MULTI USE BYRON SHIRE RAIL CORRIDOR

Social Assessment Report

28 MAY 2019

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BYRON SHIRE COUNCIL
MULTI USE OF BYRON SHIRE RAIL CORRIDOR

Social Assessment Report

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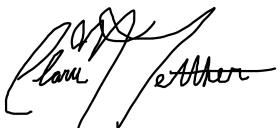

REVISIONS

Revision	Date	Description	Prepared by	Approved by
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1	09/05/2019	Adjustments following internal review- Draft for issue to client	AM	CT
2	28/05/2019	Amendments following client review	AM	CT

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APPENDICES

NON-TECHNICAL SUMMARY

The social assessment was undertaken concurrently and complementary to the engineering and economic assessment of multi use rail corridor. The assessment is critical in ensuring there is a wholistic approach to identification and assessment of potential impacts considers all community needs.

The social assessment followed a structured approach to capturing the opinions, inputs and potential impacts on the community, as summarised in the following headings:

- Need for social assessment
- Methodology
- Policy context
- Stakeholder engagement
- Community profile
- Engagement outcomes
- Social implications of multi use options

Need for social assessment

Given the project has previously involved significant community discussion and will be a key piece of community infrastructure in the future, consultation and engagement plays a critical role in ensuring all voices are heard from inception to delivery of the project. It is also critical stakeholders can be continually engaged in project progress to advise of new impacts if and when they arise. This approach empowers and builds trust.

Good social assessment incorporated into all phases of a project allows for the capture of insights, challenges, risks and opportunities. It helps to define community needs and aspirations regarding uses of the rail corridor, which in turn provides a deeper understanding of community impacts and opportunities in designing the optimum uses of the rail corridor.

In addition to meeting the expectations of the Byron Shire community and ensuring that the multi use of the rail corridor project addresses all potential impacts from a quadruple bottom line perspective (social, environmental, economic and civic leadership), the need for social assessment is also driven through Federal, State and Local planning and policy frameworks. Future stages of the project need to consider the planning and policy frameworks for assessment and approvals.

Methodology

It is recognised that there is a limitation on the degree, timeframes and effectiveness of consultation and engagement for the purpose of assessing social impacts throughout the development of the multi use rail corridor options for the project. As such, the methodology used included the development of a tailored plan for supporting the delivery of the engineering, economic and subsequent Multi Criteria Assessment of options based on previous consultation and a realistic plan for targeted engagement.

Stakeholder identification during the social assessment was essential in ensuring that, as far as reasonably possible, all potential impacts and opportunities relating to the multi use of the rail corridor for the Byron community were identified. The process was guided by the Byron Shire Council Policy for Community Engagement (2018), which in turn has adopted the community engagement approaches of the International Association of Public Participation (IAP2), which is considered the best practice benchmark across the globe. Key stakeholder subgroups identified during the project included:

- Local, State and Federal Government (elected representatives, agencies, Byron Shire Councillors and representative Council committee members)
- Public Transport (advocacy groups, interest groups, private operators)
- Active Transport (advocacy groups, interest groups, Council committees)
- Infrastructure managers and operators

- Local businesses and commerce networks (including market, festival and event operator and organises)
- Tourism agencies, networks and activity providers
- Community and interest groups (mobility impaired, youth, arts)
- Education community
- Environment and Cultural Heritage agencies and groups.

Policy context

When considering the social impacts and opportunities arising from the multi use rail corridor options being assessed, it was essential to consider the legislative framework and policies under which the land and proposed options may be positioned. This framework recognises that the options will utilise an existing transport corridor as well as the potential relevance under federal, state and regional policies, strategies and initiatives which may underlie or overarch the foundations for the project moving forward.

Community profile

A fundamental component of a social assessment is to consider the community profile specific to the project area and ensure that engagement and assessment of impacts incorporates factors which are unique to a region such as culture shared beliefs, customs and values. This is particularly important for the Byron Shire community which has a culture influenced by a number of societal advantages and challenges, including:

- **Population.** The resident population is spread out across main centres including Byron Bay, Ocean Shores, Suffolk Park (-Broken Head), Mullumbimby, Bangalow, Myocum, Brunswick Heads, Tyagarah and the North and South Rural west, however the enumerated population is 6.6 per cent higher than the resident population, primarily due to tourism.
- **Tourism.** The natural beauty of the shire combining beautiful hinterlands, farming countryside and amazing beaches results in a popular international destination, but also a popular national destination receiving a large number of day trippers who attend the tourist attractions as well as many festivals and music events held in the area. In 2017/2018 it is estimated Byron Shire welcomed more than two million visitors.
- **Infrastructure capacity.** Byron Shire is currently faced with a serious road congestion problem, causing huge delays for the local populations and tourists alike. This is because the shire's road networks and associated infrastructure were designed for a much smaller population and are currently operating beyond their capacities.
- **Vision.** Byron's vision is one of a sustainable, self-sufficient, environmentally aware "people place" and an economically balanced environment. The community is engaged, passionate and motivated.

Engagement outcomes

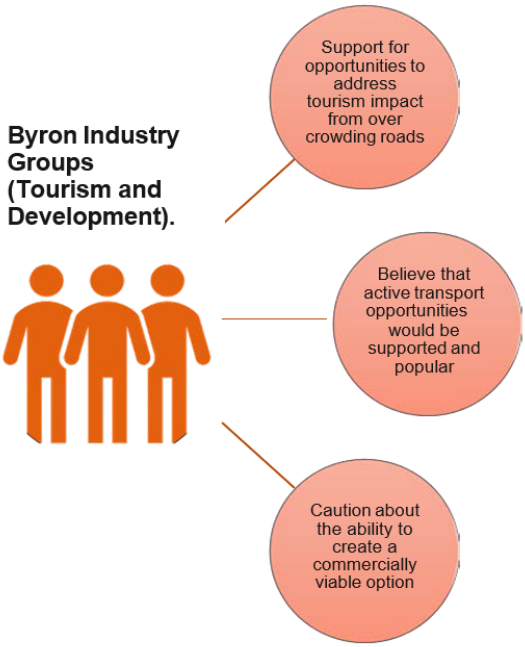
Despite a diverse range of stakeholder input, the outcomes of engagement resulted in the ability to summarise some common themes:

- Support for the use of an otherwise wasted asset and land
- Support for efforts to address traffic issues
- Broad interest in active transport options
- Interest in sustainable rail corridor opportunities.

Engagement was delivered under initial and secondary phases. Initial phase engagement involved select stakeholder interviews with community representatives to test the community understanding of the project and gauge likely key issues. Secondary phase engagement commenced when more direction was available about the overarching community context and potential options.

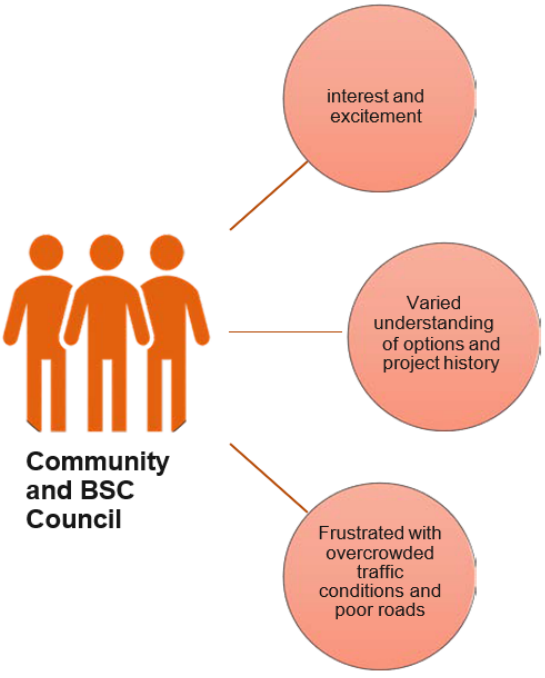
During the targeted, direct engagement activities in both the initial and secondary assessment phase it was possible to organise findings from some of the key stakeholder subgroups further into common themes and key discussion points.

The following diagrams present the common themes and key discussion points from industry groups (tourism and development) and Council and community interest groups.



Key discussion points:

- The parties representing development and industry around the Byron Shire were all supportive of opportunities to utilise the rail corridor, with potential tourism industry benefits identified. Acknowledge that traffic congestion from tourism is impacting on the community
- All saw that active transport options are likely to be very popular, and all were familiar with community interest in rail trail options
- Those parties associated with the Byron Bay Railroad Company issued caution regarding licensing delays (through the rail operator), community perception and asset improvement costs if rail options are identified
- All parties were sceptical of the ability to ever reinstate heavy rail options due to their understanding of construction constraints and the ability to provide a commercially viable option.



Key discussion points:

- Consultation with Byron Shire representatives has been very informative, identifying multiple connections and relationships between the Multi-Use of Byron Shire Rail Corridor project and other Council policies, strategies and projects
- Primary understanding of the importance of the project is to address congestion and transport asset maintenance costs that are impacting on the liveability of the region
- During field surveys, opportunistic engagement with interested locals was unanimously positive regarding the use of what they considered to be wasted lands and assets.

Beyond the direct, targeted engagement with stakeholders, an online survey was made available to the general community. The focus of the survey was to verify (and quantify, where possible) the potential impacts which had been identified during the direct, targeted stakeholder engagement, while intending to allow broader community involvement and communication about the project. The survey was completed by 1088 participants with general support and encouragement for the reactivation a common theme.

"The use of the corridor can only be a good thing"
and

"I definitely think getting the rail line reinstated, ideally with trains but light rail would do if need be, would be a game-changer for Byron Shire."

and

"The corridor is currently a wasted resource. A cycle/walking path would safely connect the shire and if managed wisely be a financial windfall. Refurbish or rebuild the old stations to supply accommodation or cafes for people riding the corridor".

Analytics from the survey responses demonstrated some of the following trends:

- Heavy reliance on private car travel with limited current public transport use. Anecdotally, this aligns with stakeholder feedback regarding insufficient public transport options (limited services and locations) within the Byron Shire resulting in traffic congestions and a lack of connectivity for the transport disadvantaged
- The highest number of participants responding in the category of "would very much like to see" support "Combined use- public transport plus cycling and/or walking tracks and cafes/ retail" (61.75 per cent). However, there was also strong support for exclusive options which support "Public transport service- train ONLY" and "Cycle and/or walking path ONLY" with the category of "would very much like to see" selected by 49.68 per cent and 57.11 per cent respectively. This aligns with stakeholder feedback from the most coordinated and passionate community groups supporting rail reactivation OR rail trail solutions
- The highest number of participants responding to the category of "would not like to see at all" selected "public transport service- bus services ONLY" 65.65 per cent. This aligns with stakeholder feedback about lack of connectivity and inadequate services of current public transport bus services.

Social implications of multi use options

The social assessment process followed for the multi use of the Byron Shire rail corridor project has resulted in the identification of potential impacts which may result from the reactivation of the rail corridor, considering stakeholders across the community.

From an amenity, social and environmental perspective, there were a number of potential impacts identified relevant to the construction phase. These include impact on regrowth vegetation, water quality (erosion and sedimentation), noise, vibration and air quality impacts. These in general have industry-accepted mitigation measures which can be employed to lessen the impacts on the community and most sensitive receptors (nearby residents sensitive to receiving nuisance impacts). Impacts during the construction phase which are not easily addressed through mitigation measures include impacts on cultural heritage values and items (Aboriginal and non-Aboriginal).

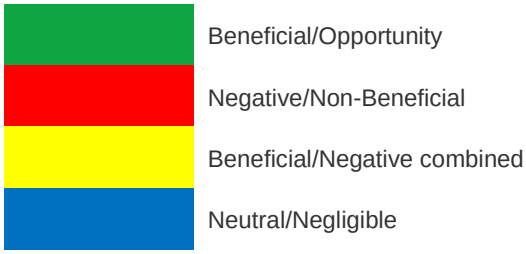
The direct and indirect impacts from an operational perspective are often more difficult to gauge and manage. The social assessment has identified potential impacts relevant to the reactivation of the rail corridor falling into the following categories:

- Tourism
- Employment
- Economic opportunities, assets and access
- Asset values – private and public
- Safety and security
- Transport mobility – traffic, school commuting, transport inclusion and connectivity
- Health and wellbeing- active transport and recreation

- Construction nuisance
- Environmental and amenity issues
- Cultural Heritage Values and Significance
- Market and event patronage
- Displacement of itinerant and youth populations using rail corridor land, tunnels
- Change of access to station buildings used for community forums, office space
- Change of land use activity adjacent to conservation areas and nature reserves.

The social assessment captured social implications by considering these impacts for all potential reactivation options identified within the Engineering Report, to determine if the impact could be considered beneficial, negative, a combination of both beneficial and negative, or neutral.

Overall Social Impacts Identified



Findings from the assessment of social impacts also integrated with the Multi Criteria Assessment process conducted across the project disciplines considering a list of criteria, which captured the Byron Shire Wellbeing Indicators framework.

Opportunities for the community to get involved and to influence the final design or multi use solution

The principle of comprehensive social assessment is that community members are genuinely able to collaborate and contribute to the outcomes of a potential development. As such, it is recommended that the social assessment process should continue and refine as the project progresses to future feasibility, concept and design phases. The methodologies used and consultation strategy developed was tailored specifically to the current project phase.

Future, ongoing engagement with the community will be critical to continue to monitor and address the impacts preliminarily identified in this social assessment. As the project progresses to future feasibility, concept and design phases consultation should be regular, open and inclusive to provide the community with a sense of empowerment and trust in Council, and to provide for the most sustainable long term development and use of the rail corridor. Importantly, no matter how significant or negligible, the identified impacts should continue to be captured and addressed throughout future project phases.

Provisional framework for monitoring and managing social impacts

The most effective ongoing social assessment methodology to accompany future feasibility, concept and design phases consultation should include a clear provisional framework for monitoring and managing social impacts. This framework would ideally be developed in collaboration with the community, key stakeholders as well as Byron Shire Council.

1 INTRODUCTION

As a part of the broader Casino to Murwillumbah rail corridor, the Byron Shire rail corridor (hereafter referred to as the Byron Shire Rail Corridor) has been identified within the Byron Bay Town Centre Masterplan as a key space, crucial to the master plan, and a potential catalyst site for improvements to community connectivity.. In addition, the aim is to promote active transport for the shire, not only to enhance the Town Centre, but to potentially open up connectivity and inclusion in the region, connecting inland regions through the provision of easy access to coastal activities and vice versa.

Byron Shire Council (Council) have resolved to support multiple/integrated commuter, tourism attractor transport and active transport uses of the rail corridor within the shire.

As a part of aiding in defining the most sustainable and acceptable long-term solutions for the multi use re-activation of the rail corridor, the Council have instigated a number of site-specific studies and assessments. A State of the Use of Corridor Report (Engineering Report) has been developed to address the existing condition of the rail corridor, which has informed an Economic Feasibility study and this social assessment.

The multi use context is intended to provide assessment of potential options for integrating public transport services for residents, day trippers and various tourism products, along with a path-based use for walking, cycling etc.

This report draws on the outcomes of the State of the Use of Corridor Report and the Economic Feasibility Study, combined with social and environmental considerations and data, to develop a social assessment. This report outlines predicted project impacts and assesses their significance related to both environmental and social aspects and standards of the community, with a focus on those critical issues identified through consultation with stakeholders.

This study is developed on the basis that not only is Byron very unique in its advantageous position in the tourism market, but that it also has its own culture, social setting and context.

1.1 Project purpose

Cities around the world have, in addition to traditional forms of passive and active transport options, a plethora of new technologies related to transport to choose from. Considering the innovation and rapid growth of these technologies, the way these new or traditional transit technologies are introduced and implemented in the future, will have a direct functioning impact on a city, affecting quality of life, accessibility, commuting time, and the level of urban regeneration that can be unlocked by effective, clean and efficient transport networks.

Unhindered by legacy transit systems, Byron Shire Council have a choice and opportunity to either reactivate the rail corridor through traditional transit multi use options or ‘leap frog’ the currently adopted transport technologies in an optimum way that will strengthen their economic development whilst providing an inclusive, safe, resilient and sustainable solution to the reactivation of the unused rail corridor.

This project seeks to understand the many social and economic transport issues faced by the Byron Shire and determine the optimum multi use transport solution to overcome these issues as well maintaining Byron’s uniqueness and commitment to make Byron a great place to live, aligning with the social and economic goals outlined in the Community Strategy Plan 2028.

1.2 Report structure

The social assessment forms part of a multi-disciplinary assessment incorporating engineering, economic and multi criteria assessments.

The engineering assessment incorporates a state of the asset assessment, environmental constraints and considerations, cost estimates and GIS data.

The economic assessment incorporates consideration of events and festivals, tourism, community benefits, market, land value considerations as well as case studies of similar transport options from around the world.

Although written to provide the reader with an overview of the whole project along with specifics on the social assessment, this social assessment report should be read in conjunction with these reports and is not intended as a stand-alone document.

2 PROJECT DESCRIPTION

2.1 Background

2.1.1 History of the project

The Byron Shire Council have resolved to support the investigation of a multiple public transport and active transport (walking/cycling path) use of the currently unused section of the former railway within the Byron Shire. The history of the rail corridor is long and in some ways complex. The original stretch of rail line from Casino to Murwillumbah was opened in 1894, running through Byron, Lismore, Richmond Valley and Tweed Local Government Areas (LGAs). The train was a main transport option for travel from Murwillumbah, through Mullumbimby, Byron Bay, Bangalow and Lismore, and continued to Sydney from 1990 as an express passenger train (XPT) service.

In recent history the railway has stopped providing services and the community has shown concerns around, and interest in, elements of its disuse and potential future use as a key transport asset.

The last train service was in April 2004, and no rail services have since used this rail corridor. The Byron Shire length is an approximately 30 km length in the middle of the larger North Coast branch line from Casino to Murwillumbah (130 km long). In September 2004, PriceWaterhouseCoopers (PWC) completed a feasibility study for passenger and/or commuter services on the Murwillumbah to Casino branch line. The study investigated five options for developing and operating the railway, however, all of the options had an estimated net present value (NPV) cash deficit of between $43.7 million and $55.3 million over a 20-year period. The positive externality effect of each option was also considered and was estimated to provide $15.6 million to $27.2 million of economic benefits.

In 2008, the Council made a submission to Infrastructure Australia (IA) proposing the refurbishment of the Casino to Murwillumbah Rail corridor and an extension to the Gold Coast Airport[1]. A 2012 'Condition Assessment' was completed for Transport for New South Wales (TfNSW) by the consultancy ARUP and in the following year TfNSW (April 2013) published the Casino to Murwillumbah Transport Study in favour of improving bus services between Casino and Murwillumbah in place of the railway option that was estimated to cost some $900 million. In addition, the TfNSW report recommended the safety review of three bridges on the line, that in 2014-15 resulted in the removal of two rail bridges west of Bangalow in the Byron Shire.

The TfNSW railway assessment assumed a two track, 120 kph class two standard track, as opposed to shuttle-like services or light rail. This assessment criteria raised concerns from some community groups who have criticised the TfNSW report for applying a scope and standard of railway resulting in a cost-benefit analysis which was excessive, leading to a higher than needed cost.

However, TfNSW's study did indicate the rail corridor gradient and alignment could support rail shuttle services with works to improve the railway and adding additional passing loops. Importantly, the study also indicated the rail corridor had many of the attributes that support a successful rail trail project including being close to large population centres, heritage infrastructure, uniqueness of experience, a variety of trail lengths. Rail trails are essentially shared-use paths (predominantly cycling and walking) within disused railway corridors, increasing in popularity across Australia.

In May 2013, a Northern Rivers group, The Sourdough Group, provided a report proposing a Northern Rivers Rail Trail be built on the line between Casino and Murwillumbah, specifically recommending the NSW Government do a feasibility study of the walking/cycle trail. In May 2014, the NSW Department of Premier and Cabinet (DPC) completed a study on the proposed rail trail that included economic, environmental and social benefits along with engineering costs and possible funding sources. The results of the DPC study indicated there is a potential benefit-cost ratio (BCR) of between 1 (breakeven) and 2.54 depending on the demand assumptions of between 34,802 and 88,320 visitors per year respectively. The financial capital cost of the project was estimated as $75.5 million partly driven by the more than 160 bridges along the route. The estimated operating maintenance costs were $884,000 to $1,157,000 per year

[1] Byron Shire Council, 14 Oct 2008, Refurbishment of the Casino to Murwillumbah Rail Corridor and its Extension to the Gold Coast Airport, Submission to Infrastructure Australia, Viewed 19 Sept 2017, http://infrastructureaustralia.gov.au/policypublications/submissions/published/files/188_byronshirecouncil_SUB2.pdf

or $6800 to $8900 per kilometre. The assumed base case suggested the project would be financially viable with a payback period of four to five years. The funding of these costs is partly offset by using the Country Rail Contracts division of TfNSW $750,000 per annum funding for maintaining the current assets. Other government funding sources suggested included the Department of Infrastructure and Regional Development (DIRD) grants and program funding, NSW Government funding via Destination NSW various programs. Non-government funding recommendations included BHP Billiton and education partners (Sothern Cross University and TAFE).

The NSW Government originally budgeted for $100 million under the Restart NSW – Regional Tourism Infrastructure Fund: Rail Trails over 2014-15, however, this funding did not materialise. The lack of funding and general lack of community agreement on what to do with the rail corridor has led to suggestions from Regional Development Australia (RDA) that the land could be sold off section by section if not used for a community purpose.

The Byron Shire Mayor had The Byron Line report produced in June 2016 to bring the community together in developing the agreed vision; communicate the issues and views; and to assist with planning and management. The Byron Line report envisages a central governance body (Trust) establishing and managing a combined railway shuttle service and rail trail walk/cycle way from Billinudgel to Bangalow within the Byron Shire. The first step recommended is securing a social license by establishing a community group the “Friends of the Byron Line”. This community includes stakeholders such as Byron Shire Council, Northern Rivers Regional Organisation of Councils (NOROC), RDA, local State and Federal Members of Parliament.[2]

The Byron Line report has addressed several of the difficult issues of the previous reports considering the rail corridor, including reducing the scope of the project to only include the Byron Shire and use light rail not high-speed rail; expand the benefits to accessing attractions close to the line, suggesting adjoining land-owners starting new businesses to service the users of the line, and allowing the line to be used for commercial activity. The cost estimate used is approximately $300 000 per kilometre for 30 kilometres or $9 million capital cost. The revenue estimated in the report uses the full Country Rail Contracts division of TfNSW budget of $750 000 and private funding through usage fees, sponsorship and event payments. The operating model suggested is ownership stays with TfNSW and a Trust is established by the TfNSW Minister to manage the development and operations.

A key aspect of the Byron Line report is that it sets out a clear path to project development starting with gaining the social license – community ownership of the project, then increasing the project support from Council and other government agencies and then developing The Byron Line Feasibility Report and Business Plan.

2.1.2 Previous Relevant Stakeholder Consultation, Issues and Context

The background and history of the rail corridor that traverses through Byron Shire has included a variety of consultation outcomes and community opinion and issues. The context for the stakeholder assessment relevant to the multi use rail corridor project is also built around the context provided through previous assessments, engagement and studies.

This section of document outlines relevant previous stakeholder information which helps to outline the baseline situation with regards to the project across the community and enables building an approach to stakeholder identification and analysis undertaken for this assessment.

2.1.2.1 Community Strategic Plan – Our Byron, Our Future

As a precursor to the development of Byron Shire’s Community Strategic Plan – Our Byron, Our Future (CSP), an initial engagement program was undertaken in late 2017, with an Engagement Outcomes report illustrating the key themes, issues and priorities of the community being produced as a result. Over 2,700 people participated in the process by way of workshops, online and social media forums, interactive activities, business and staff surveys and written submissions.

[2] Council Report to Council 14 December 2017 – Bangalow Village Plan and Our Mullumbimby Plan

A series of key themes emerged based on the community engagement program and were used to inform the drafting of the CSP, these are highlighted below:

- Desire for improvements to infrastructure, with an emphasis on fixing local roads
- Managing growth and change while protecting the lifestyle which makes living in Byron Shire unique
- Providing strategies to ensure living in Byron Shire is affordable for locals and future generations, and to ensure young people don't have to move from the area due to lack of employment or housing options
- Balancing the benefits and impacts of tourism in a sustainable manner which provides maximum value for the local community
- Providing opportunities and support for greater levels of community lead involvement and empowerment in local decision making
- A lack of trust in Council decision making, and a feeling that past feedback has been ignored or not acted upon by elected Councillors and staff
- A feeling of inequitable resource allocation across the Shire, with a feeling that the Byron Bay town centre receives more resourcing and service than other parts of the Shire
- Ensuring the natural environment is protected and that Council supports the community to develop climate friendly initiatives
- Investigating opportunities and strategies to improve transport across the Shire
- Greater support and promotion of arts and cultural programs across the Shire.

Of particularly relevance to the multi use of the rail corridor is that the community are behind options for improving transport across the Shire, with many participants indicating they supported sustainable transport options including cycleways, driverless cars and shared transport systems when considering what Byron should look like in 10 years' time. With regards to elements of change or improvements within the Shire, common and recurring responses outlined included; improved transport options including sustainable transport, improved infrastructure including footpaths, open spaces and other assets, more transparent decision making and opportunities for genuine community engagement, and reductions in tourism.

Cycle paths and a park and ride program rated highly on the list of big ideas for the future, along with acknowledgement of Aboriginal people and culture. The rail corridor was specifically mentioned a number of times during consultation, generally with regards to support for its potential use for cycling, walking and/or as useful community space. The consultation also outlined some support for train activation within the rail corridor (commuter, freight, light, solar).

2.1.2.2 Byron Pedestrian Access and Mobility Plan and Byron Bike Plan

In 2018 – 2019, an extensive three-stage community consultation process was adopted to inform the development of the Byron Pedestrian Access and Mobility Plan (PAMP) and the Byron Bike Plan. These stages included:

- Stage 1 – Online survey
- Stage 2 – Local design workshops
- Stage 3 – Consultation on the Draft PAMP and Draft Bike Plan.

Different consultation methods and mediums have been adopted in order to provide the greatest opportunity for meaningful community contribution and the timing of each stage has been strategically sequenced to occur prior to critical periods in the development of each of the plans. At the time of writing, the first two stages have been undertaken. Community workshops were completed during October and November 2018. The draft PAMP and Bike Plan will be put forth to the community in a 2019 midyear meeting. Both draft plans will then go on public exhibition for a period of 28 days. This will provide a final opportunity for the community to comment and provide feedback on what has been proposed.

2.1.2.3 Casino to Murwillumbah Transport Study 2013

This study has stated that from regular consultation with transport stakeholders there was little support to re-introduce the heavy rail service, specifically due to the expected high value of investment.

Regular and consistent consultation was undertaken with over 100 major stakeholders including:

- Government agencies
- Councils
- Businesses
- Tourism groups
- State regional bodies
- Service providers (e.g. education institution
- representative and interest groups
- local members of parliament.

The consultation included regional forums used to inform the long term Transport Master Plan, with over 100 community representatives/residents said to be in attendance. In addition, consultation included one-on-one meetings and phone conferences with both NSW and Qld Government agencies, business and representative groups. Surveys of households within Ballina, Casino, Murwillumbah, Bryon Bay and Lismore were also undertaken to inform the long term Transport Master Plan.

The outcomes of the above consultation highlighted a very diverse range of opinions on the highest priority public transport method which should be implemented in the region and how much use any type of public transport would actually receive. Stakeholders in general found it hard to justify the expense of a new or fixed railway. With consistency, stakeholder consultation did identify that:

- There needs to be better public transport systems which are better integrated across the border with QLD transport services
- There needed to be certainty regarding the future rai line
- In the short-term public transport is unlikely to provide a better alternative to car travel.

There was a resulting general consensus that the demands of the local area are not met or even understood by the NSW government and a better attempt needs to be made to address the issues faced by the Northern Rivers population overall. For example, the lack of public transport options disproportionately affects the local population too young to have a driver's license or without a car, and the population over 65 years who are no longer driving.

2.1.2.4 Feasibility study completed for the Tweed Shire Council 2004

In 2004 the Federal Government provided funding to the Tweed Shire Council to produce a feasibility study of the Murwillumbah to Casino rail line in in response to public concerns regarding the closure of the XPT service. PWC was commissioned to examine the need for, and viability of, a passenger and / or a commuter rail service on the branch line.

- Stakeholder consultation was seen as important to understanding NR transport issues and completed at regular intervals throughout the project
- Consultation meetings were held with a range of different stakeholder groups. These included briefings and informal discussions
- The consultation team was able to review public submissions and transcripts which were provided by the NSW Parliament Upper House Inquiry (UHI). This information related to the closure of the Casino to Murwillumbah Rail Services
- The consultation process also included a published options paper calling for public comment, released on the 14th August 2004
- Consultation identified that there is strong community support for the re-establishing and extending of the rail line to connect with the Queensland Rail service.

2.1.2.5 Lismore to Bangalow Road Draft Corridor Strategy 2016

The Lismore to Bangalow Road Draft Corridor Strategy was produced in 2016 through a collaboration between TfNSW and NSW Roads and Maritime Services. The strategy sets out the Government's 20 year plan to manage and guide the development of the road corridor to improve safety, traffic efficiency and sustainability.

The Lismore to Bangalow Road Draft Corridor Strategy 2016 intends to identify objectives specific to the Lismore to Bangalow corridor from the *NSW Long Term Transport Master Plan 2012*. It also utilised findings from the community consultation conducted for the *NSW Long Term Transport Master Plan 2012,* which

involved a wide range of consultation with customers directly affected by the transport network. During this consultation, Northern Rivers customers raised the following:

- They saw the need for greater efficiency of existing rail and road networks
- More accessible and affordable public transport was viewed as a priority
- Additional funding for community transport was suggested, with road maintenance nominated as an area for appropriate funding
- They view improving access to South East Queensland as an important issue, including integration of services across the border
- There is a desire for more walking/cycling facilities and networks and
- The adoption of more sustainable transport options wherever appropriate was encouraged.

2.1.2.6 Northern Rivers Rail Trail proposal (One Awesome Ride) 2013

By Northern Rivers Rail Trail Inc (an Initiative of The Sourdough Group Vision to Action) May 2013.

This document has been used to aid gain key insight to the NRRT's opinions and objectives for the rail corridor.

The proposed rail trail will require the full length of the length of the rail corridor and the NRRT would like a study to be completed addressing the feasibility of a rail trail specifically. It is suggested by the NRRT that this trail would provide significant benefits to the surrounding communities and the entire Northern Rivers region. As well as the direct benefits of the rail trail corridor, it is suggested that the track would provide flow on economic advantages and promote growth throughout the region. If implemented the NRRT believe that the rail corridor will have the additional benefit of better connecting town centers, sports facilities and other destinations of importance to the local community.

The proposal outlines that the area needs economic growth and new business to remain stable. If the rail trail is constructed it could be used to develop the brand and reputation of the Northern Rivers region as more of a tourist destination and fuel economic growth. This would be especially powerful as the proposed trail connects towns and increases their accessibility to tourists. Currently tourists mainly visit hot spots such as Byron Bay. Marketing for the rail trial would also provide additional jobs for the region.

The likely impact of the rail trail is that both existing and new businesses will be encouraged. Seasonal and causal employment will increase along with the growing tourism industry. The growth of business will develop with the increase of the popularity of the rail trail. An expected 800 – 1200 jobs could be created if the rail trail is as successful as intended.

The NRRT has proposed that a follow up study from the region specific transport study, in which further analysis of the suitability of the rail corridor as a walking/ cycling track, be undertaken. It has also been proposed that if in the future a rail service should return to the Northern Rivers that a rail trail should be incorporated elsewhere within the rail corridor.

2.1.2.7 Northern Star article "$50 million to get the railway line functional'[3] released on 10/12/2018

This article demonstrated the community's interest in the rail corridor and their desire to be involved in decision making. The article included an interview with Northern River Rail Action Group (NRAAG). When asked about the rail corridor NRRAG chair Beth Shelly states "our big question is why can't we have a community consultation? Why can't the people of this area have the right to have a say?"

[3] https://www.northernstar.com.au/topic/casino-to-murwillumbah-rail-trail/

2.1.2.8 Casino to Murwillumbah Rail Trail Study (NSW Department of Premier and Cabinet) 2014

An outcome of the Casino to Murwillumbah Transport Study was the recognition that the region's transport needs would be better met through an integrated approach and that there was potential for the Casino to Murwillumbah rail corridor to be converted to a rail trail for use by pedestrians and cyclists. In 2014 The Department of Premier and Cabinet commissioned the Casino to Murwillumbah Rail Trail Study.

- This is a report presenting a study on the proposed rail trail using the existing rail corridor and which details the results of a stakeholder consultation process
- These stakeholders include: local governments, the regional tourism organisations, community groups and tourism operators
- Consultation with the relevant community groups throughout this study has identified that there is support for the rail corridor to be transformed into a rail trail cycle/walking path.

2.1.2.9 Northern Rivers Rail Corridor Issues Paper: Submission to rail trail feasibility study December 2013

Sustain Transport is a Working Group of Sustain Northern Rivers (SNR), a collaboration of 26 peak regional organisations working to address key social issues of the region. In 2013 Sustain Transport produced a submission to rail trail feasibility study. The study outlined key findings from stakeholders in the community.

This feasibility study should include consultation with aboriginal councils and history groups.

- This paper aims to represent a range of different stakeholder perspectives across the Northern Rivers Region. To achieve this a workshop was held in which relevant stakeholders were invited to provide their perspective, with a total of 22 attending
- From this workshop it became apparent that there would be a need to educate the community on the rail trail, where it is, what it connects, the geography it traverses, its benefits for the community
- The workshop also identified potential synergies and opportunities for collaboration in the development of the rail corridor
- When considering land use a number of relevant examples of good land use were identified as potential models for use in the development of this project. These include:
    - Centennial Parklands, Sydney – crosses three local government boundaries- ownership remains public, managed by a board of trustees
    - SA trails network
    - Noosa model
    - Goulbourn Valley model
    - Multi-mode rail trains in Tyrol, Italy.

2.1.2.10 Northern Rivers Bushwalkers Club: Letter from the president of the club on community support for the Rail Trail Group

This is a letter written by the president of the Northern Rivers Bushwalkers Club to Marie Lawton and the Northern Rivers Rail Trail Group. The letter outlines that the club will greatly support the initiative for the rail trail. The rail trail would provide bushwalkers with alternative walking paths, routes and access to parts of the countryside previously unavailable. The letter also proposes that the introduction of a rail trail would provide the opportunity to engage the wider community in healthy outdoor activities.

This group has 200+ members and continues to grow. It may be necessary to include this group in the stakeholder consultation process.

2.1.2.11 Trains On Our Tracks (TOOT)

TOOT is a community based organisation that supports the return of a rail service to the region. TOOT organises and participates in community rallies and events. In 2015 TOOT collected 3500 signatures from locals wanting the return of rail services to the Murwillumbah-Casino rail corridor.

2.1.2.12 Summary of previous consultation

Based on the above, in order to aid in outlining the baseline situation with regards to the project across the community, the following summary is provided around key issues and concerns, context and common points of view:

- Transport issues are a consistent concern across the Northern Rivers region.
- A long history of local and state government studies relevant to potential use of the corridor.
- Numerous differing community opinions on the best use of the corridor, within and outside Byron Shire.
- Rail trails form a large part of previous options discussed and assessed for the rail corridor, within and outside Byron Shire.
- Cycle paths and a park and ride programs rated highly on the list of big ideas for the future of Byron Shire.
- Synergies and opportunities a common positive for development of the rail corridor

2.2 Case Studies

A number of case studies were deemed relevant in terms of their similarity and application to the rail multi use solution. Whilst numerous case studies have been reviewed and assessed to support development of options and multi criteria analysis in terms of engineering, economic, social and environmental aspects, the summaries outlined here aid to provide context to and focus on some of the more community or social aspects and impacts related to the potential options. This context enables a more focused assessment of key potential social impacts of a number of options which may be considered for the rail corridor. Full outlines of case studies, including descriptions of the reactivation options, features of the rail corridor, drivers for change, ownership/ management structure and social and/or economic impacts are provided in the Economics Report.

1. Murray to the Mountains Rail Trail, Victoria
2. Bass Coast Rail Trail, Victoria
3. Fernleigh Track (Adamstown to Belmont Rail Trail), NSW
4. Mary to the Bay Rail Trail, Queensland
5. Self-driving urban mobility system, Portugal
6. Drive Sweden, Sweden
7. Burke Gilman Trail Washington, USA
8. Otago Central Rail Trail, South Island New Zealand
9. Cuckoo Trail, East Sussex, United Kingdom
10. Midtown Greenway, Minneapolis, USA
11. Florida East Central Regional Rail Trail, USA
12. Railtrack Riders: Australia's first pedal railway, Tasmania
13. Cambridge Guided Busway, United Kingdom
14. Smart Circuit Columbus, USA
15. Very Light Rail National Innovation Centre (VLRNIC), Dudley, United Kingdom
16. DMV (Dual-Mode Vehicle) Japan
17. 2getthere (AV Buses), the Netherlands
18. Parry People Movers, Stourbridge, United Kingdom.

Studies 1 to 4 provide good examples of rail trails in Australia. Studies 5 and 6 have been chosen to demonstrate recent work in the application of self-driving minibus/ taxi-bus concepts in dedicated multi use corridors. These vehicles lend themselves to sharing paths adjacent to pedestrian walkways, cycle paths or other active transport users. Studies 7- 10 consider international rail trails. Further case studies look at innovative and automated transport solutions internationally, including very light rail and dual mode vehicles relevant to rail corridors.

1. **Murray to the Mountains Rail Trail**
   The Murray to the Mountains Rail Trail in North East Victoria is one of the better known rail trails in Australia with three separate trails incorporating 116 km of sealed surface trail. It is also one of the most successful in Australia, with social and economic benefits attributed to this rail trail including support for many tourist related business, largely tours, accommodation and bike hires. This increase in tourism dollars has had a beneficial social impact as it increases employment rates within the region.

Research work undertaken over Easter 2006 (Beeton 2006) found that average daily expenditure was $258/user/ day. The bulk of this expenditure was on food and beverage (57 per cent 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. Positive social impacts from the trail also includes the promotion of group and community activities including sporting clubs, work groups, service clubs, 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 outings.
According to the Goulburn Crookwell Rail Trail Feasibility Study, cycling on the Murray to the Mountains Rail Trail provides a unique opportunity for locals and visitors to experience the natural environment and gain health, social and economic benefits through physical activity, community connections, business development and jobs.

2. **Bass Coast Rail Trail**
The Bass Coast Rail Trail is located 130 km south-east of Melbourne, near Phillip Island Victoria. This rail trail has many similar characteristics of the Byron Shire rail corridor as it moves through farmland, coastal bushland, historic coal mining reserves and along the Gippsland coastline.

Social and economic benefits attributed to the Bass Coast Rail Trail is that it forms an important recreational linear reserve, connecting a range of environments and accessing different areas of industrial heritage significance along with many other areas. Interpretation is provided along the length of the trail.

The rail trail is surfaced with fine gravel. Most of the rail tracks were removed when the railway was decommissioned, but the remnant steel lines from the Bourne Creek trestle bridge have been reused as a 'relic' at Kilcunda Station. This bridge, one of five repaired, has been adapted to accommodate horse riders as well as walkers and cyclists.

At some points the trail deviates from the path of the rail line – in some cases to ensure the safety of users near busy highways, in others to protect regenerated vegetation

The development of the rail trail has also been a catalyst for the adaptive reuse of associated historic structures – for example, Wonthaggi station is now a museum, arts and crafts shop – and the trail also brings visitors to adjacent mining heritage sites, such as the State Coal Mine Heritage Area at Wonthaggi.

Solar panel counters at Kilcunda and Wonthaggi track the use of the trail. These indicate an average of 10,000 users per month in the summer peak period and 5000 to 7000 at other times.

Maintenance, including weed and vegetation control is a continual expense, as is managing vandalism. The community plays an active role in looking after the trail and providing informal 'surveillance'. A Friends Group, formed in 2006, helps with marketing and promotion, advice and minimal maintenance[4].

3. **Fernleigh Track (Adamstown to Belmont Rail Trail)**
The Fernleigh Track – Adamstown to Belmont Rail Trail is a 16 km sealed track that runs from Adamstown to Belmont. It is a coastal rail trail near Newcastle that includes similar train tunnels as the Byron Shire rail corridor.

Social and economic benefits attributed to this rail trail is safety, as it is part of the Cyclesafe Network. The Cyclesafe Network (CSN) is a system of family safe, easily navigated and usefully connected cycling, walking and shared paths across the Newcastle and Lake Macquarie local government areas. The aim of the network is to make walking and cycling for short trips – less than two kms for walking and less than 10 kms for cycling – a viable alternative to car travel. In addition to its transport infrastructure benefits, the CSN will also deliver health benefits to the population of the Hunter region by increasing physical activity as part of everyday life [5].

The track provides other features demonstrating social and economic benefit:

- easy grades for people of all fitness levels

[4] https://heritagecouncil.vic.gov.au/research-projects/industrial-heritage-case-studies/bass-coast-rail-trail/
[5] https://www.heartfoundation.org.au/images/uploads/publications/Fact_Sheet_CSN_160615.pdf

- safe off-road link between residential and employment areas
- former stations and heritage railway relics are visible from the track
- the Fernleigh Tunnel as the connection point between Lake Macquarie and Newcastle.

4. **Mary to the Bay Rail Trail**
The Mary to the Bay rail trial is an 18-kilometer long cycle track which originates from the Urangan Pier, a tourist destination in the heart of the Harvey bay township and terminates at Vernon national park, on-route to Maryborough. It is a coastal rail trail in a tourist community including developing rail buildings for commercial activity, hence the applicability to the Byron Shire rail corridor.
Social and economic benefits attributed to the rail trail include that the development of the rail trail provided a number of local tourism opportunities. Bicycle hire, accommodation and cafes are an integral part of rail trails developed all over Australia. A feasibility study considered the following on the Mary to the Bay Rail Trail:

   - The tourism, recreational and economic opportunities of the trail
   - How to safely cross the Maryborough Hervey Bay Road, Dundowran Road, Torbanlea Pialba Road and Churchill Mines Road
   - Estimate the costs of building the trail
   - Development and Implementation Plan
   - Construction staging
   - Maintenance requirements
   - Potential for community involvement in maintenance of the trail, and
   - Consultation with key stakeholders
   - Key success points for trail viability.

   Post feasibility study it has been estimated that if extended to Maryborough, the rail trial could attract 15,000 yearly visitors and provide an additional $3.2 million a year to the local economy. The completion of the corridor may also provide benefit in reducing traffic between Maryborough and Harvey Bay.

5. **Self-driving urban mobility system, Portugal.**
This case study is of a report which "examines the changes that might result from the large-scale uptake of a shared and self-driving fleet of vehicles in a mid-sized European city". The study sought to review the impacts of a large-scale uptake and reliance on a self-driving commuter fleet made up of mini-buses and taxi-buses. The interest for the Byron Shire rail corridor is the methodology and framework applied and key findings/impacts.

   Social and economic impacts relevant to Byron Shire include that in all cases examined, self-driving fleets completely remove the need for on-street parking. This is a significant amount of space, equivalent to 210 football fields or nearly 20 per cent of the kerb-to-kerb street space in our model city. Additionally, up to 80 per cent of off-street parking could be removed, generating new opportunities for alternative uses of this valuable space.

   Self-driving vehicles could change public transport as we currently know it. For small and medium-sized cities it is conceivable that a shared fleet of self-driving vehicles could completely obviate the need for traditional public transport.

   Public transport, taxi operations and urban transport governance will have to adapt. Shared self-driving car fleets will directly compete with urban taxi and public transport services, as currently organised. Such fleets might effectively become a new form of low capacity, high quality public transport. This is likely to cause significant labour issues. Yet there is no reason why current public transport operators or taxi companies could not take an active role in delivering these services. Governance of transport services, including concession rules and arrangements, will have to adapt[6].

6. **Drive Sweden**
This case study involves community members engaged in technology trails. In April 2016 Ericsson hosted its first Swedish demonstration of self-driving buses, connecting them through its 5G network.

[6] https://www.itf-oecd.org/sites/default/files/docs/15cpb_self-drivingcars.pdf

More than 3000 people took the opportunity to ride the self-driving buses, with the most common question among the users being “When will the buses be back?”.

Of social and economic interest is that the buses are electric, create less noise than conventional diesel or gas buses, and are local emission free. The small, self-driving buses are a completely new type of vehicle - which creates opportunities not thought to previously existed. They can authorities understand how cities of the future can develop, with reducing private car ownership and creating more efficient transportation, especially where people are sharing rides. This opens up possibilities for new types of city development, and when used in this manner, reduces the need for parking in dense areas[7].

Gothenburg City Planning Authority is the first in the world to examine the interaction between autonomous vehicles and sustainable, long-term urban planning. The city is exploring the effects and benefits of technology, including, but not limited to, the future need for parking facilities, enhanced road safety, accessibility, and implications to the use of public space.[8]

7. **Burke/Gilman Trail Washington, USA**
This is a notably successful rail to trail conversion, occupying an abandoned Seattle, Lakeshore and Eastern Railway corridor in Washington, USA. After the line was abandoned in 1971, the first 12.1 miles (19.5 km) was opened as a public trail in 1978.

Social and economic benefits attributed to the line include that cycling in Seattle has increased due to the city’s implementation of the 2006 Bicycle Master Plan, a ten-year strategy to improve cycling conditions. As a result, bicycle lanes, sharrows (street arrows indicating a shared road), separated bike trails like the Burke-Gilman and educational programs have popped up citywide.

The path is popular due to the fact that it caters to a wide variety of skill levels; it is easily accessible, undemanding physically and completely separated from car traffic. The trail is as much a thoroughfare for commuting to work and the University of Washington as it is a staple for social recreation and fitness.

8. Otago Central Rail Trail, NZ
The Otago Central Rail Trail is a 152 km trail that follows the route of the Otago Central Railway, from Clyde to Middlemarch, New Zealand. It is all completely off-road, with no traffic.

Social considerations are that the trail caters to a wide variety of skill levels. Demographics of the users include: retirees, families, school, fitness and social groups. The trail accommodates walking, cycling and horse riding.

Economically, the towns in the area have developed facilities for trail users, and companies have been developed to aid travellers on the trail, such as transporting luggage between destinations and accommodation. Due to the increasing numbers of pubs now available on the track route, the trail has also been nicknamed the 'Ale Trail' instead of 'Rail Trail'.

9. Cuckoo Trail, East Sussex, UK
The 11-mile-long Cuckoo Trail follows the old route of the railway linking Heathfield, Hailsham and Polegate. Opened in 1880, the railway was named the Cuckoo Line after the tradition that the first cuckoo of spring was always heard at the Healthfield Fair.

The rail line was shut in the 1960s as part of the “Beeching Plan". The trail accommodates walkers, cyclists and horse riders. It is part of the National Cycle Network and serves as a traffic-free route between several local schools. Family-friendly rail trails - with interesting wildlife and plant draw-cards and family-friendly amenities, such as benches, picnic tables and bike racks - can form the centrepiece of a broader campaign to promote healthier and more active lifestyles in regional areas. Byron Shire has ample natural and wildlife assets it may wish to consider using as trail drawcards.

10. Midtown Greenway, Minneapolis USA

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[7] https://www.drivesweden.net/en/news/premiere-self-driving-buses-gothenburg
[8] https://www.drivesweden.net/en/news/gothenburg-first-city-incorporate-autonomous-vehicles-urban-planning

The Midtown Greenway is a 5.5-mile long former railway corridor in south Minneapolis, with biking and walking trails. The Greenway was originally part of the Milwaukee Railroad's main line to the West Coast, which began running in 1882. The first phase of the Greenway was opened in 2000.

Social considerations for success include that Greenway trails are plowed in the winter, lit at night, and open 24/7. Several thousand people use the Greenway each spring, summer, or fall day, and hundreds of hearty cyclists and runners use it each winter day no matter how cold or snowy as it offers barrier-free bicycling that can make cross-town trips faster than going by car.

The Midtown Greenway has been very successful in promoting active transport in Minneapolis, and the city has also seen economic development benefits from adjusting their zoning laws and trail amenities to encourage people to live adjacent to the trail.

Byron Shire may wish to consider ways they could adjust their zoning laws around the Byron Shire Rail Trail to encourage economic development adjacent to the trail.

11. Florida East Central Regional Rail Trail, USA

The East Central Regional Rail trial covers a distance of just over 50 miles or 80 km and is located along Florida's east coast, connecting towns between Edgewater and Titusville to the city of Deltona. There are medium-long term plans to connect the with a number of other Rail Trials, drawing parallels to Byron Shire rail corridors and the neighbouring sections of rail corridor.

As it joins to form a greater system of rail trails this case study provides insight into social benefits from encouraging an active and healthy lifestyle within the shire and beyond, while providing alternative transport services.

12. Railtrack Riders: Australia's first pedal railway (Tasmania)

This case study is of Australia's First Pedal Railway. The Railtrack Riders allows visitors to travel at their own pace and fully experience the sights, sounds and smells of the rainforest on pedal powered cars along the rail line. It is the only tourism product of its type currently operating in Australia.

From a social and economic perspective Railtrack Riders Pty Ltd is part of Maydena's community's aim to create a sustainable future through economic growth, employment opportunities and the development of tourism product that capitalises on the region's natural and cultural values.

Of relevance to the Byron Shire rail corridor, it is a community developed tourist operation that offers a unique experience and utilises existing infrastructure (rail tracks) meaning lower development cost vs developing new infrastructure.

13. Cambridgeshire Guided Busway, UK

The Cambridgeshire Guided Busway opened in 2011 and connects Cambridge, Huntington and St Ives in the English Country of Cambridgeshire. It is the longest guided busway in the world, at over 25 km (or 15.5 miles). The northern section uses the course of the Cambridge and Huntington railway.

The aim of the Cambridgeshire Guided Busway was to provide high quality, reliable and frequent local public transport along the A14 corridor and reduce congestion on the road. The Guided Busway route in Cambridgeshire links Cambridge city centre to several local town centre's, hospitals, colleges, tourist destinations, rail interchanges and existing and new park and ride sites. The permanent infrastructure of a dedicated busway improves public perception of bus travel. Dedicated busways have consistently shown increased patronage figures, when compared to on-road services.

14. Smart Circuit, Columbus, USA

Smart Circuit is Ohio's first self-driving shuttle, taking riders on a 2.25 km (1.4 mile) loop to explore the Scioto Mile in downtown Columbus. It is considered a case study relevant to the Byron Shire rail corridor as it provides an opportunity to collect data on autonomous shuttles, how they are used, what sorts of technological challenges they currently face, and how they can fit in to government policy, regulations and procurement models

From a social perspective, the shuttles offer Columbus residents and visitors a hands-on experience designed to educate local innovators on the capabilities and potential of autonomous vehicle technology and inspire the community to envision how self-driving vehicles can transform their community's future.

15. Very Light Rail National Innovation Centre, Dudley, UK

The proposed VLR National Innovation Centre (VLRNIC) will be located in Castle Hill in Dudley. It aims to capture the emerging very light rail (VLR) sector aims by harnessing technology from the automotive sector to create hybrid or all-electric self-propelled vehicles which are lightweight (less than 1 tonne per linear metre), energy efficient, cheap to manufacture & operate and geared to the needs of communities.

Research into VLR will explore ways to reduce the weight and cost of carriages and track to provide a cheaper alternative to heavy rail and metro systems for connections between suburban and rural areas. VLR offers a cheaper public transport option for users as well as a more environmentally friendly system. This is considered to be of social and economic relevance to the Byron Shire rail corridor, aligning with desired outcomes of identifying a relatively inexpensive solution to operate and maintain which requires only minimal necessary restorative track works. The VLR also provides service economically viable for rural areas.

16. Dual-Mode Vehicle (DMV) Japan

This is considered a case study relevant to the Byron Shire rail corridor as dual-mode vehicles (DMV) are capable of running on both rails and roads as an ordinary bus. Through these busses Hokkaido could provide a more efficient service to rural areas with decreasing patronage.

From a social and economic perspective for the Byron Shire, these DMVS provide an example of how effective of a solution the Hi-Rail option could potentially be. They only require basic rail and road infrastructure, increases flexibility of the provided service and are capable of operating outside of the corridor (to tourist destinations). The purchase and maintenance costs of DMV's are respectively only 1/6 and 1/4 of the cost of rolling stock.

17. 2getthere (AV Buses)

2getthere is a global supplier and industry leader in the field of Autonomous busses. As a company they boast over 25 year-experience with autonomous vehicles and have two models of driverless shuttles. These autonomous shuttles in combination with their AV and sensory systems and software provide an example of a viable option for rail corridor reactivation if a bus solution which may apply to the Byron Shire rail corridor. These shuttles have a range, speed, passenger capacity and charge time acceptable from the requirements of the BSC. 2getthere also provides examples of how driverless shuttles have been successfully implemented in combination with or alongside existing transport systems.

18. Parry People Movers

Parry People Movers (PPMs) were developed as lightweight rail vehicles for use on regional railways in the United Kingdom. Currently their railcars are powered by gas, diesel or hydrogen dependent on requirements and age of the vehicles, with the modern vehicles taking advantage of high energy efficient low emissions technologies.

PPM's journey and uptake of vehicles demonstrates that there running smaller vehicles on regional lines is not only viable but a service that is used extensively by tourists and locals alike, a scenario which may be similar to that experienced in the Byron Shire rail corridor.

2.2.1 Key learnings from the case studies

Key learnings from case studies have been summarised below to further inform the preliminary identification, prediction and assessment of potential social impacts of the alternative options considered for the Byron Shire rail corridor.

Segregation of multi uses: The specific design of any rail corridor transport systems needs to carefully consider segregation. Cyclists tend to value complete separation from road and train traffic because it is

safer. Similarly, with the onset of e-bikes and high efficiency road cycles, segregation between pedestrians and cyclists can also be an issue. Disused rail corridors offer great potential for complete separation from vehicle traffic, so any if shared with bus or rail vehicles it is important that the segregation is maintained. Rail infrastructure offers a "natural" segregation in that the rail infrastructure formation is sat on a shoulder of ballast higher than the adjacent cess or access road. The speed of the rail trail also matters. If it is able to cut through certain areas to provide a faster option than car-travel, it will be more appealing (especially for commuter traffic), as in the Midtown Greenway example.

Access/connection to amenities: The amenities provided along the trail can also important to help shape the type of pedestrian and cycling traffic that is attracted to the trail. If one of the key goals is to provide efficient transit and dispersion of tourists away from congested roads, without necessarily stimulating more tourism, the focus can be on providing trail amenities that target existing tourist traffic by implementing service circuits to current popular events, activities and markets, and also provide incentives along route for use by tourists (benches, picnic tables, bike racks). Opportunities at stations, festivals and accommodation areas for bike sharing and hiring will also act to incentivise tourists to use bikes. Similarly, incentives offered by the festival and event organisers – such as free usage of the rail corridor service will also increase usage.

Governance models, marketing and promotion: Strong community integration and effective planning of the route from the outset will help set up such multi use projects for success. Learning from the Otago Central Rail Trail in New Zealand, establishing a Trust to raise funds for the final rail corridor solution may increase community buy-in and to help with marketing and promotion activities.

The Midtown Greenway has been very successful in promoting active transport in Minneapolis. This has been due to a combination of factors, such as the complete separation from vehicle traffic, the comparative speed of the trail vis-a-vis commuting by car, the effective use of planning, zoning and land-use strategies. These factors should all be considered if strong active transport utilisation is a principal goal. An active transport campaign similar to the Wealden District Council's approach (on the Cuckoo Trail) of sending a certificate to residents, and maybe some sort of prize to visitors, who register online when they complete 100 miles.

Zoning Laws: As demonstrated by the Burke-Gilman Trail in Seattle, USA, property values near a rail trail can be affected by their proximity to the trail (studies have also shown that properties near public transport also benefit[9]). These potential impacts – plus and minus –should be considered when making zoning and land-use decisions in proximity to any future rail corridor solution.

The Potential to Use Autonomous Vehicles: There are numerous examples of Autonomous Vehicle pilots underway in Australia and across the world. Integration with the NSW Smart Innovation Centre to discuss how a trial could be conducted as part of the rail corridor reactivation would help to address issues and concerns from the community. An AV trial would allow the collection of information to inform future policy and regulation surrounding AV shuttles.

2.3 Current project studies

This current report (social assessment) forms part of investigations around the feasibility of reactivation of the Byron Shire rail corridor, in coordination with an engineering assessment and economic assessment. The current scope of works for the rail corridor includes:

1. Infrastructure assessment of existing and required assets to inform a "State and Use of Corridor Report" (Engineering assessment);
    a. Cross Sections
    b. Environmental constraints and considerations
    c. Cost Estimates
    d. GIS
2. Economic and Feasibility Study
    a. Case studies
    b. Park and ride options
    c. Events and festivals
    d. Markets
    e. Patronage

[9] https://www.yourmoney.com.au/real-estate/public-transport-impacts-the-value-of-your-property/

    f. Community Benefits
    g. Tourism
    h. Funding
    i. Benefit Cost Ration Analysis
3. Social Assessment
4. Multi Criteria Assessment supported by all of the above.

The intention is that the above studies formulate the basis for a thorough and considered planning, design and assessment process, with the outcomes recommending potential future directions for the rail corridor. With the inclusion of this social assessment within the project studies, there is the opportunity to incorporate community ideas and sentiment into that process.

The ability for the Council to support the future potential net benefits from the use of the rail corridor requires this robust understanding of the social impact of future development of the rail corridor combined with well-informed decisions about physical design, commercial structures, funding and finance, and community engagement. Ideally, when these aspects of decision making are combined, considered and balanced, the outcome should deliver improved social outcomes.

2.4 Potential rail corridor options

Preliminary considerations for multi use options for the rail corridor were founded around the basis that "everything was on the table". All potential multi use transport considerations were researched and outlined at a high level by the transport engineering representatives in the project team and then evaluated against the following key preliminary criteria: cost (over $6 million / km not considered further), engineering feasibility (adaptability for multi use applications), sustainability (environment, operations and future proofing), accessibility and mobility (integration with existing and future proposed), residential and environmental impact, safety. This initial process was not to evaluate a preferred option, but to ensure only practical, fit for purpose solutions were assessed.

The findings from the engineering site inspections was that generally the trackform was in reasonable condition, although it was noted bridges and structures would need significant upgrade to enable medium/high speed (80 km and above) rail passenger vehicles. However, based on the status of engineering elements within the rail corridor, it was outlined that minimal work would be required to allow passage of light axle load vehicles at lower speeds of 50 km/hr to 60 km/hr. The engineering site inspections also identified that vegetation clearance and management would be a concern for future development.

The findings from the engineering and economics assessments combined with the outcomes of preliminary social assessment findings, further refined the potential for multi use options which were considered to have the greatest viability of combining a public transport solution with options for active transport (e.g. cycle, pedestrian options) whilst remaining practical for application in the Bryon Shire rail corridor.

They include:

- Very Light Rail (VLR) and Active Transport
- Hi-Rail (also called Dual Mode Vehicles (DMV)) options and Active Transport
- Cycle track basic (pushbike and walking)
- Active transport, cycle, mobility scooters and walking
- Automated Vehicles/Driverless pods plus active transport
- Busway (traditional) plus active transport options.

In-depth detail of the above options can be found in the State and Use of Corridor Report however a summary has been provided below in Table 2-1. These are the options that have been assessed with regards to potential social considerations and impacts within this report (refer Section 6.6.1).

Table 2-1 Summary of potential multi use options

Option	Estimated capital cost	Description	Example	Case Studies: Selected as good examples of the proposed solution
1. Very light rail and active transport	$67.4m	This option combines a paved pedestrian and cycle path with Very Light Rail (VLR). VLR harnesses innovative and efficient technologies from the automotive and rail sector, resulting in a hybrid or all-electric self-propelled vehicle which is lightweight, energy efficient, cheap to manufacture and operate and geared to the needs of rural communities.		Case Study 15 Very Light Rail National Innovation Centre (VLRNIC), Dudley, UK
2. Hi-Rail and active transport	$31.4m	This option combines a paved pedestrian and cycle path with small Hi-Rail vehicles and rail pedal vehicles running on and off the existing rails, with only minor restorative works. Hi-Rail vehicles go from highway to railway. They are often converted road vehicles, keeping their normal wheels with rubber tyres, and fitted with additional flanged steel wheels for running on rails.		Case Study 16 DMV (Dual-Mode Vehicle Japan) & Case Study 10 Midtown Greenway, Minneapolis, USA
3. Basic active transport	$11.5m	This option is envisioned to be a basic active transport solution only (e.g. rubber matting) without removing the existing rail infrastructure. Advantages are that it is relatively cost effective, retains the rail infrastructure and allows for faster reactivation of the rail corridor. Disadvantages include track deterioration and lack of accessibility for people who use a mobility aid and cyclists who use road bikes (skinny wheels).		Case Study 3 Fernleigh Track (Adamstown To Belmont Rail Trail) & Case Study 8 Otago Central Rail Trail, South Island, New Zealand
4. Active transport and mobility aids	$20.3m	Assumes a hard stand (bitumen or concrete track) constructed on the rail corridor which is suitable for all types of bikes, pedestrians and mobility aids (e.g. wheelchairs, mobility scooters, prams, etc.). This option removes the existing rail.		Case Study 11 Florida East Central Regional Rail Trail & Case Study 2 Bass Coast Rail Trail &

				Case Study 7 Burke Gilman Trail Washington, USA
5. AV vehicles / driverless pods plus active transport	$105.3m	This option combines a cycle and pedestrian path with a road to facilitate the use of driverless busses or shuttles. This option assumes that 10 new electric self-guided vehicles would be purchased to operate regular services on and off the rail corridor to key locations. This option removes the existing rail.		Case Study 6 Drive Sweden, Gothenburg Sweden. & Case Study 17 2getthere (AV Busses)
6. Busway	$200m	Assumes a full hard surface road be built on the railway corridor suitable for large buses to operate. All bus companies would be able to use the rail corridor if approved by the asset owner. Therefore, the current bus operators in the Byron Shire are assumed to use the rail corridor as an easy access to/from Byron Bay township. This option removes the existing rail.		Case Study 13 Cambridgeshire Guided Busway, United Kingdom

3 LEGISLATIVE AND POLICY CONTEXT

When discussing options for use of an existing transport rail corridor and assessing potential impacts of those options, it is essential to consider the legislative framework under which the land and proposed options may fall. It is also cognisant to address relevant federal, state and regional strategies and initiatives which may underlie or overarch the foundations for the project moving forward.

3.1 Federal context

The **Department of Infrastructure, Regional Development and Cities** supports the federal government investment in infrastructure with a focus on protecting nationally significant transport corridors and assets. The department promotes and supports increases in active transport in Australian communities, however the design, development and funding of cycling and pedestrian facilities generally falls under the responsibility of state and local government.

With the current appetite for promotion of active transport, various active transport strategies have already been developed for Australia, including the Australian Government's *Walking, Riding and Access to Public Transport,* Ausroads' *National Cycling Strategy,* and various other reports at state, territory and local government levels.

A **National Cycling Strategy** was approved by relevant federal, state and territory Ministers in November 2010, with the aim of doubling the national rate of participation in cycling between 2011 and 2016. The Strategy was developed to deliver agreed national cycling goals through coordinated activities across various agencies and levels of government and consists of six key priorities/objectives:

- Cycling promotion: promote cycling as both a viable and safe mode of transport and an enjoyable recreational activity
- Infrastructure and facilities: create a comprehensive and continuous network of safe and attractive bicycle routes and end-of-trip facilities
- Integrated planning: consider and address cycling needs in all relevant transport and planning activities
- Safety: enable people to cycle safely
- Monitoring and evaluation: improve the monitoring and evaluation of cycling programs, and develop a national decision-making process for investing in cycling
- Guidance and best practice: develop nationally consistent technical guidance for stakeholders to use and share best practice across jurisdictions.

The **Australian Bicycle Council** (ABC) ceased operations in December 2017, however in the first half of 2018, a new **Cycling and Walking Australian and New Zealand** (CWANZ) Group was established to collaborate on and coordinate cycling action at a national level. The new organisation is the peak Australasian body for walking and bike riding on transport and recreation networks and includes:

- senior and executive leaders from aall Australian state and territory transport agencies
- New Zealand Transport Agency
- local government representatives
- leading advocacy groups and peak bodies for walking, cycling, health and mobility.

CWANZ follows four high level key objectives:

1. Increase the number of people walking and cycling as integral elements of liveable, healthy and productive communities
2. Articulate the case for investment in walking and cycling from all levels of government
3. Achieve consistency and harmonisation across Australia and New Zealand
4. Be recognised as the peak organisation for walking and cycling on transport and recreation networks.

Infrastructure Australia plays a role, as an independent statutory body, in prioritising, progressing and strategically auditing nationally significant infrastructure, and developing 15-year rolling Infrastructure Plans (specifying national and state level priorities) under the *Infrastructure Australia Act 2008.* The most recent Australian Infrastructure Plan (2016) recommends:

“state, territory and local governments should demonstrate integration of active transport strategies through transport and land-use planning. Governments should provide active transport that is connected, accessible and safe, and encourage shifts to more efficient, sustainable transport options to improve transport sustainability and provide greater public amenity”.

3.2 NSW context

NSW Government’s Planning Framework is NSW 2021, a 10-year plan for the state which is based on five overarching strategies:

1. Rebuild the economy. Restore economic growth and establish NSW as the ‘first place in Australia to do business’
2. Return quality services. Provide the best transport, health, education, policing and justice, and family services, with a focus on the customer
3. Renovate infrastructure. Build the infrastructure that makes a difference to both our economy and people’s lives
4. Strengthen our local environment and communities. Improve people’s lives by protecting natural environments and building a strong sense of community
5. Restore accountability to government. Talk honestly with the community, return planning powers to the community and give people a say.

One of the key goals of NSW 2021 centres around the need to make improvements to customer satisfaction in transport services across the state. This customer-centric approach underpins a needs-based transport study methodology, and also supports that studies should outline needs-driven recommendations.

The NSW planning framework also includes the NSW Long Term Transport Master Plan, the Metropolitan Strategy, and the State Infrastructure Strategy. Regional Action Plans have also been developed for all regions in NSW.

The proposal to activate the Byron Shire rail corridor for multi use transport options fulfils some of the goals of the planning framework as it aims to reinvigorate the local community and economy by redeveloping an unused infrastructure asset.

3.2.1 Development within or adjacent to rail corridor

Rail corridors and their related infrastructure in NSW are within the jurisdiction of the state government. The Byron Shire rail corridor, as a land parcel and infrastructure asset, sits within the remit of TfNSW whose “role is to lead the development of a safe, efficient, integrated transport system”. As the NSW state government’s delegated authority, asset and landowner, TfNSW are a key stakeholder in all matters relating to the rail corridor and activities within and adjacent to it.

NSW TrainLink Corporate Plan 2018-2023 was prepared in collaboration with TfNSW, setting out the strategy, business objectives and priorities for delivery of regional and intercity passenger services. The Corporate Plan outlines how TfNSW aims to continually improve and deliver integrated transport services to support regional communities. Elements of the future planning for the Byron Shire rail corridor fit within the purpose of the Corporate Plan, i.e., To connect people and communities throughout NSW.

3.2.2 The Northern Rivers Regional Action Plan

Regional Action Plans focus on immediate actions the NSW Government will take to improve outcomes in each region, aligned with each of the five overarching strategies from NSW 2021. They were developed following consultation with regional communities over several months in 2012 and will be updated every two years. The priority actions related to improving transport services relevant to the Byron Shire and the rail corridor are:

- The Casino to Murwillumbah Transport Study
- Develop a Regional Transport Plan for the Northern Rivers
- Upgrade regional infrastructure in partnership with Local Government.

The proposal to activate the Byron Shire rail corridor for multi use transport options is a sub-section of the Casino to Murwillumbah rail line and is therefore subject to the Northern Rivers Regional Action Plan.

3.2.3 Long Term Transport Master Plan

The Long Term Transport Master Plan is the NSW Government's 20 year plan to return quality services to the NSW transport system. It is built around eight objectives the NSW Government has for the transport system, including improving the quality of services, supporting economic growth, reducing social disadvantage and supporting regional development.

The Master Plan provides the basis upon which further detailed transport planning can be undertaken in the state, including for the Northern Rivers region. It identifies a number of challenges that are relevant to many regional areas.

The proposal to activate the Byron Shire rail corridor for multi use transport options aims to support regional development by potentially developing a regular public transport option between the bigger regional populations between Yelgun and Bangalow.

3.2.4 Northern Rivers Regional Transport Plan

The Long Term Transport Master Plan sets principles and provides overarching direction for the Northern Rivers at a strategic level. While some specific regional initiatives have been identified, greater detail is required for implementation at the local level. The Northern Rivers Regional Transport Plan will provide this by:

- Translating principles and actions from the Master Plan into actions that are relevant locally, to be implemented locally
- Address identified transport demands and priorities at the regional and local levels, drawing on region-specific household travel surveys and feedback to do this
- Provide a mechanism to support early transport provision for new residential areas in regional NSW, particularly in our major regional cities
- Ensure the right transport links are in place to support regional economic development.

The Northern River Regional Transport Plan supports the proposal to activate the Byron Shire rail corridor for multi use transport options with fulfilling some of the goals of the Long Term Transport Master Plan.

3.2.5 Regional land use planning

Land use planning at the strategic level is addressed through Regional Strategies, that are prepared by the Department of Planning and Infrastructure. The Far North Coast Regional Strategy 2006-31 was released in 2007 and establishes a long-term vision for the region, identifying long term actions to help achieve it. The Far North Coast Regional Strategy includes a section on improving public transport within the region. The proposal to activate the Byron Shire rail corridor for multi use transport options will help fulfil this goal of improving public transport.

3.2.6 Requirements for social and environmental impact assessment

The legislative requirement for social impact assessment relevant to proposed development is in most parts of Australia linked to the approval of large infrastructure developments and generally undertaken as a part of or in coordination with an Environmental Impact Assessment (EIA) process.

In NSW, the *Environmental Planning and Assessment Act 1979* (EP&A Act) requires social impacts to be assessed and considered as part of the overall environmental impact assessment of all State significant projects. Specific guidance on how social impact assessment should be conducted is available relevant to State significant mining, petroleum production, and extractive industry developments (i.e. State significant resource projects). The NSW Government is currently considering options for extending this guideline to other sectors.

Byron Shire Council has its own Social Impact Assessment Policy, which is based around a number of objectives:

- To assist in achieving sustainable, resilient and cohesive communities within the Shire
- To enhance consistency, certainty and transparency in Council's assessment of the positive and negative social impacts of proposed development and infrastructure
- To maximise the positive social impacts of development such as improved access, amenity, affordable housing provision, employment opportunity and safety
- To minimise the negative social impacts of development such as increased traffic congestion, restriction of access, loss of employment opportunity, loss of existing affordable housing stock, loss of public safety or perceived public safety
- To ensure that proposals that are likely to cause significant social impacts and that do not require a development application are guided by when and how to prepare social impact assessments.

The need for a social impact assessment for the multi use rail corridor project was identified by Byron Shire Council as a part of meeting the objectives of their policy and supporting the drivers for future use of the rail corridor, however, is not (due to the stage of the project) required as a part of an approvals process under state legislation. Future phases of the project, should it progress, would potentially require environmental approval under the EP&A Act, in accordance with the State Environmental Planning Policy Infrastructure (2007) (Infrastructure SEPP).

The Infrastructure SEPP is aimed at providing a simplified process for approval of infrastructure developments (including roads and railways) undertaken by the NSW Government, private infrastructure providers, local councils and the communities they support.

The Infrastructure SEPP has specific provisions for development within or adjacent to rail corridors, under Subdivision 2 Development in or adjacent to rail corridors and interim rail corridors – notification and other requirements.

An appropriate planning and approvals pathway would need be discussed and confirmed prior to any future stages of this project's development, in particular addressing potential EP&A and ISEPP obligations. The Environmental Constraints and Considerations Report (within the Engineering Report, Appendix A) goes some way towards identifying and addressing those issues or constraints, also nominating where they are to be further assessed.

3.3 Local context

3.3.1 LEP 2014

The Byron Local Environmental Plan 2014 provides for local environmental planning provisions in Byron Shire and is aimed at ensuring that any changes or developments in the natural, social and economic environment follow the principles of ecologically sustainable development. The LEP has been approved by the State Government to regulate Council's planning decisions in development and land use.

3.3.2 Byron Bay Town Centre Master Plan

In 2011 Byron Shire Council conducted resident and visitor research in order to produce the Byron Bay Town Centre Masterplan. The Masterplan is a 20-year plan that provides a strategy to guide the development of the Byron Bay Town Centre by setting out realistic actions and strategies to be utilised. The Masterplan includes short, medium- and long-term priorities. The goal of the Masterplan is to "connect the centre of Byron Bay with the spirit of the community" and a key element for development is to ensure that projects align with values outlined within the Masterplan.

3.3.3 Our Mullumbimby Masterplan

The Mullumbimby Masterplan is currently in development through a collaboration of the Our Mullumbimby Masterplan Guidance Group and Byron Shire Council. Workshops to develop the masterplan have been in the works since 2017 but were paused temporarily in favour of the Bangalow Village Plan. The preparation of

the draft masterplan is currently back underway, with a public exhibition expected in mid-2019. The use of the rail corridor has featured highly within discussions with the community, with a number of various more passive options discussed (walking, cycling, community recreation).

3.3.4 Bangalow Village Plan

The Bangalow Village Plan was completed in February 2019 and was prepared in consultation with the Bangalow Guidance Group (a group comprised of community and council members). The Plan lays out a 15 year vision for the development and growth of the Bangalow area. Activation of the corridor has featured highly within the development of the master plan, with the community supporting cycling and walking access and linkages to other walking and cycling tracks within the Bangalow community.

3.3.5 Byron Arts and Industry Precinct Plan

The Byron Shire Council has initiated consultation in order to prepare Precinct Plan for the Byron Arts & Industry Estate. Stakeholder engagement has been initiated in order to prepare a draft precinct plan. It is expected that due to a large portion of the workforce within the Arts and Industry Precinct experiencing transport related issues getting to and from work, that the activation of the corridor will feature heavily in the consultation and the development of the plan.

3.3.6 Byron Shire Community Strategic Plan

Council applies a Quadruple Bottom Line (QBL) approach that combines social, environmental, economic and civic leadership considerations. It developed a Community Strategic Plan (CSP) in 2018 which is underpinned by a QBL approach to ensure its overall objectives and supporting strategies deliver outcomes in a balanced and holistic way.

Council's CSP document, Our Byron, Our Future sets out the community's priorities, visions and aspirations through to 2028. It is a whole-of-Byron Shire document which has been developed based on in-depth community engagement. The CSP aims to guide Council's long-term decision making and outlines five key community objectives:

- We have infrastructure, transport and services that meet our expectations
- We cultivate and celebrate our diverse cultures, lifestyle and sense of community
- We protect and enhance our natural environment
- We manage growth and change responsibly
- We have community led decision making which is open and inclusive.

The above community objectives where considered as the basis for ensuring consistency across impact analysis and evaluation methods for the multi use rail corridor.

3.3.7 Byron Shire Wellbeing Indicators Framework

Social impact assessment should be undertaken to assess a proposed projects' impact on the community and stakeholders, measured against key indicators that the community and stakeholders value. The Byron Shire Wellbeing Framework is still under development, however with regards to implementation, it is aimed to have a toolkit which enables Council to use a set of social and cultural, environmental, economic and civic leadership indicators for relevant project assessment and measurement against the indicators. Based on each indicators' applicable measures, a positive, negative, non-existent or unknown impact could be determined. Where impacts are unknown, or unable to be qualified/quantified, further assessment/ investigation/ research could be required before the project can proceed through to approval stages. Essentially, it is intended as a decision-making tool within Council for assessment of suitability of project proposals.

The Byron Shire Council Wellbeing Framework Indicators are outlined below in Table 3-1: Byron Shire Wellbeing Framework Indicators. These are further discussed in the context of social assessment for the multi use rail corridor options in Sections 4.4.2 and the application of these indicators is in Section 4.4.16.6.1.

Table 3-1: Byron Shire Wellbeing Framework Indicators

• SOCIAL AND CULTURAL	• ENVIRONMENTAL

• Housing affordability • Relative socioeconomic equality • Community services and facilities • Self-reported health • Life satisfaction • Safety • Community connectedness • Social support • Cultural diversity • Cultural participation • Recreation • Public art	• Responsibility for environmental sustainability • Greenhouse gas emissions • Energy use • Waste minimisation • Healthy waterways • Biodiversity • Open space • Road safety • Active and public transport
• ECONOMIC	• CIVIC LEADERSHIP
• Economic diversity and resilience • Early childhood education and care access • Innovation • Work-life balance • Growth and development	• Trust • Political participation • Council performance

4 ASSESSMENT METHODOLOGY

4.1 Rationale for a 'Social Assessment'

To complement the other studies around the multi use of the Byron Shire rail corridor, social assessment is required to understand the potential impacts to the community (positive and negative) of the various possible ways of providing an integrated cycling and walking path within the existing rail corridor, along with passenger rail/transit services. The assessment considers broader opportunities and potential, to seek the most positive and sustainable uses for the rail corridor, in consideration of the unique context of Byron Shire.

The methodology draws on social impact assessment (SIA), but is not a comprehensive SIA as conventionally understood, but rather it should be considered a preliminary study of potential social issues associated with various rail corridor options.

As explained above (Section 3.2.6), a SIA might be required to assist consideration of a future development proposal. In contrast, the present study aims to identify and analyse the social issues associated with alternative multi use options, including community perceptions of those options. For this reason, it is being called a *Social Assessment*, rather than SIA. Nevertheless, it is relevant to explain SIA and how it relates to this study. The International Principles for Social Impact Assessment defines SIA as being "the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions". SIA can be applied in many different settings, the most common is at the project level (planned developments and construction of new infrastructure).

As outlined in Section 3.2.6, BSC has developed its own Byron Social Impact Assessment Policy due to a growing demand on Council to consider the social impacts of decision-making in addition to the more traditional assessments of economic issues and environmental impacts.

According to the policy, the demand for a stronger focus on social impacts is being driven in the Byron Shire through:

a) The need to generate data in order to measure and manage social impacts
b) High levels of unemployment in the Shire
c) Lack of affordable housing
d) Significant impacts on the community 'way of life' as a consequence of tourism development
e) The need to recognise the value of 'way of life' to sustainable tourism
f) A strategic move towards triple bottom line accounting.

In accordance with the above identified drivers, the social assessment methodology for this project has been developed around enabling focus on priority risk and opportunity areas with regards to the social environment, understanding of the intricacies of combined transport options within the rail corridor, providing a preliminary indication of where potential impacts may occur as a result. Based on a range of multi use options, consideration of potential social issues to the community are qualified against available and collated social and engagement data and an understanding of social aspects for the community. These are measured against indicators developed by and for the Byron Shire (Wellbeing Indicators discussed in 4.4.2) within a standard multi criteria assessment outlined in Section 4.4.1. The assessment methodology is largely based around:

1. the outcomes of previous consultation within the community with regards to transport issues, the use of the rail corridor for trains or rail trails, and community values
2. focused and current consultation around the potential for multi use transport options within the rail corridor
3. preliminary assessment of potential areas of impacts to the community measured against shire specific criteria and indicators
4. Outline of provisional framework for monitoring and managing social impacts in any future project phases.

The International Association of Impact Assessment (IAIA) identifies that social impacts are changes to one or more of the following:

- people's way of life – that is, how they live, work, play and interact with one another on a day-to-day basis
- their culture – that is, their shared beliefs, customs, values and language or dialect
- their community – its cohesion, stability, character, services and facilities
- their political systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- their environment – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources
- their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity
- their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties
- their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.[10]

This above list helps us to consider all the potential types of social impact that might be associated with any change process within and around the Byron Shire rail corridor. The Byron Shire SIA Policy also outlines key elements for consideration under the scope of an SIA:

- Transport – Access to employment and recreation opportunities by way of public and private transport has a significant bearing on social cohesion, economic development and regional education
- Safety - The minimisation of potential security risks to persons and properties
- Diversity - Nurturing and maintaining respect for points of cultural and demographic difference within the population
- Amenity - Quality of attractiveness experienced in a place as a result of the environmental, social/cultural and economic factors
- Employment and Training – Opportunities for paid employment and paid training positions within award requirements
- Culture - Communities are complex and multilayered, meaning that a particular community is made up of many 'cultures'. Community culture includes expressions of identity such as language, dress, cuisine, sporting activities and more, in addition to what is narrowly termed 'arts'.

Given the above list from the IAIA, the elements for consideration identified in the Byron SIA Policy, the Byron Shire Wellbeing Indicators (refer Section 4.4.2), project specific criteria and indicators have been adopted in order to outline potential social issues associated with the options being discussed for the rail corridor (refer Section 4.4.1). This SA forms a basis for developing a full SIA during future project phases by preliminarily identifying potential social issues, future consultation and engagement requirements, monitoring and management requirements for potential social impacts.

4.2 Purpose of social assessment and key themes

In conjunction with Byron Shire Council representatives, and in consideration of the above rationale, our team confirmed the definition of the purpose of the Social Assessment (SA) as being a preliminary study of potential social issues associated with various rail corridor options. This involved a process of looking at the issues from all relevant stakeholder perspectives and prioritising the purpose in terms of what is optimum for the Byron Shire community. Council applies a Quadruple Bottom Line (QBL) approach that combines social, environmental, economic and civic leadership considerations. It developed a Community Strategic Plan (CSP) in 2018 which is underpinned by a QBL approach to ensure its overall objectives and supporting strategies deliver outcomes in a balanced and holistic way.

Impact analysis and evaluation is required to address how elements of the project may affect the social (including cultural), environmental, economic and civic leadership values of the Byron Shire community. Based on the assessment of multiple mixed-use options and the current stage of the project, key themes

[10] Vanclay, F. 2003 International Principles for Social Impact Assessment. Impact Assessment & Project Appraisal 21(1), 5-11.)

were developed around the definition of purpose for this particular social assessment, and these themes were discussed and agreed with Bryon Shire Council prior to commencing data collection.

Key themes for the social assessment include:

- Impacts to all stakeholder groups (both positive and negative) of various rail corridor options
- Changes to mobility and access
- Needs of special groups and how each option addresses those needs
- Leisure, recreational and health opportunities
- Employment opportunities
- Impact on the reduction of cars by adding another mode of transport
- Public and other transport development especially additional services linking to activated rail corridor
- Travel movement and experiential use of the rail corridor, by all patrons, e.g. residents, commuters and visitor patronage, tourism etc
- Regional connectivity and social cohesion.

These key themes enable early consideration and identification of social impacts, categorisation of impacts considered the most important to measure and defining the collection of data and types required for the assessment. Based on the key themes, key criteria and indicators were outlined for the assessment of potential impacts (see Section 4.4.1) of the multi use options.

4.3 Data collection and analysis

Well implemented and structured methods for data collection ensure a robust and unbiased outcome. In consideration of the overall objectives of the concurrent studies being undertaken for the multi use rail corridor options, timeframes and programme requirements, for the assessment of potential social impacts to the broader community, a mixed approach to data collection has been implemented. This approach included a collation of existing data relevant to Byron Shire community, compiled information on multi use case studies (research and empirical analysis) and qualitative data from refined stakeholder consultation. Data was collected from relevant State and Commonwealth agencies, as well as from Byron Shire Council, to provide information on demographics, forecasts for visitors and residents both within Byron and surrounding regions.

Data collection specific to the community and relevant to the potential project and impacts was gathered through a program of community engagements using a number of approaches and methods. These are further explained and discussed in Section 5. Further discussion on the demographics and specific community profile of the Byron Shire is provided in Section 6.

Allowing for a “mixed” methodology of data collection aids in overcoming risks associated with each method when used alone and provides a greater credibility of findings when the information from each source is converged and summarised.

A mixed approach also enables maximum use of existing data, that is, determine what baseline data is available for the selected indicators as well as defined characteristics and purposes of Byron Shire. From this baseline, it is possible to identify any important data gaps which inform the basis for the design of our data collection process.

4.4 Identification, prediction and assessment of impacts

The Planning Institute of Australia (PIA) outlines that the social impacts are assessed against a fully described scope of proposed changes. Due to the need to identify, predict and assess impacts of a number of potential options within the rail corridor which are not yet full detailed to robustly outline proposed changes a more high-level assessment has been proposed at this stage of the project. However, the assessment of impacts still aligns with key requirements outlined by the PIA:

- Examples of similar changes are identified, including impacts likely to affect minority groups, different age, income and cultural groups and future generations
- Direct as well as indirect, long term and short term, positive and negative, passing and accumulating impacts are identified. Cumulative effects that may materialise through interaction with other developments in the local towns, villages and hinterlands

- The relative equity of impacts is identified. It is important to identify how the benefits and losses will be distributed to different sections of the community
- Impacts over time and location are considered (e.g. local as opposed to state and national benefits and losses.)
- Impacts which are not amendable to precise measurement are not excluded from consideration – the assessment is an evaluation not a proof.

In undertaking social impact assessment, the key steps include identification of key issues, identification of information sources and data, some determination of weighting and relevance or priority. The following sections of this report outline the identification and determination of the above. Refer to Section 6.6.1 for analysis outcome of potential social and environmental impacts relevant to the rail corridor options outlined.

4.4.1 Multi Criteria Analysis

A Multi-Criteria Analysis (MCA) was undertaken as a part of the various studies prepared to support the evaluation of potential options for the rail corridor. An MCA is a process that is used to evaluate alternative solutions by using an agreed set of criteria that can differentiate between the alternatives. The criteria were based on industry examples and then collaboratively workshopped amongst the cross-discipline project team (engineers, economists, environmental and social experts, in combination with Council project personnel). The nominated criteria were then further considered within Byron Shire Council for agreement and acceptance. The criteria scores for this assessment were weighted for importance and then summed up for a comparison of the alternative options. With this information, it is possible to rank each alternative from most to least preferred.

The outcomes of the MCA are included in Appendix D of the State and Use of Corridor Report (Engineering assessment) and a summary outlined below. This summary assists the basis of social impact analysis of multiple options, with further detail provided in Section 6.6.1.

Due to the broader strategic nature of the evaluation process for the Multi Use of Byron Shire Rail Corridor project, quantitative measurements have been limited to economic indicators (CAPEX and OPEX). Two qualitative assessment method scales have been used, depending on the respective criteria. The assessment scales used for this MCA are:

- Qualitative Assessment: rated as Poor, Poor/Fair, Fair, Fair/Good or Good
- Impact Assessment: rated as Nil, Low, Low/Med, Medium, Med/High or High
- Quantitative Assessment: numerical values.

The criteria used for the MCA included the following which were deemed relevant to the social assessment, and linked to the Wellbeing Framework Indicators:

- Capital Costs (Total)
- Operational Costs (Per annum)
- Constructability
- Sustainability in terms of environment (energy use, emissions - greenhouse gases)
- Future proofing for capacity and technology (innovation)
- Accessibility and mobility
- Safety (user and operations)
- Integration with local and regional transport networks
- Integration with interstate and other transport networks
- Environmental impacts (including emissions)
- Employment (access and opportunities)
- Support of existing events, markets and the like
- Land value
- Reduced car reliance
- Economic growth and development
- Cost to users
- Amenity impacts to residents - sound/noise impact/aesthetics
- Accessibility to events, facilities and attractions
- Health benefits (recreation and commute)
- Cultural diversity and participation.

Each of the criteria relevant to this social assessment are described further below with respect to how the assessment was undertaken.

4.4.1.1 Sustainability in terms of environment

Sustainability as a qualitative statement from poor to good where poor means not sustainable and good provides the best sustainability benefits. This assessment includes consideration of energy use and emissions (Greenhouse gases) as well as long term sustainability of damage to flora and fauna, emissions etc. Sustainability assessment further considers the environmental footprint caused through the construction use/reuse of materials.

4.4.1.2 Future proofing for capacity and technology (innovation)

Qualitative assessment where poor means little scope for future proofing. This assessment captures how adaptable/flexible is the solution to easily enable capacity increases in the future should it be required. This assessment considers how easy it will be to incorporate new technologies.

4.4.1.3 Accessibility and mobility

Accessibility and mobility impacts of the options is considered a qualitative assessment where low means caters poorly, and good means makes quality contributions to accessibility and provides options for all mobility types. This assessment considers how well the solution caters for all types of mobility and levels of accessibility, including those with reduced mobility or accessibility.

4.4.1.4 Safety, including from a user perspective

Safety considerations of the operation of the solution as a qualitative assessment rated poor to good. This assessment considers how safe the solution is for multi use and interactions, whether physical separators (fencing) will fences need to be implemented, what are the requirements at level crossings etc.

4.4.1.5 Integration with local and regional transport networks

Qualitative assessment of how well the solution lends itself to door to door transportation and integration with existing or future local and regional transport networks (local walking, cycling, public transport and road network) rated as poor to good. A rating of poor indicates limited integration and connectivity with the local network, hindering the solution, while a rating of good indicates high integration and connectivity, promoting the solution.

4.4.1.6 Integration with state and other transport networks

This assessment considers how easy it will be for users of the rail corridor to interchange between different transport options to integrate multiple modes in one journey across the region and interstate. The assessment further considered the ability to connect with transport systems or modes outside of the Byron Shire Local Government Area for longer distance travel (for example to airports or local domestic tourist feeder sites).

A rating of poor indicates limited connection currently and, in the future, to connect with interstate connections and other modes for longer distance travel whilst a rating of good indicates high connectivity and flexibility to future proof for future proposed transport networks.

4.4.1.7 Environmental Impacts (including emissions)

An impact assessment to evaluate the solution in terms of the varying degrees of environment effects from construction and operation. The criterion was rated from low to high impacts with the option to also categorise impacts as being ‘nil’.

An assessment of low impact demonstrates the use of sustainable materials, minimal disturbance to vegetation or fauna habitat and limited non-renewable resource use for operation. An assessment of high impact indicates intensive use of non-sustainable products during operation, large environment footprint in construction which would hinder the solution. That is, it evaluates in terms of amount and type of emissions

and footprint used for construction and maintenance materials. For example, petroleum-based asphalt production is extremely bad for the environment hence a roadway which requires regular resurfacing would score worse than a light railway which will only need re-ballasting every 40 years.

This considers all components of the environment, such as water bodies, flora and fauna, biodiversity and ecosystems

4.4.1.8 Employment

Qualitative assessment of how providing a new transport facility can improve the ability of an individual or a business to access economic or employment opportunities. This criterion assesses how well the option improves access to employment and expands commute travel options with a rating of poor (businesses and potential employees isolated from commuting options which would benefit them) to good (increased, multiple options for commuting to employment opportunities).

4.4.1.9 Support to existing events, markets and the like

Qualitative assessment which evaluates how well the option improves access and travel options to existing events and markets, rated poor to good.

4.4.1.10 Reduced car reliance

A qualitative assessment of how likely the option is to encourage people to replace car trips with other more sustainable modes, rated poor to good. This criterion assesses whether the option provides a realistic and feasible alternative to driving, and therefore the likelihood that the option will encourage people to replace car trips with other more sustainable modes such as public transport, walking and cycling.

4.4.1.11 Economic growth and development

A qualitative assessment of how likely the option is to facilitate increased tourist visitation/spend, generate business revenue, boost local jobs, and so on. It is rated poor to good with a poor rating providing limited opportunity to facilitate job growth during construction and operation while a good rating provides multiple, strong opportunities to facilitate job growth and increase tourist visitation and spend.

4.4.1.12 Cost to Users

A quantitative negative assessment where the highest cost is rated the lowest. This criterion assesses the direct financial cost to users, that is assumed public transport fare revenue.

4.4.1.13 Amenity impacts to residents

An impact assessment of noise and vibration impact, air emissions, aesthetics, character/setting etc. on adjacent residents rated low to high with an option to designate ‘nil’ impact. Options for the rail corridor will have varying levels of impact to the amenity of residents and businesses in the form of emissions (such as noise and vibration and air emissions), traffic, aesthetics and general character or setting of the rail corridor. This assessment considers how the solution will impact adjacent residents and businesses in terms of their amenity. A low rating means little impact and a high rating means a significant perceived impact on residents. Options such as very light rail or buses, will have a higher impact on noise emissions and in terms of altering the character of existing disused rail corridor. Whereas options such as cycling, walking will have minimal impact on noise and aesthetics, and the character of the disused rail corridor will not dramatically change.

4.4.1.14 Health benefits

A qualitative assessment that evaluates how likely the option is to encourage physical activity and reduce health problems due to sedentary lifestyles, rated poor to good. Active transport options will provide for additional health benefits to the community. With regards to various other options, consideration of emissions, greenhouse gases, reduction in CO^2 etc, will provide the ability to quantitatively assess impacts with regards to health benefits.

4.4.1.15 Cultural Diversity and Participation

A qualitative assessment of how well the options will provide for cultural diversity and participation? Where equity and community access (including connectedness) is enabled, this is seen to correspond well with cultural diversity and participation. Employment of the indigenous community would also rate more highly with enabling cultural diversity and participation.

4.4.1.16 Outcomes of the MCA

Outcomes of the MCA indicate that the following three options rate highest against qualified criteria:

- Option 2 - Hi-Rail and active transport
- Option 4 - Active transport, cycle, mobility scooters and walking
- Option 5 - Autonomous Vehicles (AV)/Driverless pods plus active transport

These options rated high against social aspects within the MCA including, connectivity, flexibility to adapt to demand responsive transport, equity of accessibility, safety, environmental and sustainability aspects.

4.4.2 Key criteria and indicators- Byron Shire Wellbeing Indicators Framework

As previously outlined in Section 3.3.7, for Byron Shire, the social impact assessment is to be aligned with the Byron Shire Council Wellbeing Framework Indicators. These indicators have been developed collaboratively by Byron Shire Council and the broader community. They are based around a number of international and national frameworks which were compiled and then considered against the unique setting of the Byron Shire for appropriateness. On an international front, the Gross National Happiness movement from Bhutan, a was a leading global change movement to attribute measures of development and success to alternative factors than just economic growth, was a contributor to development of the indicators. On a national level, there are a lot of examples of local governments in particular who are including community indicators to assess development need by taking up the idea that Council's role was to be more outcome than output based, with a customer facing approach. These 'best practice examples' were used as a base which were then applied to Byron.

In the context of the multi use of the rail corridor, and assessment of the six options, the wellbeing framework indicators have been used to assess each of the options with regards to the qualification of potential impacts to the community. As the framework is still under development, there is not yet a defined process for allocating scores for measuring or demonstrating potential project impact. The impact assessment therefore has been undertaken to qualify impacts against each of the indicators.

The methodology for impact assessment within this report, most specifically focuses on the social and cultural criteria, whilst also outlining implications to those indicators that are particularly relevant under the other aspects (environmental, economic).

The Byron Shire Wellbeing Framework Indicators which are deemed most relevant for the social assessment of the multi use rail corridor options are outlined below:

- Relative socio-economic equity
- Community services and facilities
- Life satisfaction
- Safety
- Community connectedness
- Social support
- Cultural participation
- Recreation
- Responsibility for environmental sustainability
- Greenhouse gas emissions
- Energy use
- Road safety
- Active and public transport
- Economic diversity and resilience
- Innovation

- Work-life balance
- Growth and development.

Table 4-1 shows how each indicator was addressed in the Multi Criteria Assessment.

Table 4-1 Wellbeing Framework Indicators in the Multi Criteria Assessment

	Multi Criteria Assessment	Wellbeing Framework Indicator alignment	Wellbeing Framework Category alignment
1	Sustainability in terms of environment (Energy Use, Emissions- Greenhouse Gases)	Responsibility for environmental sustainability Greenhouse gas emissions Energy use	Environment
2	Future proofing for capacity and technology (innovation)	Innovation	Economic
3	Accessibility and mobility	Active and public transport	Environment
4	Safety (User and operations)	Safety Road Safety	Social and Cultural Environment
5	Integration with local and regional transport networks	Community services and facilities Community connectedness	Social and Cultural
6	Integration with interstate and other transport networks	Community services and facilities Community connectedness	Social and Cultural
7	Environmental Impacts (including emissions)	Responsibility for environmental sustainability	Environment
8	Employment	Relative socioeconomic equality	Social and Cultural
9	Support to existing events, markets and the like	Social Support Cultural Participation Growth and Development Economic Diversity and Resilience	Social and Cultural Economic
10	Land Value	Relative socioeconomic equality Growth and development	Social and Cultural
11	Reduced car reliance	Life satisfaction	Social and Cultural
12	Economic growth and development	Growth and development Economic Diversity and Resilience	Economic, Social, Cultural
13	Cost to users	Relative socioeconomic equality	Social and Cultural
14	Amenity impacts to residents- sound/noise impact/aesthetics	Open Space Recreation	Environment
15	Accessibility to events, facilities and attractions	Community services and facilities Recreation Social support Community connectedness	Economic Social and Cultural
16	Health benefits	Recreation Work-life balance Life Satisfaction Active and Public Transport	Social and Cultural Economic Environment
17	Cultural Diversity and Participation	Cultural participation Social Support	Social and Cultural

5 STAKEHOLDER IDENTIFICATION AND ENGAGEMENT

To gain an understanding of community views and concerns for various multi use options a methodical process of consideration of views and inputs from the broader community was undertaken. In order to capture both previous consultation outcomes as well as the outcomes of targeted additional consultation specific to the multi use rail corridor and the Byron Shire community, a dynamic and adaptive approach was necessary, demonstrated in Figure 5-1- Stakeholder Engagement Approach.

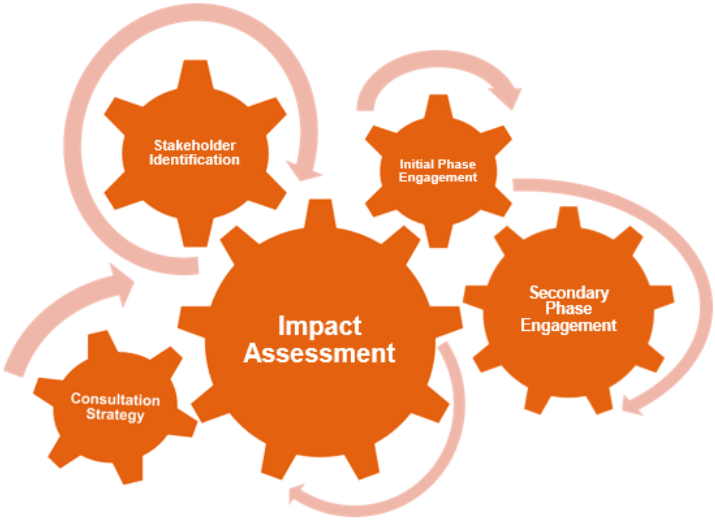


Figure 5-1- Stakeholder Engagement Approach

5.1 Byron Shire Multi Use Rail Corridor Consultation Strategy

At the onset, a project-specific consultation strategy was developed in coordination with Byron Shire Council to determine how to best inform the cross-discipline components of the project, being the engineering and economic assessments as well as this social assessment. Relevant to the entirety of the project scope, it was necessary for the consultation strategy to be developed considering not just the multiple project disciplines, but also the directions for assessment captured across and within these disciplines. These were defined by Byron Shire Council and consisted of ‘defining the stakeholders and need’, ‘impact and risk assessment’, ‘financial assessment and funding models’, ‘operating model’ and ‘technical scoping’. The consultation strategy was also tailored to recognise previous and concurrent community consultation as well as the degree and effectiveness of consultation that would be possible within the project constraints (cost, timeframe, development of options).

The development of the strategy considered the need to be adaptive and dynamic in order to respond to the evolution of the project throughout. A dynamic approach to the consultation process was necessary because the stakeholder engagement had to be conducted concurrently with other project discipline assessments (engineering, economic and environment). Further, the strategy had to recognise the unique nature of the project status as a pre-feasiblity study, acknknowledge that stakeholder engagement was not able to present as either a true options analysis or a traditional presentation of a development proposal, other than to present opportunity to comment on reactiviation with a multi use solution. The goal of the engagement therefore was to determine the likely use of activation options within the rail corridor, and the potential social impacts of activation, not to prioritise one option over another.

The overarching focus of the consultation strategy was to deliver some targeted, direct engagement, supported by the collation of existing data in order to best inform the engineering, economic and social assessments. Broadscale, open consultation was not deemed effective for this stage of the project.

Importantly, the consultation strategy focuses on working closely with Byron Shire Council. Findings from the engagement activities during delivery of the consultation strategy have been identified throughout the project, particularly from the targeted consultation. These findings are the primary source of information from which to conduct the preliminary assessment of potential impacts within this social assessment.

For a full discussion on the impact assessment on social aspects supported by the engagement activities see Section 6.6.1.

5.2 Stakeholder Identification and analysis

The identification of relevant, concerned, valuable and beneficial stakeholders is essential in ensuring that all potential impacts and opportunities relating to the multi use of the rail corridor for the Byron community are considered. The process was guided by the Byron Shire Council Policy for Community Engagement (2018) which in turn has adopted the community engagement International Association of Public Participation (IAP2) which is considered the best practice benchmark in the world.

Stakeholder identification commenced with a preliminary list of key stakeholders preliminarily identified by Byron Shire Council, based on their previous assessments and consultations. The key stakeholder list was then reviewed and assessed for suitability and inclusiveness in line with sub groupings and representations accepted in social assessment practice in the Byron Shire Council Policy for Community Engagement (2018). The adaptive nature of the stakeholder engagement approach allowed for additional stakeholder input to be captured during the course of the project, as engagement opportunities revealed newly identified parties.

Analysis of stakeholders into subgroups allowed for inclusivity and efficiency. Further categorisation for the purpose of prioritising and establishing engagement methods also allowed the engagement process to effectively ascertain sentiment and potential impact, whilst being transparent, building trusting relationships and enabling inclusivity.
The stakeholder subgroups for the multi use of the rail corridor project included:

- Local, State and Federal Government (elected representatives, agencies, Byron Shire Councillors and representative Council committee members)
- Public Transport (advocacy groups, interest groups, private operators)
- Active Transport (advocacy groups, interest groups, Council committees)
- Infrastructure managers and operators
- Local businesses and commerce networks (including market, festival and event operator and organises)
- Tourism agencies, networks and activity providers
- Community and interest groups (mobility impaired, youth, arts)
- Education community
- Environment and Cultural Heritage agencies and groups.

The stakeholder analysis process then involved the categorisation for the purpose of establishing levels of participation and engagement methods for each of the subgroups. This categorisation utilised the participation levels “inform”, “consult”, “involve” and “collaborate”, as nominated in the Byron Shire Council Policy for Community Engagement (2018).

In conducting the stakeholder identification and analysis a number of key points have been considered and applied to the process, ensuring it is targeted to the outcomes for the unique nature of the project. It has considered the stakeholders and their contributions from a number of perspectives, including:

- Their interests and expectations from the project
- How they might influence the project – positively or negatively
- How their livelihoods could be impacted – positively or negatively
- How they should be involved in the social assessment, implementation and ongoing
- Identify and/or re-confirm key stakeholder interests and expectations from the project
- How they might influence the project – positively or negatively
- How their livelihoods, activities and daily could be impacted – positively or negatively

- How they should be involved in the social assessment, project implementation and ongoing engagement.

5.3 Stakeholder Engagement

The methods and means of stakeholder engagement follows industry practice and is underpinned by the *Byron Shire Council Policy for Community Engagement (2018)*, which has in turn adopted the International Association for Public Participation (IAP2). These principles focus on developing meaningful and mutually beneficial relationships with community and stakeholders. The principles which have remained at the centre of engagement are presented in

Figure 5-2 below, with the terms further explained below.

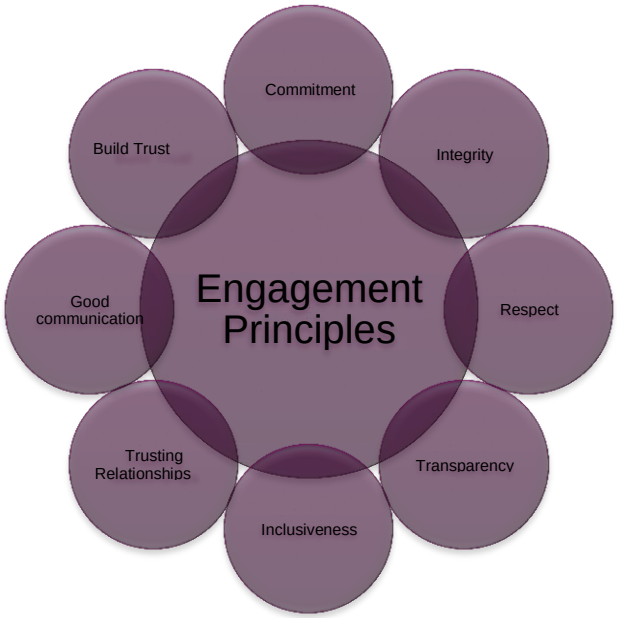


Figure 5-2 Principles of Engagement

Commitment: *Our commitment to good consultation is demonstrated through this Consultation Strategy. We will work to identify who may be affected by - or interested in - the project, and to practise engagement activities designed to understand their values, expectations, and aspirations.*
Integrity: *We will do what we say we will do, taking accountability for how the solution integrates with the local area and community.*
Respect: *We will implement the project in a way that recognises the community and stakeholder concerns and values, and we will work to address these as part of the Project.*
Transparency: *Through regular reporting and providing timely responses to feedback we will promote transparency in our consultation and strive to ensure stakeholders are kept up to date.*
Inclusiveness: *We will promote our contact details on all project communication and provide multiple channels for feedback including website and email. All our project communication will be targeted and written in plain English.*
Trusting relationships: *We will continue to build trusting relationships by being open and honest with all communication to stakeholders when discussing the Project and project impacts.*
Good communication: *This Strategy outlines our approach to consultation and communication. By establishing clear processes, we will have open two-way communication with our community and stakeholders that allows for meaningful dialogue. We will close the loop on feedback and ensure we have up to date information available online.*

> ***Build trust:*** *Early consultation, accessible and proactive communication and good interactions with stakeholders help us to build trust with stakeholders. We will apply all of the above principles to help foster trust and encourage meaningful relationships.*

Given the extensive level of consultation that has already been undertaken (by local government and others) relevant to previous phases or projects relevant to the development of the rail corridor over time, it is seen as essential to carefully consider the most appropriate engagement methods. It is critical that the approach (phone, in person, email or other) and means for contribution (interview, survey response, data provision) for engagement both respect and value the stakeholders input whilst avoiding “consultation fatigue” and dissilusionment, which can result from ongoing engagement from different levels of governement. To mitigate the risk of consultation fatigure, where appropriate, effort was made to enhance and revitalise previous consultation inputs, rather than re-instate additional consultation.

As the current focus was pre-feasibility on a number of viable options, and the objective not to focus on a “recommended” or “preferred” option, engagement was prefaced with the explanation that the current focus was on understanding all impacts and investigating all opportunities to integrate multi use opprtunities within the rail corridor.

The project timeframe necessitated the delivery of the stakeholder engagement concurrently with other project discipline assessments (engineering, economic and environment) and so a staged approach was implemented to benefit from the progress and consultation findings being identified througout the project.

The pahses of engagment involved:

Initial phase engagement, where select stakeholder interviews with community representatives were conducted to initially test the community understanding of the project and gauge likely key issues. A target for this phase of engagement were industry groups working in the Byron Shire and Northern Rivers Region with a focus on tourism and development.

Secondary phase engagement commenced when more direction was available about the overarching community context and potential options. Engagement during this phase targeted Byron Shire Council representatives, formalised interest groups and key stakeholders with an identified interest in the rail corridor. This phase also captured input form the general community through participation in an online survey.

5.3.1 Pre-engagement research

The background and history of the rail corridor that traverses through Byron Shire has outlined a variety of consultation outcomes and community opinion and issues. The context for the stakeholder assessment relevant to the multi use rail corridor project is also built around the context provided through previous assessments, engagement and studies.

This section of document outlines relevant previous stakeholder information which helps to outline the baseline situation with regards to the project across the community and enables building an approach to stakeholder identification and analysis undertaken for this assessment.

Initially, the outcomes of previous consultation on potential use of the rail corridor was captured and considered

The researched case studies were also used to identify significant elements for consideration with regards to stakeholder engagement based on community, social and economic related issues encountered with these projects/systems.

5.3.2 Initial phase engagement

As previously, the initial phase engagement consisted select stakeholder interviews with community representatives to test the community understanding of the project and gauge likely key issues. This phase was used as an opportunity to set the scene regarding the current situation and local context and to further establish key messages.

The initial phase engagement primarily consisted of one-on-one or small group interviews in person or via teleconference. Industry groups working in the Byron Shire and Northern Rivers Region were prioritised for these direct engagements, with a focus on the tourism industry and regional development. These were selected as a stakeholder subgroup with a strong understanding of community context and values as well as

having connections with community networks likely to be interested or impacted by the potential reactivation of the rail corridor.

During this phase, the following groups were engaged with:

- Discover Byron Bay
- Regional Development Australia- Northern Rivers
- Elements of Byron (including representatives of the North Byron Beach Resort)
- Byron Bay Railroad Company (associated with Elements of Byron)
- Destination Byron Bay.

5.3.3 Secondary phase engagement

The secondary phase engagement occurred concurrently with the progression of engineering and economic assessments which were generating and comparing multi use transport solutions or options for the rail corridor with different degrees of viability and feasibility.

Engagement was prefaced with the explanation that the current focus was on understanding all impacts and investigating all opportunities to integrate multi use opprtunities within the rail corridor and that the project will not result in prioritisation of a preferred or recommended option. However, at this point some considerations/discussion could focus on what was now recognised as the six “viable” options for the rail corridor.

The nature of the second phase engagement, and indeed of the current project, did not allow for direct discussions about the engineering or economic assessment outcomes for the options under investigation. That is, engagement was not an options analysis process nor was it a process for informing the community of viable or otherwise options.

As per the initial phase, the engagement was prefaced with the explanation that the current focus was on understanding all impacts and investigating all opportunities to integrate multi use opprtunities within the rail corridor and that the project will not result in prioritisation of one option over another and will not result in a preferred or recommended option.

However, with increasing direction regarding what multi use options were viable there was some ability to ensure that engagement with stakeholders during the secondary phase could drive detailed discussion and thoughtful consideration of impacts and opportunities by the stakeholders involved.

The secondary phase engagement primarily consisted of email contact and request to provide feedback either in person or via teleconference, as well as via a community survey. The requests aimed at encouraging stakeholders to provide input on behalf of the stakeholder group that they were representing, encouraging compilation of combined sentiment, concern issues and opportunities common to that stakeholder group.

Community and interest groups and council committees and representatives were prioritised for these direct engagements, with a focus on groups with particular interest in community values, transport and development. These were selected as stakeholder subgroups with clear ideas on community development priorities and an understanding of the transport context of the project. These stakeholder subgroups were identified as well-informed, likely familiar with the rail corridor and the history of the phases or projects relevant to the development of the rail corridor over time, as well as having an interest, perceived impact or connection with the potential reactivation of the rail corridor.

During this phase, the following groups were engaged with:

- Aboriginal Corporations and Land Councils (Arakwal Corporation, Tweed Byron Local Aboriginal Land Council, Jali Local Aboriginal Land Council)
- Community and Transport operators (Tweed, Byron & Ballina Community Transport including Aboriginal Transport Development, private sector bus operators)
- Public and active transport advocacy and interest groups (Northern Rivers Rail Trail Inc., Trains on Our Tracks)
- Byron Shire Council Representatives from the following business units:
    - Engineering and Infrastructure Services

- Major Projects Planning
- Master Planning and Placemaking
- Community Development and Wellbeing
- Economy and Sustainability
- Aboriginal Development
- Cycle and Pedestrian Planning.

5.3.4 General community input via online survey

The online survey was developed as a means to engage with the community where face to face, open consultation and the traditional type “townhall” meetings were not deemed effective at this stage of project. The focus of the survey was to verify (and quantify, where possible) the potential impacts which had been identified during the direct, targeted stakeholder engagement, while intending to allow broader community involvement and communication about the project.

The online survey was available via a link from the Byron Shire Council website project page and was open to the general public. A public marketing campaign did not accompany the release of the survey. Targeted advice about the release survey was provided to stakeholders identified during the stakeholder identification and analysis phase who were considered to have some interest in the rail corridor but were not prioritised for direct engagement. Existing networks provided by council from similar consultation projects were also utilised to advertise the survey. This approach operated as a as a means of quality control over the input and participants.

Examples of the groups provided with advice of the release of the survey include:

- Local schools
- Activity operators
- Cycle and rail advocacy groups
- Community service groups.

Parties involved in direct engagement were also provided with advice of the release of the survey and encouraged to distribute to their networks.

The survey was open for more than four weeks between 4 April 2019 to 3 May 2019.

5.3.5 Future engagement

As described in Section 5.1, the consultation strategy tailored for this project recognised previous and concurrent community consultation as well as the degree and effectiveness of consultation that would be possible within the project constraints (cost, timeframe, development of viability of options).

Targeted, direct engagement with key stakeholders and community input at a generic survey level were methods which rapidly consult with the community to best identify potential impacts, community concerns and in so, possible project constraints. The strategy was developed to be adaptive and dynamic in order to respond to the evolution of the project, however it does not represent a complete and thorough social impact assessment for the purpose of a comprehensive options analysis or meaningful presentation of design and development.

Future, ongoing engagement with the community will be critical to continue to monitor and address the impacts preliminarily identified in this social assessment. Future phases of the project should allow for a greater level of collaborative and participatory consultation with the community where a greater understanding of development and options can be considered and analysed in more detail. As the project progresses to future feasibility, concept and design phases (based on an ascertained preferred option) consultation should be regular, open and inclusive to provide the community with a sense of empowerment and trust in the council, and to provide for the most sustainable long term development and use of the rail corridor.

6 COMMUNITY PROFILE

Overview

The Byron Shire economy is diverse, sustainable and forward-looking, and has provided enormous societal benefits to its residents, visitors and the wider community for more than a century. Byron Bay and its surrounding areas have long been a destination of choice for surfers and holidaymakers from around the world. In more recent times the once quiet beachside towns of Byron Shire have become a mecca for holidaymakers, festivals and other events. Given strong new residential development, and growth in business, tourism and population in the Byron Shire the demand for sustainable and effective public transport solutions to connect towns and people within Byron Shire is increasing each year. The existing Murwillumbah rail corridor is seen as an immensely valuable local asset that already connects Byron Shire from the Booyong Reserve through Bangalow to Byron Bay, and then north along the coast connecting all the key population areas up to North Byron Parkland and beyond. Assessing the potential social impacts of activation of the rail corridor for multi use transport options must consider the past, existing and future social context of the shire.

The outcome of this study and the end-use of the rail corridor will have many socio-economic impacts on the Council and its residents. It is therefore essential to understand all the elements of the project, specifically, what makes the Byron Shire unique ensuring that this understanding is captured in the assessment of impacts and options. Some of these considerations have been outlined below;

- People's way of life – that is, how they live, work, play and interact with one another on a day-to-day basis
- Their culture – that is, their shared beliefs, customs, values and language or dialect
- Their community – its cohesion, stability, character, services and facilities
- Their political systems – the extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose
- Their environment – the quality of the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources
- Their health and wellbeing – health is a state of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity
- Their personal and property rights – particularly whether people are economically affected, or experience personal disadvantage which may include a violation of their civil liberties
- Their fears and aspirations – their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children. Taking into consideration any rumours surrounding the rail corridor including; losing it all together, selling it off, private development etc.

6.1 Byron Shire community snapshot- facts and observations

An overview of the key facts and obsevations central to the community profile can be found below;

- Major population catchment areas are;
    - Byron Bay
    - Ocean Shores
    - Mullumbimby
    - Bangalow
    - Myocum
    - Suffolk Park
- Higher enumerated population than resident population;
- High proportion of older people (age 50-69) than NSW average;
- Higher proportion of low and lower-middle income levels than the NSW average
- Tourism is vital to Byron's economy;
- 72 per cent of vistors self drive;
- 27 per cent tourists dissatisfied with level of congestion on roads;
- A five minute traffic delay in Byron Bay could generate $10,000 per day in travel time costs (source.iD Profile);

- Higher cycling and walking percentages than other regional towns in NSW;
- Byron's vision is one of sustainable, self-sufficient, environmental aware "people place", and economically balanced environment; and
- Highly involved, aware, motivated and committed community.

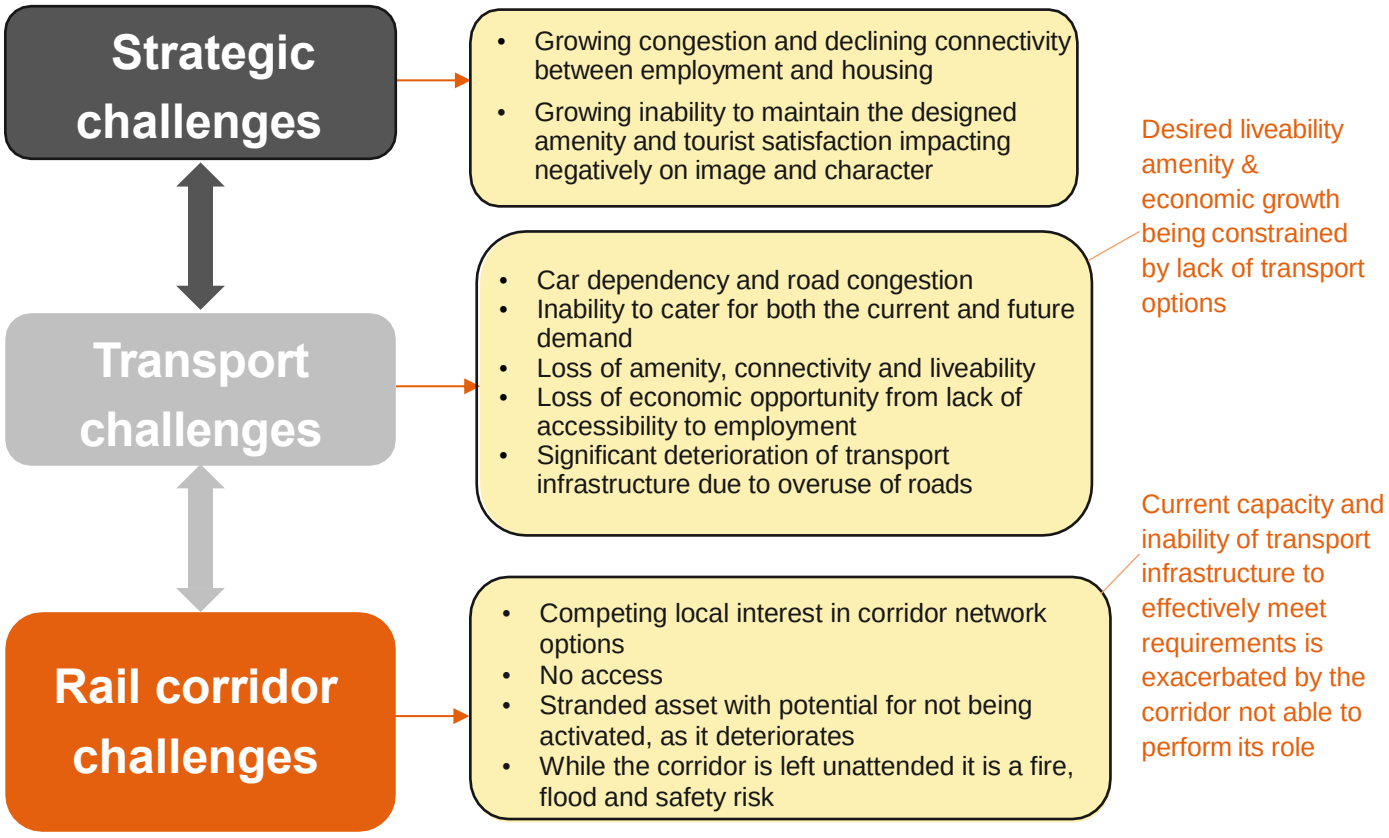
6.2 Shire Challenges

Outlining the key transport and socio-economic challenges that Byron Shire is facing provides a basis for the existing context. Therefore, the following challenges were noted as being relevant to the potential multi use rail corridor options:

- Permanent population to tourist ratio imbalance
- Pressure on infrastructure
- Safety
- Traffic congestion leading to loss of productivity and reduction in livability
- Limited transport options
- Potential damage to 'Byron' image and character
- Under-utilisation of rail corridor with land pressures across the shire
- Very dispersed resident population with a high proportion of rural dwellers who are not near transport options or the corridor.

The above challenges can be addressed across three tiers, including strategic, transport and corridor, as summarised in Section 456.3.

6.3 Three Levels of Challenge



6.4 Demographic Profile

The demographic profile of the Byron Shire is one that is unique across NSW due to the influence of being a popular and generally accessible tourist destination. Much of the business and local infrastructure is catered towards accommodating the influx of tourists, especially during music festivals and other events. To understand the profile of the Shire, this section seeks to outline the associated factors influencing the demographics.

6.4.1 Population and growth

Byron Shire localities and population statistics for 2017 are included in Table 6-1 below. The larger portions of the population are based within the communities of Mullumbimby, Ocean Shores, Suffolk Park, and the Byron Bay Township itself.

Table 6-1: Localities with associated populations[11]

Locality/Station	2017 Population	2018 Population
Ocean Shores[1]	6688	6786
Byron Bay Township	6125	6218
Suffolk Park	4231	4293
Mullumbimby	3824	3898
Rural North West	3159	3231
Rural South West	2297	2334
Bangalow	2144	2190
Myocum	1865	1921
Brunswick Heads	1824	1815
Tyagarah[2]	1747	1771
Sub Total	*33,904*	*34,452*
Rest of Byron Shire[3]	83	122
Total Byron Shire	**33,987**	**34,574**

1. Includes populations Billinudgel & Ocean Shores
2. Population from Ewingsdale
3. Includes populations from Hayters Hill, McLeods Shoot and Talofa

Byron Shire's regular population is larger than its resident population. Based on the 2016 Census, Byron had a population of 33,624, which is 6.6 per cent higher than its usual resident population (31,556), equivalent to over 2,000 extra people.

With the increase in tourism, festivals/events and the 'popularity' of the Byron Shire, the population has grown since 2016, with the ABS estimating a 2017 population of 33,987 persons and iD profile estimating a 2018 population of 34,574 persons.[12][13] The long term (50 year) resident population growth estimates can be found in Figure 3, which is based on the five-year compound annual growth rate of 1.72 per cent and relies on data back to 2012.

[11] https://profile.id.com.au/byron/population-estimate?WebID=10

[12] itt.abs.gov.au/itt/r.jsp?RegionSummary&region=11350&dataset=ABS_REGIONAL_LGA2017&geoconcept=LGA_2017&maplayerid=LGA2017&measure=MEASURE&datasetASGS=ABS_REGIONAL_ASGS2016&datasetLGA=ABS_REGIONAL_LGA2017&regionLGA=LGA_2017&regionASGS=ASGS_2016.

[13] https://profile.id.com.au/byron/population-estimate

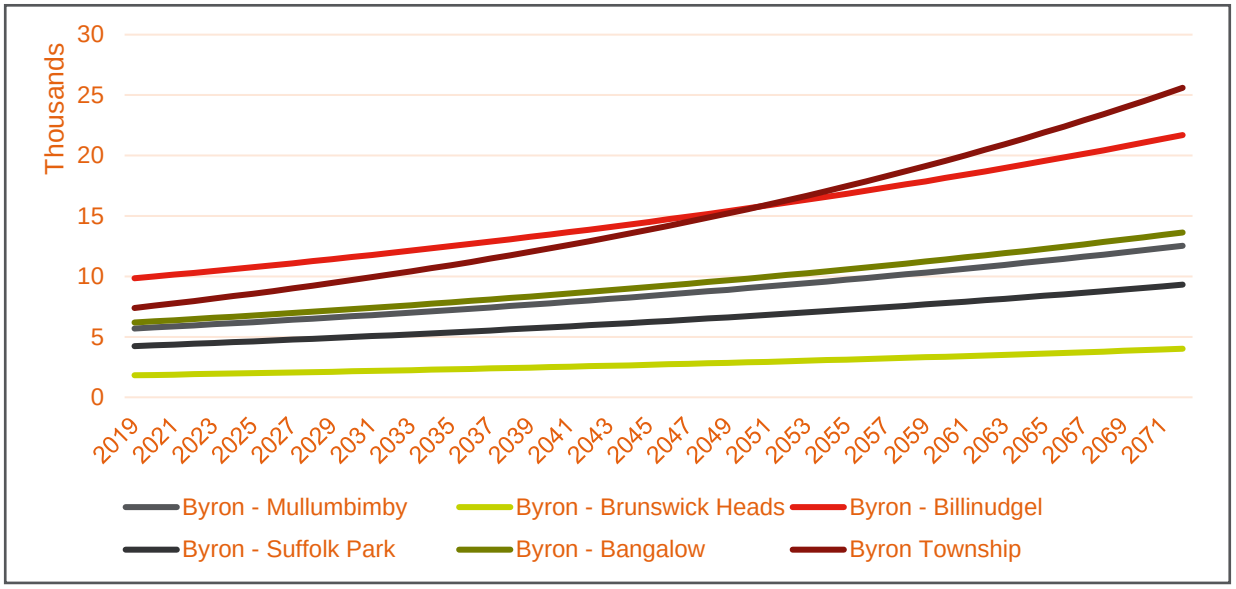


Figure 3 Byron Bay population growth over 50 years

The age structure of Byron Shire (based on 2016 data) is shown in Table 6-2 below. In 2016, there were more people aged 50 and over compared with the general population of NSW, and fewer people in the young workforce (25-34 years) or below compared with the NSW average.

Table 6-2: Age structure, Byron Shire 2016

	Byron Shire population	Byron Shire (per cent)	NSW (per cent)
Babies and pre-schoolers (0 to 4)	1553	4.9	6.2
Primary schoolers (5 to 11)	2658	8.4	8.8
Secondary schoolers (12 to 17)	2148	6.8	7.1
Tertiary education/independence (18 to 24)	1740	5.5	9.0
Young workforce (25 to 34)	3390	10.7	14.3
Parents and homebuilders (35 to 49)	6768	21.4	20.0
Older workers & pre-retirees (50 to 59)	5240	16.6	12.8
Empty nesters and retirees (60 to 69)	4840	15.3	10.8
Seniors (70 to 84)	2541	8.1	8.9
Frail aged (85 and over)	687	2.2	2.2

6.4.2 Income

Compared with the NSW average, more of the Byron Shire community sit within the lower and lower middle income brackets (refer to Table 6-3 below). Byron Shire households recorded a lower median income at $1149 per week, in comparison to NSW at $1486. However, the median rent is $400 which is higher than the States median at $380. As a result, 61 per cent of households are in the bottom two household income quartiles whereas, 56 per cent of households are in the top two weekly rental payment quartiles. 17.2 per cent of households are facing rental stress, which is above the average for NSW which is sits at 12.9 per cent.[14]

[14] Spending more than 30 per cent of household income on rental payments. Source: ABS Census 2016 QuickStats

Table 6-3 Income levels, Byron Shire 2016

Household Income	Byron No.	Byron (per cent)	NSW (per cent)
Less than $650 (low)	2,745	22.7	17.8
$650 to $1449 (lower middle)	3,903	32.3	27.5
$1449 to $2499 (upper middle)	2,185	18.1	21.2
$2500 or more (high)	1,596	13.2	23.1
Incomes not stated	1,645	13.6	10.4

6.4.3 Vehicle ownership

From 2016 data, 48 per cent of households have access to two or more motor vehicles, compared to 51 per cent in Regional NSW. 80.2 per cent of households owned at least one car, whilst 3.3 per cent had no cars, compared to 84.7 per cent and 5.8 per cent respectively in Regional NSW.

It is generally considered that higher incomes tend to be associated with greater car usage, therefore the above analysis of incomes should be considered, as the majority of the Byron Shire community sit within the lower and lower middle income brackets.

Table 6-4 Car ownership in Byron Shire[15]

Number of cars	Number	Byron per cent	Regional NSW per cent
No motor vehicles	451	3.34	5.84
1 motor vehicle	4382	32.49	33.40
2 motor vehicles	4502	33.38	34.03
3 or more motor vehicles	1927	14.29	17.22
Not stated	2226	16.50	9.50
Total households	**13,488**	**100.0**	**100.0**

6.4.4 Journey to work details

Travel to work data available for the shire indicates that the majority of residents drive to work in all four of the major townships in the Byron Shire transport corridor region. Indeed, over 60 per cent of the working population, aged 15+ and over, in Ocean Shores, Bangalow and Mullumbimby travel to work by car, with the majority of these driving their own car, and a small proportion travelling as passengers. In Byron Bay, the proportion of those driving to work is slightly lower, but still over 50 per cent of the working age population.

A small proportion of the community cycle or walk to work, with Byron Bay has the highest percentages of workers who walk (8.1 per cent) or cycle (7.2 per cent) to work. In Bangalow, 5.9 per cent of the working age population walk to work, but there are no cyclists recorded in the Census data, possibly due to the steeper terrain around Bangalow. In Mullumbimby, 4.6 per cent of the working age population walks to work and 3.2 per cent cycles. Only small percentages of the working age population catch a bus to work (less than one per cent in all four locations).

As Figure 4 indicates, use of public transport in the Byron Shire is lower than the NSW average. This is reflective of the limited public transport options available and the high percentage of car ownership. It is less likely to reflect distances to work, as the majority of residents who live in Byron Shire also work in Byron Shire, and vice versa, as discussed in the next section below.

[15] Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016

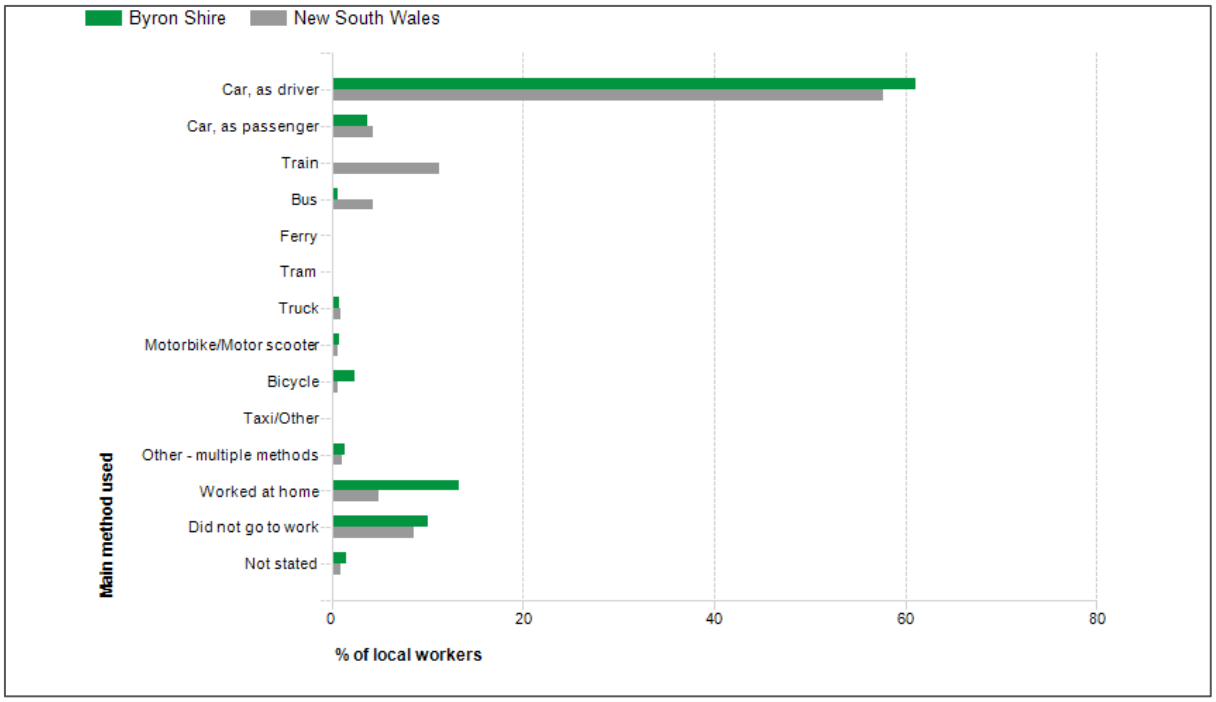


Figure 4 Journey to work data, Byron Shire versus NSW

Census data could be further interrogated, and additional data collated in future stages of the project to enable detailed determination of how commuters in each town travel to and from work or indeed whether they would be able or likely to utilize public or active transport options along the rail corridor. Research suggests that most people would walk up to 10 minutes to a high-frequency, direct public transport service. This equates to about 800 metres walking. For less frequent or indirect local services, people are generally prepared to walk for up to five minutes or about 400 metres.[16]

Research also suggests, that at a moderate riding speed a cyclist can travel three or four times the distance of a pedestrian in the same time, increasing a transit catchment area significantly. Therefore, cyclists could be willing to travel up to 4 km to 8 km to a public transport stop.[17]

6.4.5 Resident workforce

Around 21.5 per cent of Byron Shire's working residents travel outside the area to work. In total, 9558 (70.8 per cent) resident workers live and work in the area, according to the 2016 Census of Population and Housing. The Census also recorded workers' place of residence; of the 12,927 persons who work in Byron Shire, 73.9 per cent also live in the area.

The largest proportion of residents work in healthcare and social assistance (14.1 per cent), which is also the most common in NSW as a state. Table 6-5 shows the top six sectors in which Byron Shire's residents are employed in. The top 6 ranking for NSW is very similar with the only difference being that 'Accommodation and Food Services' comes in at position six, as opposed to position two in Byron Shire.

Table 6-5 Resident workers industry of employment[18]

Occupation	Number	Byron per cent	Regional NSW per cent
Health Care and Social Assistance	1,916	14.1	12.5

[16] Australian Government Department of Infrastructure and Transport (2013). Walking, Riding and Access to Public Transport. Canberra: Commonwealth of Australia, p.24.

[17] Vtpi.org. (2019). *Online TDM Encyclopedia - Bike Transit Integration*. [online] Available at: https://www.vtpi.org/tdm/tdm2.htm [Accessed 28 May 2019].

[18] Australian Bureau of Statistics, Census of Population and Housing 2011 and 2016.

Accommodation and Food Services	1,618	11.9	7.1
Retail Trade	1,381	10.2	9.7
Education and Training	1,319	9.7	8.4
Construction	1,157	8.5	8.4
Professional, Scientific and Technical Services	962	7.1	8.1

6.4.6 Employment

Tourism is highly significant in terms of employment, as it is the largest employer in Byron Shire. In 2016/17, tourism and hospitality generated 23 per cent of Byron's jobs (3,506 jobs) and 14.1 per cent of output/sales ($463 million). Tourism and hospitality output/sales grew by 14 per cent ($57 million) between 2007 and 2017. Tourism output has grown faster than in benchmark local government areas (LGAs) based on the averages.

In the 2018 December quarter, the unemployment rate in the Byron Shire was 4.74 per cent, with an average of 4.88 per cent from all quarterly data in 2018. In comparison, regional NSW had an average unemployment rate of 5.57 per cent, NSW had 4.625 per cent and Australia had 5.28 per cent. The trends of unemployment can be found below in Figure 55.

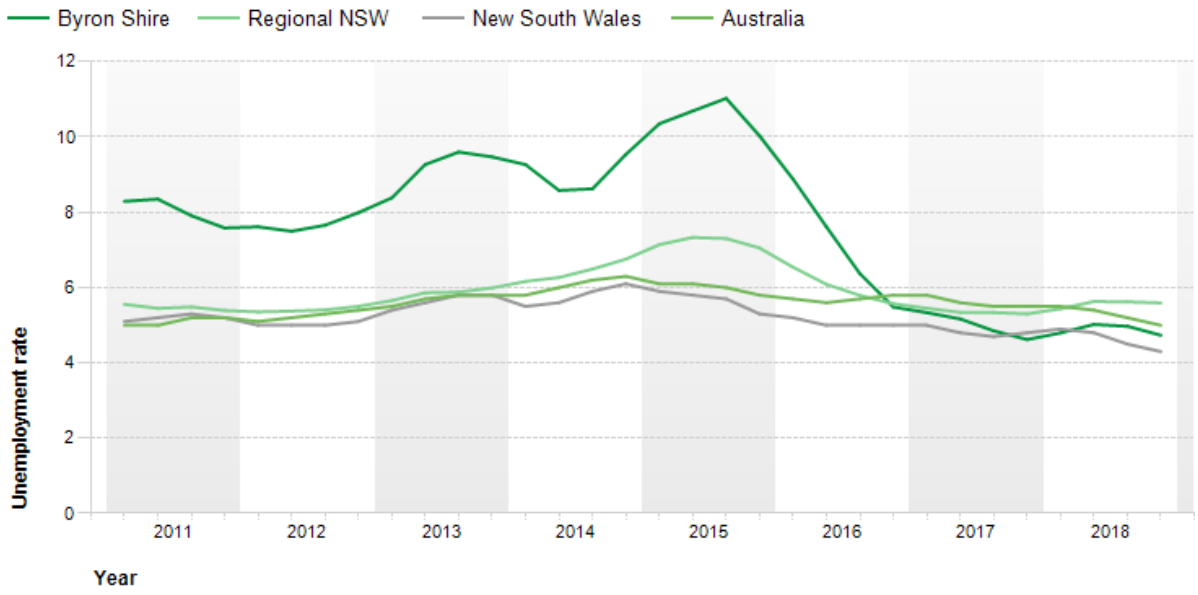


Figure 5 Quarterly unemployment rate[19]

6.4.7 Industry and events

Byron Shire is home to some of the most popular music festivals, surfing and other cultural events in Australia. Communities in the Byron Shire are renowned for their laid-back, natural and contemporary vibe, which attracts a diverse array of visiting artists from around the globe. Visitors to the events and to the Shire can spend significant amounts of money on accommodation, food, drink and entertainment. As such, hosting these events has a positive impact on the regional economy, boosting local businesses. This also has a side effect of increasing traffic to and around event sites, with thousands of attendees visiting the festivals, as seen below in Table 6-6.

In the three years to 2017/18, Byron supported 3.3 per cent of NSW's events-based trips including 8.3 per cent of NSW's events based overnight travel. This has resulted in Byron having similar visitation levels to

[19] Australian Bureau of Statistics, Labour force survey, catalogue number 6202.0, and Department of Employment, Small Area Labour Markets, December 2018.

tourist destinations like the Great Ocean Road but having four times the number of international visitors stay overnight.

Table 6-6 Main festivals and events in Byron Shire

Category	Event	Estimated no of attendees (counting over event days)	Closest station
Music Festivals	Splendour in the Grass	105,000	Yelgun
	Fall Festival Byron Bay	60,000	Yelgun
	Bluesfest	100,000	Tyagarah
	Mullumbimby Music Festival	9000	Mullumbimby
Sport Events	Byron Bay Tri & Multisport Festival	2000	Byron Bay
Other Cultural Events	Sample Food Festival	17,000	Bangalow
	Byron Bay Surf Festival	10,000	Byron Bay
	Byron Writers Festival	12,000	Byron Bay
	Safe Summer in the Bay	10,000	Mullumbimby
	Schoolies	10,000	Byron Bay
	Byron Bay Japan Festival	5000	Byron Bay
	Byron Bay Spirit Festival	4500	The Cavanbah Centre and Elements

Markets, festivals and sporting events are a huge part of the Byron community. Sporting events such as the Byron Bay Tri and Multisport Festival, include participants, both professionals and amateurs and can draw significant spectator crowds. These types of events can include a range of other non-sporting and recreational activities such as photography exhibitions, yoga, and sunset cinemas. Other popular sporting events/festivals include the Byron Bay Triathlon, the Big Swim, the Byron Lighthouse Run, and the Brazilian Jiu Jitsu Australian Open.

Byron Shire is a favoured day trip location for many surrounding populations including the large South East Queensland (SEQ) residential areas of Brisbane and Gold Coast and markets are an ideal reason for a day trip to the Byron Shire. Due to the many small business operators, especially agriculture and arts businesses, there are many businesses seeking an extra opportunity to meet the SEQ tourist demand for local goods and services. The Byron Shire Business Survey indicates 58 per cent of businesses in the Byron Shire are sole traders. Approximately, 40 per cent of local businesses (more than 3000) operate in the sectors that are associated with markets, including the creative sector, retail, agriculture, good, and the visitor economy.

6.4.8 Rural

Rural areas of Byron Shire are heavily saturated by agriculture, supported by the fertile basalt soils, high rainfall and subtropical climate. This leads to the production of; macadamias, avocados, bananas, coffee, pork, vegetables, bush foods, dairy, beef and flowers.[20] Byron is heavily focused on organic, bio-dynamic and traditionally farmed foods, which is evident throughout their markets.

From the 2015/16 census data it was determined that the total value of agricultural output from the Shire was $32 million. The largest commodity was nuts, which made up just over 35 per cent of the Shire's total agricultural output in value terms. Nurseries and cut flowers then followed at almost 30 per cent and then livestock slaughtering (14.8 per cent) and milk (12.6 per cent).

[20] https://www.byron.nsw.gov.au/Business/Business-in-Byron/Agriculture

6.4.9 Tourism

Byron Shire is a key tourism destination, with attractions including; beaches, active sports (surfing, cycling, etc.), farmers markets, the hinterland, health and wellbeing destinations and festivals. Tourism is a major contributor to the Byron Shire region, which injected over $700 million into local businesses for the year ending June 2017[21].

Byron Bay is the fourth most visited destination in NSW and the 11th most visited in Australia amongst international visitors. In 2017/18, 2.1 million tourists visited Byron Shire. Recently, Byron Shire's growth in visitor numbers has outpaced that of NSW. International visitor nights are forecast to grow by 900,000 over the next decade, domestic nights by 700,000. Tourism is the largest employer in Byron Shire, generating 23 per cent of Byron's jobs and 14.1 per cent of output/sales in 2016/17 (Source: iD Profile).

According to Tourism Research Australia (TRA), over 2 million people visit Byron Shire each year, which range from domestic day visitors to overseas tourists. In 2018, there were:

- 201,000 international overnight visitors (1,315,000 international visitor nights)
- 818,000 domestic overnight visitors (2,733,000 domestic visitor nights)
- 1,024,000 domestic day visitors.

Tourism attractions are centred around Mullumbimby, Byron Bay, Brunswick Heads and Bangalow. These towns are assumed to attract the majority of both domestic and international visitors. Most visitors arrive from the Gold Coast Airport.

Tourism is the largest employer in Byron Shire, accounting for 23 per cent of Byron Shire's jobs (3506 jobs) and 14.1 per cent of output/sales ($463 million) in 2016/17.

The economic analysis has assumed an annual increase in tourist numbers of around 47,000 people per year based on the average change in tourist numbers from 2002 to 2018. This is a moderate estimate based on a growth rate that tapers down from around 3 per cent down to 1 per cent in fifty years' time. The reducing growth rate is due to the highly volatile and uncertain nature of tourism growth.

6.4.10 Current transport options — how visitors reach Byron Shire

A Tourism Research Australia survey found that 72 per cent of visitors to the region were self-drive, with 15 per cent travelling by air transport and 11 per cent by bus or coach. More than a third (36 per cent) of international visitors travelled to the Byron Shire by bus/coach[22].

[21] Destination Byron, 2017. Byron Bay Visitor Economy Snapshot. Available at https://www.destinationbyron.com.au/research/

[22] Byron Shire Visitor Profile and Satisfaction Report: Summary and Discussion of Results, Tourism Research Australia 2011

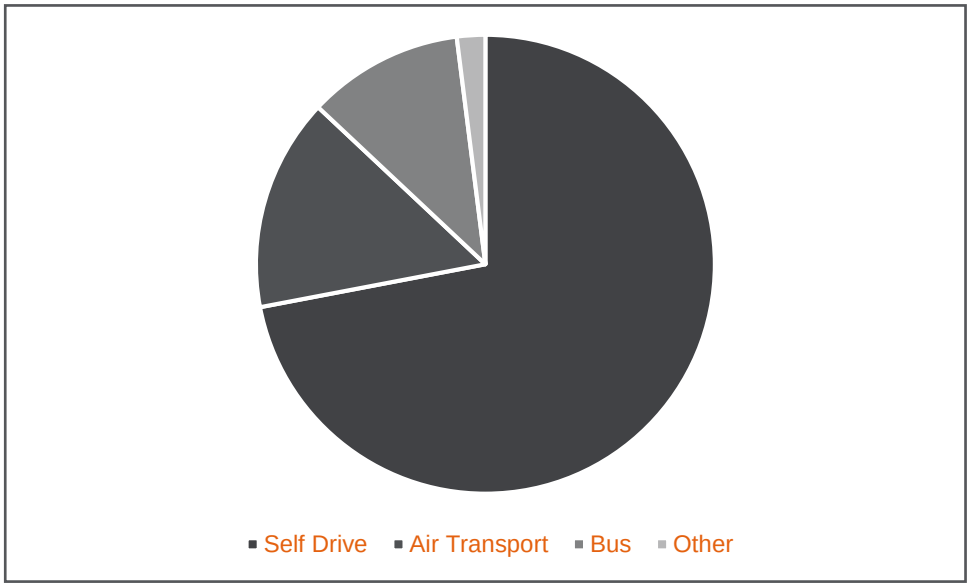


Figure 6 How tourists currently reach Byron - transport options used

6.4.11 Current and future projects

6.4.11.1 Byron Bay Masterplan 2016

The Masterplan took into account place vitality criteria in order to develop their vision and place principles. These were then used to develop the town centre strategies, in which there are six in total.

Based on these outcomes, the Masterplan was then divided into twelve town centre precincts, each having their own short term (2016-21) and long term (2022-35) projects. The list of identified projects and outcomes can be found online.[23]

6.4.11.2 Byron Bay Bypass

The construction of the Byron Bay bypass is expected to commence in mid-2019, with an anticipated completion date of late 2020. The bypass will connect Shirley Street (north) to Browning Street (South), which will include the upgrade of an existing roundabout and the construction of a new roundabout, the extension of some of the streets and a new level rail crossing. This project received a grant of $9.5 million from the NSW State Government for this project. The aims of this project are to; improve traffic efficiency, support future growth, maximise road safety and enhance in-town amenity.

6.4.11.3 Railway Park Upgrade

Railway Park is a central public space in Byron Bay, as it is located in the town centre, adjacent to the Railway Station, the Jonson Street bus stop, Visitor Centre and the Community Centre. However, with the termination of the train services in 2004 along with the aging infrastructure, the park has been less used in recent years by the community. Therefore, in February 2019, the Council awarded a construction tender to upgrade the park. Works will begin in April 2019, due to be completed by October 2019. This project is one of the first to be actioned from the Byron Town Centre masterplan, which was adopted by Council in June 2016. The upgrade will include; a play circuit, play tower, toilet block, pocket park, inter-connecting paths, plaza space, new seating, new planting areas, public telephones and much more.[24]

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[23] https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-industries-development-tourist-strategies-byron-bay-town-centre-masterplan/e201665664-16.07.20_422su_mp_report_final_reduced-byron-bay-town-centre-masterplan.pdf

[24] https://www.byron.nsw.gov.au/files/assets/public/hptrim/economic-development-projects-special-one-off-or-unique-projects-railway-square-revitalisation-project/24.2017.25.1-railway-square-upgrade-pages-from-railway-square-landscape-concept-plan-v2-171206-stage-1-highlighted.pdf

6.4.11.4 Byron Bay Bus Interchange

A proposed bus interchange in Byron Bay is currently being discussed between the Council and the NSW Government, taking into consideration the outcomes of the bypass. The interchange will need to complement the bypass and reflect the responses received by the community during the Byron Town Centre Master Plan process.[25] The interchange was planned for the Butler Street reserve, however an environmental assessment of the site found that it would not be suitable, due to the reserve being a previous landfill in the 1970s.

6.4.11.5 Jonson Street Protection Works (JSPW)

The Jonson Street Protection Works (JSPW) project was established to protect some coastal areas of Byron Bay against coastal erosion. It also aims to protect the town centre and reduce the risk of recession during large storm events. The project began in mid-2018.

6.4.11.6 Sandhills Estate Skate Park and Recreation Hub

The Sandhills Estate is a large open space in the centre of Byron, resulting in a large opportunity to reinvigorate the space and create a community hub. At the moment the space is under-utilised and is prone to use for anti-social behaviour and has a lack of community ownership. The space has potential to link the Byron Recreational Grounds and Main Beach as well as being an East-West pedestrian access connector across the town centre. The Council identified space in the masterplan as being for multi-generation use, including; a skate park, an educational biodiversity boardwalk, a playground, barbeque, toilets and other family friendly facilities. Council is aiming to have concept plans developed and completed by mid-2019.

6.5 Culture and facilities

Several areas of the study area have been identified as heritage listed both under the State and Local Government associated with the existing railway infrastructure. Therefore, any future development on the railway line would require a Heritage Impact Assessment. Refer to the *Environmental Constraints and Considerations Report* for more detail on cultural heritage.

6.5.1 Aboriginal culture

The Arakwal people are recognised as the Traditional Owners and custodians of parts of the Byron Shire. Aboriginal places and objects provide links to the culture, environment and knowledge that the local Aboriginal communities have and are therefore considered an integral part of the area's rich heritage.[26]

The Council, the Bundjalung Arakwal people and the broader Bundjalung community understand the importance to protect and preserve the cultural heritage and its wider environment. The Council are committed to working with Aboriginal custodians to protect; places of cultural significance, cultural practices, traditional sites and expressions of cultural identity. The relevant legislation to underpin the Councils objectives are found below:

- National Parks and Wildlife Act 1974
- Heritage Act 1977
- Environmental Planning and Assessment Act 1979
- Aboriginal Lands Right Act 1983

The Census data in 2016 stated that 1.8 per cent of the Byron Shire population identifies as Aboriginal and Torres Strait Islander, compared to 5.5 per cent in Regional NSW.

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[25] https://www.byron.nsw.gov.au/Council/Media-centre/Media-Releases/Changes-proposed-for-new-Byron-Bay-bus-interchange?BestBetMatch=bus%20interchange|d13b95b2-5146-4b00-9e3e-a80c73739a64|4f05f368-ecaa-4a93-b749-7ad6c4867c1f|en-AU

[26] https://www.byron.nsw.gov.au/Community/Indigenous-community/Aboriginal-culture

The Sandhills Estate Park and Recreation Hub project mentioned earlier is an example in which Council is working with the Arakwal Corporation to optimise project outcomes. Through learning more about the stories connected to the site and how they might be able to be incorporated into design and functionality and providing indigenous interpretation (e.g. into the wetlands boardwalk which will highlight the cultural and environmental significance of the land.

6.5.2 Heritage within the rail corridor

A detailed AHIMS search and consultation with the Arakwal Bundjalung People, Tweed Byron Local Aboriginal Land Council and Jali Local Aboriginal Land Council would be required to determine if any development would impact Aboriginal Heritage.

Under the Byron Shire Local Environmental Plan (LEP), 179 items are listed as being heritage, inclusive of; houses, churches, shops, railway and industrial buildings. Sites listed as heritage sites specifically related to the rail corridor are; the Bangalow Railway Station, Byron Bay Railway Station and Mullumbimby Railway Station. Several of the disused rail tunnels including the tunnels at Vallances Road, Coolamon Scenic Drive, The Tunnel Road as well as the Railway Underbridge at Yelgun Road and the Railway Water Tower at Butler Street are also listed.

In addition, two items are of state heritage significance; the Mullumbimby hydroelectric power station and the Byron Bay railway station. Several conservation areas and an old growth forest are also listed as being high conservation value.

The stereotype of Byron Bay and the expanding tourism industry is vastly different to the lifestyle of local Aboriginal people before the European settlement and Council understands how important it is to acknowledge and incorporate this into future plans.

6.6 Economic Profile

Further detail regarding the economic profile of Byron Shire can be found in the Economic Reports, which outline the key components of the economic profile including the socio-cultural, historical, institutional and political context in which the project operates. The economic trends and prospects relevant for social groups impacted by the project and the main economic activities and livelihood activities.

6.6.1 Key findings from consultation

6.6.1.1 Key findings of initial phase engagement

The initial phase engagement primarily targeted industry groups working in the Byron Shire and Northern Rivers Region as stakeholders expected to have a strong understanding of community context and values as well as having connections with community networks likely to be interested or impacted by the potential reactivation of the rail corridor.

During this phase, the following groups were engaged with:

- Discover Byron Bay
- Regional Development Australia- Northern Rivers
- Elements of Byron (including representatives of the North Byron Beach Resort)
- Byron Bay Railroad Company (associated with Elements of Byron)
- Destination Byron Bay.
-

The initial phase engagement with industry groups identified the following common themes:

- Strong support for opportunities which aim to address the impact on the tourism industry resulting from road congestion, travel delays and the limited transport network available to tourists.
- Belief that active transport opportunities would be supported by the community and tourists and would likely be popular.

- General caution about the ability to create a commercially viable option for the rail corridor reactivation, associated with both capital and maintenance costs and patronage.

Findings identified during this initial phase engagement took into careful consideration the various business interests that these stakeholders may be representing, finding that the points presented by multiple parties were able to represent common themes and therefor be considered representative.

These common themes reflect the level of regional knowledge that this stakeholder subgroup has from a business perspective in the community and in particular their understanding of development opportunities. The common themes also reflect the fact that the persons involved in the interviews all had background knowledge of the current project as well as previous iterations of rail corridor use investigations (including past direct consultations and familiarity with previous reports on the issue).

The initial phase engagement with industry groups further resulted in the below key discussion points which were mutually understood or accepted across the stakeholder subgroup.

- The parties representing development and industry around the Byron Shire were all supportive of opportunities to utilise the rail corridor, with potential tourism industry benefits identified. There was an acceptance that traffic congestion was likely attributable to tourism and that this was impacting on the community. Although locally significant and responsible for delays, some parties within this stakeholder subgroup highlighted that on a national or global level the congestion issues faced were not likely comparable
- All parties saw benefit in better utilising an otherwise wasted asset or land and indicated that they believed this sentiment would reflect the majority of the wider community. General discussion was also had about the varying opinions across the Byron Shire community on the merit of all potential solutions (rail, rail trail, etc). The statement “you will not please everyone” was common and discussion revolved around the community being highly motivated and engaged in issues such as the rail corridor
- All parties within this stakeholder subgroup saw that active transport options would likely be very popular. Multiple anecdotes were provided presenting situations where both locals and tourists have positively commented on or perceived would likely benefit from active transport options. This stakeholder subgroup was familiar with community interest and discussion about rail trail options and multi use opportunities were supported
- Those parties associated with the Byron Bay Railroad Company issued caution regarding accreditation delays (obtaining effective management and control of the railway), community perception and asset improvement costs if rail reactivation options are identified during the assessment
- Where the Byron Bay Railroad company currently operates the solar train, complementary and non-exclusive multi use opportunities were supported with a belief that the rail corridor width is sufficient to support such options without impact on their operation
- All parties were sceptical of the ability to ever reinstate heavy rail options due to their understanding of cost constraints and the ability to provide a commercially viable option.

6.6.1.2 Key findings of Secondary Phase Engagement

The secondary phase engagement was aimed at community and interest groups and council committees and representatives as stakeholder groups with particular interest in community values, transport and development. These were selected as stakeholder subgroups with clear ideas on community development priorities and an understanding of the transport context of the project.

During this phase, the following groups were engaged with:

- Aboriginal Corporations and Land Councils (Arakwal Corporation, Tweed Byron Local Aboriginal Land Council, Jali Local Aboriginal Land Council)
- Community and Transport operators (Tweed, Byron & Ballina Community Transport including Aboriginal Transport Development, private sector bus operators)
- Public and active transport advocacy and interest groups (Northern Rivers Rail Trail Inc., Trains on Our Tracks)
- Byron Shire Council Representatives from the following business units:
    - Engineering and Infrastructure Services
    - Major Projects Planning

- Master Planning and Placemaking
- Community Development and Wellbeing
- Economy and Sustainability
- Aboriginal Development
- Cycle and Pedestrian Planning.

The secondary phase engagement with community interest groups and council committees and representatives identified the following common themes:

- There is a general interest in the project and a clear recognition of the local issues driving the need to investigate rail corridor reactivation options (primarily traffic congestion and community connectivity). For a number of the stakeholders this interest tended more towards excitement, encouragement and support for the project to progress
- Engagement with these stakeholder groups demonstrated a varied level of previous involvement across past iterations of investigations into use of the rail corridor. This in turn presents as a varied level of understanding about project status and opportunities
- Progress of the project and utilisation of the rail corridor was seen as an opportunity to retain the asset for the benefit of the community.

The secondary phase engagement with community interest groups and council committees and representatives further resulted in the below key discussion points which were mutually understood or accepted across the stakeholder subgroup.

- Consultation with Byron Shire representatives demonstrated the multiple connections and relationships between the multi use of the rail corridor project and other Council driven projects, policies and strategies. In particular, interaction with planning and road infrastructure projects necessitates a coordinated planning and engineering review of options beyond the scope of the current project. These include Byron Bay Bypass, Byron Bay bus interchange, Railway Park Upgrade as well as smaller projects associated with the Mullumbimby, Bangalow Village and Byron Arts and Industry Estate Precinct Masterplan
- Community connectedness for transport disadvantaged persons within the Aboriginal community also presented as a key discussion point to be considered. Formal or documented input regarding potential impacts and suggested opportunities was not forthcoming from the engagement with Aboriginal Corporation and Land Council engagement. However, preliminary engagement with these parties expressed interest in best capturing business and employment opportunities for the local Aboriginal community as well as representations of Aboriginal values in the options. A focus of discussion was ensuring that these opportunities be investigated early to maximise benefit.
- These stakeholder subgroups understand that the importance of the project is primarily linked to the need to provide tourists with a desirable location to visit as well as to the liveability of the region. Most see the benefits from both perspectives
- These stakeholder subgroups are well connected, informed and have a high level of understanding relating to the interconnectedness of asset maintenance costs, reactivation option costs, ratepayer contributions and the economic contribution from the tourism industry, however they have been informed on these matters from a variety of sources, leading to varied opinions and conclusions
- The ability for the rail corridor option to meet, complement and interact with other transport services across the region was highlighted within these stakeholder subgroups, as was the limitation of the current status of the rail corridor in connecting with other areas within the region. Although most parties expressed that existing bus and cycle networks were inadequate in connecting the broader community, it was stated that for a rail corridor reactivation to actually benefit the community a more strategic network approach interacting with these is required
- Many within these stakeholder subgroups are of the perception that there is already a level of certainty about the delivery of options being investigated within the project. These relate to unviability of any rail-based options and the imminent asset sale (and loss of the rail corridor). These opinions are typical of community rumours, fear and confusion which can generate out of a project delivered across multiple or disconnected stages of planning, design and delivery
- There is a clear divide between community interest groups who support rail trails and those who support other types of rail-based solutions. Although there is a divide in their desired final option, multi use opportunities are supported by both, and rail trail supporters state that their persistence with a rail trail option is primarily because of the unviability of rail-based solutions. Both groups are in

agreement about the community benefits for not continuing to waste this land and the risk of losing the asset through potential change to designated use/purpose of the corridor.

During the secondary phase of engagement efforts were made to also capture the opinion of the general community. During engineering field surveys, opportunistic engagement with interested locals presented in the field, with the parties encountered unanimously positive regarding the use of what they considered to be wasted lands and assets. To more methodically capture opinions from the general community and to ensure that potential impacts beyond those presented by key identified stakeholders were not missed, an online survey was developed.

Further discussion of the engagement with the general community via the online survey is in provided in Section 6.6.1.3.

6.6.1.3 Key Findings from the online survey

6.6.1.3.1 Transport use and preference findings

An online survey was available to the general public a four-week period between 4 April 2019 and 3 May 2019 and was responded to by 1088 participants. Full survey results are included in Appendix A.

Comments from the community in response to the survey are varied in their aspirations for the rail corridor, however the comments reflected general support, encouragement and excitement for the reactivation.

"Hurry up and do it!"

and

"I think it would be fantastic for the area and visitors, less traffic and congestion and less emissions"

and

"So positive!! Not having it means more pollution, more wear on our roads, and huge opportunities missed for tourism and jobs"

From a basic transport usage perspective, the following results confirm a heavy reliance on the use of private vehicles and limited use of local public transport options. Graphs representing the response to the question of "Is a car your main form of transport to travel around the Shire?" and "Do you currently use a bus service for travel in and around Byron Shire?" are in **Error! Reference source not found.** and **Error! Reference so urce not found.**. This question filtered to those who identified as living in Byron Shire.

Figure 6-5 Online survey result showing reliance on private vehicle

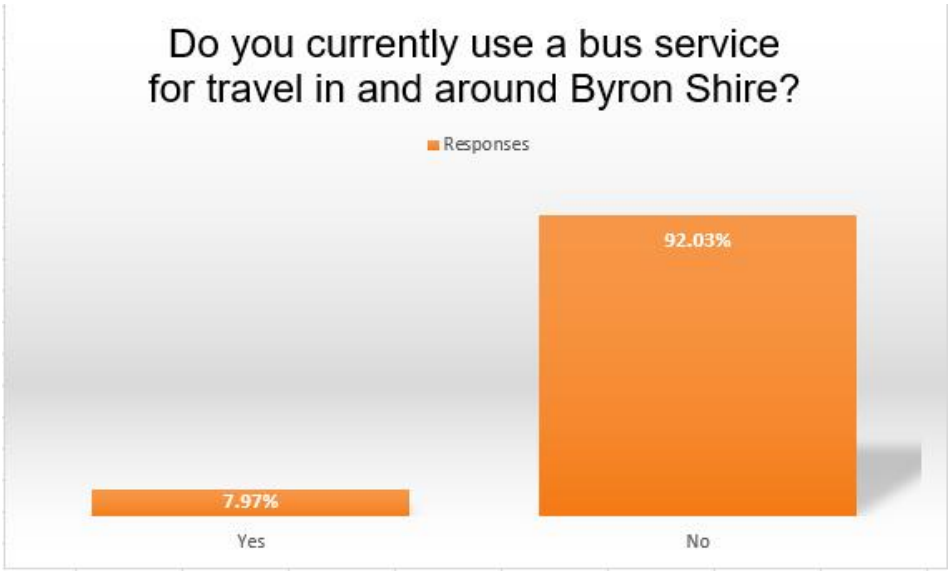

Figure 6-6 Online survey result indicating minimal use of bus services

Participants who answered YES were then asked to list which bus services they used, and whether they use them daily, weekly or occasionally? Limited response comments on the use by school children, for airport transfers and some inter-regional travel to locations such as Ballina and Lismore. Other responses indicate some bus travel between Byron Shire centres (for example Suffolk Park or Mullumbimby to Byron), however these responses accounted for just 7.97 per cent or participants. Participants who answered NO, were asked why not. Many participants commented on the inconvenience associated with the current bus service, citing infrequent services and limited stops and connections as reasons for their reluctance to use the services. For example:

"They don't run at night; they take too long and don't run where I want them to"

and

"They run so seldom - don't fit my travel times"

and

"Unreliable and irregular service"

This heavy reliance on private car travel and limited current public transport use anecdotally aligns with stakeholder feedback regarding insufficient public transport options (limited services and locations) within the Byron Shire resulting in traffic congestions and a lack of connectivity for the transport disadvantaged.

Although combined in their support for the reactivation, community opinion about reactivation options are more varied. In response to the question about what they would like to see on the rail corridor, the highest number of participants responding in the category of “would very much like to see” support “Combined use- public transport plus cycling and/or walking tracks and cafes/ retail” (61.75 per cent). However, there was also strong support for exclusive options which support “Public transport service- train ONLY” and “Cycle and/or walking path ONLY” with the category of “would very much like to see” selected by 49.68 per cent and 57.11 per cent respectively. This aligns with stakeholder feedback from the most coordinated and passionate community groups supporting rail reactivation OR rail trail solutions. Figure 6-7 shows the varied support for some nominated rail corridor reactivation options.

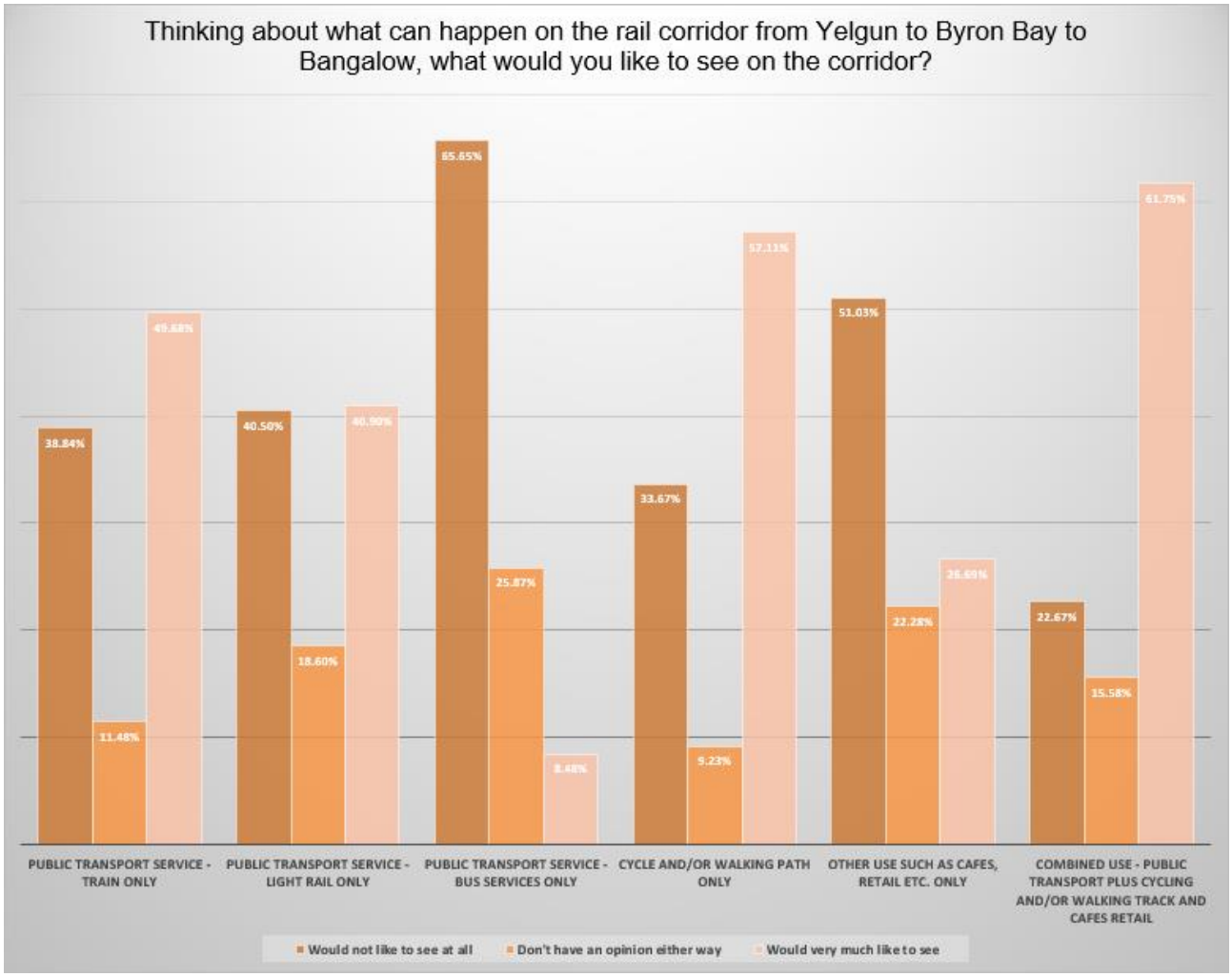

Figure 6-7 Online Survey Response to the question "What would you like to see on the corridor".

The highest number of participants responding to the category of “would not like to see at all” selected “public transport service- bus services ONLY” 65.65 per cent. This aligns with stakeholder feedback about lack of connectivity and inadequate services of current public transport bus services. The question about what the community would like to see on the rail corridor also allowed for “Other” suggestions to be made, further demonstrating the varied aspirations, included options such as electric vehicles (buses, golf carts, tuk tuks and more), solar trains, community open space and horse riding in addition to the popular rail trail, rail and light rail solutions.

"Small, licenced-operator, electric public/tourist vehicles"

and

"Electric shuttle buses only. Not diesel"

and

"Include access for horse riding!".

Further in response to the question of what the community would like to see on the rail corridor, both support and opposition was presented to the prospect of café or retail (including markets) within the rail corridor.

"A mixture of cafe/local culture, and rail trail cycle path infrastructure would be a massive tourist draw. I would love a light rail, but it just doesn't seem feasible."

and

"Public transport + cycling and walking, please. No more cafe's, we have enough. People who are walking or riding will be there to enjoy nature. People on the train will be on the train and can't shop. Put a cafe on the train. Problem solved."

and

"Just leave it as it is for the wildlife as open space why do you have to develop everything in this town".

The majority of general comments supported a multi use rail corridor, coinciding with the feedback provided by stakeholders during direct engagement activities. As captured by one of the participants:

"I think it would be a huge loss to commit this land to just a single purpose"

Beyond this support for multi use options within the rail corridor, opinions and priorities for a particular solution were often provided in the general comments, mainly with specific reference to rail trails or trains. Some examples are provided in the below quotes supporting rail trail and train options.

"A Rail Trail would provide jobs for locals in an industry that is low impact on the environment, good for health and well-being and positive for the economy."

And

"Train travel will open up the entire region, creating jobs and providing much needed sustainable transport to a fast growing area, as well as bringing new life to hinterland communities. Buses in the hinterland are not viable - the roads are already under pressure."

6.6.1.3.2 Community value findings

As an important indicator of community values and perception of impact, a series of questions were asked on a sliding scale of importance about a list of community values which broadly align with industry accepted indicators (including the Byron Shire Council Wellbeing Indicators). In addition to giving an indication of where participants saw potential for rail corridor options to impact on the community, these questions provide guidance in the completion of the impact assessment process within this social assessment and the multi-criteria assessment within the engineering assessment. The question specifically asked “Thinking about the Yelgun to Bangalow corridor and the activities that we have mentioned in this survey, how important is an activated corridor to delivering these community factors?” and the response details are provided in

Table 6-7 and Figure 6-8 Graphical representation of importance ranking of community values from online survey below

	Very Important	Somewhat Important	Not At All Important
Improving our general way of life	83.09 per cent	13.97 per cent	2.94 per cent
Ease of accessing community services and facilities	74.11 per cent	20.09 per cent	5.80 per cent
Improving our health and well-being	81.57 per cent	14.94 per cent	3.50 per cent
Respecting Aboriginal culture	53.02 per cent	34.48 per cent	12.50 per cent
Preserving the local environment and biodiversity	78.50 per cent	18.82 per cent	2.67 per cent
Reducing emissions	84.02 per cent	13.12 per cent	2.86 per cent
Improving the aesthetics	66.41 per cent	27.97 per cent	5.62 per cent
Improving amenity including background noise and air quality	73.20 per cent	22.39 per cent	4.41 per cent
Improving safety	77.97 per cent	19.25 per cent	2.78 per cent
Providing equitable access for all our community	80.09 per cent	18.31 per cent	1.61 per cent
Preserve local culture, unique to Byron Shire	68.00 per cent	26.94 per cent	5.06 per cent
Improving access to work opportunities for locals	73.71 per cent	22.32 per cent	3.97 per cent

Table 6-7 Importance ranking of community values from online survey

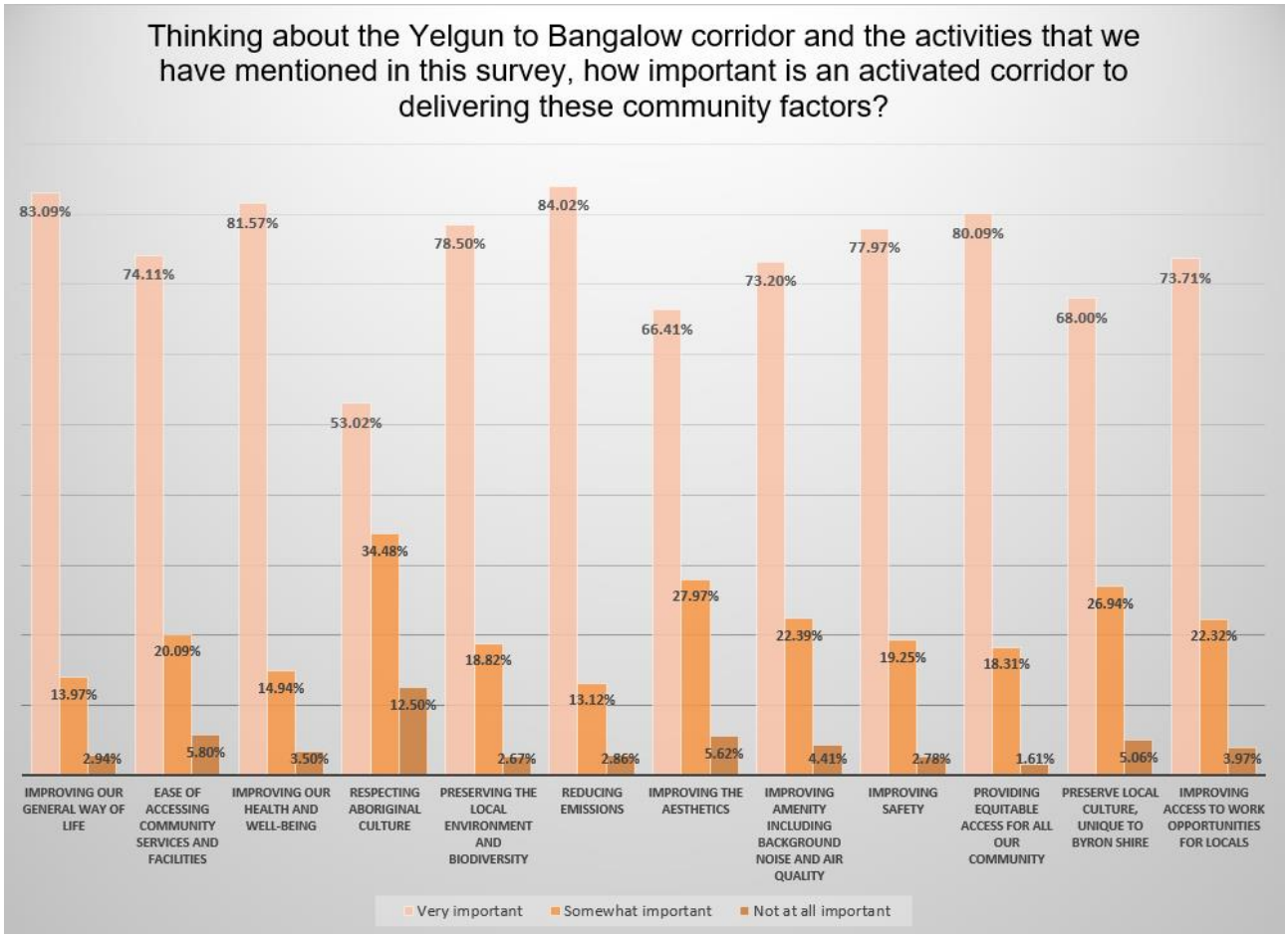

Figure 6-8 Graphical representation of importance ranking of community values from online survey

Overwhelmingly the participants demonstrated that the preservation of all commonly accepted community values as a critical consideration for the development of rail corridor reactivation options, with high 'very important' rankings for all provided community factors.

The survey also provided opportunity to put forward general comments and opinions about the reactivation which have been reviewed for common themes. The general comments were also compared and aligned with the ranking of importance provided in questions about the importance placed on community factors as a way of gauging concern about potential impacts.

Despite '**reducing emissions**' being supported by the largest majority of participants as 'very important' there were only a handful of general comments related to emissions included in survey responses. A number of comments on sustainability and ecological footprint were provided, highlighting that environmental factors (combining emissions, ecological impacts and others) are highly important to the community in developing and evaluating rail corridor options.

As a more general demonstration of concern regarding community factors, '**Improving our general way of life**' was also responded to with a ranking of 'very important' by a large portion of participants. This more directly aligned with a large number of general comments provided by participants as a demonstration of their concern for ensuring impacts are addressed. The following common themes were highlighted as the most important to address:

- Safety concerns around cycling on the current road network
- Reducing road congestion
- Improving access for transport disadvantaged (children, elderly, disabled with mobility issues etc). around the region.

The majority of general comments supported a multi use rail corridor, coinciding with the feedback provided by stakeholders during direct engagement activities. As captured by one of the participants:

"I think it would be a huge loss to commit this land to just a single purpose"

Beyond this support for multi use options within the rail corridor, opinions and priorities for a particular solution were often provided in the general comments, mainly with specific reference to cycleways or trains. Some examples are provided in the below quotes supporting rail trail and train options.

"A Rail Trail would provide jobs for locals in an industry that is low impact on the environment, good for health and well-being and positive for the economy."

And

"Train travel will open up the entire region, creating jobs and providing much needed sustainable transport to a fast growing area, as well as bringing new life to hinterland communities. Buses in the hinterland are not viable - the roads are already under pressure."

A similar number of people identifying as living within the shire or as visitors to the shire participated in the survey (49.45 per cent and 20.55 per cent, respectively). When asked about who would benefit most from the potential reactivation options, the majority of participants perceived that both tourist and locals would use the nominated potential services. These results are demonstrated in Figure 6-9.

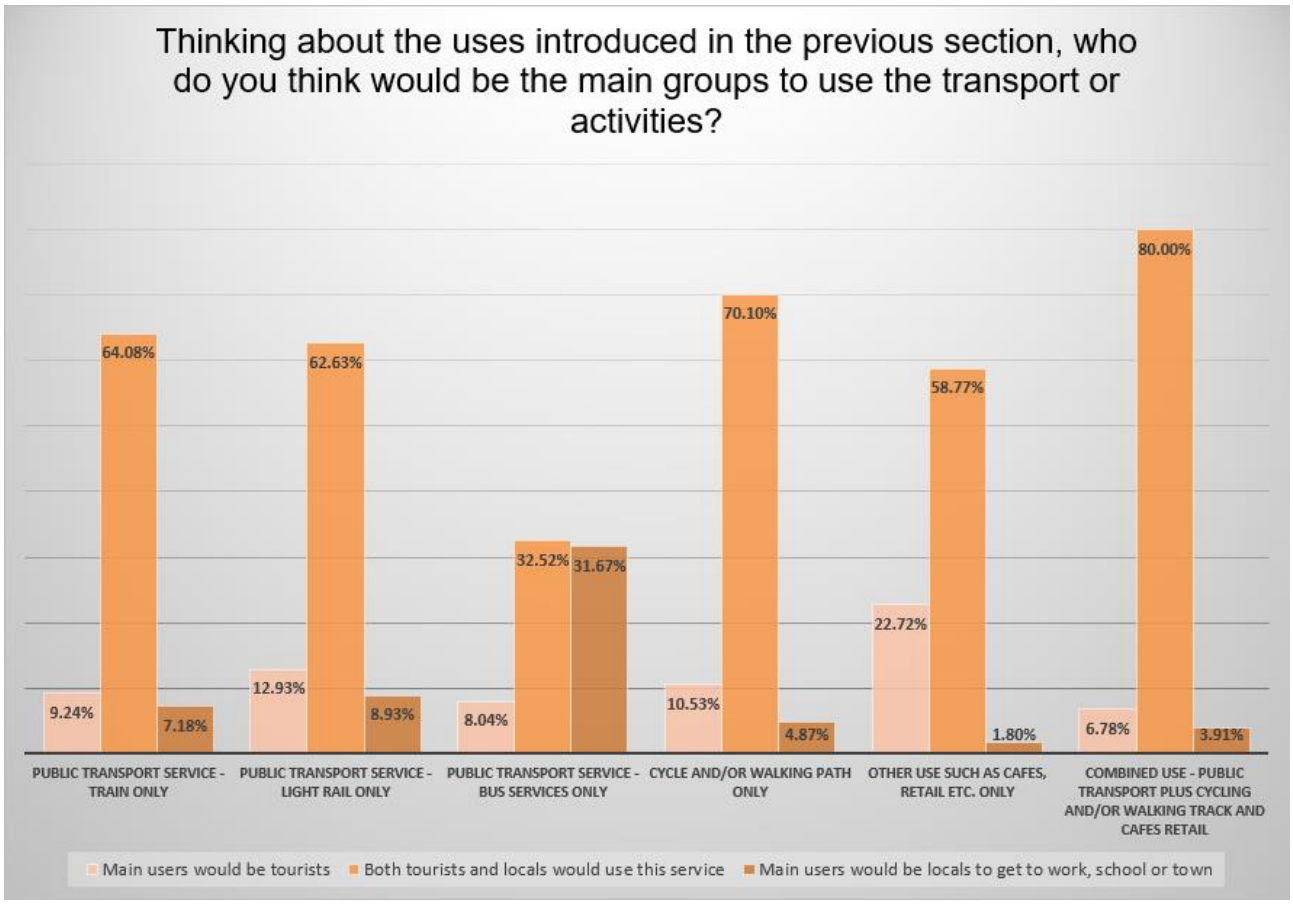

Figure 6-9 Survey response considering which groups of people would most benefit from reactivation options

However, within the general comments from those identifying as living within the shire, tourism is heavily discussed. This appears to identify an issue of perception and division, relating to how locals expect the numbers and management of tourists to occur. The opinion that the rail corridor options should not only benefit tourists is clearly presented, as is a concern about the financing of the rail corridor being borne by the locals for the benefit of the tourists. Some examples of these comments are:

"Implement a real bus service. It is cheaper and can reach more communities. Buses are already expensive in Byron Shire and a train will only cost more. If a train isn't cheap, it will only be used by tourists, and council will yet again have screwed its local population in favour of tourism"

And

"A service which SERVES the greater number of people is the only option. We walk along the beach and swim, spending millions to create a bike path for a few tourists is a waste of money."

Some general comments from the survey reflected points made within the direct stakeholder engagement about connectivity with other transport networks and planning on a region-wide scale. The general comments included suggestions on where they want the train stations to be, how to connect the rail corridor with the coast and so on. The below examples capture some sentiment about the strategic network needs and the want for consideration of the rail corridor solution on a broader planning level.

"We need the rail corridor to be preserved for rail transport with a network of buses meeting the trains. Trains should run at times that are suitable to people, that's important. The traffic in Byron, including bicycles, has gotten way out of hand and must be tamed."

And

"Would create a dispersed economy that would share the tourism load throughout the region and lessen the impact on roads and parking."

7 PRELIMINARY ASSESSMENT OF POTENTIAL IMPACTS

Social impacts can affect people in different ways, potentially involving changes to people's way of life and their surroundings, community and culture, health and wellbeing, access to services and recreation, personal and property rights, decision-making systems and fears and aspirations. Assessing the potential social impacts of a variety of possible options is somewhat challenging at this stage, given exploratory nature and status of the present study, the presence of multiple uncertainties relating to the various multi use options, and the reality that different people experience impacts in different ways and at different times. For these reasons this section is presented as a preliminary assessment of potential impacts.

This section of the report identifies potential impacts, which may be either beneficial or negative, direct or indirect, short or long-term, experienced during construction and/or operation, and potentially cumulative in part. More detailed prediction and assessment is appropriate for later phases, once a favoured option is proposed. The focus of this assessment has been around enabling the development of specific social opportunities for the potential future multi use of the rail corridor, rather than a traditional impact assessment approach.

7.1 Potential impact identification

A tabular format has been used to present a matrix of where potential impacts may arise against key social criteria and indicators, based on the combined findings of the studies undertaken. This is a means of methodically working through the project-specific criteria, from which social issues or impacts can be discussed, agreed and presented within the social assessment - a process further informed by the background research and engagement phases of the social assessment. This matrix was developed around the MCA criteria, specific to social and environmental aspects of the Byron Shire and rail corridor.

Error! Reference source not found. outlines areas where potential social issues or impacts may arise (both b eneficial and negative) for the various options against the criteria defined for the MCA. The colour key below outlines the basis for initial identification of potential impacts against indicators and criteria.

	Beneficial/Opportunity	Identification of where potential beneficial impacts may arise, or aspects which incur opportunity relevant to specific criteria/indicators
	Negative/Non-Beneficial	Identification of where potential non-beneficial impacts may arise, or aspects which may incur negative impacts relevant to specific criteria/indicators
	Beneficial/Negative in combination	Identification of where potential beneficial and negative impacts may arise in combination, or aspects which may incur both beneficial and negative impacts relevant to specific criteria/indicators
	Neutral/Negligible	Identification of where neutral or negligible impacts may arise, or aspects which are not likely to be impacted relevant to specific criteria/indicators

Table 7-1 Identification of potential impacts against key social criteria/indicators

	Option 1 Very light rail & active transport	Option 2 Hi-Rail & active transport	Option 3 Cycle track basic	Option 4 Active transport- cycle, mobility scooter, walking	Option 5 Automated Vehicles/ driverless pods & active transport	Option 6 Busway (traditional) & active transport
Sustainability in terms of environment (energy use, emissions - greenhouse gases)						
Future proofing for capacity and technology (innovation)						
Accessibility and mobility						
Safety, including safety from a user perspective						
Integration with local and regional transport networks						
Integration with interstate and other transport networks						
Environmental impacts (including emissions)						
Access to employment						
Support of existing events, markets and the like						
Reduced car reliance						

	Option 1 Very light rail & active transport	Option 2 Hi-Rail & active transport	Option 3 Cycle track basic	Option 4 Active transport- cycle, mobility scooter, walking	Option 5 Automated Vehicles/ driverless pods & active transport	Option 6 Busway (traditional) & active transport
Economic growth and development						
Cost to users						
Amenity impacts to residents - sound/noise impact/aesthetics						
Accessibility to events, facilities and attractions						
Health benefits (recreation and commute)						
Cultural Diversity and Participation						
Recreation						

The matrix helps to demonstrate where most of the potential beneficial impacts or opportunities may arise relevant to each of the potential options, and where some of the potential key issues and concerns may arise with regards to some of the criteria/indicators relevant to each of the potential options. Based on the preliminary analysis above, the options with most favourable (highest number of areas where potential beneficial impacts may arise, or aspects which incur opportunity relevant to specific criteria/indicators) include options 3 (cycle track basic), 4 (active transport- cycle, mobility scooter, walking and 5 (automated Vehicles/ driverless pods & active transport).

Based on the above high level assessment of options against socially relevant criteria/indicators, it was possible to further consider potential key impacts, allowing generation of a preliminary list of potential issues and impacts within broad categories. Preliminary assessment of potential social impacts relevant to development, construction and operation of the multi use options within the rail corridor have been discussed in the following sections. These include both direct and indirect and cumulative impacts, impacts within and surrounding the rail corridor, to the community and the environment, and impacts in the broader regional context.

Key areas of potential impact relevant to the key social aspects of the project include the following:

- Tourism
- Employment
- Economic opportunities and access
- Asset values – private and public
- Safety and security
- Transport mobility – traffic, school commuting, transport inclusion and connectivity
- Health and wellbeing- active transport and recreation
- Construction nuisance
- Environmental and amenity issues
- Cultural Heritage values and significance
- Market and event patronage
- Displacement of itinerant and youth populations using rail corridor land, tunnels
- Change of access to station buildings used for community forums, office space
- Change of land use activity adjacent to conservation areas and nature reserves.

The potential areas of impact are discussed further in the sections below.

7.2 Discussion of direct and indirect social impacts

Direct and indirect impacts could affect the people, groups, industries and organisations within the Byron Shire community, as a result of development, construction and operation of potential multi use options outlined for the rail corridor. In consideration of the social criteria/indicators outlined in Table 7-1, the following sections discuss the key areas of potential impact identified above. This section is further supported by the discussion in the Community Benefits chapter of the Economics Report.

7.2.1 Tourism

Both direct and indirect impacts to tourism as a result of activation of the corridor are relevant to a number of the social aspects, criteria/indicators outlined in Table 7-1. In addition to residents, Byron has a substantial number of tourists and visitors who may patronise the multi use rail corridor. The majority of people travelling within the region would be likely to only want to travel a short distance, creating an opportunity for building an economically viable transport corridor.

Multi use of the rail corridor is likely to have benefits to the current high volume of tourists, providing alternative transport and connection options. Some multi use options may present as tourism attractions in their own right. The multi use of the corridor creates extensive opportunity to more efficiently move the tourist populations throughout the shire, to enhance their experience. There is also the potential that an effective multi use option for the rail corridor may add to increasing tourism numbers, enabling more effective access Byron Township and to the outlying areas of Byron Shire (hinterland areas and more rural townships and populated town centres i.e. Bangalow, Mullumbimby, Brunswick Heads).

Although there are benefits from tourism, peak visitor periods can cause considerable congestion costs. Both anecdotal evidence and traffic count data indicate increased congestion on Byron roads, particularly during the peak travel months (summer and the April festival period). Therefore, activating the transport corridor may help to alleviate these impacts.

Future phases of project development should further consider the impacts to tourism in the region, and the broader implications to the community.

7.2.2 Employment

Construction phases relevant to all options will present a range of local employment opportunities. Unemployment rates in Byron Shire hit a peak in 2015 (11 per cent), and although have steadily declined to 4.74 per cent in 2018, these levels are still above the NSW average. As employment is a key wellbeing indicator for the Byron Shire, future stages of project development should outline a framework for maximising local employment benefits for the Byron community.

Opportunity to access employment opportunities (especially for those who are transport disadvantaged) will be a beneficial impact of the activation of the rail corridor. Multi use solutions with limited ability to connect with other transport networks may present as neutral or negligible impact in relation to employment. Employment opportunities will also arise from operation of the multi use options, with higher maintenance and operational requirements of some options providing additional long-term employment opportunities. The activation of the rail corridor may open up access to new areas adjacent to the rail corridor, which will potentially provide the opportunity for new businesses in the medium to long term. New businesses will result in additional employment opportunities. As an example, employment opportunities may arise in relation to potential use of the rail corridor for active transport, i.e. hiring cycles/scooters.

Very light rail options are considered to provide the best rating in terms of increasing employment opportunities, this is due mostly to slightly higher operational and maintenance requirements of the systems. The rail trail option was considered to provide the least benefit in terms of employment opportunities as there would be minimal maintenance and operational requirements against other options.

Overall the activation of the rail corridor for multi use options will incur direct and indirect, beneficial employment impacts to the Byron community, as opposed to the rail corridor remaining as is (unused). Future phases of project development should further consider frameworks for increasing employment opportunities in the region, and the broader implications to the community due to the multi use of the rail corridor.

7.2.3 Economic opportunities, assets and access

Reactivation of the rail corridor is seen as a positive impact on the local economy, with improved customer access to commercial and retail locations, as well as opportunity in locations not previously accessible. Businesses operating services similar to the multi use options (for example bus operators) may be impacted negatively, or they may find ways to adapt their business in a complementary manner. Community businesses operating from the station buildings may also be negatively impacted, although this would be expected to be temporary and manageable based on adequate planning and alternatives.

There may be some beneficial and negative direct and indirect impacts on both private and public assets (i.e. private properties or businesses) with improved connectivity from the activated multi use solution creating more effective access from a market value perspective. However perceived impacts from noise (see Section **Error! R eference source not found.**) and from public related access adjacent to private property may be seen as a negative.

From a public perspective, the value of the rail corridor asset is likely to be improved through activation and multi use. However, operation of transport systems will cost more, where operational costs sit will be dependent on/determined in subsequent stages of project development (i.e. business case).

Economic growth and development within the region was identified as being most positive with regards to the very light rail option, and also rated high with regards to the Hi-Rail option and the AV pods. These options are considered to provide increased opportunities for integration with other economic drivers and development opportunities within the region. The rail trail option was considered least likely to have a beneficial impact on economic opportunities, with a more neutral or negligible impact in this regard.

Future phases of project development, in conjunction with shire planning policy, should further consider economic opportunities in the region, and the broader implications to the community due to the multi use of the rail corridor.

7.2.4 Safety and security

Activation of the rail corridor for all multi use options has the potential to expose residents to perceived or real safety risks. Cyclists are at greater risk of accidents than motor vehicle users and so there are beneficial impacts by creating off-road paths and crossings to reduce exposure to traffic injuries by reducing road users and the interaction between vehicles and active transport users. Safety will be a key consideration in the design due to the potential to create locations which encourage or allow criminal activity exposing the users to negative impacts.

The MCA undertaken rated some of the multi use options as having more of an impact on safety and security aspects of the rail corridor. For the rail trail, minimal lighting or infrastructure for night usage my incur additional safety concerns for users outside of daylight hours. A system which is more constantly operating vehicles i.e. with rail or pods, would be preferable for security as the vehicle could be fitted with a mounted camera and constant surveillance.

Safety aspects of the vehicle related multi use options will need additional assessment in further stages of project development to ensure safety and security of users is a priority. Sensors on vehicles and separation between vehicles and passive uses (walking, cycling) will improve safety for all users of the rail corridor.

7.2.5 Transport mobility – traffic, school commuting, transport inclusion and connectivity

Although there are benefits from tourism, peak visitor periods can cause considerable congestion costs to the community, particularly where multiple transport modes or public transport options are unavailable. Both anecdotal evidence and traffic count data indicate increased congestion on Byron roads, particularly during the peak travel months which is seen as a negative impact. Multi use solutions which provide the opportunity to present reduced travel time, reduced travel time variability and reduced vehicle operating costs are benefits to the community, as is the potential to connect transport disadvantaged persons or less populated areas across the region.

School commuting opportunities for some schools are seen as a potential benefit. It is understood that currently, school children make up the larger portion of users for existing bus networks in the region. Therefore, it is expected (particularly where schools are closely located to or accessible via the corridor, that they would also contribute to patronage numbers of multi use options.

Due to the fixed nature of the rail corridor multi use solutions are likely to disproportionality benefit residents from locations directly along the rail corridor, particularly those living within 800 m of stations or stops. This transport consideration may present negatives to other locations and increase dissatisfaction with social cohesion and connectedness a throughout the region.

Ordinarily, it would be difficult to envisage that self-drive tourists, who make up the majority of tourists (over 70 per cent), would switch from private vehicle transport to a public transport option along the rail corridor. However, a key reason that may lead visitors to patronise alternative transport along the rail trail corridor is to avoid congestion. The portion of visitors traveling from Queensland and Tweed Shire arrive at Byron Bay by travelling down the M1 and through Ewingsdale Rd, the latter of which experiences daily congestion.

The recent survey undertaken within the Byron Shire community around use of the rail corridor for multi use transport options has highlighted the importance of working towards more efficient transport mobility. Evident frustrations with road congestion (particularly relevant to impacts from tourists and visitors) and the lack of options for public transport and connectivity across the community indicate potential willingness to consider alternate transport options should they be available. Additional dissatisfaction around parking, and the general state of the roads in the shire may indicate willingness to consider use of potential public transport options along the rail transport corridor. However, it is not possible to accurately estimate the number of tourists who might switch to a rail corridor transport option to avoid congestion without further studies.

Overall, improvements in transport mobility across the community are seen to be beneficial in both the short and long term, for all options. Those that enable more stopping points and more connectivity to transport modes outside the rail corridor will likely incur more direct beneficial impacts to transport mobility across the community.

7.2.6 Health and wellbeing- active transport and recreation

Health and wellbeing are overall a priority for the Byron community. The recent community survey undertaken indicates that a large portion of those that responded considered improving health and wellbeing to be a very important aspect of the project to activate the corridor. In general, the community is very passionate about their outdoor focused lifestyle, and support of increases in cycling, walking and mobility pathways. The opportunity to deliver transport options in the rail corridor that are sustainably focused and result in minimal emissions is also a key focus for the broader community.

Health and wellbeing benefits are likely to result from multi use options due to the increased access to safe and available cycle and walking facilities for exercise and recreation as well as transport, creating long term beneficial impacts for the broader community. Encouragement to avoid car travel is also a potential beneficial impact. Exposure to emissions resulting from multi use options should be considered due to the potential negative impacts on the community. Over 84 per cent of respondents via the recent community survey rated reducing emissions as being very important for the use of the corridor.

7.2.7 Construction nuisance

From an amenity, social and environmental perspective, there were a number of potential negative impacts identified relevant to the construction phase. These include impact on regrowth vegetation, water quality (erosion and sedimentation), noise, vibration and air quality impacts. These in general have industry-accepted mitigation measures which can be employed to lessen the impacts on the community and most sensitive receptors. Multi use options which require significant construction works (i.e. very light rail, busway) will incur more significant potential impacts than those that have minimal construction works requirements (i.e. rail trail).

Impacts during the construction phase which are not easily addressed through mitigation measures include impacts on cultural heritage values and items (Aboriginal and non-Aboriginal – see below).

7.2.8 Cultural Heritage Values and Significance

Physical Aboriginal values within the rail corridor are likely to have been previously impacted through the original development of the rail corridor, therefore reactivation options are considered neutral. However intangible or spiritual values may be present and impacted negatively by the reactivation.

The connectedness of the broader Aboriginal community is currently impacted by transport disadvantage and a lack of access to public transport which could be benefitted by multi use solutions which are strategic in their links with other transport systems and/or gathering points. Opportunities to present, display and educate the community on Aboriginal culture through multi use rail corridor options present benefits, as do Aboriginal business and employment opportunities from the reactivation. Any future stages of the project should incorporate a framework for ongoing consultation with and integration of the aboriginal community to ensure no negative impacts result.

Non- aboriginal heritage features throughout the railway alignment represent historic rail development and engineering achievements. Opportunities to present, display and educate the community on rail history through multi use rail corridor options present significant benefits.

7.2.9 Market and event patronage

Market and event patronage for multi use options is considered likely to be a benefit, with opportunity for tourists without vehicles and transport disadvantaged persons to access markets and events. Opportunities to create new market and events along the rail corridor is a potential benefit from a business perspective but can impact negatively on nearby residents due to increased noise and traffic. However, existing markets and events not adequately connected with the multi use option may experience negative impacts.

Hosting these events near transport corridors (active or otherwise) has the potential to yield additional transport, environmental and health benefits to individuals and communities. Event attendees are more likely to travel to and between communities if there is a convenient means of transport.

Music festivals often draw the most visitors when compared to other cultural events. However, large music festivals are designed to be self-contained as attendees are given the opportunity to camp on site, with various amenities available to make the stay more comfortable. As such, travel to communities surrounding the event sites e.g. Ocean Shores near North Byron Parklands is limited. Notwithstanding, there would be opportunity to decrease car traffic entering and exiting these sites at the start and end of each event if park and rides were available from another location on the rail corridor.

Error! Reference source not found. below has summarised the current estimate of possible patronage on t he rail corridor transport option due to the main markets. The details of each market have been explained in the Economics Reports relevant to this study however, here we have separated all farmers markets and general markets into geographic locations to provide an indication of the patronage expectations on each leg of the railway corridor.

Table 7-2 Summary of estimated number of people using the railway corridor and reduced number of car trips per year

	Annual on Corridor	Number of Car Trips	Number of Reduced Car Trips
Byron Bay	190,010	459,866	229,933
Bangalow	80,000	173,724	86,862
Mullumbimby	128,000	330,751	165,375
Brunswick Heads	21,120	45,863	22,932
Total	**419,130**	**1,010,204**	**505,102**

Byron Bay markets are the largest markets and have the largest expected patronage however, to access this demand the railway corridor transport option would need to service both north and south directions. The Mullumbimby markets are the second largest but there is a need for the new transport option to take people to the actual market location for the farmers market as it is outside the walking distance most people would expect to walk. Brunswick Heads is also not very close to the railway corridor and therefore, would require a service that transports people to the market location.

7.2.10 Displacement of itinerant and youth populations using rail corridor land, tunnels

As a part of this assessment, it was outlined that itinerant and youth may use the existing rail corridor land and tunnels for shelter, storage and gathering. Reactivation of the corridor for multi use could therefore result in significant impacts to these groups. Although thought to be only a small number of persons, displacement of any persons I considered a significant negative impact, which would result from all multi use options. Further investigation of itinerant and youth populations using the rail corridor land and tunnels should be investigated within future stages of the project and adequate frameworks put in place in order to manage and mitigate significant impacts.

7.2.11 Change of access to station buildings used for community forums, office space

Use of the disused rail stations for community forums and office space have been identified as a current beneficial use of the public asset. Impact on this would potentially be negative, however with adequate management and planning, this could be short term and minimal impact.

7.2.12 Change of land use activity adjacent to conservation areas and nature reserves.

The following state government reserves for the purpose of conservation areas and nature reserves have been identified adjacent to the rail corridor.

- Billinudgel Nature Reserve
- Marshalls Creek Nature Reserve
- Jinangong Nature Reserve
- Brunswick Heads Nature Reserve
- Tyagarah Nature Reserve
- Cumbebin Swamp Nature Reserve
- Cape Byron State Conservation Area
- Arakwal National Park
- Ti-Tree Lake Aboriginal Area

Increased access to conservation areas and nature reserves for recreation and natural experiences can be a significant benefit to the community, however negatives such as pest and weed exposure, increased rubbish, increased noise and general degradation to the areas are also potentials.

7.3 Environmental Considerations

A preliminary environmental constraints and considerations assessment undertaken for the rail corridor outlined a number of potential constraints and risks relevant to

environmental aspects of the rail corridor. These have been considered in the assessment of options against criteria to generate the preliminary list of broad social impact and issues. The key constraints and considerations for the project with regards to environmental aspects are around contaminated land, noise, vibration and air quality, ecology and Aboriginal and non-aboriginal heritage. Impacts on water quality, geology and topography are considered to present a low risk to the project.

In addition, future planning and approval requirements for the project will need to consider detailed environmental impact assessment, inclusive of continued stakeholder engagement. Environment and sustainability are important aspects for the Byron community and will be key drivers for future phases of development of multi use options for the rail corridor.

Error! Reference source not found. provides a summary of the environmental components analysed for t he activation of the corridor, a summary of constraints and indication of risks to the project. Specific recommendations for each environmental component are also included.

Table 7-3 Summary of environmental components reviewed and recommendations for on-going work

Environmental component	Risk to the project	Summary of constraints	Recommendations
Planning and approvals	Moderate	The proposal is designed to improve transport options and reduce vehicle use, so would be in keeping with regional and transport plans in the area. The level of impact assessment and pathway would be confirmed as part of feasibility and concept design.	Planning pathway to be confirmed alongside concept design.
Community and Stakeholder Engagement	High	The proposal has historically been controversial with varying interest from the general public in re-opening the rail link, however a multi use rail corridor, reducing vehicle movements may be more appealing.	Detailed Social Impact Assessment on defined option, ongoing consultation.
Topography, geology and soils	Low	A section of the study area passes through estuarine flats, but most of the area is sandstone, and basalt.	To be considered in further environmental assessment in the future, if the proposal is progressed.
Contaminated Land	Moderate	No sites of potential contamination were identified, however due to previous rail use contamination is assumed unless proven otherwise.	Due to the potential for contamination from previous rail work, any spoil would need to be tested and disposed of appropriately. ASS management would

Environmental component	Risk to the project	Summary of constraints	Recommendations
		ASS are potentially present.	need to be implemented.
Hydrology and Water Quality	Low	The study area traverse two river crossings at Brunswick River and Belongil Creek.	Develop plans to minimise impacts on these waterways of the proposal.
Ecology	Moderate	State mapping of the study area has about 50 per cent under native vegetation that could meet the criteria for several threatened ecological communities and provide habitat for threatened flora and fauna species.	There are opportunities to improve ecological outcomes through bush restoration in cleared and disturbed parts of the study area, enhancing wildlife corridors. Detailed ecological assessment as part of on-going planning
Noise and Vibration	Moderate	The study area passes in close proximity to sensitive receptors, particularly in the townships of Byron Bay, Bangalow, Mullumbimby and Billinudgel.	Noise and vibration assessment and consideration during feasibility and concept design.
Cultural Heritage	Moderate	Four potential aboriginal heritage sites were identified, and the indigenous community is an active and important part of the local Byron community. Non-aboriginal heritage sites include: Byron and Mullumbimby railway stations, several rail tunnels and the underbridges along the study area.	Cultural heritage assessment to be completed.
Climate Change and Sustainability	Low (potential opportunities though)	Study area traverses flood-prone areas which may become worse under various climate change scenarios. The proposal however could reduce greenhouse gas emissions and be viewed as a “green” project in a	Incorporate BSC’s Climate Change Planning Policy (BSC 2009) and ISCA’s. principles into further planning.

Environmental component	Risk to the project	Summary of constraints	Recommendations
		community that values open space, ecology and sustainability.	

7.4 Impacts within the project's wider area of influence including beyond the project scope impacts

Future consideration of multi use rail corridor options may apply techniques such as integrated modelling to understand and form linkages and assess the potential direct flow-on effects to other sectors of the Northern NSW region and communities.

These are important considerations relevant to potential impacts as such opportunities will include the indirect or flow-on of change as generated by the options developed by the rail corridor, and will include potential changes to employment, asset values, inclusion, mobility and levels of service provided to regional areas such as the greater Tweed Shire, Lismore and surrounds. In particular, the flow-on effects to the community at large through inclusion and connectivity afforded by activity in the rail corridor should be further assessed.

These impacts have not been considered for this phase of the project due to initial focus on the Byron Shire region.

8 RECOMMENDATIONS FOR FUTURE ASSESSMENT/CONSIDERATION

It is recommended that the social assessment process should continue and refine as the project progresses to future feasibility, concept and design phases. The methodologies used and consultation strategy developed was tailored specifically to the current project phase. Future, ongoing engagement with the community will be critical to continue to monitor and address the impacts preliminarily identified in this social assessment. As the project progresses to future feasibility, concept and design phases consultation should be regular, open and inclusive to provide the community with a sense of empowerment and trust in the council, and to provide for the most sustainable long-term development and use of the rail corridor.

Importantly, no matter the rating, the potential impacts identified in the preliminary assessment should continue to be captured and addressed throughout future project phases. Future phases of the project should allow for a greater level of collaborative and participatory consultation with the community where a greater understanding of development and options can be considered and analysed in more detail. The most effective ongoing social assessment methodology to accompany future feasibility, concept and design phases consultation should include a clear provisional framework for monitoring and managing social impacts. This framework would ideally be developed in collaboration with the community, key stakeholders as well as Byron Shire Council.

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APPENDIX A ONLINE SURVEY

Community Engagement Survey
Multi-Use Rail Corridor (Yelgun to Bangalow)

1088

Total Responses

Date Created: Tuesday, March 26, 2019

Complete Responses: 960

Q1: Which if the following statements best describes you?

Answered: 1,088 Skipped: 0

ANSWER CHOICES	RESPONSES	
I live in Byron Shire	49.45%	538
I work or study in Byron Shire, but live outside the Byron Shire	8.18%	89
I am a visitor to Byron Shire who lives in NSW	31.25%	340
I am a visitor to Byron Shire who lives in Australia, outside NSW)	10.66%	116
I am an international visitor to Byron Shire	0.46%	5
Other (please specify)	0.00%	0
TOTAL		1,088

Q2: Which location do you live in, in Byron Shire?

Answered: 527 Skipped: 561

ANSWER CHOICES	RESPONSES	
Byron Bay town and Byron Arts & Industry Estate	23.91%	126
Mullumbimby	15.18%	80
Bangalow	8.35%	44
Billinudgel and/or surrounds	2.09%	11
Brunswick Heads	5.12%	27
Hinterland - east of the highway including Ewingsdale, Coopers Shoot etc.	5.69%	30
Hinterland - west of the highway including Federal, Coorabel etc..	7.59%	40
Main Arm	2.28%	12
Ocean Shores area (including New Brighton and South Golden Beach)	12.52%	66
Suffolk Park and Broken Head	12.71%	67
Other (please specify)	4.55%	24
TOTAL		527

Q3: Is a car your main form of transport to travel around the Shire?

Answered: 527 Skipped: 561

ANSWER CHOICES	RESPONSES	
Yes	92.03%	485
No	7.97%	42
TOTAL		527

Q4: Which best describes your car travel in and around Byron Shire?

Answered: 527 Skipped: 561

ANSWER CHOICES	RESPONSES	
I mostly travel in or around our towns during peak hour	28.84%	152
I mostly travel in or around our towns outside peak hour	49.53%	261
I mostly travel to outside our Shire during peak hour	6.07%	32
I mostly travel to outside our Shire outside of peak hour	5.88%	31
Other (please specify)	9.68%	51
TOTAL		527

Q5: Do you currently use a bus service for travel in and around Byron Shire?

Answered: 527 Skipped: 561

ANSWER CHOICES	RESPONSES	
Yes	7.97%	42
No	92.03%	485
TOTAL		527

Q6: Do you currently use a car to regularly (at least once a week) travel into the Shire?

Answered: 88 Skipped: 1,000

ANSWER CHOICES	RESPONSES	
Yes	93.18%	82
No	6.82%	6
TOTAL		88

Q7: Which best describes your car travel in and around Byron Shire?

Answered: 88 Skipped: 1,000

ANSWER CHOICES	RESPONSES	
I mostly travel in or around Byron Shire during peak hour	54.55%	48
I mostly travel in or around Byron Shire outside peak hour	39.77%	35
Other (please specify)	5.68%	5
TOTAL		88

Q8: Thinking about when you visit Byron Shire - our towns and surrounds - what are the major form/s of transport you use to get here and get around? Tick all that apply

Answered: 455 Skipped: 633

ANSWER CHOICES	RESPONSES	
Private car	87.47%	398
Rental car	8.57%	39
Plane	9.67%	44
Train	18.68%	85
Commercial bus ie: Murrays, Greyhound, Skybus	3.52%	16
Small 12 seater buses for example Byron Easy Bus	1.98%	9
Hitchhike	0.44%	2
Cycle	25.05%	114
Taxi	1.54%	7
Uber	1.54%	7
Other (please specify)	3.96%	18
Total Respondents: 455		

Q9: Thinking about what can happen on the rail corridor from Yelgun to Byron Bay to Bangalow, what would you like to see on the corridor?

Answered: 964 Skipped: 124

	WOULD NOT LIKE TO SEE AT ALL	DON'T HAVE AN OPINION EITHER WAY	WOULD VERY MUCH LIKE TO SEE	TOTAL	WEIGHTED AVERAGE
Public transport service - train ONLY	38.84% 308	11.48% 91	49.68% 394	793	3.22
Public transport service - light rail ONLY	40.50% 307	18.60% 141	40.90% 310	758	3.01
Public transport service - bus services ONLY	65.65% 472	25.87% 186	8.48% 61	719	1.86
Cycle and/or walking path ONLY	33.67% 270	9.23% 74	57.11% 458	802	3.47
Other use such as cafes, retail etc. ONLY	51.03% 371	22.28% 162	26.69% 194	727	2.51
Combined use - public transport plus cycling and/or walking track and cafes retail	22.67% 192	15.58% 132	61.75% 523	847	3.78

Q10: Thinking about the uses introduced in the previous section, who do you think would be the main groups to use the transport or activities?

Answered: 964 Skipped: 124

	MAIN USERS WOULD BE TOURISTS	BOTH TOURISTS AND LOCALS WOULD USE THIS SERVICE	MAIN USERS WOULD BE LOCALS TO GET TO WORK, SCHOOL OR TOWN	NO ONE WILL USE	TOTAL	WEIGHTED AVERAGE
Public transport service - train ONLY	9.24% 81	64.08% 562	7.18% 63	19.50% 171	877	2.95
Public transport service - light rail ONLY	12.93% 110	62.63% 533	8.93% 76	15.51% 132	851	2.91
Public transport service - bus services ONLY	8.04% 66	32.52% 267	31.67% 260	27.77% 228	821	3.65
Cycle and/or walking path ONLY	10.53% 93	70.10% 619	4.87% 43	14.50% 128	883	2.87
Other use such as cafes, retail etc. ONLY	22.72% 189	58.77% 489	1.80% 15	16.71% 139	832	2.50
Combined use - public transport plus cycling and/or walking track and cafes retail	6.78% 59	80.00% 696	3.91% 34	9.31% 81	870	2.94

Q11: If we were able to introduce public transport and recreation activities, please indicate which do you see yourself using? Select those you think you would use.

Answered: 964 Skipped: 124

	PUBLIC TRANSPORT - TRAIN	PUBLIC TRANSPORT - LIGHT RAIL	PUBLIC TRANSPORT - BUS SERVICES	CYCLE &/OR WALKING TRACK	WOULD NOT USE	TOTAL	WEIGHTED AVERAGE
Holiday travel	31.03% 287	12.22% 113	0.76% 7	47.46% 439	8.54% 79	925	2.99
Regular shopping	22.39% 197	21.48% 189	3.07% 27	24.32% 214	28.75% 253	880	3.44
To and from work or school	20.64% 174	12.93% 109	3.20% 27	23.72% 200	39.50% 333	843	3.88
Going out in the evening	26.03% 228	26.26% 230	3.20% 28	16.89% 148	27.63% 242	876	3.21
Going to the markets	24.83% 223	21.49% 193	2.12% 19	38.42% 345	13.14% 118	898	3.07
Festivals & events	29.98% 268	23.38% 209	6.04% 54	30.43% 272	10.18% 91	894	2.78
Recreation, to the beach & exercise	23.20% 216	13.64% 127	1.40% 13	55.21% 514	6.55% 61	931	3.15

Q12: What fee would you be willing to pay for a one-way trip from Bangalow or Mullumbimby to Byron township?

Answered: 964 Skipped: 124

ANSWER CHOICES	RESPONSES	
Less than $5 per person	39.52%	381
$5 to $10 per person	41.49%	400
$10 to $20 per person	5.81%	56
$20 plus per person	1.35%	13
Other (please specify)	11.83%	114
TOTAL		964

Q13: Thinking about the Yelgun to Bangalow corridor and the activities that we have mentioned in this survey, how important is an activated corridor to delivering these community factors?

Answered: 964 Skipped: 124

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT AT ALL IMPORTANT	TOTAL
Improving our general way of life	83.09% 791	13.97% 133	2.94% 28	952
Ease of accessing community services and facilities	74.11% 690	20.09% 187	5.80% 54	931
Improving our health and well-being	81.57% 770	14.94% 141	3.50% 33	944
Respecting Aboriginal culture	53.02% 492	34.48% 320	12.50% 116	928
Preserving the local environment and biodiversity	78.50% 734	18.82% 176	2.67% 25	935
Reducing emissions	84.02% 794	13.12% 124	2.86% 27	945
Improving the aesthetics	66.41% 615	27.97% 259	5.62% 52	926
Improving amenity including background noise and air quality	73.20% 680	22.39% 208	4.41% 41	929
Improving safety	77.97% 729	19.25% 180	2.78% 26	935
Providing equitable access for all our community	80.09% 748	18.31% 171	1.61% 15	934
Preserve local culture, unique to Byron Shire	68.00% 631	26.94% 250	5.06% 47	928
Improving access to work opportunities for locals	73.71% 687	22.32% 208	3.97% 37	932

Q16: What age group do you belong to?

Answered: 959 Skipped: 129

ANSWER CHOICES	RESPONSES	
Under 14 years	0.00%	0
14-17 years	0.63%	6
18-24 years	3.44%	33
25-34 years	7.61%	73
35-44 years	16.16%	155
45-54 years	21.17%	203
55-64 years	28.26%	271
65+ years	21.38%	205
I would rather not say	1.36%	13
TOTAL		959

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Q17: Are you male or female?

Answered: 960 Skipped: 128

ANSWER CHOICES	RESPONSES	
Male	59.48%	571
Female	37.50%	360
I would rather not say	3.02%	29
TOTAL		960