



Feasibility Study

Bundaberg Gin Gin Rail Trail

Prepared by



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Executive summary

The Queensland Government released its Queensland Cycling Action Plan in 2017 which committed to the investment of \$14 million over four years to develop and implement a program to deliver rail trails in partnership with local governments on state-owned disused rail corridors. This funding provided an impetus to examine a range of railway corridors which may have the opportunity to be converted to rail trails.

Bundaberg Regional Council commissioned Mike Halliburton Associates to prepare a Feasibility Study for a possible rail trail from Bundaberg to Gin Gin – utilising the now disused Mt Perry branch line railway corridor.

The study was commissioned to ascertain whether it is a worthwhile project, and whether the rail trail will deliver the anticipated and desired benefits.

This Feasibility Study seeks to answer a number of critical questions:

- Is there a viable trail route (is a trail route physically possible)?
- Are there alternative uses for the corridor that will provide more value to the community? Are these alternative uses viable?
- Will the rail trail provide a quality user experience (terrain / landscape / history)?
- Is there a market for the proposed trail (local people and visitors who will be attracted to use it)?
- Will the rail trail create any unmanageable or unmitigated impacts on adjoining landholders' farming practices and lifestyles?
- Are the local government and key stakeholders supportive of the concept?
- Are there supportive/strong advocates (in the community)?
- Is there a supportive community?
- Would the trail be value for money?
- Is there a commitment to the ongoing maintenance of the trail ("friends of ..." group or support network)?
- Will the trail provide a unique experience?
- Is there a demonstrated benefit to trail users and, especially, the host communities?

The Feasibility Statement set out in Section 10 answers these questions. Generally, the answer to most of these questions is "Yes".

What is a rail trail?

A rail trail is a multi-use recreation trail running on a disused rail corridor (public land) for non-motorised recreation. There are over 100 established rail trails in Australia, the majority of which are in Victoria. South Australia, Western Australia, Queensland, Tasmania, NSW and the Northern Territory also have rail trails albeit a small number in each state. A number are under consideration in Queensland.

Issues

There are a range of issues involved when considering a rail trail project. Of particular significance when considering whether a rail trail between Bundaberg and Gin Gin would be viable are the following matters:

- **Bridges:** river and creek crossings. 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 costliest items in the development of trails on former railways. The bridge over Splitters Creek is without doubt the single biggest highlight of the proposed rail trail. However, refurbishing it with new decking suitable for pedestrian and cyclist use, together with the installation of safety railings, will be the single biggest cost item in establishing the proposed rail trail.
- **Trailheads.** Having a significant population centre at each end of the proposed rail trail is a major advantage. It is highly desirable that the rail trail have a clearly identifiable activity centre at each end where there is ample space for accommodating trail users' vehicles. Identifying a logical 'trailhead' within Bundaberg and at Gin Gin is not without difficulties as numerous options are available at the eastern end (Bundaberg), and several at Gin Gin. The recommended site in Bundaberg is within Lions Park in North Bundaberg, between the railway bridge and Bundaberg Bridge. In Gin Gin, the obvious trailhead location would be in the vicinity of the railway station museum – most likely in vacant land to the south of the museum.
- **Encroachments on the corridor.** When a railway corridor becomes disused it is only a matter of



The spectacular bridge over Splitters Creek would be a major attraction to many local people and visitors to the towns of the region. Refurbishing it for pedestrian and cyclist use will be a major expense.

time before it becomes used for other (usually unapproved) purposes. Such is the case with the Bundaberg to Gin Gin corridor. The Bundaberg Golf Club utilises the corridor as an access road for its members' vehicles and for parking. Adjoining businesses store materials on the corridor. Large swathes of the corridor in the vicinity of McIlwraith siding appear to have been used for agricultural pursuits. Between Bullyard and Maroondan a large stretch of the corridor has been cleared and integrated with the adjoining farm. A significant portion of the corridor at Koolboo Rd has been used for the storage of old earthmoving machinery. Farm vehicle and stock access across and along the disused railway corridor is commonplace in many locations. It is believed that the construction of buildings on the corridor has taken place. It is likely that there are others that were not seen during the fieldwork for the feasibility study but will become obvious if trail development proceeds. Most of these issues can be satisfactorily resolved but it needs to be reinforced that the corridor is public land.

- **Road crossings.** There are in the order of 15 significant road crossings along the railway corridor between the proposed trailhead in Bundaberg and the proposed trailhead in Gin Gin. This includes 4 locations where the former railway corridor crosses the Bundaberg Gin Gin Rd. Given the recent crash history along this road, and the propensity for rail trails to attract novice cyclists and family groups, special care will need to be taken to ensure each road crossing is treated carefully to maximise safety for trail users.
- **Landholder issues.** Adjacent landholders are traditionally, and understandably, apprehensive about trails close to their properties. It is important that these concerns are seriously addressed before any trail conversion takes place. Many landholders resent having things imposed on them or feeling as if they have no say in what is happening around them. Landholder consultation always raises a number of issues, all of which have been satisfactorily addressed in other rail trail projects in Australia, New Zealand and North America. Issues tend to centre around a number of key elements within three major headings:
 - **Farm management and disruption to farming practices;**
 - **Non-farm management issues.** These are generally concerns around safety, security privacy, theft, trespass, noise, disturbance and a range of related issues; and
 - **Trail management.** These are generally concerns around maintenance, and the behaviour of trail users in regard to littering, toileting and other issues.
- **Costs for construction and maintenance.** Costs for capital and maintenance are a major consideration in any public infrastructure project. These need to be offset against a range of benefits, both economic and non-economic. Detailed costings are not part of this project, but the Council needs to have some understanding of the possible construction and maintenance costs. Ongoing trail maintenance is

a crucial component of an effective management program, yet it is often neglected until too late. Ongoing maintenance can be minimised by building a trail well in the first place. A well-constructed trail surface will last considerably longer than a poorly built trail.

- **Fencing.** Although much of the former railway corridor is located within bushland, or is now well overgrown and somewhat remote from adjoining farms, there is still a need for new boundary fencing is several locations both for insurance purposes and to reduce maintenance costs by allowing grazing of the “excess” corridor. One of the options to maintain the corridor (as opposed to maintaining the actual trail) is to allow adjoining or adjacent landholders grazing permits over those parts of the corridor not required for a trail (a 6 metre envelope incorporating the trail on the railway formation). There is limited grazing along the corridor as it runs through cropping land but fencing is an option where grazing is occurring.
- **Cane railways.** The 45.6 km former railway corridor between Bundaberg and Gin Gin crosses over a large number of operating cane railways. Just like crossing roads, the rail trail will need to be constructed to ensure minimum conflict between trail users and train movements along the cane railways.
- **Potential other uses of the corridor.** In other parts of Australia in recent years there have been proposals for the establishment of some form of tourist train (or even freight and/or passenger services) on some disused railway corridors. Despite the huge cost for this to occur, they nonetheless are a matter that requires some consideration before a rail trail is developed. At the time of the preparation of this Feasibility Study no known train proposals have been identified for the Bundaberg to Gin Gin railway corridor.

Opportunities

Rail trails also provide several opportunities. There are a number of specific elements within the area encompassed by the proposed trail route that provide opportunities and reasons for why a trail should be built.

- **Appealing landscapes and infrastructure.** The proposed Bundaberg Gin Gin Rail Trail would pass through attractive scenery. There are farming vistas west of Splitters Creek and all the way to Gin Gin. They vary and cover both grazing and cropping. The attractiveness of these

quintessential rural landscapes to city dwellers in particular should not be underestimated. There are small patches of relatively undisturbed bushland west of Bullyard. The trailhead at Lions Park North offers a pleasant start with good views of the Burnett River. The occasional views over irrigation channels, cane fields, cane railways, and other agricultural pursuits add variety and interest. The quality of intact railway heritage items varies along the corridor, such as Splitters Creek bridge, will be a major attraction for both trail users and other visitors who simply want to come and see a historic timber trestle bridge. The restored railway station and museum at Gin Gin provides a comprehensive and enjoyable look at the region’s past.

- **Topography of the route.** One of the major appeals of rail trails is the gentle gradient, suitable for all types of cyclists and walkers (gradient is typically less of an issue for horse riders). This is the market that would be attracted to a rail trail. Their demands are paramount in considering trail feasibility.
- **Connections between towns.** Taking trail users through towns will provide new business opportunities for service providers. Presently, there are a relatively limited number of services that would appeal to trail users in the smaller settlements of Sharon, South Kolan and Bullyard (the trail passes some distance from South Kolan). Bundaberg and Gin Gin provide much higher level of services of interest to trail users. Development of the rail trail may provide a range of new business opportunities (or allow existing businesses to expand). The trail will make an actual connection between the towns and villages en route – one that reinforces historic connections.
- **A trail with anchors at each end.** One-way trails (or out-and-back trails) need an anchor at both ends to be attractive to users. The best one-way trails (including many rail trails) have natural terminuses in major centres or towns or pass through major towns. Bundaberg and Gin Gin are the obvious well-developed anchor points.
- **Broadening the recreation offerings.** Provision of an additional off-road trail adds to the list of tourist offerings in the region and encourages visitors to stay a little longer to go for a pleasant walk or ride. A new nature-based attraction has the power to retain those visitors for longer, spending money and generating business opportunities. Natural assets that are utilised for outdoor recreation are found in the region.



Development of the rail trail would provide numerous opportunities to interpret the rich history of the region, including the importance of the many railway sidings and stations such as at Birthamba.

- **Visitor markets.** A trail such as the Bundaberg Gin Gin Rail Trail will provide a number of opportunities generally associated with recreation trails. A trail will bring additional tourists and keep them longer in the area. Other possible benefits from developing the trail include improvements to community connectivity, increasing recreational options for local people and creating opportunities to build on existing industries and enterprises of the area.
- **There is a range of business opportunities for private sector investors arising from the potential development of a rail trail.** Providing accommodation, food and beverages, supported and guided tours, and equipment, are some of the businesses that have arisen along other trails. Such services add significantly to the user's enjoyment if done properly.

Trails also have a number of non-monetary benefits. They improve community connectivity and provide increasing recreational options for local people thus contributing to both physical and mental health of communities through which they pass.

Trail costs

The Costs of Developing the Rail Trail
(GST exclusive)

Section	Cost
Section 1: Bundaberg to Sharon (8.7km)	\$4,500,140
Section 2: Sharon to South Kolan (Birthamba) (10.2km)	\$1,171,280
Section 3: South Kolan (Birthamba) to Bullyard (12.9km)	\$1,705,150
Section 4: Bullyard to Gin Gin (13.8km)	\$1,793,290
Total (excluding GST)	\$9,169,860

The Business Case

It is always difficult to predict the economic impact of a new trail. Visitor numbers on the Bibbulmun Track (in WA) grew from 10,000 when the new alignment was first opened in 1997 to 137,000 in 2004 (*Colmar Brunton 2004*) to over 167,000 in 2008 (*Colmar Brunton 2009*) to over 300,00 in 2015 (*Hughes et al 2015*). 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 any of the proposed trail is primarily dependent on the extent to which the trail is marketed and promoted (if it proceeds).

A trail will bring additional tourists and keep them longer in the area. Other possible benefits from developing the trail include:

- Improvements to community connectivity;
- Increasing recreational options for local people; and
- Creating opportunities to build on existing industries and enterprises of the area.

A trail such as the proposed Bundaberg Gin Gin Rail Trail will have attraction to visitors – day trippers and overnight visitors. However, it will also add to the stock of existing trails for local people – people who live in towns and villages within easy reach of the rail trail. Some of these people will use the rail trail for exercise – these 'back gate' users may not be significant in terms of expenditure, but they are significant in terms of numbers as they would use the rail trail many times a year.

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

- Significant local use – 312,000 local users/year is a reasonable expectation. This will result in an economic injection of \$670,800/year;
- Expansion of the existing day tripper market to the region. 3,000 new day trippers/year injection \$435,300/year into the regional economy.
- With a new significant recreation attraction, some day-trippers may stay overnight, generating a new income stream. If the trail converted 2,000 day trippers into overnight visitors, this would inject an additional \$418,080/year into the regional economy.
- If 5,000 visitors stay an extra day to use the

trail (or use a package of trails including the Bundaberg Gin Gin Rail Trail), an additional \$1,045,200/year would be injected into the regional economy.

- If 1,000 new visitors come to the region solely (or primarily) to do the trail, an additional \$418,080/year would be injected into the regional economy.

The total injection of dollars into the local economies from local, day trip and overnight visitors may be of the order of **\$2,987,460/ year** (under a range of conservative scenarios). Complex economic analysis (beyond the scope of this project) is needed to determine how many jobs are likely to be created by such expenditure.

It should be emphasised that user and visitor numbers will not necessarily be realised in the first years of operation if the trail proceeds. It also should be noted that these numbers may grow as the overall visitor numbers grow – particularly in the two groups covering existing visitors – converting day trips into overnight stays and extending overnight stays by a day.

Trail development offers a range of new business opportunities and the opportunity for existing businesses to extend their offerings. The trail has the potential to improve the sustainability of businesses reliant on tourism.

The completion of a trail would not simply provide an injection of funds to stabilise and grow existing and new businesses. The psychological impact on businesses can also be very important; businesses operating around other rail trails believe the trails have contributed to their businesses as well as helping to position their area as an authentic leisure holiday destination.

The trail construction process itself will provide an economic input to the region.

The trail will provide a number of less quantifiable benefits. These include:

- Health-related benefits to the wider community. Data from the USA indicates that every \$1 of funds spent on recreational trails yield direct medical benefits of \$2.94. The trail 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. Medical research has shown that 1 hour of moderate exercise can add more than 1 extra hour of high-quality life to an individual.
- Rail trails are an accessible form of recreation. Trail-based recreation is generally free, self-directed and available to all people, all day, every day. Good quality, accessible trails encourage physical activity and improved health. Increasing recreational options for local communities will aid overall community wellbeing. The psychological benefits of trails remain under-estimated.

- Quality recreational facilities, such as trail networks, can help create attractive places to live and visit. Walking and cycling are relatively cheap modes of transport. Trails also provide a low impact means of travelling through the landscapes and play an important role in connecting people with nature.
- Trails present a unique opportunity for education. People of all ages can learn more about nature, culture or history along trails. Trails have the power to connect users to their heritage by preserving historic places and by providing access to them. They can give people a sense of place and an understanding of the enormity of past events. An added advantage of a rail trail is that it provides an opportunity for city to connect to country, in a way "bush" trails do not.
- Trails provide a number of environmental and cultural benefits including opportunities for the community to experience natural and cultural environments, increased community ownership which helps to preserve natural and cultural values; and opportunities for community participation in conservation and revegetation work.

The Feasibility Statement

Following consideration of the major issues pertaining to the development of a trail on the disused railway corridor between Bundaberg and Gin Gin and considering the views of key stakeholders, groups and individuals consulted (and background information obtained during the course of the project), this Study recommends that the proposed rail trail proceed, *subject to a number of conditions being met*.

It should be noted that it is not necessary to meet all these conditions immediately a decision is made to proceed to the next stage (a trail development plan).

For the trail to ultimately proceed, a number of conditions should be met:

1. Bundaberg Regional Council (or a Committee of Management) being prepared to accept vesting of the entire railway between Bundaberg and Gin Gin with an acknowledgement that sub-leases may be required to permit other activities (if appropriate);
2. A detailed design development plan for the rail trail being prepared, which will involve a thorough examination of the proposed trail, the preparation of detailed works lists and cost estimates;
3. A comprehensive program of one-on-one discussions on-site with affected adjoining landowners be undertaken to ascertain their individual concerns and to work out together solutions to each issue raised. This can be done as part of the trail development plan;
4. The project proponents (the Council) seek funding from external sources (notably the Queensland Government and Commonwealth Government) for the construction of the proposed trail;
5. A commitment to ongoing maintenance of the trails being given by the Council, any Committee of Management and volunteers;
6. Consideration be given (based on this report, the trail development plan, any relevant Bundaberg Regional Council policies and any State Government policy direction) to forming a Committee of Management, comprising (at least) representatives of the Council, user groups, the Rural Fire Service, residents of the communities, local business proprietors and adjoining landowners, be formed to guide the ongoing planning, design and construction, management and maintenance of the proposed rail trail and the former railway corridor. (The Committee of Management could be modelled on successful Victorian examples);
7. Following completion of a Trail Development Plan and a decision to proceed, the preparation of relevant plans, such as a Corridor Management Plan and a Bush Fire Risk Management Plan for the corridor;
8. Existing uses of the corridor (primarily but not only for agricultural purposes) to be considered on their merits, and suitable solutions found to enable the activity to continue where reasonably achievable; and
9. Once constructed, the Trail Manager is to assume liability responsibility for trail users and are to take all actions possible to mitigate potential claims against landowners and neighbours.

There are a number of stages for trail development if and when a decision is made to proceed with the development of the Bundaberg Gin Gin Rail Trail as recommended in this report.

- Undertake a series of more detailed investigations into the structural integrity of the Splitters Creek bridge.
- Prepare a detailed design development plan for the trail, which will involve a thorough examination of the entire corridor, and the preparation of detailed works lists and cost estimates. Include within this planning detailed one on one consultation with adjacent landholders to investigate issues and arrive at agreed solutions.

An artistic illustration of two cyclists riding along a dirt trail that winds through a dense forest. The trees are tall and thin, with green foliage. The cyclists are wearing helmets and casual riding gear. The trail is a reddish-brown color, contrasting with the green grass and trees.

Implementation stages

The recommended stages for the progressive development of the Bundaberg Gin Gin Rail Trail are:

- **Stage 1 of construction:**
Bundaberg to Sharon
(8.7km – includes bridge over Splitters Creek)
- **Stage 2 of construction:**
Sharon to South Kolan (Birthamba)
(10.2km – includes existing Sharon Rail Trail)
- **Stage 3 of construction:**
South Kolan (Birthamba) to Bullyard (12.9km)
- **Stage 4 of construction:**
Bullyard to Gin Gin (13.8km)

Section 1 – Introduction

The proposed Bundaberg Gin Gin Rail Trail would be developed on the disused railway corridor between Bundaberg and Gin Gin – a distance of some 46 kilometres.

1.1 A history of the railway corridor

The development of the railway line was driven by the discovery of copper at Mt Perry (approximately 100 kilometres west of Bundaberg) in 1869. A railway to the coast was essential to provide cheap transport and make the mining of low percentage ore viable. Maryborough and Bundaberg vied for the opportunity to be the terminus and Bundaberg was successful.

Transportation of timber, sugar and dairy products continued until it became uneconomical for the service to continue. This was a typical scenario across Australia. Road transport became steadily more efficient during the 1950s and the railways began to lose their primary function. Throughout the following decades, scores of railway lines were abandoned. Many of these corridors remain in public ownership.



The bridge over Splitters Creek is the major remaining bridge on the proposed rail trail.

An 1875 survey proposed a line from North Bundaberg, thus avoiding an expensive bridge over the Burnett River west to Gin Gin and then via the old road and telegraph route to Moolboolaman but still some distance short of Mount Perry. By the time the Queensland Parliament finally approved construction, mining at Mount Perry was substantially curtailed.

Construction of the first stage pre-dated the completion of the North Coast line from Maryborough to Bundaberg by some seven years. When the North Coast line reached Bundaberg, the original Bundaberg station on the Bundaberg Gin Gin line was renamed North Bundaberg.

There followed a series of extensions before the line to Mount Perry finally opened on 20 May 1884. A feature of the last stage of the line was construction of the Boolboonda Tunnel. The tunnel is the longest unsupported tunnel (192 metres) in the southern hemisphere.

The Bundaberg Mt Perry line closed in stages with the final closure (Gin Gin to North Bundaberg) in January 1993. (https://en.wikipedia.org/wiki/Mount_Perry_railway_line)

Some important reminders of the former railway remain along the railway corridor between North Bundaberg and Gin Gin. The North Bundaberg and Gin Gin railway stations remain and have been re-purposed as museums. Due to the nature of the original line, there were limited cuttings and embankments. Some remain east of Gin Gin. Remaining bridges are limited though the Splitters Creek bridge is a spectacular example of a railway bridge.

1.2 Recent history

The Queensland Government released its Queensland Cycling Action Plan in 2017 which committed to the investment of \$14 million over four years to develop and implement a program



The old railway station at Gin Gin.



The old railway station North Bundaberg. Both stations have been preserved and restored, thanks to the hard work of local heritage groups.

to deliver rail trails in partnership with local governments on state-owned disused rail corridors. This funding provided an impetus to examine a range of railway corridors which may have the opportunity to be converted to rail trails.

Sections of the former railway to Mt Perry have already been converted to a rail trail including the rail trail at Boolboonda Tunnel, a section of sealed pathway at Sharon (Sharon Rail Trail) and the Watawa Rail Trail between Gin Gin and Tirroan.

In mid 2018, Bundaberg Regional Council sought funding under the Queensland Cycling Action Plan to commission a feasibility study on the Bundaberg to Gin Gin Rail Trail.

1.3 The study approach

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 study, the approach taken defines the community not just as the local community (i.e. people living and working alongside the railway corridor), but also all of those people living in

the wider region encompassing residents of Bundaberg Regional Council. The approach has also encompassed visitors to the region in its scope, as these numbers may be significant.

Naturally, those living alongside the corridor have a direct and often very personal interest in the corridor and perceive that they may be losers out of any conversion to a rail trail due to a perception of 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, and 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.



Sections of the former railway to Mt Perry have already been converted to a rail trail. Above: a section of sealed pathway at Sharon (Sharon Rail Trail).



Watawa Rail Trail between Gin Gin and Tirroan.

Section 2 – Scope of works

The Feasibility Study will provide sufficient detail to determine whether a rail trail on the disused Bundaberg Gin Gin rail corridor (a distance of some 46kms) has merit. More refined and accurate cost estimates would be prepared by means of a detailed trail development plan (once the rail trail has been deemed feasible or not).

Feasibility is determined not just by the project costs but by an analysis of several factors.

In considering trail feasibility, the costs of construction need to be weighed against the benefits (direct and indirect) that such a trail brings.

The Feasibility Study should seek to answer several questions:

- Is there a market for the proposed trail (i.e. local people and visitors who will be attracted to use it)?
- Are the local governments and key stakeholders supportive of the concept?
- Are there supportive/strong advocates (in the community)?
- Is there a supportive community?
- Will the trail provide a quality user experience (terrain/landscape/history)?
- Would the trail be value for money?
- Is there a commitment to the ongoing maintenance of the trail ("friends of ..." group or support network)?
- Will the trail provide a unique experience?
- Is there a demonstrated benefit to trail users and, especially, the host communities?

The Feasibility Study addresses a number of issues (as well as answering the key questions). This will allow informed Council and community consideration of the proposal. Issues to be addressed include:

- What is a rail trail, including an overview of history and development, and operations;
- Options for corridor re-use;
- Community benefits and socio-economic benefits (including estimate of the potential monetary value) of rail trails;
- Requirements for successful rail trail development;

- The potential demand and source of demand (local vs. tourism) for use by pedestrians, horse riders and the various types of cyclists;
- Opportunities for small-scale tourism development around trailheads or along the trail;
- Current condition of the corridor with regard to vegetation, formal or informal activities, presence of track and any other relevant matters;
- Geological or environmental significance and environmental issues for the trail/corridor;
- General review of works necessary to establish the trail to bring the bridges, tunnels and trail surface to a condition where they can be incorporated into the trail;
- Heritage aspects of the route including any potential railway heritage associated with the corridor;
- Rail trail infrastructure requirements in accordance with standards having regard to user demand, other local rail trail facilities, consideration of ongoing maintenance costs, and the need to minimise conflicts between users;
- Key links to other existing or proposed cycle, pedestrian or bridle paths;
- Cost estimates to establish the rail trail to the preferred standard including bridges, trail surface, rail removal (where required), signage, boardwalks, highway and road crossing points and additional community infrastructure. This should include initial estimates of annual costs of maintenance and management;
- Staged establishment of the rail trail; and
- An economic evaluation of the project including the expected benefits and costs associated with the complete rail trail development.

All these factors feed into the preparation of a feasibility statement.

Section 3 – Rail trails explained

A rail trail is a multi-use recreation trail running on a disused rail corridor (public land) for non-motorised recreation. There are over 100 established rail trails in Australia, the majority of which are in Victoria. South Australia, Western Australia, Queensland, Tasmania, NSW and the Northern Territory also have rail trails albeit a small number in each state. A number are under consideration in Queensland.

3.1 Requirements for successful rail trail development

There is a wide range of features that make rail trails popular. Generally speaking, it is the flatness of the corridor and the many historic features of the railway (embankments, cuttings, bridges, tunnels, signals, switches, stations and sidings, turntables etc) that attract and fascinate visitors to a rail trail.

Not all rail trails are the same: some are located through farming land, some are located in inner urban areas, and others are located through forests.

Rail trails are different from each other, but a number of characteristics often distinguish 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 - places to eat and drink, explore and stay.
- Good rail trails have some heritage infrastructure in place such as historic stations, bridges, tunnels, goods sheds, sidings, platforms, turntables, switches, signals, and mile posts. Rail trails elsewhere have utilised their railway history as part of their attraction. 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
- 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-of' 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. Intermediate towns easily accessible along the trail are critical when a trail is long and an added bonus when the trail is short.
- The best rail trails 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. 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 add 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 the number of 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.

3.2 Who uses rail trails and why?

Observation of many operating rail trails throughout Australia, New Zealand and North America indicates that there is a very wide diversity of people (and groups) that use rail trails in particular.

The predominant user group for rail trails is cyclists, ranging from elderly people, to baby boomers, young couples, family groups with children, teenagers and young children. Walkers and horse riders are also attracted to rail trails, but in far lesser numbers. They all are using rail trails for a reason: they enjoy motor vehicle traffic-free routes, away from the noise and smell of roads, away from trucks and cars.

Rail trails appeal to individuals, to couples, to groups. In fact, a significant proportion of trail users on the Otago Central Rail Trail on the South Island of New Zealand are groups. These groups consist of sporting clubs, work groups, school groups, social clubs, Over 50’s groups and organised tour groups.

Some use the rail trail for team-building, some use it for fitness training, others for a social club outing. Others use the Otago Central Rail Trail simply for the outstanding beauty and scenery that it provides.

A study of the impact of rail trails on the communities through which they pass was undertaken by Professor Sue Beeton of La Trobe University. The study involved interviews and survey of users of the Murray to the Mountains Rail Trail in NE Victoria over the 2009 Easter weekend. It found:

- Of the 128, only 22 identified themselves as living close to the Rail Trail but were all travelling with visitors. Travel companions were evenly spread between travelling with a partner, family or friends, while only a small number of respondents (5%) travelled alone.
- The respondents were predominantly employed in professional and administrative positions (47% and 25% respectively) with 14% retired; however, no respondents identified themselves as unemployed.
- Ages were varied, ranging from one year old to 79, with a slight majority of men (53%). The largest group was aged between 41 and 60 years old, however the high representation of riders in the 0-10 age groups illustrates the significance of mixed family groups and the suitability of the Rail Trail for all ages.
- Half of the respondents had past experience in using rail trails and identified the Murray to the Mountains Rail Trail as one they had visited previously. Over half (53%) considered themselves to be frequent riders, cycling more than once a week, but not daily. The next largest group (23%) were regular weekly riders, suggesting that while the trail is being used by people who cycle often, they are primarily recreational cyclists with a quarter who do not cycle regularly.

The Hauraki Rail Trail in New Zealand is particularly popular with the “baby boomer” and family clientele from Auckland and the wider Waikato, with 24% of users coming from Auckland, 15% from Hamilton, and a large proportion of users being older riders (*New Zealand Ministry of Business, Innovation and Employment 2013*).

Rail trails are not new – they have been established in America for over 50 years and Australia for over 30 years.

3.3 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. In the snows of winter, the unconventional outdoor enthusiast skied or snowshoed on the corridor, but these were days before even running and all-terrain bicycles were common, so the predominant activity was walking. Of course, none of the corridors 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 50 years later, rail trails have made a significant mark in America, with around 100 million users per year enjoying 2,094 rail-trails covering over 37,780 kilometres. There are another 794 rail trail projects being planned and/or developed for a total of 8,494 miles (13,590 kms) (*Rails-to-Trails Conservancy website: <http://www.railstotrails.org/our-work/research-and-information/national-and-state-trail-stats/>*). The longest trail is the Katy Trail State Park in Missouri (240 miles) while 12 other trails are longer than 100 miles. All American states have a rail trail network. Missouri has the most rail trail miles (2,320 miles on 113 trails), while Pennsylvania has the most trails (169 rail trails covering 1,753 miles). Wisconsin is the home of the first rail trail in America – the Elroy Sparta State Trail opened in 1965.

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.



The Burke-Gilman Rail Trail in Seattle (Washington, USA) is one of that country's oldest and most popular rail trails. Studies along that trail corridor have demonstrated that property values have risen as a result of the development of the trail and are higher with close proximity to the trail.

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

Rail trail conversions have proven most popular in Victoria. The Victorian Trails Strategy 2014-2024 reports that there are currently over 800 kilometres of rail trail in Victoria, while the Rail Trails Australia website lists over 30 rail trails throughout Victoria. Some listed are still under construction or require signage and/or publicity materials, though they are in use.

One of the best known of Victoria's rail trails is the Lilydale Warburton Rail Trail which is situated some 40km east of Melbourne (at the end of the suburban train line). This trail caters for all types of bikes,



Various styles of interpretation have been used on the Old Beechy Rail Trail in Victoria to highlight the farming history, indigenous history, railway history and natural history of the region. An innovative feature is the use of rusty steel cut-outs. The steel structure pictorially illustrates timber cutting, farming history and other agricultural practices over the years.



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.

The Murray to the Mountains Rail Trail, in northern Victoria, 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 35 kilometre long trail allows visitors to experience the Clare Valley from end to end by foot or from the saddle of a bicycle. 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 have created 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 Coast to Vines Rail Trail (34 kms) continues this very popular South Australian theme, connecting many of the vineyards of McLaren Vale. The trail offers scenic coast to hinterland views with spectacular vineyard vistas and changing landscapes.

Queensland offers Australia's longest rail trail. The 161 km Brisbane Valley Rail Trail (BVRT) follows the disused Brisbane Valley rail line that commenced construction at Wulkuraka near Ipswich in 1884 and was completed at Yarraman in 1913. The BVRT winds its way up the Brisbane valley, traversing farmland, forests, picturesque rural settings and country towns.

Being on the old railway line, the BVRT provides an off-road climb up the valley for day trippers, overnight camping or longer-term adventures, but some sections can be more challenging. The final section of the trail was opened in 2018. There are also rail trails linking Kingaroy and Kilkivan, and Atherton and Walkamin. There is a short rail trail in Yeppoon. Current investigations (in addition to this project) are a rail trail linking Tarago (near Calliope) and Reids Creek (near Gayndah) and the completion of the Mary to Bay Trail (linking Maryborough to Hervey Bay). These investigations have been driven in part by the Queensland Government's commitment of \$14 million over 4 years in the Queensland Cycling Action Program. Construction of the Imbil Brooloo Rail Trail in the Mary Valley of the Gympie Region is scheduled to be completed by June 2019.



The Lilydale Warburton Rail Trail (Victoria) is about an hour from the Melbourne CBD. This proximity helps attract over 100,000 users per year.



The Riesling Trail is South Australia's premier rail trail, travelling through the very attractive wine-growing country of the Clare Valley.



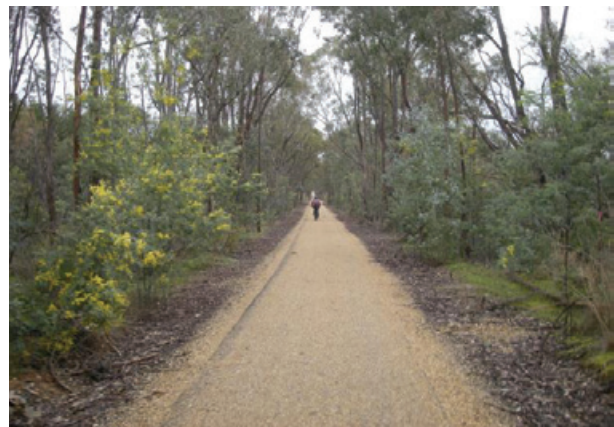
The Sidings Rail Trail (WA) makes the most of existing historic rail infrastructure. This trail has two elements – as well as being a rail trail in itself, it is part of the Munda Biddi Trail – the long distance mountain bike trail between Perth and Albany.



The Brisbane Valley Rail Trail (Qld) is Australia's longest rail trail, attracting users from South East Qld, one of Australia's fastest growing regions.



The Fernleigh Track in Newcastle is exceedingly popular with a range of users. One of its key attractions is the Fernleigh Tunnel.



The Murray to the Mountains Rail Trail is one of Australia's highest profile rail trails; users are spending around \$250/day while using the trail.

3.5 Complementary uses of a rail corridor

A linear corridor such as a rail trail 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.

3.6 How do rail trails function and operate?

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 three states with an established history of rail trails – Victoria, South Australia and Western Australia. It also provides commentary on how some rail trails have begun operating in Queensland where they are a relatively new development.

3.6.1 Victoria

Victoria has led the way in converting disused railway lines into recreation and tourism destinations. Consequently, it has the most mature process. A rail reserve is gazetted under the Crown Land (Reserves) Act as a public recreation reserve. Gazetted 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 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.

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 that provides the basis for the Business Plan.

3.6.2 South Australia

In South Australia trail management is governed by a partnership between the Office of Recreation, Sport and Racing (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 the Department of Planning, Transport and Infrastructure) to facilitate rail trail development.

The Riesling Trail

As indicated earlier, the Riesling Trail is perhaps the best-known rail trail. Located in the Clare Valley, the 35 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 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 (through 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 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 Shiraz Trail (formerly the Coast to 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.

3.6.3 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.

3.6.4 Queensland

In Queensland, former rail corridors are designated as 'non-motorised transport corridors'. As a relatively new entity, management arrangements are still being settled. The Department of Transport and Main Roads (TMR) is the state agency responsible for the day-to-day management and maintenance of the Brisbane Valley Rail Trail in conjunction with Ipswich City Council, Somerset, South Burnett and Toowoomba Regional Councils, and the Ambassadors of the BVRT. When the first trail section was opened (the Blackbutt to Linville section), the predecessor to the South Burnett Regional Council was very supportive and took a sub-lease over a section of the trail in neighbouring Esk Shire (as it was then) as the Esk Shire Council was not willing to take on the sub-lease. The Kingaroy Kilkivan Rail Trail was constructed under the management of South Burnett Regional Council and Gympie Regional Council and has recently opened.

3.6.5 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 was included in Section 3.1. 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.



Aware of the tremendous economic and recreational benefits of the Railway Reserves Heritage Trail, the Shire of Mundaring continues to expend funds on improving the trail.

- 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 (i.e. a staged process) while keeping the big picture in mind. However, there is a need to be conscious of how stages are marketed.
- All trails make the most of official 'opening ceremonies' – bridges, sections, etc.

Section 4 – Delivering on agreed community outcomes

The Queensland Government and Bundaberg Regional Council have prepared a number of community, planning and economic documents in recent times outlining a range of goals, objectives and actions. Developing a rail trail on the disused rail corridor delivers on a number of these goals, objectives and actions. How a rail trail aligns with these broad outcomes is best shown under each broad goal (which are similar in a range of documents).

4.1 Economic development

Rail trails provide an additional tourism asset to the communities through which they pass. This in turn creates a number of economic opportunities both for existing businesses and new businesses. Various documents prepared for the Council and the wider region include goals and actions around supporting and diversifying the existing economic base.

The *Queensland Cycling Strategy 2017-2027* and the *Queensland Cycling Strategy Action Plan 2017-2019* (which funds this report) have clearly identified the economic benefits of cycling tourism. The Strategy identifies that getting more people cycling, more often will help power Queensland's economy and revitalise local communities. It states that Investing in cycling as a mode of transport for recreation and tourism will help to power Queensland's economy. The State Government has committed to supporting cycle tourism by providing funding to build and promote rail trails and touring routes. The State Government is investing \$14 million over four years to develop and implement a program to deliver rail trails in partnership with local governments on state-owned disused rail corridors.

The *Wide Bay Burnett Regional Plan* (2011) includes within its discussion of future planning for tourism that one of the guiding principles for future development is that the existing commercial tourism market is complemented by a diverse range of new sustainable tourism opportunities to build the local economy and employment sector.

The *Bundaberg Regional Council's Corporate Plan 2019-2023* has, under the general heading of economic growth and prosperity, goals of achieving sustainable economic growth, and improving access to local jobs and services.

Council's *Economic Development Strategy 2014-2024* identifies that agribusiness and tourism are emerging trends globally that the region can leverage. It identifies that tourism product

diversification is expected to raise tourism expenditure. While the Strategy (and the Bundaberg North Burnett Regional Tourism Development Plan) highlight the region's connectivity to the Great Barrier Reef as a key attraction for nature-based tourism, a rail trail also offers nature-based tourism activities to complement the use of the Reef.

The (draft) *Bundaberg Heritage Tourism Strategy* (2016) aims to develop clearly defined heritage experiences, attractions and events and in the process add value to existing strategies and approaches. The strategy is intended to create a deeper interest in the history and character of the region and provide experiences and attractions that help engage visitors and keep them in the region longer - and coming back. The report identifies that heritage tourism is a growing tourism market and in some parts of the world is a primary driver of tourism. There is no doubt that the heritage aspects of railway history are one of the main attractors of rail trails – people are interested in the history and will visit a region to understand it. A rail trail offers the opportunity to deepen that understanding and these visitors provide an economic benefit to the host communities.

A rail trail is one asset which can provide more employment opportunities in tourism and hospitality by offering niche tourism experiences, widening the employment and tourism activity base.

4.2 Attractive communities

Quality recreational facilities, such as a rail trail, can help create attractive places to live and visit. Walking and cycling are relatively cheap modes of transport. Trails also provide a low impact means of travelling through the landscapes and play an important role in connecting people with nature.

Attracting new businesses and residents to any region is dependent in part on the 'attractiveness' and 'liveability' of the area, with the region competing with other localities throughout Australia. Knowledge workers - people who are paid to solve

problems and generate wealth through the creation of new ideas - are the new drivers of regional economic prosperity. Regions need attributes which appeal to 'knowledge workers' including quality recreational, leisure and sporting facilities. A rail trail is one such attraction.

According to the Regional Australia Institute, one of the key population shifts back to regional cities in recent years are 'regional returners'. These are people aged between 25-44 who left Australia's regions as young adults, but are choosing to return home later in life, and a number are professionals with a mix of specialist skills.

Making the region attractive as a place to live and work is a key outcome sought by Bundaberg Regional Council's *Economic Development Strategy 2014-2024*. The Strategy seeks an outcome that will see the region build a robust economy that is focussed on attracting working families and, in doing so, changing the demographics of the population base. The Strategy states that attracting a skilled population and workforce is a building block for change and cites the catch-phrase for skilled professionals who have found their escape from the larger metropolitan areas - "If you can do your job anywhere, why not do it here".

Lifestyle is one factor that makes regional areas an attractive alternative to capital cities. A rail trail is part of this mix of lifestyle opportunities. The provision of quality recreation assets and opportunities (such as a rail trail) is one way of adding to an area's appeal for both families, tree changers and regional returners.

4.3 Healthy communities

Rail trails are an accessible form of recreation. Trail-based recreation is generally free, self-directed and available to all people, all day, every day. Good quality, accessible trails encourage physical activity and improved health. Increasing recreational options for local communities will aid overall community wellbeing. The trail will encourage people to exercise.

The overall aim of the *Bundaberg Regional Council Sport and Recreation Strategy 2018-2028* is to enable the Council to achieve its goal to become "A safe, active and healthy community". The Strategy identifies a number of strategies to do this including:

- Planning, providing and maintaining, or facilitating, a range of leisure, physical activity and recreation services;
- Providing facilities to help meet basic community needs; and
- Advocating for a better quality of life for the community through relevant, affordable services, programs and facilities.

The Strategy identified that walking and cycling (road and recreation) are popular activities among the Region's residents. However, the lack of connectivity and safe off-road paths was consistently mentioned throughout the community engagement process. A rail trail is a relatively low-cost option for developing such connections (physically and psychologically).

One of the actions arising from the Strategy was to undertake a feasibility study of the Bundaberg to Gin Gin section of the North Bundaberg/ Mt Perry railway line into a shared use rail trail. There is no doubt that such a trail will contribute to better health outcomes for some residents.

4.4 Connected communities

The Bundaberg Gin Gin Rail Trail will provide opportunities for both recreation cyclists and other cyclists (those undertaking commuting or utility trips).

The *Wide Bay Principal Network Plan* (2016) identifies a number of principal cycle routes. A principal cycle network is comprised of core routes designed to make it easy to use the bicycle as an everyday form of transport. The Network Plan also includes tourism routes which cater for longer distance recreation and cycle touring, highlighting both coastal and hinterland scenic opportunities. The Plan identifies a long distance tourism route heading west from Bundaberg, linking to Gin Gin. In the Plan, this is intended to be a rail trail along a disused rail alignment, serving local residents wanting a longer distance ride and attracting tourists to the area.

The *Bundaberg Regional Council Multi Modal Pathway Strategy* (2012) had a number of aims:

- Defining the purpose and characteristics of a multi modal pathway network;
- Assessing the existing multi modal pathway network throughout the local authority area to identify opportunities for pathway upgrade;
- Developing a multi modal pathway strategy that addresses locational criteria, hierarchy characteristics and design and construction standards; and
- Recommending a staging strategy for construction of paths.

The Strategy included a rail trail between Bundaberg and Sharon Gorge, and a possible future extension to Gin Gin, to provide a walk and cycle link. The Strategy recommended priority be given to effecting the greater part of the Tourist/Recreation routes (including the rail trail).

Section 5 – Issues



There are a range of issues involved when considering a rail trail project:

- **Bridges:** river and creek crossings. 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 costliest items in the development of trails on former railways. The bridge over Splitters Creek is without doubt the single biggest highlight of the proposed rail trail. However, refurbishing it with new decking suitable for pedestrian and cyclist use, together with the installation of safety railings, will be the single biggest cost item in establishing the proposed rail trail.

The former railway bridges along this corridor crossed standing water, as well as crossing over intermittent streams and creeks. Fieldwork associated with this feasibility study revealed that few, if any, of the former railway bridges remain in place. The concrete abutments of many so, however, remain in place.

Replacement and re-purposing costs are one of the considerations for rail trail bridges. Work on other timber rail trail bridges across Australia have returned costs of between \$3,000 - \$6,000/lineal metre up to \$11,000/lineal metre.

- **Trailheads.** Having a significant population centre at each end of the proposed rail trail is a major advantage. It is highly desirable that the rail trail have a clearly identifiable activity centre at each end where there is ample space for accommodating trail users' vehicles. Identifying a logical 'trailhead' within Bundaberg and at Gin Gin is not without difficulties as numerous options are available at the eastern end (Bundaberg), and several at Gin Gin. The recommended site in Bundaberg is within Lions Park in North Bundaberg, between the railway bridge and Bundaberg Bridge. In Gin Gin, the obvious trailhead location would be in the vicinity

of the railway station museum – most likely in vacant land to the south of the museum.

The North Bundaberg railway station museum was examined for its potential as a trailhead. However the museum's small amount of vehicle parking together with the limited opening hours, necessitated that a better site be found. It is proposed that directional signposting be used to direct trail users (and others) to the museum.

Minor trailheads need to be carefully selected and they should be located with careful consideration and observation of adjoining land uses (such as the residence alongside the Birthamba siding). Utilising existing sites such as the Bullyard showground will make use of existing infrastructure.

- **Encroachments on the corridor.** When a railway corridor becomes disused it is only a matter of time before it becomes used for other (usually unapproved) purposes. Such is the case with the Bundaberg to Gin Gin corridor. The Bundaberg Golf Club utilises the corridor as an access road for its members' vehicles and for parking. Adjoining businesses store materials on the corridor. Large swathes of the corridor in the vicinity of McIlwraith siding appear to have been used for agricultural pursuits. Between Bullyard and Maroondan a large stretch of the corridor has been cleared and integrated with the adjoining farm. A significant portion of the corridor at Koolboo Rd has been used for the storage of old earthmoving machinery. Farm vehicle and stock access across and along the disused railway corridor is commonplace in many locations. It is believed that the construction of buildings on the corridor has taken place. It is likely that there are others that were not seen during the fieldwork for the feasibility study but will become obvious if trail development proceeds. Most of these issues can be satisfactorily resolved but it needs to be reinforced that the corridor is public land.

Should this project proceed into the detailed trail development planning process, all encroachments will be noted and discussions held with adjoining landowners.

Development of the rail trail is likely to necessitate the removal of all encroachments and the re-establishment of boundary fences that have been removed.

- **Road crossings.** There are 15 significant road crossings along the railway corridor between the proposed trailhead in Bundaberg and the proposed trailhead in Gin Gin. This includes 4 locations where the former railway corridor crosses the Bundaberg Gin Gin Rd. Given the recent crash history along this road, and the propensity for rail trails to attract novice cyclists and family groups, special care will need to be taken to ensure each road crossing is treated carefully to maximise safety for trail users. It should be noted that almost every rail trail ever built crosses roads and therefore a range of well thought out techniques are available to make the crossing points as safe as possible.
- **Landholder issues.** Adjacent landholders are traditionally – and understandably – apprehensive about trails close to their properties. Issues tend to centre around a number of key elements within three major headings:
 - Farm management and disruption to farming practices;
 - Non-farm management issues. These are generally concerns around safety, security privacy, theft, trespass, noise, disturbance and a range of related issues; and
 - Trail management. These are generally concerns around maintenance, and the behaviour of trail users in regard to littering, toileting and other issues.

More detail is provided in Section 7.

- **Costs – construction and maintenance.** Costs, both capital and maintenance, are a major consideration in any public infrastructure project. These need to be offset against a range of benefits – both economic and non-economic. Detailed costings are not part of this project, but the Council needs to have some understanding of the possible construction and maintenance costs. Cost estimates for construction are set out in Section 8.

Ongoing trail maintenance is a crucial component of an effective management program – yet it is often neglected until too late. Ongoing maintenance can be minimised by building a trail well in the first place. A well-constructed trail surface will last considerably longer than

a poorly built trail. Evidence of actual trail maintenance costs for individual items along a rail trail, or any trail for that matter, are scarce. It is difficult estimating the costs involved in maintaining a trail until every last bridge and other infrastructure items have been installed.

- **Fencing.** Although much of the former railway corridor is located within bushland, or is now well overgrown and somewhat remote from adjoining farms, there is still a need for new boundary fencing is several locations both for insurance purposes and to reduce maintenance costs by allowing grazing of the “excess” corridor. One of the options to maintain the corridor (as opposed to maintaining the actual trail) is to allow adjoining or adjacent landholders grazing permits over those parts of the corridor not required for a trail (a 6 metre envelope incorporating the trail on the railway formation). There is limited grazing alongside the corridor as it runs mainly through cropping land but fencing is an option where grazing is occurring. As the original railway corridor is mostly 20 – 40 metres wide, the excess corridor can be leased to adjoining landholders. This approach will minimise the reduction in land that they currently farm and enable stock to ‘maintain’ the corridor outside of the fenced trail corridor (noting that some landholders already have stock on the corridor). While this creates a capital cost, it has the potential to significantly reduce maintenance costs.
- **Cane railways.** The 45.6km former railway corridor between Bundaberg and Gin Gin crosses over a large number of operating cane railways. Just like crossing roads, the rail trail will need to be constructed to ensure minimum conflict between trail users and train movements along the cane railways. The comparative low speeds of the cane trains, and the seasonal and infrequent nature of the trains, means that safety at these crossings should not be a significant issue. Construction of the trail itself needs to ensure a small passage for bicycles across the rails, with adequate sight lines and safety signage.
- **Potential other uses of the corridor.** In other parts of Australia in recent years there have been proposals for the establishment of some form of tourist train (or even freight and/or passenger services) on some disused railway corridors. Despite the huge cost for this to occur, they nonetheless are a matter that requires some consideration before a rail trail is developed.

At the time of the preparation of this Feasibility Study no known train proposals have been identified for the Bundaberg to Gin Gin railway corridor.

Section 6 – Opportunities

There are a number of specific elements within the area encompassed by the proposed trail route that provide opportunities and reasons for why a trail should be built.



Appealing landscapes and scenery, including vistas over surrounding agricultural properties, are certainly evident along sections of the former railway corridor.

6.1 Appealing landscapes and infrastructure

The proposed Bundaberg Gin Gin Rail Trail would pass through some very attractive scenery. There are farming vistas west of Splitters Creek and all the way to Gin Gin. They vary and cover both grazing and cropping. The attractiveness of these quintessential rural landscapes to city dwellers in particular should not be underestimated. There are small patches of relatively undisturbed bushland west of Bullyard. The trailhead at Lions Park North offers a pleasant start with good views of the Burnett River. The occasional views over irrigation channels, cane fields, cane railways, and other agricultural pursuits add variety and interest.

The quality of intact railway heritage items varies along the corridor, such as Splitters Creek bridge, will be a major attraction for both trail users and other visitors who simply want to come and see a historic timber trestle bridge. The restored railway station and museum at Gin Gin provides a comprehensive and enjoyable look at the region's past.

6.2 Topography of the preferred route

One of the major appeals of rail trails is the gentle gradient, suitable for all types of cyclists, and walkers (gradient is typically less of an issue for horse riders). This is the market that would be attracted to a rail trail. Their demands are paramount in considering trail feasibility.

6.3 Connections between towns

Taking trail users through towns will provide new business opportunities for service providers. Presently, there are a relatively limited number of services that would appeal to trail users in the smaller settlements of Sharon, South Kolan and Bullyard (the trail passes some distance from South Kolan). Bundaberg and Gin Gin provide much higher level of services of interest to trail users. Development of the rail trail may provide a range of new business opportunities (or allow existing businesses to expand). Such opportunities are examined later in this section.

The trail will make an actual connection between the towns and villages en route – one that reinforces historic connections.

The distances between towns is also important when considering likely users. The good one-way trails often provide opportunities for short, medium and long length rides and walks on the main trail. There are such options on this trail should it proceed.

Connecting the towns and villages via a trail will also provide an opportunity for local residents to choose a non-motorised connection for visiting friends or undertaking some exercise. A non-motorised trail provides another psychological link between the towns on the route.



A rail trail will re-create the links between towns and villages that historically were served by the railway.

6.4 A trail with anchors at each end

One-way trails (or out-and-back trails) need an anchor at both ends to be attractive to users. The best one-way trails (including many rail trails) have natural terminuses in major centres or towns or pass through major towns. Bundaberg and Gin Gin are the obvious well-developed anchor points.

6.5 Broadening the recreation offerings

Provision of an additional off-road trail adds to the list of tourist offerings in the region and encourages visitors to stay a little longer to go for a pleasant walk or ride. A new nature-based attraction has the power to retain those visitors for longer, spending money and generating business opportunities. Natural assets that are utilised for outdoor recreation are found in the region.

The region is looking to highlight its connectivity to the Great Barrier Reef as a key attraction for nature-based tourism; a rail trail also offers nature-based tourism activities to complement the use of the Reef. The Coral Coast Pathways campaign promotes existing trails along the coast. The Turtle Trail is a well-used and promoted walk and cycle trail, while the Water Trails of the Wide Bay Burnett is another promotion highlighting nature-based tourism and activity tourism. Adding a rail trail to that list will encourage more visitors looking for that type of experience. It will also provide an opportunity for nature-based recreation away from the coast – variety is important for such visitors.

It is worth noting that many rail trail users come from the (generally) higher paying professional and

managerial occupations; combined with the typical age profile, food and wine consumption form a major motivator for those using rail trails and many rail trails (in South Australia and Victoria) have built upon this desire by users.

The Bundaberg CMCA RV Park was recently opened and will bring a number of new visitors to Bundaberg. During the Open Houses, a local representative of the CMCA indicated that his members (users of the park) are always looking for an additional activity and many are interested in walking and cycling.

6.7 Visitor markets

A trail such as the Bundaberg Gin Gin Rail Trail will provide a number of opportunities generally associated with recreation trails. A trail will bring additional tourists and keep them longer in the area. Other possible benefits from developing the trail include:

- Improvements to community connectivity;
- Increasing recreational options for local people; and
- Creating opportunities to build on existing industries and enterprises of the area.

6.7.1 General visitor trends

Tourism Research Australia and Destination NSW have undertaken research on a number of visitor markets relevant to rail trails. While the research focusses on NSW, there are a number of general observations of relevance.

Regional destinations offer key experiences for what Australians are seeking from their holidays.

While Australian travellers do not have one typical destination in mind when they think about regional travel, there are some experiences common to everybody's idea of what is on offer in regional Australia. It looks at these experiences for each of the three major markets – millennials, families and over 55s.

- The millennials age group seeks authentic and genuine travel experiences, together with a variety of active and passive ways to enjoy them. For older millennials, in the 25-34 age group, travel is about rejuvenation and search for self. Through travel, this group seeks to recover from work and is a way of getting away from responsibilities of everyday life. They feel the need for regular breaks to sustain and keep themselves going and seek out relaxing experiences that they can't have at home. (*Tourism Research Australia, 2017(a)*). For regional destinations to attract millennials, they need to offer something unique and have basic, yet sophisticated experiences. This could include nature-based experiences, as well as country food and wine. Short breaks offer millennials an opportunity to relax and reflect, often with friends. Importantly, in this context, rest and relaxation does not mean just passive experiences, but rather experiences that promote discovery, rejuvenation and an opportunity to forget about routine life, and these can include very active pursuits. (*Tourism Research Australia, 2017(a)*).
- At the opposite end of the age range, the over 55s is one of most powerful age groups in Australia in terms of financial capability and life expectancy is increasing. In a recent survey of Australians aged over 55 years, 96% of respondents took at least one leisure trip within Australia in the past 12 months, and the percentage of respondents who took two and three leisure trips was 26% and 23% respectively. This age group preferred domestic travel to international travel. According to the survey, the most important reasons for over 55s taking overnight leisure trips are spending time with family and friends, getting away from daily routine, having fun, spending time with partner and to relax mentally. (*Destination NSW, May 2015*).
- Within the over 55s market (and perhaps importantly a distinct sub-set of it), the research identifies a global mega-trend that the fifties are the new demographic for travel brands – more people are choosing to travel earlier than retirement to enjoy the more active or immersive experiences that destinations have to offer. This is one of the key demographics for rail trails.

For families, domestic travel offers an opportunity to have a break from normal routine, to reconnect and open the lines of communication between adults and children without time pressures. Ease and convenience are the key drivers for domestic travel by families in Australia, and they are looking for destinations that are relaxed and easy with beautiful surroundings, preferably only a few hours' drive from home. (*Destination NSW, June 2015*). Destinations that offer relaxation, novelty, outdoor activities, arts and heritage sites are appealing to families. However, family travellers seek destinations for relaxation more than non-family travellers. Family travellers seek holidays offering experiences that are authentic, different to normal and which create positive memories. The future of family tourism lies in catering for the increasing diversity of the family market. It includes offering opportunities for relaxation as well as activities that help create happy memories that appeal to the different ages of travellers in diverse family group structures. This market (particularly the 35-54 age group) is higher yield and is continuing to show positive growth (*Schänzel and Yeoman 2015*).

6.7.2 General visitor numbers

Available figures for the Bundaberg region show that the region which the rail corridor traverses hosted 476,000 domestic overnight visitors and 600,000 domestic day trippers in 2017. 37,000 international visitors also came to the region (for a total of 1.13 million visitors). Holidaying and visiting friends and relatives made up the highest percentage of purpose of visit (68% of all visitors came for these two reasons). (*Tourism Research Australia, 2017(b)*).

The short break market (1-3 days) has been a predominant market for domestic tourism for some time and it remains a key market for visitors to the region. People on short breaks often look for a trail experience as part of their holiday.

6.8 Trail users – a significant market

While general visitor numbers and motivations are a guide, it is important to look more closely at trail user numbers and motivations to fully understand who uses trails and why.

6.8.1 Trail user numbers

6.8.1.1 Visitors

Recreation trails provide an important piece of tourism infrastructure and provide experiences in the nature-based tourism market and particularly the adventure tourism market. Nature-based tourism is estimated to be growing at 10-30% per annum – a significant growth market to target (*Victorian Nature-based Tourism Strategy 2008-2012*).

Research (cited in *Destination Country and Outback NSW's Destination Management Plan 2018-2020*) reports that Australians have participated in a broad range of nature-based activities as part of their overnight travel over the last year (2017). This includes:

- An increase of 12% to 10.8 million visitors to national parks;
- More people undertaking bushwalking, which grew by 9% to 11.3 million; and
- Growth of 12% in water-based activities and sports, up to 3.4 million visitors.

There has also been an increase in the number of domestic overnight travellers who connect with local communities, in particular through attending festivals, events and fairs, which grew by 14% to around 3.4 million.

Tourism Research Australia estimates that 51% of domestic overnight nature visitors take part in bushwalking / rainforest walks, whilst 39% of domestic day visitors and 37% of international visitors enjoy this type of activity (*TRA Snapshots 2009*).

A number of high-profile trails in Australia and New Zealand provide examples of user numbers that can be achieved on tracks and trails. 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. Each trail has its own reasons for success. One of the common elements is that the trail itself is the physical element (and is often managed by a Government agency) while private sector businesses and community-based organisations (such as the Bibbulmun Track Foundation) provide the 'experiences' of and around the trail.

- Use of the Bibbulmun Track (WA's long-distance walking track linking Perth and Albany) increased from 10,000 in 1998 to 35,000 in 1999-2000 to 137,500 in 2003 (*Colmar Brunton 2004*) to over 167,000 in 2008 (*Colmar Brunton 2009*). In 2015 over 300,000 people used the track (*Hughes et al 2015*). 79% of 2007/08 users came to the track specifically to use the track. The Bibbulmun Track offers a wide range of experiences, from a gentle stroll to enjoy the peace and beauty of the natural environment, to an epic eight-week adventure. The trail offers a diversity of accommodation – users can enjoy a wilderness experience by camping out, they can join a guided group, a tour, or they can do it in comfort by staying in the towns along the Track and enjoying day walks in the area (*Bibbulmun Track Foundation website*).

- The Munda Biddi Trail is WA's off-road cycle touring equivalent of the Bibbulmun Track. Running from Perth to Albany (a distance of 1,088 km), it attracts 21,000 users per year (*Munda Biddi Website*).
- The Great Ocean Walk in Victoria attracts 100,000 visitors per year (*pers com Parks Victoria*).
- The Wilsons Promontory Walk (Victoria) attracts some 60,000 visitors/year (*pers com Parks Victoria*).
- The Murray to the Mountain Rail Trail (Victoria) attracts almost 60,000 annual visitor days (*SGS Economics and Planning 2011*).
- The Otago Central Rail Trail (NZ) offers a 3-day cycle or 5 day walk experience covering 150 kms. Over 14,000 users traverse the entire length each year, with the most popular section attracting over 20,000 users (Central Otago District Council 2011). This figure was slightly less in a recent survey (*Central Otago District Council 2015*) but 12,000 users riding the trail from end to end is a significant figure. Cyclists undertaking the complete journey often do so in 3 days, while walkers take 5 days (*Otago Central Rail Trail Trust 2005*). A number of tour operators offer a "guided" service for cyclists in particular, allowing users to spend all day riding between accommodation options carrying only what they need for a day and their gear is transported from accommodation place to accommodation place (*Central Otago District Council 2015*).
- Data from Colac Otway Shire (Victoria) shows that the total usage on monitored sections of the Old Beechy Rail Trail for 2013 was 23,368. Monitors were not in place along the whole trail.
- In the first quarter of 2014, the Great Victorian Rail Trail (a 134 km rail trail between Tallarook and Mansfield) had 27,500 users pass through trail counters. This figure is unlikely to represent total numbers of users as some users would have travelled past more than one counter, but it does represent significant trail usage.
- Recent counts (2011-2013) for South Australia's Riesling Trail show 40,000 people passing through 4 trail counters each year.

6.8.1.2 Local users

Tourism numbers are important. However, it is important not to overlook the contribution of local residents to the success of a trail. In 2001, the Mundaring Shire (in Western Australia) 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. The total annual visits (people generally use trails more than once a year) were a staggering 2.454 million visits annually, with local residents accounting for 63% of these visits. Their expenditure on the trail was also significant. While the individual value was low (i.e. expenditure per person per visit), the cumulative economic impact was significant. 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. 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.

The Bundaberg Regional Council has a population of 92,897 (according to the 2016 Census).

6.8.2 Trail user characteristics

6.8.2.1 Broad trends

A number of broad trends are influencing the way people participate in outdoor recreation:

- Increased demand for informal recreation (as opposed to formally organised sport);
- Increased demand for access and contact with the natural environment associated with urban to rural residential shift;
- Increased visitation to natural areas as an escape from modern lifestyles;
- Increased awareness and concern for health, with obesity and stress on the rise;
- Increased use of technology to support outdoor recreation (e.g. geocaching, Strava, EveryTrail, Trailforks); and
- Increased computer-based leisure including the internet.

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 residential drift ('sea change' and 'tree change'), 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).

Two other trends have also driven higher outdoor recreation participation - increasing health and environmental awareness and increasing affluence and expectations of recreation.

People are becoming increasingly concerned about their health, with conditions such as obesity and stress on the rise. This, combined with society's

growing environmental awareness, has facilitated a growth in visitation to natural areas. A term referred to as 'returning to nature', where people feel the desire to become reconnected to their natural environments from which they can escape their modern lifestyles.

As individuals become more affluent, the proportion of income spent on goods and leisure increases. As people spend more money on outdoor recreation and associated equipment, an increase in outdoor recreation activities, previously offered by commercial operators, has been observed. As such, a diversification for natural areas offering unique experiences and higher levels of infrastructure are often in demand.

6.8.2.2 What do people do on a trail?

An overall view

The Department of National Parks, Sport and Racing conducted the Queensland Sport, Exercise and Recreation Survey Adults (QSERSA) in 2015.

Unfortunately, the survey results lumped Bundaberg Region in with a large number of Councils in "Central" including Gladstone, Central Highlands and Longreach meaning that information for regional levels is of little meaning. The State-wide results provide more reliable data.

The survey indicated that:

- Any walking activity is the most popular activity participated in by 63% of respondents.
- Bushwalking was participated in by 14% of respondents.
- Mountain biking (specifically) was participated in by 3% of respondents while a further 9% participated in leisure cycling (not on-road cycling).
- Horse riding and equestrian events was participated in by 2% of respondents.

These numbers are somewhat different (in terms of returning lower participant numbers) to other surveys conducted over recent years both in South East Queensland and other locations. A number of earlier 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, 2001 and 2007), South Australia (Adelaide and Adelaide Hills, and *Market Equity 2004*), and the ACT. Table 1 provides a summary of the relevant participation rates.

Table 1: Participation rates in outdoor recreation activities

Study	Walking	Cycling	Horse riding
SE Qld (1998)	60%	25%	7%
SE Qld (2001)	50%	26%	7%
SE Qld (2007)	35%	29%	7% *
South Australia	59%	26%	
SA – Market Equity	69%	29%	*
ACT	73%	58%	*

* no horse riding trails were considered in these surveys

The figures for participation show the percentage of the population for the town or region who had participated at least once in walking, cycling or horse riding in the previous 12 months. All studies used large samples. (A number of other outdoor-related activities such as bird watching, canoeing and scuba diving were included as possible responses – this is why the figures do not add up to 100%). 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. The point of most significance in these figures and the 2016 QSERSA figures is the relative proportion or level of participation for each of the three activities.

Walking

Clearly walking is the most popular trail related activity and is in fact one of the most popular outdoor activities amongst all Australians. It is likely to remain so as the population ages. Walking continues to be the most popular activity for people aged over 34 (*ERASS 2010*).

Bushwalking continues to be a relatively popular activity.

Off-road cycling

Unfortunately, none of the surveys distinguish between cycling generally and off-road cycling – both off-road cycle touring and traditional mountain biking (though the recent QSERSA did make this distinction as noted above). Off-road cycle touring and mountain biking is a rapidly growing recreational pursuit around Australia, and there is growing usage

of non-urban areas for this activity. Cycle tourism is a growing market within the Australian tourism sector, particularly within the nature-based tourism segment. Available research demonstrates that cycle tourism has the potential to make an active contribution towards the economic revitalisation of regional Australia as well as improve quality of life for its residents (*Victoria's Cycle Tourism Action Plan 2011-2015*). Domestic overnight visitors who participate in cycling on their trip stay longer and do more while on holiday when compared with other tourists, making them a stronger source of income for regional communities.

Mountain biking underwent a tremendous increase through the 1990's. It has been one of the 'boom' recreational pastimes of the last two decades. Cross-country mountain biking (the oldest type of mountain biking) remains the most popular type of mountain biking activity. It can be undertaken in a variety of places and terrains, from management trails to shared trails to purpose-built single track.

The draft *Kosciuszko National Park Cycling Strategy* (2016) identified that mountain bike riders can be broadly divided into core and non-core riders:

- Core mountain bikers tend to be more experienced riders who may differentiate into one or more different genres.
- Non-core mountain bikers include novices, families seeking safe enjoyable places to ride away from cars, school groups (often guided by tour operators), off-road bike tourers (from rail trails to trails in steeper and more difficult terrain) and people seeking a different outdoor experience or adventure (such as undertaking a guided experience or hiring a bike while on holiday). This is the group to which rail trails appeal.

The Mawson Trail in South Australia was primarily designed for off-road cycle touring, and the 1,000km 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. Work by Market Equity (2004) for the South Australian Office of Recreation and Sport adds to the body of evidence on the popularity of cycling, particularly on rail trails. Market

Equity's survey of five trails in South Australia included the Riesling Trail (a rail trail); the percentage of trail users that were cyclists was quite high at 65% (compared to an average of 29% of cyclists across the five trails).

The *New Zealand Cycleway Market Research (2009)* found that, in general, international cycle tourists want easy multi-day trips with good supporting services or events. The holidays can also be location-based and utilise nearby trail networks. Domestic cycle tourists and recreational riders are not primarily focused on cycling but on the broader experience. This group is likely to be older or consist of families rather than single visitors or couples. Both markets are looking for easy access to safe and traffic-free trails. Trail gradient is a critical factor in successfully designing a trail for a specific market or type of rider. For a large portion of the location-based cycling and cycling holiday market, average trail gradients of 2-3 degrees are required (this explains the popularity of rail trails for this market).

Horse riding

Horse riding is an activity by a relatively small number of participants (around 7% of outdoor recreation activities). Horse riding demand can also be highly localised – certain localities attract residents who are horse riders. A rail trail could offer this opportunity (as it does in some other locations – some 25% of rail trails in Australia allow horse riding).

6.8.2.3 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 QSERSA tends to confirm this finding. The results show that:

- 98% of bushwalkers undertaking their activity for 30 minutes to more than 1 hour.
- 93% of mountain biking is undertaken over the same period (30 mins – more than 1 hour).
- Horse riding activities generally take longer with 93% of their activities taking 45 minutes to more than 1 hour (it is understandable that horse riders take longer, given the preparation needed for horse riding).

The Market Equity work in South Australia confirms this finding with 76% of walkers using trails for less than 2 hours. 40% of the users of the Bibbulmun Track spent less than 4 hours on the trail, while another 29% spent between 4 hrs and a day, meaning that 69% of all users (115,000 of a total of 167,000) spent no more than a day on the track (*Colmar Brunton 2009*). The tremendous success of the Great Short Walks of Tasmania program is testimony to the fact that there is a huge market for

this type of walk. Many of the 60 walks promoted through this program are around this length.

Use patterns for cyclists are somewhat different (although most use takes up less than a day). Results from a recent survey carried out by the Queensland Outdoor Recreation Federation (June 2013) on mountain bike riding indicate that the most popular “ideal length of ride” for biking was 21-30km followed by 10-20km. Most rides are between 1 and 3 hours. Market Equity’s 2004 South Australian work showed slightly different results. The majority of cyclists surveyed (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 longer times may be due to the fact that the trails involved in the SA study were ‘easier’ than the trails involved in the Queensland study.

Though there is limited background research of how long horse riders seek to ride for, industry knowledge indicates that horse riders are generally looking for rides of approximately 3-4 hours (about 25 -30 kilometres) – in addition to short ‘after school’ or ‘after work’ rides.

There is no doubt that visitors in particular are likely to put aside the time to travel along the potential trail (or parts of it) – people have more time on holidays than they do in their normal day.

6.8.2.4 Who uses trails and why?

What sort of person is a trail user? Unfortunately, there is limited Australian research on who uses trails. The limited research that has been done shows some interesting attributes of trail users across Australia:

- The majority of people (53%) who participate in outdoor recreation are aged between 25 and 54 (*South East Queensland Outdoor Recreation Demand Study 2007*).
- The single biggest group (53%) of users of the Bibbulmun Track (WA’s primary long-distance walk track) are aged between 25 and 39, with 25% between 15 and 24, and 17% between 40 and 65 (*Colmar Brunton 2009*).
- People over 30 years of age are the most common users of the Otago Central Rail Trail. The average age of people surveyed was 41 years; the average age of users has decreased over the course of 3 surveys (over 10 years) (*Central Otago District Council 2015*).
- The City of Greater Geelong conducted a very extensive survey of walkers (not just on trails) in the City. 82.9% of survey respondents who

had a degree or post-graduate qualifications had walked for exercise or pleasure in the last 2 weeks, while only 62.9% of those who had left school in Year 10 or earlier had walked for exercise or pleasure in the last 2 weeks. The authors of this survey concluded that walking participation increases with educational achievement (*City of Greater Geelong 2003*).

- People using a series of walk and cycle trails in SA (including the Riesling Trail) are motivated by a desire to attain a sense of well-being (95% of users listed this as a motivation), to unwind and relax (91%), to be close to nature (87%), and to be close to family and friends (70%) (*Market Equity 2004*).
- Taking time out and participating in an activity are more important to domestic cycle tourists than international cycle tourists. On the other hand, exploring a unique place or must-see destination, experiencing local culture and learning about other cultures are all more important to international cycle tourists than their domestic counterparts (*Tourism Resource Consultants 2009*).

Observation of many operating rail trails throughout Australia, New Zealand and North America indicates that there is a very wide diversity of people (and groups) that use rail trails. As discussed in Section 3, the predominant user group for rail trails is cyclists, ranging from elderly people, to baby boomers, young couples, family groups with children, teenagers and young children. Walkers and horse riders are also attracted to rail trails, but in far lesser numbers. They all are using rail trails for a reason: they enjoy routes free from motor vehicles, routes that are away from the noise and smell of roads, and away from trucks and cars.

6.8.3 The economic opportunities of trails

6.8.3.1 How much do trail users spend?

Successful trails are already attracting large numbers of visitors and they are spending reasonable amounts of money both in the local economies and in the broader economy. The following figures provide a snapshot of expenditures from a range of trails to demonstrate user expenditures.

- The Mundaring Trails Network, 1 hour from the Perth CBD, injected some \$12.62 million into the local economy and a further \$15.21 million into the State economy annually. Local residents spent \$4.06/visit to the network and visitors (primarily day users) spent \$23.71/visit. The key is that the total number of trips on the trails studied was a staggering 2.454 million visits annually (*Jessop and Bruce 2001*).
- Users of South Australia's Riesling Trail who come primarily to use the trail are estimated to spend \$1.08 million/year (\$215/person/visit with daily expenditure of around \$100). This does not count the other 50% of trail users who use the trail as a secondary purpose for their visit (*Market Equity 2004*).
- The economic impacts of the Bibbulmun Track (WA's long-distance walking track) have been studied over two periods (in 2003 and 2007/08). In 2003, the track was shown to have generated **\$21 million** of expenditure **annually** by track users, well in excess of its one-off construction costs of \$5 million (*Colmar Brunton 2004*). The estimated expenditure in 2008 is around **\$39 million annually** (*Colmar Brunton 2009*). The 2007/08 study shows that the average day walker (some 70% of all users) is spending \$50-\$60/day, while those walking the track for 2-3 days are spending around \$200/visit. Those using the trail for 6 weeks or more, while small in number, are spending \$1,400/visit.
- The Murray to the Mountains Rail Trail in North East Victoria is one of the better known rail trails in Australia. Research work undertaken over Easter 2006 (*Beeton 2006*) found that average daily expenditure was **\$258/user/day**. The bulk of this expenditure was on food and beverage (57% of daily expenditure which equates to \$147/user/day). Beeton applied accepted economic multipliers to these figures and calculated that the direct contribution to the local economy per user per day was in excess of \$480. (Follow-up work by Beeton (2009) made similar findings).
- Users of New Zealand's Otago Central Rail Trail are spending **\$NZ 177/day** with the average length of stay in the region of 3.8 days (*Central Otago District Council 2015*). There is a range of expenditures – users doing the whole trail spend **\$NZ 166/day** while those doing part of the trail spend **\$NZ 247/day**. The benefits to the New Zealand economy of the rail trail are quite significant. The 2015 study showed that the trail had direct output of over \$6.9 million/year, with a total output of almost \$10.4 million/year (taking into account regional multipliers). The trail directly increased New Zealand GDP by \$3.5 million/year with a total increase of \$5.2 million/year. The trail created 81 direct jobs and a total of 102 jobs. Accommodation derives 41-48% of the benefit, followed by food and consumables.

There is a range of business opportunities for private sector investors arising from the potential development of a rail trail. Providing accommodation, food and beverages, supported and guided tours,



Above: a variety of users are encountered on the Otago Central Rail Trail. Recent research (2015) shows that the majority of international users of the trail are from Australia.

and equipment, are some of the businesses that have arisen along other trails.

It is important to understand how trail users spend their money. Trail users spend money before coming to a trail and in towns and villages along the way. The expenditure data shown below represents an amalgam of existing research data. There are a number of specifically trails-related research projects on user expenditures. These are:

- Use and Users of the Appalachian Trail: A Source Book (*Manning et al 2000*);
- Bibbulmun Track User Research Report (*Colmar Brunton 2009*);
- An Economic Analysis of Rail Trails in Victoria, Australia (*Beeton 2003*);
- Regional Communities and Cycling: The Case of The Murray to the Mountains Rail Trail, Victoria, Australia (*Beeton 2006*);



The Otago Central Rail Trail on the South Island of New Zealand is an outstanding success, stimulating the establishment of 20 tour operators that provide logistical support. The rail trail has also stimulated private developments including chalet accommodation at Wedderburn, developed by the owners of an adjoining farming property.

- Cycling in Regional Communities: A Longitudinal Study of the Murray to the Mountains Rail Trail, Victoria, Australia (*Beeton 2009*);
- Trails Research Project (South Australia) (*Market Equity 2004*);
- Nga Haeranga – The New Zealand Cycle Trail Evaluation Report (NZ Ministry of Business, Innovation and Employment 2013);
- Otago Central Rail Trail User Survey 2010/11 (*Central Otago District Council 2011*); and
- Otago Central Rail Trail User Survey 2014/15 (*Central Otago District Council 2015*) (the calculations use this report's average expenditure rather than the range of expenditures identified).

Reviewing the expenditure data from these 9 studies allows an understanding of average expenditure patterns of trail users. Tables 2, 3 and 4 show average amount spent by trail users and the broad sectors in which they spend their money. (Table 3 is included to allow for the fact that the non rail-trails provide free or low cost camping options on-trail). It should be noted that:

- Not all studies included day tripper expenditures.
- average expenditure per sector is drawn from most of the studies listed above.
- Not all studies provided detailed data. Where detailed sector breakdown is not available nominal percentage allocations to each sector have been made reflecting general trends.
- The data was collected at different times and noted in different currencies. The figures below represent averages converted to 2017 Australian dollars.

Table 2: Trail User expenditure by category for overnight visitors (all trails)

(Overnight users include those staying one night or more in the region to use a specific trail)

Sector	Average
Accommodation	\$44.66
Food and beverage	\$70.30
Transport	\$24.30
Retail	\$44.40
Other (including cycle maintenance)	\$18.44
Total	\$202.10

Table 3: Trail user expenditure by category for overnight visitors (rail and cycle trails only)

(Overnight users include those staying one night or more in the region to use a specific trail)

Sector	Average
Accommodation	\$52.00
Food and beverage	\$80.56
Transport	\$22.93
Retail	\$33.74
Other (including cycle maintenance)	\$19.81
Total	\$209.04

Table 4: Trail user expenditure by category for day-trippers (day tripper expenditure was only available for some of the studies)

Sector	Average
Accommodation	\$0.00
Food and beverage	\$55.42
Transport	\$26.90
Retail	\$38.03
Other (including cycle maintenance)	\$24.75
Total	\$145.10

(* at least one study reported accommodation expenses for day trippers, but this was related to a visit to the region to undertake various activities including trail use. The expenditure therefore cannot be attributed to the trail)

6.8.3.2 What types of businesses serve rail trail users?

Identifying specific business opportunities along a trail that may take years to develop is not a simple task. Some success stories from other trails are worth considering. It is important for those providing a business service and those considering doing so to remember that such services add significantly to the user's enjoyment if done properly. A 2015 user survey of the Otago Central Rail Trail reported that ratings for package operators have consistently improved over time and were rated 9.5 out of a possible 10 in 2015. There is no doubt that this contributed to visitors rating their overall rail trail experience at 9.0 out of a possible 10 (*Central Otago District Council 2015*).

Equipment hire

While many visitors will bring bikes, some will not and a business opportunity presents itself to address this market. A number of cycle hire, cycle repair and guided cycle tour businesses are accredited businesses under the Munda Biddi Trail Foundation's *Cycle Friendly Business* program. These businesses offer a range of services along the length of the trail and pay an annual subscription fee to remain in the accredited program.

Supported tour opportunities

Cycle tourism is a growing market. Domestic overnight visitors who participate in cycling on their trip stay longer and do more while on holiday when compared with other tourists, making

them a stronger source of income for regional communities. Many of the cycle touring trips would be confined to bitumen (quiet back country roads etc.) but a significant portion may be interested in an off-road cycling experience. International visitors participating in cycling spend \$NZ 3,800/person/visit while in New Zealand compared with the average of \$NZ 2,500/person/visit for all other categories of international visitor. 22% of cycle tourists spend more than \$NZ 5,000/person/visit (Nga Haeranga – *The New Zealand Cycle Trail Evaluation Report 2013*).

Supported tour opportunities are offered on Otago Central Rail Trail where some 10% of visitors take advantage of this service. A recent survey by the Otago Central Rail Trail Trust showed that total expenditure was \$NZ 472.61 per person per trip along the rail trail. The largest component of expenditure is on package expenses (as it was in 2008/2009 when a previous survey was carried out). 'Off the Rails' is one such bicycle tour company that offers premium, eco-friendly and fully supported bike tours. The company offers various tours including accommodation, bike hire and guided sightseeing activities. All tours include transfers, care of all luggage during the tour and meals, providing a fully inclusive cycling experience. A key to its success is its ease of planning/organising for visitors – once the tour is booked in they do not have to think about anything else (*SGS Economics and Planning and Quantum 2012*).

Such services are not confined to cycling tours. These services are also offered on the Bibbulmun Track. The Bibbulmun Walking Breaks (run by the Bibbulmun Track Foundation) provide packages for those who enjoy walking but do not want to carry a heavy pack or camp overnight. The Walking Breaks program has won a national award for innovation in travel in the Jaguar Awards for Excellence. The Foundation organises "best of the Bibbulmun 8-day tours". Both of these tours are carefully compiled to combine a variety of day walks with off-Track accommodation. A bus service transports users to the Track each day and returns them to accommodation in rural towns and villages at the end of the day. On the walks, users carry only a small daypack carrying food and other items.

A number of private providers offer similar supported activities on a number of trails – both walking and cycling. Tour de Vines – a cycling company – offers various cycling tours on Australian rail trails (as well as other cycle touring opportunities in Australia and overseas) (see <http://tourdevines.com.au/cycling-tours/cycling-tours-australia>). Out There Cycling offers supported cycling packages on the Brisbane Valley Rail Trail. The BVRT 3 Day cycle tour allows the rider enough time to explore the local towns and to

enjoy the countryside at a relaxed pace. The tour can be experienced in a tent at selected camping areas or in a Hotel/Motel along the way. Users can choose to carry their own gear on the bikes or chose to have the gear transferred to the next stop. This company also offers a bus shuttle service encompassing both the Brisbane Valley Rail Trail and the Kilkivan Kingaroy Rail Trail (see <http://www.outtherecycling.com.au>).

Qualitative research done by SGS Economics and Planning and Quantum (2012) (focusing on Victoria's north east) indicates respondents wanting activities and experiences that are easy to organise – the 'facilitated' experience, which would complement the existing 100km of scenic and safe trails through iconic rural villages. Facilitated itineraries would seek to emulate the best facilitated road cycling experiences in Europe, including the provision of regional interpretation, food and wine. The report noted that the North East's Rail Trail is a key asset for the region, providing infrastructure from which a cycling experience could be leveraged.

The *Destination Country and Outback NSW's Destination Management Plan 2018* notes a global trend that tourism activities such as tours are finally coming into their own. However, the focus is on small-scale, immersive and locally curated activities. This is particularly important in relation to Indigenous and nature-based tourism.

While the proposed Bundaberg Gin Gin Rail Trail is probably too short (for cyclists) to support fully supported "single" tours, packaging it together with other trails and outdoor recreation experiences in the region could provide opportunities for supported tours.

Guided walking/cycling touring

This facility provides an even greater level of support for trail users; all "traversing" is done with the accompaniment of a knowledgeable guide (as well as the provision of all necessary equipment).

This type of service is offered on the Great Ocean Walk (e.g. Bothfeet Walking Lodge and

Tours). Internationally renowned adventure company World Expeditions offer a 7-day guided and supported hike along the Bibbulmun Track. One of the key features of these packages is that users simply pay just one flat fee for their entire holiday.

Comments on the length of the trail above apply.

Off-trail Accommodation

There is some opportunity to provide users with off-trail accommodation of varying qualities as the trail passes private property. Riesling Trail Cottages and Riesling Trail Bush Cottages provide self-contained

accommodation adjacent to South Australia's famous Riesling Trail through the Clare Valley. When these were first constructed, the owner was often asked "How close are your cottages to the wineries"; over time, the more common enquiry became "how close are the cottages to the rail trail".

Supporting Existing Businesses

A trail increases the opportunities offered to existing businesses that currently provide relevant services to provide such services on a more regular basis. These types of examples are critical economic opportunities to diversify and solidify the sub-region's economic base. In New Zealand across four recreation trails subject to detailed research (*New Zealand Ministry of Business, Innovation and*



Several accommodation establishments are clearly benefiting for locating close to the Riesling Trail, resulting in economic benefits to the businesses and a bigger range of accommodation options cyclists and walkers using the trail.

Employment 2013), 1 in 5 businesses surveyed reported that they had either expanded their services (e.g. added capacity) or added new services since the trail opened in their region. These ranged from provision of cycle tours to cellar door tasting sessions, but were commonly in the provision of accommodation, transport or shuttles, or cycle hire. There was anecdotal evidence that trails have been beneficial for existing businesses either by absorption of existing excess capacity and by spreading the risk through the diversification of product.

6.9 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. 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.

The Bundaberg Gin Gin Rail Trail would provide experiences for a range of user groups in a series of markets that have been consistent over time – walking and bushwalking and cycling – or growing significantly – off road cycle touring. The trail would provide for both visitors and local people who participate in a range of activities. The potential expenditures may be quite significant based on trail user expenditures elsewhere.

Section 7 – Community consultation

7.1 Introduction

Gauging the level of public, stakeholder and business support is important. It is also important to elicit any issues that people in the community may have about the project. Community consultation is extremely important in building the community understanding and support vital in delivering such a project.

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.

The community is not just the local community (i.e. people living and working alongside the railway corridor), but also all of those people living in the wider region encompassing residents of Bundaberg Regional Council. The needs and interests of visitors to the region also need to be considered as these numbers may be significant.

Naturally, those living alongside the corridor have a direct and often very personal interest in the corridor and perceive that they may be losers out of any conversion to a rail trail due to a perception of 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, and 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.

Despite the obvious advantages of a rail trail conversion, there are often opponents to the idea of turning the railway corridor into a multi-use trail. Neighbouring and nearby landowners, some of whom have farmed the publicly owned land for long periods, may be disturbed about the prospect of change to a situation that they have grown accustomed to. It is important to consider the issues that may be raised by adjoining landowners and investigate what options are available for resolving some of these concerns. Adjacent landowners are traditionally – and understandably – apprehensive 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, despite a plethora of testimonials (indicating nothing but positive results from the trail) from people in very similar situations.

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 the rail trail project.

7.2 Open houses

As part of the preparation of this Feasibility Study three 'Open Houses' (or 'drop in sessions') were held in Gin Gin, South Kolan and Bundaberg. The consultants conducted these Open Houses, with the attendance of representatives of the Council. The purpose of these sessions was to inform the community of the project, to provide an opportunity to provide further information and for community members to ask questions and to receive feedback.

Static display material was available for people to peruse which showed a series of artist's impressions to convey "before" and "after" scenes of the trail alignment, as well as material on rail trails generally – including fact sheets and photos of other operating rail trails. (Artists impressions are included in Appendix 1).

Open Houses were held in

- Gin Gin - Tuesday 27 November 2018.
8 people attended the open house.
- South Kolan - Wednesday 28 November.
10 people attended the open house.
- Bundaberg - Thursday 29 August.
At least 26 people attended the open house.

Of the 42 people who attended, there were at least 6 adjoining landholders. Most of these landholders had properties where the rail corridor was one side boundary. This is important because many of the farm management issues (as opposed to other issues such as lifestyle issues) arise where properties straddle a rail corridor.

There were a number of conversations between Open House attendees and the consultants. The

conversations were with both supporters and opponents of the rail trail proposal. There were a number of adjoining landholders who raised issues with the proposal but were not necessarily opposed to the project. Many of these concerns are what might be termed generic concerns – they have been raised in association with the many rail trails proposals across Australia. In many cases, satisfactory solutions have been found. The generic problems and solutions are discussed in 7.3 below with some specific notes about issues raised in the Open Houses. One adjoining landholder fully supported the project and had no concerns, while one clearly stated that they opposed the project.

The conversations during the Open Houses were also held with supporters of the proposal who highlighted economic, business and tourism benefits and exercise and recreational opportunities and benefits for local residents (including those people not along or near the corridor). The presence of the new RV park was discussed and it was put forward that many users of the park will look for additional activities to do – the rail trail provides one such opportunity. Some saw it as an opportunity to revitalise the central business district. A number of people noted that the trail provided a good opportunity to provide historical information. There was some discussion on the merits of sealing the trail as opposed to leaving it as an unsealed gravel surface. One positive theme put forward was that the trail would be an asset that local people could contribute. Ideas for the contributions included:

- One attendee raised the possibility of placing a series of sculptures along the trail. This person noted that John Olsen, a well-known sculptor who is preserving history through the use of recycled metals, lives in Bundaberg and had sculpted the ceratodus in the Riverside Parklands and his sculptures would add to the enjoyment of the trail.
- The trail could contribute to the activation of the Lions Park at Bundaberg North by the use of artworks.
- Produce stalls could be set up along the trail selling local produce.

It is reasonable to state, based on conversations with Open House attendees, that:

- The adjoining landholders who attended had concerns with the proposal and raised a number of issues. One appeared to be vehemently opposed to the proposal, whereas most of the others could see that, if it were to proceed, acceptable solutions could be found to their issues (this did not apply to all landholders –

some did not believe that the issues would not arise despite the evidence from rail trails elsewhere).

- The majority of those who attended who attended were very supportive of the project and said they would use the trail if it were developed (this included one adjoining landholder). Many of these could see a range of benefits to the region if the trail was developed.

It is not possible (nor is it fair to those who attended) to give some definitive comment on numbers opposed and supportive of the project. However, it is reasonable to state that the vast majority of those who were not adjoining landholders were in favour of the proposal.

7.3 Issues and solutions

As noted above, a number of what might be called generic issues and concerns were raised by adjoining landholders in conversations at the Open Houses. It is likely that there are a number of other issues and concerns adjoining landholders in particular have that were not raised. These are legitimate and need to be understood.

The corridor under scrutiny passes through a range of rural landscapes. Some sections of the corridor run alongside constructed roads. This reduces the potential for adjoining landholder management issues. However, other sections bisect farm land. In some circumstances, farmland on both sides will be owned and/or used by the same landholder, while in other circumstances, different landholders will be on either side of the corridor.

Landholder consultation always raises a number of issues, all of which have been satisfactorily addressed in other rail trail projects in Australia, New Zealand and America. Issues tend to centre around a number of key elements within three major headings:

- Farm management and disruption to farming practices;
- Non-farm management issues. These are generally concerns around safety, security, privacy, theft, trespass, noise, disturbance and a range of related issues; and
- Trail management. These are generally concerns around maintenance, and the behaviour of trail users in regard to littering, toileting and other issues.

Table 5 presents a range of problems generally raised (most were raised in the three Open Houses) and some generic solutions (a photographic essay follows showing some of these solutions on other

rail trails). The table also notes which issues were specifically raised in the open houses or were relayed via letters to the Council. The table and photos are provided as guidance; they do not substitute for detailed discussions with adjoining landholders over

problems and specific tailored solutions – this should be part of the next phase of work (preparation of a detailed development plan) if the project proceeds.

Table 5: Common issues and solutions

Issues and Solutions	
Impact / issue / problem	Solutions successfully used elsewhere Comments from experience elsewhere
Impacts on adjoining land owners' lifestyles	
Crime, trespassing, vandalism and theft Landholders often express a range of concerns in regard to the issue of trespassing on to farmland, especially where the railway corridor is remote from farm buildings and public roads.	Comments Crime <ul style="list-style-type: none"> ● Numerous studies have concluded rail trails do not generate crime. Research and anecdotal evidence suggest 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. ● There have been no reports of trespassing, theft or vandalism on the Murray to the Mountains Rail Trail (Victoria) since the establishment of the trail. ● Similarly, the Collie to Darkan Rail Trail (Western Australia) has had no incidents of crime. ● The Clare Valley (South Australia) Riesling Trail has had two incidents along the trail in over 25 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 that can be avoided by trail users following trail rules. ● The Linville-Blackbutt Rail Trail (part of the Brisbane Valley Rail Trail in South East Queensland) had 2 incidents with trail bike access in almost 10 years, but these were easily dealt with by the local police. ● The Rails to Trails Conservancy work in the USA includes dozens of testimonials from law enforcement officers in a number of jurisdictions confirming that the expected/perceived crimes simply do not occur. ● At least one landholder raised the issue of trespass noting that, at the present time, people use the railway corridor to access the creekside (at Splitters Creek) for fishing despite the fact that the creekfront land is privately owned. ● One landholder attending an open house was concerned about security of livestock. The comments about the incidence of theft apply.

Possible solutions

Crime prevention

- Design solutions to minimise theft include installation of security (and additional) fencing and planting.
- Trail design can eliminate overgrown vegetation and tall shrubs that minimises hiding places and creates long sight lines.
- Security lighting at trail heads and parking areas adds security.
- Emergency vehicle access helps increase user security.
- Keeping trail corridors clean and well maintained increases sense of community ownership and 'passive surveillance' reducing minor crime such as litter, graffiti and vandalism.
- 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.
- Many trails have a signposted Code of Conduct as a means of reinforcing what is expected of trail users and highlighting inappropriate behaviour.
- Prohibiting motor vehicle use (by regulation and design) reduces property crime. Locked management access gates are a proven method of restricting access on to a trail.
- Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols.
- The trail construction would include the provision of appropriate signage and barriers (something lacking at the moment). Signage (and appropriate barriers) would allow enforcement of trespassing rules as well as acting as a physical barrier.

Loss of privacy for adjoining landowners

Often 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. One landholder was particularly concerned as they had built their house in close proximity to the railway line and were alongside an old station ground which they envisaged would be turned into a trailhead where people would turn up at all times of the day and park and unload.

Possible solutions

- Some effective design solutions are possible and have been used to good effect on other rail trail projects. Fencing and security screening are the obvious methods.
- Re-routing the trail off the formation away from the affected residence onto an adjacent road reserve or elsewhere in the rail corridor. This option was investigated as part of the fieldwork (for the particular issue raised) and found to be a feasible solution – it would move the trail to the far side of the corridor meaning it is some distance from the house and screen planting would aid in the separation.
- Substantial additional vegetation planting to provide a visual barrier between the trail and the residence (while minimising 'hiding' places).
- Installation of screen fencing to obscure views of houses from the trail.

Land value devaluation

Comment

- What empirical evidence exists comes from the USA (*American Trails website*). The evidence is that rail trails positively add value to properties along their route. Research and anecdotal evidence suggest 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). Single family residential property values along the Little Miami Scenic Trail (Ohio) were positively impacted by proximity to the trail (*Karadeniz 2008*). Properties along the Minuteman Bikeway and Nashua River Rail Trail (Massachusetts) sell for a higher proportion of the asking price and in about half the time that it took for houses in the general inventory (*Della Penna*). Properties near, but not immediately adjacent to the Burke Gilman Trail (Seattle) sold for an average premium of 6% while those immediately next to the trail sold for a minimal premium (around 0.5%). Neutral-to-positive expectations for property values were held by 87% of adjacent neighbours to the Luce Line Trail (Minnesota). In the same 1988 study, 56% of farm neighbours held that same view, as did 61% of suburban neighbours (*American Trails website*).
- The consultants are not aware of any documented evidence to suggest property values decrease.

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

- 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.
- 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

- Staging of the project so that landholders and the responsible committee 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 may be felt differently by different people in different parts of the corridor).

Impacts on farming practices

Threat of fire

Landowners are often concerned about the possibility of increased fire risk along a rail trail with fires spreading unimpeded along the corridor and consider that additional fire protection will be required if the reserve is used for a rail trail.

Possible solutions

- Development of an effective fire management plan in close consultation with the local rural fire service.
- Areas of the trail deemed high fire risk can have more active management controls.
- Trail closure during periods of fire bans – as occurs on other tracks in high fire areas. The Hume and Hovell Track (in southern NSW) is one example of the use of specific closures. Trails in fire-prone areas can be closed for the duration of the high fire risk season.
- Smoking can be prohibited on the trail. Councils can declare the public area a smoke-free zone, just as it can with other public areas. (Note: trail users are usually people interested in healthy pursuits and are therefore predominantly non-smokers).
- Development of the rail trail has a significant advantage in that it provides easy access for emergency vehicles and other vehicles (such as electricity maintenance vehicles) to locations that may otherwise be difficult to access. Access for both fire vehicles and Ergon energy vehicles was raised as a concern by one landholder. Locked gates with access codes or keys available only to authorised vehicles can enhance access.

Weeds

There are weeds on the corridor at present – who will remove them and who will keep them under control.

Possible solutions

- Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues prepared in advance of construction.
- Focus of maintenance – erosion, vegetation regrowth, weed control and signage damage.
- Division of maintenance into regular inspections and simple repairs and once/twice yearly programs undertaking larger jobs such as vegetation control.

Interactions between nervous livestock and trail users with dogs.

Farmers whose properties adjoin the corridor are often concerned at unrestrained dogs being allowed along the proposed rail trail and causing difficulties for their livestock.

Comments

- It is well recognised that people walking dogs is a pastime with considerable physical and mental health benefits. On other rail trails, some sections of the trail (notably within the urban areas) permit this activity.

Possible solutions

- 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.
- If the rail trail is declared 'dog free', Council's rangers could issue infringement notices and the offender can be fined.

Interactions between nervous livestock and trail users on horseback

Farmers whose properties adjoin the corridor are often concerned at horses being allowed along the proposed rail trail, potentially bringing in weeds via faecal matter and a range of bacterial diseases and causing difficulties for their livestock.

Comments

- Rail trails around Australia vary on whether they permit horses. Of the trails listed as open on the Rail Trails Australia website, some 75% do not allow horses (for a range of reasons).
- The debate about whether horses carry weeds in faecal matter has been around for a number of years and is particularly topical in discussions about whether horses are allowed into national parks. There appears to be no agreed consensus (though some national parks managers are permitting horses).

Possible solutions

- The impact on trail feasibility is always relatively low (given the small number of horse riders in any community) and it is more properly a decision for the community to make.
- If horses are to be allowed, a separate slashed bridle trail should be developed within the corridor.

General biosecurity

There are concerns that the use of rail reserve by trail users will increase the risk of contamination of livestock.

- Advice obtained by the proponents of the Great Victorian Rail Trail (in central Victoria) 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 (in particular).

- The NSW Government prepared guidelines for assessing rail trails (*Strategic Risk Assessment: Biosecurity Risks Associated with Rail Trails*) which included an assessment of the risk of trail users introducing exotic animal diseases as an unlikely risk with catastrophic consequences, giving it a high risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. The document identifies that current national border control and quarantine protocols are in place. Suggested solutions include providing bins which fully contain rubbish (or instructing people not to leave rubbish and why), provide information on the general biosecurity duty to which the general public must adhere, and using signage to prevent contact between people and animals. Information on the trail should also include biosecurity risks and responsibilities including warnings about food scraps, human waste, soil, seeds, organisms and people who have been outside Australia in the last 7 days. The assessment also notes that trespass laws apply.

	<ul style="list-style-type: none"> ● The NSW Government document assesses the risk of trail users introducing non-endemic animal diseases as an unlikely risk with moderate consequences, giving it a medium risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. Solutions are similar to the risk of introducing exotic animal diseases and also includes signage to indicate wheels and shoes must be clean and free of dirt and vegetable matter before entering the trail. (Such facilities could be included at trailheads). Trailheads could also include wash down areas for bikes, prams, and footwear in high risk areas.
	<ul style="list-style-type: none"> ● The NSW Government document assesses the risk of trail users spreading established diseases between farms as an unlikely risk with moderate consequences, giving it a medium risk rating. The documents suggest that risk treatment options reduce likelihood and result in a low residual risk rating. Suggested solutions are as above.
	<ul style="list-style-type: none"> ● The NSW Government document also recommends that the trail proponent include in their emergency response plan a provision to close the trail during a disease emergency.
Exclusion from markets with Quality Assurance programs	<ul style="list-style-type: none"> ● The NSW Government document assesses the risk as a likely risk with minor consequences, giving it a medium risk rating. The documents suggest that risk treatment options by active management result in a negligible residual risk rating. In preparing the risk assessment, the report authors contacted two meat processors who indicated there were no known QA issues.
<p>Fencing of the corridor</p> <p>Farmers often believe that the rail trail project will result in them needing to pay for additional fencing.</p> <p>Farmers have adopted their practices to suit – moving livestock and machinery across, moving vehicles across, developing watering points on both sides etc. Farmers often believe fencing will cause problems with farming practices and not fencing will create havoc with livestock / trail user interactions & liability.</p>	<p>Comment</p> <ul style="list-style-type: none"> ● There will be sections that ‘dissect’ properties or are used by the adjoining landholder. <p>Possible solutions</p> <ul style="list-style-type: none"> ● Fencing may be appropriate in some places and not in other places – this depends on a number of factors and should be part of the consideration of a trail development plan.

Splitting of farm paddocks

Splitting properties and the resultant impact on farm practices (particularly getting stock to watering points and moving machinery)

Comment

- There will be sections that 'dissect' properties or are used by the adjoining landholder.
- This matter was raised by one of the attendees at the Open Houses who indicated that the corridor provided the only access way between two properties.
- Another landholder raised related issue indicating that the corridor provided the only access points to avoid a high quality wetland.

Possible solutions

- There are several options for dealing with "paddock splitting". They involve providing fenced and gated crossing points for stock and machinery at appropriate locations as determined by the landholder and trail manager.
- Another option to deal with watering points issue is to provide watering points (new water tanks or similar) on both sides of the corridor for stock (these could be provided by the project construction budget).
- Access licences can be granted by the trail manager with use conditions set to minimise damage to the trail, to manage interactions with trail users, and to maintain farm practices and maintain/develop access. The locations for these should be noted in the trail development planning process as part of field work.

Construction impacts on livestock

One landholder was concerned about timing of construction and the impacts it could have on their use of certain paddocks for livestock at certain times of the livestock management cycle

Possible solution

- Construction timing should be worked out and negotiated between the Project Manager and any relevant landholders to minimise disruption to livestock and cropping management.

Impacts of trail users

Management of litter and toilet waste

Comment

- Some landowners whose properties adjoin a former railway corridor expect high levels of litter.
- It has not been a problem elsewhere. The Lilydale 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. There was no litter to clean up. The Clare Valley Riesling Trail (in SA) is also litter-free.

Possible solutions

- Thoughtful placement of rubbish bins at trailheads on the trail.
- Regular maintenance patrols by council staff or volunteers, or the trail manager.
- While installation of composting toilets is one appropriate solution, these are costly and are generally recommended only where there are long stretches between towns.

Farm safety	Possible solutions
<p>Adjoining landholders can be concerned that farms are unsafe work places and people are being invited into such unsafe workplaces.</p>	<ul style="list-style-type: none"> ● Good design and appropriate information (as discussed above) will discourage people from going off the trail onto farm property and thus placing themselves in dangerous work environments or in close proximity to unpredictable livestock. ● 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	
<p>Funding for construction</p> <p>A major concern for opponents to rail trails is “Who is going to pay for trail project?” How will it affect rates?</p>	<p>Comment</p> <ul style="list-style-type: none"> ● Many Federal and State Government funding programs are available for tourism/recreation projects such as trails. Numerous trails around Australia have been funded by major grants worth hundreds of thousands of dollars. ● Major companies, such as mining companies, have contributed to trail projects. For example, BHP Billiton has contributed \$200,000 towards the Camperdown-Timboon Rail Trail in Victoria. ● Volunteers and other low cost resources, including low risk prison crews, can be brought into trail construction and maintenance projects. ● Entire construction costs for trails are rarely borne by local government, therefore there is minimal impact on ratepayers for construction (even though ratepayers do benefit directly from trails, and indirectly by visitors spending in the community).
<p>Liability – who is liable for the safety of users both on-trail and when they stray off-trail</p>	<p>Comment</p> <ul style="list-style-type: none"> ● 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. <p>Possible solutions</p> <ul style="list-style-type: none"> ● Primary project partners must take responsibility and ensure that their role is clear and unambiguous. ● Management body takes liability responsibility along the full length of the trail regardless of ownership. Farmers do not carry any additional liability. ● Effective signposting at trail heads and access points indicating trail regulations and trail use rules and user responsibilities. ● 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). ● Courts are increasingly ruling that people are responsible for their own actions, marking a different emphasis to that which occurred in the late 1990s/early 2000s when managing authorities were held responsible for inappropriate behaviour.

Unauthorised trail users

There are often concerns over whether motor bikes would use the trail

Comment

- Unauthorised access to the trail by users of cars, motor bikes, etc, is often stated as one the major concerns of adjoining landowners (it is also a concern of potential trail users).

Possible solutions

- Prohibit motor vehicle and motor bike use through motor vehicle exclusion barriers and effective signage at each road crossing
- On the Lilydale 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 motorbikes 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) management gate.
- Encourage reporting of vehicle/bike registration numbers of illegal users. Experience on the Murray to the Mountains Rail Trail was that motorbikes tended to use the same sections at the same time – enforcement was therefore relatively easy.

Ongoing maintenance costs

Who is responsible, who will pay, what effect will it have on rates?

Comment

- There are often concerns about the capacity of Councils to maintain the trail.

Possible solutions

- Preparation of a regularly reviewed Trail Management Plan covering all maintenance issues (including fencing) prepared in advance of construction is critical. The plan will provide a clear definition of who is responsible for what.
- Proper design and construction will minimise ongoing maintenance costs.
- Focus of maintenance – erosion, vegetation regrowth, weed control and signage damage.
- A clear definition of who is responsible for what.
- 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.
- Hazard inspection program (to limit liability and to define maintenance activities).

Environmental issues

Who is responsible for environmental effects of rail corridor? Environmental issues include construction concerns – noise impacts on wildlife and vegetation destruction on rail formation.

One particular issue raised during the open houses was drainage and the negative impacts that have resulted from poor drainage management between the corridor and the adjoining road.

Comment

- 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.
- With respect to drainage, this matter would need further investigation in the next phase (if the trail proceeds) to recommend a solution.

	<p>Possible solutions</p> <ul style="list-style-type: none"> ● Primary project partners must take responsibility and ensure that their role is clear and unambiguous. ● Management body takes liability responsibility along the full length of the trail regardless of ownership. Farmers do not carry any additional liability. ● Effective signposting at trail heads and access points indicating trail regulations and trail use rules and user responsibilities. ● 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). ● Courts are increasingly ruling that people are responsible for their own actions, marking a different emphasis to that which occurred in the late 1990s/early 2000s when managing authorities were held responsible for inappropriate behaviour.
<p>Responsibility for policing trail</p> <p>Adjoining landowners are often concerned about undesirable people using the trail and causing a nuisance</p>	<p>Comment</p> <ul style="list-style-type: none"> ● Rail trails do not attract undesirable people. Adjoining landowners need not be concerned about the typical trail users as they do not cause trouble. They are using the trail for a relaxing and enjoyable outing in an attractive environment, free of motor vehicles. <p>Possible solutions</p> <ul style="list-style-type: none"> ● Volunteer or professional trail patrols ranging from informal monthly clean-ups and maintenance crews to daily patrols. ● Preparation of a regularly reviewed Trail Management Plan contains a clear definition of who is responsible for what. ● Police and/or Council ranger patrols (including on bikes); or by trail manager on regular patrols.

This table is informed by the consultants' own experiences and also draws upon a NSW Government document *Strategic Risk Assessment – Biosecurity Risks Associated with Rail Trails*.

Some examples of successful solutions from other rail trails



Self-closing trail user access gate and locked management access gate at a road crossing on the Brisbane Valley Rail Trail.



Cattle crossing gates, as used on the Port Fairy Warrnambool Rail Trail in Victoria, enable adjoining farmers, and their cattle/sheep, to cross the trail whenever necessary – thereby not hindering farming practices. Gates are closed across the trail and side gates on side boundaries opened to allow stock to cross when required. This spectacle - when it occurs - is of considerable interest to trail users.



The gating system at road crossings used on the Lilydale Warburton Rail Trail in Victoria makes it difficult for unauthorised users (such as motor bikes and 4WD vehicles) to gain access to the rail trail.



Additional tree planting (such as on the Lilydale Warburton Rail Trail) can provide a necessary screening where residences are located close to the rail trail. On this rail trail, the fences of the original railway corridor have been relocated closer to the trail to enable the adjoining landowner to utilise the superfluous area of the corridor.



If the fencing of the railway corridor is brought in to that needed for the rail trail, adjoining farmers can make use of the remainder of the corridor. Fencing of the Lilydale Warburton Rail Trail has been relocated, bringing trail users in close proximity to farm animals without any problem.



User Codes of Conduct, and signposted regulations and rules, can prevent most undesirable and unwanted activities from occurring as well as instructing users where they can legitimately carry on their activities (such as walking dogs within stipulated areas).



Regular maintenance of the trail surface, vegetation of the corridor, bridges, culverts, weeds, gates and fences are all matters that should be the subject of a Corridor Management Plan and ongoing maintenance schedule. The Friends of the Lilydale Warburton Rail Trail undertake routine maintenance.



Various techniques are available to make road crossings safe for trail users, including this simple technique used on the O'Keeffe Rail Trail (in Victoria). On other rail trails, road crossings have been made safer by the installation of underpasses, bridges and traffic lights.



Appropriately placed signage advising/reminding trail users not to trespass has worked successfully on the Riesling Trail – an area where high value vineyards are immediately alongside the rail trail. Interestingly, on other sections of this rail trail, fences have not been erected (despite vineyards being located immediately alongside the trail).



Brice Hill Lodge, immediately alongside the Riesling Trail, sees a benefit in advertising its upcoming sale to trail users – an indication that proximity to a rail trail is regarded by many as an added advantage and adding to the value of the property (as studies have indicated).



Wineries immediately alongside the Riesling Trail in South Australia see no need to erect fences between the vineyards and the rail trail, as evidence from that (and other rail trails) shows that trespass and theft and other commonly perceived problems do not eventuate.



The Murray to the Mountains Rail Trail has a Code of Conduct sign board at regular intervals along the trail ensuring that all trail users are aware of their rights and responsibilities. An improved signage system could be derived using pictograms, although the use of 'wordy' signs is probably a legal requirement.



The Shiraz Trail in the McLaren Vale in South Australia has operated for many years and runs alongside numerous residences – with negligible reports of trespass, theft, vandalism and other crimes. Neighbours feel no need to install fences.



Individuals, community groups, schools and local businesses have adopted every mile of the Row River Rail Trail in Oregon, USA – as is typically found along many rail trails in the USA.



It is apparent that rail trail use and farming use can co-exist on the rail trail between Collie and Darkan. Sheep graze this paddock, which is in fact part of the railway corridor. Self-closing gates can be used in such situations to ensure that gates are not inadvertently left open and stock do not escape.



Grids are commonly used on rail trails at fence lines and property boundaries to prevent stock from escaping, but still allowing the passage of cyclists and walkers. This example is from the Otago Central Rail Trail in New Zealand. Similar examples can be found on the Brisbane Valley Rail Trail and the High Country Rail Trail in Northern Victoria.



7.4 Detailed planning

Should the trail proceed, detailed trail development planning is a critical phase of the project (beyond the scope of this report). One of the central elements in this phase would be one-on-one consultation with adjoining landholders to determine, in a cooperative manner, solutions to their particular issues. It is time-consuming but absolutely necessary. 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.

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

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

Involving landholders 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.

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 farming operations.



Section 8 – Estimates of probable costs

8.1 Basis of cost estimates

The investigations undertaken during the fieldwork associated with this project and the consultation carried out enable a reasonable indication of the work required to bring about the development of the proposed Bundaberg Gin Gin Rail Trail project.

The costs of construction of the proposed rail trail is an estimate of probable costs only. Accurate costs can only be determined, firstly, by the compilation of more detailed works lists accomplished through individual, detailed trail development plans for each section of the proposed rail trail and, secondly, via a tendering process.

The costs for development of the trail (bridges, trail construction, etc) are based on conditions likely to be encountered during construction. As accurate measurements have not been made, it is not

possible to be precise in quantifying costs. It is only after detailed trail development plans are prepared (including a full traverse of the corridor) that more definite quantities and costs can be provided.

Bridge assessments have not involved a detailed examination and further detailed assessments will be required to accurately establish the condition of timber and steel components.

For the purposes of determining costs for this Feasibility Study, the per unit construction rates have been included in the tables, along with an estimate of the total length or quantity.

8.2 Section costs

For ease of calculating costs, and as a possible future guide to development of the rail trail in stages, the corridor was divided into four roughly equal distance segments.

Table 6 - Section 1 – Bundaberg to Sharon (8.7km)

Activity	Unit	Qty	Rate	\$
Clearing of corridor				
● allowance for minimal clearing of weeds etc	metres	5120	\$3	\$15,360
● allowance for moderate clearing of regrowth	metres	1660	\$7	\$11,620
Erection of fencing along corridor*				
● double fencing (allowance)	metres	1240	\$30	\$37,200
● single fencing (allowance)	metres	3600	\$15	\$54,000
● no fencing	metres	3860	\$0	\$0

Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	10	\$400 (average)	\$4,000
Installation of prefabricated (pedestrian / cyclist decking and handrail) sections to Splitters Creek Bridge	metres	285	\$10,000	\$2,850,000
Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges)	metres	40	\$4,000	\$160,000
Construction of gravel trail to 2.5m wide, compacted to 150mm thickness (includes stripping of topsoil, boxing out, clearing side drains, compacting subgrade, filling, levelling, shaping and compacting gravel)	Lineal metres	6780	\$60	\$406,800
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	4	\$3,800	\$15,200
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	8700	\$2	\$17,400
Construction of road crossings at major / minor roads (gating systems and signage)	units	4	\$5,400	\$21,600
Allowance for refurbishment of significant railway heritage items		-	-	\$3,000
Allowance for trailside bench seats		3	\$1,000	\$3,000
Allowance for removal of cross fences				\$2,000
Bundaberg trailhead facilities:				
● Install map panel	units	1	\$5,500	\$5,500
● Directional signage to trailhead from regional and local roads	units	2	\$600	\$1,200
● Install roadside "Trailhead" signage on local roads	units	2	\$1,600	\$3,200
● Install picnic shelters and tables		2	\$8,000	\$16,000

● Install bike parking rails	set	1	\$1,000	\$1,000
● Allowance for trailhead sculptures / artwork		2	\$15,000	\$30,000
Sharon trailhead facilities:				
● Install map panel	units	1	\$5,500	\$5,500
● Install picnic shelter and table	units	1	\$4,000	\$4,000
● Install directional signage to rail trail along Sharon Rd	units	3	\$600	\$1,800
● Install roadside "Trailhead" signage on Bundaberg Rd	units	2	\$1600	\$3,200
● Install bike parking rails	set	1	\$1,000	\$1,000
Sub-total				\$3,673,580
Approvals, permits, applications, designs, specifications, assessments	%		2.5	\$91,840
Contingency amount	%		15.0	\$551,040
Project management	%		5.0	\$183,680
Total (not incl GST)				\$4,500,140

Notes

*The recommendation is that fencing on the corridor will be built to allow for a 6 metre wide trail corridor and the remaining corridor (usually 14 metres on a 20 metre wide corridor) will be made available to adjoining landholders for grazing livestock. This will apply in very limited circumstances given the nature of the surrounding land uses. While this contributes to a high construction cost, it significantly reduced the maintenance burden meaning only a 6 metre corridor needs to be slashed by the trail manager.

Table 7 - Section 2 – Sharon to South Kolan (Birthamba) (10.2km)

Activity	Unit	Qty	Rate	\$
Clearing of corridor				
● allowance for minimal clearing of weeds etc	metres	460	\$3	\$1,380
● allowance for moderate clearing of regrowth	metres	7610	\$7	\$53,270
Erection of fencing along corridor*				
● double fencing (allowance)	metres	200	\$30	\$6,000
● single fencing (allowance)	metres	8120	\$15	\$121,800
● no fencing	metres	1880	\$0	\$0

Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	10	\$400 (average)	\$4,000
Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges)	metres	40	\$4,000	\$160,000
Construction of gravel trail to 2.5m wide, compacted to 150mm thickness (includes stripping of topsoil, boxing out, clearing side drains, compacting subgrade, filling, levelling, shaping and compacting gravel)	Lineal metres	8590	\$60	\$515,400
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	6	\$3,800	\$22,800
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	10,200	\$2	\$20,400
Construction of road crossings at major / minor roads (gating systems and signage)	units	3	\$5,400	\$16,200
Allowance for refurbishment of significant railway heritage items		-	-	\$3,000
Allowance for trailside bench seats		3	\$1,000	\$3,000
Allowance for removal of cross fences				\$2,000
Birthamba trailhead facilities:				
● Install map panel	units	1	\$5,500	\$5,500
● Install directional signage to trailhead from regional and local roads	units	2	\$600	\$1,200
● Install roadside "Trailhead" signage on local roads	units	2	\$1,600	\$3,200
● Install picnic shelters and tables		1	\$4,000	\$4,000
● Install bike parking rails	set	1	\$1,000	\$1,000
● Construct parking area (160m ²)	m ²	160	\$75	\$12,000
Sub-total				\$956,150
Approvals, permits, applications, designs, specifications, assessments	%		2.5	\$23,900
Contingency amount	%		15.0	\$143,420
Project management	%		5.0	\$47,810
Total (not incl GST)				\$1,171,280

Table 8 - Section 3 – South Kolan (Birthamba) to Bullyard (12.9km)

Activity	Unit	Qty	Rate	\$
Clearing of corridor				
● allowance for minimal clearing of weeds etc	metres	160	\$3	\$480
● allowance for moderate clearing of regrowth	metres	11,740	\$7	\$82,180
Erection of fencing along corridor*				
● double fencing (allowance)	metres	160	\$30	\$4,800
● single fencing (allowance)	metres	6960	\$15	\$104,400
● no fencing	metres	5780	\$0	\$0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	10	\$400 (average)	\$4,000
Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges)	metres	80	\$4,000	\$320,000
Construction of gravel trail to 2.5m wide, compacted to 150mm thickness (includes stripping of topsoil, boxing out, clearing side drains, compacting subgrade, filling, levelling, shaping and compacting gravel)	Lineal metres	13,210	\$60	\$792,600
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	3	\$3,800	\$11,400
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	12,900	\$2	\$25,800
Construction of road crossings at major / minor roads (gating systems and signage)	units	4	\$5,400	\$21,600
Allowance for refurbishment of significant railway heritage items		-	-	\$3,000
Allowance for trailside bench seats		3	\$1,000	\$3,000
Allowance for removal of cross fences				\$2,000

Bullyard trailhead facilities:

● Install map panel	units	1	\$5,500	\$5,500
● Install directional signage to trailhead on Bundaberg Gin Gin Road		2	\$600	\$1,200
● Install directional signage to rail trail along Bucca Road	units	3	\$600	\$1,800
● Install roadside "Trailhead" signage on Bucca Road	units	2	\$1,600	\$3,200
● Install picnic shelter and table		1	\$4,000	\$4,000
● Install bike parking rails	set	1	\$1,000	\$1,000
Sub-total				\$1,391,960
Approvals, permits, applications, designs, specifications, assessments	%		2.5	\$34,800
Contingency amount	%		15.0	\$208,790
Project management	%		5.0	\$69,600
Total (not incl GST)				\$1,705,150

Table 9 - Section 4 – Bullyard to Gin Gin (13.8km)

Activity	Unit	Qty	Rate	\$
Clearing of corridor				
● allowance for minimal clearing of weeds etc	metres	5600	\$3	\$16,800
● allowance for moderate clearing of regrowth	metres	6750	\$7	\$47,250
Erection of fencing along corridor*				
● double fencing (allowance)	metres	1510	\$30	\$45,300
● single fencing (allowance)	metres	4390	\$15	\$65,850
● no fencing	metres	7900	\$0	\$0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	10	\$400 (average)	\$4,000
Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges)	metres	80	\$4,000	\$320,000
Construction of gravel trail to 2.5m wide, compacted to 150mm thickness (includes stripping of topsoil, boxing out, clearing side drains, compacting subgrade, filling, levelling, shaping and compacting gravel)	Lineal metres	13,720	\$60	\$823,200
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	4	\$3,800	\$15,200
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	13,800	\$2	\$27,600
Construction of road crossings at major / minor roads (gating systems and signage)	units	6	\$5,400	\$32,400
Allowance for refurbishment of significant railway heritage items		-	-	\$3,000
Allowance for trailside bench seats		3	\$1,000	\$3,000
Allowance for removal of cross fences				\$2,000

Gin Gin trailhead facilities:

● Construct parking area (200m ²)	m ²	200	\$75	\$15,000
● Install map panel	units	1	\$5,500	\$5,500
● Install directional signage to trailhead on Bundaberg Gin Gin Rd	units	2	\$600	\$1,200
● Install directional signage to rail trail along Bucca Road	units	3	\$600	\$1,800
● Install roadside "Trailhead" signage on access road	units	1	\$1,600	\$1,600
● Install picnic shelter and table		1	\$4,000	\$4,000
● Install bike parking rails	set	1	\$1,000	\$1,000
● Allowance for trailhead sculptures / artwork		2	\$15,000	\$30,000
Sub-total				\$1,463,900
Approvals, permits, applications, designs, specifications, assessments	%		2.5	\$36,600
Contingency amount	%		15.0	\$219,590
Project management	%		5.0	\$73,200
Total (not incl GST)				\$1,793,290

Table 10: Total Costs: Bundaberg to Gin Gin (45.6km)

Section	Cost
Section 1: Bundaberg to Sharon (8.7km)	\$4,500,140
Section 2: Sharon to South Kolan (Birthamba) (10.2km)	\$1,171,280
Section 3: South Kolan (Birthamba) to Bullyard (12.9km)	\$1,705,150
Section 4: Bullyard to Gin Gin (13.8km)	\$1,793,290
Total (not incl GST)	\$9,169,860

Section 9 – The Business Case

9.1 Introduction

It is always difficult to predict the economic impact of a new trail. Visitor numbers on the Bibbulmun Track (in WA) grew from 10,000 when the new alignment was first opened in 1997 to 137,000 in 2004 (*Colmar Brunton 2004*) to over 167,000 in 2008 (*Colmar Brunton 2009*) to over 300,00 in 2015 (*Hughes et al 2015*). 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 any of the proposed trail is primarily dependent on the extent to which the trail is marketed and promoted (if it proceeds).

A trail will bring additional tourists and keep them longer in the area. Other possible benefits from developing the trail include:

- Improvements to community connectivity;
- Increasing recreational options for local people; and
- Creating opportunities to build on existing industries and enterprises of the area.

A trail such as proposed Bundaberg Gin Gin Rail Trail will have attraction to visitors – day trippers and overnight visitors. However, it will also add to the stock of existing trails for local people – people who live in towns and villages within easy reach of the trail. Some of these people will use the trail for exercise – these 'back gate' users may not be significant in terms of expenditure, but they are significant in terms of numbers as they would use the trail many times a year.

9.2 Visitor markets

Visitor trends and markets were discussed in detail in Section 6. Key trends and markets to be considered bear reiteration.

9.2.1 General visitor trends

Tourism Research Australia and Destination NSW have undertaken research on a number of visitor markets relevant to rail trails. While the research focusses on NSW, the most relevant general

observation was that regional destinations offer key experiences for what Australians are seeking from their holidays.

- The millennials age group seeks authentic and genuine travel experiences, together with a variety of active and passive ways to enjoy them. This could include nature-based experiences, as well as country food and wine (*Tourism Research Australia, 2017(a)*).
- The over 55s is one of most powerful age groups in Australia in terms of financial capability and life expectancy is increasing. This group travels and prefers domestic travel to international travel. (*Destination NSW, May 2015*).
- More people (over 55) are choosing to travel earlier than retirement to enjoy the more active or immersive experiences that destinations have to offer. This is one of the key demographics for rail trails.
- Ease and convenience are the key drivers for domestic travel by families in Australia, and they are looking for destinations that are relaxed and easy with beautiful surroundings, preferably only a few hours' drive from home. (*Destination NSW, June 2015*).

9.2.2 General visitor numbers

The Bundaberg Region hosted 476,000 domestic overnight visitors and 600,000 domestic day trippers in 2017. 37,000 international visitors also came to the region (for a total of 1.13 million visitors).

9.3 Visiting trail users

There is no doubt from available evidence that recreation trails attract visitors who may come to a region specifically to do a trail (for example in 2004, 50% of visitors to South Australia's Riesling Trail came to the Clare Valley specifically to walk or ride the trail – the other 50% used the trail as a secondary activity to their trip to the Clare Valley).

The proposed rail trail has the potential to add to the number of existing visitors. The length of the trail (around 46kms) is an ideal length for cyclists (who are the primary users of rail trails). As a rail trail, the rail corridor is reasonably flat and will therefore accommodate the full range of cyclists as well as walkers.

9.3.1 Visiting trail users – predicting user numbers

What is a reasonable forecast for trail user numbers (some existing visitors will stay longer to experience the trail, and some will come to the region as new visitors simply to use the trail)? Nature visitors who participate in the types of activities undertaken on tracks and trails provide a pointer to the market potential for a trail such as the proposed Bundaberg Gin Gin Rail Trail. Tourism Research Australia estimates that 51% of domestic overnight nature visitors take part in bushwalking / rainforest walks, whilst 39% of domestic day visitors and 37% of international visitors enjoy this type of activity. While the proposed trail does not necessarily provide a bushwalking experience, it does provide an opportunity for nature visitors.

Victoria attracted 320,000 cycle tourists (domestic and international) in 2010 (Victoria's Cycle Tourism Action Plan 2011-2015). A proportion of these would be interested in off-road cycle touring on a trail such as the Bundaberg Gin Gin Rail Trail.

9.3.1.1 Projected User Scenarios - Day Trip Usage

Any trail has the potential to add to the number of day trippers. The day trip market will be a significant market for any trail.

The Mundaring Shire trail network (in WA) is just under 1 hour from the Perth CBD. 180,000 visitors (from outside the Shire) make over 900,000 visits/year (an average of 5 visits/person). The majority of these visitors come from Greater Perth (a population of 1.5 million at that time) and are day trippers. Some 12% of Perth residents visit the trail network.

Market Equity's work in South Australia shows that a significant percentage of cyclists on surveyed trails are more prepared than walkers to travel to use a trail (36% of cyclists interviewed on the five trails were non-locals) (*Market Equity 2004*).

It is difficult to predict with any certainty what effect development of any trail will have on the day trip market in the region as comparative work on other trails simply does not exist. However, the Lilydale Warburton Rail Trail provides a reasonable 'shadow' market for making some estimates. The trail attracts a large number of day trippers, with 100,000 of the 105,000 annual visitors being day trippers (some 3% of the day tripper market to the Yarra Valley and Ranges). The trailhead at Lilydale is 40 minutes by car from Central Melbourne and an hour by train. It is very well positioned for day trippers. The Trail is in an established tourism area – the Yarra Valley and Ranges – with a wide range of tourist infrastructure and attractions. In

2013, the Yarra Valley and Ranges region attracted 663,000 domestic overnight visitors and 3.1 million day trippers. The Yarra Valley and Ranges are very attractive natural environments, another positive factor attracting trail users.

Expenditure is also quite significant. Day tripper expenditure (based on a number of studies) is \$145.10/day with \$46.43 (or 32%) of this spent on food and beverage – most of which is likely to be spent in the region.

The work below assumes that two hours is a reasonable distance for people to travel (each way) to undertake a day trip.

The trail end points (Bundaberg and Gin Gin) are within 2 hrs of a number of significant major and minor population centres of the region. Maryborough, Hervey Bay, Childers, Gayndah and Mundubbera are all less than two hours from either Bundaberg or Gin Gin (a combined population of 84,000 people). (*This does not include local users within 20 minutes of the trail*).

A trail developed along the old railway corridor between Bundaberg and Gin Gin may attract in the order of 3,000 additional day trippers/year (specifically to use the trail). This number represents:

- Around 0.5% of the existing day tripper market to the Bundaberg region; and
- 3.5% of the population within two hours of the trail.

Increasing day trippers to the region by 3,000/year will result in an injection of some \$435,300 into the local economies per year (based on the average figures of \$145.10).

9.3.1.2 Projected User Scenarios - Converting Day Trips to Overnight Trips

Trail development may also turn day trippers into overnight trippers with consequent rise in economic benefits. The trail provides an additional activity for visitors – an overnight stay will give visitors time to walk or ride the trail in addition to their other activities. Overnight visitors to rail and cycle trails are spending an average of \$209.04/person/day.

The likely scenario would be that some visitors to the region will turn day trips into overnight stays if a trail is provided as an additional activity.

If the trail converted 2,000 day trippers into overnight visitors, this would inject an additional \$418,080/year into the economy based on overnight visitor expenditure of \$209.04/day. If they stay overnight to undertake the trail journey, they would undertake other activities as well over the course of their stay.

The benefit of the second or subsequent day's stay cannot be attributed to the trail.

This number represents around 0.4% of the existing overnight visitor market to the region. It should be noted that some of these visitors are likely to be people who are not traditional rail trail users but who would be interested in using the trail simply to visit Splitters Creek bridge.

9.3.1.3 Projected User Scenarios - Encouraging Existing Overnight Visitors to Stay Longer

Providing an additional facility for visitors already coming to the region is probably the key benefit of the trail development proposal. Such an additional facility will encourage them to extend their stay to allow an extra day (or part of a day) to use the trail. The trail could be included in a package of outdoor recreation opportunities and this is likely to attract users. A trail would be a good inclusion in a package with other tourist attractions. Such a package makes an appealing weekend away or an incentive to stay a day or two longer.

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.

This is also the market group in which the majority of the users of the RV Park would fall. It is not known what their expenditure is and it is too difficult to break down expenditure figures by each sub-group.

If 5,000 visitors stay an extra day to use the trail, this would inject an additional \$1,045,200/year into the economy. Additional expenditure as a result of their overnight stay – primarily but not only accommodation – can be attributed to the trail. This number represents around 1% of the existing overnight visitor market to the region. As with “converted” day trippers, some of these visitors are likely to be people who are not traditional rail trail users but who would be interested in using the trail simply to visit Splitters Creek bridge.

9.3.1.4 Projected User Scenarios - Attracting New Overnight Visitors

There will be small number of visitors who would drive from Brisbane primarily to undertake the trail given its relatively short length. As stated above, the key market is likely to be existing visitors who extend their stay. 1,000 extra visitors may come as new overnight visitors to the region primarily to do the trail.

All their expenditure (over 2 days as the assumption is that they will be overnight visitors) can be attributed to the trail; if there was no trail they would not come.

If 1,000 visitors came primarily to use the trail, this would inject an additional \$418,080/year into the economy (1,000 visitors spending \$209.04/day over 2 days).

There are a number of other rail trails being investigated for the Wide Bay Burnett region (the Boyne Burnett Inland Rail Trail and the completion of the Mary to Bay Rail Trail from

Maryborough to Hervey Bay). The Kilkivan Kingaroy Rail Trail has been constructed with some possible extensions being discussed. The Imbil Brooloo Rail Trail is under construction. It is reasonable to consider that there is a real possibility of packaging up a number of these trails (existing and proposed) and providing a Wide Bay Burnett Rail Trail experience over a number of days. This would attract new visitors from Greater Brisbane (and perhaps other States) and provide significant economic benefits for the region. Many of the world's longer trails offer supported and guided experiences opening up trails to people who may previously have not considered doing a trail activity. Such similar packages can be offered in the region.

In summary, possible visitor numbers are shown in Table 11.

**Table 11: Bundaberg Gin Gin Rail Trail:
Possible visitor numbers and associated
expenditure: A Summary**

Category	Predicted visitor numbers/year	Predicted expenditure/year
New day trippers	3,000	\$435,300
Day trippers converting to overnight stays	2,000	\$418,080
Overnight stays being extended by a day to use the trail	5,000	\$1,045,200
Attracting new overnight visitors	1,000	\$418,080
Total visitor numbers	11,000	\$2,316,660

How do these figures compare to what is happening on other trails in Australia? Research figures are limited and tend to focus on iconic trails – the Bibbulmun Track (300,000/yr) and the Munda Biddi Trail (21,000/yr) in Western Australia, the Murray to the Mountains Rail Trail (60,000/yr), the Great Ocean Walk (100,000/yr) and the Wilsons Promontory Walk (60,000/yr) – all in Victoria.

Other less iconic trails provide good pointers to likely use of any of these rail trails:

- Recent trail counters on South Australia's Riesling Trail show that over 40,000 people passed through 4 trail counters each year. While this does not necessarily translate to 40,000 users (as many would pass more than one counter), it suggests significant number of users. This trail is 2 hrs from Adelaide in the renowned tourist area of the Clare Valley (with very limited local population).
- Over 23,000 users passed through counters on the Old Beechy Rail Trail in 2013. Again, this does not necessarily translate as over 23,000 users, but it gives an indication of use rates.
- Around 27,500 users passed through counters on the Great Victorian Rail Trail in the first quarter (January-March) of 2014. Again, this does not necessarily translate as 27,500 users, but it gives an indication of use rates.

There may be additional people who use the trail as part of their visit to the region. While they add to the total number of trail users, their expenditure cannot be counted in any economic analysis of the trail's benefit as the presence of the trail is not the primary attraction for these visitors. As noted above, 50% of visitors to South Australia's Riesling Trail came to the Clare Valley specifically to walk or ride the trail – the other 50% used the trail as a secondary activity to their trip to the Clare Valley. The economic contribution of the latter 50% is not counted as an economic benefit of the trail.

The predicted user numbers are an "end state" of user numbers. Trail numbers will build in the first 5 years of a trail section being opened (after 5 years a trail is a "mature product"). It is assumed that trail use will increase by steady increments. The available evidence is limited and tends to show that trail use starts slowly but grows very quickly at some point – the Bibbulmun Track for example grew from 10,000 in 1997 to 137,000 in 2003 to 167,000 in 2007 to over 300,000 in 2015. It may be that the growth of social media will see trails reach an "end state" of use much faster than previously.

9.4 Local trail users

Every regional trail is a local trail. Therefore, it is important not to overlook the contribution of local residents to the success of a trail. 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. The total annual visits (people generally use trails more than once a year) were a staggering 2.454 million visits annually, with local residents accounting for 63% of these visits. The average number of trips per year per local resident was 75 (compared to the 10–30 trips used in the following forecasts). It is difficult to know how far people will travel to take advantage of a local recreation facility. 20 minutes travel is a reasonable figure to estimate the "local catchment" of a trail.

9.4.1 Local trail users – predicting user numbers

There are four "areas" within 20 minutes of the Bundaberg Gin Gin Rail Trail (Bundaberg, Gin Gin, the coastal strip from Elliot Heads to Moore Park, and the rural areas between Bundaberg and Gin Gin). The combined population of these areas is of the order of 78,000 (based on the 2016 Census).

Three possible scenarios can be used in calculating likely local user numbers. These are:

- A low/low scenario – 10% of the combined population within 20 minutes of the trail making 10 visits/year to the trail.
- A medium/medium scenario – 20% of the combined population making 20 visits/year to the trail.
- A high/high scenario – 30% of the combined population making 30 visits/year to the trail.

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 12 provides three visitation scenarios taking a far more conservative approach compared to the actual visitation rate coming from the Mundaring study.

Table 12: Potential Total Annual Visits by residents
(Population of the four centres within close proximity to the trail – 78,000)

Category	Low trail usage: 10% of residents	Medium trail usage: 20% of residents	High trail usage: 30% of residents
Low (10 visits/year)	78,000	78,000	234,000
Medium (20 visits/year)	156,000	312,000	468,000
High (30 visits/year)	234,000	468,000	702,000

Local users also spend money while using trails. 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 in the Shire – mainly food and drink) are a legitimate base to work from (and have been converted to 2017 dollars - \$2.15/person/trip).

Using this figure in combination with visitation scenarios generated in Table 12 gives a range of expenditure estimates. Table 13 shows a simplified set of three scenarios: low usage / low number of trips, medium usage / medium number of trips, and high usage / high number of trips.

Table 13: Potential total annual expenditure in the vicinity of the trail by residents

(low, medium and high refer to the use rates developed in Table 13 above)

Use Scenario	No. of person visits	Total spent
Low/low	78,000	\$167,700
Medium/medium	312,000	\$670,800
High/high	702,000	\$1,509,300

What is the likely scenario for local trail users? The Mundaring figures show 63% of the local population making an average of 75 trips/year. The Rail Trail will be the only rail trail and the only non-coastal trail in the area. As noted in Section 4, the *Bundaberg Regional Council Sport and Recreation Strategy 2018-2028* identified that walking and cycling (road and recreation) are popular activities among the Region's residents. However, the lack of connectivity and

safe off-road paths was consistently mentioned throughout the community engagement process. It would seem there is a latent demand for these activities which is currently not being met.

Given these figures, it would seem the medium/medium scenario of 312,000 person visits (i.e. 20% of the 'local' population using the trail for 20 visits per year) is a reasonable, if very conservative, scenario to adopt (conservative when compared with the Mundaring data). Such visitor numbers would inject **\$670,800/year** into the local economy. Due to the significant local population, economic benefits flowing from local trail use will be relatively high.

9.4.2 Local trail users – how long will they spend on a trail

The evidence is that most trail users spend up to 4 hours on a trail (walking or cycling). However, local people using the trail as part of an exercise regime are likely to have different time use patterns. The most recent national Exercise, Recreation and Sport Survey (2010) shows that those who regularly exercise do so for between two and five hours/week and the median number of exercise "events" was 1.6 times/week. It is reasonable to assume (for the purposes of calculating potential hours of exercise on the trail) that each use will be for one hour.

Using this assumption and combining it with the forecast user numbers, it is likely that there will be an additional 312,000 hours of additional physical activity in the local communities who can access the Bundaberg Gin Gin Rail Trail.

9.5 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 – 312,000 local users/year is a reasonable expectation. This will result in an economic injection of \$670,800/year;
- Expansion of the existing day tripper market to the region. 3,000 new day trippers/year injection \$435,300/year into the regional economy.
- With a new significant recreation attraction, some day-trippers may stay overnight, generating a new income stream. If the trail converted 2,000 day trippers into overnight visitors, this would inject an additional \$418,080/year into the regional economy.
- If 5,000 visitors stay an extra day to use the trail (or use a package of trails including the Bundaberg Gin Gin Rail Trail), an additional \$1,045,200/year would be injected into the regional economy.
- If 1,000 new visitors come to the region solely (or primarily) to do the trail, an additional \$418,080/year would be injected into the regional economy.

The total injection of dollars into the local economies from local, day trip and overnight visitors may be of the order of **\$2,987,460/ year** (under a range of conservative scenarios). Complex economic analysis (beyond the scope of this project) is needed to determine how many jobs are likely to be created by such expenditure.

It should be emphasised that user and visitor numbers will not necessarily be realised in the first years of operation if the trail proceeds. It also should be noted that these numbers may grow as the overall visitor numbers grow – particularly in the two groups covering existing visitors – converting day trips into overnight stays, and extending overnight stays by a day.

9.6 Business benefits

The completion of a trail would not simply provide an injection of funds to stabilise and grow existing and new businesses (as discussed in Section 6). The psychological impact on businesses can also be very important. Work done for the Riesling Trail included some qualitative research using focus groups consisting of business operators (*Market Equity 2004*). The key responses included:

- A belief amongst business providers that the trail contributes to economic activity in the region.
- The trail is seen to attract a variety of visitor types to the region, with wine as well as 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. The exact impact in measurable terms could not be clearly ascertained, as it is so intrinsically linked to businesses in the region, but 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.

Trail development offers a range of new business opportunities and the opportunity for existing businesses to extend their offerings.

It should also be noted that the trail construction process itself will provide an economic input to the region. The size of this benefit is beyond the scope of this report but it can be quite significant.

9.7 Non-economic benefits

There are a range of non-economic benefits accruing to local and wider communities from trail construction and use.

9.7.1 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 (*Wang et al 2005*).
- The trail 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 (*Institute of Transport Economics 2002*). Increasing recreational options for local communities will aid overall community wellbeing.
- 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.

9.7.2 Quantifiable benefits to individual residents

There are a number of benefits that accrue to residents of the region from a 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).

- Medical research has shown that one hour of moderate exercise can add more than one 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.

9.7.3 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.

9.7.3.1 Health and Wellbeing

Rail trails are an accessible form of recreation. Trail-based recreation is generally free, self-directed and available to all people, all day, every day. Good quality, accessible trails encourage physical activity and improved health. Increasing recreational options for local communities will aid overall community wellbeing.

Physical activity has also been shown to improve mental health and help relieve stress. The economic cost of mental illness is high in Australia – estimated to be approximately \$20 billion per year.

People can use trails in a variety of ways, depending on their abilities and preferences. Physical health benefits are discussed above. Social health benefits include:

- 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;
- 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;

- 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.

9.7.3.2 Liveability

Quality recreational facilities, such as trail networks, can help create attractive places to live and visit. This was identified by a number of planning documents as a goal for the two regions (as discussed in section 4). Walking and cycling are relatively cheap modes of transport. Trails also provide a low impact means of travelling through the landscapes and play an important role in connecting people with nature.

Local users of the trail will enjoy social interaction within the community and with greater social interaction, the social capital of the area may be boosted. There are a number of benefits of enhanced social capital. It improves the capacity for people to trust others (*ABS 2012 cited in SGS 2013*). This strengthens the social cohesion in a community as it provides the opportunity for socially isolated individuals to integrate into the community. Greater social capital also facilitates networking, thus creating more efficient economic networks.

Trail projects help build partnerships among private companies, landowners, and local government. Each trail contains elements of local character and regional influence, and reflects the hard work, enthusiasm, and commitment of individuals, organisations and elected officials. In addition, when residents are encouraged to become involved in a trail project, they feel more connected to the community (*Warren 1998 cited in SGS 2013*).

9.7.3.3 Education

Trails present a unique opportunity for education. People of all ages can learn more about nature, culture or history along trails. Of particular importance, trails provide firsthand experience that educate users about the importance of the natural environment and respect for nature by leading users into a natural classroom. An added advantage of a rail trail is that it provides an opportunity for city to connect to country, in a way “bush” trails do not. Education of users about railway history is also a paramount consideration in trail development.

Enhanced, active education along trails is achieved through the use of comprehensive trail guides and signage to encourage awareness of the natural, cultural and historical attributes of the trail.

Trails have the power to connect users to their heritage by preserving historic places and by providing access to them. They can give people a sense of place and an understanding of the enormity of past events.

9.7.3.4 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;
- Increased community ownership which helps to preserve natural and cultural values; and
- Opportunities for community participation in conservation and revegetation work.

9.9 Summary

The Bundaberg Gin Gin Rail Trail will provide a number of benefits to residents and businesses of the region. Some of these are quantifiable.

Increased visitor numbers in the order of 11,000 visitors will inject in excess of \$2.3 million into the region's economy. Local use rates of almost 312,000 people/year will see the injection of an additional \$670,800/year. These figures represent an injection of money into the local economy, which will ensure that the construction investment and ongoing maintenance costs is "paid off" over time.

The proposed trail offers a range of other significant benefits to these communities that cannot be quantified but are equally important to consider when assessing the project's merits. These are:

- The trail offers the opportunity for existing businesses to extend their offerings. The trail has the potential to improve the sustainability of businesses reliant on tourism.
- The trail will encourage visitors to stay a little longer when visiting the region by offering another activity.
- Increasing recreational options for local communities will aid overall community wellbeing, and in the long-term reduce health costs (a saving to the State Government).
- A trail will provide firsthand experience that educate users about the importance of the natural environment and respect for nature by leading users into a natural classroom and connect the city to the bush.

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. Much of the money that will be spent on this project, should it proceed, will be sourced from specific grants for tourism and/or recreation projects. It will not be available for other types of projects – there is, in a sense, limited opportunity cost for funds, though funds for this project could be spent on similar projects elsewhere with a different set of costs and benefits.

Section 10 – Feasibility Statement

10.1 The Statement

The project required the examination of the feasibility of developing a rail trail on the disused railway corridor between Bundaberg and Gin Gin. In order to establish whether the proposed rail trail is a feasible proposition, this Feasibility Study sought to answer several questions:

Is there a viable trail route? Yes. As is the case for the vast majority of disused railways in Queensland, the entire corridor is still in public ownership. Although many adjoining landowners have had unrestricted access to the public land within the corridor for a period of time, the land remains in public ownership and is unlikely to ever be used again as a Government railway. It is also highly unlikely that the publicly owned land will be sold for an alternative use.

There may be existing licences over parts of the corridor. These can remain in place if appropriate. Detailed design can provide realistic solutions to continuation of any access licences.

It is likely that some adjoining landowners have erected fences alongside, and across, the corridor over the years and stock have had unlimited access to much of the corridor for grazing purposes (some of these examples were seen and some were relayed during the Open Houses). In addition, some adjoining landholders have used the corridor for turning around machinery and some have used it for access between paddocks. In at least one instance, an adjoining landholder has used the corridor to park a large number of old earthmoving vehicles. There will inevitably be disruptions to long established farming practices should the proposed rail trail be constructed.

However, as is the case with many other successful rail trails developed in similar farming areas in Australia and overseas, there is a range of practical and viable solutions to each and every issue that adjoining landowners raise. Use of the corridor for farming purposes should therefore not be considered as a reason for not proceeding with the development of a trail.

Are there alternative uses for the corridor that will provide more value to the community? Are these alternative uses viable? The realistic answer is no. No proposal has come forward during the study nor has there been any history of proposed alternative uses. It is understood that the State Government is committed to retaining the railway corridor in public ownership which would allow it to be used for other public purposes should the need arise (other than a rail trail).

Will the trail provide quality user experiences (terrain/landscape/history)? Yes. The Bundaberg Gin Gin Rail Trail would pass through some very attractive scenery including cropping land – an unusual sight on rail trails. Farming vistas provide attractive landscapes for city people.

The Splitters Creek bridge is an outstanding example of a timber railway bridge and will be an attraction in its own right. Some of the railway stations remain and have been restored. While the North Bundaberg station will not be immediately alongside the rail trail, easy access from the rail trail will encourage visitation by those trail users interested railway history.

As with all disused railway corridors, the routes pass through cuttings, along embankments, and over numerous culverts and creeks. In addition to the cuttings and embankments of the railway formation, other reminders of the former railway exist all along the corridor including railway signs, cattle grids and remains of sidings and platforms.

The experience to be gained by users on the proposed trails would be of high order.

Interpretation of the cultural and natural values of the area will add to the user's experience.

Critically, in addition, the trail provides an alternative recreation experience to the range of existing trails within the region which are all coastal trails. This trail takes people into the rural hinterland opening up a range of different landscapes.

Is there a market for the proposed trails? Yes. Existing rail trails in other states, notably Victoria, are extremely well used and very popular recreational assets of the communities in which they are situated. The existing visitor market (both day trips and overnight trips) is very well established in the Bundaberg Region.

This Feasibility Study has examined the potential for users to travel to the region from places such as the State's south east specifically for the rail trail and as an added component to their leisure time activities.

It is highly likely that the proposed rail trail will become popular additions to the suite of rail trails available to those who actively seek out these recreational opportunities. The situation in Queensland at present (with a very limited number of rail trails) has meant that potential rail trail users have to travel to other Australian states (or overseas) to utilise such recreational cycling and walking experiences. The future development of additional rail trails in Queensland will stimulate

interest in, and use of, rail trails in a state largely unaware of rail trails.

The opening of CMCA's RV park at the Bundaberg Showground potentially brings a large new market of people who are interested in using a rail trail as an add-on activity.

It is highly likely that the proposed rail trail between Bundaberg and Gin Gin will become a popular addition to the suite of rail trails available to those who actively seek out these recreational opportunities.

Critically, the proposed rail trail will be a very worthwhile addition to the local cycling and walking opportunities in Bundaberg Regional Council – critical because local user numbers are likely to be quite high given the large population base of the region. In addition, the trail will foster day-trips from Maryborough, Hervey Bay and Gympie.

There are a number of other rail trails being investigated for the Wide Bay Burnett region (the Boyne Burnett Inland Rail Trail and the completion of the Mary to Bay Rail Trail from

Maryborough to Hervey Bay). The Kilkivan Kingaroy Rail Trail has been constructed with some possible extensions being discussed. The Imbil Brooloo Rail Trail is under construction. It is reasonable to consider that there is a real possibility of packaging up a number of these trails (existing and proposed) and providing a Wide Bay Burnett Rail Trail experience over a number of days. This would attract new visitors from Greater Brisbane (and perhaps other States) and provide significant economic benefits for the region.

Will the rail trail create any unmanageable or unmitigated impacts on adjoining landholders' farming practices and lifestyles? There are none that are obvious. It is true that a rail trail is a different use to the historic use of the corridor (for trains) and adjoining landholders may have expectations of how the corridor will be used in the future. A rail trail probably was not one of their expectations and they may have concerns or outright opposition. However, the corridor remains publicly owned land and the issues and concerns likely to be raised by adjoining landholders have been satisfactorily addressed in the other rail trails round Australia (of which there are over 100). Evidence shows no long-term negative impacts on farming practices and lifestyles. It is important to recognise landholder concerns and, if the trail proceeds, to work closely with them to address individual concerns and arrive at mutually agreed solutions.

Are the local governments and key stakeholders supportive of the concept? Yes. Funding for this Feasibility Study was provided by the Department

of Transport and Main Roads; Bundaberg Regional Council managed the process of the Study. While there are no formal resolutions of support, meetings with the Mayor, the divisional councillors and the chair of the relevant portfolio have indicated a Council which is very supportive of the rail trail's development. Experience from elsewhere has shown that Local Government needs to be prepared to be involved in the planning and development of rail trails to realise their potential. Community groups, while well-intentioned and passionate, often do not have the resources to deliver a major project such as a rail trail.

Are there supportive/strong advocates in the community? Yes. There does appear to be a ground swell of support from groups and individuals within the surrounding communities, as evidenced by the numerous supportive comments obtained during the series of "Open Houses" conducted during the course of this study. It is also evident that there are strong advocates within the communities who have expressed a desire to get more involved in ensuring the proposed rail trail gets developed. A meeting with Bundaberg Mad Cyclogists confirmed that group's longstanding support for the trail and the open houses provided introductions to a number of individuals who have been promoting the idea for some time.

It would be important for the future operations and maintenance of the proposed trail that a strong "Friends of ..." group be established.

A committed community-based group (or groups) is an important element in a rail trail's success. This commitment can be tapped into to ensure the rail trail succeed should they proceed for ongoing maintenance and promotion.

Is there a supportive community? It is not possible to provide a definitive answer as to community support based on the limited consultation for this project. This project has been the subject to a long history of limited community conversations but not for some time. Projects with a long lead time prior to a feasibility study often have developed a reasonable level of community support (and opposition).

Community opinion is not unanimous based on feedback from the Open Houses. Based on verbal feedback at the Open Houses, the following summarises the community views that were presented in these forums:

- The six adjoining landholders who attended had concerns with the proposal and raised a number of issues. One appeared to be vehemently opposed to the proposal, whereas most of the others could see that, if it were to proceed, acceptable solutions could be found to their

issues (this did not apply to all landholders – some did not believe that the issues would not arise despite the evidence from rail trails elsewhere).

- The majority of those who attended who attended were very supportive of the project and said they would use the trail if it were developed (this included one adjoining landholder). Many of these could see a range of benefits to the region if the trail was developed.

It is not possible (nor is it fair to those who attended) to give some definitive comment on numbers opposed and supportive of the project. However, it is reasonable to state that the vast majority of those who were not adjoining landholders were in favour of the proposal. This is typical of most rail trail proposals (and of most public infrastructure proposals).

Would the trail be value for money? Yes. Trails repeatedly demonstrate that there are numerous benefits to be gained through their construction: economic benefits to the towns where they start and finish; a boost to businesses associated with the trail; social and physical health benefits; and a range of environmental and cultural benefits. The business case for the trail is set out in Section 9. In summary, it can be reliably anticipated that development of the proposed rail trail will result in increased annual visitor numbers of the order of 11,000 who will inject in excess of \$2.3 million into the region's economy every year. Local use rates of around 312,000/year will see the injection of over \$670,000/year.

Is there a commitment to maintenance ("friends of ..." group or support network)? This has not been explored in any detail. The Feasibility Study identifies a range of possible maintenance costs. The experience of other trails indicates that community groups (such as Landcare groups, school groups, service clubs, etc) will help to maintain sections of the trail, or areas through which the trail would pass.

Will the trails provide a unique experience? Yes. The landscape associated with the proposed rail trail is attractive and adds significantly to the range of trail opportunities available to walkers and cyclists in this region. One of the key attractions that sets this apart is the fact that it traverses cropping landscape (primarily sugar cane). This landscape provides variety. The attractive vistas available all along the proposed rail trail, the variety of existing rail infrastructure (notably cuttings and embankments) add interest. Splitters Creek bridge certainly adds interest to the trail.

Is there a demonstrated benefit to trail users and, especially, the host communities? This question

has been answered partially in answers to other questions posed. The demonstrated benefits come in the form of economic and non-economic benefits that will accrue to both users and host communities (with the creation of a range of economic opportunities arising from the development of the rail trail).

10.2 Recommendations

Following consideration of the major issues pertaining to the development of a trail on the disused railway corridor between Bundaberg and Gin Gin and considering the views of key stakeholders, groups and individuals consulted (and background information obtained during the course of the project), this Study recommends that the proposed rail trail proceed, subject to a number of conditions being met.

It should be noted that it is not necessary to meet all these conditions immediately a decision is made to proceed to the next stage (a trail development plan).

For the trail to ultimately proceed, a number of conditions should be met:

1. Bundaberg Regional Council (or a Committee of Management) being prepared to accept vesting of the entire railway between Bundaberg and Gin Gin with an acknowledgement that sub-leases or access licences may be required to permit other activities (if appropriate);
2. A detailed design development plan for the rail trail being prepared, which will involve a thorough examination of the proposed trail, the preparation of detailed works lists and cost estimates;
3. A comprehensive program of one-on-one discussions on-site with affected adjoining landowners be undertaken to ascertain their individual concerns and to work out together solutions to each issue raised. This can be done as part of the trail development plan;
4. The project proponents (the Council) seek funding from external sources (notably the Queensland Government and Commonwealth Government) for the construction of the proposed trail;
5. A commitment to ongoing maintenance of the trails being given by the Council, any Committee of Management and volunteers;
6. Consideration be given (based on this report, the trail development plan, any relevant Bundaberg Regional Council policies and any State Government policy direction) to forming a Committee of Management, comprising (at least) representatives of the Council, user

groups, the Rural Fire Service, residents of the communities, local business proprietors and adjoining landowners. This Committee would guide the ongoing planning, design and construction, management and maintenance of the proposed rail trail and the former railway corridor. (The Committee of Management could be modelled on successful Victorian examples);

7. Following completion of a Trail Development Plan and a decision to proceed, the preparation of relevant plans, such as a Corridor Management Plan and a Bush Fire Risk Management Plan for the corridor be undertaken;
8. Existing uses of the corridor (primarily but not only for agricultural purposes) to be considered on their merits, and suitable solutions found to enable the activity to continue where reasonably achievable; and
9. Once constructed, the Trail Manager is to assume liability responsibility for trail users and are to take all actions possible to mitigate potential claims against landowners and neighbours.

10.3 Factors supporting the decision

In formulating a decision about whether the proposed trail is feasible or not, due consideration has been given to a range of factors.

- From a trail users' perspective, the former railway corridor between Bundaberg and Gin Gin is attractive. It offers a range of positive factors.
- The entire railway corridor between Bundaberg and Gin Gin remains in public ownership with few constraints to the development of a trail along its entire length.
- The railway corridor is situated in a relatively scenic landscape, with a diversity of landscapes and existing historic railway infrastructure (including the Splitters Creek bridge and the railway stations at Bundaberg North and Gin Gin).
- The railway corridor offers a good trail experience and, coupled with the ideal distance between centres (Bundaberg to Gin Gin is approximately 46km) could become a significant trail destination in Queensland, especially when coupled with other attractions of the region.
- The corridor is easily accessible and is within a short distance of major towns in the Wide Bay Burnett region and South East Queensland and is in an established tourism region with high visitation rates both for day-trippers and overnight visitors. Adding another attraction will potentially bring additional visitors and keep visitors longer in the area. The opening of CMCA's RV park at the Bundaberg Showground potentially brings a large new market of people who are interested in using a rail trail as an add-on activity.
- The development of several trailheads along the trail (as well as the two anchors Bundaberg and Gin Gin) provides for a variety of rides/walks of different lengths.
- Some of the major elements of the railway infrastructure remain (the cuttings, embankments and Splitters Creek bridge).
- Being in an established tourism region means that there is a reasonable supply of accommodation options for visitors coming to use the rail trail, though more may develop in response to the opportunity provided by the rail trail.
- The surrounding farmland and various other land uses, the natural qualities of the region, the history of construction of the railway and a host of other interesting subjects results in a huge potential for interpretation along the rail trail – adding to and enriching the experience of trail users.
- As a rail trail, the corridor is reasonably flat and will therefore accommodate the full range of cyclists, as well as walkers. The total length (at around 46km) would comprise a relatively easy one day cycle ride and perhaps a two day walk but there are opportunities to 'hop' on and off the rail trail.
- The trail will improve non-motorised transport connections between Bundaberg and Gin Gin and the small communities in between, promoting walking and cycling among local people.
- The trail will build on the existing small rail trail at Sharon which has operated successfully for some years.
- The trail will provide local people with a new opportunity for walking, cycling, fun runs, wheelchair use and educational opportunities for school children.

Section 11 – Implementation

This Feasibility Study is one of the initial steps in the development of the proposed rail trail between Bundaberg and Gin Gin. The fieldwork and other investigations carried out in the study have revealed a number of tasks that will need to be undertaken to progress the proposed trail through to fruition.

11.1 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 Bundaberg Regional Council has been the primary driver of this phase of work (with funding provided by the Department of Transport and Main Roads). The Council 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 a detailed trail development plan; and
- Sourcing funds for future development of the rail trail.

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

It is therefore recommended that the Bundaberg Regional Council continue to take the lead role in the next phase of the project, working in conjunction with relevant State Government agencies to implement the development of the Bundaberg Gin Gin Rail Trail. Following consideration of this Feasibility Study, the Council will have developed a more detailed understanding of many of the issues and opportunities and are ideally placed to continue to facilitate future stages.

11.2 Further investigations required

A number of further investigations are needed before further work on constructing any section or all of the trail is undertaken.

11.2.1 Structural integrity of bridges

The Scope of Works for this Feasibility Study does not include detailed engineering assessment of bridges.

If the Council determines to proceed further along the trail planning and development process, bridge inspections are seen as a key matter to be

addressed. Obviously the most significant bridge to be assessed will be the timber and steel bridge over Splitters Creek. At 285m long, it will be a major drawcard and when made safe for pedestrian and cyclist use will attract thousands of users each year. It will require a detailed examination to confirm its true condition.

Most of the watercourses observed during fieldwork once had a low bridge which are now missing. In most cases only the concrete abutment remains.

Detailed assessment of all bridge locations will determine the need for, and the design parameters of, any new structures to be installed. This level of work could be included within the recommended trail development planning phase or it could be carried out as a separate project.

11.2.2 Detailed trail design (trail development plan)

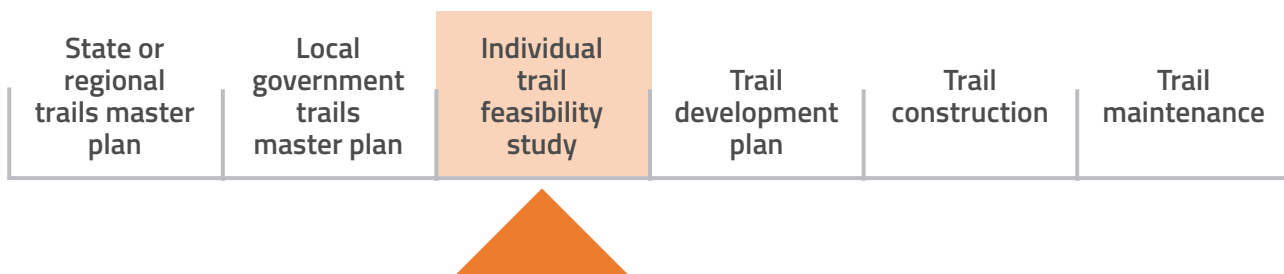
This project is a feasibility study examining the merit and physical constraints of establishing a trail on the disused railway corridor between Bundaberg and Gin Gin. By necessity, indicative costs and possible solutions are included. It does not provide detailed trail development planning that seeks out solutions to all specific issues, nor does it articulate detailed design solutions. It does however provide broad estimates of probable costs, based on an examination of numerous parts of the former railway corridor that identifies likely works required (clearing, trail construction, bridges, drainage, signage, etc).

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

- Individual Trail Feasibility Study – establishes whether a trail route is viable; refines potential alternative 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 cost estimates and detailed works lists; identifies signage requirements and costs; provides trail inspection and maintenance schedules.

Following the establishment of trail feasibility and the preparation of a detailed trail development plan, trail construction can 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”.

trail was completely developed in one stage as the result of a large Commonwealth Government grant after the tragic Black Saturday bushfires in 2009. The Port Fairy Warrnambool Rail Trail (a 37km trail) was subject to various studies and plans from 2002; it was opened in 2010 – again all in one stage.



The Bundaberg Gin Gin Rail Trail project is at the “feasibility” stage of the trail planning and development spectrum. Further detailed trail planning will be required for the rail trail once it has been demonstrated that it is feasible and therefore worth proceeding with.

The preparation of a detailed trail development plan will deliver a high quality, locally focussed and well-managed and maintained trail for use by residents and visitors.

If the decision to proceed is taken, the preparation of a trail development plan is the next logical step. This would include onsite consultation with adjoining landholders.

11.3 Trail construction stages

Development of trails can often be staged so that parts of trails are developed in line with available funding sources. It is often not possible to open the full length of a trail simultaneously as significant physical, financial, community and institutional work needs to be undertaken. This is the case in 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. Promotional material needs to clearly articulate what sections are open and what this means for users.

A staged approach to planning and development is often the best approach as it better suits the capacity of the entity charged with delivering the project. Trails can take up to 10 years to develop from initial planning stages. The “new” Bibbulmun Track in WA was some 4 years in the detailed planning and construction. This was a significant trail project with backing by the State Government – it stands out as a track planned and built relatively quickly. Other rail trail projects provide better illustrations of a realistic timeframe. A Feasibility Study for the Great Victorian Rail Trail was prepared in 2004; the trail opened in 2012. Interestingly, this

The criteria used to determine the recommended stages of development for the trail were:

- Trail sections anchored in trailheads; this provides easier access for users and builds on associated infrastructure investments already made.
- Construct cheaper sections earlier than expensive ones (affordability).
- Construct most attractive sections first.
- Probable economic impacts.
- Finished product logic.
- Ease of access for users.
- Trailhead development.

Assessment of potential stages was done in a broad sense against all these criteria, rather than assessing each section against each individual criterion. Combined with the field assessment, consideration of these elements allows the determination of the implementation schedule.

If the Council determines to proceed with trail construction, the recommended staging is as follows:

- **Stage 1 of construction:** Bundaberg to Sharon (8.7km – includes bridge over Splitters Creek).
- **Stage 2 of construction:** Sharon to South Kolan (Birthamba) (10.2km – includes existing Sharon Rail Trail).
- **Stage 3 of construction:** South Kolan (Birthamba) to Bullyard (12.9km).



- **Stage 4 of construction:**
Bullyard to Gin Gin (13.8km).

The logic and rationale behind this staging is as follows:

- It builds the section which contains the trail's most obvious and attractive feature (Splitters Creek bridge);
- It connects with the existing Sharon Rail Trail – thus capitalising on what is already in place; and
- It provides a continuously growing trail easily accessible to the region's most populated centre (Bundaberg).

11.4 Sourcing funding

Once the decision is taken to proceed with the implementation of the proposed rail trail, it will be prudent to start the process of finding construction funding. All funding sources available at that time will need to be identified and funding applications prepared as soon as possible. (Funding programs often change and are subject to review – current funding programs are discussed in Section 13).

11.5. Environmental issues

A number of key environmental issues have been identified. These include:

- Clearing of regrowth vegetation along the corridor, and the need for clearing permits and the possible future need for offset re-vegetation.
- The potential for the spread of weeds (and pathogens) during the construction phase and, potentially, through usage of the trail.
- Contamination of soils as a result of the operations of the railway and the manner in which former bridges were constructed and maintained.
- The potential for sedimentation of watercourses as a result of trail construction and bridge works.

In addition, care will need to be taken in the ongoing maintenance of the proposed rail trails to ensure weeds and pathogens are not unwittingly spread by maintenance machinery. Ongoing clearing at the sides of the rail trails will be required to keep the trail corridor at acceptable widths.

Section 12 – Trail management

12.1 Introduction

Once a decision is taken to proceed with the development of the proposed rail trail between Bundaberg and Gin Gin, decisions will need to be made about the management regime that will be put in place to manage and maintain the trail. A serious commitment to long term management by the trail's proponents will be required, particularly as there is likely to be a significant investment of Government funds.

The responsibility for overseeing the preparation of this Feasibility Study has rested with the

Bundaberg Regional Council (with funding from the Department of Transport and Main Roads).

Ongoing management of the construction program and operation of the trail will be crucial in achieving sustainable and well-used facilities. Options are available for future management of the trails.

The Queensland Government has not given any indication as to how any new rail trails will be managed. What exists on rail trails presently is a combination of State and Local Government and community groups. What follows draws on standard administrative practice in Victoria (which has the most mature process for rail trail development and management), provides commentary on the key attributes and issues and provides advice on the types of skills and tasks a management committee should undertake; these elements will not necessarily be governed by whatever administrative procedures are adopted. The commentary is provided as a series of best practice notes. They are also provided for the Council to consider likely ongoing arrangements if the trail proceeds.

12.2 Common elements of good management

While legislative regimes differ, the operations of many trails across the country are marked by a common set of features. Some common characteristics about all aspects of operation are discussed in Section 3.6.

12.3 Types of management structure

There are three primary ways a rail trail (or indeed any trail) can be managed:

- Local Government as sole manager – e.g. Railway Reserves Heritage Trail, WA
- Local Government as lead player in partnership with other stakeholders (State Government and community) – e.g. Murray to the Mountains, Victoria

- Local Government as a player in the management structure – e.g. Great Southern Rail
- Trail Victoria; Riesling Trail, SA

Each of the three models has its advantages and disadvantages.

Rail trails where a single Council manages a rail trail are often managed as a recreation asset of the Council, no different from a range of other assets. This has the advantage of simplicity but has no community ownership and buy-in and treats a rail trail as similar to swimming pool or park – assets provided simply for the local community with no outside appeal (bearing in mind that these rail trails will attract visitors).

Trails where Local Government is the lead player in partnership with other stakeholders is the most common approach used in Victoria. A strong argument for this model is community ownership. Those involved in a number of trails strongly put forward the view that community involvement needs to be significant and meaningful. If this does not occur, people will say "It's Council's problem, why doesn't Council fix it?". The other advantages of this model are summed up by contrasting it with experiences of trail managers where the Local Government is involved simply as a player.

Those involved in management of the two trails where Councils are involved as simply a player (option 3) believe that Councils should play a much stronger role for various reasons:

- A rail trail project needs solid and proper support from the responsible Council on an ongoing basis and preferably from the project commencement. There is a concern that a long-term vision for the trail is missing. Such long-term views are often (though not always) located within a Council rather than outside a Council structure.
- The project is a community resource (as evidence by the large number of local people using the trail), therefore the community should contribute to the trail (including through the Council).
- One of the challenges for one of the Committees is the process of renewal and that many of the Committee members have been on the Committee since inception (in the late 1990s) and new blood is needed. If a trail sits "within the Council" i.e. is driven or at least strongly supported within the Council, the institution can take a trail through these times of transition much easier than can a community-based model.

- Council should have a significant responsibility in the trail's management – it should be responsible for seeking funds, for involving the community in a meaningful way and for keeping the project going when community involvement drops (as it inevitably will at times). Many significant funding programs are open only to Local Governments (rather than community groups).

The Great Southern Rail Trail (Gippsland, Victoria) 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 driven by the community rather than by Government. One issue that has arisen (though not with rail trails but on other recreational assets) is the sense of proprietorial ownership that can occur when a community group is the sole manager. This has both advantages and disadvantages but it has been the experience of Local Governments (often around showgrounds) that such proprietorial ownership can lead to management difficulties when changes are required.

The final decision on a management option may well depend on the State Government's position. In 2010, the State Government was looking to develop a series of rail trails in consultation with Local Governments. At that time, the State Government was offering long-term (30 year) sub-leases to Local Governments only. If a Local Government declined the opportunity to take up a sub-lease, the State Government indicated it would consider offering a similar sub-lease to a responsible entity that could indemnify the State Government and could demonstrate a capacity and a willingness to develop the corridor for recreation purposes. Whether this is the current position is unknown.

The model which is the preferred model for rail trail management across Australia (i.e. the one that is the most common) is one where the Local Government or Governments has a lead role in partnership with other stakeholders.

Bundaberg Regional Council can determine the management structure if it determines to proceed with the trail. The Queensland Government may also set a preferred management structure.

12.4 Committees of management

A formal Committee of Management could be established as a way of getting community ownership; this is the established process in Victoria and has been successful in managing a number of rail trails. In Victoria, 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.

Any committee set up to run the trail should have a similar set of powers and duties.

12.5 Skill sets

At a general level, 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; 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 trail is critical;
- 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; and
- 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. Project initiation skills are important in the early stages whereas ongoing management skills are more appropriate once the trail is established.

12.6 Trail maintenance

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 programme 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 this trail (if it proceeds) - to ensure user safety and enjoyment, and to minimise liability risks for land managers.

12.6.1 A trail maintenance plan

Ongoing maintenance costs can be minimised by building a trail well in the first place. A well-constructed trail surface will last considerably longer than a poorly built trail. Signs, gates, posts and bollards installed in substantial footings stand less risk of being stolen or damaged. Well designed, well built and well installed management access gates and trail user gates (as proposed) will keep motor vehicles and motorised trail bikes off the trail with a consequent lesser need for surface repairs. Trail furniture (such as seats, trail directional marker posts and interpretation) should be installed (during the construction/upgrading process) in substantial footings sufficient to withstand high winds and theft. These should require minimal ongoing maintenance.

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 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 trail; and
- Set in place a management process to cover most foreseeable risks.

Most minor repairs (bridges, fences and gates) 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 trail management.



Volunteers organised by the Committee of Management at a busy bee to undertake maintenance work along the rail trail near Port Fairy in western Victoria.

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 rail trail and then baulk at the demands of managing and maintaining it.

12.6.2 Public liability and risk management

It is prudent that the trail manager is aware that – whether or not visitors are actively encouraged to come to the rail trail – they carry a significant duty of care towards those visitors accessing the trail. The maintenance of a quality trail is therefore critical from this perspective. 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.

12.6.3 Trail maintenance activities

The discussion that follows provides general guidance for the development of maintenance plans should the rail trail proceed. It is not a substitute for specific maintenance plans for a trail.

Maintenance on the rail trail 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.

At the core of any trail maintenance program is an inspection program. The relevant Australian Standards sets out the basis for frequency of trail inspections. It only covers walking tracks and provides for inspections every 30 days (or less) for Class 1 trails, every 90 days for Class 2 trails, and annually for Class 3-6 trails. This sets the minimum standard for inspections and is a guide only. What the Australian Standards do not include but should include is an inspection of any trail after significant weather events such as storms, fire, floods, and high winds in addition to the regular inspection program. The trail should have its own maintenance plan that may, for particular reasons, have more frequent inspections. Particular needs should be recognised in an individual trail maintenance plan.

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.

The presence of trees along some sections of the trail means that time will be spent removing damaged and fallen trees and branches in the aftermath of a storm.

One of the most frequent maintenance task will be attending to fallen branches and limbs, repairing trail surfaces, replacing stolen or damaged signs (including road signs), clearing culverts and under bridges and ensuring gates and fences are functioning as intended.

Table 14: Key elements for a trail maintenance program

Activity	Notes
Check, repair or replace all trail signage, esp. road-crossings and directional markers	<p>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.</p> <p>Each trailhead should be carefully checked to ensure that all signage is present, and that all signs are clearly visible and legible. An inventory of locations needs to be prepared to assist in regular maintenance.</p> <p>Interpretive panels should be checked for damage 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.</p>
Check and cut-back overhanging or intruding vegetation	<p>Undergrowth vegetation grows quickly, and over time will continue to intrude into the trail 'corridor'. Such intruding vegetation will need to be cut back to provide clear and safe passage for trail users.</p> <p>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 that 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.</p>
Check condition of trail surface for erosion (or other) damage and arrange repairs if necessary; trim off regrowth vegetation	<p>Some of the trail sections will require regular surface maintenance, though this should be minimal as the rail formation was originally constructed with drainage a major consideration. Primary focus will be on erosion damage caused by water flowing down or across the trail and by illegal motor vehicle and trail bike use. This must be repaired as soon as it is noted, or it will get worse, quickly.</p> <p>Earthen surfaces may need to be topped up after heavy storms, though good design will minimise such washouts.</p>

Check and clear drains

Drainage maintenance is critical. Drains need to be checked and cleared once or twice/ year and after heavy rainfall events. Regular maintenance especially after heavy rainfall is essential.

Most maintenance will involve clearing of material from silted up or blocked drains.

Any scouring out of table drains should be stabilised as soon as possible.

Drain blockages should be cleared as urgent priority.

Silt traps at culvert discharges or entry points should be cleared regularly.

Drains through cuttings will require attention, though care during construction of trail (through cuttings) will minimise ongoing maintenance requirements.

Check structural stability of built structures such as trailside furniture, bridges, interpretive signage, interpretive shelters

Visual inspection is appropriate though detailed inspection should follow storm events.

Maintain all non-slip surfaces

Maintenance on these surfaces is critical to prevent build-up of conditions that can lead to deterioration. Leaf blowing, sweeping, gurneying and the application of algicide are all appropriate techniques. The appropriate technique and efficiency will be subject to site conditions.

Undertake Hazard Inspection and prepare Hazard Inspection Report

This should be done annually

12.6.4 Maintenance costs

Maintenance costs are a major consideration in any public infrastructure project. These need to be offset against a range of benefits – both economic and non-economic. Detailed costings are not part of this project but the Council needs to have some understanding of the possible maintenance costs. The following presents a broad discussion on costs informed by other projects and real-life rail trail costs.

Estimating the cost of maintaining a trail is difficult due to the unpredictability of events such as wild fires, ferocious storms, occasional flooding and malicious damage. Heavy rains and the subsequent runoff can cause considerable damage to trail infrastructure – especially if drainage is not

attended to well during the construction of the trail. Deliberate and willful damage and vandalism can also contribute significantly to the need for ongoing maintenance and replacement of infrastructure. Volunteers can be organised (through a coordinated program) to carry out much of the work at a limited cost to the trail manager.

According to a report prepared by the Rail to Trails Conservancy in the USA (*Rail Trail Maintenance and Operation – Ensuring the Future of Your Trails – A Survey of 100 Rail Trails*, July 2005), the cost to maintain trails is hard to determine. The report provides two general answers for why it is difficult to estimate maintenance costs. First, the trail may be part of a larger budget for a single park or even an entire parks and recreation department. Specific

costs for the trail aren't separated out. Second, small trail groups, though run by competent and extremely dedicated volunteers, tend to be 'seat-of-the-pants' operations. Maintenance is done "as needed," funds are raised "as needed," and the people are volunteering because they love the trail, not because they love doing administrative tasks like budgeting.

Evidence of actual trail maintenance costs for individual items along a rail trail, or any trail for that matter, are scarce. However, the activities of a strong Committee of Management and an effective volunteer maintenance program can **significantly** reduce the maintenance burden on a local government.

In Victoria, the Murrindindi Shire Council manages and maintains approximately 85% of the (134km) Great Victorian Rail Trail. It spends around \$2,000/km on maintenance activities each year. Anecdotal information indicates that initial construction issues necessitate an increased level of maintenance of the trail surface (and drainage through cuttings). A higher level of (initial) construction quality (i.e. better trail surfacing and better drainage through cuttings) would mean less ongoing maintenance. At present there is no "Friends of" group to undertake some of this maintenance (and lessen the cost burden of maintenance).

Maintenance responsibility does appear to significantly affect cost. Approximately 60% of the surveyed trails reporting costs were maintained primarily by a government agency, implying paid staff and/or contractors. The other 40% of trails were primarily maintained by a non-profit or volunteer organisation. Annual costs for government-run trails were just over US\$2,000 per mile (US\$1,250/km). This is not much more than the overall average of US\$1,500/mile (US\$940/km), but it nearly triples the average for volunteer-run trails of just under US\$700 per mile (US\$440/km).

There will be numerous items that will require ongoing attention and maintenance. Fencing and gates should be installed (during the construction process) in substantial concrete footings sufficient to withstand removal by 4WD vehicles. Trail furniture (such as seats, signage, trail directional marker posts and interpretation) should be also installed in substantial concrete footings. These should require minimal ongoing maintenance.

The most frequent maintenance task will be attending to signage. Replacing stolen or damaged trail signage may be required, but how much time spent on this task is guesswork.

The biggest maintenance costs involved are obviously maintenance of the items that initially

cost the most to install: the trail surface itself (due to erosion from stormwater runoff and usage – especially misuse by unauthorised users such as trail bike riders) and maintenance of bridges.

It is difficult estimating the costs involved in maintaining a trail until every last bridge and other infrastructure items have been installed.

As stated earlier, ongoing maintenance can be minimised by building a trail well in the first place. This means the better the initial trail surface, the lower will be the ongoing maintenance of that trail surface. A similar situation applies to bridges. Reconstructed and refurbished bridges will require little or no maintenance for many years. However, after perhaps a decade of use they will require more and more maintenance of decking timbers (if used) and more scrutiny of fixings (depending on what materials are used for decking).

The use of volunteers to undertake many of the routine repairs and cleaning tasks can substantially reduce the costs to the management authority.



Local schools, and other groups such as service clubs maintain sections of the Port Fairy to Warrnambool Rail Trail in Victoria.

Whilst it is impossible to provide an estimate of ongoing maintenance at this stage, an allowance of **\$2,000 - \$3,500/km/year** is not an unreasonable basis on which to work. Some notes on these figures follow:

- The general costs are on the high side of figures that have been obtained in research (noting the caveats in the report about very limited available data). It is a conservative estimate.
- Bridge maintenance costs can be a significant portion of any maintenance bill. Given that this trail will only have one major bridge, the lower end of this range may be more likely.

- Good asset management practice suggests money be put aside every year for maintenance, even though much of it will not be spent in the first 5-10 years as there will be limited need for maintenance. The dollar figure/km/yr is an “end-case scenario”.
- Costings are at full commercial rates (but of course this would be far less if volunteers are involved). US evidence suggests significant savings using volunteer maintenance (trails maintained by volunteers costs one-third of those maintained by Government entities).
- The maintenance estimate provided in the report is an estimate only based upon certain design parameters and construction standards. For example, repurposing bridges using material other than timber such as expanded steel mesh or fibreglass reinforced plastic for the decking which would have a different maintenance regime and costing.
- A significant portion of any maintenance budget for any trail is surface repair. There will be very limited need for surface repairs in the first five years.
- Bridge maintenance is also a significant maintenance cost. Bridges are even less likely to need repair for the first 5 years (or even 10 years) of a trail’s life. Re-constructed and refurbished bridges will require little or no maintenance for many years. However, after perhaps a decade of use they will require more and more maintenance of decking timbers (if used) and more scrutiny of fixings (depending on what materials are used for decking). Pre-fabricated bridges (suggested for some water crossings) require less maintenance over time.
- Maintenance on these two critical elements (surface and bridges) is even less likely to be needed in the first 5-10 years if the trail is built well in the first place. The key message is spend more on construction and spend less on maintenance.



Trail managers and “Friends of ...” groups often arrange ‘Adopt-a-Trail’ programs to ensure the rail trail is well maintained – by volunteers.

- The likely maintenance costs in the first few years of a trail’s life will focus on sign damage and inspections.

12.6.5 Reducing maintenance costs

Using volunteers is the key element in reducing the maintenance costs. Volunteers could undertake much of the ongoing maintenance of the trail if a volunteer maintenance program is arranged. 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.

- The Munda Biddi Trail Foundation assists with planning, developing, marketing and maintaining the trail. It enlists paid memberships, enrolls and manages volunteers, holds trail and community events, and provides information and resources to enhance the quality of the trail experience. **Over 85% of that trail is maintained by volunteers.**
- Activities of the Friends of the Lilydale to Warburton Rail Trail include revegetation, weed eradication, protection of remnant species, and building and restoration work.
- Parklands Albury Wodonga a community-based, not for profit organisation focused on undertaking the conservation of “bush parks” in and around Albury-Wodonga from an ecological perspective, whilst allowing sympathetic recreational access. One of the Group’s projects is managing and maintaining the High Country Rail Trail.

The Bibbulmun Track is Western Australia’s premier long-distance walking track. The Track’s success





can be put down in large part 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 Foundation is not the track manager – this job is done by the Department of Parks and Wildlife (DPAW). 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 values of the Track, attracts funds and other resources, and promotes the track as accessible to all.

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. Approximately 780 km (80%) 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 such as pruning, clearing minor obstacles, replacing trail markers and keeping campsites clean and report regularly on conditions likely to affect walkers or the long-term future of the Track itself to the track manager. The maintenance volunteers have developed the same sense of ownership of 'their' section of Track. There are also office and field activity volunteers.

The Foundation has a number of corporate sponsors 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 13 – Resources and funding opportunities

(Note: Funding programs do change; the information presented in this report is current at the time of writing).

Once the decision is taken to proceed, one of the first tasks will be to seek development funding. All funding sources available at that time will need to be identified and funding applications prepared as soon as possible and dedicated resources made available. The Commonwealth and State Governments regularly review funding programs (particularly before and after elections); such decisions make the need to review this section at the time of seeking grants critical.

13.1 Commonwealth Government

The National Stronger Regions Fund (NSRF) will provide funding of \$1 billion over 5 years, commencing in 2015 – 2016, to fund priority infrastructure in regional communities. Key elements are:

- Grants must be between \$20,000 and \$10 million.
- Local government and incorporated not-for-profit organisations are eligible to apply.
- Grant funding must be matched in cash on at least a dollar for dollar basis.
- NSRF funding will be provided for capital projects that involve the construction of new infrastructure, or the upgrade or an extension of existing infrastructure.
- The project must deliver an economic benefit to the region beyond the period of construction. Projects should support disadvantaged regions or areas of disadvantage within a region.
- The NSRF funded component of the project must be completed on or before 31 December 2019.

Trail projects have been funded by this program. Round 1 funded:

- The Grampians Peaks Trail Project (Victoria). The NSRF contributed \$10 million (of \$27 million) to this project, which will construct a 144km, multi-day walking trail across the length of the Grampians National Park. The project will showcase the beauty and majesty of the Park's natural and cultural landscapes. The Grampians Peak Trail will be one of the great iconic walks of Australia with an estimated visitation of 23,000 people per annum by 2020.
- North East Rail Trail (Tasmania). The NSRF contributed \$1.47 million (of almost \$3 million) to this project – the construction of a 70km multi-use trail along the disused rail corridor from Launceston to Scottsdale.

(See <http://investment.infrastructure.gov.au/funding/NSRF/> for further information)

Rounds 2 and 3 funded a military history trail on the Fraser Coast and a maritime trail along the Murray River.

13.2 Queensland Government

The main current source of funding will come from the Queensland Cycling Action Plan and program (which has funded this study). The program commits the State Government to investing \$14 million over four years to develop and implement a program to develop, deliver and manage rail trails in partnership with local governments on state-owned disused rail corridors across the state.

Other programs may also provide funding (though the amounts are likely to be small).

The Department of Local Government, Racing and Multicultural Affairs manages the \$600 million Works for Queensland (W4Q) program which supports regional Councils to undertake job-creating maintenance and minor infrastructure projects. An additional \$200 million has been approved to extend the W4Q program until 2020–21. The allocation is to be spent on job-creating maintenance and minor infrastructure projects relating to assets owned or controlled by local governments. This program is being used to fund the development of the Imbil Brooloo Rail Trail in Gympie Regional Council.

Sport and Recreation Services offers a number of programs for planning and infrastructure development. These change over time – if the Council determines to proceed, review of what relevant programs are available should be undertaken.

13.3 Private sponsorship

Sponsorship is big business – and very competitive. Two main options exist: either negotiate with local/national corporate entities which have a geographical and social connection with the area through which a trail passes or go after the 'big' players for big projects. 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.

- 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).
- BHP Billiton provided over \$200,000 for the Coast to Crater Rail Trail in western Victoria to help construction.
- GlaskoSmithKline Australia has donated \$10,000 to the development of the Warrnambool to Port Fairy rail trail project to encourage employees to combine their physical exercise with commuting to work. GSK has stated "We are proud to contribute to the establishment of the Port Fairy rail trail through our Community Partnerships Program. We see this project as being of benefit not only to our own employees, but also to the local community as a whole."

Significant sums can be gained if benefits can be proven. Any company with an operation within the region would appear to be a potential sponsor.

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 and sustainable economic opportunities (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 looks to supply time and expertise as well as funding. Many other banks have both a competitive grants program and a volunteer scheme that 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. It is important to note that, when considering these options, there are often exclusivity provisions around such programmes.

What is important in dealing with potential corporate sponsors is to have:

- a clear trail development plan (the next stage of work should the trail proceed);
- a well-developed message;
- clear pointers as to what and where their engagement might be; and
- a clear indication of how they might benefit from their involvement.

13.4 Other trail funding resources

13.4.1 The Heart Foundation

The Heart Foundation 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 \$5,000 prize for the overall winner and a \$2,000 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.

13.4.2 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.

13.4.3 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. 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.

13.4.4 Prison crews

Crews of minimum security inmates have worked extensively in trail construction in Western Australia in the last 15 years. In the Northern Territory, NSW and Queensland, prison crews have been successfully used recently on trail and park projects.



For example, the Gympie Regional Council has partnered with Gympie Probation and Parole to help maintain the station yards of the Mary Valley Rattler. The hours committed and the dollar value of those hours are not insignificant. In 2013/14, community service workers attached to Gympie Probation and Parole contributed a total of 6,917 community service hours (valued at over \$150,000) to volunteer community groups, Council initiatives, church groups and sporting clubs across the Gympie region by community service workers.

The labour supplied by inmates goes directly towards each community organisations' and Councils' goals, while the inmates gain an opportunity to develop positive work habits, self-discipline and pro-social behaviours within a working environment.

13.4.5 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.

There is also a growing network of trail advocates 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 (where some 80% of the trail is maintained by volunteers).

Volunteer labour can also be used in innovative ways to benefit a number of community sectors. The Lilydale Warburton Rail Trail (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, which needed a new fire engine. Labour in bridge construction was "swapped" for a new fire engine.

13.4.6 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).

The Ian Potter Foundation has a number of interests, including environment and conservation (details can be found at www.ianpotter.org.au). Its' Environment and Conservation program supports small projects that combine elements of biodiversity and ecology preservation, volunteerism and community education. A trail development could fall within this mandate.

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Appendix 1

Artists impressions



Splitters Creek bridge in its current state.



Artists impression of how it could be refurbished for pedestrian and cyclists use.



Disused railway corridor passes alongside some farming properties.



Artists impression of how fencing could be installed to minimise intrusion into farming practices.



Numerous shallow cuttings are characteristic of the former railway corridor.



Artists impression of how the trail could look as it passes along a cutting.



The former railway serviced a number of sidings – including McIlwraith Siding.



Artists impression of of the proposed rail trail through the siding, with new fencing.



The former railway corridor had numerous low-level bridges, most now gone.



Artists impression of a new bridge along the rail trail.



Embankments are a common feature of railways.



Artists impression of the proposed trail along the embankment.

Appendix 2

Plans of proposed rail trail



Bundaberg Gin Gin Rail Trail Feasibility Study – Plan 1: Bundaberg to South Kolan. January 2019.



Bundaberg Gin Gin Rail Trail Feasibility Study - Plan 2: South Kolan to Gin Gin, January 2019.

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