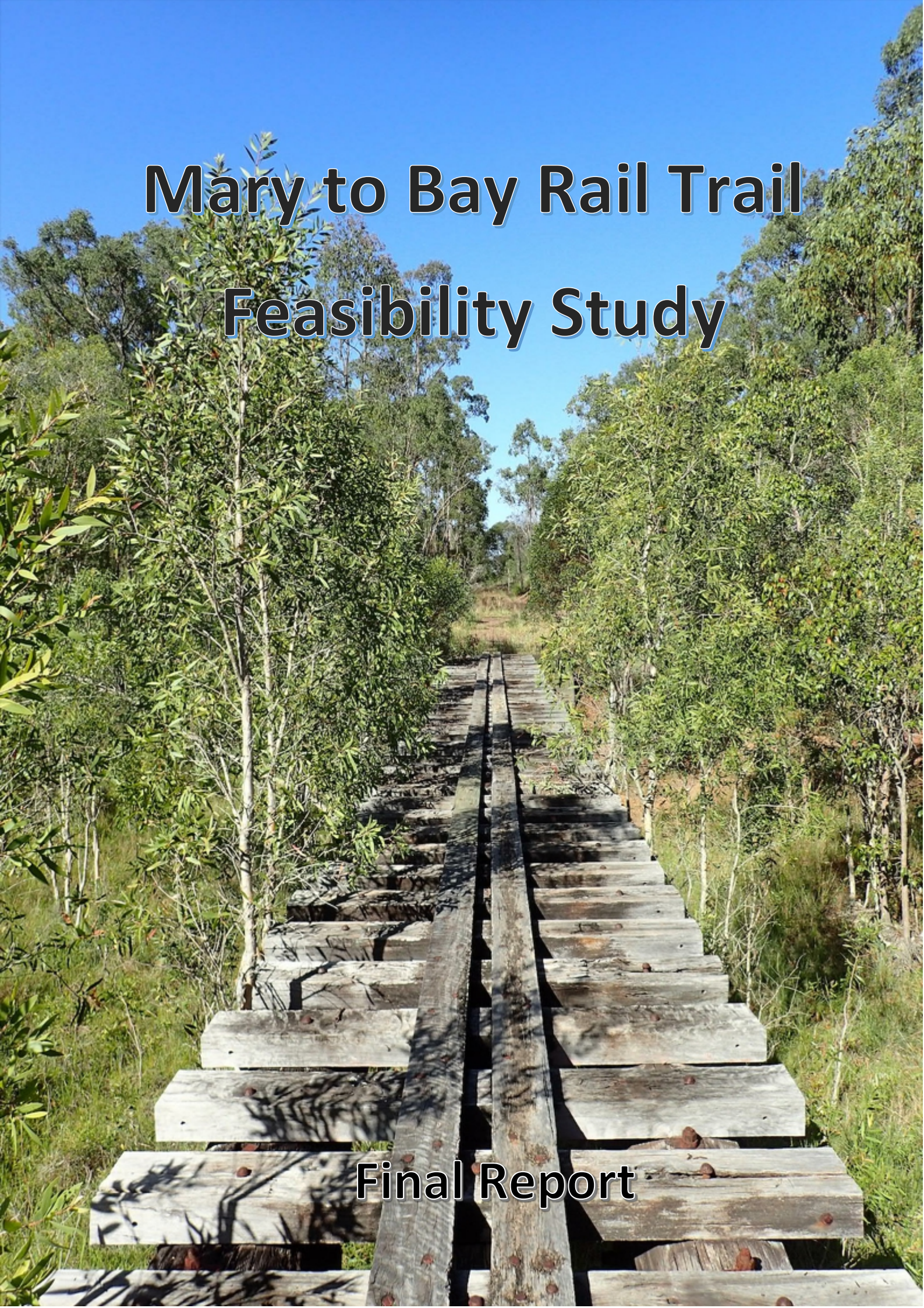

Mary to Bay Rail Trail Feasibility Study

Final Report

MARY TO BAY RAIL TRAIL FEASIBILITY STUDY

FINAL REPORT

Fraser Coast REGIONAL COUNCIL

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Planning and Design

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CONTENTS

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.

Fraser Coast Regional Council commissioned Mike Halliburton Associates to prepare a Feasibility Study for a possible rail trail from Stockyard Creek to Maryborough thus completing the Mary to Bay Rail Trail.

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" though there are a number of caveats over route issues.

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 Stockyard Creek and Maryborough would be viable are the following matters:

- **Mining leases over the disused corridor.** The presence of a mining lease over part of the former railway corridor at Colton (primarily between Churchill Mine Road and the disused corridor's intersection with the North Coast Railway Line) has been a significant issue since the original proposal for a rail trail. In May 2017 the Queensland State Government approved New Hope Group's Mining Lease application for its Colton coal project. The actual mining lease (and the proposed open cut mine) encompasses a large portion of the former railway corridor. Significant lengths of the former railway corridor between Churchill Mine Rd and Colton were also to be used for infrastructure (railway and roads) for the proposed mine. In October 2018 Colton Coal Pty Ltd was placed in to the hands of administrators, meaning the company may become insolvent. This occurred at the start of the Feasibility Study process; a site inspection with the mining company to investigate alternative route alignments was cancelled at the last minute by the company's representative due to the financial state of Colton Coal.

The railway formation through the mining lease is in great condition and is used already by mountain bikers and walkers. Unfortunately, it cannot be used for the trail at this time.

Until such as time as this process is resolved, it is not known when (if ever) the company or any other company will proceed with an open cut mine in this coalfield. This uncertainty over the future of the mine means that a trail on the disused railway corridor could not be planned with any guarantee of its longevity – unless terms of the mining lease are changed.

Critically the mining leases, whilst they exist, give exclusive rights to the lease holder and therefore access to the rail corridor in this section even in the short-term or until a mine is constructed in this section would not be achievable. This means that a rail trail on the original corridor from Churchill Mine Road to Colton is not achievable.

Any proposal to develop the trail adjacent to Churchill Mine Road and then alongside Maryborough Hervey Bay Road into Maryborough is not an acceptable solution as this would not be a feasible rail trail; there is even a question as to whether such a route would be feasible - in terms of costs versus numbers of users - as any sort of recreation trail. There appear to be two options for development of the trail across or around the mining lease area:

Option 1: The lease conditions (for the mining lease) specify that the trail must go to Saltwater Creek Road, and this makes a very significant deviation from the railway corridor in terms of percentage of trail. If any deviated trail must go to Saltwater Creek Road, there is simply no way back along Saltwater Creek to Aldershot that does not involve significant land resumptions. An alternative route would see a newly constructed off-road trail run alongside Churchill Mine Road to Peridge Road (which is a formed and unformed road) then across land adjacent to Peridge Road. Tenure may be an issue as it is not clear that the entire route is in public ownership (particularly a potential route along Peridge Road). Significantly this represents a 19 kilometre route deviation to cover 5 kilometres (the direct route along the former corridor between Churchill Mine Rd and Colton). Such a deviation would have significant effects on the trail's feasibility as it would add 14 kms of non rail-trail to a 48 km rail trail.

Option 2: The trail is constructed on a new route on the northern side of the mining lease area parallel to the existing railway corridor. This route would provide minimum deviations from the corridor. The landform here is similar to the landform through which the existing railway corridor runs. There appears to be no significant technical impediments to such a trail. It will require construction of a new trail. The proposed trail appears to be on State-owned land which may mean that the trail proponent (FCRC) would need to negotiate with the State about gaining an access easement across the land to facilitate a trail. This route would involve a similar distance of travel for users (although a little longer as it will intercept the North Coast Line a little further north of Aldershot). This option means that the deviation from the original railway corridor is minimised. This is the recommended option around the mining lease.

- **A trail route north and south of Aldershot**. In 2012, a trail route passing under the Bruce Highway (at Saltwater Creek and Deadmans Gully) was recommended. This route is not an ideal route given its deviation from the original railway alignment and its proximity to the Bruce Highway. Examination of Council's property database indicated that Fraser Coast Regional Council owns a large property which runs immediately east of the original railway corridor south of Saltwater Creek (it appears to be used for farming purposes). It appears as if the original railway formation is the dividing line between two properties – the one owned by the Council and the one west of the original railway line which is privately owned. The obvious and relatively simple solution is for Council to provide a trail along the western boundary of its property – this may or may not be along the line of the original railway formation, but it certainly would be within the original railway corridor. This would allow construction of a rail trail between the south bank of Saltwater Creek and Quarry Road. Some negotiations may be required with the adjoining landowner (west of the railway formation), and a land swap or acquisition of land for the trail route may be appropriate, due to the very complicated property boundary created after the railway corridor was sold.

  North of Saltwater Creek, it may be possible to develop the rail trail within the existing active railway corridor for a short length between the southern end of Bronze Street and Saltwater Creek. Alternatively, an access easement could be negotiated with the landholder of the property adjoining the active railway corridor. It is approximately 340 metres from the end of Bronze Street to the northern bank of Saltwater Creek (along the old railway alignment).

The railway corridor through Maryborough has ample width to permit the development of a 'rail-with-trail' – a commonplace sharing arrangement which could easily occur due to the low numbers of train movements.

- **Rail-with-trail in Maryborough.** The recommended route for the proposed rail trail through Maryborough utilises the existing (active) railway corridor. The corridor has ample width for the alignment of a pathway/trail. Throughout Australia, and elsewhere in the world, shared paths have been constructed alongside operating railways without

complications. In Perth, Western Australia, for example, shared paths have been constructed along many kilometres of the suburban high speed, electrified commuter railways without issue. Even though the railway corridor through Maryborough serves only a handful of trains (at very slow speeds) each week, and it is not electrified, barrier fencing would be required to provide added safety and to prevent trespass.

- **Rail trail or not – how much of a rail trail should be on a disused railway line?** In considering the three issues above, when a (proposed) rail trail significantly departs away from a disused railway corridor the issue is raised as to what proportion of a trail needs to be located on the original formation for the trail to actually be called a "rail trail". Generally speaking, a 10 – 20% deviation of a rail trail away from the disused railway corridor could be tolerated, but deviations beyond that are perhaps excessive. Deviations from the original rail corridors remove much of the attractiveness to the rail trail 'market' – that is, those potential users that may come from afar to experience the attributes of a true rail trail: embankments, cuttings, timber bridges, railway signage, sweeping curves, level gradients etc. A deviation away from the former railway corridor will be required as a result of the Colton mining lease. These old railway attributes will definitely not be present on a deviation around the mine. The same comments apply to a route that deviates from the original rail corridor south of Aldershot and a route that uses the road network to get into Maryborough CBD.

  It is therefore strongly recommended that a deviation around the mine is to be the limit of deviations – i.e. the rail corridor would follow the original railway corridor from Aldershot into Maryborough station. The feasibility of the rail trail and the business case prepared for this report are dependent on this critical issue. If other deviations are chosen between Colton and Maryborough, the forecast user numbers in the business case cannot be relied upon.

- **Road crossings.** There are several significant road crossings along the former railway corridor between Stockyard Creek and Maryborough. In Maryborough itself, there are several road bridges over the railway corridor and solutions are available for enabling the proposed rail trail to share the corridor under the road with the existing railway line.

- **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 former railway bridges along this corridor crossed standing water, as well as crossing over intermittent streams and creeks. Three of the former railway bridges remain in place. Five timber bridges are no longer in place and no structure has been put in their place, while in some cases bridges have been replaced with concrete culverts. The existing rail trail east of Dundowran Rd features some refurbished bridges which serve as the model for how other bridges should be reconstructed for trail users.

- **Trailheads.** Having a significant population centre at each end of the proposed rail trail (i.e. Hervey Bay and Maryborough) 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. The recommended site in Maryborough is within the precinct adjacent to the transit centre. Proposed future commercial developments within this precinct will determine options available. Minor trailheads (between Hervey Bay and Maryborough) need to be carefully selected and they should be located with careful consideration and observation of adjoining land uses – and spacing between potential rest areas and access points.

One of the old railway bridges refurbished for cyclist and pedestrian use of the recently constructed rail trail east of Dundowran Road.

- **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. Initial investigations along this former railway corridor reveals little, if any, encroachments. There appear to be some minor encroachments near the old Takura siding.
- **Landholder issues.** No adjoining landholders made themselves known or submitted objections to the proposal – a very unusual situation even though the railway corridor passes through adjoining land uses quite different to many other rail trails (which typically pass through grazing and cropping land). In addition, the successful operation of the existing rail trail (though primarily through urban areas) may have allayed potential concerns. 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 including biosecurity concerns;
    - 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 – 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. 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.
- **Trail surfacing.** The existing trail surfaces provide an interesting contrast. It is sealed between Urangan Pier and Nikenbah but has a natural gravel surface between Piggford Lane and Stockyard Creek. This approach provides for maximum use within the urban area (commuting on road bikes for example is much easier on a sealed surface, as is the use of mobility scooters) while providing a lower cost option in rural areas where recreation riding is more common and which can be easily traversed by hybrid bikes and mountain bikes. The key question is whether to seal the surface or to use a gravelled surface – in effect to develop the rest of the rail trail similarly to the existing Links Mobility Corridor or to the new section between Piggford Lane and Stockyard Creek. 60% of survey respondents to the questionnaire survey favoured a sealed surface while 40% responded in favour of a natural surface. The Rails to Trails Conservancy (the American advocacy group for rail trails) suggests that at least one other area of consideration (other than costs) should be suitability to purpose. It suggests considering:
    - Volume of use — high volumes of use will arguably have a greater impact on non-asphalt trails, although there are numerous examples of well-constructed non-asphalt trails that hold up well under relatively high use.
    - Types of use—different trail surfaces will be better or worse for different activities. How do you expect the trail to be used? Are there any uses or user groups you specifically want to include or exclude?
    - Setting — asphalt may be more fitting for an urban setting than a rural setting. There is also the need to consider environmental and aesthetic factors such as the need to be consistent with a natural or historic setting.

  Unfortunately, there is no research that indicates how much extra use a sealed trail attracts (compared to a natural surface).
- **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 in several locations. Should the proposed trail be constructed

on the alignment of the former railway (now private property) between Aldershot and Quarry Road it is highly likely that fencing will be requested by adjoining landowners.

- **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 light or heavy rail passenger services) on some disused railway corridors. Despite the huge cost for these rail services to occur, they nonetheless are a matter that requires some consideration before a rail trail is developed. The presence of the Mary Anne replica steam locomotive service running a very short tourist service in Maryborough highlights this option. At the time of the preparation of this Feasibility Study no known detailed alternative proposals have been identified for the Stockyard Creek to Maryborough railway corridor.
- **Environmental issues.** A number of key environmental issues need to be evaluated when a rail trail is proposed. None of these are issues preventing the development of the trail.
    - Clearing of regrowth vegetation along the corridor, and the need for clearing permits and the possible future need for offset re-vegetation, are common issues.
    - There is a 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 is often raised as an issue.
    - The potential for sedimentation of watercourses arises as a result of trail construction and bridge works.

There are also a number of issues associated with the existing trail between Urangan Pier and Stockyard Creek.

- **Legibility of the existing pathway in Hervey Bay.** Directional signage for the 'Links Mobility Corridor' is inadequate and insufficient in numerous locations, and totally absent in others. Typically, each change of direction or decision point along a trail (including rail trails in busy suburban areas such as through Hervey Bay) need to have directional marker arrows at regular intervals indicating to users where they must turn or the direction they should follow. At present many road crossings and deviations of the path are not signposted, causing confusion for trail users. Locations where this is particularly critical are at Urraween Drive, within the urban heart of Hervey Bay at Pialba, Dayman Street at Urangan, and wayfinding from Charlton Esplanade.

- **Mapping and promotion.** Many residents of both Maryborough and Hervey Bay are not well informed about the presence and location of the existing pathway (the 'Links Mobility Corridor') between Urangan Pier and Nikenbah, and beyond to Stockyard Creek. Maps and a brochure of this rail trail are not readily available, and it is possible that the nomenclature of the trail/pathway (as it is called a 'mobility corridor') is misleading.

- **The missing link at Nikenbah.** The "missing" 1.0km of railway corridor between Nikenbah and Piggford Lane means that trail users must negotiate their way along the shoulder or verge of Maryborough Hervey Bay Road. Input received at the Open Houses and in the questionnaire survey responses indicated that this situation was very concerning for many users of the trail – and in fact deterred some users from venturing on to use the recently opened (unsealed) section of trail. Various options to deal with the road crossing are possible including an at-grade crossing (at one of several potential locations) or a grade-separated crossing (underpass or bridge). Installing a grade-separated crossing of Maryborough Hervey Bay Road by way of an underpass is a recommended solution. Underpasses are common on other rail trails in Australia and overseas. Installation may also require a small pump and good design to ensure that water does not pool in the underpass or on approaches either side of the underpass.

The need for a grade-separated crossing of Maryborough Hervey Bay Rd has inhibited use of the existing rail trail beyond Nikenbah.

- **Motorbike access on the Piggford Lane - Stockyard Creek section**. It is evident that motorbikes use this section frequently, judging from the numerous tyre marks on the surface and the comments expressed by attendees at the Open Houses associated with this project. Barriers to prevent unauthorised motor bike access onto the trail are absent; consequently motor bikes have easy access on to and along the trail. Retrofitting barriers at each road crossing (in the existing remote sections of the trail and proposed future extensions) will help significantly in preventing unwelcome and unauthorised access for motor vehicles.

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 Mary to Bay Rail Trail would pass through some very attractive scenery. Unlike many other rail trails, the disused corridor passes mainly through bushland rather than farmed rural areas. It is not until a user comes to Aldershot that they encounter urban or semi-urban or semi-rural landscapes (noting that the existing trail from Urangan to Nikenbah is primarily through urban areas). This variety provides an interesting contrast for users. The quality of intact railway heritage items varies along the corridor. A few timber bridges remain while the (proposed) route into Maryborough takes users along the existing (infrequently used) operating rail line which provides an interesting attraction. The journey into Maryborough also goes past some historic building such as the Dominion Milling Company and (depending on the trailhead chosen) the Maryborough Railway Station adding interest to the journey.
- **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. Both Maryborough and Hervey Bay provide high level of services of interest to trail users – there are limited opportunities for stand-alone commercial facilities between these two towns. Nikenbah provides users with a chance for a refreshment but then there are no commercial opportunities until Maryborough (the corridor passes through Aldershot and the proposed route bypasses commercial development on the Bruce Highway). The advent of e-bikes (which can cover distances in a much shorter time frame) means less emphasis on "intervening services" though it is possible to envisage somebody setting up a coffee cart en-route (at an accessible road crossing) particularly on weekends. 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 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. Hervey Bay and Maryborough 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. Completing the rail trail from its current terminus at Stockyard Creek (including completion of the missing section between Nikenbah and Piggford Lane) will significantly increase the attractiveness of the existing trail from Urangan Pier to Nikenbah, and from Piggford Lane to Stockyard Creek – users will be willing to travel from further afield to ride a 48km rail trail through a range of landscapes rather than primarily urban rail trail of a much shorter distance (the urban section to Nikenbah is 13.5 km while the new section connecting Piggford Lane to Stockyard Creek is 3.5 km). There will be a significant realisation of investments already made in the existing rail trail.
- **Community support.** Formal consultation (in the form of Open Houses) was carried out for this report (details can be found in Section 7). In excess of 120 people attended the two Open Houses. A questionnaire survey was also made available for people to fill out online or at the Open Houses. 374 people responded to the questionnaire survey. No one attending the Open Houses was opposed to the project – a rare outcome. In terms of the surveys, 355 respondees (over 95%) were supportive. Most of the commentary at the Open Houses (and in survey responses) was around the issue of "let's get on with building this project".
- **Visitor markets.** A trail such as the Mary to Bay 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: Maryborough to Walker St Underpass (4.3km)	*$1,441,770*
Section 2: Walker St Underpass to Quarry Road (2.9km)	*$457,220*
Section 3: Quarry Road to Colton (7.6 km)	*$1,448,780*
Section 4: Colton to Churchill Mine Road (7.0km)	*$823,530*
Section 5: Churchill Mine Road to Stockyard Creek (9.0km)	*$4,376,820*
Section 6: Piggford Lane to Nikenbah (1.0km)	*$3,893,215*
Total (excluding GST)	***$12,441,335***

This figure allows for sealing of section1 only. Sealing the entire newly built trail (including the section between Piggford Lane and Stockyard Creek) will add in excess of $5.3 million to the project cost.

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 rail 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 (i.e. completed) Mary to Bay 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 – 159,780 local users/year is a reasonable expectation. This will result in an economic injection of $343,546/year;
- Expansion of the existing day tripper market to the region. 5,000 new day trippers/year injection $725,500/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 4,000 day trippers into overnight visitors, this would inject an additional $836,160/year into the regional economy.
- If 4,000 visitors stay an extra day to use the trail (or use a package of trails including the Mary to Bay Rail Trail), an additional $836,160/year would be injected into the regional economy.
- If 2,000 new visitors come to the region solely (or primarily) to do the trail, an additional $836,160/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 **$3,577,526/ 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. 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 Maryborough and Stockyard Creek (the trail's current terminus) 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 (being cognisant of the key issues around a viable route), *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. Fraser Coast Regional Council (or a Committee of Management) being prepared to accept vesting of the entire railway between Maryborough and Stockyard Creek 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 route, 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 trail being given by the Council, any Committee of Management and volunteers. Council can make the commitment and then develop mechanisms for involving other groups;
6. Consideration be given (based on this report, the trail development plan, any relevant Fraser Coast 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 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 Mary to Bay Rail Trail as recommended in this report.

- Bridge inspections. There are only a small number of bridges that will require a detailed examination to confirm their true condition. Three timber bridges remain and should be reused (as the two bridges on the recently opened section have). It is likely, given the recent restoration on two bridges between Piggford Lane and Stockyard Creek, that the remaining three bridges are in good condition (one does have a span missing).

- 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.

- The presence of a mining lease over part of the former railway corridor at Colton has been a significant issue since the original proposal for a rail trail. The trail development planning process can proceed by assuming that the suggested alternative route north of the mining lease will be used (the process will provide more detail of the alternative route).

- The proposed route into Maryborough (from Walker Street to the proposed trailhead at the Transit Centre) uses the existing active railway line. It is in the interests of Fraser Coast Regional Council as the trail proponent to initiate discussions with Queensland Rail and the Downer Group to determine a way forward. There would also be a role for the Department of Transport and Main Roads given its interest in developing rail trails across Queensland. The trail development planning process can proceed by assuming that the existing corridor will be used. Negotiations with Queensland Rail will also need to include discussions over the development of the trail alongside the North Coast Line north and south of Aldershot. The trail development plan if undertaken would provide more parameters for this discussion.

- North of Saltwater Creek, it may be possible to operate the rail trail within the existing active corridor for a short length between the southern end of Bronze Street and

Saltwater Creek. Alternatively, an access easement could be negotiated with the landholder of the property adjoining the active corridor. It is in the interests of Fraser Coast Regional Council as the trail proponent to initiate necessary discussions with either Queensland Rail or the landholder. The trail development plan if undertaken would provide more parameters for this discussion.

IMPLEMENTATION STAGES

The recommended stages for the progressive development of the Mary to Bay Rail Trail are:

- Stage 1 of construction: Piggford Lane to Nikenbah (1 km). This could be progressed as a separate project immediately – the main issue is funding, designing and installing an underpass of Maryborough Hervey Bay Road.
- Stage 2 of construction: Maryborough to Walker St underpass (4.3 km).
- Stage 3 of construction: Churchill Mine Road to Stockyard Creek (9.0 km).
- Stage 4 of construction: Walker St underpass to Quarry Rd (2.9 km).
- Stage 5 of construction: Quarry Rd to Colton (7.6 km).
- Stage 6 of construction: Colton to Churchill Mine Road (7 km). This would be developed on a new trail alignment rather than on the old railway corridor.

SECTION 1 – INTRODUCTION

A significant portion of the proposed Mary to Bay Rail Trail already exists. There is a 13.5 kilometre rail trail from Urangan Pier to Nikenbah (known locally as the Link Mobility Corridor) and a recently opened 3.5 kilometre section from Piggford Lane to Stockyard Creek. Completion of the proposed Mary to Bay Rail Trail would mean developing a rail trail on the disused railway corridor between Stockyard Creek and Maryborough. There is also the need to develop the section of disused railway corridor between Nikenbah and Piggford Lane. A completed rail trail from Maryborough to Hervey Bay will cover a distance of some 48 kilometres.

1.1 A HISTORY OF THE RAILWAY CORRIDOR

The Colton to Urangan railway corridor has a long and storied history.

Coal was discovered on the Burrum River in 1863. The Maryborough railway line had commenced operations as an isolated system with the opening of a line from the Port of Maryborough to the goldfields at Gympie. Initially, the coal at Burrum River generated little interest, but by the 1880s, developers were pushing for a railway to the river, and the first section of the line, which would eventually be extended to Bundaberg, opened from Baddow to Howard on 30 June 1883. This gave the coal mines near Howard access to the Maryborough wharves, but the small, shallow vessels which could traverse the Mary River were not conducive to development, and shipping of the coal from Burrum River, across Hervey Bay to the Mary River where it was transhipped to larger vessels was met with similarly limited success.

Installation of interpretive signage at former railway stations and sidings, such as Takura (above left) and Walligan (above right) will be of interest to trail users. (Source: http://www.stationspast.net/queensland/pialba-branch/)

Various private sector proposals were put forward in the 1870s and 1880s to develop a rail connection, but none came to fruition due to a number of issues of a financial and technical nature.

In 1895, the Queensland Government passed the *Railway Construction Guarantee Act*, the main provision of this act being that the government and local authorities would guarantee to meet half the loss incurred or share the profits.

In March 1896, the plans for the new railway line were approved by the government. The railway would be the first railway in Queensland to be constructed under the new guarantee act.

The contractors commenced work in April 1896, and with the relatively flat terrain, construction proceeded steadily. The tourist potential of the line had already been realised and there were possibilities of the coal mining industry developing, as well as an upturn in the agriculture (notably sugar cane) and timber industries.

The Colton to Pialba rail line was opened 18 December 1896. Though the line to Pialba was now completed, a deep water port at Urangan was vitally needed. Approval was finally given for the railway to be built in 1911. The line opened on 19 December 1913, with train services commencing the following day.

The government started construction of a pier at Urangan. The railway line was extended to the end of Urangan Pier in 1917 and opened at the same time as the pier.

Due to a range of factors (time and economics), it was sugar, not coal, which formed the most important commodity to be handled over the pier, and it never became the coaling port which had been originally intended.

For many decades, major events on this line were the annual Railway Picnics with trains coming from as far away as Kingaroy, Monklands (Gympie), North Bundaberg, Cordalba and Maryborough. Huge numbers of passengers would descend on one of Hervey Bay's beaches for memorable picnics.

The sugar cane industry continued to flourish, however the coal came to a gradual end, and by 1967 mining had virtually ceased. In 1969, produce was no longer exported to Maryborough via the railway line as it became too costly to maintain. Pineapples became the main export to Maryborough. Declining efficiencies 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.

Regular passenger services ceased in August 1972. Freight steadily declined in the next couple of decades and the line was closed in July 1993 (*sources: https://en.wikipedia.org/wiki/Hervey_Bay_(Urangan)_railway_line; Fraser Coast BUG 2009).*

Very few reminders of the former railway remain along the railway corridor between Urangan and Maryborough. The Maryborough railway station remains and is used as a QR ticketing office and a storage site for the Mary Ann replica steam locomotive. A railway museum is also open in one of the old railway buildings. Due to the nature of the original line, there were limited cuttings and embankments. Remaining bridges are limited; some have been restored on the new section from Piggford Lane to Stockyard Creek.

1.2 THE SCOPE OF WORK

The Feasibility Study will provide sufficient detail to determine whether a rail trail on the disused rail corridor between Stockyard Creek and Maryborough has merit (and also to provide advice on developing the undeveloped section between Nikenbah and Piggford Lane). 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;
- Identification of the tourism, recreational and economic opportunities associated with the development of the Mary to Bay Rail Trail;

- Assessment of constraints, environmental impacts and contaminated soils associated with the undeveloped portions of the trail and sections of alternative routes including recommendations for treatments;
- Review and consideration of any heritage values of the rail trail;
- Identification and recommendations on addressing any native title or cultural heritage values of the rail trail;
- Identification of alternative Rail Trail alignment options for areas that conflict with existing developed areas and the Colton Mile lease permit area;
- Recommendations on Rail Trail road crossings in particular (but not limited to) Maryborough Hervey Bay Road, Dundowran Road, Torbanlea Pialba Road and Churchill Mines Road;
- Recommendations on the desired standard of the surface treatment to be provided along the undeveloped portions of the Rail Trail;
- Recommendations on the desired treatment (i.e. either culvert, bridge or other treatment) for creek crossings and drainage channels etc;
- Estimate of costs of providing a facility to the desired standard;
- Recommended staging of construction;
- Identification of management options, maintenance requirements and potential for community involvement in maintenance of the trail (e.g. Rail Trail Friends Group);
- Rail Trail Development and Implementation Plan; and
- Undertaking consultation with key stakeholders to obtain and information required to address the above scope items.

All these factors feed into the preparation of a Feasibility Statement.

Sections of the former railway between Colton and Urangan have already been converted to a rail trail. Above left: a section of sealed pathway in Hervey Bay and (above right) a section of unsealed rail trail in the Nikenbah locality.

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 Fraser Coast Regional Council. The approach has also encompassed visitors to the region in its scope, as these numbers may be significant.

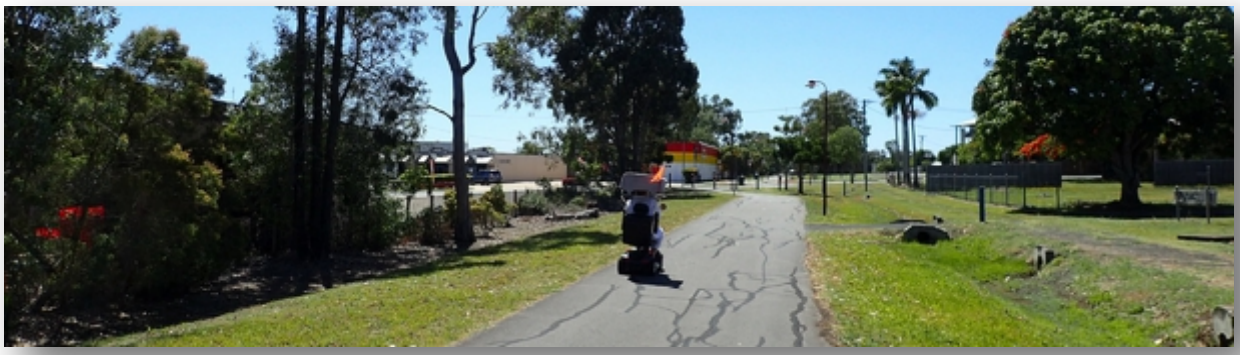
Naturally, those living alongside the corridor have a direct and often very personal interest in the corridor and perceive that they may be losers out of any conversion to a rail trail due to a perception of negative impacts on lifestyles, and loss of currently used land. The 'winners' from such a project 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.

SECTION 2 – THE CURRENT SITUATION

As noted in Section 1, regular passenger services ceased on the Hervey Bay to Colton corridor in August 1972. Freight steadily declined in the next couple of decades and the line was closed in July 1993. In 1995 the line was lifted from Urangan back to Takura. The rail corridor and station sites from Pialba to Urangan were sold with the former Hervey Bay City Council purchasing the majority of the land.

2.1 THE LINKS MOBILITY CORRIDOR

The Links Mobility Corridor (as it is locally known) from Urangan Pier to Nikenbah has been developed over time by the responsible Council (firstly the Hervey Bay City Council and then the Fraser Coast Regional Council). The corridor is popular with local riders and walkers.



The existing mobility corridor through Hervey Bay is popular with cyclists, walkers and those using mobility scooters.

There are however a number of issues with the existing trail; these were observed during fieldwork and also raised at the Open Houses held for this project and in the survey responses (see Section 7). These issues are primarily related to:

- Signage (or wayfinding) particularly where the rail trail crosses Uraween Road, Old Maryborough Road, Hunter Street and Dayman Street;
- The route within the urban heart of Hervey Bay from the Regional Art Gallery and Fraser Coast Discovery Sphere to the Hunter Street crossing east of Pialba Place;
- Accessing the trail from anywhere other than the Urangan Pier (in terms of wayfinding); and
- Mapping and promotion.

These matters are discussed in detail in Section 5 (Issues).

2.2 PIGGFORD LANE TO STOCKYARD CREEK

In March 2018, a new section of trail was opened between Piggford Lane and Stockyard Creek. The section is 3.5 kilometres long and is quite attractive. It is very different to the Links Mobility Corridor – it traverses bushland rather than urban settings and has been developed as a natural surface rather than a sealed surface. However, the key issue is the section between Nikenbah (on the eastern side of Maryborough Hervey Bay Road) and Piggford Lane which has not been constructed – a section of approximately 1 kilometre (including the road crossings at both ends). This was raised as an issue at the Open Houses and in the survey responses (see Section 7). This matter is further discussed in Section 5 (Issues).

A compacted gravel surface and refurbished bridges (with solid timber decking and handrails) are features of the newly constructed rail trail between Piggford Lane and Dundowran Road.

2.3 STOCKYARD CREEK TO MARYBOROUGH

Since 2004 the Fraser Coast Bicycle User Group (BUG) has advocated for the redevelopment of the old rail corridor from Colton to Urangan as a rail trail. In 2009, the BUG prepared a concept and route feasibility study. Over the next three years, more detailed studies were prepared looking at engineering feasibility, ecological constraints, costs assessments, and route alignments particularly between Aldershot and Baddow. In 2012, the BUG released a vision statement bringing all the reports together. The vision statement was for a Mary to Bay Rail Trail which would be a shared path for use by pedestrians, cyclists and horse riders linking the Mary River with Hervey Bay, predominantly utilising the old rail corridor from Colton to Urangan. The statement outlined a number of key features including:

- Trailheads at Queens Park and Urangan Pier and trailheads for horse riders at Aldershot and Stockyard Creek;
- A generally 3 metre wide permanently surfaced path able to be used in all conditions;
- A facility for multi-purpose tourism, recreational and commuter facility; and
- A range of trail facilities including toilets, seats, shelters, directional and information signage.

The trail would showcase the historical development of the Fraser Coast, and showcase a number of recreational and tourist facilities along or in close proximity to the rail trail.

In 2017, the Queensland Government released its *Queensland Cycling Action Plan* 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.

In mid 2018, Fraser Coast Regional Council sought funding under the Queensland Cycling Action Plan to commission a feasibility study to complete the Mary to Bay Rail Trail.

2.4 MINING LEASES OVER THE DISUSED CORRIDOR

The presence of a mining lease over part of the former railway corridor at Colton (primarily between Churchill Mine Road and the disused corridor's intersection with the North Coast Railway Line) has been a significant issue since the original proposal for a rail trail. In 2005, an exploration permit was granted. In 2010, mining lease applications for a small-scale project over part of the exploration area were made. In May 2017 the Queensland State Government approved New Hope Group's Mining Lease application for its Colton coal project. The actual mining lease (and the proposed open cut mine) encompasses a large portion of the former railway corridor. In October 2018 Colton Coal Pty Ltd was placed in the hands of administrators.

This critical matter is further discussed in Section 5 (Issues).

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 rails 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.

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.

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.

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, 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.

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.

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 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 (37 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 161km Brisbane Valley Rail Trail (BVRT) follows the disused Brisbane Valley rail line connecting Wulkuraka to Yarraman. 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. The existing Links Mobility Corridor is a rail trail – a trail built primarily on a disused rail corridor. There are also rail trails linking Kingaroy and Kilkivan, and Atherton and Walkamin. There is a short rail trail in Yeppoon – the Capricorn Coast Pineapple Rail Trail.

Current investigations (in addition to this project) are a rail trail linking Taragoola (near Calliope) and Reids Creek (near Gayndah) and a rail trail linking Bundaberg and Gin Gin. There has been active interest by the relevant Council in investigating the feasibility of rail trails linking Mareeba and Walkamin (a continuation of the existing Atherton Walkamin Rail Trail) and a rail trail linking Proston to Murgon (which is on the existing Kilkivan Kingaroy Rail Trail). Livingstone Shire Council has received funding to undertake a planning and design project in preparation for the future construction of approximately 21 kilometres of the Capricorn Coast Pineapple Rail Trail within the decommissioned rail corridor from its current alignment in Yeppoon through to Mount Chalmers. These current investigations have been driven 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. It is funded by the Works for Queensland programme.

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

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

Above: 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.

Above: The Hervey Bay Rail Heritage Trail (also known as the Links Mobility Corridor).

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

Above: 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. Gazettal as a public recreation reserve allows for the setting up of a formal Committee of Management, which has vested management responsibilities for the corridor. Where the corridor traverses more than one Local Government, a Special Joint Committee is required under the legislation.

The 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 (though ORS) covers legal liability insurances as they relate to the trail.

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

RTI is run by a Management Committee. Membership of the Committee comprises representatives from ORS, Clare Valley Tourist Association Inc., Clare Valley Winemakers Inc, Clare and Gilbert Valleys Council, and five community members with experience in areas such as tourism, arts and culture, business and finance etc. Community membership is invited through public notice and is determined at an AGM.

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

THE COAST TO 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

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.

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. The Links Mobility Corridor is simply managed as an asset of the Fraser Coast Regional Council.

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.
- 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 the Fraser Coast Regional Council have prepared a number of community, planning and economic documents in recent times outlining a range of goals, objectives and actions. Completing the 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 *Fraser Coast Regional Council's Community Plan 2031* includes elements relating to the employment base, expressing an objective of making the employment base diverse and robust to buffer it from economic fluctuation. The Plan supports an economic development objective which includes supporting tourism in order to create diverse economic and employment benefits. The Community Plan seeks to ensure that young people have opportunities to work in the region. A rail trail is one asset which can provide more employment opportunities in tourism and hospitality by offering niche tourism experiences.

Growing tourism will be one method of achieving the economic and employment objectives set out in the Community Plan. The *Economic Development Strategy 2015-2020* indicates that tourism is one of the six pillars by which economic transition in the region can be achieved; it identifies that a transition is happening as the region, previously a key destination for retirees

and sea changers, becomes a destination for affluent couples and families. The Community Plan includes strengthening and broadening tourism opportunities by promoting natural attributes of the region to form the basis of new economic development growth opportunities. This desire to leverage off the natural and cultural attributes of the region is also expressed in the *Economic Development Strategy* and the *Destination Tourism Plan 2017.* The tourism plan specifically identifies that "cultural tourism" presents an opportunity for the region to stand out amongst its competitors. The economic development strategy identifies a doubling of tourism expenditure between 2013 and 2020 and a 35% increase in domestic visitors as desirable performance indicators. The strategy identifies a number of key markets for growing the tourism sector including many of those to whom a rail trail would be attractive such as drive tourism, interstate fly-drive visitors, long stay visitors, niche markets such as natural and cultural heritage tourism, and nature-based tourism. This is further discussed in Section 6 (opportunities).

A rail trail offers nature-based and cultural heritage tourism activities to complement existing attractions of this type. 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.

The *Economic Development Strategy* also identifies the Mary to Bay Rail Trail as one of the key priority projects for investment.

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.

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. The *Fraser Coast Regional Council's Community Plan 2031* sets out a vision that includes achieving a region that provides a balance between work, family and leisure activities as an alternative to a busy paced metropolitan area. *The Economic Development Strategy 2015-2020* recognises that affluent couples and families are moving to the region not only to enjoy the Fraser Coast lifestyle but to take on new business and employment opportunities, marking a transition away from retirees and sea changers. A rail trail adds to the suite of attractions for these groups.

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 *Fraser Coast Regional Council's Community Plan 2031* sets out a vision that includes an objective where physical, mental and spiritual wellbeing is promoted and supported by dedicated organisations and high-quality health care facilities and services within the Region. Preventative care is as important as curative care, particularly when it comes to mental health. There is no doubt that a rail trail will contribute to better health outcomes for some residents. The Plan also seeks to ensure that community facilities are provided throughout the region as places for people to exchange ideas and to be encouraged to contribute to community life. A rail trail is one such facility providing a way for people to contribute to community life by volunteering for maintenance or simply "catching up" with friends and family on a trail ride or walk. The Plan also expresses a desire that the Fraser Coast offers outdoor places, spaces and corridors which are provided throughout the region for the safe enjoyment of people of all ages and abilities to support an active, healthy lifestyle.

4.4 CONNECTED COMMUNITIES

The Mary to Bay 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 the development of a rail trail between Maryborough and Hervey Bay as a key project.

The *Fraser Coast Regional Council Walk and Cycle Strategy* (2015) had a number of objectives including:

- Walking and cycling is encouraged by an environment where people feel secure and all facilities provide safe and consistent walking and cycling conditions;
- The pedestrian and cycle network will connect people to where they want to go.;
- The pedestrian and cycle network and environment provide equity of access and mobility for all users; and
- Pedestrian and cycle improvements and facilities will assist in improving the economic development of the urban areas.

The Strategy included a rail trail between Urraween and Maryborough though it did rank it as a lower priority than a number of other cycle and walk projects. However, a rail trail will deliver on the four objectives identified above – providing safe and consistent conditions, connecting people to where they want to go, generally providing equity of access and capitalising on the investment already in cycling and walking infrastructure (which the last-mentioned objective is primarily about).

The *Fraser Coast Regional Council's Community Plan 2031* sets out an objective to ensure that extensive walking, cycling and mobility scooter networks are developed throughout the region to promote healthy active lifestyles in a safe environment. The proposed Mary to Bay Rail Trail would deliver on this objective.

SECTION 5 - ISSUES

As indicated in Section 2, there are a number of issues associated with both the existing trail corridor and the proposed trail from Stockyard Creek to Maryborough. For the purposes of this section, the existing trail corridor is considered to comprise of the Links Mobility Corridor, the unfinished section from Nikenbah to Piggford Lane, and the newly constructed section from Piggford Lane to Stockyard Creek.

5.1 THE EXISTING TRAIL CORRIDOR

The Links Mobility Corridor (as it is locally known) from Urangan Pier to Nikenbah has been developed over time by the responsible Council (firstly the Hervey Bay City Council and then the Fraser Coast Regional Council). Corridor "legibility" in a number of locations, and mapping and promotion are two key issues associated with this constructed trail.

The difficulty associated with the Maryborough Hervey Bay Road crossing raises the issue of the unfinished trail between Nikenbah and Piggford Lane.

The newly opened section between Piggford Lane and Stockyard Creek also has a particular issue with motorbike access.

5.1.1 LEGIBILITY OF EXISTING PATHWAY IN HERVEY BAY

Feedback received at the Open Houses (particularly for residents of the Hervey Bay area) indicated that the directional signage for the 'Links Mobility Corridor' was inadequate. Observations made by the consultants in the course of fieldwork also indicated that the signage was insufficient in numerous locations, and totally absent in others. Typically, each change of direction or decision point along a trail (including rail trails in busy suburban areas such as through Hervey Bay) need to have directional marker arrows at regular intervals indicating to users where they must turn or go. At present many road crossings and deviations of the path are not signposted, causing confusion for trail users. There are three particular locations where wayfinding is a critical issue.

- As the trail approaches Urraween Drive, there is no indication of where users should actually cross this major road, nor is there any indication of which side of Urraween Road the trail is actually on. Both sides have a mix of wide sealed concrete paths particularly in the vicinity of the TAFE College and St Stephen's hospital. Fraser Coast Regional Council needs to determine the logical trail route which would include determining the safest location to cross Urraween Road and signpost accordingly.
- The route within the urban heart of Hervey Bay from the Regional Art Gallery and Fraser Coast Discovery Sphere across Main Street to the Hunter Street crossing east of Pialba Place is unclear. Commercial development has occurred on the former railway corridor

meaning the route from Main Street to Hunter Street is unmarked and there is no clear trail. This needs to be attended to if the trail is to be satisfactorily utilised. Existing promotional material (Hervey Bay Recreation Trails Flyer) does not indicate a desired route nor is there any signposting on the ground to indicate where users should go. Heading west along the trail, the simplest solution would be to take users south on Hunter Street (a left turn after crossing Hunter Street), and west on Old Maryborough Road (a right turn onto Old Maryborough Road) before re-connecting with the existing trail south of Old Maryborough Road opposite the Fraser Coast Discovery Sphere. Signposts need to be placed at all intersections where a turn or a decision is required by the trail user. Council may also consider widening the footpath on Old Maryborough Road between Hunter Street and Main Street to allow for shared use.

- The existing trail abruptly finishes on the southern side of Dayman Street at Urangan. Directly opposite the end of the trail, the user faces a cleared site for an electricity substation with no clear indication as to which way they should go. It appears as if the trail goes north along Pier Street. Once users cross King Street, the trail is obvious from its construction; however, signage would help confirm users are on the right trail – confusion can easily occur in an urban environment. Signage at the trail entrance onto Dayman Street (preferably on both sides of the road with a straight-ahead arrow on the southern side and a left turn arrow on the northern side) is needed with clear directions as to which way users should go. Directional arrows should also be placed where users need to turn onto Pier Street, where users turn from Pier Street onto King Street, and where users cross King Street.
- Accessing the trail from anywhere other than the Urangan Pier (in terms of wayfinding). If a user wished to access the trail from any of the numerous accommodation establishments along Charlton Esplanade (and this is a likely scenario), it is very difficult to find a way to the trail without heading along the Esplanade bikeway to Urangan Pier then connecting to the Links Mobility Corridor. Council should determine a number of connecting routes (utilising quiet suburban streets with constructed footpaths if possible) and signpost them accordingly to provide easy, simple, convenient and legible connections to the rail trail.

These are critical issues if the trail is extended to Maryborough. Users of the trail travelling from elsewhere in the region or State to use the entire Mary to Bay Trail will need this work to be done to ensure a safe and enjoyable journey along the whole trail.

5.1.2 MAPPING AND PROMOTION

It is evident (particularly from feedback at the Open Houses) that many residents of both Maryborough and Hervey Bay are not well informed about the presence and location of the existing pathway (the 'Links Mobility Corridor') between Urangan Pier and Nikenbah, and

beyond to Stockyard Creek. Maps and a brochure of this rail trail are not readily available, and it is possible that the nomenclature of the trail/pathway (as it is called a 'mobility corridor') is misleading. It is also not clear how well Fraser Coast Regional Council promotes the trail through its website and visitor centres. When each new section is complete, or a missing link is put in place, a new brochure with a map should be produced and widely distributed. Better promotion of the trail will inevitably result in increased usage.

5.1.3 THE MISSING LINK AT NIKENBAH

The existing sealed pathway/trail from Urangan Pier in Hervey Bay finishes near Nikenbah (just short of Maryborough Hervey Bay Rd). A newly completed section of unsealed trail extends west of Piggford Lane as far as Stockyard Creek, several hundred metres west of Dundowran Rd. The 1.0km of railway corridor between these two existing sections of trail remains unconstructed, meaning that trail users must negotiate their way along the shoulder or verge of Maryborough Hervey Bay Road. Input received at the Open Houses and in the questionnaire survey responses indicated that this situation was very concerning for many users of the trail – and in fact deterred some users from venturing on to use the recently opened (unsealed) section of trail.

Above left: Port Fairy Warrnambool Rail Trail underpass of Princes Hwy in Victoria. Above right: Railway Reserves Heritage (Rail) Trail underpass of Great Eastern Highway near Clackline, WA.

The advice from Fraser Coast Regional Council when preparing the brief for this project and in initial discussions for the project was that the crossing of the major road was a significant issue given its width, traffic volumes and speeds.

Various options to deal with the road crossing are possible including an at-grade crossing (at one of several potential locations) or a grade-separated crossing (underpass or bridge). Relatively new at-grade road crossings have been established on the Brisbane Valley Rail Trail in high speed zones. One crossing of the Brisbane Valley Highway at Wanora, and two crossings of

the D'Aguilar Highway, one near its intersection with the Brisbane Valley Highway, north of Harlin and one near Moore provide at-grade crossings with little or no infrastructure in terms of gates and slow points. However, the advice from the Department of Transport and Main Roads was that the design solutions were deemed satisfactory due to the relatively low numbers of trail users who would be using them. The Mary to Bay Rail Trail will likely have a greater number of users and local DTMR representatives have indicated to FCRC that an at-grade crossing is not a satisfactory solution. Installing a grade-separated crossing of Maryborough Hervey Bay Road by way of an underpass is the recommended solution. Underpasses are common on other rail trails in Australia and overseas. Installation may also require a small pump and good design to ensure that water does not pool in the underpass or on approaches either side of the underpass (water flows were raised by a landholder who adjoins the unconstructed trail section). However, it needs to be accepted that, after major rain events, water will pool for a period of time.

5.1.4 MOTORBIKE ACCESS ON THE PIGGFORD LANE-STOCKYARD CREEK SECTION

During fieldwork associated with this Feasibility Study encounters were had with people riding motorised trail bikes along the existing rail trail (in the vicinity of Dundowran Rd). It is evident that this occurs frequently, judging from the numerous tyre marks on the surface and the comments expressed by attendees at the Open Houses associated with this project. Barriers to prevent unauthorised motor bike access onto the trail are absent, and motor bikes have easy access on to and along the trail. Retrofitting barriers at each road crossing (in the existing remote sections of the trail and proposed future extensions) will help significantly in preventing unwelcome and unauthorised access for motor vehicles.

Above: the Lilydale Warburton Rail Trail in Victoria uses a gating system with chicanes to keep unauthorised users off the trail. These chicanes are being lengthened to permit longer bicycles (e.g. tandems and hand pedal bicycles). The existing barriers on the Mary to Bay Rail Trail will keep motor vehicles off the corridor but do little to deter trail bikes.

5.2 THE NEW TRAIL - STOCKYARD CREEK TO MARYBOROUGH

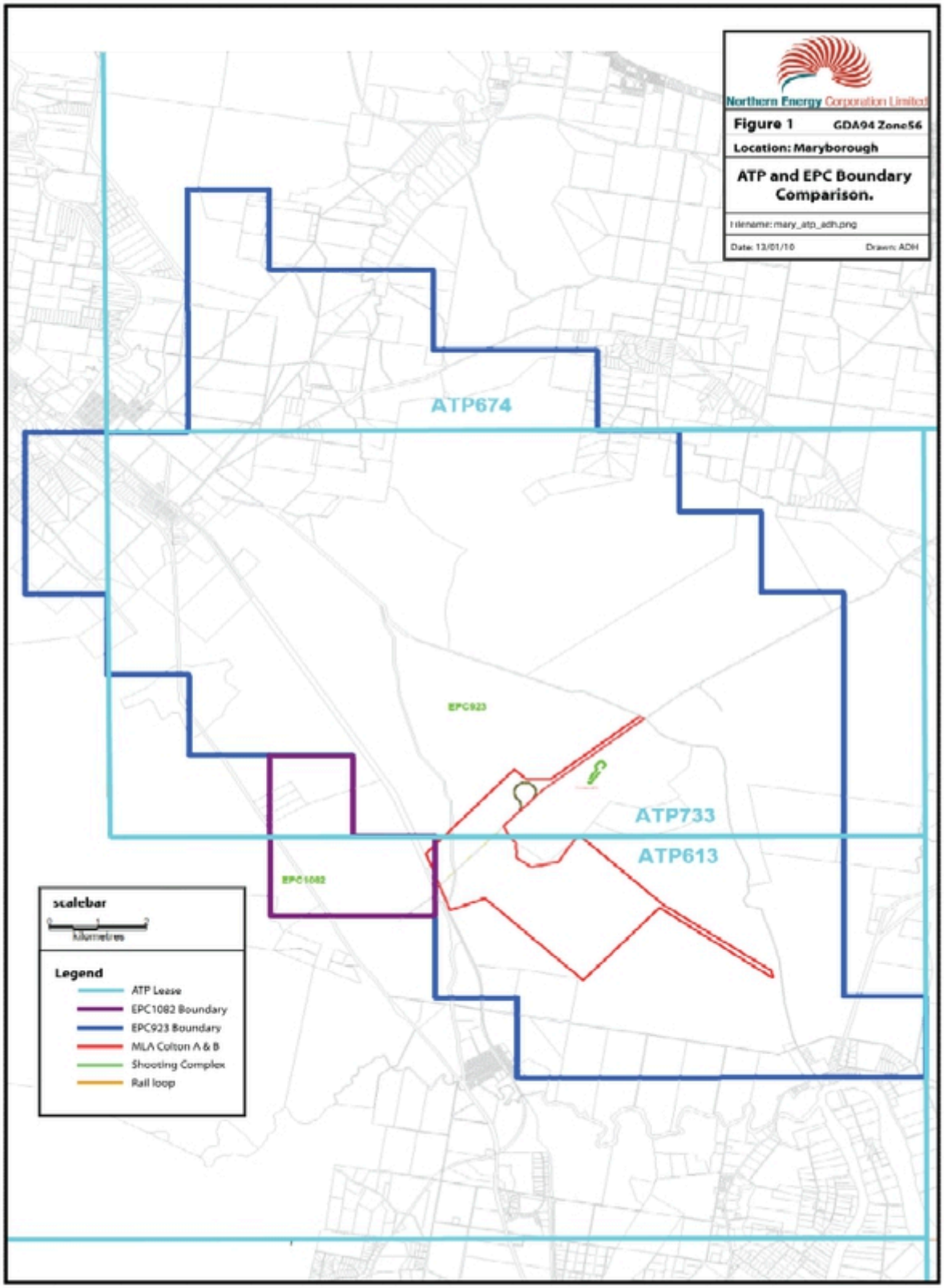
5.2.1 MINING LEASES OVER THE DISUSED CORRIDOR

The presence of a mining lease over part of the former railway corridor at Colton (primarily between Churchill Mines Road and the disused corridor's intersection with the North Coast Railway Line) has been a significant issue since the original proposal for a rail trail.

The Colton Project area lies in the Burrum Coal Fields where small-scale underground mining had been carried out from 1865 until the late 1990s. An Exploration Permit over part of the coal field area was granted to Colton Coal in 2005 and after first phase exploration and a review of historical data, an initial 5Mt inferred resource was announced in 2009. Following further exploration in the area mining lease applications for a small-scale project over part of the exploration area were made in 2010. In May 2017 the Queensland State Government approved New Hope Group's Mining Lease application for its Colton coal project (ML50273, ML50274, ML50280) situated 10 kilometres north of Maryborough. The actual mining lease (and the proposed open cut mine) encompasses a large portion of the former railway corridor. Significant lengths of the former railway corridor between Churchill Mine Rd and Colton were also to be used for infrastructure (railway and roads) for the proposed mine. Under the terms of the mining lease, the mining lease holder has the following responsibilities relating to the rail corridor:

- responsibility for the identification of an alternative corridor from Churchill Mine Road to Saltwater Creek Road;
- responsibility for the acquisition of any land along this alternative corridor; and
- responsibility for negotiating with Fraser Coast Regional Council a contribution towards the construction of the rail trail along the alternative corridor.

The New Hope company states on its website: *Today, the marketable coal reserve, supported by a substantial inferred resource, supports a project that is expected to produce 0.5 Mtpa of coking coal from the proposed open cut Colton Mine for around 10 years. There is an expansion opportunity in and around the current project to extend the project duration to more than 25 years. Any expansion opportunity would be subjected to a separate application and approvals process to that applying to the current project.* (Source: http://www.newhopegroup.com.au/content/projects/development/colton)



Above: the Colton Mine Lease area north of Maryborough effectively precludes use of the former railway corridor between Churchill Mine Road and the (former) Colton siding. Source: Colton Coal Pty Ltd – Colton Mine Project – Mining Lease Application – Colton C - November 2010
http://www.newhopegroup.com.au//content/projects/development/colton/mining-lease-application-documents

In October 2018 Colton Coal Pty Ltd was placed in to the hands of administrators, meaning the company may become insolvent. This occurred at the start of the Feasibility Study process; a site inspection with the mining company to investigate alternative route alignments was cancelled at the last minute by the company's representative due to the financial state of Colton Coal.

Until such as time as this process is resolved, it is not known when (if ever) the company or any other company will proceed with an open cut mine in this coalfield. This uncertainty over the future of the mine means that a trail on the disused railway corridor cannot be planned with any guarantee of its longevity – unless terms of the mining lease are changed.

The presence of the mining lease has been an issue since the completion of the original rail trail and there has been no development on the mining lease area. It is simply not known when any mining will occur. **Critically the mining leases, whilst they exist, give exclusive rights to the lease holder and therefore access to the rail corridor in this section even in the short-term or until a mine is constructed in this section would not be achievable. This means that a rail trail on the original corridor from Churchill Mine Road to Colton is not achievable.** This is unfortunate as there are no major issues with constructing the trail along the original corridor which is in good condition, though a small bridge is missing.

There appear to be two options for development of the trail across or around the mining lease area:

- Option 1: One of the mining lease conditions specifies that the trail must be routed around the mining lease and the mining company is responsible for identifying an alternative corridor from Churchill Mine Road to Saltwater Creek Road. This would be a very significant deviation from the railway corridor in terms of the percentage of new trail actually on or alongside the former railway corridor. If any deviated trail must go to Saltwater Creek Road, there is simply no way back along Saltwater Creek to Aldershot that does not involve significant land resumptions.

  An alternative route would see a newly constructed off-road trail run alongside Churchill Mine Road to Peridge Road (which is a formed and unformed road) then across land adjacent to Peridge Road. In this case, the new trail would need to be constructed parallel to both roads - using the roads as the trail route is simply not suitable for the target audience (particularly if mining trucks are using Churchill Mine Road). This trail could connect back to the old railway corridor south west of the mine boundary. Tenure may be an issue as it is not clear that the entire route is in public ownership (particularly a potential route along Peridge Road).

  Significantly this represents a 19 kilometre route deviation to cover 5 kilometres (which is the direct route along the former corridor between Churchill Mine Road and Colton

siding). Such a deviation would have significant effects on the trail's feasibility as it would add 14 kms of non rail-trail to a 48 km rail trail (this is further discussed in 5.2.5).

Any proposal to develop the trail adjacent to Churchill Mine Road and then alongside Maryborough Hervey Bay Road into Maryborough is not an acceptable solution as this would not be considered a rail trail; there is even a question as to whether such a route would be feasible - in terms of costs versus numbers of users - as any sort of recreation trail.

- Option 2: The trail is constructed on a new route on the northern side of the mining lease area, and parallel to the existing railway corridor. This route would provide less deviation from the original railway corridor. The landform here is similar to the landform through which the existing railway corridor runs. There appears to be no significant technical impediments to such a trail. It will require construction of a new trail – surveying, fencing, vegetation clearing, trail construction. However, this is no different for any suggested deviation. In terms of costs, it is likely to remove the need to construct safety barriers alongside the shooting range – which would have been needed if the trail was developed along the original rail formation. The proposed trail would be outside the boundary of the mining infrastructure layout (in terms of what is publicly known). The proposed trail will cross the exploration permit area but so will any other route option chosen as the exploration permit area is quite extensive. This proposed trail route appears to be on State-owned land which may mean that the trail proponent (FCRC) would need to negotiate with the State about gaining an access easement across the land to facilitate a trail. This route would involve a similar distance of travel for users (although a little longer as it will intercept the North Coast Line a little further north of Aldershot). There were some conversations in the Open Houses that indicated that much of that area has disused mine shafts and old mining rubbish piles - these are not major issues as a trail could be routed around them or they could be repaired/removed. Such a route may not technically trigger the lease condition in that the company is required to identify an alternative between Churchill Mine Rd and Saltwater Creek Rd. In a sense, putting it north of the lease may remove the company's obligations to provide a contribution to the rail trail's costs. This option means that the deviation from the original rail trail is minimised. This is the recommended route around the mining lease.

Interestingly, the issue of the mine was not raised in any community discussions about the rail trail (the Open Houses and the survey). When raised by the consultants with people at the Open Houses, their responses were along the lines of "*the mine isn't going to happen*" or "*this doesn't matter*". The community (or at least those who attended the Open Houses) did not appear to see the mining lease as a critical issue for the trail's development.

5.2.2 A TRAIL ROUTE SOUTH OF ALDERSHOT

A trail route between Aldershot and Maryborough was extensively examined by Brock and Associates in 2011 as part of a suite of work for the Fraser Coast Bicycle User Group. Two options were examined – (1) using the original railway corridor which the report identified had been converted to private ownership south of Saltwater Creek or (2) a circuitous route passing under the Bruce Highway (at Saltwater Creek and Deadmans Gully). The 2011 report compared the two routes but made no recommendation. The 2012 Vision Statement prepared by the Fraser Coast BUG recommended the use of the "highway route".

Investigations conducted as part of this Feasibility Study included re-examining the previously considered options. The route recommended in the 2012 Vision Statement is not an ideal route given its deviation from the original railway alignment and its proximity to the Bruce Highway. Field investigations carried out for this Feasibility Study looked at a slight refinement of the route taking it further west of the highway once Saltwater Creek was crossed (utilising Fluerty Road) but this did not make the route any more attractive.

Examination of Council's property database indicated that Fraser Coast Regional Council owns a large property which runs immediately east of the original railway corridor south of Saltwater Creek (it appears to be used for farming purposes). Whilst the ownership mapping is not perfectly clear, it appears as if the original railway formation is the dividing line between two properties – the one owned by the Council and the one west of the original railway line which is privately owned. The obvious and relatively simple solution is for Council to provide a trail along the western boundary of its property – this may or may not be along the line of the original formation, but it certainly would be within the original railway corridor. This would allow construction of a rail trail between the south bank of Saltwater Creek and Quarry Road. Some negotiations may be required with the adjoining landowner (west of the railway formation), and a land swap or acquisition of land for the trail route may be appropriate, due to the very complicated property boundary created after the railway corridor was sold. It would be preferable if the trail was on the original formation; depending on the precise boundary location, this would possibly require some agreement with the landowner to acquire a thin strip of land where the rail formation is (this is not essential but desirable).

This may also require some changes to rural operations on the Council-owned land, but these are envisaged to be very minor given that the trail would be on the property boundary.

It appears that the former railway corridor south of Quarry Road is intact all the way south to Walker Road and beyond (or a parallel road reserve is available for the proposed trail).

North of Saltwater Creek, it may be possible to operate the rail trail within the existing active corridor for a short length between the southern end of Bronze Street and Saltwater Creek. Alternatively, an access easement could be negotiated with the landholder of the property

adjoining the active corridor. More precise fieldwork and possible surveys would establish what is needed but it is approximately 340 metres from the end of Bronze Street to the northern bank of Saltwater Creek (along the old railway alignment).

Two new bridges will be required along this route – over Saltwater Creek and Deadmans Gully.

5.2.3 ROAD CROSSINGS

There are several significant road crossings along the former railway corridor between Stockyard Creek) and Maryborough. In Maryborough itself, there are several road bridges over the railway corridor and solutions are available for enabling the proposed rail trail to share the corridor under the road with the existing railway line (the artists impression in Appendix 1 shows how this could be achieved under Walker Street).

It should be noted that almost every rail trail ever built crosses roads (both major and minor) and therefore there are already numerous well thought out and well-established designs available to make the crossing points as safe as possible for trail users. Roads such as Piggford Lane, Dundowran Road, Torbanlea Pialba Road and Churchill Mine Road require relatively straightforward at-grade crossing designs. The existing trail/pathway between Urangan Pier and Dundowran Road crosses numerous roads and these have been designed with trail users in mind.

5.2.4 RAIL-WITH-TRAIL IN MARYBOROUGH

The recommended route for the proposed rail trail through Maryborough utilises the existing (active) railway corridor. As depicted in the “before” and “after” images in Appendix 1 the corridor has ample width for the alignment of a pathway/trail. Throughout Australia, and elsewhere in the world, shared paths have been constructed alongside operating railways

Trails and paths alongside operating railway lines successfully operate elsewhere in Australia such as in Perth (above left). The current use of the railway line in Queens Park operates with very few safety measures (above right).

without complications. In Perth, Western Australia, for example, shared paths have been constructed along many kilometres of the suburban high speed, electrified commuter railways without issue.

Even though the railway corridor through Maryborough serves only a handful of trains (at very slow speeds) each week, and it is not electrified, barrier fencing would be required to provide added safety and to prevent trespass. A detailed study of options at road crossings will required to ensure the best possible route is chosen. In some areas a short deviation off the railway corridor may be required due to the abutment walls of over-bridges impinging on the available width of the railway corridor.

5.2.5 RAIL TRAIL OR NOT – HOW MUCH OF A RAIL TRAIL SHOULD BE ON A DISUSED RAILWAY LINE?

As discussed in 5.2.1, a deviation away from the former railway corridor will be required as a result of the Colton mining lease. When a (proposed) rail trail significantly departs away from a disused railway corridor the issue is raised as to what proportion of a trail needs to be located on the original formation for the trail to actually be called a "rail trail". Funding from the Queensland State Government, via its Rail Trail Local Government Grants program, is for *rail trails* only – not for recreational trails (the attitude of the Department of Transport and Main Roads to this matter is not known). Generally speaking, a 10 – 20% deviation of a rail trail away from the disused railway corridor could be tolerated, but deviations beyond that are perhaps excessive. Deviations from the original rail corridors remove much of the attractiveness to the rail trail 'market' – that is, those potential users that may come from afar to experience the attributes of a true rail trail: embankments, cuttings, timber bridges, railway signage, sweeping curves, level gradients etc. These attributes will definitely not be present on a deviation around the mine, whichever route is selected. The same comments apply to a route that deviates from the original rail corridor south of Aldershot. The previous work also suggested using the road network once users got to Maryborough West. This would simply add further to the deviation and again reduce the appeal of a rail trail.

It is therefore strongly recommended that a deviation around the mine is to be the limit of deviations – i.e. the rail corridor would follow the original railway corridor from Aldershot into Maryborough station. The feasibility of the rail trail and the business case prepared for this report are dependent on this critical issue. If other deviations are chosen between Colton and Maryborough, the forecast user numbers in the business case cannot be relied upon.

5.2.6 BRIDGES 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. Refurbishing remaining bridges with new decking suitable for pedestrian and cyclist use, together with the installation of safety railings, will be one of 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 (and a review of the Cardno and Associates 2010 engineering study) revealed that three of the former railway bridges remain in place. Five timber bridges are no longer in place and no structure has been put in their place, while in some cases bridges have been replaced with concrete culverts.

The existing rail trail east of Dundowran Rd features some refurbished bridges which serve as the model for how other bridges should be reconstructed for cyclists and pedestrian use.

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. The costs for the two bridges east of Dundowran Road were in the order of $4,050/lineal metre for the longer bridge and $11,500/lineal metre for the shorter one. Table 1 presents general costings for alternative waterway crossings.

Table 1: General costings for alternative waterway crossings

River and creek crossings	Unit costs	Comments
Re-purpose timber rail bridges	$3,000 - $6,000/lineal metre up to $11,000/lineal metre.	Costs may be more if heritage or environmental matters such as lead paint need to be managed.
Concrete floodways/wash-overs	$20,000 - $30,000	These costs are for simple crossings.
Major concrete floodways	$600,000 - $800,000.	These were the costs of four concrete floodways recently built on the Brisbane Valley Rail Trail where significant bridges were washed away. It is acknowledged that no watercourses along the potential Rail Trail route where bridges have been removed or may be removed will carry similar volumes of water.

Concrete culverts	$2,000/lineal metre installed (plus handrails where needed).	These costs are for simple crossings.
Pre-fabricated bridges (Landmark or similar)	$4,000/lineal metre.	Costs will vary but this assumes there are a number to be installed and there are some economies of scale.

5.2.7 TRAILHEADS

Having a significant population centre at each end of the proposed rail trail (i.e. Hervey Bay and Maryborough) 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 Maryborough is not without difficulties as several options are available. The recommended site in Maryborough is within the precinct adjacent to the transit centre. Proposed future commercial developments within this precinct will determine options available.

Minor trailheads (between Hervey Bay and Maryborough) need to be carefully selected and they should be located with careful consideration and observation of adjoining land uses – and spacing between potential rest areas and access points. The installation of a picnic table at the former Walligan siding (west of Dundowran Rd) indicates that thought has already been given to developing a trailhead in this location. The survey results (see Section 7) also indicated a desire by potential users for various facilities along the way – these would best be located at minor trailheads.

5.2.8 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. Initial investigations along this former railway corridor reveals little, if any, encroachments. There appear to be some minor encroachments near the old Takura siding. More detailed examination will be required should the construction of the extension to the rail trail proceed.

5.2.9 LANDHOLDER ISSUES

No adjoining landholders made themselves known or submitted objections to the proposal through either the Open Houses or the survey – a very unusual situation even though the railway corridor passes through adjoining land uses quite different to many other rail trails

(which typically pass through grazing and cropping land). In addition, the successful operation of the existing rail trail (though primarily through urban areas) may have allayed potential concerns. It is acknowledged that there may be opponents to the project who have not taken the opportunity to contribute to any discussion.

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 (including biosecurity concerns);
- 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.

5.2.10 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. 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.

5.2.11 TRAIL SURFACING

The existing trail surface provides an interesting contrast. It is sealed between Urangan Pier and Nikenbah but has a natural gravel surface between Piggford Lane and Stockyard Creek. This approach provides for maximum use within the urban area (commuting on road bikes for example is much easier on a sealed surface, as is the use of mobility scooters) while providing a lower cost option in rural areas where recreation riding is more common and which can be easily traversed by hybrid bikes and mountain bikes.

A smooth compacted surface is most appropriate for a shared use rail trail. The surface should be firm enough to provide cyclists (the predominant user group of rail trails) with a relatively smooth ride.

Most rail trails developed in Australia use a locally available earth surface (gravel, decomposed granite, crushed limestone, etc.) to produce a firm surface easily capable of accommodating walkers and cyclists. Use of such material provides a high-quality natural surface without the expense of a hardened (i.e. sealed) surface.

Generally speaking, asphalt, concrete and other such hard surfaces are not appropriate on rail trails. However, there are some good arguments for sealing the surface of some rail trails – users on road bikes are able to use such a trail and the very successful Murray to the Mountains Rail Trail (Victoria) is a sealed trail as is the Amy Gillette Rail Trail, the Coast to Vines Rail Trail (both in South Australia) and the Fernleigh Track in NSW. Usually, the costs of putting down a hard surface and the aesthetics of a hard surface are arguments against a hard surface though there are some proponents who claim that the capital and maintenance costs of a sealed surface are compatible with the costs for an unsealed surface.

Alternative surface treatments may also be worth exploring. A number of liquid polymer modified bitumen composition products are currently available and the proponents have indicated that this surfacing treatment can be delivered at a similar cost to a compacted natural surface. Proponents have argued that the two key advantages are that the products re-use the ballast and therefore it does not need to be removed from site and that as a harder wearing surface it has a longer life.

Around 75% of rail trails across Australia do not permit horses but are used by walkers and cyclists; the remaining 25% permit use by horse riders. If horses are to be permitted on the trail (and there were requests for horse riding during both the Open Houses and in the surveys conducted for this project), it is important to keep horses off the main trail surface as the hooves of horses can do significant damage to unsealed trail – although the level of damage depends on the surfacing material used and the prevailing weather conditions. Some surfacing materials (such as “Lilydale Toppings” as used on the Lilydale Warburton Rail Trail in the Yarra Valley in Victoria) are very accommodating to horses’ hooves.

The most effective method of accommodating horses is by the establishment of a separate bridle trail – usually a signposted, slashed single-track route off to the side of the main trail (but still within the original railway reserve). This is commonly done on rail trails such as the Great Victorian Rail Trail, the High Country Rail Trail (also in Victoria) and others. The bridle trail route can be simply constructed by slashing the low grass. The constant passage of horses will keep the ‘single-track’ clear of regrowth and clearly defined. Bridle trail signage will be required to show riders where to go and to keep them off the main trail. Horses will need to share bridges where they cross watercourses.

The key question is whether to seal the surface or to install a gravelled surface – in effect to develop the rest of the rail trail similarly to the existing Links Mobility Corridor or to the new

section between Piggford Lane and Stockyard Creek. The consultants are aware that this is a major issue within the community. Consequently, a question was included in the survey (discussed in detail in Section 7) as to which surface respondents preferred. Notwithstanding that some respondents were not aware of the surface on the newly opened section, the results make interesting reading: 60% responded in favour of a sealed surface while 40% responded in favour of a natural surface.

Unfortunately, this does not provide an overwhelming endorsement of either option. The normal recommendation would be to provide a sealed surface within the urban sections to provide for commuting and mobility scooters, while providing a natural surface in the more rural areas. Under this recommendation, the trail would be sealed from the Maryborough trailhead out to Walker Street and then developed as a natural surface between Walker Street and Stockyard Creek. The costings table (Section 8) provide indicative costings for developing both trail surfaces for all sections of the trail. Council should determine which is the best option for it to pursue.

Advice from the Rails to Trails Conservancy Service (the American rail trails advocacy group) is pertinent. In 2005, it prepared a report entitled *Rail Trail Maintenance and Operation – Ensuring the Future of Your Trails – A Survey of 100 Rail Trails.* As part of the report, the Conservancy addressed the issue of surfacing. The results from their survey of 100 trails found that the annual per mile M&O costs are very similar for asphalt and non-asphalt trails. They identified that there are a number of factors that tend to support this conclusion:

- Surface maintenance, and re-surfacing in particular, is a less-frequent maintenance item that may not appear in annual budgets. Therefore, the surface choice will have less of an impact on recurring costs than patrols, trash collection, vegetative maintenance, and various other tasks.
- Trail organizations and government agencies likely spend whatever they can get their hands on. Expenditures may be more reflective of fundraising and budgetary constraints than actual need.
- While anecdotal evidence repeatedly suggests higher maintenance (activity, if not cost) for non-asphalt trails, this effort may be largely absorbed by volunteers, and would not be reflected in hard dollar costs.

The RTCS report offers some general guidance. Non-asphalt trails require significant re-grading or resurfacing twice as often as asphalt trails (9 years vs. 17 years). A simplistic cost approach would then say, if asphalt is less than twice the cost, it is a more cost-effective, long-term choice. At least one other area of consideration should be suitability to purpose. In this regard, there are three factors that come into play:

- Volume of use — high volumes of use will arguably have a greater impact on non-asphalt trails, although there are numerous examples of well-constructed non-asphalt trails that hold up well under relatively high use.
- Types of use—different trail surfaces will be better or worse for different activities. How do you expect the trail to be used? Are there any uses you specifically want to include or exclude?
- Setting — asphalt may be more fitting for an urban setting than a rural setting. There is also the need to consider environmental and aesthetic factors such as the need to be consistent with a natural or historic setting.

Unfortunately, there is no research that indicates how much extra use a sealed trail attracts (as opposed to a natural surface). This is further discussed in Section 9 (the Business Case).

The costings table also provide a costing for slashing a parallel bridle trail which is recommended if Council determines to allow horse riders to use the new trail (though it is suggested that they not use the in-town sections in Maryborough).

Even though a separate bridle trail may be provided, there is no guarantee that horse riders will keep to this separated trail – especially if the main trail is an unsealed surface. If it is an unsealed surface, and numerous horse riders choose to ignore the parallel bridle trail, it can be expected that the unsealed trail surface will get chopped up by horses' hooves (the level of damage being determined by the amount of horse riding).

5.2.12 FENCING

Although much of the former railway corridor is located within bushland or is now well overgrown and somewhat remote from adjoining farms, there may still be a need for new boundary fencing in several locations. Should the proposed trail be constructed on the alignment of the former railway between Aldershot and Quarry Road it is highly likely that fencing will be requested by adjoining landowners.

5.2.13 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 light or heavy rail passenger services) on some disused railway corridors. This issue was raised in a small number (6) of questionnaire survey responses. Despite the huge cost for these rail services to occur, they nonetheless are a matter that requires some consideration before a rail trail is developed.

The presence of the Mary Anne replica steam locomotive service running a very short tourist service in Maryborough highlights this option.

At the time of the preparation of this Feasibility Study no known detailed alternative proposals have been identified for the Stockyard Creek to Maryborough railway corridor.

5.2.14 ENVIRONMENTAL ISSUES

A number of key environmental issues need to be evaluated when a rail trail is proposed.

Clearing of regrowth vegetation along the corridor, and the need for clearing permits are common issues. It is unclear whether permits for the clearing of regrowth vegetation for the purposes of constructing the trail will be required should the trail proceed.

There is a potential for the spread of weeds (and pathogens) during the construction phase and, potentially, through usage of the trail. This matter will require close examination should further trail construction occur.

Contamination of soils as a result of the operations of the railway and the manner in which former bridges were constructed and maintained is often raised as an issue. The Fraser Coast BUG report addressed this in 2009. It reported that an arsenic-based weed spray was used for the control of vegetation within rail corridors (and widely elsewhere) in Queensland. Prior to development of modern timber preservation techniques and the use of such treated timber in bridges, insecticide treatments of bridge timbers were undertaken. In regard to weed spray use, abundant vegetation regeneration is occurring beside and along the rail formation throughout its extent, and no suppression of seeding germination or regeneration is evident. The BUG had held discussions with people associated with the development of the Brisbane Valley Rail Trail, who informed them that no soil contamination issues had been identified and no remedial work undertaken in the (at the time) recently opened trail section from Moore to Linville.

The potential for sedimentation of watercourses arises as a result of trail construction and bridge works.

These issues can be managed by good construction techniques if the trail proceeds; there are certainly not issues preventing the development of the trail.

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.

6.1 APPEALING LANDSCAPES AND INFRASTRUCTURE

The proposed Mary to Bay Rail Trail would pass through some very attractive scenery. Unlike many other rail trails, the disused corridor passes mainly through bushland rather than farmed rural areas. It is not until a user comes to Aldershot that they encounter urban or semi-urban or semi-rural landscapes (noting that the existing trail from Urangan to Nikenbah is primarily through urban areas). This variety provides an interesting contrast for users.

The quality of intact railway heritage items varies along the corridor. A few timber bridges remain while the (proposed) route into Maryborough takes users along the existing (infrequently used) operating rail line which provides an interesting attraction. The journey into Maryborough also goes past some historic building such as the Dominion Milling Company and (depending on the trailhead chosen) the Maryborough Railway Station adding interest to the journey.

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. Both Maryborough and Hervey Bay provide high level of services of interest to trail users – there are limited opportunities for stand-alone commercial facilities between towns. Nikenbah provides users with a chance for a refreshment then there are no commercial opportunities until Maryborough (the corridor passes through Aldershot and the proposed route bypasses commercial development on the Bruce Highway). The advent of e-bikes (which can cover distances in a much shorter time frame) means less emphasis on “intervening services” though it is possible to envisage somebody setting up a coffee cart en-route (at an accessible road crossing) particularly on weekends. 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 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.

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. Hervey Bay and Maryborough 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.

Completing the rail trail from its current terminus at Stockyard Creek (including completion of the missing section between Nikenbah and Piggford Lane) will significantly increase the attractiveness of the existing trail from Urangan Pier to Nikenbah, and from Piggford Lane to Stockyard Creek – users will be willing to travel from further afield to ride a 48km rail trail through a range of landscapes rather than primarily urban rail trail of a much shorter distance (the urban section to Nikenbah is 13.5 km while the new section connecting Piggford Lane to Stockyard Creek is 3.5 km). There will be a significant realisation of investments already made in the existing rail trail.

The development of the rail trail will also add value to the existing walk and cycle trails already promoted, particularly in Hervey Bay and Maryborough (via a series of brochures).

The *2017 Fraser Coast Destination Tourism Plan* recommends further developing the region's its profile as a key attraction for nature-based tourism (building on whale watching); a rail trail also offers nature-based tourism activities to complement existing nature-based activities. As noted above, Fraser Coast Regional Council already promotes walking and cycling opportunities in Hervey Bay and Maryborough, 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 ocean and Fraser Island – 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.

6.6 COMMUNITY SUPPORT

One of the key questions to be considered in determining whether a trail is feasible is to determine whether there are supportive and/or strong advocates within the community through which the proposed trail passes. This covers two key elements – promotion of the trail idea and the trail itself once constructed, and ongoing maintenance. Formal consultation (in the form of "Open Houses") was carried out for this report (details can be found in Section 7). In excess of 120 people attended the two Open Houses. A survey was also made available for people to fill out online or at the Open Houses. 374 people responded to the survey.

No one attending the Open Houses was opposed to the project – a rare outcome. In terms of the surveys, 355 respondents (over 95%) were supportive. Most of the commentary at the Open Houses was around the issue of "*let's get on with building this project*".

There does appear to be a ground swell of support from groups and individuals within the surrounding communities. 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. The work of the Fraser Coast Bicycle User Group from 2009 until today is evident of a major commitment to the rail trail concept.

It is acknowledged that there may be opponents to the project who have not taken the opportunity to contribute to any discussion.

A committed community-based group is an important element in a rail trail's success. This commitment can be tapped into to ensure the rail trail succeeds should it proceed for ongoing maintenance and promotion. However, committed non-government groups should not be relied upon to take on the formal task of being the trail manager.

6.7 VISITOR MARKETS

A trail such as the Mary to Bay 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 and, increasingly, craft beer. 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.

6.7.2 GENERAL VISITOR NUMBERS

Available figures for the Fraser Coast region show that the region which the rail corridor traverses hosted 615,000 domestic overnight visitors and 692,000 domestic day trippers in 2017. 138,000 international visitors also came to the region (for a total of 1.44 million visitors). Holidaying and visiting friends and relatives made up the highest percentage of purpose of visit (79% 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. 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 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*). 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. The Mundaring Shire trail network (in Western Australia) provides a good indication of the magnitude of local use.

- In 2001, the trail network was used by over 200,000 people making multiple trips *(Jessop and Bruce 2001)*.
- Only 10% of these users were locals (residents of Mundaring Shire).
- Locals accounted for 63% of all trail uses (1.546 million trips of a total of 2.454 million trips).
- The cumulative economic impact of expenditure by locals 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 Fraser Coast Regional Council has a population of 101,504 (according to the 2016 Census) with approximately 27,000 in the Maryborough urban area and over 52,000 in the Hervey Bay urban area.

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 the drift of population from capital cities to provincial cities shift drift ('sea change' and 'tree change');
- 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);
- Increased computer-based leisure including the internet;
- increased demand for open space (parks, recreation trails etc.) in urban developments;
- increasing demands for recreational time in the outdoors (changing work patterns and day trips from home);
- Increasing health and environmental awareness;
- Increasing affluence and expectations of recreation; and
- An increased capacity provided by the National Disability Insurance Scheme for many people previously limited in their capacity to access outdoor recreation.

Consequently, 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

A number of survey-based studies are available which together give a consistent indication of participation levels relevant to trails-related outdoor recreation activities. These studies come from Queensland (2015), South East Queensland (1998, 2001 and 2007), South Australia (Adelaide and Adelaide Hills, and *Market Equity 2004*), and the ACT. Table 2 provides a summary of the relevant participation rates.

Table 2: Participation Rates in Outdoor Recreation Activities

Study	Walking	Cycling	Horse riding
Queensland (2015)	63%	12%*	2%
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%	**

**Mountain biking and off-road cycling only. The other surveys covered all cycling.*

***no horse riding trails were considered in these surveys*

The point of most significance in these 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. The QSERSA study (2015) showed bushwalking was participated in by 14% of all respondents.

OFF-ROAD CYCLING

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.

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.

Mountain biking 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 *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 *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 2%-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).

TRAIL RUNNING

A group who do not show up in any of the older or more recent survey data are trail runners. This generic term covers a range of users – those who look for similar challenges as downhill mountain bike riders, those who participate in ParkRun (an internationally recognised program requiring 5km loops), and those who run marathon distances and similar along “bush trails”. Representatives of the latter group did attend the Open Houses and discussed their interest in the trail proposal. One of their concerns was ensuring adequate water provision along the trail. They also expressed interest in events that could be held. It is difficult to know the demand for this activity. Trail runners looking for similar experiences as downhill mountain bikers are unlikely to be attracted to a rail trail, but those who do endurance trail running and those participating in ParkRun will be potential users.

6.8.2.3 HOW LONG DO PEOPLE SPEND ON A TRAIL?

There is a clear preference for shorter walks.

- A Victorian study found that most users were looking for walks between 30 minutes and 2 hours (and up to 6kms) *(Victorian Trails Strategy 2005-2010)*.
- 98% of bushwalkers across Queensland undertake their activity for 30 minutes to more than 1 hour *(QSERSA 2015)*.
- 76% of walkers use a series of South Australian trails for less than 2 hours (*Market Equity 2004)*.
- 69% of all users of the Bibbulmun Track spent no more than a day on the track with 40% spending less than 4 hours *(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).

- 93% of mountain biking in Queensland is undertaken for between 30 minutes to more than 1 hour *(QSERSA 2015)*.
- A 2013 Queensland survey (*Queensland Outdoor Recreation Federation 2013*) found 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.
- On selected trails in South Australia, 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 2013 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. The QSERSA study (2015) tends to confirm this anecdotal evidence reporting that 93% of horse riding activities take 45 minutes to more than 1 hour (it is understandable that horse riders take longer, given the preparation needed for horse riding).

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*).
- 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 rails 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. 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)*.
- 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.
- 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)*.

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.

- Research work undertaken on the Murray to the Mountains Rail Trail in North East Victoria 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 in 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, 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 mainly from trails in Australia and New Zealand (sources are *Manning et al (2000*), *Colmar Brunton (2009*), *Beeton (2003, 2006, 2009*), *Market Equity (2004*), *NZ Ministry of Business, Innovation and Employment (2013*), and *Central Otago District Council (2011, 2015*)).

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.

Tables 3, 4 and 5 show average amount spent by trail users and the broad sectors in which they spend their money. (Table 4 is included to allow for the fact that the non rail-trails in the published data 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 3: Trail User Expenditure by Category for Overnight Visitors (all trails)

(Overnight users include those staying 1 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 4: Trail user expenditure by category for overnight visitors (rail and cycle trails only)

(Overnight users include those staying 1 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 5: Trail user expenditure by category for day-trippers (day tripper expenditure was only available for some of the studies)

Sector	Average
Accommodation*	$0
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.

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. '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 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 or 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 Mary to Bay 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.

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.

OFF-TRAIL ACCOMMODATION

There may be some opportunity to provide users with off-trail accommodation of varying qualities. 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 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. Horse riding, while generally a low demand activity, is popular in some areas.

The Mary to Bay 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 Fraser Coast 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.

7.2 OPEN HOUSES

As part of the preparation of this Feasibility Study two Open Houses (or 'drop in sessions') were held in Maryborough and Hervey Bay. 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.

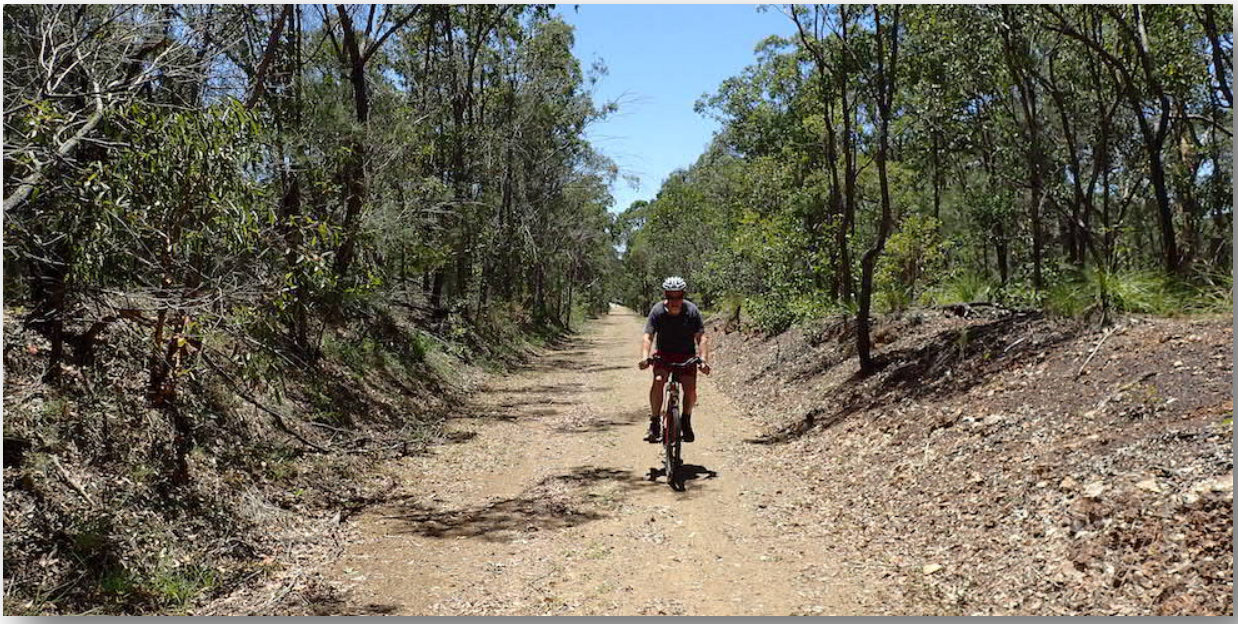
Static display material was available for people to peruse which showed a series of artist's impressions to convey "before" and "after" scenes of the trail alignment, as well as material on rail trails generally – including fact sheets and photos of other operating rail trails. (Artists impressions are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

Open Houses were held in

- Maryborough - Wednesday 30 January 2019. Over 50 people attended the Open House.
- Hervey Bay - Thursday 31 January. Over 70 people attended the Open House.

No one attending the Open Houses was opposed to the project – a rare outcome. One couple identified themselves as adjoining landholders and were very supportive of the trail being developed. Most of the commentary at the Open Houses was around the issue of "let's get on with building this project". People were very supportive and raised a number of positive outcomes which the trail would achieve and the opportunities the trail would provide for local businesses, exercise, tourism, health and recreation, education and commuting. Issues raised for consideration included:

- the "missing link" between Nikenbah and Piggford Lane;
- the poor signage and promotion of the existing trail;
- a number of trail design matters – gates, exclusion of unauthorised users, surfacing, user groups (particularly whether horse riders would be permitted), all abilities access, toilets, water stops, shade trees, road crossings, general signage;
- managing the trail as it passes by the Fraser Coast Shooting Complex; and
- the route into and out of Maryborough (but interestingly the issue of routes north and south of Aldershot and the issue of the mining lease were not raised).



The development of the rail trail between Piggford Lane and Stockyard Creek has stimulated a demand in the community for the completion of the trail all the way into Maryborough.

- *It is a fantastic idea. Much safer for cyclists and a great way to bring the two main centres together.*
- *We are in an obesity epidemic. Young people are getting type two diabetes because we live in a culture of fast food and passive transport. Anything any level of government can do to facilitate gentle, incidental exercise is fantastic. More cycling makes cycling safer and more accessible.*
- *I just wanted to come in and give my wholehearted support to this. I've ridden rail trails in Victoria and in Europe and they're great. We need this for tourism and also for the people who live here. I recently moved to Hervey Bay because it has a cycling culture and I'm glad the council is supporting that. Thank you.*
- *Love the concept. Let's join these two lovely cities together.*
- *Riding a bike on the roads around town is very dangerous and keeps a lot of people off their bikes. My husband and I have been waiting for this for the past 10 years, so are really looking forward to seeing it come to life.*
- *This is a fantastic opportunity to link the historic hinterland (Maryborough) with the eco-opportunities offered by Hervey Bay. It would be a great resource for many community groups and schools (inside and outside of the region) and provide a fantastic lifestyle opportunity for retirees who still want to be active.*
- *A tremendous experience and already well used. I LOVE IT.*
- *We have a very large horse riding community that is a big drawcard for attracting visitors to our area. If designed well, with spaces for us to ride too, this will be a very important feature of our region. Imagine how envious other regions will be of us! Please don't forget us horse riders!!*
- *I am a professional, father and husband who would ride to work most days using the trail. My friends and I would choose this route over most other routes on the road.*
- *I think the rail trail will be beneficial as a health /wellness space as well as being a tourism draw card*
- *We are regular HB resident bike riders who travel the country to experience well presented and marketed bike trails. The Fraser Coast has an opportunity to grab a slice of this market to add to its tourist portfolio. Please do it properly first time.*
- *I am not a local but with a group of friends we have ridden rail trails in New Zealand, Victoria, the Brisbane valley and South Burnett. We have seen the progress in small towns because of the extra visitors in the areas. Rail trail users stop in small towns that people in cars often drive past.*
- *I can't wait for this to be constructed!*

7.3 SURVEYS

A questionnaire survey was also made available for people to fill out online or at the Open Houses. The survey was available on Council's website from mid January until 6th February. 374 people responded to the survey. 355 respondents (over 95%) were supportive. As with the Open Houses, many of the positive comments focussed on the range of opportunities the trail would present to the region. Issues similar to those raised in discussions at the Open Houses were also raised in the survey responses. Again, a common response was "we can't wait for this to be open. Council should get on with it".

The few negative comments focussed on arguing the trail was a waste of money, and arguing for some form of train service (light rail, tourist, regular) on the corridor instead. A summary of the survey results can be found in Appendix 2.

7.4 ADJOINING LANDOWNER ISSUES AND CONCERNS

Through both consultation mechanisms (the Open Houses and the surveys), no adjoining landholders made themselves known and objected to the proposal – again, a very unusual situation though the railway corridor passes through surrounding land uses different to many other rail trails (which typically pass through grazing and cropping land). In addition, the successful operation of the existing rail trail (though primarily urban) may have allayed potential concerns. It is acknowledged that there may be opponents to the project who have not taken the opportunity to contribute to any discussion.

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 or used in some other way (as an access way for example) 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.

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 (including biosecurity concerns);
- 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.

A list of generic problems and solutions are included in this report as an appendix for reference (See Appendix 3).

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.

7.5 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 Mary to Bay 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 6 segments. (See Plans 1 – 3 of Appendix 4).

Table 6 - Section 1 – Maryborough to Walker Street Underpass (4.3km)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	3,000	$3	$9,000
• allowance for moderate clearing of regrowth	metres	1,300	$7	$9,100
Erection of fencing along corridor:				

• double fencing (allowance)	metres	0	$30	0
• single fencing (allowance)	metres	4,300	$15	$64,500
• no fencing	metres	0	$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	0	$4,000	0
Construction of sealed pathway 2.5m wide, compacted to 150mm thickness (includes stripping of topsoil, boxing out, clearing side drains, compacting subgrade, filling, levelling, shaping and sealing).	Square metres	4,300	$90	$967,500
Allowance for installation of pedestrian maze	unit	1	$7,500	$7,500
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	4,300	$2	$8,600
Allowance for road crossings signage	units	3	$2,000	$6,000
Allowance for refurbishment of significant railway heritage items		-	-	$2,000
Allowance for trailside bench seats		3	$1,000	$3,000
Allowance for removal of cross fences	unit	0	$200	0
Maryborough trailhead facilities:				
• Install map panel	units	1	$5,500	$5,000
• Directional signage to trailhead from regional and local roads	units	4	$600	$2,400

• Install roadside "Trailhead" signage on local roads	units	2	$1,600	$3,200
• Install picnic shelter and table		1	$8,000	$8,000
• Install bike parking rails	set	1	$1,000	$1,000
• Allowance for trailhead sculptures / artwork		2	$15,000	$30,000
Sub-total				*$1,130,800*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$28,270
Contingency amount	%		20.0	$226,160
Project management	%		5.0	$56,540
Total (not incl GST)				***$1,441,770***

Table 7 - Section 2 – Walker Street Underpass to Quarry Road (2.9km)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	500	$3	$1,500
• allowance for moderate clearing of regrowth	metres	2,400	$7	$16,800
Erection of fencing along corridor:				
• double fencing (allowance)	metres	0	$30	0
• single fencing (allowance)	metres	0	$15	0
• no fencing	metres	2,900	$0	0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	5	$400 (average)	$2,000

Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges).	metres	0	$4,000	0
Construction of gravel trail 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	2,900	$80	$232,000
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	0	$3,800	0
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	2,900	$2	$5,800
Construction of road crossings at major / minor roads (gating systems and signage)	units	1	$5,400	$5,400
Allowance for refurbishment of significant railway heritage items		-	-	2,000
Allowance for trailside bench seats		2	$1,000	2,000
Allowance for removal of cross fences		5	$300	$1,500
Allowance for slashing of parallel bridle trail	metres	2,700	$5	$13,500
Maryborough West 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 shelter and table		1	$4,000	$4,000
• Install bike parking rails	set	1	$1,000	$1,000
• Construct parking area – including horse float parking (800m^2)	m^2	800	$75	$60,000
• Horse hitching rails		4	$300	$1,200
Sub-total				*$358,600*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$8,970
Contingency amount	%		20.0	$71,720
Project management	%		5.0	$17,930
Total (not incl GST)				***$457,220***

Table 8 - Section 3 – Quarry Road to Colton (7.6km)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	100	$3	$300
• allowance for moderate clearing of regrowth	metres	4,370	$7	$30,590
Erection of fencing along corridor:				
• double fencing (allowance)	metres	1,410	$30	$42,300
• single fencing (allowance)	metres	1,460	$15	$21,900
• no fencing	metres	4,730	$0	0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	5	$400 (average)	$2,000

Allowance for reinstatement of (2) missing bridges (or installation of new pre-fabricated bridges).	metres	90	$4,000	$360,000
Construction of gravel trail 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	6,720	$80	$537,600
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	7,600	$2	$15,200
Construction of road crossings at major / minor roads (gating systems and signage)	units	0	$5,400	0
Allowance for refurbishment of significant railway heritage items			-	2,000
Allowance for trailside bench seats		2	$1,000	$3,000
Allowance for removal of cross fences		3	$300	$900
Allowance for slashing of parallel bridle trail	metres	7,600	$5	$38,000
Allowance for land acquisition from Saltwater Creek north for ~340m				$10,000
Aldershot 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 shelter and table		1	$4,000	$4,000
• Install bike parking rails	set	1	$1,000	$1,000
• Construct parking area – including horse float parking (800m^2)	m^2	600	$75	$45,000
• Horse hitching rails		4	$300	$1,200
Sub-total				*$1,136,290*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$28,410
Contingency amount	%		20.0	$227,260
Project management	%		5.0	$56,820
Total (not incl GST)				***$1,448,780***

Table 9 - Section 4 – Colton to Churchill Mine Road (7.0km)

(Assumes trail is NOT built on original formation but instead uses another route through Unallocated State Land north of the rail corridor)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	1,200	$3	$5,100
• allowance for moderate clearing of regrowth	metres	5,800	$7	$40,600
Erection of fencing along corridor:				
• double fencing (allowance)	metres	0	$30	0
• single fencing (allowance)	metres	0	$15	0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	0	$400	0
Allowance for installation of new pre-fabricated bridges	metres	40	$2,000	$80,000
Construction of gravel trail 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	7,000	$60	$420,000
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	0	$3,800	0
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	7,000	$2	$14,000

Construction of road crossings at major / minor roads (gating systems and signage)	units	1	$5,400	$5,400
Allowance for refurbishment of significant railway heritage items			-	$2,000
Allowance for making safe (e.g. fencing) of historic mines				$20,000
Allowance for trailside bench seats		2	$1,000	$2,000
Allowance for removal of cross fences		0		0
Allowance for parallel bridle trail	metres	7,000	$5	$35,000
Churchill Mine Road trailhead facilities:				
• Install map panel	units	1	$5,500	$5,500
• Construct parking area – including horse float parking (100m^2)	m^2	100	$75	$7,500
• Install roadside "Trailhead" signage on access road	units	2	$1,600	$3,200
• Install picnic shelter/table		1	$4,000	$4,000
• Install bike parking rails	set	1	$1,000	$1,000
• Horse hitching rails		2	$300	$600
Sub-total				*$645,900*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$16,150
Contingency amount	%		20.0	$129,180
Project management	%		5.0	$32,300
Total (not incl GST)				***$823,530***

Table 10 - Section 5 – Churchill Mine Road to Stockyard Creek (9.0km)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	4,500	$3	$13,500
• allowance for moderate clearing of regrowth	metres	4,500	$7	$31,500
Erection of fencing along corridor:				
• double fencing (allowance)	metres	0	$30	0
• single fencing (allowance)	metres	0	$15	0
• no fencing	metres	9,000	$0	0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	10	$400 (average)	$4,000
Allowance for construction of missing bridges (abutments, decking, handrails etc)	metres	156.9	$11,000	$1,725,900
Major repairs and/or refurbishment of remaining bridge structures (abutments, new decking, handrails etc)	metres	171.7	$6,000	$1,030,200
Construction of gravel trail 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	9,000	$60	$540,000
Allowance for installation of gating at minor track crossings (to enable access from one side of corridor to the other)	units	5	$3,000	$15,000
Installation of signage (directional / distance, warning, etiquette, private	metre	9,000	$2	$18,000

property, no trespassing, interpretive, emergency etc)				
Construction of road crossings at major roads (gating systems and signage)	units	1	$5,400	$5,400
Allowance for signage at minor road/track crossings	units	4	$1,000	$4,000
Allowance for refurbishment of significant railway heritage items		-	-	$2,000
Allowance for trailside bench seats		3	$1,000	$3,000
Allowance for removal of cross fences		5	$300	$1,500
Allowance for parallel bridle trail (not needed: vehicle track alongside)	metres	0	$5	0
Takura 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 regional roads	units	2	$600	$1,200
• Install roadside “Trailhead” signage on access road	units	1	$1,600	$1,600
• Install picnic shelters and tables		1	$4,000	$4,000
• Install bike parking rails	set	1	$1,000	$1,000
• Horse hitching rails		2	$300	$600
Walligan trailhead facilities:				
• Construct parking area (already constructed)	m^2	0	$75	$0
• Install map panel	units	1	$5,500	$5,500
• Install directional signage to trailhead on regional roads	units	2	$600	$1,200

• Install roadside "Trailhead" signage on access road	units	1	$1,600	$1,600
• Install picnic shelter/table (already in place)		0	$4,000	$0
• Install bike parking rails	set	1	$1,000	$1,000
• Horse hitching rails		2	$300	$600
Sub-total				*$3,432,800*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$85,820
Contingency amount	%		20.0	$686,560
Project management	%		5.0	$171,640
Total (not incl GST)				***$4,376,820***

Table 11 - Section 6 – Piggford Lane to Nikenbah (1.0km)

ACTIVITY	UNIT	QTY	RATE	$
Clearing of corridor				
• allowance for minimal clearing of weeds etc	metres	0	$3	0
• allowance for moderate clearing of regrowth	metres	1,000	$7	$7,000
Erection of fencing along corridor:				
• double fencing (allowance)	metres	0	$30	0
• single fencing (allowance)	metres	0	$15	0
• no fencing	metres	1,000	$0	0
Allowance for cleaning of, and earthworks around, pipe and box culverts under railway embankment	units	2	$400 (average)	$800

Allowance for reinstatement of missing bridges (or installation of new pre-fabricated bridges)	metres	9.1	$4,000	$36,400
Construction of gravel trail 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	1,000	$60	$6,000
Allowance for installation of stock crossings (grids, gates, etc) to permit stock / machinery to cross from one side of corridor to the other	units	0	$3,800	0
Installation of signage (directional / distance, warning, etiquette, private property, no trespassing, interpretive, emergency etc)	metre	1,000	$2	$2,000
Allowance for construction of underpass of Maryborough Hervey Bay Road (and approaches)*	units	1	$3,000,000	$3,000,000
Allowance for refurbishment of significant railway heritage items		-	-	0
Allowance for trailside bench seats		1	$1,000	$1,000
Allowance for removal of cross fences		1	$300	$300
Sub-total				*$3,053,500*
Approvals, permits, applications, designs, specifications, assessments	%		2.5	$76,340
Contingency amount	%		20.0	$610,700
Project management	%		5.0	$152,675
Total (not incl GST)				***$3,893,215***

**Cost estimate has been supplied by FCRC. The $3 million estimate takes into consideration additional costs associated with:*

- *Relocation of services such as Optic Fibre - Telstra and Optus, main gas lines and other unknown services; and*
- *Conditions that could be imposed by DTMR – installation and removal of side track during the construction phase, lighting and safety solutions.*

Table 12: Total Costs

Section	Cost
Section 1: Maryborough to Walker Street Underpass (4.3km)	*$1,441,770*
Section 2: Walker Street Underpass to Quarry Road (2.9km)	*$457,220*
Section 3: Quarry Road to Colton (7.6km)	*$1,448,780*
Section 4: Colton to Churchill Mine Road (7.0km)	*$823,530*
Section 5: Churchill Mine Road to Stockyard Creek (9.0km)	*$4,376,820*
Section 6: Piggford Lane to Nikenbah (1.0km)	*$3,893,215*
Total (excluding GST)	***$12,441,335***

Sealing the entire new trail (including the section between Piggford Lane and Stockyard Creek) as opposed to only sealing Section 1 between Maryborough and Walker Street will add in excess of $5.3 million to the construction cost (this figure includes the on-costs).

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 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 Mary to Bay 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 re-iteration.

9.2.1 GENERAL VISITOR TRENDS

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

Available figures for the Fraser Coast region show that the region which the rail corridor traverses hosted 615,000 domestic overnight visitors and 692,000 domestic day trippers in 2017. 138,000 international visitors also came to the region (for a total of 1.44 million visitors). Holidaying and visiting friends and relatives made up the highest percentage of purpose of visit (79% of all visitors came for these two reasons). (*Tourism Research Australia, 2017(b)*). 28% of domestic overnight visitors came from Brisbane and 47% from regional Queensland.

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 completed trail from Hervey Bay to Maryborough (around 48kms) 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 Mary to Bay 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 Mary to Bay Rail Trail.

One of the difficulties in forecasting user numbers is that the existing section of the rail trail attracts users. Unfortunately, Fraser Coast Regional Council keeps no statistics on user numbers so it is impossible to be sure of numbers using the existing trail. It is fair to say that the completion of the trail, while representing a new product in the tourism market, does not present a completely new product. A rail trail being built in an area where there is currently no rail trail, such as proposed in other Queensland projects such as the Bundaberg Gin Gin Rail Trail and the Inland Rail Trail, is a new product. Completing the Mary to Bay Rail Trail is not a new product in the same sense. Conversely, existing users visiting from elsewhere to use the trail are likely to stay longer (and spend more) as the new trail will be 48kms long as opposed to some 17kms for the existing one. **The forecasts below focus on new trail users i.e. those using the trail for the first time rather than those who already ride or walk the existing trail and extend their stay to ride or walk the new section from Stockyard Creek to Maryborough. Some of the analysis below includes consideration of those who already use the trail but who extend their stay (either from a day trip to an overnight stay, or adding an extra day onto their stay) to do the much longer 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 (*Jessop and Bruce 2001*).

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 2 hours is a reasonable distance for people to travel (each way) to undertake a day trip.

The trail end points (Maryborough and Hervey Bay) are within 2 hrs of a number of significant major and minor population centres of the region. Most of the cities and towns of Noosa Shire, Bundaberg Region and Gympie Region are all less than 2 hours from either Maryborough or Hervey Bay (these three councils have a combined population of over 203,000 people - according to 2017 estimates from the Queensland Government Statistician's Office). This figure does not include local users within 20 minutes of the trail.

A completed Mary to Bay Rail Trail may attract in the order of 5,000 additional day trippers/year (specifically to use the trail). This number represents:

- Around 0.7% of the existing day tripper market to the Fraser Coast region; and
- 2.5% of the population within 2 hours of the trail.

Increasing day trippers to the region by 5,000/year will result in an injection of some $725,500 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 4,000 day trippers into overnight visitors, this would inject an additional $836,160/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 2nd or subsequent day's stay cannot be attributed to the trail.

This number represents around 0.6% of the existing overnight visitor market to the region. It should be noted that some of these visitors are likely to be people who already use the shorter trail and are extending their stay to do the longer trail journey.

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.

If 4,000 visitors stay an extra day to use the trail, this would inject an additional $836,160/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 0.6% of the existing overnight visitor market to the region. As with the "converted" day trippers, some of these visitors are likely to be people who already use the shorter trail and are extending their stay to do the longer trail journey.

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. 2,000 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 2,000 visitors came primarily to use the trail, this would inject an additional $836,160/year into the economy (2,000 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 Bundaberg Gin Gin Rail Trail). 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 13.

Table 13: Mary to Bay Rail Trail: Possible Visitor Numbers and Associated Expenditure: A Summary

Category	Predicted visitor numbers/year	Predicted expenditure/year
New day trippers	5,000	$725,500
Day trippers converting to overnight stays	4,000	$836,160
Overnight stays being extended by a day to use the trail	4,000	$836,160
Attracting new overnight visitors	2,000	$836,160
Total visitor numbers	***15,000***	***$3,233,980***

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.

One of the difficulties with estimating local use for this trail is that a significant portion of it already exists. Will local use increase given that users (at least in Hervey Bay) can and do already use the trail? Obviously, local users in Maryborough will have a new recreation trail opportunity so it is legitimate to consider the Maryborough population to be a "new local market". The survey responses and Open Houses conversations indicate many people in Hervey Bay who would use the extended trail – many of those are already using the existing trail – in economic terms, these are not new users and create no additional economic benefit by using the new trail section. Caution needs to be used in assessing likely new trail users from Hervey Bay – separate tables are provided to assist this analysis.

9.4.1 LOCAL TRAIL USERS – PREDICTING USER NUMBERS

The population of Maryborough is 26,929 and Hervey Bay is 52,073 (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 14 and Table 15 provides three visitation scenarios for the two cities taking a far more conservative approach compared to the actual visitation rate coming from the Mundaring study.

Table 14: Potential Total Annual Visits by residents of Maryborough

(Population of Maryborough – 26,929)

Category	Low trail usage: 10% of residents	Medium trail usage: 20% of residents	High trail usage: 30% of residents
Low (10 visits/yr)	26,929	53,858	80,787
Medium (20 visits/yr)	53,858	107,716	161,574
High (30 visits/yr)	80,787	161,574	242,361

Table 15: Potential Total Annual Visits by residents of Hervey Bay

(Population of Hervey Bay – 52,073)

Category	Low trail usage: 10% of residents	Medium trail usage: 20% of residents	High trail usage: 30% of residents
Low (10 visits/yr)	52,073	104,146	156,219
Medium (20 visits/yr)	104,146	208,292	312,438
High (30 visits/yr)	156,219	312,438	468,657

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 14 and Table 15 gives a range of expenditure estimates. Table 16 and Table 17 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 16: Potential Total annual expenditure in the vicinity of the trail by residents of Maryborough

(low, medium and high refer to the use rates developed in Table 14 above)

Use Scenario	# of person visits	Total spent ($)
Low/low	26,929	$57,897
Medium/medium	107,716	$231,589
High/high	242,361	$521,076

Table 17: Potential Total annual expenditure in the vicinity of the trail by residents of Hervey Bay

(low, medium and high refer to the use rates developed in Table 15 above)

Use Scenario	# of person visits	Total spent ($)
Low/low	52,073	$111,957
Medium/medium	208,292	$447,828
High/high	468,657	$1,007,613

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.

Noting the comments above about the difficulties of forecasting users when part of a trail already exists, the reasonable, if very conservative, scenario to adopt (conservative when compared with the Mundaring data) are:

- For Maryborough residents, a medium/medium scenario of 107,716 person visits (i.e. 20% of the 'local' population using the trail for 20 visits per year). Such visitor numbers would inject **$231,589/year** into the local economy. Due to the significant local population, economic benefits flowing from local trail use will be relatively high.
- For Hervey Bay residents, a low/low scenario of 52,073 person visits (i.e. 10% of the 'local' population using the trail for 10 visits per year). Note that this figure is additional to those Hervey Residents already using the trail. Such visitor numbers would inject **$111,957/year** into the local economy. Due to the significant local population, economic benefits flowing from local trail use will be relatively high.

In total, local use would be in the order of **159,780 person visits/year** (over and above those local residents using part of the trail) injecting some **$343,546** into the local economy. Additional economic benefits are likely to arise as local residents already using the existing corridor use the new corridor as part of their trip. No research data is available to calculate how much more expenditure this will yield.

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 2 and 5 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 1 hour.

Using this assumption and combining it with the forecast user numbers, it is likely that there will be an additional 159,780 hours of additional physical activity in the local communities who can access the Mary to Bay 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 – 159,780 local users/year is a reasonable expectation. This will result in an economic injection of $343,546/year;
- Expansion of the existing day tripper market to the region. 5,000 new day trippers/year injection $725,500/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 4,000 day trippers into overnight visitors, this would inject an additional $836,160/year into the regional economy.
- If 4,000 visitors stay an extra day to use the trail (or use a package of trails including the Mary to Bay Rail Trail), an additional $836,160/year would be injected into the regional economy.
- If 2,000 new visitors come to the region solely (or primarily) to do the trail, an additional $836,160/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 **$3,577,526/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 IS THERE AN ECONOMIC BENEFIT TO SEALING A RAIL TRAIL

Fraser Coast Regional Council requested consideration of the economic benefits (indicated by increasing user numbers) from sealing the new trail (similar to the existing Links Mobility Corridor) as opposed to leaving it as a natural surface (similar to the Piggford Lane to Stockyard Creek section). Unfortunately, there is simply no available research (from Australia or elsewhere where rail trails are found) comparing the user number outcomes from different trails. There is very limited data even on use of rail trails in Australia (Section 6 outlined the current available economic research). The most successful rail trail in Australia in terms of user numbers is probably the Lilydale Warburton Rail Trail which hosted 105,000 visitors (the only year users were counted which was some time ago). It is an unsealed surface. By contrast, the Murray to the Mountains Rail Trail (probably Australia's best known rail trail) is sealed and hosted 60,000 trail users at its most recent count. However, the trail surface probably makes little difference to the user numbers for comparative purposes. A number of other factors explain the relative appeal of both, primarily closeness to major markets (the Lilydale Warburton Rail Trail is at the end of the Melbourne suburban train network whereas the Murray to the Mountains Rail Trail is some 2-3 hours' drive from Melbourne). Unfortunately, reliable counts are not available which would allow comparisons of regional rail trails to be done. It would be ideal if a user comparison could be done between the Murray to the Mountains Rail Trail and the Great Victorian Rail Trail, for example, though differences in user numbers may be attributable to a number of factors.

A sealed rail trail will allow the use of road bikes (a potential new source of users). However, most people interested in riding rail trails have hybrid or mountain bikes (often in addition to road bikes) and do not find the surface a limiting factor for use and enjoyment. Road bike users are often looking for long distances where relatively high speeds can be achieved – given the mixed nature of rail trail users (families with children in particular), rail trails may have less of an appeal even if sealed. One of the attractions often touted for sealing a rail trail is a greater ability to attract events such as triathlons – this was put forward as one reason for sealing the section of the Kilkivan Kingaroy Rail Trail in South Burnett Regional Council. A sealed trail may allow greater access for people of all abilities – this is a consideration. It is not clear whether mobility scooters seen on the Links Mobility Corridor are able to satisfactorily use a well-maintained natural surface.

In summary, there is no research which enables a reasonable comparison of economic benefit to be made between sealing a rail trail and leaving it as a natural surface. Opening a trail to road bikes by sealing it would attract new users (and may displace other users) but no available data can be used to determine how many.

9.7 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 study, but it can be quite significant.

9.8 NON-ECONOMIC BENEFITS

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

9.8.1 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.

9.8.2 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 1 hour of moderate exercise can add more than 1 extra hour of high-quality life to an individual.
- Cycling and walking as recreation activities can be cheaper than alternative forms of exercise such as gym classes. Yearly memberships to gyms are around $600 in many instances – the cost of a good hybrid bike, which has a life of more than one year.

9.8.3 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.

9.8.3.1 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.

9.8.3.2 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 region (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*).

9.8.3.3 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.

9.8.3.4 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 Mary to Bay 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 15,000 visitors will inject in excess of $3.23 million into the region's economy. Local use rates of almost 160,000 people/year will see the injection of an additional $343,546/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 continuing the development of the existing Mary to Bay Rail Trail on the disused railway corridor between Maryborough and Stockyard Creek (and sought recommendations on addressing the "missing link" between Nikenbah and Piggford Lane). 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?

This is a conditional yes. As is the case for the vast majority of disused railways in Queensland, most of 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, most of 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 are however, three sections of the corridor over which there are significant concerns. Viewing all three together brings forward consideration of "when is a rail trail not a rail trail?".

MINING LEASES OVER THE DISUSED CORRIDOR

The presence of a mining lease over part of the former railway corridor at Colton (primarily between Churchill Mine Road and the disused corridor's intersection with the North Coast Railway Line) has been a significant issue since the original proposal for a rail trail. In May 2017 the Queensland State Government approved New Hope Group's Mining Lease application for its Colton coal project. The actual mining lease (and the proposed open cut mine) encompasses a large portion of the former railway corridor. Significant lengths of the former railway corridor between Churchill Mine Rd and Colton were also to be used for infrastructure (railway and roads) for the proposed mine. In October 2018 Colton Coal Pty Ltd was placed in to the hands of administrators, meaning the company may become insolvent.

Until such as time as this process is resolved, it is not known when (if ever) the company or any other company will proceed with an open cut mine in this coalfield. This uncertainty over the future of the mine means that a trail on the disused railway corridor cannot be planned with any guarantee of its longevity – unless terms of the mining lease are changed.

Critically the mining leases, whilst they exist, give exclusive rights to the lease holder and therefore access to the rail corridor in this section even in the short-term or until a mine is constructed in this section would not be achievable. This means that a rail trail on the original corridor from Churchill Mine Road to Colton is not achievable.

Any proposal to develop the trail adjacent to Churchill Mine Road and then alongside Maryborough Hervey Bay Road into Maryborough is not an acceptable solution as this would not be a feasible rail trail; there is even a question as to whether such a route would be feasible - in terms of costs versus numbers of users - as any sort of recreation trail.

There appear to be two options for development of the trail across or around the mining lease area:

- Option 1: The lease conditions (for the mining lease) specify that the trail must go to Saltwater Creek Road, and this makes a very significant deviation from the railway corridor in terms of percentage of trail. If any deviated trail must go to Saltwater Creek Road, there is simply no way back along Saltwater Creek to Aldershot that does not involve significant land resumptions. An alternative route would see a newly constructed off-road trail run alongside Churchill Mine Road to Peridge Road (which is a formed and unformed road) then across land adjacent to Peridge Road. Tenure may be an issue as it is not clear that the entire route is in public ownership (particularly a potential route along Peridge Road). Significantly this represents a 19 kilometre route deviation to cover 5 kilometres (the direct route along the former corridor between Churchill Mine Rd and Colton). Such a deviation would have significant effects on the trail's feasibility as it would add 14 kms of non rail-trail to a 48 km rail trail.
- Option 2: The trail is constructed on a new route on the northern side of the mining lease area parallel to the existing railway corridor. This route would provide minimum deviations from the corridor. The landform here is similar to the landform through which the existing railway corridor runs. There appears to be no significant technical impediments to such a trail. It will require construction of a new trail. The proposed trail appears to be on State-owned land which may mean that the trail proponent (FCRC) would need to negotiate with the State about gaining an access easement across the land to facilitate a trail. This route would involve a similar distance of travel for users (although a little longer as it will intercept the North Coast Line a little further north of Aldershot). This option means that the deviation from the original railway corridor is minimised. This is the recommended option as a suggested route around the mining lease.

DEVELOPING A TRAIL ROUTE NORTH AND SOUTH OF ALDERSHOT

A trail route between Aldershot and Maryborough was extensively reviewed in 2011. Two options were examined – (1) using the original railway corridor which the report identified had been converted to private ownership south of Saltwater Creek and (2) a circuitous route passing under the Bruce Highway (at Saltwater Creek and Deadmans Gully). The 2012 Vision Statement prepared by the Fraser Coast BUG recommended the use of the "highway route" (the second option). This route is not an ideal route given its deviation from the original railway alignment and its proximity to the Bruce Highway. Examination of Council's property database indicated that Fraser Coast Regional Council owns a large property which runs immediately east of the original railway corridor south of Saltwater Creek (it appears to be used for farming purposes). Whilst the ownership mapping is not perfectly clear, it appears as if the original railway formation is the dividing line between two properties – the one owned by the Council and the one west of the original railway formation which is privately owned. The obvious and relatively simple solution is for Council to provide a trail along the western boundary of its property – this may or may not be along the line of the original formation, but it certainly would be within the original railway corridor. This would allow construction of a rail trail between the south bank of Saltwater Creek and Quarry Road. Some negotiations may be required with the adjoining landowner (west of the railway formation), and a land swap or acquisition of land for the trail route may be appropriate, due to the very complicated property boundary created after the railway corridor was sold.

North of Saltwater Creek, it may be possible to develop the rail trail within the existing active corridor for a short length between the southern end of Bronze Street and Saltwater Creek. Alternatively, an access easement could be negotiated with the landholder of the property adjoining the active railway corridor. It is approximately 340 metres from the end of Bronze Street to the northern bank of Saltwater Creek (along the old railway alignment).

RAIL WITH TRAIL IN MARYBOROUGH

The previous studies have suggested using the system of local roads to get into Maryborough CBD. This is not appropriate to the user market and can become very confusing. The recommended route for the proposed rail trail through Maryborough utilises the existing (active) railway corridor. The corridor has ample width for the alignment of a pathway/trail. Throughout Australia, and elsewhere in the world, shared paths have been constructed alongside operating railways without complications. In Perth, Western Australia, for example, shared paths have been constructed along many kilometres of the suburban high speed, electrified commuter railways without issue. Even though the railway corridor through Maryborough serves only a handful of trains (at very slow speeds) each week, and it is not electrified, barrier fencing would be required to provide added safety and to prevent trespass.

RAIL TRAIL OR NOT – HOW MUCH OF A RAIL TRAIL SHOULD BE ON A DISUSED RAILWAY LINE?

In looking at these three route issues together, the key question becomes (and certainly in terms of market appeal), when does a rail trail lose its status as a "rail trail". When a (proposed) rail trail significantly departs away from a disused railway corridor the issue is raised as to what proportion of a trail needs to be located on the original formation for the trail to actually be called a "rail trail". Generally speaking, a 10 – 20% deviation of a rail trail away from the disused railway corridor could be tolerated, but deviations beyond that are perhaps excessive. Deviations from the original rail corridors remove much of the attractiveness to the rail trail 'market' – that is, those potential users that may come from afar to experience the attributes of a true rail trail: embankments, cuttings, timber bridges, railway signage, sweeping curves, level gradients etc. These attributes will definitely not be present on a deviation around the mine, whichever route is selected. The same comments apply to a route that deviates from the original rail corridor south of Aldershot and using the road network to get into Maryborough CBD. This would simply add further to the deviation and again reduce the appeal of a rail trail.

It is therefore strongly recommended that a deviation around the mine is to be the limit of deviations – i.e. the rail corridor would follow the original railway corridor from Aldershot into Maryborough station. The feasibility of the rail trail and the business case prepared for this report are dependent on this critical issue. If other deviations are chosen between Colton and Maryborough, the forecast user numbers in the business case cannot be relied upon.

Other route issues are relatively minor. 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.

ARE THERE ALTERNATIVE USES FOR THE CORRIDOR THAT WILL PROVIDE MORE VALUE TO THE COMMUNITY?

Are these alternative uses viable – such as new rail services? The realistic answer is no. This issue was raised in a small number (6) of survey responses. Despite the huge cost for these rail services to occur, they nonetheless are a matter that requires some consideration before a rail trail is developed.

The presence of the Mary Anne replica steam locomotive service running a very short tourist service in Maryborough highlights this option. At the time of the preparation of this Feasibility Study no known detailed alternative proposals have been identified for the Stockyard Creek to Maryborough railway corridor.

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)?

The proposed Mary to Bay Rail Trail would pass through some very attractive scenery. Unlike many other rail trails, the disused corridor passes mainly through bushland rather than farmed rural areas. It is not until a user comes to Aldershot that they encounter urban or semi-urban or semi-rural landscapes (noting that the existing trail from Urangan to Nikenbah is primarily through urban areas). This variety provides an interesting contrast for users.

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 cattle grids and remains of sidings and platforms.

The experience to be gained by users on the proposed trail would be of high order. Interpretation of the cultural and natural values of the area will add to the user's experience.

IS THERE A MARKET FOR THE PROPOSED TRAIL?

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 Fraser Coast 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 between Maryborough and Stockyard Creek (meaning the completion of the Mary to Bay Rail Trail) will become a popular addition 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.

Critically, the proposed rail trail will be a very worthwhile addition to the local cycling and walking opportunities in both Maryborough and Hervey Bay – 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 Bundaberg, Gympie and Noosa Shire.

There are a number of other rail trails being investigated for the Wide Bay Burnett region (the Boyne Burnett Inland Rail Trail and the Bundaberg Gin Gin Rail Trail). 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. No adjoining landholders made themselves known or submitted objections to the proposal through either the Open Houses or the survey – a very unusual situation even though the railway corridor passes adjoining land uses quite different to many other rail trails (which typically pass through grazing and cropping land). In addition, the successful operation of the existing rail trail (though primarily through urban areas) may have allayed potential concerns.

IS THE LOCAL GOVERNMENT AND KEY STAKEHOLDERS SUPPORTIVE OF THE CONCEPT?

This is a conditional Yes. Funding for this Feasibility Study was provided by the Department of Transport and Main Roads; Fraser Coast Regional Council managed the process of the Study but has not yet adopted a formal position on the proposal waiting until the results of this investigation. The Links Mobility Corridor and the extension from Piggford Lane do indicate ongoing (albeit previous) support from the Council. 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 and questionnaire surveys conducted during the course of this study. The work published by the Fraser Coast Bicycle Users Group in 2009-2012 is a serious indication of support and this was reinforced by the Group's representatives in various meetings and the Open Houses.

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 it proceed) for ongoing maintenance and promotion. It is recognised that Fraser Coast Regional Council has been managing the existing trail of its own accord. It may be time to review possible community involvement.

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. Projects with a long lead time prior to a feasibility study often have developed a reasonable level of community support (and opposition).

However, community opinion is overwhelmingly positive based on feedback from the Open Houses (where not a single attendee of the over 120 people expressed opposition) and the survey results (where over 95% [355] responses were supportive of the project).

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 15,000 who will inject in excess of $3.2 million into the region's economy every year. Local use rates of around 160,000/year will see the injection of over $340,000/year into the region's economy.

IS THERE A COMMITMENT TO MAINTENANCE ("FRIENDS OF …" GROUP OR SUPPORT NETWORK)?

This has not been explored in any detail. However, meetings with representatives of a range of interest groups indicate a high level of interest in being involved in trail activities. 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 TRAIL 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. The attractive vistas and vegetation available all along the proposed rail trail and the variety of existing rail infrastructure (notably cuttings and embankments) add interest. Adding the significant urban element (in both Hervey Bay and Maryborough) adds both to the variety and the potential catchment of trail users.

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 Maryborough and Stockyard Creek and finishing the existing trail between Piggford Lane and Nikenbah 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. Fraser Coast Regional Council (or a Committee of Management) being prepared to accept vesting of the entire railway between Maryborough and Stockyard Creek 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 trail being given by the Council, any Committee of Management and volunteers. Council can make the commitment and then develop mechanisms for involving other groups;
6. Consideration be given (based on this report, the trail development plan, any relevant Fraser Coast 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 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 rail 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 Maryborough and Stockyard Creek is attractive. It offers a range of positive factors.
- Most of the entire railway corridor between Maryborough and Stockyard Creek remains in public ownership with few constraints to the development of a trail along its entire length. This statement is cognisant of the existing mining lease at Colton and other land tenure issues.
- The railway corridor is situated in a relatively scenic landscape, with a diversity of landscapes and existing historic railway infrastructure.
- The railway corridor offers a good trail experience and, coupled with the ideal distance between centres (Maryborough to Urangan is approximately 48km) 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 development of several trailheads along the trail (as well as the two anchors at Hervey Bay and Maryborough) provides for a variety of rides/walks of different lengths.
- Some of the major elements of the railway infrastructure remain (the cuttings, embankments and some bridges).
- 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 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 48km) 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 Maryborough and Hervey Bay and the small communities in between, promoting walking and cycling among local people.
- The trail will build on the existing rail trail within Hervey Bay which has operated successfully for some years. This will provide a greater return on investments already made in the existing rail trail.
- 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 completion of the proposed Mary to Bay rail trail. 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 Fraser Coast 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;
- Negotiations over a range of route issues, notably the mining lease and the rail-with-trail; 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 Fraser Coast 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 completion of the Mary to Bay 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. There are only a small number of bridges that will require a detailed examination to confirm their true condition.

Five of the watercourses observed during fieldwork once had a low bridge which is now missing. In most cases only the concrete abutment remains. Three timber bridges remain and should be reused (as the two bridges on the recently opened section have).

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. It is likely, given the recent restoration on two bridges between Piggford Lane and Stockyard Creek, that the remaining three bridges are in good condition (one does have a span missing).

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 Stockyard Creek and Maryborough. 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".

The Mary to Bay 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.

11.2.3 NEGOTIATIONS OVER DEVELOPMENT ACROSS THE MINING LEASE

As discussed extensively in Section 5, the presence of a mining lease over part of the former railway corridor at Colton has been a significant issue since the original proposal for a rail trail. To reiterate the key issue in terms of progressing the project, in October 2018 Colton Coal Pty Ltd was placed in to the hands of administrators, meaning the company may become insolvent. This occurred at the start of the feasibility study process.

Until such as time as this process is resolved, it is not known when (if ever) the company or any other company may proceed with an open cut mine in this coalfield. This uncertainty over the future of the mine means that a trail on the disused railway corridor cannot be planned with any guarantee of its longevity.

The trail development planning process can proceed by assuming that the suggested alternative route north of the mining lease will be used (the process will provide more detail of the alternative route).

11.2.4 NEGOTIATIONS OVER DEVELOPMENT ALONG THE EXISTING ACTIVE RAILWAY LINE

As discussed in Section 5, the proposed route into Maryborough (from Walker Street to the proposed trailhead at the old railway station) uses the existing active railway line. This line is used infrequently and at very low speeds for taking trains and train carriages out to the main western line. However, there are likely to be some concerns by both the rail operator and Queensland Rail (as the rail corridor manager). This is notwithstanding the fact that the Mary Anne replica steam locomotive service operates relatively frequently (every Thursday morning and the morning of the last Sunday of the month) with minimal safety concerns.

It is in the interests of Fraser Coast Regional Council as the trail proponent to initiate discussions with Queensland Rail and the Downer Group to determine a way forward. There would also be a role for the Department of Transport and Main Roads given its interest in developing rail trails across Queensland. The trail development planning process can proceed by assuming that the existing corridor will be used.

Negotiations with Queensland Rail will also need to include discussions over the development of the trail alongside the North Coast Line north and south of Aldershot. The trail development plan if undertaken would provide more parameters for this discussion.

11.2.5 NEGOTIATIONS OVER DEVELOPMENT IN ALDERSHOT

As discussed in Section 5, north of Saltwater Creek, it may be possible to develop the rail trail within the existing active corridor for a short length between the southern end of Bronze Street and Saltwater Creek. Alternatively, an access easement could be negotiated with the landholder of the property adjoining the active corridor. More precise fieldwork and possibly surveys would establish what is needed but it is approximately 340 metres from the end of Bronze Street to the northern bank of Saltwater Creek (along the old railway alignment).

It is in the interests of Fraser Coast Regional Council as the trail proponent to initiate necessary discussions with either Queensland Rail or the landholder. The trail development plan if undertaken would provide more parameters for this discussion.

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 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 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.
- Negotiations and agreements required.
- 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. Detailed trail development planning may provide further insight into this broad schedule and may cause a revision of the schedule.

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

- Stage 1 of construction: Piggford Lane to Nikenbah (1 km). This could be progressed as a separate project immediately – the main issue is funding, designing and installing an underpass of Maryborough Hervey Bay Road.
- Stage 2 of construction: Maryborough to Walker St underpass (4.3 km).

- Stage 3 of construction: Churchill Mine Road to Stockyard Creek (9.0 km).
- Stage 4 of construction: Walker St underpass to Quarry Rd (2.9 km).
- Stage 5 of construction: Quarry Rd to Colton (7.6 km).
- Stage 6 of construction: Colton to Churchill Mine Road (5.7Km).

During the Open Houses, one attendee raised the issue of potentially developing the trail on an "activity basis" rather than a geographic basis (i.e. do minimum work needed and open it recognising it will only be suitable for certain users until a higher level of development is done). This approach means a trail is open and functioning earlier than it might otherwise be. Whilst this has happened for other trail projects, there are good reasons for not taking this approach:

- Negotiations and route clarification and security around the Colton mining lease, land around Aldershot and the use of rail-with-trail in Maryborough all take time to negotiate and resolve. As it currently stands, a trail could be developed from Stockyard Creek to Churchill Mine Road (9 km) with minimal negotiations needed but the route south of that requires more negotiations.
- This would mean spending money now on trail development then effectively having to re-spend it later. This does not represent a wise use of limited resources.
- Allied to that is that there is a State Government funding program available now (the Queensland Cycling Action Plan) specifically for the development of rail trails. Such a dedicated fund may not be available for future upgrades.
- User expectations will be critical particularly in an age where social media means reviews of any new product quickly spread. A lower quality trail may not be as well reviewed with a consequent impact on potential visitor numbers. Whilst promotional material can make it clear that this is a lower quality trail, users may have differing expectations.
- Opening the trail can create an expectation that all the work is done, and the Council may be less inclined to spend money in subsequent years given the competing demands for money. This would be exacerbated by the possible future absence of State Government funding.
- There is also a chance that developing a lower quality trail may physically compromise the possible future upgrading if not done properly or mean that future upgrading will be more expensive.

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

These were discussed in Section 5 but are worth reiterating in brief. These environmental issues 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 trail to ensure weeds and pathogens are not unwittingly spread by maintenance machinery. Ongoing clearing at the sides of the rail trail 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 Maryborough and Stockyard Creek, 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.

It may be that the existing management regime used for the developed section from Hervey Bay to Nikenbah, and from Piggford Lane to Stockyard Creek applies. However, a major extension presents an opportunity to review existing arrangements and perhaps involve community groups who have, in conversations, indicated a willingness to be involved on an ongoing basis.

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 trail.

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 funding for this Study is one such example.

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 the 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.

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.

Fraser Coast 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 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.

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.

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.

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. It should be considered as additional advice to any existing maintenance plans for the existing rail 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 18: Key elements for a trail maintenance program

Activity	*Notes*
Check, repair or replace all trail signage, esp. road-crossings and directional markers	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.

	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. 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.
Check and cut-back overhanging or intruding vegetation	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. 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.
Check condition of trail surface for erosion (or other) damage and arrange repairs if necessary; trim off regrowth vegetation	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. Earthen surfaces may need to be topped up after heavy storms, though good design will minimise such washouts.
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 algaecide 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 $US2,000/mile ($US1,250/km). This is not much more than the overall average of $US1,500/mile ($US940/km), but it nearly triples the average for volunteer-run trails of just under $US700/mile ($US440/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.

(Above: existing Mobility Corridor) A sealed trail provides access for a greater number of user types (those with road bikes for example) but does present a series of ongoing maintenance tasks especially crack repairs.

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. As indicated in Section 5, the new trail could either be sealed (as the existing Links Mobility Corridor is) or constructed of a natural surface (such as the new section between Piggford Lane and Stockyard Creek is). Maintenance costs will vary between the two as will the design life with a natural surface needing to be replaced earlier than a sealed surface. Balanced against this is the need to constantly repair cracks in a sealed surface to keep it useable.

A similar situation applies to bridges. 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).

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

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 a limited number of relatively small bridges, 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.

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

- 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 5 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.
- 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.

Trail managers and "Friends of …" groups often arrange 'Adopt-a-Trail' programs to ensure the rail trail is well maintained – by volunteers.

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 780km (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

A previous program, the **National Stronger Regions Fund** (NSRF) provided funding of $1 billion over 5 years, commencing in 2015 - 2016, to fund priority infrastructure in regional communities. Trail projects have been funded by this program, including the Grampians Peaks Trail Project (Victoria) which involved constructing a 144km, multi-day walking trail across the length of the Grampians National Park, the North East Rail Trail (Tasmania) involving the construction of a 70km multi-use trail along the disused rail corridor from Launceston to Scottsdale, and a maritime trail along the Murray River. This program benefitted the region in terms of trail-related construction. The Returned and Services League of Australia (Queensland Branch) was granted funding in Round 2 to construct a military history trail on the Fraser Coast.

This program is now finished (despite its 5 year running time). It has been superseded by the **Building Better Regions Fund**. The fund is designed to create jobs, drive economic growth and build stronger regional communities into the future. The fund invests in projects located in, or benefiting, eligible areas outside the major capital cities of Sydney, Melbourne, Brisbane, Perth, Adelaide, and Canberra.

Grant funding is available through two funding streams

- The Infrastructure Projects Stream: Supports projects that involve construction of new infrastructure, or the upgrade or extension of existing infrastructure.
- The Community Investments Stream: Funds community development activities including, but not limited to, new or expanded local events, strategic regional plans, leadership and capability building activities.

$200 million was allocated in the 2018–19 Budget for Round Three of the BBRF. Up to $45 million was earmarked for tourism related infrastructure projects that would help stimulate local economies by investing in the tourism sector.

Unfortunately, Round 3 has now closed (November 2018). Several trail projects were funded in previous rounds including the completion of the Brisbane Valley Rail Trail (Moore to Toogoolawah) and work on South Australia's iconic Riesling Trail.

It is not clear from the available information whether the program will extend to a 4th or subsequent rounds. A Federal election scheduled for May 2019 may also affect the future of the program.

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 20 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.

As noted in various sections of the report, the Fraser Coast BUG has been a major player in getting the existing trail to where it is now and advocating for its completion. During the consultation, the consultants also met with the Maryborough Mountain Bike Club representatives who discussed being involved in trail maintenance.

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 PHILANTROPY

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 (AND "BEFORE" AND "AFTER" IMAGES)

Above: Getting to Maryborough would be done within the existing railway corridor to ensure a "rail trail" experience.
Below: An artist's impression of how the rail trail may be developed along the active (but little used) corridor.

Above: Cuttings and embankments are features sought by rail trail users.
Below: An artist's impression of how the rail trail may be developed through a cutting.

Above: The underpass at Walker Street requires a shared rail with trail (and barrier fencing).
Below: An artist's impression of how the rail trail may be developed through the underpass.

Above: The trail passes mainly through forested country rather than developed rural landscapes.
Below: An artist's impression of how the rail trail may be developed along the former railway formation.

Above: One of several old railway bridges that remain along the corridor.
Below: The existing rail trail bridges provide a good example of how the new bridges should be refurbished.

APPENDIX 2

SUMMARY OF SURVEY RESULTS

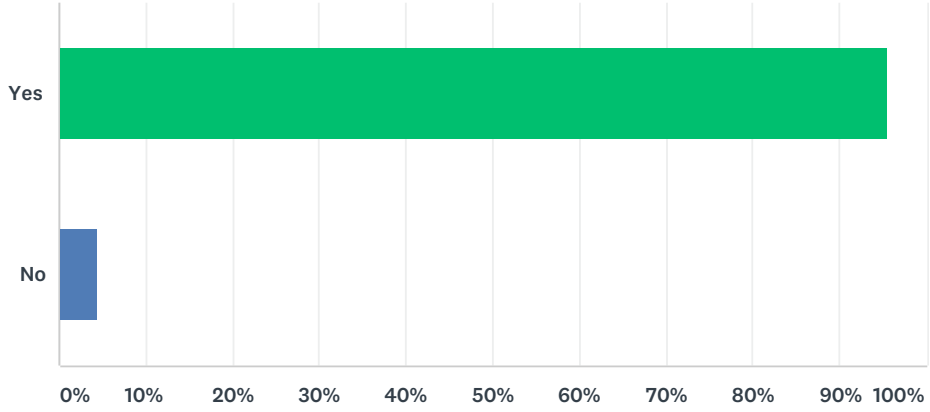
Q1 Contact details

Answered: 191 Skipped: 183

ANSWER CHOICES	RESPONSES	
Name	100.00%	191
Company	0.00%	0
Address	0.00%	0
Address 2	0.00%	0
City/Town	0.00%	0
State/Province	0.00%	0
ZIP/Postal Code	0.00%	0
Country	0.00%	0
Email Address	96.86%	185
Phone Number	0.00%	0

Q2 Do you support the extension of the Mary to Bay Rail Trail Project for walkers, cyclists and horse riders between Stockyard Creek (the end of the existing rail trail) and Maryborough?

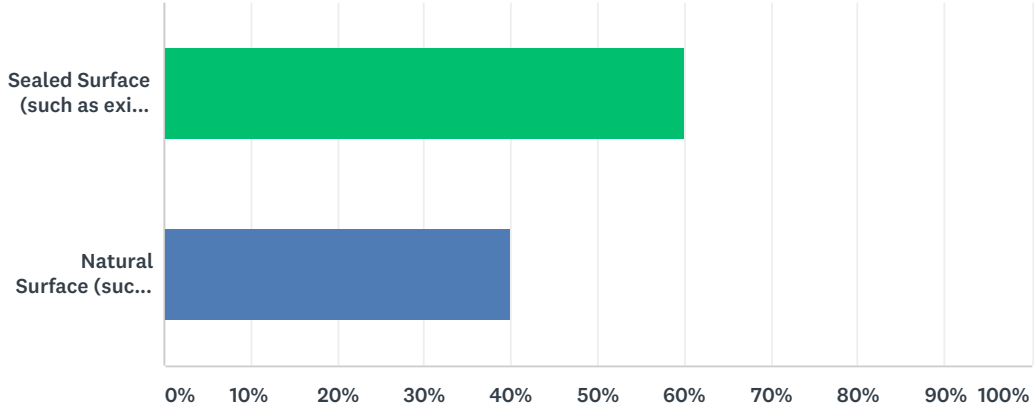
Answered: 371 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	95.69%	355
No	4.31%	16
TOTAL		371

Q3 If the extension of the Mary to Bay Rail Trail Project was to proceed between Stockyard Creek and Maryborough, what surface do you think it should be?

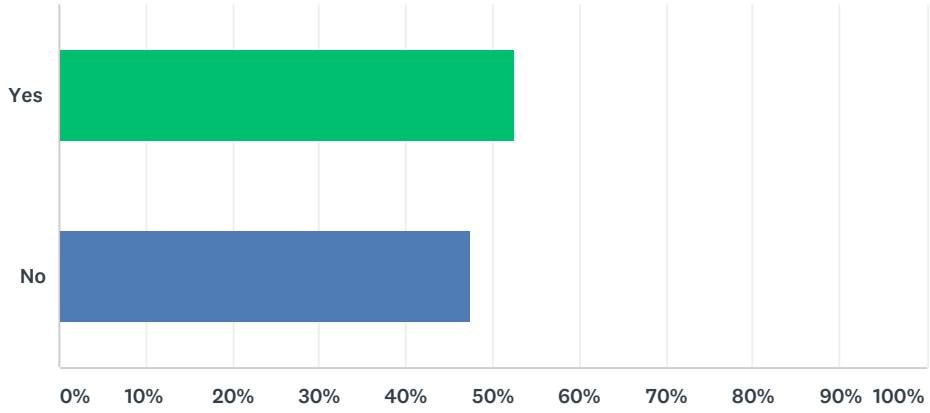
Answered: 356 Skipped: 18



ANSWER CHOICES	RESPONSES	
Sealed Surface (such as exists between Urangan Pier and Nikenbah)	60.11%	214
Natural Surface (such as exists between Piggford Lane & Stockyard Creek)	39.89%	142
TOTAL		356

Q4 If the extension of the Mary to Bay Rail Trail Project was to proceed between Stockyard Creek and Maryborough, do you have any suggestions for interpretative signage or other elements along the trail including suggested locations?

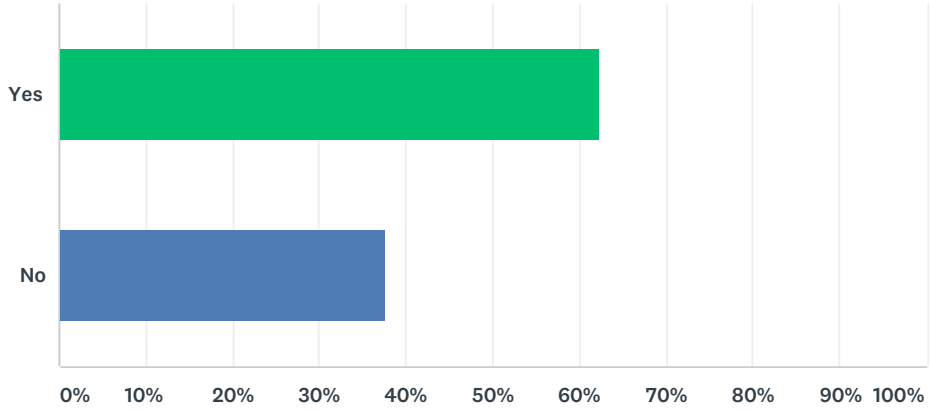
Answered: 332 Skipped: 42



ANSWER CHOICES	RESPONSES	
Yes	52.41%	174
No	47.59%	158
TOTAL		332

Q5 Do you have any other general comments?

Answered: 340 Skipped: 34



ANSWER CHOICES	RESPONSES	
Yes	62.35%	212
No	37.65%	128
TOTAL		340

APPENDIX 3

ADJOINING LANDOWNER 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* • 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 2 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. 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 phone boxes and 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.
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.	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. • 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 pubic 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).
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	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

concerned at unrestrained dogs being allowed along the proposed rail trail and causing difficulties for their livestock.	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 document assesses 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. - 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. - 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. • 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	• 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 know QA issues.
Fencing of the corridor Farmers often believe that the rail trail project will result in them needing to pay for additional fencing. 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.	Comments • There will be sections that 'dissect' properties or are used by the adjoining landholder. Possible solutions • Fencing may be appropriate in some places and not in other places – this depends on a number of factors.
Splitting of farm paddocks Splitting properties and the resultant impact on farm practices (particularly getting stock to watering points).	Comments • There will be sections that 'dissect' properties or are used by the adjoining landholder. 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).
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 Adjoining landholders can be concerned that farms are unsafe work places and people are being invited into such unsafe workplaces.	Possible solutions • 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	
Funding for construction	Comment • Many Federal and State Government funding programs are available for tourism/recreation

A major concern for opponents to rail trails is "Who is going to pay for trail project?" How will it affect rates?	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).
Liability – who is liable for the safety of users both on-trail and when they stray off-trail	Comment - In recent years public liability has become a major issue right across the community. Trails are not immune from concerns related to liability, or from the resulting issues. Indeed, liability – who is liable and who will pay – is often raised as a potential 'problem' with rail trail projects. Possible solutions - 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	Comments • 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.	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.
Responsibility for policing trail Adjoining landowners are often concerned about undesirable people using the trail and causing a nuisance	Comment • 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. Possible solutions • 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.*

APPENDIX 4

PLANS OF PROPOSED RAIL TRAIL

Opportunity exists for routing the proposed trail between the operating railway and Kingston Dr.

Minor deviations may be necessary where there is limited space between operating railway and abutments.

Space exists to route the rail trail in the underpass alongside the little used operating railway at Walker Rd.

Looking NW down onto the railway corridor from the pedestrian bridge at Tooley St.

Looking SE down onto the railway corridor from the pedestrian bridge at Tooley St.

The overgrown former railway corridor still exists in the vicinity of Slaughterhouse Rd.

Colton

Colton-Pialba-Urangan Spur

Colton Mining Lease boundary (approximate)

North Coast Line

Churchill Mine Rd

Maryborough Hervey Bay Rd

Proposed rail trail route

Road Twenty One (reserve)

Bruce Hwy

Aldershot

Saltwater Ck

Proposed rail trail route

Old railway corridor

Neil Rd

Quarry Rd

Slaughterhouse Rd

North Coast Line

Bruce Hwy

Mary River

Walker Rd

Underpass

Maze crossing required

Proposed rail trail route

Rail-with-trail

Maryborough

Mary River

Proposed trailhead: Maryborough transit centre

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Mike Halliburton Associates
Trail Consultants

February 2019

Mary to Bay Rail Trail Feasibility Study

Plan 1
Maryborough to Colton

Fraser Coast Regional Council

Much of the corridor will require clearing to permit the development of the rail trail.

Though some bridges are missing, those that remain could easily be re-furbished for the proposed trail.

Significant lengths of the railway was built in cuttings which will be an attraction to future trail users.

Making road crossings safe is one of a number of challenges to overcome in the development of the trail.

Some of the original bridges will require extensive rebuilding for them to cater for cyclists and walkers.

The corridor between Churchill Mine Rd and Colton is easily ridden and walked in its current condition. Unfortunately it is located within a mining lease.

Bridge 16 (missing)

Existing rail trail

Torbanlea Pialba Rd

Stockyard Ck

Dundowran Rd

Bridge 13 (missing)

Bridge 14 (new)

Bridge 15 (new)

Old Walliigan Rd

Bridge 11 (missing)

Bridge 12 (filled in)

Bridge 10 (box culvert)

Leos Rd

Bridge 9 (part missing)

Proposed rail trail route is located on former railway corridor

Bridge 7 (remaining)

Bridge 8 (remaining)

Churchill Mine Rd

Bridge 6 (missing)

Bridge 5 (remaining)

Colton Mining Lease boundary (approximate)

North Coast Line

Bridge 4 (box culverts)

Possible trail route

Bridge 3 (pipe culvert)

Churchill Mine Rd

Hervey Bay Rd

Maryborough

Bridge 2 (missing)

Former railway corridor

Colton Mining Lease boundary (approximate)

Bridge 1 (box culvert)

Bruce Hwy

Colton

Colton-Pialba-Urangan Spur

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Mary to Bay Rail Trail Feasibility Study

Plan 2
Colton to Stockyard Creek

Fraser Coast Regional Council

This design at Chapel Rd at Nikenbah provides a safe at-grade road crossing for trail users.

Constructing the missing section of rail trail between Nikenbah and Piggford Lane is a high priority.

A section of the sealed pathway (Mobility Corridor) between Urangan Pier and Nikenbah.

One of the new pedestrian/cyclist bridges constructed on the recently opened section of the rail trail.

Urangan Pier

Hervey Bay

Boat Harbour Dr

Main St

Existing "mobility corridor"

Existing "mobility corridor"

Urraween Dr

Nikenbah

Bridge 16
(missing)

Major road crossing
treatment required

Piggford Ln

Missing
section
of trail

Existing rail trail

Dundowran Rd

Stockyard Ck

Bridge 15
(new)

Bridge 13
(missing)

Bridge 14
(new)

Hervey Bay Rd

Old Walligan Rd

Maryborough

Bridge 12
(filled in)

The crossing of Maryborough Hervey Bay Rd has been an issue which has stalled the completion of the rail trail.

A section of the recently constructed gravel trail between Nikenbah and Stockyard Creek.

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Mary to Bay Rail Trail Feasibility Study

Plan 3
Stockyard Creek to Urangan Pier

Fraser Coast REGIONAL COUNCIL