia's best known trails has benefited local businesses, as well as users. Local people named the trail after the grape that is so celebrated in the Clare Valley. Several wineries are now creating picnic locations along the trail. There are more than 30 bed and breakfast cottages, several hotel/motels and caravan parks close to the rail-trail, enabling users to turn a comfortable one day bicycle ride into several days. The Riesling Trail Management Committee is considering the possibility of extending the trail another 8 kilometres north to Barinia Siding, the "official" northern end of the Clare Valley.

2.5.3 Complementary Uses of a Rail Corridor

Such a lengthy linear corridor does lend itself to a range of potential future uses – many of which are not excluded by the possibility of the corridor being converted into a recreation trail.

These former railway corridors, like so many others around the world, are also ideally suited for the placement of utilities, such as wires, cables and pipes. Data, telephony, and energy can and are all carried in pipes alongside or underneath rail trails. These uses can be complementary to the corridor's use as a rail-trail, the primary focus of this work.

2.6 How Do Rail Trails Function and Operate?

As stated above, rail-trails are most prominent in Victoria. South Australia and Western Australia have a few formal trails while the other states have a very limited number of rail-trails (though many of these do not fit the accepted definition). There are differences in the way rail trails function and operate, primarily due to differing legislative regimes.

The next section examines how existing rail-trails operate in the three states with an established history of rail-trails – Victoria, South Australia and Western Australia. Section 14 has further discussion on possible management models.

2.6.1 Victoria

Victoria has led the way in converting disused railway lines into recreation and tourism destinations across a number of “areas”. Consequently it has the most mature process. A rail reserve is gazetted under the Crown Land (Reserves) Act as a public recreation reserve. A Committee of Management cannot be appointed under the Local Government Act until the rail corridor has been surrendered by Vic Track and reserved under the Crown Land (Reserves) Act. Gazettal as a public recreation reserve allows for the setting up of a formal Committee of Management which has vested management responsibilities for the corridor. Where the corridor traverses more than one Local Government, a Special Joint Committee is required under the legislation.

The Department of Sustainability and Environment is the lead agency for the establishment of Victorian rail-trails and supports the delegated managers.

The State Government has set down a uniform process for establishing rail trail Committees of Management. It involves an Expression of Interest period where applicants prepare and submit their applications. The State Government, in consultation with relevant Local Governments, selects members depending on skill sets required.

Under the Victorian guidelines, the Committee of Management has relevant Local Governments and individual people selected for appointment by the relevant Minister. The term of appointment is for 3 years. The members must be an adult resident or ratepayer within the “community of interest” of the Reserve. The Minister is also able to appoint nominees of various interest groups that may use a reserve or have an interest in its proper management.

Committees of Management are generally incorporated. Incorporated Committees allow lawsuits, contracts, borrowings and tenancy agreements in the name of the Committee providing security and greater continuity. Sub-committees have no power in themselves; recommendations need to be bought to the full Committee.

Committees of Management under the Crown Land (Reserves) Act have a number of powers and duties:

Powers

- Managing the reserve;
- Undertaking works and improvements;
- Using workers;
- Deriving income;
- Spending, borrowing and investing;
- Controlling users;
- Entering into legal proceedings; and
- Granting tenancies (licences, leases, permits)

Duties

- Financial records and auditing;
- Reporting – financial, annual, performance;

- Liability insurance – duty of care;
- Duties as an employer;
- Council rates (payable by occupiers under lease, licence and tenancies – commercial and agricultural); and
- Responsibilities under Freedom of Information and Ombudsman requirements.

Committees of Management have traditionally absorbed the responsibility for pursuing the development of a rail-trail including the preparation of concept plans and business plans.

The CoM guidelines set out the need to determine objectives under heading of recreation, tourism, conservation, economic and social. These objectives translate into a community-driven concept plan which provides the basis for the Business Plan.

Murray to the Mountains Rail Trail

As among the most developed rail-trails in Victoria, the Murray to the Mountains Rail Trail provides a good example of how the Victorian Government's rail-trail legislative and management regime is put into action. The trail was familiar to many attendees at the public meetings. The trail runs for 97 kilometres from Wangarratta to Bright through the Ovens Valley.

The Trail has a full-time trail manager, the only paid trail manager on an Australian rail-trail that the consultants are aware of. The trail development project was driven by the three Local Governments through which it passes – the Rural City of Wangarratta, Alpine Shire and Indigo Shire.

Management of the trail is in accordance with the Victorian Government guidelines. There is a General Committee of Management which has two representatives of each of the Local Governments through which it passes, one representative from the Technical Group (a sub-committee) and three representatives from the Advisory Group (a sub-committee). Its roles and responsibilities are:

- Day to day management and ongoing development of the trail;
- Preparation and implementation of a business plan;
- Development and achievement of trail objectives;
- Develop future budgets; and
- Oversee activities of the Technical Group and ensure active participation of the Advisory Group.

The Technical Group has been set up as a sub-committee. It has three Local Government representatives (one from each Local Government), one representative from the Department of Sustainability and Environment and one representative from Vic Roads (State Government agency). Its roles are trail maintenance, weed and vegetation control, and bridge maintenance.

An Advisory group has also been set up as a sub-committee. It has six representatives of user groups/communities, one representative from the Country Fire Authority, three local landholders (one from each Local Government area) and one representative from the Victorian Farmers Federation. Its roles are representing

community and user group interests to the Committee of Management, liaison with the Committee of Management on management and maintenance issues

Great Southern Rail Trail

The Great Southern Rail Trail provides a slightly different example of how the legislative and management regime has been implemented. The trail runs for 53 kilometres from Leongatha to Foster in the Gippsland region. The trail was entirely community driven; proponents believe that there was, and there continues to be, a need to engage a range of individuals, organisations and governments – this is a lot easier if the project is community rather than Government driven. The Committee of Management is made up of community volunteers and has responsibility for protection, maintenance and improvement of the railway lands. With the assistance of the Shire of South Gippsland, the Committee designed and managed trail construction and facilities. The Committee is responsible for the maintenance, preservation and enhancement of trail and natural vegetation. It receives assistance from the Friends of the Great Southern Rail Trail.

2.6.2 South Australia

South Australia has two significant rail-trails (the Riesling Trail and the Coast to the Vines Rail Trail – formerly the Willunga to Marino Rail Trail) and these are managed differently primarily based on the involvement of the relevant councils. There are some similarities. In both cases, trail management is governed by a partnership between the Office of Recreation and Sport (ORS) (an agency of the SA Government) and another organisation. Land on the rail corridors was granted to the Office of Recreation and Sport by other agencies (notably Transport SA) to make the rail-trail happen.

The Riesling Trail

As indicated above (Section 2.4.2), the Riesling Trail is perhaps the best known rail-trail. Located in the Clare Valley, the 27 kilometre trail passes several wineries and offers spectacular views from numerous points along the trail.

Trail management is governed by a partnership between the Office of Recreation and Sport (ORS) (an agency of the SA Government) and the Riesling Trail Incorporated (RTI), an incorporated association/legal entity under the Associations Incorporation Act. RTI is a community body with an interest in developing and promoting the trail and facilitating management at the local level. ORS has formalised management roles and responsibilities of the Association in overseeing and ongoing development of the trail through a partnership agreement. The Government of South Australia (though ORS) covers legal liability insurances as they relate to the trail.

There is also a partnership agreement between RTI and the Clare and Gilbert Valleys Council. The Council will consider funding nominated projects where the trail traverses and interfaces with council roads, and will contract to do maintenance and repair work.

RTI is run by a Management Committee. Membership of the Committee comprises representatives or officers from ORS, Clare Valley Tourist Association Inc., Clare Valley Winemakers Inc, Clare and Gilbert Valleys Council, and five community members with experience in areas such as tourism, arts and culture, business and

finance etc. Community membership is invited through public notice and is determined at an AGM.

The Office of Recreation and Sport has a $30,000/year maintenance budget to cover both the Riesling Trail and the Riverton Trail network to the south. RTI is responsible for organizing/overseeing the maintenance (done by their own hands or by contractors) for the Riesling Trail and the Riverton trail network. RTI has the main role to pursue grants.

The Coast to the Vines Trail

This trail on the outskirts of Adelaide is jointly managed by the two Councils – the City of Onkaparinga and the City of Marion in partnership with the Office of Recreation and Sport. It is understood that there are no other special arrangements – the trail is managed as a recreation asset of the Councils.

2.6.3 Western Australia

Mundaring Railway Reserves Heritage Trail

This trail is a 72 kilometre multi-use trail opened in the mid 1980s. It is managed solely by the Shire of Mundaring as a recreational asset like all its other recreational assets.

Upgrading of the trail is in accordance with the *Railway Reserves Heritage Trail - Trail Development and Operational Plan*. As each section of trail is upgraded, a trail maintenance plan is prepared. The Shire of Mundaring is currently preparing a comprehensive management plan for the trail, which will consider the following matters:

- Philosophical background to RRHT development
- A statement of guiding principles
- Review of how RRHT is, and can be further linked to other trails, especially the Munda Biddi Trail, the Bibbulmun Track, the Kep Track, the Farming Heritage Trail and those in the eastern portion of the City of Swan.
- Clarification of management roles and responsibilities for the various trail sections
- Risk management policy
- Group usage policy and guidelines
- Provision of essential services for trail users, such as water points, toilets, rubbish bin, lighting and other desirable trail furniture.
- Identification of any outstanding access /egress works for the RRHT, including disability works.
- Trail maintenance sub-plan of the Management Plan to describe maintenance levels, activities and standards, including:
  - Prepare infrastructure inventory identifying and showing the location of existing and proposed trail elements, such as directional and information signage, boom gates, information shelters, drinking fountains, etc.
  - Hazard inventory and inspection timetable
  - Control of vegetation overgrowth

  - Maintenance of the trail surface
  - Inspection and repair of fencing and gates
  - Deferred maintenance program
  - Appraisal of capital costs, labour hours and/ or $ value for annual maintenance requirements
  - Responding to customer requests, including trail users
  - Review of current environmental conservation and rehabilitation projects and suggestions of location and requirements of new ones.
- Fire management and emergency evacuation procedures
- Preparation of a promotional and interpretation management sub-plans, including specifications for signage and suggestions for interpretation along the trail between the townsites
- Mapping and brochures – guiding principles
- Formation of a Friends of the RRH Trail Group
- Timetable for reviewing and updating the Management Plan

The trail management plan for the Mundaring Railway Reserves Heritage Trail, when complete, will serve to ensure the trail continues to function and operate as one of Western Australia's premier trail experiences.

2.6.4 Overview

While legislative regimes differ, the operations of many rail-trails across the country are marked by a common set of features. A discussion of successful rail-trail development characteristics follows in Section 2.7. Some common characteristics about all aspects of operation include:

- Most rail-trails have incorporated Committees of Management; many (but not all) of these draw support from "Friends of" groups.
- Community involvement in positions of "power" i.e. on a Committee of Management is critical to community buy-in.
- In Victoria in particular, all Committees follow a template for setting up the organisation and, to a certain extent, pursue the same activities (due to the requirement under legislation and the guidelines).
- All trails predominantly use public land – mostly State Government land (as they are on former rail corridors).
- There are no charges to enjoy any rail-trails.
- Many offer leasing arrangements to adjoining landholders as the trail rarely needs the (almost standard) 20 metre corridor. This generates income for the trail, keeps the farmers onside and provides some maintenance.
- Most trails opened section-by-section (ie. a staged process) while keeping the big picture in mind. However, there is a need to be conscious of how stages are marketed. The Spring 2004 RailTrails Australia newsletter carries an interesting letter on the Ballarat to Skipton Rail Trail from a user. The person compliments the rail trail but notes that some of the trail is in poor condition and consequently they used the adjoining road. The user suggests

that the rail trail guide should stress that the trail is slow and plenty of time should be allowed. The user suggests that significant work is still required. Promotional material needs to clearly articulate what sections are open and what this means for users.

- All trails make the most of official "opening ceremonies" – bridges, sections, etc.

2.7 Requirements for Successful Rail Trail Development

Rail-trails are different from each other, but a number of characteristics often mark the good ones. These features are drawn from a number of published sources and the consultants' own extensive experience with rail-trails.

- Many successful rail-trails have accessibility to large population centres both for visitors and as a stimulus for local demand.
- There are existing or easily developed tourism infrastructure in or near townships along the rail-trail - wineries, places to eat, explore and stay.
- Good rail-trails have some heritage infrastructure in place such as historic stations, bridges, tunnels, goods sheds, sidings, platforms, switches, signals, and mile posts. Rail trails elsewhere have utilised their railway history as part of their attraction. Stations in particular can provide a focal point for community activities as well as an interesting attraction for visitors. Remaining major elements of the railway infrastructure (formations, deep cuttings, high embankments, bridges, culverts) add significantly to the user's experience. Built and social heritage values are a critical part of the rail-trail experience not often experienced on other types of recreational trails.

Railway history, access to towns, interesting scenery, safe cycling and walking conditions and a variety of nearby land-uses are all present along both corridors.

- A common feature is community and adjacent landholders' level of support for the project to move ahead. Many (though not all) adjacent landholders are initially suspicious of rail-trails; they often become converts once a trail is built.
- A uniqueness of experience is often important – be it landscape, trail type, a "one-off" nature.
- Many of the good rail-trails have a regional or state tourism significance (some have national and international significance). Significance is elevated where extensions are made to connect to services in towns. The best rail-

trails have natural terminuses in major centres or towns. There should be intermediate towns easily accessible along the trail – this is critical when a trail is long and an added bonus when the trail is short.

- The best rail corridors are located in highly scenic surrounds, with spectacular views of the surrounding landscapes. These trails are often full of variety and interest. The best rail-trails traverse places of cultural and natural history and conservation and provide opportunities to view birds, other wildlife and remnant vegetation.
- The good rail-trails often provide opportunities for short, medium and long length rides and walks on the main trail.
- Railway corridors can provide a great insight into the history of the region – both European settlement, and Aboriginal use. Good interpretation will mark out an excellent trail – this is the next frontier in all trail development. There are many good recreation trails (including rail-trails) in Australia – few have good interpretation. Interpretation adds significantly to the user's experience.
- In a similar vein, trails that emphasise local conditions – flora, fauna, history, construction materials, etc. - are very popular. Good interpretation will bring out this local flavour.
- Well-signed and mapped trails - both on the trail and easily available elsewhere - are more successful than those that are not.
- Informed locals make a user's experience more pleasurable.
- The best rail-trails offer a challenge, and they offer peace and solitude.
- A well-maintained trail and a strong community support network adds to the user's experience, primarily because the trail remains in good condition. Such a community network could include a committed and purpose-dedicated management committee, a strong "Friends of the Trail" Group or even a full-time trail manager. Various rail-trails in Australia feature at least some of these elements.

In addition, all rail-trails have a number of positive features which mark them out as uniquely rail-trails (as opposed to other recreational trails).

- Rail-trails are trails for people of all abilities and all types of bicycles. Good trails provide equity for people of many levels of fitness and equipment to gain access to the types of experience within the region.
- All rail-trails are motor vehicle free i.e. safe for all types of trail users. Minimising major road crossings adds to the experience. Trails rarely interrupted by road crossings appeal more than those which constantly cross roads – well marked and safe crossings where necessary add to the success.
- All railway formations (through cuttings and along embankments) provide a gentle gradient and sweeping bends, suitable for all types of cyclists, walkers, and where appropriate, horse riders.
- All rail-trails offer safety for users compared with urban shared pathways which have driveways, light poles, blind corners, poor sightlines, and are often "congested" as users cannot see other users approaching due to poor sightlines.

SECTION 3 – THE STUDY APPROACH

3.1 Scope of the Project - The Brief

The Project brief sets out a number of aims (the brief is attached as Appendix 1). The key outcome is a concept proposal and feasibility study for the Wagga Wagga and Tumbarumba Rail Trail and the Batlow to Tumut Rail Trail. The aims of the project are identical for each corridor. These are:

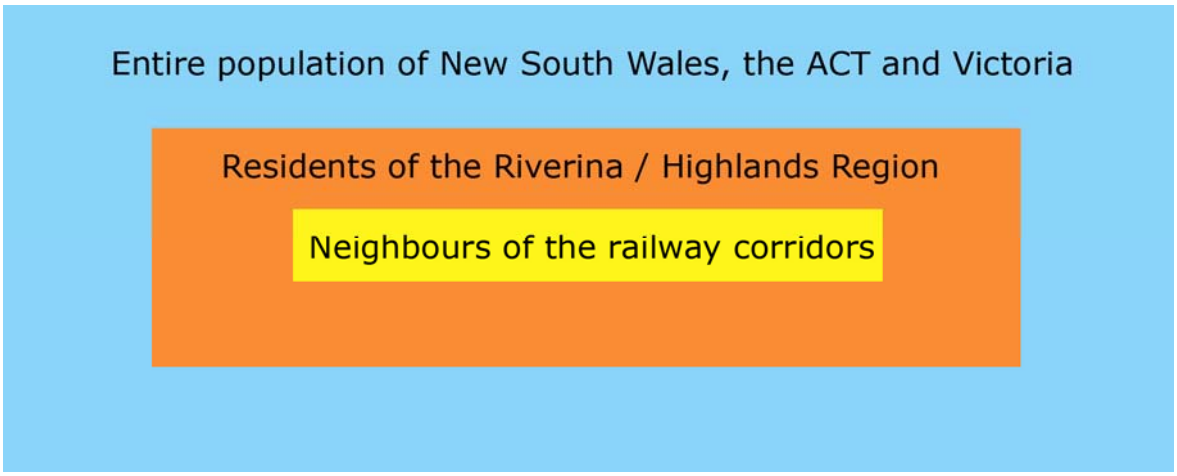
- Provide an overview history of rail trail developments in NSW and other States and give an outline of the basic concepts and features of existing rail trail developments.
- Provide a broad outline of each trail corridor as well as details and discussion of local and regional features supporting their development.
- Present an economic evaluation of the projects including the expected benefits and costs associated with the complete rail trail development.
- Identify and discuss the main issues concerning the proposed developments and give recommendations concerning the subsequent approval and implementation process.

3.2 Concentric Circles of Community

Clearly, a project such as this demands extensive consideration of the desires of the "community" surrounding the corridor. But exactly what is this community, and just whose desires should be considered.

In this Feasibility Study, the approach taken defines the community not just as the local community (i.e. people living and working alongside the two railway corridors), but also all of those people living in the wider region encompassing residents of Wagga Wagga City, Tumbarumba Shire and Tumut Shire. The combined population of these three Local Governments is in excess of 71,000. The approach has also encompassed visitors to the region in its scope, as these numbers are quite significant (2.1 million visitor nights were recorded for the region in 2004).

Naturally, those living alongside the corridor have a direct and often very personal interest in the corridor and perceive that they will be losers out of any conversion to



a rail-trail due to interruption to long-established farming practices, negative impacts on lifestyles, and loss of currently-used land. The “winners” from such a project are often a much more diverse and geographically-spread group – local users, visitors, local businesses. This is a typical pattern for the impacts of most public infrastructure projects. It is important that such a project be cognisant of all these interests and concerns. Section 5 (community consultation) goes into detail about consultation undertaken to elicit the range of views and concerns.

It is must be remembered that the corridor is public land and is owned by all residents of New South Wales (while acknowledging existing use and practice by adjoining landholders).

These different layers of community are depicted in the drawing and have informed the approach taken to this study.

SECTION 4 – THE REGION AND ITS CHARACTERISTICS

4.1 Wagga Wagga City

4.1.1 The City

The City of Wagga Wagga is a vibrant regional centre in the heart of the highly productive Riverina region. It is the capital of the Riverina and the major retail and industry centre of the region. It is a city with several major industries, the Charles Sturt University, a significant Defence Force presence, and a number of government regional offices. The Murrumbidgee River is the City's most prominent natural feature, winding its way through the City's heart.

4.1.2 The City's people

The population of the City was 56,722 at the 2001 Census. The Estimated Resident Population in June 2004 was 57,557. The City's population is growing at 1% per year. At this growth rate, the forecast population for 2020 is 74,800. The City serves a catchment of 150,000 people.

The Local Government Area of Wagga Wagga City is highly urbanised with almost 90% of people residing in the urban areas. This trend will continue into the future.

The demographic profile of the City is close to the NSW average though with a slightly higher proportion in the 15-24 category. The key reason it is a young city is the location of defence force and education facilities (Charles Sturt University, Riverina Institute of TAFE, Conservatorium of Music, and Riverina Community College) in the City – these primarily attract school leavers.

Despite this fact and in common with the rest of Australia, the population of the City is aging. Since 1996, there has been strong growth in the 40+ age group, with a noticeable growth in the 80+ age group. However, in 2002, 40.6% of the population of the urban part of the City was under 25, while only 19.1% over 55. In June 2004, the median age of the population was 33 years.

The number and proportion of people aged 65+ will increase in Wagga City in the future, but its median age (in 2031) will be younger than the Riverina region generally (at 40 years). It is important to note that the ongoing presence of the education and defence facilities will continue to ensure a large number of young adults live in the City.

From a trail location perspective, the Council's future land use and growth corridor planning directions are important in terms of locating people adjacent to or near the Wagga Wagga to Tumbarumba rail corridor. The Council is currently reviewing its land use planning documents and has indicated that it is planning for a number of growth fronts. In recent times, the majority of the City's expansion has occurred to the south – the main attracting nodes include Lake Albert. This puts the terminus of the rail-trail (Equex Centre) in easy reach of many people (noting that there are concerns about inadequate and unsafe cycle links to the potential trail start at the Equex Centre).

The growth of the RAAF base at Forest Hill is also a critical factor in examining the success or otherwise of the rail-trail (and it has a possible effect on implementation timelines). There are currently 390 staff (including RAAF, Navy, Army, APS and contractors) working at the base. 360 of these live off the base (in a combination of

Defence Housing Authority properties – 222 of these are adjacent or accessible to the rail corridor - and private housing). There are 648 students of whom only about 2-5% live off the base at any one time. The total base population is currently 1,038.

These numbers will increase over the next two years as all three services increase recruiting and the RAAF Recruit Training Unit moves to Wagga at the end of 2007. The population of the base will rise to around 1,800 when this is finalised.

In terms of the villages along the rail corridor, population growth in both villages (Ladysmith and Humula) is expected to be quite small, though Ladysmith is more likely to grow given its relatively close proximity to the CBD. Ladysmith Village has a population capacity of 2,000 and currently has 80 existing dwellings. Humula Village has a current population of 105 and currently has 36 existing dwellings, and a further 108 potential dwelling lots.

Rail-trails bring economic benefits (further discussed in Section 7). Complementary economic development opportunities have arisen from the development of trails across Australia. For example, a large number of accommodation businesses along the Riesling Trail (in the Clare Valley of South Australia) are prospering due to the trail. Riesling Trail Cottages and Riesling Trail Bush Cottages are two accommodation enterprises, amongst many, trading on their proximity to the trail. Sevenhill Winery, also in the Clare Valley, has constructed a short walk/cycle trail in its grounds which links to the Riesling Trail.

People employed in the service sectors (containing those employed in the broad categories of accommodation/cafes, and culture and recreation) will develop complementary facilities that make trails attractive to visitors. In Wagga Wagga, employment in the accommodation/cafes sector has grown to 5% in 2001 (up from 4.3% in 1991), while employment in the culture and recreation sector has grown to 1.6% in 2001 from 1.2% in 1991.

4.2 Tumbarumba Shire

4.2.1 The Shire

Tumbarumba Shire is located on the south western slopes of the Snowy Mountains. Rich grazing land, horticultural activities, native bushland and views of the Snowy Mountains surround the Shire. Its location and the natural resources abundant in the region have enabled the development of a thriving forestry and timber industry, stone fruit, apples and berry orchards and rapidly expanding high country vineyards. The two major towns in the Shire are Tumbarumba (containing the majority of the Shire's population) and Khancoban; the villages of Jingellic, Tooma and Laurel Hill contain the majority of the rest of the population. The Shire has a rich heritage including gold, timber, agriculture and the Snowy Mountains Scheme and is increasingly becoming known for its "cool climate" wines. Of equal potential is the tourism industry, which results from magnificent alpine scenery, alpine skiing and walking, waterways and scenic drives.

The fertile pastures and abundant water in the district attracted pastoralists in the 1830s. For over 100 years cattle were grazed on the alpine pastures of the Snowy Mountains in the summer, returning to the warmer valleys of the Tumbarumba district for the winter. Alluvial gold was discovered in many of the district creeks in the 1860s, but most of the easily extracted gold had been taken by the 1870s.

4.2.2 The Shire's People

The population of the Shire was 3,027 at the 2001 Census, a growth rate of 1.4% from the previous Census (1996). The Estimated Resident Population in June 2004 was 4,474 (*Coomes Consulting Group 2006*). The demographic profile of the City is close to the NSW average though skewed to residents aged 25 and over.

In Tumbarumba Shire, employment in the accommodation/cafes sector has risen and fallen in the last 10 years but was 4.5% in 2001, while employment in the culture and recreation sector has hovered around 1% for the last 10 years.

The Hyne Timber Mill is a major employer in Tumbarumba Shire. 160 people are employed on site at the mill some 5 kilometres from Tumbarumba town (around 10% of the labour force of 1,537). The timber mill is adjacent to the rail corridor which can provide a facility to allow some employees to commute to work by bicycle (a small number of workers already ride on the highway).

4.3 Tumut Shire

4.3.1 The Shire

Tumut Shire is rich in natural beauty and has developed a profile that is genuinely enmeshed with its natural resources. The region is nestled in the western foothills of the Snowy Mountains with the Tumut River an important feature of the district. The Shire includes the townships of Tumut, Adelong, Batlow and Talbingo as well as the villages of Brungle and Cabramurra. The Shire is a scenic region enjoying four very distinct seasons.

The Shire is the home of Batlow apples and stone fruit. This sector is continuing to both expand and diversify, thriving on the good soil quality, excellent rainfall and the high chill factor. The Shire is also an important grazing area, and its cattle in particular are sought after by buyers due to its high quality.

Tumut town is the hub of the region, the home of the Shire's major employment and service facilities. The town is extremely attractive, surrounded by mountains and green rolling valleys – it is particularly attractive in autumn with a magnificent display of autumn colours. The town was consolidated in 1852 and by 1928 had become the headquarters of the thriving Tumut Shire. It is one terminus of the proposed Batlow to Tumut rail-trail.

Batlow, at the other end of the rail corridor (some 32 kilometres by rail), is famous for its apples and stone fruits – consequently, it is a town surrounded by orchards. That is not the only visual pleasure within the townscape – views of surrounding valleys and the western edge of the Snowy Mountains add to the natural beauty of the town. Its history is a "food history" – gold rushes in the region in the 1850s created a desire for fresh produce from farms and orchards. In 1923, Batlow became the home of the first cool stores constructed in NSW. Today, it is the home to two major fruit packing facilities.

4.3.2 The Shire's People

The population of the Shire was 11,470 at the 2001 Census. The Estimated Resident Population in June 2004 was 11,382. Between 1996 and 2001, the population grew by 1%. Around 6,000 of these people live in Tumut town.

Official State Government forecasts show a slight decline in future population to 2021 (to 11,220) but a number of major investments in timber and timber-related businesses in the Shire may well mean an influx of new (and younger) residents.

The demographic profile of the Shire is close to the NSW average but skewed to residents aged 65 and over. In common with the rest of Australia, the population of the Shire is aging. As with Wagga Wagga, since 1996 there has been strong growth in the 40+ age group. The number and proportion of people aged 65 and over is forecast to increase; however, new economic opportunities may bring young families to the Shire in the next 5 years.

In Tumut Shire, employment in the accommodation/cafes sector has risen and fallen in the last 10 years but was 5% in 2001, while employment in the culture and recreation sector has hovered around 1% for the last 10 years. The Tumut Region fact sheets use a broader definition which includes the retail sector (many of whom would be dependent on visitors), lifting the employment percentage in visitor-related business to 22% (1,063 persons).

There are three major corporations with operations in the Tumut region – Visy Paper and Pulp Mill, Carter Holt Harvey Particleboard mill and Weyerhaeuser sawmill. These three enterprises employ between 450 and 500 people (around 10% of a Shire workforce of just over 4,800). Current expansion plans for these major corporations include a $36 million expansion of the Weyerhaeuser plant employing an additional 30 people, and a $450 million expansion of the Visy Pulp and Paper plant employing an additional 50 people. Importantly, the two timber mills are adjacent to the rail corridor (which may be needed in the future for rail transport but which can provide a rail-with-trail corridor to allow some employees to commute to work by bicycle) while the Visy plant is further along the rail corridor (beyond where the rail-trail would head up the Gilmore Valley to Batlow).

4.4 Tourism

4.4.1 The Region

The Riverina is one of Australia's emerging holiday destinations and Wagga Wagga is a good base for exploring the region. The Riverina region received over 800,000 domestic visitors in the year ending December 2004 who spent a total of over 2.33 million nights in the region. The main market segment is visiting friends and relatives (accounting for just over 40% of visitors and visitor nights). People travelling to the Riverina for holiday and leisure purposes accounted for over 25% of visitor numbers and visitor nights, while business travel was significant accounting for 26% of visitor numbers and 29% of visitor nights.

Around 65% of the visitors to the region come from within NSW, with regional NSW contributing around 40% and Sydney contributing around 24%. Victoria was the biggest source of interstate visitation at around 15%, while the ACT accounted for 5% of visitors. 85% of all visitors travelled by car.

The region received over 1 million domestic daytrip visitors in the year ending December 2004. Unlike the overnight visitors, the bulk of these trips (41%) were for holiday or leisure while visiting friends and relatives accounted for almost 30%. Almost 40% of day trip visitors were aged below 35, those aged 35-54 contributed almost 37% while those aged over 55 contributed 25% of visitor numbers.

On the eastern side of the region, Tumut lies at the foot of the Snowy Mountains and prides itself on access to a range of outdoor recreation activities across all four seasons including bushwalking, horse riding, trout fishing, water skiing and snow skiing. It promotes itself as an outdoor tourism region with attractions for all trail users – walking, cycling, mountain biking, horse riding. Tumbarumba and Batlow promote their food heritage and current status in Australia's food production while also extolling the virtues of a number of places for outdoor recreation.

The figures for the Snowy Mountains tourism region (covering the eastern end of the Wagga Wagga to Tumbarumba rail-trail and all the Batlow to Tumut rail-trail) differ slightly from visitor statistics for the Riverina region. The region received nearly 700,000 visitors who spent a total of over 2.6 million nights in the region. In contrast to the Riverina region, the main market segment for the Snowy Mountains region is holiday and leisure (accounting for just over 70% of visitors and visitor nights). People travelling to the Snowy Mountains to visit friends and relatives accounted for only 15% of visitor numbers and visitor nights, while business travel was significant accounting for around 10% of visitor numbers and visitor nights.

Around 79% of the visitors to the region come from within NSW, with regional NSW contributing 36% of visitors and 42% of visitor nights. Sydney contributed around 43% of visitors but only 37% of visitor nights. The ACT and Victoria contributed the bulk of the remainder of visitors (15%) and visitor nights (11%). Almost 90% of visitors travelled by car.

The region received over 440,000 domestic daytrip visitors in the year ending December 2004. The bulk of these trips (55%) were for holiday or leisure while visiting friends and relatives accounted for 26%. Around 25% of visitors were aged below 35, those aged 35-54 contributed almost 56% while those aged over 55 contributed almost 20% of visitor numbers.

4.4.2 Wagga Wagga

Yearly visitor numbers to Wagga Wagga exceed 400,000. Guest nights (note these are not visitor nights) in Wagga Wagga have averaged around 250,000 over the last 5 years (2001 – 2005). Day visitors to Wagga Wagga generate $66 million while overnight visitors generate $96 million; a total benefit of $163 million/year (*Council of Tourist Associations*). 11% of the Shire's population is supported by tourism.

The three main markets for tourism in Wagga Wagga (in descending order of importance) are:

1. Visiting Friends and Relatives
2. Conferences and events
3. Defence families

Wagga Wagga is relatively accessible to the main east coast markets of Sydney, Melbourne and Canberra (see Section 4.5). The Canberra market has been identified by tourism organisations in Wagga Wagga as having huge potential and as a market worth considerable attention. Wagga Wagga has a higher profile in the Canberra market than in the Sydney and Melbourne markets (based on attendance at stalls held at caravan and camping shows).

The final point worth noting for visitation to Wagga Wagga is that there is significant repeat visitation by people who used to work in Wagga Wagga – they have an

affection for the town. A rail-trail could build on this repeat visitation and give people reason to stay longer.

4.4.3 Tumbarumba

There are an estimated 69,000 annual visitor nights plus day visitors per year to Tumbarumba. The value of visitor expenditure is estimated at around $7.5 million/year. 7% of the Shire's population is supported by tourism. Tumba Fest is a big annual attraction for visitors.

The Hyne timber mill may generate business-related travel; while the number may be small (and have not been quantified), these will have a significant impact on the local economy. Development of a rail-trail provides a facility that they may use and consequently stay a little longer in the region.

4.4.4 Tumut

The Tumut region is truly diverse with the towns of Tumut, Adelong, Batlow and Talbingo. The landscape is stunning, sitting as it does on the western doorstep of the Snowy Mountains. The region has a number of attractions include fly-fishing, Selwyn Snowfields, Tumut 3 Power Station and Lake Blowering plus easy access to Kosciusko National Park. As stated above, the region prides itself on access to a range of outdoor recreation activities across all four seasons including bushwalking, horse riding, trout fishing, water skiing and snow skiing. It promotes itself as an outdoor tourism region with attractions for all trail users.

The average visitor numbers are 188,000/year. 84,600 of these are day visitors, overnight visitors total 101,100, while international visitors number 2,600 (a total number of visitor nights of 285,000). The tourism sector is worth around $38 million/year to the local economy and has been identified by the Council as one of three key industry sectors for the Shire (along with timber and horticulture). 9% of the Shire's population is supported by tourism. Tourism to the Shire is growing. The Council has recently appointed an Events Coordinator in recognition of the growing importance of tourism and events such as the Festival of the Falling Leaf.

As indicated above, there are three international corporations with a presence in the Tumut region. These generate business-related travel; while the number may be small (and has not been quantified), these will have a significant impact on the local economy. Development of a rail-trail provides a facility that they may use and consequently stay a little longer in the region.

4.5 Trails and Tourism

The eastern end of the region (notably, the towns on the western slopes of the Snowy Mountains) already promotes itself as a "mecca" for outdoor activity. For example, Tumut prides itself on access to a range of outdoor recreation activities across all four seasons including bushwalking, horse riding, trout fishing, water skiing and snow skiing and promotes itself as an outdoor tourism region with attractions for all trail users – walking, cycling, mountain biking, horse riding. Tumbarumba and Batlow promote their food heritage and current status in Australia's food production while also extolling the virtues of a number of places for outdoor recreation.

There are a number of short and long trail opportunities in the region. These include:

- Hume and Hovell Walking Track. This is the best known of the walking tracks in the region – a 440 km trail between Yass and Albury. There are two attractive track heads in the region of the rail corridors – the Henry Angel Flat Track Head, some 7 kilometres from Tumbarumba and the Thomas Boyd Track Head, 25km east of Tumut. The Track's reported usage is between 40,000 and 60,000 users per year (on a part of the track).
- There are a number of short walk/cycle trails in and around towns in the region. The Wiradjuri Walking Track is a 30 kilometre track in and around Wagga; parts of the track along the Murrumbidgee River near the centre of Wagga are shared paths between cyclists and walkers. There are historic and nature walks in Tumbarumba, Adelong, Paddy's River Falls and reserve (which also has horse riding opportunities), and Tumut.
- The Bago State Forest and Sugar Pine Walk are features of the Laurel Hill area.
- To the east of the region is Kosciusko National Park with numerous walking and cycling opportunities.

These attractions are complementary to a rail-trail, providing a different experience that encourages visitors to extend their stay.

Section 6 discusses growing demand for cycle riding opportunities (both on and off-road). The region is developing a profile as a cycling destination. Recent cycling events and promotions include:

- The 2006 NSW Big Ride, a 9 day bike ride, involved 900 cyclists (and a large number of support crew) and travelled through the eastern Riverina from Holbrook to Binalong, passing through Tumbarumba, Batlow and Tumut;
- A 3 hour mountain bike race as part of Tumut Festival of the Falling Leaf (Tumut State Forest) is an event that has now run for two years in succession. The first year attracted over 300 riders. The 2005 Festival also included an Audax ride (a 50 kilometre ride) that attracted some 35 participants;
- The inaugural Easter Feast of bike riding was held in April 2006;
- Tourism NSW has published a Guide to Bicycling the

The Sevenhills Winery and Cellar Door on the Riesling Trail takes advantage of its close proximity to that trail.

Snowy Mountains (the main cycling activities are east of the rail corridors but it promotes the region in general);

- The Tour de Snowy – one of the world's premier women's road racing events was first run in 1998 (again, in the Snowy Mountains to the east).

The whole Riverina region promotes its cafes, restaurants, food production, wineries and other fine food outlets – infrastructure that has been used elsewhere to provide a significant incentive and added attraction for rail trail users. There are a number of existing and proposed wineries on, near and in the vicinity of the rail corridors. These include Mannus Wines (right on the Wagga Wagga to Tumbarumba Rail corridor), Black Range Winery, Kosciusko Wines and Martins at Tumbarumba, Boonderoo Winery at Tumut, and Borambola Winery and Charles Sturt Winery at Wagga.

Any additional trail activity, such as the two rail-trails, will help extend the stays of existing visitors, will attract additional visitors and will generate return trips.

One of the key elements in the region's attractiveness (and therefore the attractiveness of the rail-trails) is the proximity to major tourism markets (though it should be noted that tourism to the region currently comes, in the main, from Regional NSW). Sydney, Melbourne and Canberra are all major markets within a reasonable distance from the rail corridors' main towns as Table 4.1 shows.

Table 4.1 – Distances to major markets

	Melbourne CBD	**Sydney CBD**	**Canberra CBD**
Wagga Wagga	514 km (5 hrs 51 mins)	454 km (5 hrs 46 mins)	246 km (3 hrs 15 mins)
Tumbarumba	475 km (5 hrs 22 mins)	470 km (6 hrs)	262 km (3 hrs 29 mins)
Tumut	524 km (5 hrs 53 mins)	405 km (5 hrs 10 mins)	196 km (2 hrs 39 mins)

It is worth noting that the Victorian and South Australian rail-trails are all within 2-3 hours of their capital city. Interestingly, the Murray to the Mountains Rail Trail also cites its relative closeness to Canberra (around 5 hours) in its promotional material. Both the proposed rail-trails would be within 3 hours of Canberra, a potential major market. Whilst their distance to the major markets of Sydney and Melbourne are, on average, somewhat further than rail-trails in Victoria and South Australia, none of the Victorian or South Australian trails can claim to be within 6 hours of three major markets. Given the growing popularity of the short break market (discussed in Section 6), this positioning of the rail-trails within a reasonable drive (or short flight) from major markets is quite significant.

4.6 Conclusion

The population of the region will increase over time (even allowing for some possible slight decline in the two smaller shires of Tumut and Tumbarumba) and with it will come an increasing demand for outdoor recreation facilities. As the number of people living in the region grows, resident demand for outdoor recreation opportunities will grow. The ongoing nature of population growth in Wagga Wagga City should not be underestimated. Wagga Wagga is one of the major population

centres in south western NSW and one that is predicted to grow over the next 30 years. This provides a number of opportunities in the outdoor recreation area. Importantly, much of the growth in Wagga Wagga will be in the young adult group (for work and educational opportunities). This group may provide a significant demand for a rail-trail for recreational purposes. Potential demand is explored in Section 6.

The other significant user group will be visitors to the region. A rail-trail would add significantly to the tourism assets.

SECTION 5 – COMMUNITY CONSULTATION

5.1 Introduction

Consultation with local and affected people is extremely important in building community understanding and support which is vital to delivery of this project. Despite the obvious advantages of a rail-trail conversion, there are often opponents to the idea of turning an abandoned rail corridor into a multi-use trail. Adjoining and nearby landholders, some of whom have farmed the publicly owned land for long periods, understandably are disturbed about the prospect of change to a situation that they have grown accustomed to.

Given the strong community interest in this project and the need for a supportive community for its success, consultation formed a key component of the study (even though the project confined itself to feasibility rather than detailed design). Continued consultation and explanation and discussion of possible resolutions to any perceived problems is essential for the success of the project (and remains a key to the success of the project even after the completion of this feasibility study).

5.2 Previous Consultation

Prior to the commencement of this feasibility study, consultation had previously been carried out by the Riverina Highlands Rail Trail Committee. The current membership of the Riverina Highlands Rail Trail Committee can be found in Appendix 2. The Committee formed in July 2004 and, in September and October of 2004, it held a series of public workshops in towns along the two corridors to talk to the community about the project. The issues raised by landowners and the general benefits of rail-trails that had been experienced received substantial press coverage at the time. Since that time, the Committee has undertaken further work developing the rail-trail concept and seeking funding for the feasibility study. Members of communities along the corridor were aware of the project at the commencement of the feasibility study.

5.3 March 2006 Round of Meetings

During the first round of field work, a number of meetings with stakeholders were held as well as five public meetings. Comments made and information gathered through this process has contributed substantially to the shaping of the draft outcomes of this feasibility study.

5.3.1 Riverina Highlands Rail Trail Committee Meetings

The Committee met with the consultants twice in Wagga Wagga during the course of the first field trip. A project inception meeting was held on 16 March at the outset of the feasibility project. Key points raised included the scope and content of the final report, discussion of outcomes, the consultation methodology, and specific issues around elements of the trails. The second meeting with the Committee was held on 24 March and provided the consultants with the chance to report back to the Committee on the field inspections and public meetings that had taken place over the previous week.

5.3.2 Meetings with Council Representatives

Meetings were conducted with representatives from Tumut and Tumbarumba Shire Councils. As well as information gathering, these meetings served the purpose of seeking comments from Councils. These are summarised below.

5.3.2.1 Tumut Shire Council

- Tourism, horticulture and timber have been identified as the major industries in the Shire's future.
- The Gilmore Valley is increasingly a place for people settling for rural lifestyles as well as traditional farming.
- At Batlow, the only flat land on the town is on the rail yards and this has been identified as a place to build a new hospital – this will influence design of the trail head should the trail proceed.

5.3.2.2 Tumbarumba Shire Council

- The Council is very supportive of this project and is keen to see the section from Tumbarumba to Rosewood developed as a priority if the trail proves feasible.
- There is the possibility of using human resources from Mannus Prison on the trail project, as the Council does on other projects in the Shire.
- Council currently invests $250,000/year in tourism ventures.
- The Tumbarumba to Rosewood section may see strong demand from horse riders as there are a number of horse riders in this area –perhaps more than other sections of either trail.

5.3.3 Community Meetings

Community meetings were conducted in March at five locations along the proposed rail-trail corridors. Meetings were held at Forest Hill, Humula and Tumbarumba (Wagga Wagga to Tumbarumba Rail-Trail) and at Batlow and Tumut (Batlow to Tumut Rail-Trail). All meetings were well attended with between 20 and 60 people attending each meeting (with the exception of the Tumbarumba meeting). A detailed record of attendees can be found at Appendix 3.

All meetings commenced with introductory comments by the consultants and a presentation on rail-trail issues and solutions used elsewhere. The consultants made the following observations relevant to the meetings:

- There are no preconceived outcomes of the project.
- The consultants will provide independent "outside" advice based on their extensive experience and community consultation and feedback.
- The consultants emphasised that the corridor is publicly owned land belonging to the whole community of NSW, including:
    - Neighbours immediately adjoining corridor;
    - Residents of the region; and
    - Other NSW residents

- The consultants acknowledged that there are existing leaseholders of the rail corridors and farmers whose properties adjoin the corridors with established farming practices whose needs require consideration.
- The consultants acknowledged that all concerns expressed are understood, are legitimate, will be noted down and will be considered.

The consultants ran an open forum, inviting people to raise relevant issues taking a SWOT (Strengths, Weaknesses, Opportunities and Threats) approach. These are summarised below for each rail trail. The consultants did not try to respond to every particular concern as this would not allow the meetings to progress in an orderly manner. Meeting attendees were informed that concerns would be noted and dealt with at a general level in this report; specific issues would be dealt with by one on one consultations on-site during the next stage of detailed trail planning should the trail prove feasible. Many of the general concerns and questions have been addressed in other sections of this report.

5.3.3.1 Wagga Wagga to Tumbarumba Rail Trail

Strengths

- This is a beautiful part of the world at the right time of the year.
- This is a stunningly beautiful area; it is too good to keep to ourselves (residents).
- The rail trail would provide an alternative cycle route and avoid log trucks on the roads; it would be a boon for cyclists and walkers.
- The trail itself needs to have some features to attract people.
- Cyclists regularly come to Humula from Wagga on the weekend.
- The S-Bends (Downfall) near Rosewood are a feature in themselves and also have lots of wildlife.
- Attractions and events such as Tumba Fest may drive repeat visitation for the trail; the trail may also encourage people to come to the area for these events.
- The trail has a captive audience. In 2005, there were 1.2 million bicycle sales in Australia compared to 980,000 motor vehicle sales. Bikes have outsold cars for the last 6 years.
- The trail would be a good bush ride which would appeal to overseas visitors.

Weaknesses

- There are 6.5 million hectares of National Park in NSW – why can't people use this area for recreation.
- There are other trail opportunities in the region – these should be developed and promoted rather than dollars spent on this trail.
- Support for tourism ventures from the Council (Wagga Wagga City) is lacking.
- There are concerns with flooding along the corridor along the Humula side of the Hume Highway.
- Wagga Wagga City Council has limited funds available for this project.

- There will be a high cost of moving existing farm infrastructure.
- The trail will encourage weeds and fire along the corridor.
- Bridges need repair – this will be a significant cost item.
- A group already run trikes on part of the corridor – there will be potential clashes between user groups.
- Tumbarumba doesn't have enough visitor throughput to keep cafes open on weekends.

Opportunities

- Cyclists in Wagga are looking for somewhere to cycle out of the traffic.
- A project such as this brings people to the area – there are lots of cyclists in the broader community.
- Kids need somewhere safe to cycle – there have been a number of cycle fatalities around Wagga.
- Bike sales continue to outstrip car sales.
- Bike trails provide economic opportunities in Europe.
- The RAAF base will double in size – the corridor from the base to Wagga is a pressing issue needing attention. Provision of cycling facilities may encourage RAAF personnel to cycle to and from work.
- There are a number of cyclists in the area regularly.
- Links to the Hume and Hovell Track could be developed.
- There could be a great future for Humula with a project such as this.
- Users will require feeding, fuelling (food and drink) and accommodation; all provide opportunities for the region.
- Land swaps could be entered into to make the trail route easier where there are difficult problems.
- Tourists come through the region looking for rail-trail opportunities, but there are none in NSW.
- Autumn/spring is the high season for visitors.
- There is a need to draw more tourists into Tumbarumba – Canberra is a major population (and a potential large market for the trail).
- Potential benefits are quite large.
- Visitors without local knowledge miss out on "hidden secrets" – a rail-trail can be an easily known resource.
- People interested in cycling will know where rail-trails are.
- Interpretation – Wagga Rail History Society has lots of photos and written history about construction of the railway (including Downfall). This would provide added user experiences.

Threats

- Will the trail be privatised once constructed?
- Revegetation on the corridor – heavy machinery to remove rail can damage revegetation; some trees will need to be removed.

- Significant revegetation has been undertaken on the corridor particularly south east of the Hume Highway (between Tarcutta and Humula). Murrumbidgee Catchment Authority and Landcare have been heavily involved – trees are now 12 years old.
- Permission would be needed from the RAAF to cross the base.
- The project is not on Wagga Wagga City Council's 10 year management plan.
- Fuel price – increased price of fuel will influence the desire/capacity of people to travel long distances e.g. Tarcutta traders noticed a drop in business when fuel went up by 12c/litre.
- Trains can still run on the lines as they are not closed.

Issues

(Note that many of these appear as weaknesses or threats in the discussion on the Batlow to Tumut corridor – this is due to the slightly different ways the meetings were run but does not affect their importance)

Process

- How will specific issues be dealt with in the feasibility stage and what is the process for dealing with landholder concerns. The response was that detailed corridor inspection will reveal specific details. Localised issues are hard to check in a broad study.
- If most of the adjoining landowners object to the proposal, what weighting is given to these objections in the assessment?

Project

- Controlling motor bike access to the trail and consequently private properties.
- Some dispute the land is actually in public ownership. Clarification of line status was sought.
- The corridor some properties in half – a trail will reduce/stop access from Paddock A to Paddock B.
- Moving stock across the corridor will become an issue if people are constantly moving along the corridor.
- Cattle don't stand still - they constantly move back and forward across the corridor.
- Cattle love warm surfaces and will lie and defecate on the corridor.
- Electric fences are a possibility as a solution to some of the issues raised – they are mobile and less intrusive.
- This line was built as an "unfenced line" – farmers have adopted their practices to this situation.
- Liability – how is this affected by fencing (or no fencing)? For example, if a bull goes through the fence and damages a user, who is responsible. Alternatively, on an unfenced corridor, who is liable if a domestic animal attacks a user?
- The railway bridge traverses a floodway – this physically means that the corridor cannot be fenced.

- There were concerns about the impacts of users on creeks eg. Rosewood Creek – users may stop, jump in with bar of soap and pollute pristine waterways.
- There were concerns about people camping illegally and how this could be prevented.
- Fires – increased numbers of people mean increased risks. How is it proposed to manage users on the track in case of fire?
- If rail trail bridges are rebuilt to enable emergency vehicle access, this will be a significant project cost.
- Maintenance – who does the maintenance, and who pays for the maintenance.
- Who enforces the rules?
- A farmer has a regular program of chemical spraying for effective weed control; consequently there are concerns over spray drift and consequent liability.
- Farmers have baiting programs and use firearms for control of pest animals; what is the impact of these practices on trail users and farmers' liability.
- Adjoining landowners currently have views across the corridor to the creek; this may be lost with screen planting (one of the suggested privacy solutions).
- The Murray to the Mountains Rail Trail (cited in the meetings) is mostly beside the road; it is not like this project which leaves the roadside on many occasions.
- In places the rail corridor runs parallel to the main road – is that a problem?
- It was suggested that the trails should be developed along the roads instead – this would address landowner concerns.
- What are the alternative routes for cyclists – there should be development of on-road cycling opportunities instead.
- What is the standard distance between amenities on a trail such as this?
- What are the average costs of rail trail construction and maintenance?
- There is a need for a Committee of Management should the trail proceed – a task/role/reminder list needs to be prepared for members so they are reminded of their obligations.
- Is staged development of the trail a possibility – Humula to Tumbarumba, and Forest Hill to Wagga as the first sections to be developed – landholders can then see how it goes, what issues arise etc. before further work is carried out.
- Trail users – what do they spend compared to other visitors to a region e.g. motorbikes.
- There are fewer towns along the way compared to the Victorian models often cited – distances vary and are different from rail trails in Victoria.
- Where is the demand for rail trails (or this rail trail) coming from?
- Advertising – how do you tell people about a rail trail?

- Council dollars should be spent elsewhere.
- Some landowners will benefit from the trail – others will not.

5.3.3.2 Batlow to Tumut Rail Trail

Strengths

- Local people would use it too, not just visitors.
- The scenery/landscape through which the corridor passes is fantastic.
- 30km-35km is an ideal length for a rail trail – this corridor is 32km.
- The potential for interpretation is high and would add to users' experiences.
- Events on a trail can bring thousands of visitors to a region/town.
- The trail would provide better access for fire fighting vehicles and emergency service vehicles (particularly to currently inaccessible country).
- The trail would provide an alternative income for adjoining residents.
- The trail provides a safe off-road cycling alternative for family groups.
- The trail would re-establish a physical (and perhaps psychological) link between Batlow and Tumut.
- Trail development represents public use of a public asset.
- There are economic benefits and job opportunities for the region.
- Batlow can develop new opportunities/industries.
- The trail would increase the length of stay of visitors.
- The trail provides for the diversification of recreation opportunities.
- The trail would develop community pride and ownership.
- The trail would be the first rail-trail in NSW – this represents an opportunity to access Government funding because of this uniqueness.
- The trail would improve aesthetics of the Gilmore Valley; more trees could be planted on the corridor.
- The trail promotes a healthy lifestyle.

Weaknesses

Process

- There has been no detailed examination of individuals' concerns in the feasibility study.
- To date, there has been inadequate attention to landowner issues.
- There has been a lack of communication between the trail proponent and landowners.
- The consultants are not able to access corridor for the assessment process.
- The question of how to weight the concerns of landowners versus supporters of the project arose.
- Who makes the ultimate decision to proceed?

Project

- The poor condition of many of the bridges along the corridor.

- The costs of payment to a trail manager if there was one – where would this funding come from.
- Who pays for ongoing maintenance?
- The trail would pass through derelict industrial land in Batlow (Mountain Maid site) at the very start (or very end) of the trail – this creates a poor image for both the town and the trail.
- Concerns were raised about potential devaluation of adjoining land – now and in the future.
- There is a lack of nearby access roads in the vicinity of the trail for back-up vehicles e.g. parents in cars providing children with drinks, help etc.
- There is a perceived lack of a supportive community.
- Steep slopes in the valley lead to a higher fire risk.
- The corridor dissects properties.
- The possible presence of dogs on the trail is a major weakness and of significant concern to adjoining landholders.
- There are concerns over the security of landholders' houses and farming equipment. In addition, these landholders believe that they will face higher insurance premiums due to additional risks their property faces (theft, fire, vandalism).
- There are privacy concerns – some houses are closer than 30 metres to the corridor.
- Lack of understanding of farming practices by users may cause accidents to users from stock or loss of new-born stock.
- Unpredictable farm animals provide dangers for children whose parents may be unaware of such dangers.

Opportunities

- Stock could be allowed on to the corridor to keep grasses low – the trail is maintained, providing benefits for both users and adjoining landholders.
- Adjoining landowners are liable at present if people stray off the corridor on to private land. Development of the rail trail would address this issue and place responsibility on user and trail manager.
- People already come to the region for the range of available trails – additional trail opportunities are welcome and provide for further complementary activities.
- The trail would stimulate other improvements in towns.
- There will be benefits to local businesses and further business opportunities eg. shuttle bus services.
- The trail has significant tourism potential and promotes tourism in the whole region.
- The trail would promote cottage industries e.g. fruit stalls, etc.
- The range of accommodation in the region will improve.
- The trail provides an alternative safe cycling route out of the traffic and off narrow roads shared with logging trucks.

- There is a big market – thousands of bicycles sold every year. There are more bikes sold per year than cars.
- There is an opportunity to preserve and promote historic railway artefacts.
- There is significant railway history in the corridor – the railway operations were unique on the Batlow line. The trail provides a good opportunity for interpretation.
- Landcare projects can be part of the overall trail development project.
- The trail would provide educational opportunities and recreational opportunities for children and teenagers in particular.
- The trail would help reduce obesity levels; it is a vital health promotion tool.

Threats

- Fire on the corridor or in adjoining paddocks and forests may threaten users.
- There will be negative impacts on livelihoods and businesses in the Gilmore Valley.
- There will be destruction of the amenity for people who live in the Gilmore Valley.
- There are weeds on the corridor at present – who will remove them and who will keep them under control?
- There are concerns over liability issues, particularly for adjoining landholders. Who will be responsible for incidents involving trail users off the trail?
- Trespass is a concern for adjoining landholders.
- Adjoining landholders are concerned about the impacts on users of aerial spraying, aerial fertilizing and ground-level spraying with associated spray drift (and their possible exposure to liability).
- Industrial neighbours in Tumut (such as sawmills) may provide problems for both the user and the industrial neighbour.
- There are other trail opportunities (eg. Batlow trail; Hume and Hovell Track) in the region that may be better and attract more people.
- A hospital development is proposed for the station site in Batlow.
- The grade (steep) of the corridor impacts on revegetation and other developments.
- Funding for trail development – State Government may be unable to do so, particularly given its recent reduced commitment for funding cycle and pedestrian facilities. Local Governments might not fund the project.
- There are high maintenance costs for cycle trails.
- Locals might not use the trail.
- There may not be volunteers to maintain the trail.
- The trail may divide the community of the Shire.
- The project may not go ahead.
- A lack of interest from tourism operators in the project and its outcomes may signal difficulties for the project.

- There will be negative impact on residents' rates as councils find money to build and maintain the trail.
- Mismothering of lambs and other livestock due to increased human presence.
- There were concerns about policing of motor bikes in particular but access by cars was also mentioned – the High Country Trail in Victoria cited as an example where cars now travel the trail corridor creating problems for users.
- There is a reluctance of landowners to accept change. Associated with this is the issue of change of purpose – the corridor was originally a train line corridor resulting in certain expectations for landowners regarding impacts. This new use would be substantially different use of the same corridor.
- The line is currently leased to a tourist railway operator.
- Who manages the trail?
- The proposal will change the number of people in and using the valley.
- The proposals creates a climate of uncertainty with regards to business and property management planning for farmers – both immediately (before the issue is resolved one way or the other) and in the medium term (a 5 year horizon) if the trail proceeds – it is another factor that needs to be factored into farm planning that is currently not in farmers' plans.
- Fires caused by cigarette smokers.
- Disease issues – biosecurity of orchards in particular.
- Speed of users – high speeds on steep downhill sections will cause safety concerns.

Other Issues / Questions

- What will rail trail look like? (Will tracks and sleepers be removed?)
- What will happen with boundary fences?
- Cost of development of trail? Any estimates? Per kilometre cost?
- Fencing
    - who pays?
    - For cattle – need posts every 3m;
    - If electric fences are used, what happens at boundaries?
- Where will the people who come to Batlow come from?
- What railway infrastructure will remain?
- Money would be better spent on other projects in Batlow.
- No motorbikes and no horses – a strong view of many attendees.
- Lack of a firm decision to close the railway.

5.3.4 Informal meetings

During the first field trip, a number of informal meetings were held with interested people and stakeholders to discuss a number of issues.

Bruce Angel, Rural Fire Service Representative and local landholder, Tarcutta

- There are a number of fire management issues – provision of fire refuges (and their specifications) at appropriate intervals along the track, signage

showing distance to/from fire refuges, possible management responses on total fire ban days noting the Hume and Hovell Track is closed on these days.

- There are a number of landholder issues – floodways and how these could be dealt with if bridges were reinstated, fencing and placement of boundary of fences, weed spraying on the rail corridor – how and when, absolute criticalness of ongoing maintenance of the rail corridor to keep adjoining landholders happy – and how this might be done (trail manager, done by landholder on a cost reimbursement basis).

Wagga Wagga-based cyclists

- It is important that the Wagga Wagga to Ladysmith stage of the Wagga Wagga to Tumbarumba trail be seen as an extension of the urban cycle network and built to a high standard (notably a sealed pavement).
- The provision of cycle links from the rail trail into the suburbs of Wagga Wagga (notably Kooringal and Lake Albert) is needed to complement the existing trail link along the Murrumbidgee River into town and provide more opportunities for urban cyclists.
- It was suggested that the trail's development be staged, with the Tumut to Batlow trail, and the Wagga Wagga to Ladysmith and the Tumbarumba to Rosewood stages of the Wagga Wagga to Tumbarumba trail being the priority sections.

Rail Trail Action Group

- The consultants met informally with representatives of landholders along the Wagga Wagga to Humula section of the corridor. The representatives reiterated many of the concerns that had been discussed at the various public meetings and were able to provide more detailed explanations of their particular issues. The Group also provided a written submission (see 5.6.2 below).

Tumba Rail

- The Tumba Rail Group is looking to operate trike rides along the section of track around Ladysmith Railway Station.
- The Group raised the possibility of sharing the corridor and bridges and discussed how this might be achieved.
- The Group is concerned about any changed management regime – currently the State Rail Authority is a supportive landlord. Would the Department of Lands (or other manager) be as supportive? Changed management regime may also impact on rates, fees etc.
- The Group also expressed a possible desire to use other sections of track as well e.g. the Downfall.
- The Group also expressed a desire to use some of the rail that might be removed if the trail proceeds to relace/replenish the rail on sections they currently use.

RAAF Base

- The Base Commander is very supportive of the corridor from Wagga Wagga to the Forest Hill base being developed; she would also like to see the trail

developed from the base to Ladysmith. It would address safety issues for base personnel who would like to cycle to work. It would also provide another safe recreation alternative for physical activity for personnel.

- There would be the possibility of using the corridor for events, fitness training, and other physically-oriented social activities.
- If the trail is developed, there may be some conflict with construction vehicles on local roads until the end of 2007 as the base has access improvements constructed.
- The Base Commander also provided a written submission (see 5.6.1 below).

Australian Rail Track Corporation

- Discussions focussed on the ARTC's current role in track management. It still has responsibility for residual disused lines and for noxious weeds etc along the corridors.
- The ARTC representative confirmed that the Wagga Wagga to Tumbarumba line was built as an unfenced line, but was unsure of the fenced status of Batlow to Tumut line
- The possible development of a "rail with trail" along the Tumut to Gilmore section of the Tumut to Batlow corridor will create some occupational health and safety issues.
- The ARTC representative clarified the status of residential sites close to and on the corridor – historically, the Railways Department allowed people who worked on the railways to build in the rail corridor.
- The heritage status of stations and platforms was also discussed.

5.4 May 2006 round of meetings

A number of formal and informal meetings were conducted in conjunction with a second round of field work in May. Comments made and information gathered through this process has contributed substantially to the shaping of the draft outcomes of this feasibility study.

5.4.1 Riverina Highlands Rail Trail Committee Meeting

A meeting was held with the Committee and an update on progress of the study was provided. Committee members also provided updates to the consultants on activities that impacted upon the trail feasibility study.

5.4.2 Meetings/on-site Inspection with Individuals

Individual meetings were held with adjoining landholders who had requested on-site meetings. On-site meetings/inspections were held in the Gilmore Valley and on a number of properties along the Wagga Wagga to Tumbarumba rail corridor. The consultants met with Rick and Pam Martin (farmers at Corienbob), a group of Gilmore Valley farmers, Ron Frew (Cellar Door manager at Mannus Wines), Bruce Wright (On-site Services Manager at Hyne Mill, Tumbarumba), Judy Scholfield (owner) and Ian Parsons (Farm Manager) at Humula and Michael Slack-Smith (farmer at Humula). Discussions at these inspections focussed on particular issues:

- Some landholders took the opportunity to reiterate their very significant concerns with the proposal and the negative impacts on their farming practices.
- Other landholders pointed out particular issues that they viewed as major concerns. These included where the rail corridor separates the farm house from farm outbuildings, where houses have been built extremely close to the corridor, where the corridor is obscured from the road raising concerns about theft particularly where farmers do not live on site, and concerns with ground undermining and landslides (in some cases, the existing rail line is hanging in mid-air).
- Other landholders were supportive of the proposal. Some farmers saw an opportunity to diversify off-farm or on-farm income. Some farmers did not see the issues that had been raised by others (such as spray drift, interaction of livestock and people and stock movement) as being of any significant concern to them. Some adjoining landholders saw it as an opportunity for increased business opportunities or providing a high quality resource for the community and an opportunity to address a neglected resource; they had no concerns that users would be cycling and walking past their properties.

5.4.3 Meeting with NSW Rural Fire Service

A discussion on fire management was held with NSW Rural Fire Service representatives in Wagga Wagga (Superintendent Joe Knox and Bruce Angel). A number of issues were raised in this discussion:

- The practicalities of getting fire trucks across the rail corridors at regular intervals (if trail corridors were to be fenced).
- Fire risk factors in the area – risk profile is influenced by a number of factors including slope of the land (hilly terrain and north and west facing slopes increase risk), response time for emergency vehicles (the closer in to towns a place is - such as Wagga Wagga - the less time for emergency vehicles to get there), proximity of roads and how heavily trafficked they are (highways and major arterials increase risk due to higher numbers of passing motorists), and closeness of refuges including fire-proof buildings and roads.
- Ideally, trail design should allow for fire vehicle passing bays (15 metres long by 6 metres wide) every 2 kilometres.
- Fire management responses for the trail. These included closure on days of total fire ban (and consequential policing). A detailed discussion was held on ranking of fire zones along each trail and differing management responses in these zones. The RFS representatives indicated that current mapping technology provided good indicators as to fire paths which would allow parts of the trail to be ranked in terms of fire risk (recognising that nothing can be absolutely precise). Possible management responses in zones of highest fire risk may include construction of fire refuges (amenities blocks designed to be fire-proof could serve a dual purpose), reconstruction and/or strengthening of bridges to carry fire vehicles (around 13.5 tonnes), provision of a number of points for corridor crossing (should the trail be fenced), appropriate warnings, and possible longer closures on these sections (rather than just on

days of total fire bans). Sections of trail in zones of lower fire risk could have a lower level of fire management response.

- The Rural Fire Service provides assistance on a cost-recovery basis to authorities to prepare fire management plans. The preparation of such a Plan should be a key element undertaken before the trail is opened (as part of a corridor management plan – see Section 15).

5.5 Newsletters

A project newsletter was produced during the project and posted on the Riverina Regional Development Board website. This outlined progress of the study. A copy of the newsletter is attached as Appendix 4.

5.6 Submissions

A number of submissions were received during the preparation of the draft study. Some of these submissions were supportive of the proposal, while some were opposed to the proposal. A summary of these submissions is included below.

5.6.1 Supportive Submissions

Supportive submissions were received from NSW Sport and Recreation, Borambola Homestead, Tumbarumba Wine Estates, Tumbarumba Historical Society, Judy Slack-Smith, RAAF Combat Support Unit, the Fatman's Riders Group, and Bicycle Wagga Wagga. The submissions made the following points:

- The trails could be utilised by groups such as Walking for Pleasure and the Duke of Edinburgh Scheme.
- The trails will provide a facility for cycling and walking, and will encourage both individuals and families to cycle and walk – a good outcome for healthy lifestyles.
- Rail trails in Victoria were used by a number of submitters – they were supportive of similar developments in this region.
- The trails would be a huge drawcard for tourism to the region, particularly given the increased interests in recreation cycling.
- The trails would provide an economic boost to villages along their routes, providing a number of opportunities for small enterprises to develop.
- The area has a number of natural assets, diverse farming operations and interesting residents – a trail will highlight these wonderful assets.
- There are a number of potential organised rides that start in Wagga that are keen to explore new possibilities.
- Cyclists are keen to have safe, off-road facilities to cycle – this would encourage more people onto bikes with good health outcomes.
- The trail would provide a potential significant increase in wine tourism, particularly where it passes close by cellar doors – similar to South Australia's Riesling Trail.

- Particular landholders expressed no concerns that users would be cycling and walking past their properties.
- Trail development will provide the opportunity to explore the history of the areas through which the trails pass – both the rail history and other historical sites along the trail would benefit from greater exposure.
- RAAF personnel would be keen to cycle and walk along a trail between Wagga Wagga and Forest Hill – currently, the base does not promote cycling to work due to the high risks along the current road system. The potential number of users will increase significantly when new trainees come on board at the end of 2007 (when the RAAF's Recruit Training Unit moves to RAAF Base Wagga).
- A cycling and walking trail as far as Ladysmith (from Wagga Wagga) would also provide additional safe options for RAAF personnel to exercise through walking or running – increasingly important from the end of 2007. Current options (limited as they are) may become more limited in the future with the possibility of increasing security measures for regional airports.
- The RAAF Museum would be an ideal stopping point for families and recreational users of the trail.

5.6.2 Submissions Opposed to the Project

Submissions opposed to the project were received from the Rail Trail Action Group, Rick and Pam Martin, and GA Sykes and Sons. The submissions made the following points:

- The Wagga Wagga to Tumbarumba rail trail will pass through intensively farmed prime agricultural land.
- The trails will pass through and close by agricultural activities considered highly dangerous under occupational health and safety regulations. Issues such as spraying and proximity to dangerous workplaces such as shearing sheds, silos and machinery storages means that the trail will not be a safe place.
- Access across the corridor is a critical issue. Adjoining paddocks are bisected by the corridor. Fencing the corridor would create major disruption to farming practices and create inefficient paddocks. The need to open and close gates at crossing points will create inefficiencies and, in some cases, may not occur.
- There were concerns over fencing. Farmers do not want the responsibility of fencing the corridor as they do not have time to do so, nor do they want responsibility for maintaining the fencing.
- Farmers are concerned with the possible transfer of disease along an "open corridor". Gates left open on the rail trail may lead to infected stock (particularly those with foot rot) wandering onto farms that do not have the disease.
- Chemical application for weed control will no longer be under the farmer's control as the rail trail manager would have some responsibility – this may

compromise farmers' ability to address issues associated with withholding periods for sale of livestock.

- Weed control is a major issue – farmers are concerned that control of weeds along the corridor will fall on under-resourced councils who would not be able to effectively control weeds.
- Access to the trail by dogs and horses is a concern. Dogs have negative interactions with livestock and may also eat fox baits. Horses along the corridor would cause problems for horse owners adjoining the corridor.
- Access by motorcycles would be almost impossible to prevent.
- Fire risk is an issue - both the risk of users starting fires and the danger posed by fire to users.
- There are questions over responsibility for environmental management along the corridor – who would be responsible for implementing solutions to land degradation along the easement. Current environmental issues include dryland salinity, severe erosion and poor drainage.
- There are concerns over privacy – the trail passes close to several landholders' dwellings. Screen vegetation is not satisfactory.
- There will be significant financial burdens placed upon landholders by adjusting management practices to adapt to the opening of a rail-trail. The submission by Rick and Pam Martin costed anticipated recurrent costs, recurrent risks, and capital costs.

  Recurrent costs included:

  - time, fuel and depreciation on fence and gate management;
  - loss of livestock due to reduced capacity due to restricted fox baiting and disturbance of lambing ewes;
  - inefficiencies in chemical application – delays, wastage, loss of aerial spraying efficiencies;
  - additional labour to monitor vandalism, theft, occupational health and safety of trail users;
  - extra management time to manage divided paddocks, environmental issues, increased insurance costs, and stress related health issues for landholders including hypertension, depression and anxiety.

  Recurrent risks included livestock diseases, weed escape, contract chemical maintenance of the corridor, and unintentional joinings of livestock.

  Capital costs included fencing the corridor, provision of water to divided paddocks, upgrade of capital improvements within close proximity of the corridor, and decrease in the value of agricultural land.
- Impacts of trail construction including noise pollution, distress of livestock, distress of landholder due to general disruption of farm activity and disruption to threatened species.
- Theft of farm property is a concern.

- Litter on the trail is a concern. Who will clean up any litter left by users?
- Development of toilets and water stops along the trails was raised as an issue.

SECTION 6 - DEMAND

The demand for rail-trails specifically and recreation trails in general is influenced by many factors, including population trends and demographics, existing recreation trends, and supply generated demand.

The resources available to the project did not allow for any new survey work to assist in the analysis of resident and visitor demand. The approach adopted in this section has therefore been a comparative one, i.e. general conclusions have been drawn using available data from other parts of Australia.

6.1 Population Trends and Demographics

Population statistics, including resident and visitor numbers, are discussed in Section 4. The key points from those statistics are:

- The current population (estimated at 2004) of the region around both rail-trails is 73,413 and it will increase to around 89,000 in the next 15 years. Wagga Wagga will remain the most populous centre in the region.
- The population in the region around both rail-trails will age, a national trend.
- In Wagga Wagga City, the aging of the population will be slowed by continual in-migration of young adults for education and employment opportunities, particularly in the defence force.
- Visitors to the region have risen over recent years and this trend is likely to continue. At least 1.5 million people visited the two tourism regions in which the rail-trails are located for overnight stays while a further 1.44 million people visited for day trips (note that visitor numbers to the towns in which the rail trails are located are smaller than this). Tourism is a major industry in all four Local Governments through which the rail-trails pass.

6.2 Recreation and Physical Activity Trends

It is a wise use of public money to build trails that will have high use rates, both from residents and from visitors (who are playing an increasingly important role in local economies). But what do people want from their trails?

6.2.1 What Do People Do?

The Inaugural Exercise, Recreation and Sport Survey (2001) reports on the propensity of Australians to participate in trail-related activities at a general level:

- 28.8% of survey respondents across Australia participated in walking, making it the most popular form of activity;
- 9.5% of survey respondents across Australia participated in cycling, making it the fourth most popular form of activity;
- 5.3% of survey respondents across Australia participated in bushwalking, making it the eight most popular form of activity.

(Sport and Recreation Queensland Web site)

Two general findings from this work are also relevant.

- Significant technological advances in equipment design and function have created new forms of outdoor activities and extended the scope and levels of participation for the general population.
- In general the population are making increased 'lifestyle' choices that associate with greater access and contact with the natural environment. This includes aspects of urban to rural ('sea change') residential drift, increased demand for open space (parks, recreation trails etc.) in urban developments, and increasing demands for recreational time in the outdoors (changing work patterns and day trips from home).

Together, these two general trends have helped increase demand for passive non-organised recreation (as opposed to organised sporting activities).

A number of survey-based studies are available which together give a consistent indication of participation levels relevant to trails-related outdoor recreation activities. These studies come from South East Queensland (1998 and 2001), South Australia (Adelaide and Adelaide Hills), and the ACT (Lanyon Valley Community Needs and Facility Study). Table 6.1 provides a summary of the relevant participation rates.

Table 6.1 – Participation Rates in Outdoor Recreation Activities

Study	Walking	Cycling	Horse riding
SE Qld (1998)	60%	25%	7%
SE Qld (2001)	50%	26%	7%
South Australia	59%	26%	4%
ACT	73%	58%	14%

All four studies used large samples; consequently, their results can be considered reliable. The ACT study included a large number of school aged children, which may explain the higher participation rates, particularly for cycling. The very extensive Canberra bike path network may also have contributed to the high participation in cycling.

Maher Brampton Associates undertook work for the Cradle Coast Authority in North West Tasmania. The participation figures in this area are similar though not the same for the four more detailed studies above. Bushwalking accounted for 86.3% of activities, bike riding for 7.2% and horse riding for 6.5% of trail activities. These figures also included interstate and overseas visitors, which the other studies did not.

The point of most significance in these figures, including the figures from North West Tasmania, is the relative proportion or level of participation for each of the three activities. Clearly walking is the most popular trail related activity, and is in fact one of the most popular outdoor activities amongst all Australians.

Unfortunately none of the surveys distinguish between cycling generally and off-road cycling. What is known is that off-road cycling or mountain biking is a rapidly growing recreational pursuit around Australia, and that there is growing usage of non-urban areas for this activity. Mountain biking underwent a tremendous increase through the 1990's. It has been one of the 'boom' recreational pastimes of the last

decade. Cyclists are the most dominant user group on the Tasmanian Trail. The Mawson Trail in South Australia was primarily designed for off-road cycle touring, and the 950km Munda Biddi Trail in WA is designed exclusively for off-road cycle touring. These projects indicate a growing demand for cycle trails, as does the popularity of rail-trails in Victoria. At a general level, bikes have outsold cars over the last six years. Over 1.2 million bikes were sold in 2005; most of these were hybrid and mountain bikes.

Recent work by Market Equity for the South Australian Office of Recreation and Sport confirms these trends. A survey of five trails in South Australia (interviewing 933 trail users) showed 69% of trail users were walkers and 29% were cyclists. One of the trails subject to the survey – the Riesling Trail – was a rail-trail and the percentage of trail users that were cyclists was quite high at 65%.

The Riverina Highlands Rail Trail Committee undertook a survey of participants in the 2006 NSW Big Ride (a 9 day bicycle touring ride) which passed through the region in February 2006. The survey provides an important indication of potential demand for a rail-trail in the region. It is acknowledged that the survey interviewed only bicycle riders who would be predisposed to using a rail-trail; nonetheless, it gives an indication of the demand for rail-trails from one potential major user group. The survey interviewed 260 cyclists on the ride (out of a total number of 900 riders who participated in the Big Ride). The key findings (in terms of demand) were:

- Over 50% of respondents were over 50 years of age;
- The majority of cyclists were from NSW (81%). Riders from the ACT made up just over 6% of participants, Victoria contributed just over 5% and Queensland just over 4% (these source figures are relatively consistent with broader visitor profiles to the region as discussed in Section 4.4, although the relative share of visitors from Victoria is less than the broader regional profile).
- Cycling tends to be a family sport with 65% of respondents having 2 or more adult members of their family who cycled.
- 44% of respondents had previous experience on a rail-trail, significant given there are no rail-trails in NSW. Most of those experiences were for a weekend or longer period.
- Almost 98% of respondents (254) indicated they would return to cycle a rail-trail in the region if one or both rail-trail projects proceeded.

6.2.2 What Do Visitors Want?

It is also critical to consider the needs of visitors as they provide much of the economic benefits associated with trail development. Recreation trails (including rail-trails) provide an important piece of tourism infrastructure and provide experiences in the ecotourism market. Ecotourism is estimated to be growing at 30% per annum and cultural tourism at 15% per year globally – significant growth markets to target.

What are tourists looking for? Research from the Bureau of Tourism Research and the Australian Tourist Commission indicates that an increasing number of visitors are interested in what is local and authentic. Successful tourism destinations are

built on factors that give a place its own distinctive character. These factors are lifestyle, heritage, cultural activities, landscape, flora and fauna; characteristics of the basic tourism product of any destination. Rail-trails provide opportunities to highlight many of these characteristics.

6.2.3 How Long Do People Spend on a Trail?

A Victorian study (prepared for the Victorian Trails Strategy 2005 -2010) found that there is a clear preference for shorter walks (up to 6 kilometres and taking between 30 minutes and 2 hours to walk) both in metropolitan and "remote" trails. The Market Equity work in South Australia confirms this finding with 76% of walkers using trails for less than 2 hours.

Use patterns for cyclists are somewhat different. Market Equity's work shows that the majority of cyclists (74%) use a trail for 3-4 hours and are more prepared than walkers to travel to use a trail (36% of cyclists interviewed on the five trails were non-locals).

The Batlow to Tumut Rail Trail (should it proceed) would be an ideal length for cyclists. Two of Australia's most successful and well known rail trails are of similar length – the Lilydale to Warburton trail (near Melbourne) is 39 kilometres long while the Riesling Trail (in the Clare Valley) is 25 kilometres long.

While the Wagga Wagga to Tumbarumba Rail Trail is longer, it appeals to a different market. A rail-trail of this length provides for an excellent weekend length ride and offers great flexibility of use options (long, medium or short walks & rides). Many sections of it would be used for short rides (3-4 hours), while the appeal of a long-distance multi-day ride would ensure a number of users would traverse the entire rail corridor. This rail trail would be among the longest in Australia. Other rail trails around this length include:

- Railway Reserve Heritage Trail (Mundaring, WA) (70+ kilometres);
- The Murray to the Mountains Rail Trail (98 kilometres);
- The Great Southern Rail Trail (93 kilometres when complete);
- The East Gippsland Rail Trail (109 kilometres when complete); and
- The proposed Wodonga to Cudgewa Rail Trail (potentially 112 kilometres).

The responses from the NSW Big Ride survey (discussed above in 6.2.1) indicate that people are prepared to travel long distances and put time aside to cycle rail-trails. There is no doubt that visitors in particular are likely to put aside the time to travel along the whole of the trail – people have more time on holidays than they do in their normal day.

6.3 Participation in trail-related activities – what is happening in the region – anecdotal

Visitor numbers are important – they bring significant direct economic benefits to a region. However, local demand is also critical to success. There will be significant local demand for improved bicycle access to provide safe cycle routes for both commuters and recreational riders. This is particularly the case in Wagga Wagga where the bulk of the population is located.

The Wagga Wagga Bikeway Plan review (1998) includes the results of a random survey of 1,000 people in the City carried out for the purposes of the study. Key relevant findings are:

- 54% of respondents regularly cycled.
- 45% undertook cycling for recreation, 26% for commuting and 25% for exercise and fitness.
- The three main facilities requested by respondents who cycled were marked cycle lanes on roads (41%), off-road commuter cycle paths (22%) and recreational cycle paths in parks (16%).

A targeted survey of user groups was also carried with the survey distributed through bike shops, the RAAF base, the Army Base and various cycle club meetings. As expected, there was a much higher response in terms of those who regularly cycled (79% of respondents). For the purposes of this study, the key findings were in terms of purpose and facilities.

- 48% undertook cycling for commuting, 23% for recreation and 21% for exercise and fitness.
- The three main facilities requested by respondents who cycled were again marked cycle lanes on roads (52%), off-road commuter cycle paths (30%) and recreational cycle paths in parks (5%).

The Bikeway Plan also provided insight into local cyclist characteristics of relevance. These were:

- Longer distance commuter cyclists travelled over 5 kilometres and travel in a direct route (scenery is a minor consideration);
- Short distance commuting cyclists have multiple destinations, such as the library, the swimming pool, and shops, and will travel a little out of their way to make the route more pleasant and away from heavily trafficked areas;
- Riding or training cyclists will ride 30-150+km per day and prefer a circuit and will not ride on gravel or unformed surfaces; and
- Recreational cyclists ride along scenic routes away from traffic riding for fun or exercise.

All these user groups will derive some benefit from the rail-trail development, particularly if it is linked with the urban cycle network. The issue of safe places to cycle was raised continually at all public meetings (see Section 5.3.3).

A number of trip generators (i.e. places where cyclists go) were identified in the Bikeway Plan Review. Bicycle routes need to pass generators to ensure use by cyclists. The RAAF Base at Forest Hill was identified as a trip generator. This is a critical factor in considering the feasibility of the rail-trails. As discussed in Section 4, the total base population is currently 1,038. Around 400 of these live in Wagga, rather than on the base. The Base Commander has indicated that RAAF personnel would be keen to cycle and walk along a trail between Wagga Wagga and Forest Hill – currently, the base does not promote cycling to work due to the high risks associated with using the current road system. Potential numbers of users will increase over the next two years as all three services increase recruiting and the RAAF Recruit Training Unit moves to Wagga.

The population of the base will rise to around 1,800 at the end of 2007. A cycling and walking trail as far as Ladysmith (from Wagga Wagga) would also provide additional safe options for RAAF personnel to exercise through walking or running. In short, the RAAF base provides a significant pool of local trail users (both for commuting and exercise purposes), both now and increasingly in the future.

The Roads and Traffic Authority has recognised cycling demand generated by large employment places by making the construction of a shared use path along the Olympic Way from the Sturt Highway to the Kapooka Army base a major cycleway project for 2005/06.

At the community meeting held in Batlow, people indicated that they walk for exercise and were looking for safe in-town walking routes.

The Roads and Traffic Authority has listed the construction of Stage 1 of a shared use path in Tumbarumba along Albury Street (from Mate Street to Langland Street) as a major cycleway project for 2005/06, recognising a local demand. The Hyne Timber Mill employs 160 people on site some 5 kilometres from Tumbarumba. The timber mill is adjacent to the rail corridor which can provide a facility to allow some employees to commute to work by bicycle (a small number of workers already ride on the highway).

The three major manufacturing enterprises in and around Tumut enterprises employ between 450 and 500 people. The two timber mills are adjacent to the rail corridor which can provide a rail-with-trail corridor to allow some employees to commute to work by bicycle while the Visy plant is further along the rail corridor. According to the 2001 Census, a small number of people already ride to work in Tumut Shire (though no detail is provided on where they are employed). The rail-trail provides a commuting opportunity.

6.4 Cycle Tourism

Cycle touring can bring significant financial benefits to host towns. A recent South Australian research paper regarding cycle tourism in South Australia provides some background and relevant statistics. The research reports states:

> *"Australian residents make an estimated 1.7 million cycle tourism overnight trips (1 or more nights) a year in Australia.*
>
> *Overseas visitors have a very high level of interest in nature activities, "experiencing Australia" and seeing natural surroundings and wildlife when in Australia. This suggests that cycle tourism options that link with these high interest themes i.e. cycling that includes experiencing Australia's nature, visiting National Parks etc would be of particular appeal.*
>
> *Local back roads and off road bike paths are the most popular routes for recreational cycle trips."*

A rail-trail has the potential to be a critical piece of infrastructure in cycle tourism. Section 4.5 looked at existing cycle events in the region; a rail-trail would build on this growing reputation and attract more cycle tourists.

6.5 Supply Generated Demand (Speculative)

There is strong anecdotal evidence from around Australia that a large part of the demand for trails is supply driven, meaning trail users are attracted to developed trails that are both "known" or advertised in some way, and offer a range of facilities such as signage and interpretation, parking, toilets and water.

Box 1: Economic benefits of Mountain Bike Trails in Moab, Utah, USA

Moab, Utah in the USA was a declining town, until an enterprising group decided to market the place as a mountain biking destination. Not only did the town survive, it thrived. The area now boasts over 20 mountain biking trails, but also many hiking trails, several drive trails, motor cycle trails, numerous accommodation places and of course a host of tourist destinations.

Several well prepared web sites illustrate to potential visitors the many trails and other attractions of the area (see: utah.com/bike and discovermoab.com). One of these web sites has received over 65,000 'hits'. Trail brochures, in PDF format, are available for downloading.

A recent study involving a travel cost model (TCM) was used to estimate the economic benefits, measured by consumer surplus, to the users of mountain bike trails near Moab, Utah.

The authors state that it is essential to estimate the economic benefits of mountain biking for several reasons. First, mountain biking has the potential to conflict with other forms of recreation such as hiking and horseback riding, as these activities often use the same trails and these conflicts may increase due to mountain biking's popularity. Mountain biking can also impose special costs on a park such as repairing damaged trails and marking trails. The authors state that it is essential to estimate the economic benefits of mountain biking to assist in trail allocation and for use in benefit cost analysis of mountain biking specific projects.

The study concluded that the trails in the Moab area produce a high value of consumer surplus to the users, between $197 and $205 per trip.

The study states:

"Although these estimates of consumer surplus may not easily transfer to other areas, due to the uniqueness of Moab, it is still useful for land managers to note that there are large benefits resulting from land being used for mountain biking".

The study also concludes:

"It should be noted that mountain biking is only one activity which can be done at Moab and, therefore, mountain biking is only part of the total economic value associated with Moab. Moab's total economic value will consist of all use values such as hiking, rafting, and sightseeing....".

(Fix, P and J Loomis)

Data to verify the proposition that "if you build it they will come" (induced demand) is rare in trails research. However evidence of usage on two recently developed trails in Western Australia, the Mundaring trails network and the Bibbulmun Track, show steadily growing usage. The Bibbulmun Track increased in usage from 10,000 in 1998 to 35,000 in 1999-2000 to 137,500 in 2003 (*Bibbulmun Track Foundation*

2004). In 2001, the Mundaring Shire trail network was used by over 200,000 people (*Jessop and Bruce 2001*), having grown from a low base when the network was first fully opened. Only 10% of these users were locals (residents of Mundaring Shire) with many other users drawn from the Perth metropolitan area. However, the 20,000 local users represented some 63% of Shire residents.

The experience of many towns across the USA also supports the notion that development of trails can stimulate visitation to an area because of the existence of the trails. There are many stories of towns in decline that reversed that trend by developing a trail (often a trail along an abandoned railway line) and the fortunes and economic prosperity of that town turned around (see Box 1 above).

6.6 Conclusion

Australians are increasingly looking for passive, non-organised recreation opportunities, often in natural or near-natural settings. Demand for this type of opportunity will only increase as the population ages. Residents of Wagga Wagga City, Tumbarumba Shire and Tumut Shire are likely to have similar desires. It is also reasonable to assume that visitors to the region have similar desires. While walking remains the most popular of these activities (and is likely to remain so as the population ages), off-road cycling shows a growing and often unmet demand within the trails market. It is this particular niche that a rail-trail would fulfil particularly noting the high percentage of cyclists on other established rail-trails. The rail-trails would also provide another significant high quality walking opportunity.

SECTION 7 – BENEFITS OF RAIL TRAILS

Converting disused rail reserves into recreation trails makes eminently good sense. Such trails have many in-built advantages. One of the most important is gradient – most rail lines have a gradient of less than three degrees, which allows and encourages use by almost all population groups, regardless of age or physical condition. Hills and vehicles are two of the major negative factors which limit trail use, and rail-trails circumvent both. Further, rail-trails often traverse a wide variety of landscapes and can contain historic bridges and other remarkable structures. The existing formation means that little construction work is required to produce a broad, flat, firm trail surface.

There is little doubt that recreation trails provide significant benefits, both to trail users, and the host communities. The Recreational Trails Strategy for South Australia 2002 – 2010 (*SA Office of Sport and Recreation 2002*) provides a succinct summary of these. The authors of this report state that social health, physical fitness, environmental protection, cultural preservation and the economy can all improve from the effects and experiences offered by recreational trails.

7.1 Social and Physical Health Benefits

Trails provide communities with a diverse, free opportunity to explore and enjoy healthy recreational pursuits. Active recreation, in any form, will improve health. People can use trails in a variety of ways, depending on their abilities and preferences. Social and physical health benefits include:

- Participation in trail activities can improve physical and mental health, assisting with disease prevention particularly cardiovascular, musculoskeletal, respiratory, nervous and endocrine systems as well as reducing obesity, hypertension, depression and anxiety. Obesity, particularly childhood obesity, consistently features in the press as one of the major issues facing Australians. While a particular piece of recent research suggests that children are exercising as much today as in previous times and it is diet that is the major contributing factor, this conclusion is yet to be fully tested. Regardless of this research, obesity amongst adults and children is increasing. Increased physical activity will make a difference. The obesity epidemic is now estimated to cost Australia $1.3 billion/year (*Australian Bicycle Council*).
- Trail activities facilitate participation and social interaction between a diversity of community members, age groups, individuals and families e.g. community walking groups, voluntary trail maintenance and conservation work;
- Trails can offer a wide range of opportunities to a diverse group of people. Depending upon design, trails can accommodate the elderly, people with disabilities or satisfy those seeking challenging adventures and a sense of achievement;
- Participation in trail activities has a relatively low cost to participants;
- Trails can introduce participants to other recreational and participation offerings in the community; and
- Trails help to connect people and places and to develop community pride.

Regular physical activity, as can be provided by the use of a trail, improves health in the following ways:

- Reduces the risk of dying prematurely from heart disease & other conditions;
- Reduces the risk of developing diabetes;
- Reduces the risk of developing high blood pressure;
- Reduces blood pressure in people who already have high blood pressure;
- Reduces the risk of developing colon and breast cancer;
- Helps to maintain a healthy weight;
- Helps build and maintain healthy bones, muscles, and joints;
- Helps older adults to become stronger and better able to move about without falling;
- Reduces depression and anxiety; and
- Promotes psychological well-being.

(*U.S. Department of Health and Human Services 1996*)

In the USA, a comprehensive health economics study showed every $US1.00 invested in recreational trails for physical activity yielded a direct medical benefit of $US2.94 (*Wang et al 2005*).

McRostie (2004) reports on survey work in Adelaide that indicates that recreational trails in urban settings can be effective in supporting regular and beneficial physical activity and promote a sense of well-being of those who use them. Merom (2004) reports that public health has now moved its focus from fitness-centred exercise participation towards health-enhancing physical activities that can be easily integrated into daily routine, as a better way of increasing participation in physical activity. Trails are one good way of encouraging people to integrate physical activity into daily routine. The report looks at the use of a converted rail-trail in Sydney's inner-west and the increase in physical activity by nearby neighbours when the trail was opened. St Leger (2004) has prepared a summary of recent international research which continues to show that tracks and trails play a major part in building and sustaining the health of the population and that recent evidence suggests their influence to be more important than first thought.

Market Equity (2004), in its report on trails in South Australia, found that using trails to get a sense of well-being (95% of survey respondents) and using trails as a means to unwind and relax (91% of respondents) were the two main drivers getting people out on recreation trails. The psychological health benefits of trails remain under-estimated.

7.2 Environmental and Cultural Benefits

Trails provide a number of environmental and cultural benefits. These include:

- Opportunities for the community to experience natural and cultural environments;

- Protection of the adjacent environments by localising impacts and facilitating management of visitation effects;
- Educational and interpretive opportunities and increased environmental and cultural awareness and appreciation;
- Provision of green commuter journeys leading to a decrease in the use of motorised vehicles for transportation and recreation. This helps reduce the production of emissions that cause global warming and respiratory problems;
- Increased community ownership which helps to preserve natural and cultural values; and
- Opportunities for community participation in conservation and revegetation work.

7.3 Economic Benefits

Trail visitors spend money in towns and communities along trails. Trails generate intrastate, interstate and overseas tourism spending.

- Trails support and enhance local business opportunities. For example, many local businesses along the Bibbulmun Track (Western Australia's premier long distance walking track) are now able to identify a turning point in their fortunes relating directly to the popularity of the track. In America, the White Mountains section of the Appalachian Trail contributes $63 million to the local economy and employs one in nine people in the region (*DNRM and EPA 2002*);
- Trail users spend money preparing for their trail journeys or recreation activities;
- Trail construction and maintenance can generate employment opportunities; and
- Participation in trail activities improves community health and reduces health expenditure.

7.4 Potential Economic Benefits in Detail

While it is possible that the proposed rail-trails could be justified on social, recreational, environmental and land management grounds, it is reasonable that some consideration be given to the potential economic benefits accruing from the project. In an increasingly economic rationalist world, projects requiring substantial expenditure of public funds must make their case. This section outlines in detail potential economic benefits as this particular range of benefits is of interest to many stakeholders.

7.4.1 Mundaring Shire – The Economic Impacts of a Local Trail Network

The most significant study undertaken in Australia was that completed by the major market research company Colmar Brunton for the Trailswest Unit of the Department of Sport and Recreation in WA, in April 2001. Titled "Attitudes of Users towards the Mundaring Recreation Trails" (*Jessop and Bruce 2001*), this study generated

valuable data relating to both gross usage levels for trails in the Mundaring Shire (on the outskirts of Perth) and the economic benefits flowing from that usage.

The Mundaring study covered a suite of trails in the Shire including the Railway Reserves Heritage Trail, a rail-trail in the network. It is reasonable to assume, given traditional trail usage patterns in the area, that a substantial majority of all trail users were accessing some part of the rail-trail.

Key outcomes from this study that are relevant to this project include:

- 42% of local residents surveyed had used the trails in the previous 4 weeks. Only 23% had either not used the trails or were not aware of them at all;
- Residents who lived adjacent to a trail were no less satisfied with the proximity of trails to private property than were those living further from them;
- The total number of people using the Mundaring trails was 209,488 per year, with 20,605 of these being Mundaring residents;
- The total number of trips on the trails studied was a staggering 2.454 million visits annually, with local residents accounting for 63% of these;
- Of all those visitors from beyond the Shire who had come to use the trails, 81% had come specifically to do so, showing the direct pulling power of trails;
- Trail users travelling from beyond the Shire spent an average of $11.43 per visit in the Shire. This injected a total of $10.39 million into the local economy;
- The same trail users travelling from beyond the Shire spent a further $12.28 outside the Shire, injecting another $11.16 million into the State economy;
- Local trail users spent an average of $1.44 per visit to the trails in the Shire. This injected a further $2.23 million into the local economy annually; and
- The same local trail users spent an additional $2.62 per visit outside the Shire, adding a further $4.05 million to the total State economic benefit.

These figures indicate that trail use has become a mainstream economic activity in the last ten years.

As previously stated, significant data is available from the USA on the economic benefits of trails. This serves to calibrate the Mundaring Shire data. Some relevant expenditure figures from the USA include:

- Visitors to Ohio's Little Miami Scenic Trail spend an average of $US13.54 ($A17.15) per visit on food alone;
- A study of the Oil Creek Bike Trail (Penn State University, 1992) in Pennsylvania revealed average visitor spending of $US25.85 ($A32.70) per day; and

- Users spent an average of $US9.21 ($A11.65), $US11.02 ($A14.00), and $US3.97 ($A5.00) per person per day as a result of their trail visits to the Heritage, St. Marks, and Lafayette/Moraga Trails respectively.

Other studies from the USA and Canada show a similar range of daily expenditure by trail users. Indeed, it would seem that the figures generated in Mundaring Shire may be at the low end of the average daily expenditure spectrum.

7.4.1.1 Expenditure by Trail Users beyond the Shire

The Mundaring study showed that trail users – both locals and visitors – spent more outside the Shire than they did in it. While some $12.61 million was spent in the Shire, a total of $15.20 million was spent elsewhere, to the broader benefit of the State economy (*Jessop and Bruce 2001*).

7.4.1.2 Job creation

Using the accepted national average 'job creation' figure for the tourism industry (provided by ABS) of 13 jobs per million dollars of expenditure, the local trail network generates 163 full-time jobs in Mundaring Shire (*Jessop and Bruce 2001*).

7.4.2 The Riesling Trail – Economic Impacts of an Iconic Rail Trail

Market Equity (a market research firm in South Australia) completed a study of the economic impact of the Riesling Trail, the 27 kilometre rail-trail in the Clare Valley in South Australia. These figures provide more powerful economic data on the impact of a well managed and promoted trail. Key findings of the Market Equity report (2004) are:

- 46% of trail users from outside the region came primarily for the Riesling Trail – a raw number of over 5,000 visitors.
- Trail users are spending $215.82/person/visit in the Clare Valley. The net effect of this expenditure is that visitors who come to the Clare Valley primarily for the trail (46% of users) are estimated to spend $1.08 million/year; and
- The average length of stay is 2.2 days (giving a daily expenditure of $98.10).

The direct economic benefit is a very important impact of the Riesling Trail. There are also unquantifiable impacts on business confidence and operation. Qualitative research undertaken by Market Equity with local business operators confirms the impact of the trail in the psyche of these businesses. Key findings were:

- The trail contributes to economic activity in the region.
- The trail is seen to attract a variety of visitor types to the region; visitors have both wine and non-wine interests.
- The trail is seen as highly important to businesses in the area. Businesses were passionate about the trail and believed it contributed to their businesses as well as helping to position the area as an authentic leisure holiday destination. There was a definite opinion that the Clare Valley would not be the same without the trail and that it had contributed to business formation as well as business growth.

7.4.3 The Bibbulmun Track – Economic Impacts of an Iconic Walk Trail

Another major Australian study examined the economic impacts of the Bibbulmun Track. The track has generated $21 million of expenditure **annually** by track users, well in excess of its **one-off** construction costs of $5 million (*Colmar Brunton 2004).*

7.4.4 The Murray to the Mountains Trail – Economic Impacts of a Well-known Rail Trail

The Murray to the Mountains Rail Trail in north eastern Victoria is one of the better known rail-trails in Australia (it was cited by a number of people attending the various community meetings in March 2006). Recent work done on this trail suggests that the trail directly injects $0.5 million/year into the local economy, with a flow-on (or multiplier) effect of up to $1.9 million/year (*Australian Bicycle Council*).

7.4.5 Rail-trails in Victoria – Economic Impacts at a General Level

A study titled "An Economic Analysis of Rail Trails in Victoria, Australia" (*Beeton 2003*) investigated user activity and expenditure patterns on three rail-trails in Victoria, each in a different geographical and social landscape. One is a semi-urban trail (the Lilydale-Warburton rail-trail). The other two are rural, and much further from major population centres (the Murray to the Mountains Rail Trail in northern Victoria and the East Gippsland Rail Trail). The two rural trails are approximately three hours from Melbourne.

The study indicates that 89% of users who responded to the questionnaire, the base of the study, were cyclists. The 'bottom line' net benefit quoted is an average of $51.10 for every visitor day on one of the three rail-trails.

Looking specifically at the two rural trails, Beeton reports that overall expenditure on the East Gippsland trail is $68.68/person/day while expenditure on the Murray to the Mountains trail is $37.15/person/day. The economic sectors that benefited from this expenditure were similar on both trails, notably the accommodation sector and the food and beverage sector. There was also significant expenditure on cycling equipment and repairs, representing a potential new industry in these regions.

This study strongly supports positive economic benefits flowing to host communities from trails such as the proposed Riverina Highlands Rail Trails.

7.4.6 The Otago Central Rail Trail – Impacts on the Business Environment

The Otago Central Rail Trail is an iconic rail-trail in the Otago region of New Zealand's South Island. Opened in 2000, it is a 150 kilometre long trail through rolling farmland. It has 68 bridges and was converted to a rail-trail at a cost of $850,000. It is a one hour drive from Dunedin (population 110,000) and a three and a half hour drive from Christchurch (population 331,000). In 2004, 5,000 people travelled along the entire trail, with some 100,000 people movements along the trail in total (some of these are repeat use by local residents). Cyclists undertaking the complete journey often do so in 3 days, while walkers take 5 days.

A survey was recently carried out focussing on businesses immediately adjacent to a section of the rail-trail (Middlemarch to Clyde) and also included businesses in Dunedin and other places offering ancillary trail services. The key findings were:

- 64% of accommodation providers in the vicinity of the rail-trail prior to the trail's opening now attribute a substantial portion (>20%) of their turnover to the trail.
- 80% of accommodation providers in the vicinity of the rail-trail set up since the trail's opening attribute a substantial portion (>20%) of their turnover to the trail. 53% of these attribute more than 60% of their turnover to the trail.
- The rail-trail was the key factor in almost 25% of new businesses opening or existing businesses changing hands in the vicinity of the trail since February 2000.
- 82.5% of survey respondents believe the trail has had a positive economic impact on their communities with 43% rating the impact as major.

These figures are similar to figures discussed above on the business and community impacts of the Riesling Trail.

The economic impacts are also explored – the average expenditure per person per day was $NZ 92.80 with the average length of stay of 3.8 days. Over 200 employment opportunities have been created by the survey respondents since the official opening of the trail.

The survey also found that respondents generally believed that the trail had brought greater community pride and improved services and facilities to the towns along the route.

7.4.7 Potential Overnight Visitors – Another Economic Benefit

Both rail-trails would be good inclusions in a package with other tourist attractions to take advantage of the region's growing reputation as a tourist destination. Such a package makes an appealing weekend or short break (up to 4 days) away. The Bibbulmun Track is a good model – the Bibbulmun Walking Breaks provide such a package for those who enjoy walking but do not want to carry a heavy park or camp overnight. In 2002, the Walking Breaks won a national award for innovation in travel in the Jaguar Awards for Excellence and have been a contributor to the $21 million annual expenditure by Bibbulmun Track users. As the Walking Breaks prove, good marketing of such a package would mean that overnight stays in the region would increase accordingly. This has a significant impact on economic benefits, as people who stay overnight spend considerably more than those who come for a day only (as can be seen in comparing the Riesling Trail and Mundaring trail network figures for example).

7.4.8 Expenditure by Trail Users Beyond a Trail's Location

The Mundaring study showed that trail users, both locals and visitors, spent more outside the Shire than they did in it. While some $12.61 million was spent in the Shire, a total of $15.20 million was spent elsewhere, to the broader benefit of the State economy (*Jessop and Bruce 2001*). By overseas standards these figures are low, and it is likely that the WA survey did not fully factor in purchase of gear and equipment such as boots or bikes. These are major expenses and studies from the USA and Canada give figures of between $300 and $1200 per person annually for trail-related purchases.

7.4.9 Job Creation Associated with Trail Development

As discussed in 7.4.4.1, the local trail network in Mundaring generates 163 full-time jobs in the Shire (*Jessop and Bruce 2001*). Access Economics conducted research for Tourism Victoria in 2002 which found that, for every $82 000 spent in regional Victoria, an extra job is created (*Beeton 2003*). This figure is slightly lower than the accepted national average but is in the same range.

This study does not provide for the detailed work required to be able to clearly state how many jobs would be created by extending the trail. However, it is reasonable to believe, given the data that is available both in Australia (notably Mundaring Shire) and overseas, that trail development and upgrades would create employment opportunities in the region given likely expenditure patterns discussed above.

7.4.10 Other Economic Implications

Perhaps the most comprehensive study into the economic benefits of new trail construction is one that was undertaken by PriceWaterhouseCoopers for Alberta Community Development. This study assessed the economic benefit of the proposed Trans Canada Trail in East Central Alberta. It explored both the direct and the indirect benefits of trail construction. A host of other factors, beyond those set out in this section, were brought into the overall equation, including:

- The immediate impact of construction expenditure, by way of direct jobs created, expenditure by workers in local towns, and flow-on taxation benefits;
- The ongoing flow of taxation benefits to all levels of government, accruing from money being spent by trail users (GST, fuel excise etc);
- The continuing benefits flowing from annual maintenance expenditure, in both direct and indirect (taxation) spheres; and
- The impact of various multipliers and additional induced expenditures, which significantly increase the overall net economic benefit.

These factors can be included to provide a more rounded picture of the net economic benefits flowing from the construction of the rail-trails. Each factor would enhance the overall outcome, bringing additional benefits to the region, and to both State and Federal governments.

To re-iterate a point made in the demand section (Section 6.5), there is strong anecdotal evidence from around Australia that a large part of the demand for trails is supply driven, meaning trail users are attracted to developed trails that are both known or advertised in some way, and offer a range of facilities such as signage and interpretation, parking, toilets and water.

7.5 Summary of Economic Benefits

Rail-trails have a strong potential to contribute significantly to local rural communities – in south-western Wisconsin the 32 mile Elroy Sparta Trail generates more than $1.25 million for the small towns of Elroy and Sparta, by attracting visitors from all over America's mid-west (*Rails to Trails Conservancy website*).

The comprehensive survey of users of the trail network in Mundaring Shire (*Jessop and Bruce 2001*) provided significant data relating to the economic benefits accruing

to businesses close to trails in the Shire. The report states that "some 200,000 people annually are making use of the trails (or other related facilities), with around 90% of users travelling from outside the shire". The report adds that 81% of those coming from outside the Shire had been attracted to the area specifically to use the trails, which "are viewed by users as a destination in their own right and are attracting people to the area."

In addressing the economic impact (i.e. the amount of additional economic activity an event or expenditure generates), the research study concluded:

> *"There is substantial economic benefit to the Shire of Mundaring from the trails and their users of an estimated $12 million. Travelling users from outside the Shire spend an average of $11.43 per visit, ……(which) injects as much as $10 million annually in the shire economy……. The majority of spending is on food and drink."*

The report continues with the following:

> *"A survey of local businesses also indicated that the trails play a valuable role in the local economy….. (Some) estimated that the trails were responsible for more than 50% of their annual turnover….. equating to $20,000 per annum."*

The research states:

> *"This finding again demonstrates the importance of trails to the local economy."*

In the conclusions to this study, the authors' state:

> *"The Mundaring trails are playing a significant role, not just for the local residents of Mundaring, but for the whole of Perth."*
>
> *"The results indicate that trails are serving as a specific destination for a large number of people from outside the Shire who bring a significant economic benefit to the Shire."*

The level of scientific rigour that applied to the Mundaring Shire project has not been used in this project. However, given what is known from that data and overseas data, it is reasonable to assume that the conversion of the rail corridors to rail-trails will provide a significant economic benefit for in terms of additional expenditure by residents and especially visitors, and consequent job creation.

7.6 Local Commuting and Recreation Benefits

Much of the foregoing analysis (particularly discussions on economic benefits) has focussed on the visitor markets and the benefits they would bring. However, there are significant direct benefits to local residents (beyond broader economic benefits) in improving bicycle access and allowing both commuters and recreational riders safe cycle routes. Financial savings to the local Council and community, and the State and Federal Government accruing from health benefits, traffic management and road safety, are likely to far exceed the direct economic outcomes calculated in this report. One heart attack is estimated to cost in the vicinity of $400,000 in direct and indirect costs (*Heart Foundation*).

Local commuting benefits are most likely to be realised at the Wagga Wagga end of the Wagga Wagga to Tumbarumba Rail Trail – this is where the bulk of the population is located. Figures for potential cycling demand in Wagga are discussed in detail in Section 6.3.

In brief, these benefits include:

- Social and physical health benefits as discussed in 7.1 above will accrue to residents who cycle and to the broader community. A recent study from Norway (*Institute of Transport Economics 2002*) shows that a physically inactive person who starts to walk or cycle to work instead of using a car gives an economic benefit to society of between $5,000 and $6,795/year. A physically active person who starts to walk or cycle to work instead of using a car gives an economic benefit to society of between $850 and $2,550/year (based on May 2006 exchange rates).
- There have been cycle fatalities along the Forest Hill-Wagga Wagga stretch of the Sturt Highway. Whilst it is very difficult to put a financial value on a human life, it is desirable to be able to cost such a factor in to a project's evaluation. Potter Forbes and Aisbett 2003 cited in Rissell have calculated the value of a statistical life year at $46,000 (for an amortised value of $1.1 million per life).
- There are significant financial benefits for households who choose cycling over other forms of transport (notably a second car). Transport costs represent 15.5% of household expenditure, second only to food as a percentage of household expenditure. Cycling for commuter purposes can avoid the need for a second car, saving between $5,000 and $16,000/year. This may be a critical factor for those who work at the RAAF base at Forest Hill in particular, (where some 400 "workers" live off-base) and for some who work at any of the major timber mills in Tumut and Tumbarumba. Provision of a safe cycle option for commuting purposes may significantly reduce or completely obviate the need for a second car in a household. The House of Representatives Standing Committee on Environment and Heritage found that, if a family traded in one car for bicycles, this would equate to $750,000 in superannuation over the main earner's lifetime.
- Cycling just 10 kilometres each way to work each day (around the distance many commuters would cycle in Wagga Wagga, Tumbarumba and Tumut) saves about $770 in transport costs and 1.3 tonnes of greenhouse gas emissions per year (*Australian Bicycling Federation*).
- Cycling and walking as recreation activities can be cheaper than alternative forms of exercise such as gym classes (though the initial entry costs of cycling may be higher).

SECTION 8 - LANDOWNER ISSUES AND SOLUTIONS

8.1 Introduction

In working towards a recommendation about the feasibility of developing a rail-trail along the corridors between Wagga Wagga and Tumbarumba and between Batlow and Tumut, it was felt important to consider the issues that had been raised by adjoining landowners and investigate what options were available for resolving some of these concerns.

Adjacent landowners are traditionally – and understandably – nervous about trails close to their properties. It is important that these concerns are seriously addressed before any trail conversion takes place. Many landowners resent having things imposed on them, or feeling as if they have no say in what is happening around them. Many landowners are resistant to change of any sort, let alone one they perceive will have detrimental impacts on their lifestyle as well as on their farming operations. It needs to be appreciated that opposition will never completely cease – some people will never be convinced.

Conversely, adjacent landowners who understand and support the reasons behind a trail, and who see that the trail is going to be well organised and efficiently managed, will prove to be extremely valuable partners in years to come. Indeed, some of them will take advantage of business opportunities offered by conversion.

8.2 The Issues

During the community meetings held in March, a presentation was made by the consultants listing concerns that are generally raised with respect to rail-trails and possible solutions. It was emphasised that these were generic issues with some solutions that had worked elsewhere. It was not intended to provide a complete list of issues and solutions at the time. This is more correctly the role of one-on-one consultations with individual landholders during detailed trail development planning (discussed further in 8.3 below). Landholders took the opportunity at the community meetings, and through individual and collective meetings, on-site inspections and submissions, to highlight a number of specific concerns and issues they believed would arise should recreation trails be established within the railway corridors.

The following extensive table (Table 8.1) documents the majority of issues raised (either generally about rail-trails or specifically in the project consultation), some comments and possible solutions. Necessarily, it is a summary of individual concerns (rather than a detailed list of every landholder's every concern). It is a more extensive set of issues and potential solutions than was presented to the community meetings; it has been extended by the inputs discussed above. The possible solutions proposed are not a substitute for detailed field analysis of problem and solution, but do provide a starting point for discussion.

It should be noted that not all landholders are in agreement about the nature of and extent of potential problems. Some landholders indicated that the concerns raised by other landholders were not an issue; for example, there were two different views presented on the likelihood of mis-mothering of stock caused by humans in close proximity to newly-born stock. Some landholders thought ewes in particular would abandon lambs if there were too many unfamiliar humans around the paddocks while others thought that stock were comfortable with the presence of humans so that this would not be an issue.

Table 8.1 Landowner concerns and possible solutions

IMPACT / ISSUE / PROBLEM	SOLUTIONS SUCCESSFULLY USED ELSEWHERE / COMMENTS FROM EXPERIENCE ELSEWHERE
Impacts on adjoining land owners lifestyles	
Crime - Trespassing, vandalism and theft.	**Comments** ***Crime*** o Numerous studies have concluded rail-trails do not generate crime. Research and anecdotal evidence suggests conversion of rail trails tends to reduce crime by cleaning up the landscape and attracting people who use the trail for legitimate reasons such as recreation and transport (it is recognised that, on many parts of the corridor at the moment, the crime rate is zero). o The Clare Valley (South Australia) Riesling Trail has had 2 "incidents" along the trail in over 10 years of operation (one of these, a burglary, would have occurred regardless of whether the trail existed at the rear of the property. The other, an incident involving an unrestrained dog 'attacking' stock in an adjoining paddock, is one which can be avoided by trail users following trail 'rules'). o The Rails to Trails Conservancy work in the USA includes testimonials from law enforcement officers in a number of jurisdictions confirming expected/perceived crimes simply do not occur. (See sample testimonials in Appendix 5). **Possible solutions** ***Crime prevention*** o Design solutions to minimise theft include installation of security fencing and planting. (See plans and drawings of Appendix 6 for illustrations of elements of good design, and ways of mitigating landowner concerns – both privacy and crime prevention). o Trail design can eliminate overgrown vegetation and tall shrubs which minimises hiding places and creates long sight lines. o Security lighting at trail heads and parking areas adds security. o Emergency phone boxes and emergency vehicle access helps increase user security. o Keeping trail corridors clean and well-maintained increases sense of community ownership and "passive surveillance" reducing minor crime such as litter, graffiti and vandalism. o Plantings of tree-lined corridors along parts deemed "vulnerable" by adjoining landowners

	could also provide a way of reminding trail users to stay on the trail – these provide a form of visual fence. o Prohibiting motor vehicle use (by regulation and design) reduces property crime. o Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols. The Murray to the Mountains Trail has a full-time trail manager, part of whose responsibilities include a daily traverse along the trail on a 4-wheel motor bike.
Loss of privacy for adjoining landowners A number of residences have been constructed in close proximity to the railway corridor. Landowners living near to or alongside the proposed rail-trail anticipate that noise and reduction of privacy will occur.	***Privacy*** o Some effective design solutions are possible, and have been used to good effect on other rail-trail projects. o Re-routing the trail off the formation away from the affected residence onto an adjacent road or elsewhere in the rail corridor. o Substantial additional vegetation planting to provide a visual barrier between the trail and the residence. o Installation of screen fencing to obscure views of houses from the trail.
Land value devaluation	**Comments** o Research and anecdotal evidence suggests conversion of rail trails tends to either have a positive impact or a neutral impact on land values. It is positive where land use is changing to more intensive uses (such as from rural production to rural living/rural residential).
Stress and concerns about the impacts of trails on farmers lifestyles and incomes An element of uncertainty in both the short-term (until a decision is made) or the long-term (from rail-trail operations)	**Comments** o Any change is difficult and causes stress for many people, especially where it is a change to the way people have operated their businesses and lifestyles for many years on the same basis. o All public infrastructure projects create stress and concerns for those who will be negatively affected (or perceive they will be negatively affected). The experience in rail-trail projects elsewhere is that the problems that adjoining landholders believe will occur do not occur. They are managed primarily by ongoing consultation and good design. **Possible solutions** o Staging of the projects so that landholders and responsible committees can see how sections work and what problems and issues arise and then react accordingly in subsequent stages is one possible way to minimise the concerns of landholders (given that these concerns are felt differently by different people in different parts of the corridor).

Impacts on farming practices	For the majority of their length, the former railway corridors traverse agricultural land. Some farmers use the railway corridor for the movement of stock. Some adjoining farmers have a lease that allows them to graze their stock on the railway corridor. In several other instances, farmers move their stock from one side of the railway corridor to the other - from one paddock to another paddock.
The threat of fires starting and spreading unimpeded along the railway corridor is a concern expressed by a number of adjoining landowners. Increased public access is seen as leading to increased risk, there would be **poor access for emergency vehicles**, and there is lack of obvious refuge areas and water points (in case of fire).	**Comments** o Some fences have been erected across the corridor, providing a barrier to the movement of any emergency vehicles, such as fire trucks, which might need to access the corridor. o A number of bridges along the corridor are missing at present, providing another major obstacle to the passage of emergency vehicles. **Possible solutions** o Development of an effective fire management plan in close consultation with the Rural Fire Service. o Areas of the trail deemed high fire risk can have more active management controls (as discussed in Section 5.4.3) including re-construction of bridges to carry 13.5 tonne fire tenders. o Clearly signposted refuge spots (directional, “advance notice – fire refuge spot 500 metres ahead” - and at-site signs) can be constructed at regular intervals depending on fire risk “zone”. o Trail closure during periods of fire bans – as occurs on the Hume and Hovell Track. o Smoking on trail prohibited. o Bridges with missing decks can be rebuilt, enabling all trail users (and emergency vehicles) access across creeks, rivers and wetlands. o The development of the trail will in most cases require the removal of fences which have been put across the railway corridor. Their removal will result in unimpeded access along the corridor for emergency vehicles. o The management of grasses along the corridor (contributing to fire risk) is one which will be overseen by a Committee of Management appointed for such decisions. The choices will be to continue to allow grazing by sheep and cattle where appropriate, or to slash the grasses at regular intervals, or to spray when and where appropriate. o Generally, the development of the rail-trail will create a situation in which fire services will be better able to deal with any emergency situations which arise along the railway corridor. It will be imperative that all emergency services have access to all padlocks on all gates along the rail trail, and locks should be keyed alike.

Growth of weeds with grazing reduction	**Possible solutions** o The management of grasses along the corridor is one which will be overseen by a Committee of Management appointed for such decisions. The choices will be to continue to allow grazing by sheep and cattle where appropriate, or to slash the grasses at regular intervals, or to spray when and where appropriate. o Parts of the corridors could be leased to adjoining landholders to allow grazing. o Grazing on trails (or sections of trail) could be allowed at regular intervals (overnight – controlled with electric fences, some weekdays when activity is quiet, some times of the year – either during low levels of activity or high growth periods). o Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues prepared in advance of construction. o Focus of maintenance – erosion, vegetation regrowth and signage damage. o Division of maintenance into regular inspections and simple repairs and once/twice yearly programs undertaking larger jobs such as vegetation control.
Loss of access to grazing paddocks Farmers use the corridor to move stock between paddocks	**Possible solutions** o Land swaps – the proposed trail is taken around the perimeter of the farming land. o Use of old style railway gates that can be closed on either the rail corridor (to allow livestock to be moved across the corridor) or on the paddocks when the livestock are in one or other paddocks. This also reduces the human/cattle interaction. o Construction of fences (if desired by the landowner) – see below. o There may be other farming practices, such as usage of the railway embankment as an access driveway, and tracks for tractor movements, which could continue unhindered by the development of the proposed rail-trail. Discussions with all farmers will reveal other uses to which the railway corridor is put. For each and every existing agricultural use, there is likely to be a solution that can be used to enable the trail to proceed, and the farming practice to continue. o The overall width needed for the trail would be in the order of 10 metres. 5-10 metres either side of the original formation (containing the railway embankment and/or cuttings) could be regarded as 'surplus to requirements'. It may be possible for the 'spare' metres either side of the rail-trail corridor to be re-fenced and be leased to the adjoining landowners. An annual fee could be directed into trail maintenance activities. The land leased to the adjoining landowners would then be grazed together with the rest of the farm, and thereby serve to keep grasses and weeds low.

Interactions between nervous livestock and trail users including dogs. Farmers whose properties adjoin the corridor are concerned at unrestrained dogs being allowed along the proposed rail-trail, and causing difficulties for their livestock.	**Comments** o It is well recognised that people walking dogs is a pastime with considerable physical and mental health benefits, and therefore there should be some sections of the trail where this activity is permitted. **Possible solutions** o On other trails, dogs are usually either banned altogether, or trail users are required by regulation to keep their dogs on a lead at all times. Only those sections of the trail which pass through a town, or are on the outskirts of a town, should be areas where dogs are permitted (on the proviso that they be kept on leads). o Ongoing monitoring of this situation should occur, and should farming practices change, or should adjoining farmers give their consent, additional sections of the trail could become available for dogs on leads. o With respect to interaction between people and livestock (particularly around lambing and calving seasons), appropriate information will discourage people from going off the trails onto farm property and thus placing themselves in close proximity to livestock, particularly in birthing season (although it should be noted that this particular concern was not seen as critical by some landowners spoken to).
Chemical applications Farmers are concerned that weed spray will drift across the trail (particularly given they spray on days that are slightly windy) affecting users who may later take civil action. Aerial spraying and fertilizing raised similar issues for farmers. Concerns about delays to spraying timetables as a result of trail users.	**Comments** o Farmers have the same obligations as any other chemical user in preventing drift and potentially causing damage to adjacent land. o For other trails, this has not been an issue. On the Lilydale to Warburton Rail Trail, grapes and flower growers are in very close proximity to the trail – they are in fact tenants renting rail trail land. Spray drift has not been an issue of concern. The same applies to the Riesling Trail (again, most adjoining land owners are grape growers). **Possible solutions** o It is anticipated that heavy use of the trail in the “agricultural sections” will primarily be confined to weekends. Spraying “rosters” agreed to between farmers and a Committee of Management could manage spraying and confine it, as much as possible, to weekdays. It is acknowledged that this is not always possible due to nature of ownership, on-site presence of farm owner/manager, and climatic factors; it is one solution. o Notifications on trail literature (permanent and temporary – such as web sites) can spell out issues about spraying and indicate to users what they are likely to encounter at any time on the trail.

	o It is understood that chemicals used in spraying are not of such toxicity that incidental exposure for short periods on a one-off or irregular basis (the likelihood of exposure of trail users) will cause any long-term health effects.
Chemical-free status of livestock There are concerns that the use of rail reserve by cyclists will increase the risk of contamination of livestock, thus jeopardizing farmers' ability to sign the National Vendor Declaration for Livestock. Farmers argue that chemical control of the corridor by another (e.g. trail committee/manager) means that chemical application will not be under the landholder's control.	**Comment** o This issue was raised on work done for the Goulburn River Rail Trail in Victoria. Advice from the Department of Primary Industries (Victoria) was that a trail should not jeopardise the landowner's ability to sign the National Vendors Declaration. The rail trail would be considered in the same way as any public thoroughfare would be. Farmers have no control over who uses and what is done on adjoining roads so they have 'no knowledge' unless they are notified (the Declaration specifies that "to the best of a farmers knowledge and from information they have control over that their livestock comply with the conditions on the declaration"). Trail users are no different to road users in that people may trespass onto private land but most are unlikely to cause significant damage, unless there is some malicious intent. Again, the farmer has to have some knowledge of this before the declaration is declared false. Cars and particularly tractors moving at high speed would disperse more dirt from roads and tracks than collective effort of numerous bikes. **Possible solutions** o In respect of chemical control of the corridor, two options are available that would allow farmers a level of knowledge. The first is that the adjacent landowner sprays the corridor as it runs through their property, reaching an agreement with the Committee of Management for suitable recompense. The second option is cooperative flow of information – the trail manager lets adjoining farmers know in advance what they will be spraying and when they will be spraying.
Increased risk of livestock disease transfer Lice, footrot, Ovine Johnes Disease, Worms and Worm Resistance, Bovine Johnes Disease	**Comment** o This issue was raised on work done for the Goulburn River Rail Trail in Victoria. Advice from the Department of Primary Industries (Victoria) was that footrot is spread by introducing infected sheep. **Possible solutions** o Wandering sheep should not graze the trail. If any grazing is allowed, it will only be by sheep from the farms adjacent to the corridor. Self-closing gates along boundaries should prevent stock moving from one landholding to another.

Unfenced corridors Both the Wagga to Tumbarumba and the Tumut to Batlow lines were built as unfenced lines and farmers have adopted their practices to suit – moving livestock and machinery across, moving vehicles across, developing watering points on both sides etc. Farmers believe fencing will cause problems with farming practices and not fencing will create havoc with livestock/trail user interactions, liability etc. Farmers believe there will also be time consumed in checking gates regularly after trail users pass through. Farmers believe fencing will require them to check and maintain fences on a regular basis.	**Comments** o Unfenced corridors were initially tried on the Lilydale to Warburton Rail Trail. This was done as a way of reducing maintenance and winning over neighbours; because of the heavy usage and tendency for the cows to enjoy the warm high smooth surfaced ground of the expensive Lilydale toppings, this practice was halted. **Possible solutions** o Fencing may be appropriate in some places and not in other places – this depends on a number of factors. o Fencing of the corridor may be required – where fencing is put in place, the installation of livestock crossing points (Such as stock underpasses) may be necessary to allow livestock to move between paddocks (or part-paddocks). It is understood that livestock quickly get used to having to cross at certain points to get to watering points or fresh herbage. o The cost of fencing, where required and requested, should be negotiated with each individual landowner during the one-on-one consultation process recommended in this report. o Where fencing is not required/requested, trail users will be made aware of this fact as they enter a property. Trail information will include warnings about unfenced sections and educate users about possible issues and appropriate behaviours. o Vegetation lines may also act as “visual” fences if appropriate. o One recommended option is for the rail-trail project to supply the materials needed for re-fencing, and for the adjoining landowners to install the fences themselves with the materials supplied to them. This however is not the only way forward. The project costings allow for full commercial installation on portions of the corridor (recognising that some farmers want the corridor fenced and some do not want it fenced). o Self-closing gates on boundary fences and at road easements will assist in managing straying stock.
Restricted pest baiting Due to safety concerns (dogs and children accidentally eating baits) and consequent loss of stock and native wildlife	**Possible solutions** o Trails to be dog-free in areas of agricultural activities. o Trail users to be aware of agricultural practices – information to be included in all material on rail-trails.

Impact of trail users	
Management of litter and toilet waste	**Comment** o Landowners whose properties adjoin the former railway corridor expect high levels of litter. o It has not been a problem elsewhere. The Lilydale to Warburton Rail Trail (Victoria) is kept spotless, with little or no visible signs of litter. The Gippsland Plains Rail Trail was involved with Clean Up Australia Day, but their involvement was curtailed because they effectively had nothing to do. The Clare Valley Riesling Trail (in SA) is also litter-free. **Possible solutions** o Thoughtful placement of rubbish bins at trailheads and between stops on the trail. o Regular maintenance patrols by council staff or volunteers, or the trail manager. o Installation of composting toilets where appropriate (note these will mostly be at trailheads located in towns/villages along the way – 25 to 30 km intervals recommended for rail-trails). Towns located along the corridors already have public toilets.
Farm safety – farmers are concerned that farms are unsafe work places and people are being invited into such unsafe workplaces. Allied to this are concerns over potential danger to children in particular from unpredictable livestock.	**Possible solutions** o Good design and appropriate information (as discussed above) will discourage people from going off the trails onto farm property and thus placing themselves in dangerous work environments or in close proximity to unpredictable livestock. o Particular attention to the trail design issues around sites where agricultural buildings are close to the rail-trail (some of these solutions are discussed above in the section on crime prevention).
Trail Management issues	
Liability – who is liable for the safety of users Farmers have also raised the question of increased insurance risks and consequent increase in premiums for them for both public liability and general insurance (upgraded fire insurance and theft)	**Comment** o In recent years public liability has become a major issue right across the community. Trails are not immune from concerns related to liability, or from the resulting issues. Indeed, liability – who is liable and who will pay – is often raised as a potential 'problem' with rail-trail projects. **Possible solutions** o Primary project partners must take responsibility and ensure that their role is clear and unambiguous. o Single agency/committee of management takes liability responsibility along the full length of the trail regardless of ownership. Farmers do not carry any additional liability. o Effective signposting at trail heads and access points indicating trail regulations and trail

	use rules and user responsibilities. o In respect of farmers' general insurance, this has not been an issue in other rail-trails. Fire management plans address the possible fire risk increase, while reports of theft of property have been virtually non-existent (as noted above).
Unauthorised trail users Many respondents expressed concerns over whether motor bikes would use the trail – they were opposed to this use and queried how the trail could be protected from this use. There were also some concerns over horse use.	**Comments** o Unauthorised access to the trail by users of cars, motor bikes, etc, was stated as one the major concerns of adjoining landowners (it is also a concern of potential trail users). o Problems experienced on the High Country Rail Trail (near Wodonga) with unauthorised car access were raised. **Possible solutions** o Prohibit motor vehicle and motor bike use through motor vehicle exclusion barriers and effective signage at each road crossing. (See drawings in Appendix 6) o On the Lilydale to Warburton Rail Trail, as with other rail-trails in Victoria, a standard gate configuration has been designed for use at all road crossings and trailheads. The design allows unimpeded access by walkers, cyclists, people in wheelchairs, etc. The design is such that motor bikes cannot squeeze past the gate posts of the narrow maze. Access by authorised vehicles, such as management vehicles, adjoining landowners (where needed) and emergency vehicles is gained through an adjoining (locked) gate. o Installation of these gates and fences at all road crossings is recommended, as they will effectively prevent access to the trail by unwanted and unwelcome people who may be intent on vandalism or theft, etc. o Encourage reporting of vehicle/bike registration numbers of illegal users. Experience on the Murray to the Mountains trail was that motor bikes tended to use the same sections at the same time – enforcement was therefore relatively easy. o Further investigation of the High Country Rail Trail issue indicated that, in fact, the Committee of Management had initially determined not to include barrier gates at road crossings and placed trust in the community surrounding the trail (a cost saving decision). This trust was abused by the community – installation of gates is now being considered. In this project, installation of barrier gates is recommended from the commencement of the project.
Ongoing maintenance costs. Who is responsible, who will pay, what effect will it have on rates?	**Possible solutions** o Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues (including fencing) prepared in advance of construction is critical. o Proper design and construction will minimise ongoing maintenance costs. o Focus of maintenance – erosion, vegetation regrowth and signage damage.

	o A clear definition of who is responsible for what. o Division of maintenance into regular inspections and simple repairs and once/twice yearly programs undertaking larger jobs such as signage repairs, culvert cleaning or vegetation control. o Hazard inspection program (to limit liability and to define maintenance activities).
Environmental issues Who is responsible for environmental effects of rail corridor such as dryland salinity? Allied environmental concerns include construction concerns – noise impacts on wildlife and vegetation destruction on rail formation.	**Comment** o The rail corridor is seen by some farmers as being the cause of dryland salinity due to changes in natural drainage. Development of the rail-trail will not change the existing situation – the existing formations will be used. The project may in fact provide an opportunity to apply for funding to address some of these issues. o Additional culverts under the trail (through embankments) could be installed during trail construction, thereby improving drainage and water flow. o With respect to construction concerns, good trail design and appropriate construction techniques on a site-by-site basis can mitigate environmental concerns. Significant vegetation stands on the boundaries of the formation should be untouched – vegetation growing between the rails is likely to be removed during construction (although alternative routes could be found should there be major concerns).
Responsibility for policing trail	**Possible solutions** o Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols. o Preparation of a regularly reviewed Trail Management Plan contains a clear definition of who is responsible for what. o Police and/or Council ranger patrols (including on bikes); or by trail manager on regular patrols.
Road crossings can be dangerous	**Possible solutions** o Good design of crossing allowing good sight lines and movements of people en masse (to avoid one at a time crossing). o Good signage on both road and trail. o Road crossing details to conform with Australian Traffic Engineering standards (*Guide to Traffic Engineering Practice - Pt 14 – Bicycles - Austroads*)

8.3 Landholder Consultation - The Next Phase

Detailed trail development planning is the next critical phase in the project. This is discussed in detail in Section 13.2. One of the central elements in this phase will be one-on-one consultations with adjoining landholders to determine, in a cooperative manner, solutions to their particular problems. It is time-consuming but absolutely necessary.

Seeking local ideas and advice always helps forge a stronger relationship. Listing concerns and working together to find resolutions is a far more productive approach than creating confrontation.

It is the experience of the consultant team that landowners will take the time to discuss the potential trail and the problems they envisioned. When issues are discussed at the actual site where the perceived problem is, discussion of possible solutions with the landowners often reveals that the problem can be minimised or completely avoided.

Involving landowners in the process, over a period of time, will help avoid feelings of alienation or mistrust. Acknowledgment of the gravity of each issue, and a ‘work together’ approach is likely to be a good starting point. As with all neighbour issues, involvement over time goes a long way to building trust.

Strictly speaking, landowners cannot legally stop a trail such as this, as it is being proposed on publicly owned land, but it is infinitely better to be proceeding with their support (or at least the absence of opposition) than it is to ride 'rough-shod' over these concerns.

While rail-trails are hugely popular and successful once they are open, during the development phase trail proponents often have to answer a wide range of concerns that local residents may have about the impact of the proposed trail on their community.

For this reason, it is strongly recommended to the Riverina Highlands Rail Trails Committee that any Committee of Management (formed to oversee the future stages in the development of the rail-trails) include several landowners whose properties adjoin the railway corridors).

SECTION 9 - TRAIL DESIGN AND DEVELOPMENT CONSIDERATIONS

9.1 General Considerations

This section of the Report addresses a series of matters relating to trail design and development – to achieve trails that are constructed with minimal disturbance to the natural environment, are sustainable and that require minimal maintenance. This information should be seen to be part of the scoping of works in that it defines many aspects relevant to the next phase of the project ie. the Detailed Design Development.

Much of the proposed trail routes are located within publicly owned railway corridors (though a short section at Forest Hill is along public roads to avoid the RAAF Base and airport) – and as such would be constructed on the formation of the former railways.

During construction of the railways effective drainage was important, as it is with all public infrastructure. Locating the trails on the formation of the former railways is important, and reinstatement of bridges where they have fallen into disrepair, or have been washed away, is important for the continuity of the trail.

Each railway corridor has many bridges, in various states of disrepair. Repair and restoration of the bridge surfaces, with new timber decking and handrails, is required and where bridges have been washed away a suitable alternative may be required (such as a concrete floodway or a new low-level boardwalk).

Construction of the railways involved the cutting and filling of the landscape to create a surface that was relatively flat to enable passage of steam trains. The result was a series of cuttings and embankments along the entire length of each corridor. Effective drainage will be required along each of the corridors, especially within cuttings to ensure stormwater is quickly and effectively removed from the sides of the trails (as it was when the trains were running).

Culverts and other drainage controls should be used to direct run-off away from the trails where possible. It should be noted that some slope is desirable on dual-use trails. A perfectly level trail will hold water (ponding), creating mud holes which then become maintenance problems. Rail-trails, by their very nature, tend to deal with these problems relatively well. Water must drain freely, and where possible, pass beneath the trail without impact on either the base formation or the surface itself. Particular care must therefore be given to reinstating the side drains through the numerous cuttings which were a feature of the railway when it was operating. Regular cleaning of culverts under railway formations is also essential. Additional pipe culverts would be advantageous in some locations. Reinstatement of all bridges, and cleaning/clearing of blocked culverts is essential to avoid serious soil and water degradation problems.

Choosing appropriate materials for the trail's sub-base and topping (surface layer) is critical to the longevity and suitability of the trail for the intended user groups.

As stated, reinstatement of all bridges, and cleaning/clearing of blocked culverts is essential to avoid serious soil and water degradation problems.

9.2 Trail Width and Height

To function effectively as multi-use trails the proposed rail-trails should have a standard trail width of 2.5 – 3.0 metres. If in some sections the surface is wider, this should not be seen to be a negative factor (unless of course this increased width

reaches 4 metres or more, at which point the trail users experience will begin to diminish). It is acknowledged that some sections of the formations are currently used as access to farming properties, or as access between paddocks, and this access can be retained without seriously diminishing trail user experiences. Passing bays for fire and emergency service vehicles will be required in appropriate locations.

Overhead clearance should be maintained to approximately 3 metres from the trail surface, to ensure that horse riders (on sections where horse riding may occur) have clear 'head space', too. All overhanging vegetation - and that which intrudes from the sides into this 'corridor' should be cut back on a regular basis. Care should be taken that sharp and dangerous 'points' are not left in this pruning process.

Drawings 1 and 2 of Appendix 6 illustrate typical cross sections for the proposed trail.

9.3 Trail Surface Material

A smooth compacted surface is most appropriate for a multi-use rail-trail such as those proposed between Wagga Wagga and Tumbarumba and between Tumut and Batlow. The surface should be firm enough to provide cyclists with a relatively smooth ride. Given the width of each corridor, it seems logical that a separate horse trail could be ‘developed’ parallel with the main bicycle/walking trail surface, where appropriate.

Generally speaking asphalt, concrete and other such hard surfaces are not appropriate on trails such as these – except on the proposed ‘commuting’ sections between Wagga Wagga and Forest Hill and perhaps ultimately between Tumut and Gilmore. The cost of asphalt and/or concrete would be prohibitive on rail-trails of the lengths involved.

At the other end of the scale, it is also not appropriate to allow the trail surface to deteriorate into either a soft sandy material or a wet, boggy or slippery condition. Soft sand may be comfortable for horses but is not acceptable to cyclists or walkers.

Water-logged trails are quickly damaged and degraded, and are very unpleasant to traverse. Loose surfaces such as ball-bearing gravel are also unacceptable, as they pose safety risks to all 3 user groups (walkers, mountain bike riders, horse riders).

9.4 Safety Considerations

The most significant safety issue is that of potential conflict between road users (cars and trucks) and trail users on the proposed trails - especially at the road crossings (in particular the crossing of Hume Highway). This is more fully dealt with in 'Road Crossings' below.

Another major safety issue is that of the bridges over the water courses. When the railway bridges were constructed, handrails were not required in view of their use by trains. Now that use of these structures by horse riders, cyclists and walkers is being contemplated, the issue of safety railings on the sides of the bridges needs to be considered. Handrails will help ensure the safety of users of the bridges, preventing people from falling over the sides – a Standards Australia requirement.

Though many of the bridges are not particularly ‘high’ above the creek below, nevertheless handrails should be installed on all bridge crossings to give a sense of safety, uniformity and consistency along the trail.

Rather than ban horses from the entire trail it is proposed that a 'Dismount and walk' policy be implemented, with signage directing riders to dismount on bridges, which

should prove quite adequate to manage what is statistically likely to be a relatively small number of potentially dangerous situations.

The only other significant safety issue relates to possible conflicts between different types of trail users – legal and illegal - for example, horses (or walkers or cyclists) and trail bikes or 4WD's, or horses and cyclists (or walkers). Effective signage and vehicle exclusion barriers (management access gates) will greatly limit this potential problem.

Signs are discussed at length elsewhere in the report, and vehicle exclusion barriers are listed as a required action at each road crossing (except a small number of minor rural tracks).

Dogs can be a potential safety consideration on a trail such as this, as it passes a number of private properties, many of which are sure to have dogs, and numerous properties with cattle and/or sheep. It is strongly recommended that a “no dogs” policy be instigated for the majority of the trail – in view of adjoining landowners (farmers) concerns - though there will be some short sections (such as Wagga Wagga to Forest Hill) where a “dogs on leads only” policy could be tolerated.

9.5 Road Crossings

Road / trail crossings always present a special hazard which must be addressed carefully. A crossing should have enough space cleared and levelled on both sides of the road to allow cyclists or riders travelling together to gather in a group and cross en masse. One-at-a-time crossing greatly increases the overall time in the roadway and therefore increases the likelihood of encountering a vehicle. The crossing should ideally be at a straight, level area allowing both trail user and vehicle driver good visibility and the driver ample stopping distance (if possible).

Signs required to create safe road crossing are outlined in the next section of this report. The trail should be clearly marked on each side of the road for easy recognition and the crossing be designed to move the trail user away from the road reserve as quickly as possible.

If at all possible the trail should not slope down - or up - to the road. Such slopes elevate danger levels considerably.

Conformity with road crossing detail as specified in *Austroads Guide to Traffic Engineering Practice - Pt 14 - Bicycles* is essential. See diagrams.

Along the rail corridors, two types of road crossing treatments are proposed:

- At-grade crossings of major roads (Hume Highway)
- Minor road and ‘lane’ crossings

The plans which accompany this report illustrate where these various types of crossing are required. (See Drawings 6 – 9 of Appendix 6).

9.6 Signage

Several kinds of signage are required on the proposed rail-trails, including distance, directional, warning, promotional, etiquette and interpretive signs. Each should be standardised along the trails and, where appropriate, concordant with relevant local or Australian ‘standards’ or practices. The chosen colours of all signs should be uniform throughout the trails.

Themes and styles already established for other rail-trails in Australia, and in keeping with the uniformity in signage sought by Railtrails Australia, may dictate what style of signs and marker posts are used along this trail. Trail markers and signage on other rail-trails are sometimes affixed to old (recycled) railway sleepers, and the removal of the old steel track and sleepers should provide a ready source of suitable sleepers. These are usually 2400mm long with 1800mm out of the ground, the face of the post being 200mm wide and the side 75mm.

As stated, Railtrails Australia (a national non-profit group working towards the establishment of rail-trails throughout Australia, with a particular interest in achieving standards for signage and construction) has a strong interest in establishing standardised signage on all rail-trails. That group has prepared a set of standard sign designs for rail-trails.

9.6.1 Visual Impact of Signs

Care must be taken with all forms of trail signage that it does not create a negative visual impact. This is particularly important in areas that are rich with natural vegetation, where the priority should be to preserve the ‘feel’ of the trail.

9.6.2 Directional Signage

Trail markers need to be placed at regular spacings along each route. These could be the standard black on yellow triangle, but a unique colour scheme could/should be considered. The trail markers should have a distinguishing symbol or logo. In the case of these rail-trails a stylised steam locomotive - or some specific local symbol or image - would seem appropriate.

Markers do not need to be placed at frequent intervals along straight sections of trail as the formation is clear and obvious, and even the most inexperienced of users will feel confident that they can remain ‘on track’.

They must be affixed with at least 2 nails (on hardwood or pine posts) to prevent them being turned or removed by vandals. Alternatively, the direction markers (as well as the various other sign panels used on the totem posts) could be affixed with silastic ('gaskets') or liquid nails.

9.6.3 Warning Signage

There are a number of locations along the proposed trails which demand warning signage, primarily at the many road crossings. Warning signs are 'standardised', using the red triangle featuring an 'exclamation mark' or, as is the case for road crossing, a “Road Ahead” yellow diamond warning sign some 50-70 metres before a crossing, with a triangular “Give Way” sign on the verge at the road crossing.

9.6.4 Promotional Signage

Though these railway corridors may be quite likely familiar to many local residents, it is recommended that a number of ‘promotional’ signs be erected at major road crossings to give prominence to the trails (when constructed). The installation of these signs will make motorists and other road users more aware of the trails, hopefully inducing greater care when in the area.

This style of promotional signage has been used to great effect on other trails throughout Australia, increasing general awareness of the trail among the broader community. The proposed signage could be constructed as a 1200mm x 250mm x

3mm aluminium panel (painted both sides in trail-specific colours). The aluminium panel should be constructed with a 10mm 'lip' to provide greater strength. The sign should bear the name of the trail and the recommended logo on both sides

It could be mounted on 100mm – 150mm treated pine posts approx. 1 metre out of the ground. The actual posts would be either 1.5 or 1.8 metre long, thus having 600 - 800 mm in the ground. The sign would be placed in a slot cut in the top of the posts, and security bolted through.

9.6.5 User Etiquette Signage

User etiquette signage should be installed at every road crossing and entry point, in recognition of the expected pattern of use (potentially) by all three primary user groups (walkers, cyclists, horse riders). These signs should inform all groups about appropriate behaviour when in the vicinity of each other.

9.6.6 Distance & Direction (Access Point) Signs

Recognising that users will join the rail-trails at a number of points, installing distance and direction signs at road crossings will not only benefit those joining the trail at that location, but provide additional information for users already on the trail. It is recommended that these signs be a 180mm x 250mm x 3mm aluminium plate placed on the standard 'totem' post (200mm x 50mm) suggested for this trail. The plate should indicate the distance to the upcoming localities along the trail. Signs indicating distance to fire refuges will need to be installed at appropriate locations.

9.6.7 Other Attractions Signage

Signs should be installed along the trail clearly directing visitors to other attractions which may lie nearby (such as wineries, B&B's, cafes, delis, etc).

9.6.8 Interpretive Signage

On-trail interpretation is becoming more and more of a feature of trails built in recent times. When well done, it can add significantly to the depth of the user's experience. It can also generate a sizeable cost, and can be subject to ongoing vandalism in rural areas. Care will need to be taken in a base-line decision about what on-trail interpretation is provided, and in choosing a style of signage with a reputation for withstanding both graffiti and vandalism. Etched nodised aluminium may be a good option, if they can be lacquer-coated to enable easy graffiti removal.

Items potentially worthy of interpretation include:

- History – railway development and settlement of the region
- Importance and function of the stations / sidings along the corridor
- Special features of the railways
- Agricultural development history - cows, sheep, (beef and dairy),
- Other agricultural enterprises: apples and stone fruits, wineries and current land uses
- RAAF history
- Soldier settlements
- Timber milling and local industries

- Vegetation/wild flowers
- Topography
- Indigenous history

See Section 16 for more detailed information.

Interpretive signs should be a 400mm x 300mm x 5mm aluminium panel, mounted on a 50mm dia aluminium post - unless such signage is to be a part of a major display at a trail-head, when it should be on standard 1200 x 800 panels, in a 2 or 4 panel shelter.

9.6.9 Road Crossings Signs

The proposed rail-trails have a number of road crossings along each route, and some of these provide both challenges and opportunities for the trail development program.

The challenges come in ensuring that these crossings are safe for future trail users, while the opportunities surround the passing traffic who can be alerted to the trails' presence. Such 'opportunistic' promotion can only be good for the future of the trails in raising awareness and increasing user numbers.

To facilitate a high level of information - and therefore a high level of safety and amenity - standard signs (as set out in *Austroads Guide to Traffic Engineering Practice – Pt 14 – Bicycles*) should be used on the trails. In most cases all - or some - of these signs will be located in and around these crossings at appropriate locations. Each style of sign serves a distinct and different purpose, and each has a specific location at which it will best serve its intended purpose.

9.7 Erosion Control and Water Crossings

Proper drainage is of considerable importance in constructing a lasting, maintenance-free facility. Water should be removed from trail surfaces as fast as possible, wherever possible. The steepness of the trail and the type of soil dictate individual site requirements for the frequency of draining water from the trail. In this case, given the flat terrain or gentle slopes involved in much of the proposed rail-trails, erosion control should be relatively easy.

Having said that, those sections of the railway formations which do have blocked or dysfunctional drains should be attended to in the trail construction process, as allowing water to stand on the proposed trail surface or run down even a gentle slope is to invite surface damage followed by costly repairs.

It may be necessary to clear existing drains on a regular basis, or to install additional culverts under the trails in some locations to remove standing water effectively - if this is done care must be taken to ensure the surface is soundly patched afterwards.

In particular, on the Tumut to Batlow line, there is a need to attend to potentially dangerous land slip problems, and the cost estimates which follow have an allowance for remedial action to stabilise the slopes and prevent further slippages.

9.8 Bridges

Bridges are one of the most obvious reminders of the heritage value of disused railways, one of the most significant attractions of trails along disused railways and also one of the most costly items in the development of trails on the former railways.

Between Wagga Wagga and Tumbarumba there are 32 bridges, ranging in length from 3 metres to over 60 metres. On the Tumut to Batlow line there are 22 bridges ranging in length from 2 metres to nearly 66 metres.

The detail contained in the following tables has been obtained from information supplied by the Australian Rail Track Corporation and the Australian Railway Historical Society (NSW). The information is assumed to be comprehensive and complete. All bridge lengths (whether still in place or removed) have been taken from information obtained from these sources.

Bridge repairs are likely to be a significant cost.

Reinstatement and refurbishment of the bridges is likely to be a major cost component of these rail-trail projects. Re-decking of the bridges, together with installation of handrails where required (in compliance with Australian Standards for bridges) will be a major component of the cost of establishing the rail-trails. It should be noted that, though most of the bridge decking timbers are in poor condition, the supporting structures appear to be in sound condition. It should also be noted that these bridges were constructed to withstand many tonnes of steam locomotives – and that weight is not a factor now when considering their future use as trails. However, following advice from the NSW Rural Fire Service (Riverina Zone Manager) there will be a need in some cases to ensure that (some, but not all) the bridges are capable of supporting fire fighting trucks. (See discussion in 5.4.3).

As this is a feasibility study, a detailed structural assessment of each and every bridge along each of the two railway corridors was not warranted. Should the decision be made to proceed into the next phase (ie. a detailed trail development plan) the services of a qualified bridge engineer will need to be utilised to assess every bridge for structural soundness, to provide drawings of, and specifications for, a typical bridge super-structure and re-decking.

A unit rate of about $1,000 per metre has been used in the tables which follow later in this report. The rate allows for:

- removal of the decking and rail;
- installation of new decking timbers and kerbing;
- transport and site works; and
- construction in difficult locations; sometimes remote locations and often in elevated situations.

Engineering certification of all bridge supporting structures and abutments is strongly recommended, to ensure their structural soundness.

9.8 1 Wagga Wagga to Tumbarumba Bridges

Bridge Number	Length (metres)
1	21.25 (Creek from Lake Albert)
2	12.81
3	3.034
4	21.945
5	45.109 (Kyeamba Creek)
6	29.869 (Coreinbob Creek)
7	8.534
8	4.267
9	8.534
10	14.63
11	12.801
12	27.432
13	60.348 (Keajura Creek)
14	21.335
15	12.801
16	8.534
17	8.534
18	12.801
19	14.63 (College Creek)
20	8.534
21	4.267
22	4.572
23	4.267
24	8.534
25	29.869
26	30.479 (Murroguldrie Creek)
27	51.205
28	17.068
29	21.335 (Bells Creek)
30	4.267
31	48.157 (Mannus Creek)
32	21.945

9.8.2 Batlow to Tumut Bridges

Bridge Number	Length (metres)
Tumut to Gilmore	
1	5.4
2	7.2
3	4.5
4	8.54
5	3.0
6	6.0
7	1.8
8	4.5
9	8.54
10	1.5
11	3.05
12	10.8
13	1.8
1	1.8
2	3.0
3	1.8
4	3.0
5	65.88 (Gilmore Creek)
6	1.2
7	0.9
8	0.6
9	0.6

9.9 Trail Furniture

There are a number of locations, such as trailheads, well suited to the placement of facilities which would benefit all trail users. This furniture could include:

- table and seating in appropriate and attractive locations with expansive outlooks;
- Trailhead infrastructure, including seats and/or picnic table, signage, composting toilets, fire refuges and other facilities.

Care should be taken in the selection of styles of seating and tables. Many styles commonly used on trails are more suited to backyard gardens, or city parks. Few look 'right' in the natural environment. It may well be appropriate to have a local furniture maker or woodworker build something suitable to the situation.

9.10 Trail Heads and Parking

Given that much of the usage of the proposed trails is likely to come from walkers and mountain bikers from other regions and (possibly) from horse riders who float horses to the trail, formal 'trail-heads' are important (Note: a 'trail-head' is a 'starting point' with parking, signage, toilets, etc). Thought will need to be given during the detailed design development phase to an appropriate level of development at each of the trailheads. For the purposes of this feasibility study, a cost estimate has been assigned to the development of trailheads at strategic locations along each trail – usually at former railway station locations where access is easy and space is readily available for the development of car parking and ancillary facilities (such as composting toilets).

Basic facilities such as parking, perhaps a picnic table or seats in the shade, interpretive information and mapping showing distances to features and towns along the trail, and connections with other trails, is important and will prove useful to all trail users. There will be locations where composting toilets will be required, and a general allowance has been built into the broad cost estimates for major trailheads. In some locations toilets already exist, such as in the towns through which the trails will pass.

9.11 Suitability for Multi-Use

The flat grades and sweeping bends typically found on abandoned railway formations make them ideally suited for development of recreation trails – especially when developed with a wide trail surface that can accommodate all user groups (walkers, cyclists, horse riders [where permitted] and – possibly – disabled users in gophers or off-road wheelchairs, etc).

There is little doubt that the former railway corridors between Wagga Wagga and Tumbarumba and between Tumut and Batlow would make ideal rail-trails. The relatively short distances between the towns and/or station grounds (potential trailheads) makes it possible for walkers to travel between one or more towns on an outing. For cyclists, the distances involved also enable several ride possibilities. The potential trail length of the different sections of each trail route would provide a comfortable day's ride from end to end for many cyclists, providing they can get back to their commencement point. (Via leaving a car at either end).

The proposed trail surface (locally available decomposed granite) is eminently suitable for walkers and cyclists (using mountain bikes). The developers of the Lilydale to Warburton Rail Trail in Victoria have used 'Lilydale toppings' (a locally available crushed stone) as the trail surface producing a firm surface easily capable of accommodating walkers and cyclists. Most other rail-trails developed in Australia use a locally available earth surface (gravel, decomposed granite, crushed limestone, etc)

Drawing 1 of Appendix 6 illustrates a typical cross section of a rail-trail, with a 3.0 metre wide trail surface.

This feasibility study has given some consideration to sections of the proposed rail trail which are appropriate for use for horse riding. It is likely that the most popular sections for horse use would be Tumbarumba to Rosewood, and sections of the Tumut to Batlow line. As stated earlier, given the width of each corridor, it seems logical that a separate horse trail could be 'developed' parallel with the main bicycle/walking trail surface.

The railway corridor appears wide enough to accommodate a parallel horse trail within the corridor, and thereby enable horse riders to stay off the walking//cycling trail surface (and thereby avoiding damage to the trail surface).

More detailed assessment of the railway corridor, as proposed in the detailed Design Development phase, will provide sufficient information to conclude categorically whether horses can be accommodated on or alongside the proposed rail-trails.

At that time trail surfacing requirements (including careful examination of all bridges) will be determined and a case by case analysis will be made to decide whether horses can be accommodated within the former railway corridors or on the proposed trails.

There are however several concerns that have been raised by walkers and cyclists regarding horses using rail-trails in general:

- Potential damage to trail surface caused by horses hooves. The passage of horses along an unsealed trail surface will inevitably cause surface damage, and soft, boggy conditions will render the trail unsuitable for use by cyclists.
- The additional engineering costs inherent in structures such as the bridges. The additional weight of horses will require that bridge structures be designed to permit these expected heavier loads – at additional cost to the project. An alternative may be to have the trail route for horses at a lower level than the bridge, though still keeping horses out of the water.
- The perceived dangers involved on the major road crossings.
- The potential conflicts between other trail users and horse riders. Though there are ways of educating trail users about their rights and responsibilities, and the rights and responsibilities of others, isolated incidences of inappropriate behaviour of one user group towards others often result in conflict and injury.

As stated, it is likely that the proposed trail surfaces would not be suitable for sharing between cyclists / walkers and horses. Horses hooves do damage unsealed trail surfaces, to the detriment of other trail users. However, it is possible that the railway corridors may be wide enough in some sections to enable parallel horse trails to be developed. Drawing 2 illustrates one method for accommodating a horse trail in suitably wide sections of the corridors.

Another technique to be examined in the Design Development phase is constructing the trail up to 4 metres wide, with the outer metre on one side being a sand surface for the exclusive use of horses. Should there be sections where horses can be accommodated, it is highly likely that loop trails may be possible by using quiet back roads and those suitable sections of the railway corridor. Narrow cuttings and narrow (and steep sided) embankments would result in all three user groups potentially needing to use the same section of formation. Should this be necessary, a harder wearing trail surface would be required – again at additional cost to the project.

9.12 Other Users and Trail Etiquette

Managing interaction between user groups is a primary prerequisite on all trails, and standard signage and protocols already exist. Providing adequate signage is installed and users are well aware of the likelihood of meeting other user groups, such interactions should generally be non-threatening and relatively safe.

It is evident that the potential for unauthorised motorised usage of sections of the proposed rail-trails is regarded as a major problem to adjoining landowners – fearful that trail bikes and 4WD vehicles may gain access to farmland and property. Members of the community at the community meetings highlighted this as a major issue.

Every attempt must be made to ensure the trails are not used by either four-wheel drives or trail bikes, though this is likely to be difficult to manage and harder to police.

The use of 'cavaletti' gates at road crossings (see Drawing 10 of Appendix 6), where other chicanes and management access gates are installed, is one method of enabling horse riders to access the railway corridor trail, and still keep unwanted trail bike riders out. The 'chicane' designs (Appendix 6) are effective motor vehicle and motor bike barriers.

Education through signage and use of locked gates or other vehicle exclusion barriers will help, as will encouraging bona-fide users - and local residents - to report registration numbers of illegal users.

9.13 Codes of Conduct

A Code of Conduct for each user group, especially for horse riders and mountain bike riders, provides these users with guidelines to minimise their impact on the environment, and on other trail users. Codes of Conduct help to:

- Prevent soil erosion
- Minimise trampling
- Prevent the introduction and spread of noxious and exotic plants
- Protect waterways
- Protect significant and environmentally sensitive sites
- Minimise potential conflict with other users of the trail
- Ensure the safety of both horse and rider.

On the rail-trails, horse riders in particular should:

- Stay on the marked trail
- Clean horses' feet before a ride to reduce the chance of carrying any soil containing dieback or weeds into bush areas
- Feed horses with processed food (not hay) if staying overnight because hay can spread weeds
- Tie horses to something other than trees to avoid damage to trees
- Use designated areas for picnics and leave the area clean and tidy
- Wear helmets - they may be uncomfortable on long rides, however their use is encouraged, especially for children
- Act in accordance with signposting
- Check all saddlery before a ride to ensure there are no faults and that safety gear is present
- Ride horses that are easily handled and keep horses under control at all times
- Attend organised rides to find out where other trails are in your area and to learn correct trail etiquette

Typically, a Code of Conduct for equestrians will read as follows:

"Riders may meet walkers, dogs, mountain bike riders, trail bike riders and others who are unfamiliar with horses and unsure about passing them on the trail. It is important that all trail users are courteous and understanding, ensuring an enjoyable time for all.

When other users wish to pass or overtake you on a narrow trail, always ensure the hindquarters of your horse are facing away from them. Preferably move to the side of the trail and give them as much room as possible to pass.

Ensure all horses in your group are walking quietly when passing others on the trail. Please thank other trail users for any courtesy they show.

Horse riders may also meet those who are unsympathetic to riders enjoying the bush. Try to avoid conflict in these situations by explaining the existence of this Code and its purpose in helping to protect the bush environment.

If you meet riders who are acting contrary to the Code of Conduct, politely explain to them that by following the Code they can help ensure that horse riding remains a legitimate activity on bridle trails in bush areas. If necessary, report such incidents to relevant authorities, such as the local government or trail manager."

9.14 Heritage Issues

The Feasibility Study has identified a number of structures along the rail corridor which are of historical or heritage value. These include bridges, culverts, cuttings and embankments, mile pegs, goods sheds, station buildings (such as at Ladysmith and Tumut), other buildings at sidings, station name boards, signals and switches.

Items such as old mile pegs are of considerable social value, even though they may not be significant enough to rate as 'heritage value'. Many remain along the lines.

Ideally a 'heritage assessment' should be undertaken along the full length of each corridor, followed by development of 'heritage conservation plans' for those items identified as being of value. This is work for professionals in the heritage field, and advice should be sought regarding both funding and personnel for these tasks. As part of the overall trail project funds should be sought to undertake this work using specialists in the field.

9.15 Environmental Issues

Other than trail-related issues such as erosion and water management, there are several key environmental issues associated with these rail-trail projects. These are weeds, dieback, salinity and drainage.

Phytophthora cinnamomi (dieback / Pc) is a considerable issue in trail construction projects elsewhere in Australia. It may be prudent for a Pc assessment to be undertaken at the time of trail development.

Rare flora searches are a requisite part of any project which results in the clearing of native vegetation. Many local governments and other authorities in whom land is vested follow guidelines, and require a rare flora search to be undertaken before permitting clearing. However, much of the former railway corridors are either clear of vegetation, or have vegetation remaining within the corridors. In some cases, trees have regrown within the rail track and sleepers. These will need to be removed at the

time that the steel rail line and sleepers are being removed for salvage purposes. The project budget allows for replanting along the corridor.

In some areas, revegetation/land care programs have resulted in a thick belt of new trees growing alongside the railway formation, with a clear corridor remaining for the construction of the trail. No additional clearing will be required.

Concern has been expressed by adjoining landowners that the railway corridor has remained unmanaged since the time the trains stopped running and since that time weeds have been allowed to take over in some sections of the corridors – unless kept under control by adjoining landowners and their stock. However, not all adjoining landowners have bothered to control weeds, and some sections of the corridors are overgrown.

Attention has been focussed on problem weeds such as caltrop, St Barnaby's thistle, St John's wort, Patterson's curse, Scotch thistle and Saffron thistle. Some farmers control these weeds by regular grazing and chemical control.

The trail management plan and trail maintenance plan, to be prepared prior to the construction phase, will need to focus on activities that ensure that weeds are managed and kept under control (or even eliminated).

Weed spread (especially by horses) can be seen to be a problem, though this can be minimised by ensuring the Equestrian Code of Conduct is clear in all literature. It should also be noted that most weeds are already present in agricultural areas such as this, especially along trail sections currently accessible to vehicles.

The issue of dryland salinity is also regarded as a major concern by adjoining landowners, many blaming the existence of the railway embankments for the salinity. Whatever the cause, action has been taken by some farmers to combat the problem through changed farming practices, revegetation and replanting programs and fencing.

The cost estimates for developing the rail trails has included an allowance for a revegetation program alongside the railway formation, though it is strongly recommended that funding continue to be sought by the trails' proponent, adjoining farmers and land care groups for additional grants for revegetation to take remedial action to help eliminate the problem.

Poor drainage associated with the railway formation has also been raised as an environmental issue by adjoining farmers– which they believe can only be dealt with by levelling of the formation. Another solution would be to install additional pipe culverts underneath the formation at the time of the construction of the trails. This detail will be discovered during the detailed trail design development phase.

9.15 Interpretation

A rail corridor is inevitably rich with history, not just European settlement history but also indigenous and natural history. People often move along a trail at a more leisurely pace than that of their everyday lives. This slower rate of travel, a more relaxed frame of mind and openness to new experiences provide ideal circumstances to educate trail users on all aspects of the country through which they pass. There are many stories that can be told along the rail-trails. The provision of interpretive material will greatly enrich the experience of visitors to the rail-trails.

9.15.1 What is Interpretation?

Interpretation is commonly defined as "a means of communicating ideas and feelings which help people understand more about themselves and their environment" (*Interpretation Australia Association*). In simple terms, it is the process of communication between the visitor and the values of a place (*Perrigo 2004*).

Perrigo argues that the best definition comes from a 1957 publication by Freeman Tilden entitled "Interpreting Our Heritage". He wrote that interpretation is "*an educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experiences and by illustrative media rather than simply to communicate factual information*". According to Perrigo, this definition has stood the test of time.

Through interpretation:

- visitors will be inspired – this will lead to increased commitment;
- visitors numbers and the duration of their stay will increase;
- visitors are more likely to come again;
- visitor diversity (user patterns) will increase. Examples will be children, adults and sections of the community particularly attracted to a theme or storyline; and
- Grants and other support are likely to increase

Perrigo believes that interpretation can provide the knowledge, awareness and understanding that propel visitors to make a commitment to the objectives of a trail. This is clearly a goal worth striving for.

9.15.2 What Could be Interpreted?

As stated above, a rail corridor is inevitably rich with history. The two corridors under consideration are no different. The following is a preliminary list of features and stories that may be appropriate for use if the Committee of Management decides to provide interpretive material. While there may be interpretation of these features and elements elsewhere in the region (such as at Wagga beach), trail users may venture no further than the rail-trail due to a range of factors. Effective interpretive material gives a specific "flavour" of the events, landforms, wildlife, and vegetation relevant to a specific site. The intention is for the traveller to develop a deeper understanding of the multitude of stories contained in a region without delving further into either the country or published information. Conversely, the themes can be designed to spark interest, encouraging people to explore any story which interests them. It may also encourage them to extend their stay in the region to further pursue an interesting story or theme.

As indicated earlier, items potentially worthy of interpretation include:

- History – railway development and settlement of the region. The whole region is rich with rail history. Signal and switching infrastructure is still in place. Excellent work by dedicated enthusiasts has restored the Ladysmith Railway Station. The importance and function of the stations and sidings along the corridor and how these tied into the development history of the NSW railways is another aspect of railway history;
- Importance and function of the stations / sidings along the corridor, and the history of the selection of the routes of the railways to maximise exposure to as many farms as possible. The Australian Railway Historical Society (NSW) and local

historical societies would be able to supply much material for inclusion on the interpretive panels;

- Special features of the railways – the Downfall is an obvious area where considerable interpretation could and should be put in place, relating the stories of the engineering marvel that it is, the people who constructed the high embankments and deep cuttings, and stories of their lives and backgrounds; the steepness of the Gilmore Valley line as it rises to Batlow is another obvious target for interpretation, as it is understood to be the steepest railway ascent in NSW;

Relics from the railway, such as this survey marker at The Downfall, should be interpreted along the rail trails, enriching the experience of all trail users.

- Agricultural development history - cows, sheep, (beef and dairy); these industries are the mainstay of the local economy; panels could indicate the how economics of food production has changed over time;
- Other agricultural enterprises - apples and stone fruits, wineries and current land uses – Batlow is famous across the nation for its apple orchards;
- RAAF history – the RAAF base has been around for many years, and there are undoubtedly many stories of its importance to the defence of Australia;
- Landcare issues – significant effort has gone into repairing degraded agricultural land, and the region displays many landcare projects to combat dryland salinity, etc. These issues warrant mention on interpretive panels in appropriate locations along the railway corridors, recognising the tremendous efforts by concerned farmers and others in the community;

The wonderful work being done by farmers and Landcare groups to redress environmental problems should also be the subject of interpretation along the rail trails.

- Soldier settlements - the 'European' settlement history of the area, notably but not exclusively focussed on settlement by immigrants and families of soldiers, provides a rich vein of interpretive themes and stories;

- Timber milling and local industries - stories about how these major national and international manufacturing concerns came to be in the region and the role they play today both in the local economy and in the national and global arenas make interesting material;
- Vegetation/wild flowers/fauna/birds – the railway corridors are rich in natural history, with significant stands of vegetation remaining (as remnant vegetation) or as regrowth; the variety of birdlife should be featured;
- Topography – the whole region is extremely scenic, with ranges of hills, mountains, creeks and stunning valleys. The impact of soils and slope, the Great Dividing Range, the Australian Alps, and numerous other panels with a topographic theme could be included along the railway corridors; and
- Indigenous history - all areas of Australia have an indigenous history that pre-dates European settlement. The region traversed by the rail-trails is no different. Various stories and mythology could be contained on any number of interpretive panels.

9.15.3 Planning Interpretation

Perrigo (2004) argues that, in the past, interpretation has been treated "as a walk-on part in the last act of a management plan". Rather than embracing and engaging interpretative principles into management plans, "bits and pieces" are often added at the end. Usually interpretation programs are the first to be lost in budget cuts. This is not the desired approach. Perrigo argues this is now changing and that there is a slow but growing recognition that interpretation is an essential tool for management of places and that resources are increasingly available.

It is therefore important for the trail manager, should the trails proceed, to give serious thought to planning and implementing interpretation in the early stages of the project development. This does not necessarily imply that interpretation material has to be in place from the trail opening though this would be a commendable outcome. However, interpretation should be an integral part of the trail's development process.

9.15.4 Funding of Interpretation

Interpretation must be planned within existing funds. Funding should be sought as soon as the decision to proceed with the trails is made. A possible funding source, as listed in Section 16, is the Commonwealth Government's *Sharing Australia's Stories* grants programme. The program provides individuals and communities, including Local Governments, with the opportunity to show how their stories have contributed to the great event and themes that have shaped our nation. Projects must contribute to an understanding of Australia's natural or cultural history.

SECTION 10.0 – COST ESTIMATES

This report provides a basis for determining whether development of a recreational trail within the disused railway corridors between Wagga Wagga and Tumbarumba and between Tumut and Batlow is feasible (from a cost perspective), and under what conditions a trail could be countenanced.

Part of the process of establishing whether a project is feasible or not is actually determining what the project is likely to cost. It is reasonably straightforward to set out the actual costs of developing a recreational trail, as the cost components are mostly known, and per unit rates can be applied.

In considering the costs set out below reference should also be made to the multitude of benefits of trails set out earlier in this report. These benefits have been taken into account in determining whether development of a trail within the former railway corridors are feasible propositions.

As this is essentially a "feasibility study" report, and not a full-scale trail development plan, the costs of construction of the trails which follow are estimates only. In the next phase of the study, should the decision be taken to proceed with construction of the trails, the detailed design development would define more accurately the costs for each trail construction.

For the purposes of this feasibility report, the per unit construction rates set out below have been used. These unit rates have been averaged out over the length of each trail (approx. 129km and 32km).

Obviously some areas/segments of the trail will vary in terms of what elements of the construction process will be required. For example, some segments of the former railway corridors will require fencing along both sides of the corridor (to satisfy adjoining landowners who require it), while in other segments of the corridors little or no fencing will be required, as new fences have already been installed by neighbouring farmers or adjoining landowners do not require fencing (due to interference with farming practices). Similarly, clearing of vegetation from the trail corridors, and removal of rubbish and weeds will be much simpler in some segments, and much more difficult in others.

- Clearing/grading/shaping trail alignment (inc. ballast removal): $1/metre
- Fencing: * see Note 2

  New: $6.50/metre
- Bridge safety railings: $60/m
- Bridges:
  - Safety railings: $60/metre
  - Re-decking * ($1,000/m)
- Road crossings:
  - Major: $4000
  - Minor: $2000
- Trail surfacing (inc. materials, machinery & labour): $4/$m^2$ (3 metres wide) = $12/lineal metre
- Signage: $1.50/metre (directional, warning, advisory, interpretive)
- Trailhead: $5,000 - $25,000 (parking; signage; picnic facilities; bike parking; perhaps a composting toilet, fire refuges, etc) – see note 5

- Weed / rubbish removal: $1/m
- Revegetation/screening: $0.50/m
- Path construction: $100/metre (3m wide – hotmix seal)
- Drainage: $0.50/metre
- Engineers Assessment: $150-$500/bridge

(Note: all distances are linear metres)

Please note that these tables do not entirely reflect the different 'sections' depicted in Plans 1 - 10 of Appendix 7. Some sections have been combined in these tables.

10.1 Wagga Wagga to Tumbarumba Rail Trail

Section 1a: Wagga Wagga to Station Equex Centre (1,750 metres)		
Clearing vegetation &/or grading trail alignment	1,750	1,750
Fencing	Allowance for 1,000m	6,500
Road crossings – Copland St – Lake Albert Rd	 Minor Minor	 2,000 2,000
Trail (pathway) construction and surfacing (hotmix)	1,750m	175,000
Signage		2,630
Weed and rubbish removal		1,750
Re-vegetation/screening		1000
Drainage (in cuttings)		1000
Sub-total		*$193,630*
Contingency & Project Management 15%		$29,050
Sub-total		*$222,680*
10% GST		$22,270
Total (incl. 10% GST)		***$244,950***

Section 1b: Equex Centre to Forest Hill (9,280 metres)		
Clearing vegetation &/or grading trail alignment	9,280m	9,280
Fencing	Allowance for 3,000m	19,500
Bridges: new decking and/or re-construction – bridge 1	 21.25m	 21,500
Bridges: safety railings – bridge 1	 23m x 2	 2,760
Road crossings – Kooringal Rd – Bakers Lane – Elizabeth Ave	 Minor Minor Minor	 2,000 2,000 2,000

– Brunskill Ave	Minor	2,000
Trail (pathway) construction and surfacing (hotmix)	9,280m	928,000
Signage		13,920
Trailhead		
– Equex Centre	Major	25,000
– Forest Hill	Minor	10,000
Weed and rubbish removal		9,280
Re-vegetation/screening		4,640
Drainage (in cuttings)		4,640
Bridge certification by engineer		400
Sub-total		*$1,056,920*
Contingency & Project Management 15%		$158,540
Sub-total		*$1,215,460*
10% GST		$121,550
Total (incl. 10% GST)		***$1,337,010***

Section 2: Forest Hill to Ladysmith (9,400 metres)		
Clearing vegetation &/or grading trail alignment	9,400m	9,400
Fencing	Allowance for 3,000m	19,500
Bridges: new decking and/or re-construction		
- bridge 2	12.81m	13,000
- bridge 3	3.034m	3,000
- bridge 4	21.945m	22,000
- bridge 5	45.109m	45,000
Bridges: safety railings		
- bridge 2	14m x 2	1,680
- bridge 3	4m x 2	480
- bridge 4	23m x 2	2,760
- bridge 5	46m x 2	5,520
Road crossings		
- Tumbarumba Rd	Minor	2,000
Trail construction and surfacing	9,400m	112,800
Signage		14,100
Trailhead		
- Ladysmith Station		10,000
Weed and rubbish removal		9,400
Re-vegetation/screening		4,700
Drainage (in cuttings)		4,700
Bridge certification by engineer		1,400

Sub-total		*$281,440*
Contingency & Project Management 15%		$42,220
Sub-total		*$323,660*
10% GST		*$32,370*
Total (incl. 10% GST)		***$356,030***

Section 3: Ladysmith to Tarcutta (37,620 metres)		
Clearing vegetation &/or grading trail alignment	37,620m	37,620
Fencing	Allowance for 5,000m	32,500
Bridges: new decking and/or re-construction		
- bridge 6	29.869m	29,000
- bridge 7	8.534m	8,500
- bridge 8	4.267m	4,500
- bridge 9	8.534m	8,500
- bridge (un-numbered)	20m	20,000
- bridge (un-numbered)	20m	20,000
- bridge (un-numbered)	8m	8,000
- bridge (un-numbered)	20m	20,000
- bridge 10	14.63m	15,000
- bridge 11	12.801m	13,000
- bridge 12	27.432m	27,500
- bridge 13 (Kyemaba Creek)	60.348m	75,000
Bridges: safety railings		
- bridge 6	31m x 2	3,720
- bridge 7	10m x 2	1,200
- bridge 8	6m x 2	720
- bridge 9	10m x 2	1,200
- bridge (un-numbered)	20m x 2	2,400
- bridge (un-numbered)	n/a	0
- bridge (un-numbered)	n/a	0
- bridge (un-numbered)	20m x 2	2,400
- bridge 10	16m x 2	1,920
- bridge 11	14m x 2	1,680
- bridge 12	29mx 2	3,480
- bridge 13	62m x 2	7,440
Road crossings:		
- Tywong St	Minor	2,000
- Keajura Rd	Minor	2,000
- Berville Ln	Minor	2,000
- Penfolds Rd/Martins Rd	Minor	2,000

- Corienbob Rd	Minor	2,000
- Blythes Rd	Minor	2,000
- Hume Hwy	Major	4,000
Trail construction and surfacing	37,620m	451,440
Path link from Mates Gully Road to Tarcutta town	350	35,000
Signage		56,430
Trailheads		
- Corienbob Station site		15,000
- Tarcutta Station site		10,000
Weed and rubbish removal		37,620
Re-vegetation/screening		18,810
Drainage (in cuttings)		18,810
Bridge certification by engineer		4,000
Sub-total		*$1,008,390*
Contingency & Project Management 15%		$151,260
Sub-total		*$1,159,650*
10% GST		$11,600
Total (incl. 10% GST)		***$1,171,250***

Section 4: Tarcutta to Humula (26,090 metres)		
Clearing vegetation &/or grading trail alignment	26,090m	26,090
Fencing	Allowance for 5,000m	32,500
Bridges: new decking and/or re-construction		
- bridge 14	21.335m	21,500
- bridge 15 (missing)	12.801m	13,000
- bridge 16	8.534m	8,500
- bridge 17	8.534m	8,500
- bridge 18	12.801m	13,000
- bridge 19	14.63m	15,000
- bridge 20	8.534m	8,500
- bridge (un-numbered)	20m	20,000
- bridge 21	4.267m	4,500
- bridge 22	4.572m	4,500
- bridge 23	4.267m	4,500
- bridge 24	8.534m	8,500
- bridge 25	29.869m	30,000
- bridge 26	30.479m	30,500
- bridge 27	51.205m	51,500

Bridges: safety railings		
- bridge 14	23m x 2	2,760
- bridge 15	14m x 2	1,680
- bridge 16	10m x 2	1,200
- bridge 17	10m x 2	1,200
- bridge 18	14m x 2	1,680
- bridge 19	16m x 2	1,920
- bridge 20	10m x 2	1,200
- bridge (un-numbered)	42m x 2	5,040
- bridge 21	6m x 2	720
- bridge 22	6m x 2	720
- bridge 23	6mx 2	720
- bridge 24	10m x 2	1,200
- bridge 25	31m x 2	3,720
- bridge 26	32m x 2	3,840
- bridge 27	53m x 2	6,360
Road crossings:		
- Humula Rd (1)	Minor	2,000
- Humula Rd (2)	Minor	2,000
- Nugents Rd	Minor	2,000
- Murraguldrie Rd	Minor	2,000
- The Eight Mile Rd	Minor	2,000
Trail construction and surfacing	26,090m	313,080
Signage		39,140
Trailheads		
- Umbango Creek Station site		10,000
- Humula Station site		15,000
Weed and rubbish removal		26,090
Re-vegetation/screening		13,000
Drainage (in cuttings)		13,000
Bridge certification by engineer		4,000
Sub-total		*$777,860*
Contingency & Project Management 15%		$116,680
Sub-total		*$894,540*
10% GST		$89,450
Total (incl. 10% GST)		***$983,990***

Section 5: Humula to Rosewood (24,880 metres)		
Clearing vegetation &/or grading trail alignment	24,880m	24,880
Fencing	Allowance for 5,000m	32,500
Bridges: new decking and/or re-construction		
- bridge 28	17.068m	17,000
Bridges: safety railings		
- bridge 28	18m x 2	2,160
Road crossings:		
- Downfall Rd (1)	Minor	2,000
- Downfall Rd (2)	Minor	2,000
- Rosewood Hills Rd	Minor	2,000
Trail construction and surfacing	24,880m	298,560
Signage		37,320
Trailheads		
- Downfall Rd		15,000
- Rosewood Station site		10,000
Weed and rubbish removal		24,880
Re-vegetation/screening		12,440
Drainage (in cuttings)		12,440
Bridge certification by engineer		500
Sub-total		*$493,680*
Contingency & Project Management 15%		$74,050
Sub-total		*$567,730*
10% GST		$56,780
Total (incl. 10% GST)		***$624,510***

Section 6 Rosewood to Tumbarumba (21,210 metres)		
Clearing vegetation &/or grading trail alignment	21,210m	21,210
Fencing	Allowance for 3,000m	19,500
Bridges: new decking and/or re-construction		
- bridge 29	21.335m	21,500
- bridge 30	4.267m	4,500
- bridge 31	48.157m	48,000
- bridge 32	21.945m	22,000
Bridges: safety railings		
- bridge 29	23m x 2	2,760

- bridge 30	6m x 2	720
- bridge 31	50m x 2	6,000
- bridge 32	23m x 2	2,760
Road crossings:		
- Broad Leaf Park Rd	Minor	2,000
- Albury St	Minor	2,000
- Jonathans Creek Rd	Minor	2,000
- Glenroy Hills Rd	Minor	2,000
- Tumbarumba Rd	Minor	2,000
- Linden Roth Drive	Minor	2,000
- Camden Park Rd	Minor	2,000
Trail construction and surfacing	21,210m	254,520
Signage		31,810
Trailheads		
- Glenroy Station site		10,000
- Tumbarumba Station site		15,000
Weed and rubbish removal		21,210
Re-vegetation/screening		10,600
Drainage (in cuttings)		10,600
Bridge certification by engineer		1,400
Sub-total		*$518,090*
Contingency & Project Management 15%		$77,710
Sub-total		*$595,800*
10% GST		$59,580
Total (incl. 10% GST)		***$655,380***

10.2 Tumut to Batlow Rail Trail

Section 1: Tumut to Gilmore (5,630 metres)		
Clearing vegetation &/or grading trail alignment	5,630m	5,630
Fencing	Allowance for 2,000m	13,000
Bridges: new decking and/or re-construction		
- bridge 1	5.4m	5,500
- bridge 2	7.2m	7,200
- bridge 3	4.5m	4,500
- bridge 4	8.54m	8,500
- bridge 5	3.0m	3,000
- bridge 6	6.0m	6,000
- bridge 7	1.8m	1,800
- bridge 8	4.5m	4,500
- bridge 9	8.54m	8,500

- bridge 10	1.5m	1,500
- bridge 11	3.05m	3,000
- bridge 12	10.8m	10,800
- bridge 13	1.8m	1,800
Bridges: safety railings		
- bridge 1	7m x 2	840
- bridge 2	8m x 2	960
- bridge 3	6m x 2	720
- bridge 4	10m x 2	1,200
- bridge 5	4m x 2	480
- bridge 6	7m x 2	840
- bridge 7	3m x 2	360
- bridge 8	6m x 2	720
- bridge 9	10m x 2	1,200
- bridge 10	3m x 2	360
- bridge 11	4m x 2	480
- bridge 12	12m x 2	1,440
- bridge 13	3m x 2	360
Road crossings:		
- Whatman's Lane	Minor	2,000
- Minor lanes x 3	Minor	3,000
Trail construction and surfacing	5,630m	67,560
Signage		8,440
Trailhead		
- Tumut Station		10,000
- Gilmore Station site		10,000
Weed and rubbish removal		5,630
Re-vegetation/screening		2,810
Drainage (in cuttings)		2,810
Bridge certification by engineer		2,000
Sub-total		*$209,440*
Contingency & Project Management 15%		$31,420
Sub-total		*$240,860*
10% GST		$24,090
Total (incl. 10% GST)		***$264,950***

Section 2: Gilmore to Batlow (25,930 metres)		
Clearing vegetation &/or grading trail alignment	25,930m	25,930
Fencing	Allowance for 3,000m	19,500
Bridges: new decking and/or re-construction		
- bridge 1	1.8m	1,800
- bridge 2	3.0m	3,000
- bridge 3	1.8m	1,800
- bridge 4	3.0m	3,000
- bridge 5	65.88m	66,000
- bridge 6	1.2m	1,200
- bridge 7	0.9m	900
- bridge 8	0.6m	600
- bridge 9	0.6m	600
Bridges: safety railings		
- bridge 1	3m x 2	360
- bridge 2	4m x 2	480
- bridge 3	4m x 2	480
- bridge 4	4m x 2	480
- bridge 5	67m x 2	8,040
- bridge 6	2m x 2	240
- bridge 7	2m x 2	240
- bridge 8	2m x 2	240
- bridge 9	2m x 2	240
Road crossings:		
- Batlow Rd	Minor	2,000
- Wereboldera Station Rd	Minor	2,000
- West Gilmore Rd	Minor	2,000
- Herrings Rd	Minor	2,000
- Memorial Ave	Minor	2,000
Trail construction and surfacing	25,930m	311,160
Signage		38,890
Trailhead		
- Wereboldera Station site		10,000
- Batlow Station site		15,000
Weed and rubbish removal		25,930
Re-vegetation/screening		12,960
Drainage (in cuttings)		12,960
Bridge certification by engineer		2,200
Slope stabilisation		25,000
Sub-total		*$599,230*
Contingency & Project Management 15%		$89,890
Sub-total		*$689,120*
10% GST		$68,910
Total (incl. 10% GST)		***$758,030***

Summary of Costs (GST exclusive)

Section 1a: Wagga Wagga Station to Equex Centre (1,750 metres)	*$222,680*
Section 1b: Equex Centre to Forest Hill (9,280 metres)	*$1,215,460*
Section 2: Forest Hill to Ladysmith (9,400 metres)	*$323,660*
Section 3: Ladysmith to Tarcutta (37,620 metres)	*$1,159,650*
Section 4: Tarcutta to Humula (26,090 metres)	*$894,540*
Section 5: Humula to Rosewood (24,880 metres)	*$567,730*
Section 6: Rosewood to Tumbarumba (21,210 metres)	*$595,800*
Total (excluding GST)	***$4,979,520***

Summary of Costs (GST exclusive)

Section 1: Tumut to Gilmore (5,630 metres)	*$240,860*
Section 2: Gilmore to Batlow (25,930 metres)	*$689,120*
Total (excluding GST)	***$929,980***

NOTE 1: Figures provided in this report are based on 2006 costs, and should be adjusted by 3% each year thereafter to factor in the impact of inflation.

NOTE 2: Fencing prices are general farming fence rates. It is understood that fencing is an issue that requires resolution during the detailed design development phase. The railways were built within unfenced corridors. Though much fencing has been erected by adjoining farmers, significant lengths remain unfenced. The fieldwork and corridor assessments of this study noted the existence of fencing. In calculating how much fencing might be required in the rail-trail development program, an estimate was made on the basis of adjoining land uses, proximity of roads, existing fencing (and condition of that fencing) and probable landowner requirements.

NOTE 3: Bridge ID numbers are taken from information provided by the Australian Railway Historical Society (NSW).

NOTE 4: Bridge re-decking and/or reconstruction cost estimates include an allowance for decking timber and kerbing, abutment repairs, fixings, transport, site works, work in difficult conditions and in elevated situations and a contingency for unforeseen works. Bridges in some locations will need to carry the weight of fire fighting equipment, while in other locations shared use of bridges with the Tumba Rail trikes will require special consideration in the design and upgrading.

NOTE 5: The need for composting toilets and fire refuge points will need to be considered in more detail during the detailed trail design development phase. It is expected that fire refuge points need be installed only every 25km, so the location of adjoining roads, and frequency of trailhead locations may mean that only one purpose-built fire refuge may be needed (on the longest section which is Section 3: Ladysmith to Tarcutta which is 37,620 metres). A contingency allowance has been made in the costs tables to cover these possible components of the trail design.

NOTE 6: No allowance has been made for removal of steel track and sleepers, as it is expected that this salvageable material will derive an income for the corridor owner.

SECTION 11 – BUSINESS CASE

11.1 Introduction

While it is always difficult to predict the economic impact of a new trail or a trail extension, figures from other trails provide some useful starting points. Research on the Bibbulmun Track shows that visitor numbers grew from 10,000 when the new alignment was first opened in 1997 to 137,000 in 2004 (*Colmar Brunton 2004*). This was on a trail that had existed in its entirety for many years, but was substantially altered and reopened in 1997 (although new sections of it had been opened prior to its grand opening). Visitors included those on "local trips", day trips and overnight or longer stays (including those who travelled from end to end).

A dramatic increase in visitor numbers such as experienced by the Bibbulmun Track can be, in part, attributed to very good marketing of the track. The economic impact of the Riverina Highlands Rail Trails is primarily dependent on the extent to which the trails are marketed and promoted.

11.2 Population and Visitor Information – A Summary

Resident and visitor numbers and tourism profiles are discussed in Section 4. It is worth reiterating some key points:

- The 2001 population of the region around both proposed rail-trails was 71, 219. Wagga Wagga is the most populous centre in the region.
- Visitors to the region have risen over recent years and this trend is likely to continue. At least 1.5 million people visited the two tourism regions in which the proposed rail-trails are located for overnight stays while a further 1.44 million people visited for day trips. Tourism is a major industry in the Local Governments through which the proposed rail-trails pass.
- Overnight visitors to the two regions come primarily from regional NSW (38%), Sydney (33%), Victoria (12%) and the ACT (5%).
- There is significant repeat visitation by people who used to work in Wagga Wagga – they have an affection for the town. A rail-trail could build on this repeat visitation and give people reason to stay longer.
- The eastern end of the region (notably, the towns on the western slopes of the Snowy Mountains) promotes itself as a "mecca" for outdoor activity providing access to a range of outdoor recreation activities across all four seasons including bushwalking, cycling, mountain biking, horse riding, trout fishing, water skiing and snow skiing.
- There are a number of short and long trail opportunities in the region, providing complementary attractions to a rail-trail - a different experience that encourages visitors to extend their stay.
- The region is developing a profile as a cycling destination with a number of recent well-attended events.
- The proposed rail-trails would be within 6 hours of three major markets. Given the growing popularity of the short break market (discussed in Section 6), this positioning of the proposed rail-trails within a reasonable drive (or short flight)

from major markets is quite significant. The Canberra market has been identified by tourism organisations in Wagga Wagga as having huge potential and as a market worth considerable attention.

11.3 Projected User Scenarios - Local Resident Usage

The following set of scenarios provides an indication of the sort of visitor numbers that could be achieved (and is based on visitor numbers achieved elsewhere on trails).

In the case of the Mundaring Shire trail network, 63% of Shire residents (the Shire has a population of 33,400) had used the network in the previous 12 months.

Table 11.1 provides three possible local use scenarios, all of which are conservative compared with the Mundaring data. When considering these figures, it is worth noting that the population of Mundaring Shire is less than half the population of the Local Governments surrounding the proposed rail-trails (not including Greater Hume Shire Council). It is also important to remember that, according to the Wagga Wagga Bikeway Plan, some 54% of respondents to a random survey indicated they cycled regularly. This figure is significantly higher than any that will be used in the following analysis.

Table 11.1: Potential Trail Usage by residents

(Population of the rail-trail region – Wagga Wagga City, Tumbarumba Shire, Tumut Shire – 71,219)

	Use rate	Numbers
Low	10%	7,122
Medium	20%	14,243
High	30%	21,365

The next step is to estimate total trip numbers. In the Mundaring study, the average number of trips per year per local resident was 75. Table 11.2 provides three visitation scenarios taking a far more conservative approach compared to the actual visitation rate coming from the Mundaring study.

Table 11.2: Potential Total Annual Visits by residents

(low, medium and high refer to the use rates developed in Table 11.1 above)

	Low trail usage : 10% of residents	Med trail usage : 20% of residents	High trail usage : 30% of residents
Low (10 visits/yr)	71,220	142,440	213,660
Medium (20 visits/yr)	142,440	284,860	427,290
High (30 visits/yr)	213,660	427,290	640,950

Expenditure per trip by local residents is always lower than for visitors, as locals are closer to home and more likely to either take all that they need or come home to eat and drink following a trail visit. The expenditure figures from the Mundaring study ($1.44/person/trip – mainly food and drink) are a legitimate base to work from. Using this figure in combination with visitation scenarios generated in Table 11.2 gives a range of expenditure estimates (Table 11.3).

Table 11.3: Potential Total Annual Expenditure by residents ***(low, medium and high refer to the use rates developed in Tables 11.1 and 11.2 above)***

Trail usage	# of trips	# of visits	$/trip	Total spend
Low	Low	71,220	1.44	102,557
Low	Med	142,440	1.44	205,113
Low	High	213,660	1.44	307,670
Med	Low	142,440	1.44	205,113
Med	Med	284,860	1.44	410,198
Med	High	427,290	1.44	615,297
High	Low	213,660	1.44	307,670
High	Med	427,290	1.44	615,297
High	High	640,950	1.44	922,968

These figures are considerably lower than the Mundaring results which delivered a total expenditure of $2.25 million in the Shire by local residents. In order to simplify the number of outcomes, Table 11.4 presents three scenarios: low usage / low number of trips, medium usage / medium number of trips, and high usage / high number of trips.

Table 11.4: Potential Total annual expenditure in the vicinity of the trail by residents
(low, medium and high refer to the use rates developed in Tables 11.1 and 11.2 above)

Use Scenario	# of person visits	Total spent ($)
Low/low	71,220	102,557
Medium /medium	284,860	410,198
High / high	640,950	922,968

What is the likely scenario for local visitors? The Mundaring figures show 63% of the local population making an average of 75 trips/year. The low/low scenario (71,220 person visits/year) is a reasonable, if very conservative, estimate particularly given the propensity of Wagga Wagga residents (at least) to cycle.

11.4 Projected User Scenarios – Day-trip Usage

The combined regions in which the rail-trails are located received over 1.4 million domestic daytrip visitors in the year ending December 2004. The rail-trails have the potential to add to this number (day trippers in this instance would be different from local “back gate” users or local residents – as discussed in 11.3) or to convert day trippers into overnight visitors. It is difficult to predict a likely increase in daytrip visitors as source information does not indicate where day trippers are coming from. Other rail-trails provide useful information. According to Beeton (2003), day-trippers provided 78% of visitors to the East Gippsland Rail Trail, 40% to the Murray to the Mountains visitors, and 88% of visitors to the Lilydale to Warburton. Expenditure is also quite significant – on the Lilydale to Warburton Rail-trail, day trippers are spending an average of $44.63/visit. The Mundaring study shows visitors from outside

the Shire (these are, in the main, Perth residents on day trips as the Mundaring network is only 40 minutes from the Perth CBD) spending $11.43/visit. Beeton indicates that there may be definitional issues with her work on day trippers – people may perceive their journey to the trail as a day trip, when it is part of a longer overnight stay in the region. Given this factor, the Mundaring data is probably more reliable, though visitors to the two rail-trails in this project may come further than a 40 minute journey (Perth to Mundaring) and consequently may spend more.

It is impossible to predict with any certainty what effect development of rail-trails will have on the day-trip market in the region; comparative work on other rail-trails simply does not exist. The level of detailed information on day trippers to the region is not sufficient to discern inputs. However, with proper marketing to an already-established day-trip market, it is not unreasonable to assume that trail construction will attract additional day-trippers to the region (particularly given the figures on user demand showing a consistent rate of cycling for leisure discussed in Section 6). Increasing day trippers to the region by 1% will result in an injection of some $160,000 into the local economies per year (based on the lower Mundaring day tripper expenditure figures). The day trip market may reduce in time with rising fuel prices – however, 14,400 day trippers for the purposes of using the trail does not seem unreasonable, even if the overall numbers of day trippers reduces.

11.5 Projected User Scenarios – Overnight Visitor Usage

11.5.1 Scenario 1 – The Riesling Trail Replicated

Figures from the Riesling Trail in South Australia are instructive and may provide one scenario as to additional visitor expenditure from trail development.

The Riesling Trail is some 2 hours from Adelaide in the Clare Valley – an overnight trip. By comparison, these trails would be within 3 hours of Canberra (a smaller population than Adelaide) but within 6 hours of Sydney and Melbourne (almost 8 million people). The Riesling Trail receives around 11,000 visitors per year (the bulk of whom are not locals), of whom over 5,000 (some 46%) come primarily to use the Trail.

Visiting trail users are spending $215.82/person/visit in the Clare Valley. The net effect of this expenditure is that visitors who come to the Clare Valley primarily to use the trail are estimated to spend $1.08 million/year. The average length of stay is 2.2 days (giving a daily expenditure of $98.10).

Is 5,000 potential visitors a reasonable assumption? The Riesling Trail is the same distance from Adelaide as these trails would be from Canberra. Although Canberra has a smaller population, residents have a higher tendency to cycle as discussed in Section 6. The NSW Big Bike Ride attracted 6% of its participants from the ACT - well in excess of its commensurate share of population of the main states that participated - NSW, Queensland and Victoria. From Canberra alone, it is reasonable to assume that the trails could attract 5,000 visitors (of a population of 380,000 – 1.3% of the population) specifically to use the trail.

11.5.2 Scenario 2 – A Less Conservative Approach

A number of factors make it worthwhile to consider that these trails may attract more than 5,000 visitors annually specifically to use the trails. The Riesling Trail attracts the figures on very limited marketing without proper packaging. It draws some 30% of its visitors from interstate and overseas. It is close to Adelaide but distant from Sydney and Melbourne. The proposed Riverina Highlands Rail Trails are better positioned with

respect to major markets (Canberra, Sydney and Melbourne). The regions already draw a substantial proportion of visitors from Sydney, Regional NSW, Victoria and Canberra. As the first rail-trail in NSW, the rail-trails may have a significant marketing edge for some time to come. The Clare Valley (in which the Riesling Trail is located) is famous for the trail and for wines – these features draw some 413,000 visitor nights per year and 253,000 domestic day trips. The Riverina Highlands Rail Trails will be in areas with a number of attractions, already known for a diversity of outdoor recreation activities (tracks, cycling, horse riding, walking and so on) and with a developing wine and food industry. It also has, in Wagga Wagga, a significant provincial city with return visitation by those who have worked in the region previously. The Riverina and Snowy Mountains tourism regions (encompassing an area broader than the rail-trail locations) draw 4.93 million visitor nights and 1.44 million domestic day trips. Tumut Shire alone draws 285,000 visitor nights and almost 85,000 domestic day trips. The rail-trails will be in an area with a significantly higher visitor base, both overnight visitors and day trippers. All these factors mean that it is reasonable to assume that the proposed rail-trails have the potential to attract significantly more users.

Given these factors, what are the possible visitor scenarios? Predicting the economic impact of potential visitors (i.e. those who stay at least one night) can be done by applying similar logic to local users – though using different inputs. It seems reasonable to assume that the Canberra market will be a significant market for rail trail users, given the proximity of the rail-trails to Canberra, that residents of Canberra are positively inclined to cycling, and that the Canberra market has been identified by tourism organisations in Wagga Wagga as having huge potential and as a market worth considerable attention. It should also be noted that rail-trails provide different experiences to cycling in urbanised environments on sealed paths – it is reasonable to assume Canberra cyclists would enjoy the different experience. These assumptions make it reasonable to determine visitation from Canberra (using a different method to that adopted in Section 11.5.1). It is noted that the majority of current visitors to the region come from Regional NSW and Sydney – this is to be expected given the population sizes and proximity. Unfortunately, there is not good source information on visitors from these places to include them in any analysis. The potential in other markets (notably Sydney and Melbourne) for the rail-trails should not be discounted and will add significantly to the trails' benefits; unfortunately it is not possible to use these markets in the following analysis.

Applying the same process as was applied in Section 11.3 above yields the following tables.

Table 11.6: Potential Trail Usage scenarios by Canberra and District residents

(Population of the Canberra and district (City of Queanbeyan, (old) Shire of Yarrowlumla, Yass Valley Shire: 379,000)

Low	1%	3,790
Medium	2%	7,580
High	3%	11,370

The next step is to estimate total trip numbers. Table 11.7 provides three visitation scenarios.

Table 11.7: Potential total annual visits by Canberra and district residents

(Population of the Canberra and district area 379,000)

	Low	medium	High
Low (1 visit/yr)	3,790	7,580	11,370
Medium (2 visits/yr)	7,580	15,160	22,740
High (3 visits/yr)	11,370	22,740	34,110

In terms of expenditure, visiting trail users are spending $215.82/person/visit in the Clare Valley. The average length of stay is 2.2 days (giving a daily expenditure of $98.10). This daily figure is relatively consistent between studies undertaken on rail-trails in Australia and New Zealand (Beeton gives an average expenditure figure – over three trails – of $132/day while the users on the Otago Central Rail Trail spend $NZ92.80/day).

Using this figure in combination with visitation scenarios generated in Table 11.7 gives a range of expenditure estimates (Table 11.8).

Table 11.8: Potential Total Annual Expenditure by visitors from Canberra ***(low, medium and high refer to the use rates developed in tables 11.6 and 11.7 above)***

Trail usage	# of trips	# of visits	$/trip*	Total spend
Low	Low	3,790	215.82	$817,957
Low	Med	7,580	215.82	$1,635,916
Low	High	11,370	215.82	$2,453,873
Med	Low	7,580	215.82	$1,635,916
Med	Med	15,160	215.82	$3,271,831
Med	High	22,740	215.82	$4,907,746
High	Low	11,370	215.82	$2,453,873
High	Med	22,740	215.82	$4,907,746
High	High	34,110	215.82	$7,361,620

**based on an average stay of 2.2 days as per the Riesling Trail*

In order to simplify the number of outcomes, Table 11.9 presents three scenarios: low usage / low number of trips (ie. low/low), medium usage / medium number of trips (ie. medium/medium), and high usage / high number of trips (ie. high/high).

Table 11.9: Potential Total annual expenditure in the vicinity of the trail by visitors from Canberra

(low, medium and high refer to the use rates developed in tables 11.6 and 11.7 above)

Use Scenario	# of person visits	Total spent ($)
Low/low	3,790	$817,957
Medium /medium	15,160	$3,271,831
High / high	34,110	$7,361,620

What is the likely scenario for visitors? The low/low scenario (3,790 person visits/year) is a reasonable, if somewhat conservative, estimate particularly given that it focuses on the Canberra market and does not include (for data difficulties) any consideration of the trail attracting visitors from Regional NSW, Sydney and Victoria (the current major markets for the Riverina and the Snowy Mountains regions). The Riesling Trail achieves 5,000 visitors annually simply to use the trail, and another 6,000 visiting the Clare Valley use the trail while they are there. It is further from the main metropolitan markets of Sydney and Melbourne but still attracts some 30% of its users from these markets – people are prepared to travel to experience a high quality trail experience. Recently released tourism statistics show that 2005 domestic tourism expenditure increased over 2004 levels – people are increasingly prepared to travel within Australia. With good marketing, high levels of visitor numbers are achievable as the Bibbulmun Track has shown with its visitor numbers going from 10,000 to 137,000 in seven years.

11.6 Projected User Scenarios - Summary

With the right marketing, the trail will attract local users, day trippers and visitors. Under a relatively conservative scenario, the following outcomes are achievable:

- Significant local use – over 71,000 local users/year is a reasonable expectation. This will result in an economic injection of $102,000/year;
- Expansion of the existing day-tripper market to the region. A 1% increase in the day-tripper market will yield an injection of around $160,000/year. With a new significant recreation attraction, some day-trippers may stay overnight, generating a new income stream;
- Expansion of the existing overnight visitor market to the region. If the trails attract 5,000 overnight visitors/year, the economic injection is likely to be around $1 million. If the trails achieve significant market penetration into the Canberra market alone (a not unreasonable scenario), the likely economic injection to the region is an additional $817,000/year. It should be realised that such visitor numbers may not be achieved in the first year of operation. The Bibbulmun Track took seven years to reach its current figure of 137,000 from an initial base of 10,000.
- Given the success of the Bibbulmun Track and its marketing campaigns, there is no reason to suspect that visitor numbers will not reach these scenarios with the right marketing.
- The total injection of dollars into the local economies from local, day-trip and overnight visitors may be of the order of $1.079 million (under a range of conservative scenarios).

11.7 Overview of Benefits and Costs

Trail development brings with it a number of benefits and costs. The following section summarises the benefits and costs – it does not arrive at a definitive benefit-cost ratio or dollar figure as there are too many unknown and generally unquantifiable factors to include in any detail. Benefits have been discussed in detail in Section 7, while construction costs have been documented in Section 10.

The preceding parts of Section 11 have presented some use scenarios and consequent economic benefits directly from trail use.

11.7.1 Benefits

It is important to indicate those benefits that can be quantified – those that can reasonably have a dollar value put on them. The following is a summary of the benefits of the development of these particular trails.

Direct Economic benefits to the region

- Direct additional expenditure as a result of trail development in the region will be in the order of **$1.079 million/year.**
- In regional Victoria (a similar ratio is assumed for NSW), every $82,000 of expenditure yields an additional job. Rail-trail development will create **13 jobs/year.**

Health-related economic benefits to the wider economy

- Data from the USA indicates that every $1 of funds spent on recreational trails yield direct medical benefits of $2.94. This trail network will cost around $6 million – the health benefits of this investment have the potential to be substantial (descriptions of the economic-related health benefits that follow are not included in this particular benefit-cost ratio as they are from different sources – readers should not double count such benefits).
- The rail-trails will encourage people to exercise – the economic benefit to society of getting an inactive person to walk or cycle is between $5,000 and $7,000/year. The economic benefit to society of getting an active person to walk or cycle is between $850 and $2,550/year.
- Participation in trail activities can improve physical and mental health, assisting with disease prevention particularly cardiovascular, musculoskeletal, respiratory, nervous and endocrine systems as well as reducing obesity, hypertension, depression and anxiety. The obesity epidemic alone is now estimated to cost Australia $1.3 billion/year (Australian Bicycle Council). One heart attack is estimated to cost in the vicinity of $400,000 in direct and indirect costs. A cost-benefit analysis in Norway (Institute of Transport Economics 2002) assessed cycle network improvements that encouraged commuting and local exercise and costed their economic value to society. The study found that there was a significant reduction in severe diseases stemming from increased exercise activity on cycle networks. The costs savings to society from this reduction made up 50-66% of the total benefit of investment in cycle networks.
- Further development of the rail-trails as part of the urban cycle network of Wagga Wagga in particular will create a safe cycling environment. There have been cycle fatalities along the Forest Hill-Wagga Wagga stretch of the Sturt Highway. Potter Forbes and Aisbett have calculated the value of a statistical life year at $46,000 (for an amortised value of $1.1 million per life). Currently, senior RAAF personnel on the RAAF base do not encourage people to ride to work due to the danger on the highway.

Quantifiable Benefits to individual residents

There are a number of benefits that accrue to residents of the region from a rail-trail development over and above those that accrue to the regional economy (and therefore a select number of people) and to the wider economy (health benefits in particular).

- There are significant financial benefits for households who choose cycling over other forms of transport (notably a second car). Cycling for commuter purposes can avoid the need for a second car, saving between $5,000 and $16,000/year/household. Provision of a safe cycle option for commuting purposes may significantly reduce or completely obviate the need for a second car in a household. This may be critical for many of the RAAF base workers and workers at the four major enterprises in the Tumut-Tumbarumba region. Savings from one year alone would buy a number of bikes over a number of years.
- Medical research has shown that 1 hour of moderate exercise can add more than 1 extra hour of high quality life to an individual.
- Cycling and walking as recreation activities can be cheaper than alternative forms of exercise such as gym classes. Yearly memberships to gyms are around $600 in many instances – the cost of a good hybrid bike which has a life of more than one year.

Non-quantifiable benefits to the community and to individuals

There are a number of unquantifiable benefits to individuals and the community. These are listed here so that a complete picture of benefits can be considered when weighed up against project costs. It is difficult to cost them for a range of reasons.

- Cycle trails can lead to a reduction in traffic accidents (premature death is costed above) and an increased sense of security for those already riding.
- Cycle trails can lead to a decrease in travel time overall – if 25% of RAAF base personnel cycled to work (a not unreasonable figure given that 54% of Wagga Wagga residents consider themselves regular cyclists), 100 cars are removed from the road, increasing flow of traffic and reducing the likelihood of accidents.
- Trail activities facilitate participation and social interaction between a diversity of community members, age groups, individuals and families e.g. community walking groups, voluntary trail maintenance and conservation work.
- Trails can offer a wide range of opportunities to a diverse group of people. Depending upon design, trails can accommodate the elderly, people with disabilities or satisfy those seeking challenging adventures and a sense of achievement.
- Trails help to connect people and places and to develop community pride and help to preserve natural and cultural values. They can help build social capital.
- Trails create opportunities for the community to experience natural and cultural environments.
- Trails can protect the adjacent environments by localising impacts and facilitating management of visitation effects.

- Trails can provide educational and interpretive opportunities and increased environmental and cultural awareness and appreciation.
- Trails provide opportunities for community participation in conservation and revegetation work.
- Trails contribute to new business formation and business growth in an area – this is particularly important in communities that are struggling economically, with old industries and employers closing or moving and no new businesses opening up. There is a positive psychological impact.

11.7.2 Costs

It is important to indicate those costs that can be quantified – those that can reasonably have a dollar value put on them.

It is necessary to note that all public infrastructure projects have costs above their direct financial cost. They often create stress and concerns for those who will be negatively affected (or perceive they will be negatively affected). In many cases (and this is one of those), the costs are borne by a few, geographically concentrated people and the benefits are spread much more diversely.

The following is a summary of the costs of the development of these particular trails.

Direct Economic costs

- The Wagga Wagga to Tumbarumba Rail Trail will cost **$4,979,520** to construct.
- The Batlow to Tumut Rail Trail will cost **$929,980** to construct.
- Annual maintenance costs in the order of **$50,000 - $60,000/year** (based on work elsewhere rather than a detailed maintenance plan for the two trails).
- The Committee responsible for the trail may determine to hire a full-time trail manager (at a cost of **$80,000/year**). Recruitment of a trail manager may reduce some of the annual maintenance cost listed above.

Non-quantifiable costs to the community

- Trails development may in fact divide communities (as well as unite them) between those who will benefit and those who believe they will accrue the costs.

Non-quantifiable costs to individuals

- There may be stress-related health issues for adjoining landholders. These include hypertension, depression and anxiety caused by a number of factors. These issues may arise during construction and upon commencement of rail-trail operations.

Non-quantifiable costs of construction impacts

- There will be short-term impacts during construction. These are likely to include noise pollution (from rail removal in particular), and disturbance of livestock, landholders, farming practices and wildlife.

Other costs listed below are open to interpretation and are primarily related to the impacts on adjoining landholders. They have been discussed briefly in Section 8.

A submission was received by one farmer clearly articulating what he believed to be the financial burden – notably the loss of time through increased workload and the loss of production that would be caused by a rail-trail corridor through broad acre agricultural properties. As stated in Section 8.2, not all landholders are in agreement about the nature and extent of potential problems. Some landholders indicated that the concerns raised by other landholders are not of concern to them. It is not known how many farmers will be affected and consequently the costs of the issue along the entire corridors have not been considered.

Many of the costs raised in the submission will be addressed by good trail design and therefore have not been included in the following discussion – the costs of dealing with these issues have been included in the project construction costs.

Possible economic costs to adjoining landholders

- Interruptions to efficient farm management practices including checking and managing straying stock, negative impacts on livestock, and interruption to chemical application and consequent loss of efficiency.
- Possible increased insurance premiums due to perceived higher risks of fire, theft and public liability (such increases depends on landowner and insurance assessment of risk).
- Higher risk of disease transfer.
- The possible provision of additional watering points in divided paddocks.
- Some reduction in land values due to rail-trail impacts on farm management.

Opportunity Costs

In economic analysis, it is important to consider the opportunity cost of investment – the cost (foregone opportunity) of money invested in one project rather than in another. This was raised at various community meetings – some people indicated that they would rather see this money spent on hospitals or roads in their community. The reality is that much of the money that will be spent on this project will be sourced from specific grants for tourism projects. It will not be available for other types of projects – there is, in a sense, limited opportunity cost for funds.

SECTION 12 – FEASIBILITY STATEMENT

12.1 The Recommendation

Following due consideration of all issues pertaining to the development of trails within the former railway corridors, and taking into account the views of *all* stakeholders consulted, this Study recommends that both railway corridors be the subject of rail-trail conversions, *subject to a number of conditions being met*.

These conditions should be considered an integral part of the 'package', and this must be recognised by the Riverina Regional Development Board, the Riverina Highlands Rail Trails Committee, all local governments involved and other key stakeholders when considering whether or not to move forward with this recommendation.

The conditions upon which both rail-trail conversions should proceed are:

1. A Committee of Management, comprising representatives of each local government, State Forests, Lands Department, current members of the Riverina Highlands Rail Trails Committee ***and adjoining landowners***, be formed to guide the ongoing planning, design and construction, management and maintenance of the proposed rail trails and the former railway corridors.
2. Detailed trail design development plans for each rail-trail be prepared, which will involve a thorough examination of each corridor, the preparation of detailed works lists and cost estimates, as well as detailed one-on-one discussions on-site with all affected adjoining landowners to ascertain their individual concerns and to work out together solutions to each issue raised.
3. The preparation of community-driven Corridor Management Plans before construction, including a comprehensive maintenance program for each trail and corridor;
4. The preparation of Bush Fire Risk Management Plans for each corridor;
5. The preparation of a maintenance program, as part of the Corridor Management Plan, detailing the ongoing maintenance of the trails;
6. The Committee of Management (CoM) for the rail-trails and corridors, together with several additional representatives of the adjoining landowners, work closely with CoM's of other rail-trails and assemble information pertinent to the development of the rail-trails and on-going management and maintenance issues. In order to become more familiar with other rail-trails (such as the Murray to the Mountains and the Lilydale to Warburton) and to gain awareness of issues and solutions, it is recommended that the CoM hire a bus and visit those other trails and meet on-site with the CoM's and adjoining landowners;
7. A comprehensive program of one-on-one in the field consultation with affected landowners, to resolve *together* all pertinent issues;
8. The CoM give its support for the relocation of side fences (where they exist) and/or the erection of new fences (should they be required) to create a narrower trail corridor, allowing adjoining farmers to enjoy a long-term license of the 'surplus' corridor land;
9. The cost of fencing and (reasonable) privacy screening are not to be the sole responsibility of landowners. New, renovated and relocated fencing costs

(where required by landowners) to be shared between the trail proponent and adjoining landowners;

10. Grazing and various other existing uses of the corridor to be considered on their merits, and suitable solutions found to enable the activity to continue where reasonably achievable;
11. The trail to be located within the corridor to achieve the lowest impact on privacy (in proximity to houses) even if this means going off the formation itself (and using adjoining road reserves);
12. Council/State agencies are to assume liability responsibility for trail users and are to take all actions possible to mitigate potential claims against landowners and neighbours;
13. A policy decision is to be implemented to make the majority of each trail 'no dogs' – though the section between Wagga Wagga and Forest Hill and the section between Tumut and Gilmore could be declared 'dogs on leads';
14. 'Wide' sections of each railway corridor (such as at former station and siding sites) to be available for long term licence arrangements where appropriate with adjoining landowners, or others, with the trail to be located along one 'edge';
15. A trail-user monitoring / feedback program is to be established, whereby the numbers of different trail users are recorded and the views of trail users are sought so that suggestions for improvements can be acted upon; and
16. The Committee of Management give consideration to the appointment of a trail manager so that landowners have a direct point of contact for issue resolution. Further, a survey of neighbours is to be undertaken following development of the initial stages.

Further, it is strongly recommended that trail development be a staged process, with the first stage (Stage 1a) being that between the Equex Centre in Wagga Wagga and Forest Hill. Stage 1b should be the section between the Wagga Wagga station and the Equex Centre, Both of these sections should be developed to a sealed standard, preferably with a red hotmix or asphalt. At the same time, or shortly thereafter, the recommended next project should be the entire Tumut to Batlow project.

Following construction of these stages in the trail development process, *a short pause should be instigated* to enable a thorough assessment of the use and success (or otherwise) of the trails, and to allow time for surveys of trail users and, importantly, neighbouring landowners.

Providing feedback from trail users is positive, usage levels are strong and any issues raised by neighbouring landowners can be resolved the conversion program should then proceed through the remaining stages.

12.2 Factors Supporting the Decision

In formulating a decision about the future use of the two former railway corridors due consideration has been given to not only the concerns and issues raised by neighbouring landowners, but also the *unique potential* of these rail corridors.

From a trail perspective, the former railway corridors are very attractive for trail development. Indeed, they both offer an uncommon combination of positive factors.

When compared to numerous other disused railway lines (both those which have been converted and those which have not) these are *'top drawer'* opportunities. In a number of key areas they could be said to be 'better' than existing (successful) trails such as the Great Southern Rail Trail (Vic), the Lilydale to Warburton Rail Trail (Vic) and the Railway Reserves Heritage Trail (WA). Why? Because:

- They are situated in some of the most scenic landscapes in Australia, especially the Tumut to Batlow line, with wonderful vistas over mountains, creeks, forests, variety of farmland and of course the Gilmore Valley;
- The Gilmore Valley offers a spectacularly beautiful trail experience and, coupled with the ideal distance between Batlow and Tumut, could become the best rail trail experience in Australia;
- They are situated in close proximity to the sizeable population of Wagga Wagga, and the popular tourist towns of Tumut and Tumbarumba, and are easily accessible;
- They are located within an already popular cycle touring locality and are within easy reach of the ACT and its population;
- The corridors pass through interesting (and regularly spaced) towns, and together with other possible trailheads at former station areas, a variety of rides/walks of different lengths are possible;
- The trails do not have complicated routes through and getting out of urban areas, with numerous, difficult crossings of busy highways;
- The major elements of the railway infrastructure remain (the formation, cuttings, embankments and most of the bridges and culverts);
- The Downfall is one of the most amazing feats of railway engineering in the country, and this section of potential rail trail would undoubtedly be a major attraction in its own right;
- The surrounding farmland and various land uses (wineries, orchards, etc), the natural qualities of the region, the history of construction of the railways and a hosts of other interesting subjects results in a huge potential for interpretation along the rail-trails – adding to and enriching the experience of trail users;
- Despite the passage of time, the continuity of the former railway corridors is excellent – and the occasional discontinuities (such as that portion of the Wagga Wagga to Tumbarumba corridor 'consumed' by the RAAF base and airport) can be circumnavigated; and
- The corridors provide for an excellent length ride and there is great flexibility of use options.

SECTION 13 – AN IMPLEMENTATION PROGRAM

13.1 Who Should Drive the Project?

The Rail Trail development program is a substantial – and complex – project. There are many stakeholders, both private and public, all with a strong interest in this project – some are already involved while some will need to be involved in the future.

The Riverina Highlands Rail Trails Committee (a sub-committee of the Riverina Regional Development Board) has been the primary driver of this phase of work; it is however important to consider whether it is appropriate for the Committee to continue to be the driving force into the next stages of the project. The Committee has taken a pro-active role in facilitating this Feasibility Study and should be commended for being prepared to carry primary responsibility through this process.

There are a number of tasks that need completion at this early stage to ensure the project's success. These include:

- Preparation of more detailed trail development plans (see 13.2 below);
- Preparation of Corridor Management Plans (detailed in Section 15) which addresses an array of issues; and
- Sourcing funds for future development of the rail-trails (Section 16 has a comprehensive list of funding sources). Any funding should ideally include money to fund a project officer to support the Committee in implementing the development of the rail-trails.

These primary tasks are critical to the project's eventual success and will require human and financial resources.

It is therefore recommended that the Riverina Highlands Rail Trails Committee (through the Riverina Regional Development Board) continue to take the lead role in the next phase of the project, working in conjunction with relevant State Government agencies and Local Governments (already represented) to implement the development of the rail-trails. Following consideration of this Feasibility Study, the Committee will have developed a more detailed understanding of many of the issues and opportunities, and is ideally placed to continue to facilitate future stages.

13.2 Planning Stages

13.2.1 Trail Development Planning

This project is a feasibility study examining the broad feasibility of the rail-trails. Included in this are indicative costs and possible solutions. It does not, however, provide detailed trail development planning that seeks out solutions to all specific issues, clearly articulates design solutions and provides detailed costs estimates and works lists.

With respect to individual trail planning, there are two basic elements:

- Individual Trail Feasibility Study – refines potential trail routes; identifies issues/challenges to trail development; identifies the possible market for the trail; broadly identifies costs; provides feasibility statement on the practicalities of developing the trail; and

- Trail Development Plan – identifies precise route of proposed trail; identifies construction techniques and materials; provides reliable costs estimates and detailed works lists; identifies signage requirements and costs; provides trail inspection and maintenance schedules.

The Riverina Highlands Rail Trails project is at the "feasibility" stage of the trail planning and development spectrum. If proven feasible, further detailed trail planning will be required.

Trail construction can then begin. This process ensures a maximum return on public (and private) investment in trail development work. Far too often, people leap to construct trails without any idea of who uses them, why, when, how much it is going to cost, how to market a trail etc. The result is often trails that are underused and eventually "return to the bush".

The preparation of detailed trail development plans will deliver high quality, locally focussed and well managed and maintained trails for use by residents and visitors. The approach has been recognised in North America (through work by the well-respected Rails-to-Trails Conservancy) and Western Australia (through its trail funding under the Lotterywest program overseen by the Department of Sport and Recreation) as one that ensures that trails are well designed and the trail manager will maximise its return on the investment in a trail.

To go forward from the Feasibility Study to construction leaves out a number of critical steps and flies in the face of what is acknowledged in North America and is emerging in Australia as good trail planning and development which gives a better chance of providing a significant return on investment.

Table 13.1 sets out the likely components and costs of a trail development plan for this project (and includes indicative costs for a number of other necessary work).

Table 13.1 Costs of Trail Development Plan

Component	Detail	Time	Costs
Preliminaries / preparation	o Details / search of adjoining landowners o Arrangements with farmers o Other logistics	5 days	4,000
Fieldwork – detailed trail traversing	o 130km + 32km = say, 160km o 8km per day = 20 days x 2 people o Contingency days	40 days 2 days x 2 people	32,000 3,200
Revegetation survey	o Fieldwork 3 days @ 700/day o Report 3 days @ $700/day o Expenses	6 days	5,000
Additional consultation with key stakeholders	o Allow 3 days x 2 people	6 days	4,800
Preparation of report	o Works lists and cost estimates	15 days	12,000
Bridge assessments	o 54 bridges o 10 days (incl. travel) @ $1,000/day o Report (allow 6 at $900) o Expenses		15,900
Mapping; drawings; graphics		80 hours	8,000
Permits	o $250 x 4 people		1,000
Expenses	o Air fares; car rental; accommodation; food; report and plan printing, etc		10,000
TOTAL	**TRAIL DEVELOPMENT PLAN**		**95,900**
Helicopter GPS – scan the Corridor	o Quote obtained from NSW based GyroVision		18,300
Business planning	o Estimate only		20,000
Corridor Management Plans	o Estimate only		20,000
Corridor Fire Plans	o Estimate only		25,000
Corridor Maintenance Plans	o Estimate only		20,000

13.2.2 Business Planning

Business planning is crucial for every organisation and major project such as these rail-trails. A Business Plan encourages forward planning and helps focus the activities of an organisation. The Victorian Government's Guide for a prospective Committee of Management includes a high level of direction on business planning. It sets out a number of questions to be answered as part of the Business Planning process. These are:

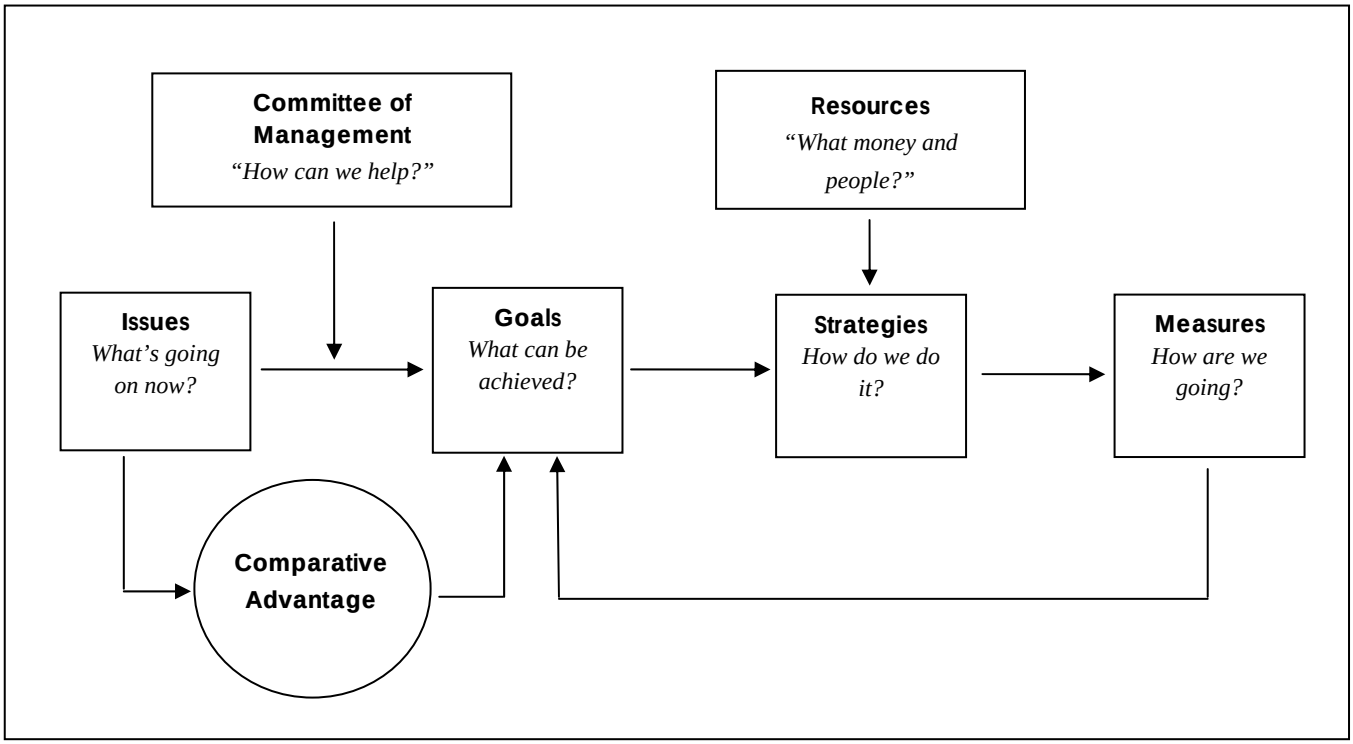
- What is the vision for the rail-trail?
- What services will be supplied?
- What are the expected visitor/use numbers?
- Is the demand expected to change in the future?
- What are the current assets and what repair/maintenance is required?
- What is the nature, extent, age and estimated replacement value of these assets?
- What additional developments/works are required in the future for the development of the rail trail?
- What is the proposed staging of development?
- What are the Committee's financial obligations in the future with development and administration of the Reserve?
- Where will the necessary labour come from and at what expense?
- What funding sources will be available i.e. grants, fundraising, sponsorship, donations, fees rent?
- Where are the shortfalls in this plan and what strategies are needed to address these?

The Guidelines set out an 8 stage process:

- Stage 1 – Define the business
- Stage 2 – Establish objectives
- Stage 3 – Clients needs analysis
- Stage 4 – Establish a financial and asset statement
- Stage 5 – Targets and outcomes
- Stage 6 – Performance Measures
- Stage 7 – Endorsement and implementation
- Stage 8 – Monitor and review

It is a comprehensive statement.

For a different level of detail, the following simple flow chart helps explain the necessary components of the development of a business plan.



Key tasks that need to be asked in undertaking the work in the flow chart include:

- Development of a specific set of goals for the permanent Committee of Management to achieve;
- The identification of necessary skills for execution of Business Plan and the identification of potential members; and
- The development of strategies to achieve the identified goals, specifically:
  - Incorporate capital requirements for development of trail and attractions;
  - Identify capital sources and processes to achieve funding;
  - Incorporate management and maintenance regime into financial model;
  - Prepare operational model (revenues and costs) for Business Plan;
  - Prepare outline marketing plan for both trails; and
  - Prepare implementation plan for Committee of Management.

13.2.3 Fire Management Planning

This has emerged as a critical issue with concerns being expressed by both landholders and the Rural Fire Service. Section 5.4.3 outlines discussions (including discussion of possible management responses) with the Rural Fire Service. It is of major importance to develop a Bush Fire Risk Management Plan early in the planning process in consultation with the Rural Fire Service. This is an issue with many rail-trails (and in fact with any activity that takes people out into the bush in significant numbers). It has been successfully tackled elsewhere.

For example, the Lilydale to Warburton Trail recently developed a Wildfire Risk Management Plan. The Plan includes a number of objectives and relevant actions. The objectives are:

- Providing a safe recreation trail for walkers, cyclists and horse riding;
- Providing a safe access onto and along the trail for all emergency vehicles;
- Minimising the risks of fires spreading from or onto the rail trail; and
- Developing annual maintenance works and maintenance programs (with an accent on fire hazard reduction).

Preparation of a Bush Fire Risk Management Plan is costed above in Table 13.1 as part of the initial planning package before trail implementation. The Rural Fire Service provides assistance on a cost-recovery basis to authorities to prepare fire management plans – it is recommended that this service be used. The formal presence of Rural Fire Service representatives on any ongoing management structure would also be a positive step.

Contents of a Typical Bush Fire Risk Management Plan:

The structure of the Bush Fire Risk Management Plan (BFRMP) will generally comprise the following sections:

- Preliminary pages – Authorisation page, Executive Summary, Glossary.
- **1. Introduction** – Sets out the context. The bulk of this information will be provided to the committee, and will most likely be incorporated into a background document for reference, with only the most pertinent facts included in the actual BFRMP.
- **2. Risk identification** – Assets and hazards, which will most likely be captured by way of maps and data layers. The amount of text included in the actual BFRMP will be minimised, and the related collection of data informing this section will be documented as an appendix, to streamline the BFRMP itself whilst still retaining all relevant information for audit purposes.
- **3. Risk assessment** – Minimal description of key risk areas. As for section 2, all related data collected and processes undertaken to complete the risk register will be documented and included as an appendix.
- **4. Risk treatment** – Local works program to be identified (what, how, when, where and who). The resulting table will be included in the BFRMP, with specific agency/land manager Annual Schedules of Works, and all background information included as appendices.
- **5. Monitor** –Table of State-wide performance measures.
- **6. Appendices**

13.3 Trail Construction Stages

Often, in trail projects, development can be staged so that parts of trails are developed in line with available funding sources. It is simply not possible to open the full length of both trails simultaneously as significant physical, financial, community and institutional work needs to be undertaken. This is the case in many rail-trails (and indeed many recreational trails) around Australia. It has not detracted from their utility or the enjoyment of them by users; however there is a need to be conscious of how stages are marketed (as indicated in Section 2.5). Promotional material needs to clearly articulate what sections are open and what this means for users.

The Equex Centre would make a suitable trailhead, from which paths/trails would head in all directions including to the residential areas around Lake Albert, a direct link into Wagga Wagga railway station and to the Murrumbidgee River following the recreational trail along the river.

A number of factors have been considered in recommending stages of construction. These include costs, likely user numbers and sources, user experience and landholder support/opposition.

The staging of trail development suggested (Table 13.2) should not be taken as definitive, but rather as a steady course towards achieving the objectives. If the Committee were to secure a major grant from one of the programs listed in Section 16, more physical trail development work could be bought forward. It is important that all the sections (in the Wagga Wagga to Tumbarumba corridor) be flagged for future development to ensure there is no community misunderstanding about the intention to ultimately develop and complete the rail-trail.

The obvious first stage for development on the Wagga Wagga to Tumbarumba corridor is the section from Wagga out to Forest Hill, which will provide a safe commuting path for personnel at the RAAF base.

Table 13.2 Possible staging of trails development

Stage	Section	Comment
1	Equex Centre to Forest Hill	This section of the railway corridor is close Wagga Wagga. Its location will appeal to the greatest amount of local users and user groups, and for this reason should be sealed. This section has an intact corridor, and would appear to have fewer issues relating to adjoining landowners. The construction primarily involves clearing of surface vegetation, installation of base course and topping for the trail surface, renovation and/or installation of fences, and the construction of trail-head facilities. The major cost in this section is primarily for a hot-mix surface – this cost is offset by the potential very high commuter and other local use.
2	Wagga Wagga Station to Equex Centre	This section of the railway corridor is within the City of Wagga Wagga. It is part of providing better links from the trailhead at the Equex Centre to the CBD, building the user numbers (local and commuter). It should be developed as an extension of the Wagga Wagga urban cycleway network. Its location will appeal to the greatest amount of local users and user groups, and for this reason should be sealed. The construction primarily involves clearing of surface vegetation, installation of base course and topping for the trail surface, and renovation and/or installation of fences. The major cost in this section is primarily for a hot-mix surface – this cost is offset by the potential very high commuter and other local use.
3	Entire Batlow to Tumut line	There are no natural staging points in the construction of this trail (e.g. a town or village). It needs to be done as one stage, though there could be a trailhead developed on the site of the former Wereboldera Station. Its primary value is as a tourist attraction (rather than local and commuting use). Because it should be built in one stage, it is a relatively high cost project.

4	Tumbarumba to Rosewood	This section of the railway corridor is closest to and within Tumbarumba township. Early construction builds on the desire of the Tumbarumba Shire Council to proceed and provides a very good tourist resource in particular, located close to a major town on the route. This section is picturesque, contains historic railway artefacts, and would appear to have fewer issues relating to adjoining landowners. In the broader analysis of user demand, this section is likely to rate lower than the Batlow to Tumut rail-trail hence its placement in the staging order. It is one of the lower cost sections.
5	Rosewood to Umbango	Includes the spectacular and historic “Downfall”, which would be a major drawcard. Is located through land that is predominantly State Forest, providing few adjoining landowner issues. There are supportive adjoining landowners. It strengthens the economic base of Rosewood, providing a boost for the local businesses.
6	Umbango to Humula	Humula Village is generally supportive, and trail would boost local businesses (including accommodation options). There are supportive adjoining landowners. This section is picturesque and contains historic railway artefacts.
7	Humula to Tarcutta	Mix of landowner support and landowner opposition. There is significant organised landowner opposition to the trail through this corridor (although there is also considerable support). The strength of landowner support is significant through this section.
8	Forest Hill to Ladysmith	Arguments have been put that this should be a high priority section. These include obvious tourism benefits, flow-on effects to the development of Ladysmith Village (and the location of existing services in Ladysmith), its relatively low costs and distance, the provision of

		tourist access to the trike operation at Ladysmith, and the potential use of the section by RAAF base personnel for training and recreation. As with some other sections, there is significant organised landowner opposition to the trail through this corridor (although there is also support for development). Probably not as picturesque as other sections.
9	Ladysmith to Tarcutta	There is significant organised landowner opposition to the trail through this corridor. Its low ranking in implementation is primarily due to this fact. Once the rest of the rail-trail is functioning effectively and without creating the problems many farmers believe will happen, opposition is likely to be reduced (though it is unlikely it will ever completely be removed). There is a significant potential use of the section by the Borambola Sport and Recreation Centre. Easily accessible from the Hume Highway and Tarcutta, potential major trailhead locations.

Each of the early stages (1, 2 and 3) must be a full implementation project, including trail development to its ultimate standard and quality (road crossings, trail surface, corridor enhancements, interpretation and other signage, etc). Use can be monitored for subsequent stages and it may be necessary to upgrade the proposed works (primarily surfaces) if uses on the more "remote" stages are significantly greater than expected.

In undertaking implementation, the Committee needs to be conscious of the experience of others. The following two sections provide insight into lessons gleaned from elsewhere (notably America) – the first on rail-trails in particular, and the second on developing mountain bike tourism.

13.4 Strategies for Success

A rail-trail development is a major undertaking with the potential to provide significant benefits to the host communities. It is appropriate to consider the secrets to the success of a good trail development process that delivers an excellent rail-trail.

The Rail-to-Trails Conservancy in the USA, now with over 15 years experience, 12,000 miles of rail-trail, and nearly 1200 rail-trail conversions, offers valuable advice (Rails to Trails Conservancy website).

Establishing good communication and an effective working relationship between an agency, a community group, adjacent landowners, and other community members is not always easy. Regardless of whether trail proponents have encountered minimal opposition or are embroiled in a highly controversial project, the following strategies can help get a project moving in a positive direction. It is never too late to reach out to opponents, work towards compromises and build support in the community. Some the work below has already been undertaken – it is always good to be reminded about what needs to be done on an ongoing basis.

- **Be the first to contact adjacent landowners**. Remember that no one likes surprises, especially when it affects their home or land. Individuals who hear about the project from an already disgruntled neighbour or a negative letter to the editor in a local newspaper are more likely to become opponents themselves. Notify landowners as early as possible in the process and ask for comments. Make personal contact with those who have already responded negatively to the trail proposal.
- **Provide a designated contact person to respond quickly and accurately to suggestions, concerns and other comments.** List his/her name, address, and phone in all trail-related information. Respond quickly to any inaccurate information before it becomes widely disseminated. Noteworthy events such as corridor acquisition or groundbreaking ceremonies provide an excellent opportunity to make contact with the community, present accurate information and generate positive media attention.
- **Create opportunities for one-on-one communication.** A low-key setting such as a trail walk or casual open house will allow undecided members of the community to ask individual questions they may be uncomfortable asking in a large group meeting. Door-to-door meetings are an extremely effective way to reach out to the community. Be prepared to sit down with people and listen to their opinions. An individual may just need a few specific questions answered before becoming a trail booster.
- **Give landowners a role in the project.** Problems may occur if landowners adjacent to the proposed trail feel that they have no voice in the process. Invite them to serve on a trail advisory committee where they can have direct input on the project. Suggest an Adopt-a-Trail program so that landowners can "adopt" the portion of the trail adjacent to their property.
- **Know your facts and prepare a management plan.** Expect the community to have serious questions about the project in areas ranging from crime and property values to design, cost, and management. Be prepared to answer these questions but if you can't, let them know what is being done to find an answer and when that information will become available.
- **Arrange a tour of an established rail-trail in your area and/or invite other communities to speak about their trails.** Hearing about other communities' real trail experience can allay the concerns of future trail neighbours. If a visit is not possible, set up a computer for a "virtual" tour of a rail-trail that has an internet web site.
- **Look for built-in constituencies among adjacent landowners.** Many of these individuals will be members of equestrian, running, bicycling or other trail user groups that would gladly work towards a trail conversion. This will broaden your base of support and ensure your trail plan accommodates all possible users.
- **After support for your project begins to grow, hold a public meeting to answer any lingering questions and to present the plans for the trail.** Provide index cards and pens for those attending to note questions. Near the end of the meeting collect the cards so that the questions can be read aloud by one person and answered by meeting organizers.

- **Construct a "demonstration" section of trail.** There is no requirement that a trail be completed in one piece. Instead, you can plan to build the trail in two or more phases. Many fears arise from not knowing what to expect from a rail-trail and a "demonstration" trail allows concerned citizens to see for themselves how a trail would look and how it is managed.
- **Bring in a third party to help build consensus.** A third party can help identify the concerns of trail opponents and supporters. Involve someone who is respected and trusted by both sides.
- **If faced with a lawsuit, continue work in the areas of planning, design, funding, and possibly construction of your trail.** Continue to reach out to the community and build support for the project. If you decide it is not practical to fight the lawsuit, is there another solution? A bypass or a land swap might be an effective compromise. Don't let a dispute over one section de-rail the entire project.
- **If encountering illegal activity, don't become confrontational yourself.** Leave matters to the appropriate law enforcement officials. Write a letter to the editor of your local newspaper to make the community aware of what has happened. Make it clear that any illegal behaviour is inexcusable and is not in keeping with the spirit of the project.
- **Above all else, be positive and creative."**

Some of these secrets have guided the consultants (and the Committee) in the work to date. They all remain relevant in the next stages of this project.

13.5 Mountain Bike Tourism

The International Mountain Biking Association has developed fifteen tips on developing mountain biking tourism, which are well worth remembering – particularly as these trails will appeal to those looking for off-road touring experiences. Not all of these are relevant to this project – they are included for completeness.

1. Create excellent trail maps - maps that clearly show the best trails for mountain biking. Elevation profile maps and concise ride descriptions are also helpful, as are estimates of ride difficulty, descriptions of ride features, and seasonal (weather) and safety considerations. Maps can include pictures of trailheads and parking information. Map revenues can help fund trail and bicycling improvements.
2. Identify and promote trails for cyclists of all abilities: Lightly travelled paved roads from towns and cities to trailheads; dirt roads and wide dirt paths that are easy to ride; twisting forest paths and narrow, challenging single Trail; plus downhill runs (if available). Being able to provide all of these experiences, in abundance, will help establish your area as a first-rate mountain biking destination. Advertise a whole system of trails, not just one.
3. Recommended rides should pass by sites with historical interest and beautiful views.
4. Consider offering hotel-to-hotel or hut-to-hut riding possibilities. Hut-to-hut rides have become popular in Colorado and elsewhere. Inn-to-inn (or hotel to hotel) rides are especially appealing to mountain bikers because they allow cyclists to ride light and free.

5. Commission photographers to take photos of your riding area, which can be sent as slides or digital files to magazines and newspapers. These photos will serve as a tremendous magnet. Moab (Utah), Fruita (Colorado) and Slatyfork (West Virginia) in the USA have built stellar images as mountain bike destinations using just a few rolls of excellent mountain bike photos. These photos should also be used in widely distributed mountain bike tourism brochures and booklets.
6. Offer FREE media mountain bike trips when you're ready - not only to cycling magazine editors but to general magazine editors and even daily newspaper writers.
7. Design, produce and post accurate trail signs to supplement the trail signs and markers that are already in place. No one likes sign pollution, but simple attractive markers that direct mountain bikers will be well received. This effort needs to be coordinated with other trail groups.
8. Develop durable, sustainable trails.
9. Offer other recreational activities and vacation elements that appeal to mountain bikers. Hiking, climbing, surfing and other tourism activities make an area attractive to visitors. Mountain bikers love to eat - and need to eat following a long day in the saddle - so abundant restaurant options are always appreciated. Mountain bikers will appreciate lists of restaurants that offer good food in a comfortable, casual atmosphere.
10. Develop package deals that appeal to mountain bikers by combining lodging, meals and bicycle shop support.
11. Build community support for bicycle tourism by emphasizing the economic benefits. Cyclists spend money on gas, food, lodging, souvenirs, etc. "If your community is not involved, you're sunk. Visitors' first stop is often the gas station, grocery store or welcome centre. If the person there is not inviting to mountain biking, the next bicycling place may be just a short drive further." -- *Troy Rarick, Fruita, Colorado*.
12. Build the sport by facilitating the presence of quality retail bicycle shops. Shops can have a guest host whose entire job is to talk about where to ride, camp, be responsible, etc.
13. Single Trail is essential.
14. Differentiate bicycling from motorcycling. Some people don't understand the difference.
15. Quantify everything - numbers before trails, numbers after trails, etc.

SECTION 14 – FUTURE MANAGEMENT

14.1 The Legislative Process in Other Jurisdictions

Section 2.5 explored in detail different legislative and management models operating for rail-trails across Australia. It noted that Victoria has led the way in rail-trail development and consequently has the most mature process. To reiterate, a rail reserve is gazetted under the Crown Land (Reserves) Act as a public recreation reserve. Gazettal allows for the setting up of a formal Committee of Management which has vested management responsibilities for the corridor. Under the guidelines, the Committee of Management has relevant Local Governments and individual people selected for appointment by the relevant Minister. There is a uniform process for establishing community representation on the Committees of Management. This involves public invitation for Expressions of Interest from the community. The State Government, in consultation with relevant Local Governments, then selects members depending on skill sets required. The term of appointment is for three years. The Minister is also able to appoint nominees of various interest groups that may use a reserve or have an interest in its proper management.

In South Australia trail management is governed by a partnership between the Office of Recreation and Sport (an agency of the SA Government) and a community organisation and/or a Council. Land on the rail corridors is granted to the Office of Recreation and Sport by other agencies (notably Transport SA) to facilitate rail-trail development. In Western Australia, the only notable rail-trail is managed by the relevant Local Government.

14.2 The Legislative and Administrative Process in NSW

The proposals being considered in this project would be the first formal rail-trails in NSW on publicly owned railway land should they proceed. This therefore represents a clean sheet – there is no legislative or administrative process to follow. As stated in Section 2.3, land in both rail corridors is still owned by the State Government. The lines are currently managed by the Australian Rail Track Corporation (ARTC) under a lease arrangement with the NSW Government (specifically the NSW Government owned rail entities, the State Rail Authority of NSW and the Rail Infrastructure Corporation). The two corridors being examined are part of the disused network, which is leased on a rolling 12 month basis, with the capacity to rescind the leases on a 3 monthly basis.

The logical approach to allow the project to proceed further is one based on the Victorian model where the relevant department (in this case, the Department of Lands) takes over the lease of the disused rail corridors from the ARTC. This could be done in stages to coincide with recommended staged development (Section 13); alternatively, it could be done in one stage to ensure a more focussed management of the corridors. This would allow the new land manager to make clear decisions regarding the development of the rail-trails, including the removal and possible sale of rail line on the corridor. It would also provide certainty for the project and affected landholders. If only sections are transferred, there is less certainty. It is understood that the corridors would remain classified as disused corridors. This presents a degree of uncertainty for any Committee of Management as they may be required to reinstate rail track in the future. This matter needs to be resolved. In Victoria, this uncertainty is covered under

the legislative process – the gazettal of land as a public recreation reserve removes any future liability on the Committee of Management to reinstate rail infrastructure. A rail-trail can always be reinstated as a rail track, but the Committee of Management is not liable for these costs.

The legislative process is not clear; it may simply be a matter of appropriate discussions between the Minister for Lands and the Minister for Transport to enable the subject railway corridors to be converted to Crown Land that could then be managed by a suitable trustee(s). At this point in time, it appears to be a matter of lease transfer from the ARTC to the Department of Lands. The issue of a suitable trustee needs to be resolved to the satisfaction of the State Government.

14.3 Management Models

14.3.1 What Model?

Once the lease situation is resolved (or in conjunction with resolving the lease issue), an appropriate management structure for the management of the Crown land reserve (if this is its status) needs to be developed. The model adopted in Victoria (and in its essence copied by the other States) of a Committee of Management involving Local Government representatives and community representatives is the most logical approach to adopt. While there are two separate two rail-trails, the project has been promoted as a package – the Riverina Highlands Rail Trails. It seems logical at this early stage (and given the recommended implementation stages) that the rail-trails continue to be viewed as one project and the two corridors managed jointly (sub-committees could be appointed for each trail but with no formal power). In time, formal management may pass to two separate committees.

The Committee of Management would be an Incorporated Association and could act as the trustee and/or manager of the rail corridors. Incorporated Committees allow lawsuits, contracts, borrowings and tenancy agreements in the name of the Committee providing security and greater continuity. Sub-committees would have no power in themselves; recommendations would need to be bought to the full Committee.

14.3.2 Membership of a Committee of Management

The process for deciding committee membership needs to be determined. As stated above, the Victorian model with representatives of Local Government and the community is appropriate with additional representation from the State Government (perhaps via the Department of Lands and the Riverina Regional Development Board). In the interim, it is suggested that the Riverina Highlands Rail Trails Committee continue to oversee the process.

Community membership may be sought in a number of ways. In the case if the Riesling Trail in South Australia, membership is invited through public notice and is determined at an AGM. In the Victorian model, the State Government, in conjunction with the Local Governments, select members from the Expression of Interest process. A third option, often used in partnership-based natural resource management organisations, uses groups rather than individuals as community representatives. In the natural resources management model, the determination of the groups (such as conservation groups, landholder groups, recreation groups) to be represented is made by an interim committee (in this case, it could be the Riverina Highlands Rail Trails Committee) and selected groups are invited to nominate their representatives to the permanent Committee.

As a starting point, it is recommended that the Committee include representation from adjoining landholders, user groups, business and tourist operators, the existing rail-trail committee and individuals with unique skill sets (focussed on project initiation rather than ongoing management), the State Government and relevant Local Governments.

Skill sets that would be useful for the Committee to have as a whole include:

- Leadership skills – critical to hold the Committee together, to inspire and motivate, to advocate to a wider audience and to maintain focus on a long term vision.
- Community skills – the skills to motivate community and volunteer efforts, the skills to "build bridges" with those most opposed to the rail-trails.
- Business skills – skills to understand and tap into locally based businesses – the capacity to communicate to businesses in ways that garner their support.
- Entrepreneurial skills – a business-like approach to running a rail-trail is critical. Unfortunately, the rail-trail world is full of well-meaning people with little idea of how to run a business.
- Administrative skills – expertise and knowledge of government grants, and how to apply for them. General administration skills are also critical.
- Environmental/scientific skills – understanding of native flora and fauna and wider environmental issues. The ability to communicate these to a wider audience is desirable.
- Engineering skills – the capacity to understand design and construction of all manner of trail infrastructure.
- Governmental skills – the ability to liaise with and understand Government departments and politicians.
- Users – it is essential that the Committee understand the needs and requirements of various targeted user groups.

These 'selection criteria' needs to be considered in selecting Committee members.

14.3.3 What Would a Committee of Management Do?

Under Victorian legislation, Committees of Management have a number of powers and duties (these are outlined in Section 2.5.1). It is assumed that NSW legislation governing any committees appointed to manage Crown reserves have similar duties.

In Victoria, Committees of Management have traditionally absorbed the responsibility for pursuing the development of a rail-trail including the preparation of concept plans and business plans. These are appropriate tasks for any new Committee of Management. In the case of the Murray to the Mountains Rail Trail, the Committee has responsibility for:

- Day to day management and ongoing development of the trail;
- Preparation and implementation of a business plan;
- Development and achievement of trail objectives;
- Developing future budgets; and
- Overseeing activities and ensuring active participation of two sub-committees.

The Committee of Management's operations could be initially funded through the proceeds of the sale of the rail infrastructure recovered (rails, timber etc). Such proceeds could also be used to construct the rail trails to an agreed standard.

14.3.4 Sub-Committees

As stated above, two sub-committees could be set up to oversee the detailed development of the two trails. Alternatively, in the short-term, sub-committees could be set up with a geographic focus for various sections of the two trails (in accordance with the implementation "division"). This structure will ensure those with most interest in achieving a section of trail development can get involved early in the project. Once the trails are completed, a sub-committee could be responsible for each trail.

Other sub-committees with specific roles but no specific powers could be explored. The Murray to the Mountains management structure provides an example. As discussed in Section 2.5.1, the management structure involves two committees. A Technical Group has three Local Government representatives (one from each Local Government), one representative from the Department of Sustainability and Environment and one representative from Vic Roads (State Government agency). Its roles are trail maintenance, weed and vegetation control, and bridge maintenance. An Advisory Group has six representatives of user groups/communities, one representative from the Country Fire Authority, three local landholders (one from each Local Government area) and one representative from the Victorian Farmers Federation. Its roles are representing community and user group interests to the Committee of Management, and liaison with the Committee of Management on management and maintenance issues. One representative from the Technical Group and three from the Advisory Group sit on the Committee of Management, ensuring a constant flow of information. This model is best used on a mature trail - it is therefore recommended that consideration be given to this model in the future when the trails are somewhat closer to completion

14.3.5 Management Models – A Summary

The following structures are recommended:

Short-term (until both trails are substantially completed)

- Committee of Management for the project (two trails) with representation from (at least) adjoining landholders, user groups, business and tourist operators, the existing rail-trail committee and individuals with unique skill sets (focussed on project initiation rather than ongoing management), the State Government and relevant Local Governments.
- Geographically-focussed sub-committees with similar representation to the Committee of Management. Roles may include consulting with adjoining landowners, developing a task list/critical path with indicative costing for each item for labour and materials and pursuing small community grants such as those made available by Wagga Wagga City Council (although some of the first two tasks may be covered by a trail development plan). The other key role for such groups is to be project advocates in their community.

Medium to long term (once both trails are substantially completed)

- Committee of Management for the two trails with representation from (at least) landholder representatives, user group representatives, business and tourist operations representatives, individuals with unique skill sets as appropriate, the State Government and relevant Local Governments. Community membership could be via the two Advisory Groups (as per the Murray to the Mountains Rail Trail management model) and/or via general representation.
- A Technical Advisory Group with Council representatives, the State Government (possibly the "landlord" agency), the Rural Fire Service, and landholders with specialist expertise in issues such as weed and vegetation control.
- A Community Advisory Group with representation from user groups/communities, local landholders, and local businesses. At the time of formation of this group, the Committee of Management can determine if other groups need representation.
- An alternative is two separate formal Committees of Management – one for each trail (with similar advisory groups). This can be determined at the time. If this approach is adopted, formal mechanisms (such as annual workshops or cross-representation) should be put in place to ensure the two trails are managed and promoted as a package.
- The geographically-focussed sub-committees may then become the focus for a series of Friends of the Trails group/s (discussed below).

14.3.6 The Future - Friends of the Riverina Highlands Rail Trails

At some point in the development of the rail-trails (should they proceed) consideration needs to be given to the formation of community support networks, usually achieved through a "Friends of the Trail/s" group/s. Many rail–trails (and indeed many recreation trails) draw support from Friends of Groups.

The best summary of the roles of Friends of Groups comes from the Rails-to-Trails Conservancy in the USA. From "Designing Rail Trails for the 21st Century" (*Flink et al 2001*) comes the following advice:

"The single most important function of a Friends organisation is to act as an advocate for the trail, defending it when necessary and promoting it the rest of the time. Funding decisions often depend on public pressure, and money is generally allocated to projects with high public visibility."

Other services of Friends Groups include:

- Physical labour for maintenance organised a number of different ways. The Rails-to-Trails Conservancy recommends the use of an Adopt-a-trail (or section of trail) program – a good approach for trails of anything over 5 kilometres. The Appalachian Trail, the Bibbulmun Track, and the Gippsland Trail all use this particular approach.
- Eyes and ears surveillance and reporting of any problems, danger or inappropriate activity (the Bibbulmun Track Foundation takes responsibilities for the first two on the Track).
- Fund-raising to pay for trail structures, amenities or threatened adjacent properties of environmental significance.
- Developing maps, newsletters and other publications.
- Promoting the trail as a tourist attraction.

The Rails-to-Trails Conservancy recommends that the trail managing agency maintain legal separation from a Friends Group; they should however coordinate activities and programs to avoid duplicating efforts or pursuing divergent goals.

As the needs of trail development change from creation to ongoing support, the skills set of the "Friends" board may need to change (a process to be handled thoughtfully). Tourism, corporate, financial and service agent communities become more important.

It is important to clearly specify the purpose and mission of Friends organisations.

14.3.6.1 What do Friends Groups do?

In Australia, "Friends of" trails groups undertake any number of tasks. A selection of tasks is discussed below. It should be noted that, in the cases cited below and most other cases, the Friends of groups are not the trail manager. This responsibility falls to a formal Committee of Management, a Government agency or a Local Government.

The Bellarine Rail Trail (in the City of Greater Geelong, Victoria) has an active Friends Group. Its primary task is revegetation along the corridor. It aims to develop the environment of the rail trail, rehabilitate flora and fauna, and encourage rail trail users to appreciate the environment

The Munda Biddi Foundation (the Munda Biddi Trail is Western Australia's long distance mountain bike trail) assists with planning, developing, marketing and maintaining the trail. It enlists paid memberships, enrols and manages volunteers, holds trail and community events, and provides information and resources to enhance the quality of the trail experience.

The Friends of the Lilydale to Warburton Rail Trail involves the community in the development and maintenance of the trail, enhances landscape and conservation values of the trail, and promotes the use of the trail. Activities include revegetation, weed eradication, protection of remnant species, and building and restoration work.

14.3.6.2 Bibbulmun Track Foundation

The Bibbulmun Track is Western Australia's premier long-distance walking track. Completed in 1997, the 962 kilometre track links Perth and Albany. Sections of the track were used by over 137,000 users in 2003, a significant increase from 10,000 users in 1997. Part of this success can be put down to the efforts of the Bibbulmun Track Foundation.

The Bibbulmun Track Foundation is probably the most successful Friends of Group in Australia, with a paid-up membership in excess of 2,100 (in a number of categories). The main membership categories are individual and family – at $40 and $65/year, these memberships provide a good income flow for the Foundation.

The Foundation is not the trail manager – this job is done by the Department of Conservation and Land Management. The Foundation is a not for profit community based organisation established to provide support for the management, maintenance and marketing of the Bibbulmun Track. The Foundation encourages community participation, ownership and education, develops opportunities for tourism, employment and training, advocates the protection of natural and historical heritage values of the Track, attracts funds and other resources, and promotes the track as accessible to all.

The Foundation is managed by a ten member Board of Management with seven people elected by general members. Current board members include the Managing Director of Mountain Designs, WA (chair), three representatives from the "community" (two business people and one educator), two representatives from CALM, one representative from WA Tourist Commission, one representative from the Department of Premier and Cabinet (the Premier is the Patron), and one representative from the Great Southern Development Commission (a statutory authority). It has a full-time paid Executive Director and a large number of volunteer staff.

Corporate sponsorship has made possible its "Eyes on the Ground" maintenance volunteer program – volunteers adopt a section of the track and ensure it remains well-maintained. Some 780 kilometres of the Track is "managed" in this way by volunteers – a Herculean effort in this time-poor modern environment. They carry out basic maintenance activities and report major maintenance issues to the track manager (CALM). There are also office and field activity volunteers.

The Foundation has a number of corporate sponsors – Premier (1), Gold (1), Silver (1), and Bronze (7) and also receives funding from the Lotterywest Trails Grants Program (WA Lotteries). Importantly, the Foundation has developed a number of paying events on the Track to support its ongoing work.

SECTION 15 - CORRIDOR MANAGEMENT PLAN

15.1 Preparation of a Corridor Management Plan

As the trail development plan moves towards completion (as discussed in Section 13) and the legislative and management issues are resolved and a formal Committee of Management is set up (as discussed in Section 14), a number of decisions need to be made about the ongoing management, operation and maintenance of the trails.

The best approach to deal with these issues is through a Corridor Management Plan which forms the basis for ongoing trail management, operation and maintenance. A well-prepared and comprehensive corridor management plan (undertaken in close consultation with the community and neighbouring landowners) serves to ensure the trails function and operate as high quality experiences.

15.2 What is in a Corridor Management Plan?

There are four major components to a Corridor Management Plan:

- A set of decisions made about how the trail will operate (a 'Trail Policy" ie. a set of Guiding Principles);
- A Trail Management Plan;
- A Fire Management Plan; and
- A Trail Maintenance Plan.

Bringing all four elements together in one framework (a Corridor Management Plan) makes ongoing trail development and management an efficient process and ensures ongoing seamless transitions as personnel involved with a trail change.

15.2.1 The Initial Decisions

Some basic initial questions need to be answered, and some crucial decisions made. These include:

- Will the trail be closed at night?
- What enforcement procedures will be in place?
- Will dogs be allowed? If they are allowed, in what sections should they be allowed? Will they be permitted to be off-leash or will they be required to be on-leash?
- Will horses be allowed? If they are allowed, on what sections should they be allowed?
- What will be the weed eradication and/or long term control program? Grazing, slashing, poisons?
- How will vegetation replanting be managed?
- Will fencing be relocated and/or built to achieve a narrower trail corridor?
- Will sections of the corridor be leased to farmers? The trail corridor is 20 metres wide in most places – not all of this will be required for the actual trail.
- What will be the fire hazard reduction approach (this informs and is informed by the Bush Fire Risk Management Plan)?

- Strategies for the protection of native vegetation.
- Strategies for vermin and feral animal control (night closures to allow graziers to patrol and shoot for example).
- Strategies for plant disease control.
- Vehicle access issues – along and across the trail (including emergency vehicles, landholder vehicles and maintenance vehicles). Who will have access and how will this be managed?
- Complaints/communications – procedures and responsibilities.
- On-trail events – approach and management.
- Trail construction and infrastructure standards – the Trail Development Plan will recommend a range of infrastructure. Included in this will the level of development of parking at trailheads, user information, on-trial signposting, facilities etc. Decisions need to be made as to whether a high or low standard of infrastructure will feature on the trail (or differing standards depending on location). This may also include timetables for ongoing enhancements of infrastructure. A decision on standards to be adopted on a permanent basis has implications for ongoing trail maintenance.
- Target user groups need to be identified.
- A promotion and marketing plan will need to be included in the set of initial decisions.
- Will on-trail advertising be allowed?
- How will the trail manager treat any requests by utilities (such as gas pipelines and phone cable providers) to utilise the trail corridor?
- Consideration and amelioration of impacts on adjoining landholders. This covers issues such as fencing, privacy issues, trespassing etc. The Corridor Management Plan needs to set a basis for how these are dealt with on an on-going basis.

While, at this point in the process, decisions will have been made about the Committee structure (both short and medium term), it will be useful to ensure these decisions, timetables for change and the reasons for decisions are included in this section of the Corridor Management Plan.

15.2.2 A Trail Management Plan

The Trail Management Plan - as with all management plans - should be both flexible and responsive to change, yet set a firm guiding outline for future directions and priorities. Trails which do not have a Management Plan suffer from decisions taken on the run, out of context or as knee-jerk responses to critical situations.

The trail manager for the Railway Reserves Heritage Trail (RRHT) in Western Australia is shortly to commence the preparation of a Trail Management Plan. It is a useful model to consider the issues that need to be dealt with by a Trail Management Plan. The issues to be covered are:

- Philosophical background to RRHT development;
- A statement of guiding principles;

- Review of how RRHT is, and can be further linked to other trails, especially the Munda Biddi Trail, the Bibbulmun Track, the Kep Track, the Farming Heritage Trail and those in the eastern portion of the City of Swan.
- Clarification of management roles and responsibilities for the various trail sections;
- Risk management policy;
- Group and commercial usage policy and guidelines;
- Provision of essential services for trail users, such as water points, toilets, rubbish bin, lighting and other desirable trail furniture;
- Identification of any outstanding access /egress works for the RRHT, including disability works;
- Fire management and emergency evacuation procedures;
- Preparation of a promotional and interpretation management sub-plans, including specifications for signage and suggestions for interpretation along the trail between the townsites;
- Mapping and brochures – guiding principles;
- Formation of a Friends of the RRH Trail Group; and
- Timetable for reviewing and updating the Management Plan

Some of the initial decisions mentioned in 15.2.1 flow into a trail management plan and should be included. These include long-term control of weeds, revegetation policies and vermin and feral animal control.

A timetable for reviewing and updating this Plan should be set, with annual reviews and three (or five) year updates recommended. The Plan must outline a professional program of management, designed to ensure that there is no lapse into a belief that trails, once built, will manage themselves.

Further, this plan *must* clearly define who is responsible for what – it is crucial that everyone knows what their role and responsibility is. Without this, it is all too easy for everyone to sit back expecting someone else to do the work. Trail management plans need to be specific about roles in management and maintenance.

15.2.3 A Bush Fire Risk Management Plan

This has been identified as a critical issue and needs to be included as part of the Corridor Management Plan. It has been discussed in Section 13.

15.2.4 A Trail Maintenance Plan

Ongoing trail maintenance is a crucial component of an effective management program – yet it is often neglected until too late. Countless quality trails have literally disappeared because no one planned a maintenance program and no one wanted to fund even essential ongoing repairs. It is therefore *essential* that funds be set aside in yearly budgets for maintenance of these trails - to ensure user safety and enjoyment, and to minimise liability risks for land managers. Depending on a swathe of conditions – weather, soil types, construction standards, usage patterns and more – trail maintenance can cost up to 10% of total construction costs – or more - *every year.* Recent work for Crows Nest Shire (in Queensland) on a package of ten walk trails and

two canoe trails (with significantly less lengths that involved in the two rail-trails) set maintenance costs at around 5.5% of the trail development budget of over $500,000. This can be a daunting prospect, particularly for cash-strapped Government Departments, Local Governments and not-for-profit community organisations.

In each trail proposal, the opportunity exists to minimise future maintenance demands through careful planning and construction. Too often initial costs are cut in the belief that all trails require maintenance anyway, and something not done properly today can be fixed in the future. Building good trails in the first place is the very best way of minimising future problems and costs. As a second line of defence, a clear and concise Management Plan (as discussed above) with a regular maintenance program written into it will aid significantly in managing ongoing resource demands.

The goals of a Trail Maintenance Plan are to:

- Ensure that trail users continue to experience safe and enjoyable conditions;
- Guard against the deterioration of trail infrastructure, thereby maintaining the investment made on behalf of the community;
- Minimise the trail manager's exposure to potential public liability claims arising from incidents which may occur along the trails; and
- Set in place a management process to cover most foreseeable risks.

Erosion (caused by weather and unauthorised users), regrowth of vegetation, fallen trees and branches and damage to signage and fences are likely to be the greatest maintenance activities on the trails. Providing these effects are attended to early, they are largely labour intensive rather than capital expensive. Calamitous events such as fire or flood will naturally generate significant rebuilding activity and consequent costs. These events are generally unmanageable, and should simply be accepted as part of the longer-term reality of a trails program.

Resourcing a maintenance program is crucial, and funds will be required on an ongoing basis to enable this essential maintenance. This matter should be addressed in the preparation of the maintenance plan. It would be short sighted to go ahead and build the trail and then baulk at the demands of managing and maintaining it.

It should be ensured that whoever is charged with ongoing responsibility for managing the trails has genuine and specific trail knowledge. It is not sufficient to be a skilled gardener, conservationist or environmental scientist. If training is required to bring staff knowledge levels up to a high standard, this should be seen as a priority to be undertaken early in the construction process. Trail skills are better learned over a longer time, with hands-on practice, than in short briefing sessions.

15.2.4.1 Public Liability and Risk Management

It is prudent that the managers of the land upon which these trails are constructed be aware that – whether or not visitors are actively encouraged to come to the trails – they carry a significant duty of care towards those visitors accessing lands vested in them. The maintenance of quality trails is therefore critical from this perspective. Recent legislative changes across Australia have reduced the number of small claims against land managers. However, liability generally rests with the land managers and hence, every attempt should be made to minimise the risk of accident or injury to trail users (and therefore the risk of legal action).

While public liability is certainly an issue for all land managers, it is not a reason to turn away from providing safe, sustainable and enjoyable resources. It is simply a mechanism by which to recognise the responsibilities inherent in managing natural and built resources. Dealing with a perceived liability threat is not about totally removing that threat – it is about doing all that is manifestly possible to provide *safe* access opportunities for visitors, thereby minimising the risk of liability claims.

A formal Hazard Inspection process is crucial in the ongoing maintenance plan. Not only will this define maintenance required and/or management decisions to be addressed, it is vital in ensuring safe conditions and therefore in dealing with any liability claim which may arise in the future. Courts are strongly swayed by evidence of a clear and functional program, and a regular series of reports, with follow-up actions, will go a long way to mitigating responsibility for injuries. Further, clearly defined 'User Responsibility' statements in brochures, maps, policy documents, plans and public places will assist this process.

15.2.4.2 Trail Maintenance Activities

The discussion that follows provides general guidance for the development of maintenance plans should the trails proceed. It is not a substitute for specific maintenance plans for each trail.

Maintenance on trails should be divided between regular inspections and simple repairs, a one (or two) person job, and quarterly programs undertaking larger jobs such as significant signage repairs or weed / vegetation control. A range of basic machinery, tools and equipment will be required for this work.

Clear records of each activity/inspection will be kept by the body with responsibility for maintenance. Pro-formas serve to maximise user safety and minimise liability risks. It will also provide a valuable record of works undertaken and make for efficient use of maintenance resources over time.

In general, Maintenance Plans are based around regular inspections, at which time simple maintenance activities should take place concurrently. More time-consuming maintenance activities should take place every six months, while detailed Hazard Inspections should occur annually. Further, the capacity to respond immediately to random incoming reports of hazards or major infrastructure failures should be built into the Plans. Table 15.1 gives a suggested schedule for general maintenance activities to achieve acceptable maintenance levels. Explanatory notes pertaining to each Activity follow the table below.

Table 15.1: General Maintenance Activities

Activity	***Site***	***Frequency***
Undertake full inspections of both trails	Entire trail	Every second month
Check, repair or replace all trail signage, esp. road-crossings and directional markers	Entire trail	Every second month- at each Trail Inspection
Check and cut-back overhanging or intruding vegetation (not trail surface)	Entire trail	Every six months, unless obviously requiring attention at regular inspections.

Sweep or rake debris from trail surfaces, especially at road crossing points	Various sites along entire trail	Every six months
Check condition of trail surface for erosion (or other) damage and arrange repairs if necessary; trim off regrowth vegetation	Entire trail	Check for erosion at each inspection. Arrange repairs immediately if acute, or schedule maintenance for six monthly work sessions if not; rake-hoe regrowth vegetation each inspection
Check structural stability of interpretive signage, and interpretive shelters	Various locations	Every six months
Undertake Hazard Inspection and prepare Hazard Inspection Report	Entire trail	Annually

(It should be noted that this schedule does not allow for repair works above and beyond 'normal' minor activities. For example, if a section is subject to heavy rain, and erosion control fails, additional repair works will need to be undertaken).

Trail signage

Particular attention needs to be given to signs at road crossings or junctions. Each crossing should be carefully checked to ensure that all signage is present, and that all signs are clearly visible. Particular attention must be given to ensuring that “Trail Crossing ahead” signs (on roadside at approach to trail crossing) are not obscured by overhanging vegetation. An inventory of locations needs to be prepared to assist in regular maintenance.

Vegetation

Undergrowth vegetation grows quickly, and over time will continue to intrude into the trail 'corridor'. Such intruding vegetation will be cut back to provide clear and safe passage - a minimum clear space 2.5 m wide by 3.5 m high (shared use trails - cyclists and walkers) and 2.0 metres wide by 3.0 metres high (for any sections allowing horses) should be provided at all times. Care will be taken to ensure that sharp ends are not left protruding into the trail as these can harm trail users. It should be noted that trailside vegetation hangs lower when wet, and allowances should be made for this when assessing whether or not to prune. "Blow-downs" - trees or limbs which have fallen across the trail - will be cleared as a part of this process. Sight lines must be kept clear either side of road crossings as a part of this process, to ensure that users can clearly see a safe distance either way at road crossings.

Trail surfaces

Many of the trail sections will require regular surface maintenance. Primary focus will be on erosion damage caused by water flowing down or across the trail and by illegal motor vehicle use. This must be repaired as soon as it is noted, or it will get worse, quickly.

Interpretive signage

Once interpretive panels have been installed along the trails, these should be checked for vandalism and cleaned if necessary. If damage is too great, replacement is

essential. An inventory of locations needs to be prepared to assist in regular maintenance.

Again, by way of illustrative example, the Railway Reserves Heritage Trail's *Trail Management Plan* will also include a Trail Maintenance Plan. Key elements are:

- Prepare infrastructure inventory identifying and showing the location of existing and proposed trail elements, such as directional and information signage, boom gates, information shelters, drinking fountains, etc.;
- Hazard inventory and inspection timetable;
- Control of vegetation overgrowth;
- Maintenance of the trail surface;
- Inspection and repair of fencing and gates;
- Deferred maintenance program;
- Appraisal of capital costs, labour hours and/ or dollar value for annual maintenance requirements;
- Responding to customer requests, including trail users; and
- Review of current environmental conservation and rehabilitation projects and suggestions of location and requirements of new ones.

SECTION 16 – RESOURCES & FUNDING OPPORTUNITIES

16.1 Introduction

Facing an ambitious project that encompasses significant trail development can be daunting indeed. Proponents may well ask: “Where are the funds going to come from for trail development, promotion and the range of other matters necessary for the creation and upgrade of this trail?” (members of the communities have asked these questions at various public meetings).

Resourcing trail construction and promotion programs can certainly be challenging, as can resourcing ongoing maintenance. It must be recognised that projects such as these are an investment in the future. Well planned and built, well interpreted and appropriately promoted, the trails will bring tourists and money into the area. They will create employment, and significantly assist in the conservation and preservation of heritage sites along their routes. The trails will also benefit the local communities. But where will the money come from?

A range of funding sources and other resources are currently available, and some of the better known are summarised below. This list should NOT be taken to be full and final. It is also important to note that, for the NSW Government programs in particular, full details are not yet known as the programs have closed for 2006/07.

16.2 Commonwealth Government

Dept	Program	Contact details	Available funds	Criteria including program aims	Closing date	Relevant Component of trail development
Transport and Regional Services	Regional Partnerships Program	Applications through the appropriate Area Consultative Committee (ACC). The contact details for the Riverina ACC are: Phone: 02 6964 5540 Email:racc@racc.org.au Website: www.racc.org.au www.regionalpartnerships.gov.au	No limit specified for individual projects. Partnership approach is adopted. Program is looking for more contributions from other partners (i.e. not necessarily a $ for $ basis)	Projects need to benefit communities by meeting a proven need or demand, filling a market gap, or adding value to an existing resource. Projects need to create or enhance opportunities by establishing new, diversified or expanded business, providing new economic opportunities, providing economic/social infrastructure, enhancing community interaction, or diversifying skills in a location. Recent changes (November 2005) will see the Commonwealth Government specify its Regional Partnerships priorities Partnership development with community, private sector and/or government agencies highly regarded.	No closing dates – applications can be submitted at any time	No components are excluded. Note (a)
Industry, Tourism and Resources	Australian Tourism Development Program (ATDP)	Manager, Tourism Programs, AusIndustry Phone: 13 28 46 Fax: 02 6231 7119 Email: atdp@industry.gov.au Website: www.ausindustry.gov.au/	Category 1 $50,000 - $100,00 Category 2 $100,000 - $500,000 Category 1 projects are funded on a $ for $ basis. Category 2 projects are	Category 1 projects focus on providing or enhancing tourism products and/or services. Projects need to achieve outcomes relating to filling a gap in products or services and/or add to the suite of attractions and facilities, contribute to long term employment and economic growth, have spill-over benefits for other tourism and non-tourism businesses, show effective business planning and research-based tourism development planning, and support development of high quality tourism products consistent with “Brand Australia”	28 June 2006 – Round 3	Trail construction Business planning Interpretation Note (b)

			not funded on this basis.	theme. Category 2 projects large, multi-faceted activities that involve collaboration in the development and/or implementation of effective strategies for tourism market development. Projects need to achieve the same outcomes as Category 1 projects with an additional outcome relating to facilitating partnerships between tourism organisations and/or operators.		
Environment and Heritage	Sharing Australia's Stories	Phone: 1800 653 004 Fax: 02 6231 7119 Website: www.deh.gov.au/heritage/programs Email: storiesgrants@deh.gov.au	Up to $50,000. Applicants expected to contribute $1 for every $2 from the program.	Opportunity to show how individuals and communities stories have contributed to the great event and themes that have shaped our nation. Projects must contribute to an understanding of Australia's natural or cultural history. Covers creative projects such as brochures, books, guides, websites, events, promotional and interpretive signage and displays, community and regional histories, and personal and family histories. The project could be about places, communities, activities, events, traditions, institutions or a family or person.	No details for 2005/06 as yet	Funding for interpretation. Funding should be sought as soon as the decision to proceed with the trail is made
National Heritage Trust	Envirofund	Australian Government Envirofund, National Heritage Trust Phone: 1800 065 823 Fax: 02 6274 2919 Website: www.nht.gov.au	$30,000 (standard) but up to $50,000 Grants are on a $ for $ basis.	Local action plan component of the National Heritage Trust. Helps communities with projects for promoting sustainable resource use. Eligibility limited to community groups and individuals.	2005/06 round has closed (late April)	Trail construction – revegetation Trail maintenance

Note

(a) Significant sections of the East Gippsland Rail Trail were funded under this program

(b) Trails have been successfully funded under this program in the two years of its operation.

2004 *Development of the Nannup to Jarrahwood Rail Trail in Western Australia ($98,000), the Swan Valley Bike Trail ($83,650) and the development of a concept design and business plan for Stage 1 of the Mitchell-Murrundindi-Mansfield Rail Trail in Victoria ($100,000) are trails that benefited from this program. A number of drive trail and cultural trail projects also attracted funding (over $100,000).*

2005 *Development of the Oberon to Tarana Rail Corridor as a rail trail and heritage rail in NSW ($100,000), construction of the Six Springs Mountain Bike Trail in South Australia as part of a larger project ($61,000), and upgrading and sealing of a part of the Cape to Cape Track in Western Australia ($96.000) are trails that benefited from this program. Interpretation projects also received significant funding. For example, Tales from the Port of Echuca – Stories through Interpretation and Imagery in Victoria received a grant of $50,000. A number of drive trail and cultural trail projects also attracted funding (over $100,000).*

16.3 NSW Government

Dept	Program	Contact details	Available funds	Criteria including program aims	Closing date	Relevant Component of trail development
Dept of Tourism, Sport and Recreation	Regional Sports Facilities Program	Joan Bennon, Programs and Partnerships, DTSR Ph: 02 9006 4795 Fax: 02 9006 3805 Email:info@dsr.nsw.gov.au Web: www.dsr.nsw.gov.au	Projects between $30,000 and $200,000 Projects are funded on a $ for $ basis	Aims to assist with the construction or upgrading of major sport and recreation facilities Projects must improve access for the general public to participate in recreation an/or physical projects hat may also incorporate uses for talented and elite athletes Projects that improve safety for users and participants are considered. Local Governments and not for profit recreational organisations are eligible to apply	2006/07 round not yet opened. 2005/06 round closed on 30 November 2005.	Trail construction (sealed sections could be provided for talented/elite road cyclists)
Dept of Tourism, Sport and Recreation	Capital Assistance Program	Joan Bennon, Programs and Partnerships, DTSR Ph: 02 9006 4795 Fax: 02 9006 3805 Email:info@dsr.nsw.gov.au Web: www.dsr.nsw.gov.au	$4 million in total was available in 2005/06. The average grant was $10,000. Projects are funded on a $ for $ basis	Aims to assist in the development of community oriented local sporting and recreational facilities Projects must improve access for the general public to participate in recreation and/or physical projects. Projects that improve safety for users and participants are considered. Local Governments and not for profit recreational organisations are eligible to apply	2006/07 round closed on 31 May 2006.	Trail construction and facilities

16.4 Council Grants

Wagga Wagga City Council and Tumbarumba Shire Council have community grants programs that offer small amounts of funding to community groups. These may be used to undertake specific actions or promote events (in the future). In Wagga Wagga, the key programs are the "Our People – Community Development Grants" (maximum grants up to $5,000), "Our Place – neighbourhood/rural village grants" (maximum grants up to $5,000), and "Events Promotion grants" (maximum grants up to $2,000 – these could be accessed once the trails are complete). All grant applications close on 30 June 2006 (this date may provide guidance for future dates). In 2003, Tumbarumba Shire Council instituted an annual grants program for local tourism and community and cultural projects.

16.5 Corporate Sponsors

Sponsorship is big business – and very competitive. Two main options exist: either negotiate with local corporate entities which have a geographical and social connection with the area (for example, there are a number of wineries that will benefit from rail-trail development) or go after the 'big' players for big projects (including those with a local presence such as any of the three timber plants and Visy Pulp Mill). Many large companies have formalised sponsorship programs.

Elsewhere in Australia, funding for trail development has been received from a number of major (and minor local) companies. Sums of up to $100,000 can be gained, if benefits can be proven. Any company with an operation within the region would appear to be a potential sponsor. Alcoa has been a major contributor to Western Australia's two premier long distance tracks – the Bibbulmun Track (walk) and the Munda Biddi Trail (mountain bike). In the case of the Munda Biddi Trail, Alcoa funded major parts of track construction and interpretation. In March 2006, BHP Billiton announced it would provide over $200,000 for the Coast to Crater Rail Trail in western Victoria to help construct the trail from Camperdown to Timboon and fund a design study for further trail extensions.

Companies are looking to be good local citizens and being associated with a positive asset such as a trail can be good for business. Companies should be approached with the message that such a project will bring a number of benefits to the region. Any approaches to corporate sponsors should focus on a main message that trails and the company products provide an alliance of healthy sustainable living and healthy sustainable products (if such a link exists).

Corporate entities are looking to make community commitments in a number of ways other than direct funding. The Macquarie Bank Foundation (discussed further below) looks to supply time and expertise as well as funding. Many other banks have both a competitive grants program and a volunteer scheme which provides paid volunteer leave to every employee. Organisations such as the ANZ and National Banks also look for community development options for their staff e.g. corporate team building days are held on a trail.

What is important in dealing with potential corporate sponsors is to have a clear trail development plan (the product of this work), a well-developed message to send to them, clear pointers as to what and where their engagement might be, and a clear indication of how they might benefit from their involvement. Going to companies on a frequent basis with no clear structured approach, no idea of what their involvement might be (beyond direct financial grants) and no clear message as to what benefits their involvement will have for them almost guarantees failure.

16.6 Other Trail Resourcing Opportunities

16.6.1 Defence Assistance to the Civil Community

The RAAF Base Commander at Forest Hill indicated that RAAF personnel are encouraged and supported in volunteer efforts in the communities where they live. This is a potential pool of volunteers, particularly given as many will benefit from the Wagga Wagga to Tumbarumba rail-trail. In addition, she indicated that she has discretion to provide other resources to projects she determines as suitable. The base Commander indicated the base does not have significant resources available other than people, but she indicated a willingness to consider requests. The Kapooka Army Base may have both and non-human resources that the Base Commander would have some discretion to commit. It is understood that a bridge on the Hume and Hovell Track near Tumut was constructed with significant technical and construction input from Army engineers, who supplied labour at a minimal cost.

16.6.2 Heart Foundation

The Heart Foundation Kellogg Local Government Awards are held each year to acknowledge projects and initiatives that local councils and organisations are delivering in their communities to promote and improve heart health. While not a significant source of funds, there is a $10,000 prize for the overall winner and a $1,000 prize for each State winner. The award also offers positive promotional opportunities. The award is for Local Governments rather than community-based organisations; this does provide a "hook" for councils to become involved in a trail project.

The Murray to the Mountains rail-trail has won the Best Overall project. Lake Fred Tritton, an artificial lake in Richmond Shire (Qld) with a significant walk trail constructed around its edges, won the Best Overall project and the Recreation Infrastructure Project in 2004. The Peninsular Pathlinks Program, a program to develop 77 kilometres of new trails and walkways in the 42 communities in the Mornington Peninsula Shire (Victoria) won the Best Overall project and the Recreation Infrastructure Project in 2005. For further details, the Heart Foundation's website is www.heartfoundation.com.au.

16.6.3 Green Corps

Green Corps is a federally funded "Young Australians for the Environment" program. A major project provides a host partner agency with 10 trainees and a supervisor for 14 weeks within a 26 week program. All materials, tools and technical supervision, accommodation and some other basic requirements must be provided.

16.6.4 Work-for-the-Dole

Schemes to provide meaningful work experience and some training for long-term unemployed are provided under the Work for the dole scheme. The program generally only supplies labour – the host agency is responsible for tools, materials, technical supervision etc.

16.6.5 Conservation Volunteers Australia

Conservation Volunteers Australia provides small crews of volunteers, with a supervisor, to undertake environmental activities. Teams of between five and eight people work for one to two weeks. An administration fee is imposed by CVA – currently $500 per day. Materials, tools and technical supervision need to be provided

by the host agency. CVA has been involved in trails project elsewhere in Australia – they were heavily involved in construction of a new walking track around the base of Mt Tibrogargan in the Glasshouse Mountains in South East Queensland. This trail is of the highest quality and is a testimony to their skills as trail builders.

16.6.6 Prison Crews

Crews of minimum security inmates have worked extensively in trail construction in Western Australia in the last ten years. This has proven a hugely beneficial program - to host agencies, to the Ministry of Justice and to the inmates themselves. A prison officer and transport is usually provided, but materials, tools, and technical supervision are required. In addition the Ministry may require host agencies to cover the Ministry's costs (staff etc). It is anticipated that prisoner crews have been used in NSW on a variety of programs, though their deployment in trails projects is not known. Mannus prison labour is used regularly by Tumbarumba Shire Council on a range of community infrastructure projects.

16.6.7 Volunteers

Volunteers are often the last thought-of resource but are often the most effective. Many trails are only built – and then kept alive – by volunteer input. The way forward is to either establish a specific local 'Trail Volunteers' or 'Friends of…' group (as discussed in Section 14), or tap into existing community organisations such as service clubs, progress associations, schools, scouts etc. There is also a growing network of trail advocates (for example, the 2nd Victorian rail-trail workshop in 2004 was attended by around 60 people) whose experience is extremely worthwhile. Concerns have been expressed in a number of forums (including popular media) about getting volunteers in a time when people have very busy lifestyles. This is acknowledged, however the Bibbulmun Track in Western Australia provides an encouraging lesson. Some 780 kilometres of the Track (total length of 962 kilometres) is maintained by volunteers five years after opening.

Volunteer labour can also be used in innovative ways to benefit a number of community sectors. One rail-trail in Victoria needed bridge construction and put out a public tender for the work. The tender was won by the local branch of the Country Fire Authority, who needed a new engine. Labour in bridge construction was "swapped" for a new fire engine.

16.6.8 Philanthropy

There are a number of philanthropic organisations in Australia (though not in the same numbers as the USA). The brief has not permitted time to extensively research all these. The Macquarie Bank Foundation currently contributes more than $2.5 million a year in community grants. Its core areas include the health care and research, the environment and the arts (trails can address each of these core areas). Macquarie looks for opportunities that are innovative, genuinely responsive to the community's needs and that also enable Macquarie to contribute time and expertise, as well as financial support. The Ian Potter Foundation has a number of interests, including environment and conservation (details can be found at www.ianpotter.org.au and follow the links). The information on the Foundation indicates that, under its Environment and Conservation program, it supports small projects that combine elements of biodiversity and ecology preservation, volunteerism and community education. A trail development could fall within this mandate.

BIBLIOGRAPHY

Australian Bicycle Council *Benefits of Cycling* www.abc.dotars.gov.au/Publications_Resources

Australian Bureau of Statistics *Regional Population Growth, Australia and New Zealand 2003-04* www.abs.gov.au/Ausstats

Australian Heritage Commission *Australia: our national stories – Linking a Nation* www.ahc.gov.au/publications/national-stories/transport

Australian Railway Historical Society (NSW Division) *Railway Resource Centre Branch Line History Resource Guide BLH-09*

Australian Railway Historical Society (1954) *Bulletin No. 196 February 1954*

Bauman, A. (1997) *Physical Activity Levels of Australians Results of the 'Active Australia' Baseline Survey* Australian Sports Commission, Canberra ACT.

Beeton, S. (2003) *An Economic analysis of rail-trails in Victoria*. La Trobe University, Bending

Bibbulmun Track Foundation (2004) "*Survey Results confirm Bibbulmun Track's increasing overseas profile"* Bibbulmun News Issue 35 Autumn 2004

City of Wagga Wagga (1998) *Bikeways Plan* Transport Planning and Management Branch

Colmar Brunton (2004) *Bibbulmun Track User Short Research Project* Report to the Department of Conservation and Land Management and the Bibbulmun Track Foundation

Coomes Consulting Group (2006) *Tumbarumba Shire Council Aged Care Needs Study (draft)*

Department of Conservation and Natural Resources (Victoria) *Rail Trails Victoria – A Guide for prospective Committees of Management*

Department of Planning, Infrastructure and Natural Resources *NSW Statistical Local Area Population Projections 2001-2031* www.planning.nsw.gov.au/tpdc

Department of Natural Resources and Department of Emergency Services – Queensland (1998) *The South East Queensland Outdoor Recreation Demand Study*

Fix, P. and J Loomis *The Economic Benefits of Mountain Biking At One of its Meccas: An Application of the Travel Cost Method to Mountain Biking in Moab, Utah*, Colorado State University, www.imba.com/resources/science/economic_moab.html

Flink, CA, K Olka and RM Searns 2001 *Trails for the Twenty-first century; 2nd Edition* Rails-to-Trails Conservancy. Washington DC

Institute of Transport Economics (2002) *Profitable Walking and Cycling Track networks* Nordic Road and Transport Research No.2 www.vti.se/nordic/2-02mapp

Jessop, M. and Bruce, D. (2001) *Research Summary, Attitudes of Users towards the Mundaring Recreation Trails.* Sport and Recreation WA, Western Australian Government, Perth Western Australia.

McRostie, H. (2004) *Access to trails promotes healthy communities: fact or urban myth* Paper to 3rd National Tracks and Trails Conference, Hahndorf, October 18 – 20, 2004

Merom, D. (2004) *Public health perspective of tracks and trails – towards evidence-based practice* Paper to 3rd National Tracks and Trails Conference, Hahndorf, October 18 – 20, 2004

PriceWaterhouseCoopers *Economic Benefits of the Trans Canada Trail*

Maher Brampton Associates (2003) *Cradle Coast Tracks Strategy*, Cradle Coast Authority

Market Equity Pty Ltd (2004) *Trails Research Project* A report for the Office of Sport and Recreation in association with Planning SA, Transport Planning and South Australia Tourism Commission

Otago Central Rail-Trail Trust (2005) *The Otago Central Rail-trail means business*

Perrigo, T. (2004) *Interpreting trails – the need for standards* Paper to 3rd National Tracks and Trails Conference, Hahndorf, October 18 – 20, 2004

Qld Outdoor Recreation Federation (2002) *South East Queensland Outdoor Recreation Demand Study*

Railcorp *Rail history* www.trackingtrains.com.au

Rail-Trails Australia *State Descriptions (NSW)* www.railtrails.org.au/states/trails

Rissell, C *Health benefits of increased physical activity and the relationship with current Government policy* www.itls.usyd.edu.au/johnp/MelbourneSydneyCyclingSydney

Riverina Regional Development Board *Tumbarumba Regional Profile* www.rrdb.com.au/rivprofile/tumbarumba

Riverina Regional Development Board *Tumut Regional Profile* www.rrdb.com.au/rivprofile/tumut

Riverina Regional Development Board *Wagga Wagga Regional Profile* www.rrdb.com.au/rivprofile/waggawagga

Roads and Traffic Authority *Improving the bike network* www.rta.nsw.gov.au/raodsafety/bicycles/improvingthebikenetwork

Sport and Recreation Queensland Web site – *Facts and Stats – Adult Participation*

South Australian Office of Sport and Recreation (2002) *The Recreational Trails Strategy for South Australia 2002 – 2010*

South Australian Tourism Commission (1999) *Cycling Tourism – A Background Research Paper*

St Leger, L. (2004) *Keeping our parks, trails and our people healthy* Paper to 3rd National Tracks and Trails Conference, Hahndorf, October 18 – 20, 2004

Tumut Shire Council *About the Shire* www.tumut.local-e.nsw.gov.au

Tumut Region – Developing Naturally Inc. *Tourism fact sheet*

Tumbarumba Shire Council *About the Shire* www.tumbashire.nsw.gov.au

Urban Enterprises (2006) *Goulburn River High Country Rail Trail –Concept Design and Business Plan* Prepared for Mitchell Shire Council, Murrundindi Shire Council and Mansfield Shire Council

U.S. Department of Health and Human Services (1996) *Physical activity and health: report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

Victorian Trails Coordinating Committee (2005) *Victorian Trails Strategy (2005-2010)*

Wagga Wagga City Council (2002) *Wagga Wagga Vision 21: Strategic Land Use Management Plan for Wagga Wagga*

Wang, G., Maccera CA, Scudder-Soucie B,Schmid T, Pratt M, and Buchner D (2005) *A cost-benefit analysis of physical activity using bike/pedestrian trails* Health Promot Pract 2005 Apr; 6 (2): 174-79

APPENDICES

APPENDIX 1 - PROJECT BRIEF

WAGGA WAGGA TO TUMBARUMBA RAIL TRAIL

DRAFT: CONCEPT PROPOSAL AND FEASIBILITY STUDY

1. RAIL TRAIL CONCEPTS

Aim: To provide an overview history of rail trail developments in NSW and other States and give an outline of the basic concepts and features of existing rail trail developments.

This section of the study would include:

i. What is a rail trail?
ii. Options for use
iii. Community benefits of rail trails
iv. Overview history and development of rail trails in NSW and other States
v. How do rail trails function and operate?
vi. Requirements for successful rail trail development

2. WAGGA WAGGA TO TUMBARUMBA RAIL TRAIL PROPOSAL

2.1 CONCEPT

Aim: To provide a broad outline of the proposed Wagga Wagga to Tumbarumba Rail Trail as well as details and discussion of local and regional features supporting its development

This section of the study would include:

i. Details and discussion of relevant local and regional features with supporting statistics (location, demographic, landscape, environmental, visitor patterns)
ii. Route details
iii. Current ownership of corridor and required changes to title
iv. Current status of infrastructure
v. Details and discussion of required track and infrastructure features

2.2 BENEFIT/ COST ANALYSIS

Aim: To present an economic evaluation of the project including the expected benefits and costs associated with the complete rail trail development.

This section would include:

i. A detailed analysis and valuation of all of the socio-economic benefits including tourism, recreational, community, environmental and business benefits.
ii. Provide an initial estimate of costs including both capital development costs as well as the annual costs of maintenance and management.
iii. Carry out a full benefit/ cost analysis including interpretation and discussion of results

3.0 TUMUT TO BATLOW RAIL TRAIL PROPOSAL

3.1 CONCEPT

Aim: To provide a broad outline of the proposed Tumut to Batlow Rail Trail as well as details and discussion of local and regional features supporting its development

This section of the study would include:

i. Details and discussion of relevant local and regional features with supporting statistics (location, demographic, landscape, environmental, visitor patterns)
ii. Route details
iii. Current ownership of corridor and required changes to title
iv. Current status of infrastructure
v. Required infrastructure developments for rail trail utilisation

3.2 BENEFIT/ COST ANALYSIS

Aim: To present an economic evaluation of the project including the expected benefits and costs associated with the complete rail trail development.

This section would include:

i. A detailed analysis and valuation of all of the socio-economic benefits including tourism, recreational, community, environmental and business benefits.
ii. Provide an initial estimate of costs including both capital development costs as well as the annual costs of maintenance and management.
iii. Carry out a full benefit/ cost analysis including interpretation and discussion of results

4.0 DISCUSSION OF DEVELOPMENT ISSUES AND IMPLEMENTATION PROCESS

Aim: To identify and discuss the main issues concerning the proposed development and give recommendations concerning the subsequent approval and implementation process.

This section would include:

i. Main issues, objections and responses flowing from the consultative process with community, adjacent landholders, Local Government Councils and Government Departments and Authorities.
ii. Potential sources of capital for development, including community contribution, Corporate, Council and Government contributions
iii. Discussion of possible oganisational structures and resourcing of trail management, operation, maintenance and marketing.
iv. Requirements and process for carrying out of detailed trail design and business planning, following acceptance of the project feasibility.

APPENDIX 2 - THE RIVERINA HIGHLANDS RAIL TRAIL COMMITTEE

The Riverina Highlands Rail Trails Committee Membership is as follows:

Owen Fitzgerald	Chair
Paul Gordon-Smith	Secretary
David Glastonbury	Assistant Secretary
Peter Dale	Executive Officer
Warwick Hull	Department of Lands
Joy Walker	Greater Hume Council
David Sell	Tumbarumba Shire Council
Brad Beed	Tumut Shire Council
Sally Nolan & John Duffy	Wagga Wagga City Council:
Tony Grimmer	Royal Australian Air Force

Appendix 3 – Attendees at Consultation Meetings

Community Meeting – Forest Hill

Thursday 16th March 2006 - 7.00pm – 8.30pm – Forest Hill Primary School

J. Simpson
Lisa Glastonbury
Betty Clarke
Bob Clarke
Diane Pike
Mark Pottie
Dave Longmore
Tim Clout
Lynne Clout
Anthony Archer
Catherine Enever
L Stenhouse
Rick + Pamela Martin
Bryce Miller
Jim Simpson
Lloyd ??
John Pike
Marty O'Callaghan
Amanda Mosely
Warwick Hull
Greg Fell
Alan Brown
Bruce Angel
Clr Jan Hay
John Moore
Peter Butler
David Glastonbury
Mal Mobbs
Jim & Helen Dumaresq
Graeme Buchan
Richard Goodman
Alice Goodman
Colin Heinz
Leanne Archer
Emily Doak
Heather Pearce
Peter Makin
John Trevaskis
Don Pollard

Community Meeting – Humula

Monday 20th March 2006 - 7.00pm – 8.30pm – Humula Club

Mrs E. McCallum
Nola Clarke
Denzel Clarke
Hector McCallcum
Mirth Parker
Ian Parsons
Mike & Judy Slack-Smith
Stephen Sykes
Stuart Forsyth
Edward Gallagher
Ken Sargent
Paul Gordon-Smith
Cathy Fitzgerald
Owen Fitzgerald
David Toola
Bob Schofield
On behalf of Keith + Penelope
J. ??
Steve Mead

Community Meeting – Tumbarumba

Tuesday 21st March 2006 - 7.00pm – 8.30pm – Tumbarumba Bowling Club

P Crozier
J Crozier
Cath Frew
Mary Anna Marshall
Malcolm Marshall
Eric Greenhalgh

Community Meeting – Batlow

Wednesday 22nd March 2006 - 7.00pm – 8.30pm – Batlow RSL

Brian & Diana Droscher
Kevin & Jo Murrell
Peter Becker
Michael Chubb
Tom Roberts
Phillip Collins
Luke Watson
Noni Broome
Jeremy Smart
Chris Horsley
Beth Mainwaring
Scott Baron

Community Meeting - Tumut

Thursday 23rd March 2006 - 7.00pm – 8.30pm – Tumut Shire Council Chambers

Harold Shore
Peter Ravenscroft
Tony Butler
Luke Butler
Kevin Fischer
Jimmy Goode
Jennifer Bawden
Steven Cook
Ben Dumbrall
Matthew Pope
Susan Quinnell
Trina Thomson
Jan French
Roger Davies
John Sutton
Charles Taylor
Scott Baron
Kay Knight
Fran Butler
Steve Longobard
Drew Tilbrook
Brian Knight
Lesley Shore
Peter Annotts
Amy Butler
Ted Taylor
Helen Taylor
Barbara Pryce
Cathy Webb
Jeni Stuckey
Fay Garner
Gordan Game
Jan Locke
Carol Regan
Carol Etherington
Bryan Shore
R Back
W. Back
Teresa. Butler
David Webb
Col Locke
Donna Martin

Graeme Martin	??
Bev McDougall	J. Jamieson
Peter Becker	Kevin Murrell
Colleen Webb	James Hayes
Cathy Knight	Phil Barton
C Lucas	

APPENDIX 4 – PROJECT NEWSLETTER

Insert 2 Page Newsletter here

APPENDIX 5 – TESTIMONIALS FROM AMERICAN LAW ENFORCEMENT OFFICIALS

CITY OF
LOUISVILLE
CONSTITUTION TOWN

DEPARTMENT OF SAFETY
DIVISION OF POLICE 330/875-1607

May 13, 1997

Hugh Morris
Rails to Trails Conservancy
1100 Seventeenth St. NW
Washington, DC 20036

Dear Mr. Morris,

I came to Louisville in August of 1991 as the Chief of Police. At that time, the City was completing plans for the conversion of an old railway line to a walking path. I was concerned for the safety of citizens due, in part, to the remote area that was traversed by the line. I strongly encouraged the placement of emergency call boxes along the walkway. The call boxes were never installed.

I am very pleased to report that crime incidents along the walkway are almost nonexistent. I attribute this to several factors. Primarily, the high volume of use by families along this walking path has created a community ownership of the path. Police also regularly patrol the area, but it is unlikely that anyone will travel the path for more than a quarter of a mile without coming into contact with other path users.

The incidents of vandalism over five years has been only two small areas of the asphalt that were spray painted. Those were immediately cleaned up by city crews. It should be noted that the path is also along an area that is a frequent loitering place for juveniles that have little supervision. Still, the criminal complaints along the path are almost zero.

Two weeks ago, my family and I took part in a community clean-up day. My wife, one daughter, and I elected to walk the path to pick up litter. Each of us armed with a large trash bag and work gloves, we started out. By the end of the mile and a half, we had found ONE piece of litter almost too small to have noticed. We did encounter, however, several familes walking and a police patrol car. I can only attribute the cleanliness to the ownership that citizens have taken for this area. I should also note that once you leave the path and continue where the railway line had been, the trash and graffiti are overwhelming.

I hope that you will find this information useful. If I can be of further assistance, please do not hesitate to call upon me.

Sincerely,

Ross L. Rigga
Chief of Police

215 South Mill Street • Louisville, Ohio 44641 • Fax 330/875-1820

OFFICE OF THE SHERIFF

Patrick J. Conlin, Sheriff
J. Michael Welsh, Chief Deputy

May 3, 1997

Mr. Hugh Morris
Research Coordinator
1100 Seventh Street, NW
10th Floor
Washington, DC 20036

Dear Mr. Morris:

I received your letter today inquiring about the Sugar River State Park Trail which is in Green County, Wisconsin. I am pleased to say that there is almost no crime associated with our trail and it is a very popular tourist attraction. It is one of our most positive advertised attractions which covers many municipalities.

The trail does not encourage crime, and in fact, probably deters crime since there are many people, tourists and local citizens using the trail for many activities at various hours of the day. The development of the trail was such a good idea, the County has just recently acquired another trail in addition to our other existing trail, the Cheese Country Recreational Trail. I have enclosed information for our ordinances concerning the Cheese Country Recreational Trail along with a brochure and other correspondence. Sorry to say, I do not have any information on the State Trail at hand. If you want, I can acquire some and forward. I usually have some, but must have recently ran out.

If you need anything, please feel free to contact me.

Sincerely,

Pat Conlin

Pat Conlin
Sheriff

trail wpd

2827 6th Street • P.O. Box 473 • Monroe, WI 53566 • 608-328-9400 • Fax 608-328-1823

APPENDIX 6 – DRAWINGS AND CROSS-SECTIONS

1. Typical Cross Section
2. Typical Cross Section – including horse trail
3. Viewshed Obscured by Planting
4. Typical Scene Through Grazing Land with Relocated Fencing
5. Techniques for Maintaining and Enhancing Security and Privacy of Adjoining Properties
6. Typical Major Road Crossing Treatment
7. Typical Major Road Crossing
8. Typical Minor Road Crossing
9. Typical 'Chicane' Arrangement
10. Cavaletti gate system

APPENDIX 7 - LIST OF PLANS

1. Wagga Wagga to Ladysmith
2. Ladysmith to Borambola
3. Borambola to Tarcutta
4. Tarcutta to Umbango
5. Umbango to Humula
6. Humula to the Downfall
7. The Downfall to Rosewood
8. Rosewood to Tumbarumba
9. Tumut to Wereboldera
10. Wereboldera to Batlow