APPENDICES

Castlemaine to Maryborough Rail Trail Feasibility Study

A STRATEGIC CONTEXT

Document	Summary	Relevance
Castlemaine - Maryborough Rail Trail Inc. Strategies, Policies and Plans		
Castlemaine-Maryborough Rail Trail Project Management Plan (2022)	The Project Management Plan completed by the Castlemaine-Maryborough Rail Trail Inc, aims to: • define the purpose, objectives, and scope of the Rail Trail Business Case and Feasibility Study (the Study) • define the deliverables of each phase the Study • identify the people and resources required to deliver the Study outputs • allocate projected costs against stages of the Study • specify the timeframe for the delivery of each phase • identify uncertainty associated with the Study and how it will be managed • identify stakeholders for the Study and how they will be engaged • identify scheduling or communications dependencies	
Dreaming the Landscape: Imagining the trail in 2028	This document explores the possibilities of the Castlemaine - Maryborough Trail including indigenous representation, artwork, tree planting, lighting, one-of-a-kind visitor experiences, potential business/ value add opportunities, and the contribution the trail will make in the wider trail network	Dreaming the landscape outlines the broader vision for the trail and beyond. The points raised in this document will be considered throughout the Study particularly when exploring the 'Enhanced destination image / competitive positioning' of the trail.
Tourism data and Insights	The Tourism Data and Insights complied by the Castlemaine - Maryborough Rail Trail Inc. provides a comparison between other established Victorian Rail Trails in terms of length, amenities, market access, visitor and resident spend, and 'pulling power'. It also outlines the numbers involved in cycling tourism, the benefits of designing a trail based around the visitor experience, the importance of marketing, and social and economic sustainability.	This document provides a summary of the benefits of trails with some significant facts and figures to be considered in this Study throughout the Business Case stage.
Regional Tourism Attractions & Festivals	This document outlines a selection of the key attractions & festivals that are featured on the Tourism Map (see below). These include nature based, epicurean, arts and culture, and First Peoples destinations and events.	The destinations and events outlined in this document will be considered during the course of this study as they will play an important role in the identification of the trail alignment and the understanding of the visitation drivers for the Castlemaine - Maryborough Trail.
Tourism Map 2022	The Tourism map provides a guide to the Castlemaine - Maryborough Rail Trail and includes opportunities for First Peoples led experiences, nature interactions, arts and culture and epicurean destinations.	As above, the points outlined on the map below will play a key role in identifying the understanding the key attractions and points-of-differences of the Castlemaine - Maryborough Trail.

Document	Summary	Relevance
Central Goldfields Shire Strategies, Policies and Plans		
Integrated Transport Strategy 2020-2030	This strategy addresses the challenges and opportunities that the Shire's network currently faces in achieving Council's vision 'to be a vibrant, thriving and inclusive community'. The strategy outlines four key themes for that the Council's transport network should support: • An active and engaged community • Safe and healthy towns • A vibrant and mobile economy • A connected shire.	Relevant to this Study are the following opportunities: • Council's aim of providing greater transport choice to the community by making low-cost and healthy transport options more safe and desirable. • Use existing road and rail corridors or traditional owner pathways to connect places of interest to deepen the Shire's Tourism offering. This can be built upon further through interpretation, accommodation and transport related products and experiences • Strategic support for exploring the feasibility for the Maryborough to Newstead Rail Track Riders project • Improve existing walking and cycling trails • Continue to provide wayfinding
Recreation and Open Space Strategy 2020 to 2029	This strategy aims to establish a clear direction for the provision, development and management of high quality open space, sport and recreation places and spaces to increase the CGSC community's opportunities to be 'Healthier and More Active More Often'. The key strategic priorities are: • Active community - with a focus on lifelong participation in physical activity • Active sport, recreation and open space sector with a focus on clubs, organisations and facilities • Active places and spaces with a focus on multipurpose facilities and outdoor spaces that provide for a range of active recreation opportunities for all	The following actions outlined in the strategy are relevant to this Study: • Improve connections in the tracks, trails and path network • Improve existing tracks, trails and pathways supporting infrastructure including seeking funding for missing links to key destinations in townships • Expand trail links to neighbouring local government areas including participating in the planning of the Castlemaine - Maryborough Rail Trail and investigation of track rider option for Newstead or Carisbrook to Maryborough • Identify locations for bike trail head shelters in Maryborough
Walking and Cycling Strategy 2017-2026	The aim of this strategy is to provide a framework to guide Council in relation to walking and cycling opportunities including paths, trails, infrastructure, events, programs and services. The strategy also aims to better utilise existing infrastructure and increase participation rates in the municipality.	Of particular relevance to this Study are the following points: • The Maryborough to Carisbrook Trail is one of the most used trails in the shire • Further research is needed to develop a trail between Maryborough to Castlemaine with a link to Maldon, requiring inter-municipal cooperation, a feasibility study and considerable resources • A key action of the strategy is "Explore the potential to develop a rail trail from Maryborough to Castlemaine via Newstead, with a link to Maldon"

Document	Summary	Relevance
Economic Development Strategy 2020 - 2025	This strategy aims to encourage economic growth in the Shire and outline a clear economic focus for the key townships of Maryborough, Talbot, Carisbrook and Dunolly. Key objectives include: • Leverage economic outcomes from industries of competitive advantage and growth sectors in the Shire such as health, education, agriculture and food manufacturing, as well as emerging industries including tourism, renewable energy and other green industries. • Enhance townships to support liveable communities and strengthen the tourism appeal of the Shire. • Transform the Maryborough Railway Station Precinct into an iconic, game-changing local and visitor hub that accommodates a mix of tourism, commercial, transport and community uses.	Whilst there is no direct mention of a trail between Maryborough and Castlemaine, the strategy does note the following relevant points: • The need to enhance the Shire's townships to support liveable communities including delivering infrastructure projects that improve access, connectivity, amenity and safety and projects that can become a catalyst for investment and economic stimulus. • The most iconic and recognisable attraction in Maryborough is the Railway Station • Investigate the transformation of the Maryborough Railway Station Precinct into an iconic, visitor hub that accommodates tourism, commercial, transport and community uses. The project will create a new visitor product for the region, increase trail infrastructure and connect to and complement the proposed revitalisation of the Maryborough Station Precinct, all of which will support the growth of the local tourism industry and livability outcomes.
Tourism and Events Strategy 2020-2025	This strategy provides a plan for future growth and enhancement of the Central Goldfields visitor economy to benefit visitors and locals alike through focusing on the existing and potential tourism and product strengths of the region, and addressing any gaps and barriers to successful and sustainable visitor economy growth. The strategy also recognises the Goldfields Region as an emerging cycling region, with existing cycling assets across the Central Goldfields.	The strategy outlines the following relevant action items: • Develop on-road cycling experiences/trails in Maryborough • Increase in the number of visitors using tracks and trails in the Shire (e.g. for cycling, bushwalking etc.)
Priority Projects Plan 2022	This Plan outlines the priority projects for the shire including: • Lead sustainable growth • Facilitate regional tourism opportunities • Support an active and healthy community • Preserve heritage buildings	Funding to undertake a feasibility study to project the development of the Castlemaine - Maryborough Trail is included as a priority project within the plan. A brief for the project as well as a summary of the benefits is included which can be drawn upon throughout the course of the Study. The plan also seeks to enhance the active transport network by securing fundings to design and construct the tracks, trails and paths network.

Document	Summary	Relevance
Council Plan 2021-2025	The Council Plan sets out Council's Vision, Purpose and Values for the coming years. It also outlines the strategic objectives for the Shire: • Community wellbeing • Growing economy • Spaces and Places • Leading change	The following strategic priorities outlined in the plan demonstrate strategic support for the trail: • Encourage, support and facilitate healthy and safe communities - by increasing the number of walking and cycling paths and trails • Providing engaging public spaces by increasing the quality of walking and cycling paths and trails
Tourism and Events Strategy (2020-2025)	Key objectives include: • Improve visitor experience, product and activation. • Activate underutilised assets through identifying opportunities for contemporary interpretation and experience development. • Revitalise assets, infrastructure and accommodation. • Meet contemporary visitor expectations and increase accessibility and connectivity.	• The project will reactivate the disused Castlemaine to Maryborough rail line to deliver a new visitor product for the region. • The proposal will also provide a new connection between Castlemaine and Maryborough for residents and visitors.

Document	Summary	Relevance
Mount Alexander Shire Strategies, Policies and Plans		
A Commitment to the Aboriginal and Torres Strait Island People of the Shire 2014	This document demonstrates Mount Alexander Shire Council's active intention to support and promote the local Aboriginal community. It commits to the following: • Encourage the local Aboriginal community and other community members to work together to care for the environment. • Develop a relationship between the Shire and the Dja Dja Wurrung Corporation. • Build respect for and promote preservation of Aboriginal cultural practices, traditional sites and significant places. • Facilitate activities which will increase cultural sensitivity and awareness. • Conduct cultural awareness training for staff and Councilors. • Promote a range of economic projects and employment opportunities. • Communicate progress through meetings and a wide range of communication tools	The commitments outlined in this document should be considered throughout the course of this Study, particularly in regards to the business case key questions around *'First Peoples' led experiences and engagement'.*
Economic Development Strategy 2013 - 2017	The Economic Development Strategy presents the following vision for the economic future of the shire *"Mount Alexander will be one of regional Victoria's most attractive places to live, work, and visit, with sustainable growth and investment in a local economy increasingly structured around innovative, highly skilled, and service oriented businesses".* The vision is supported by six objectives including the following relevant points: • Improve factors that impact on livability. • Promote Mount Alexander Shire as a desirable place to live or visit.	Key strategies outlined in this document, relevant to this study include: • Continue the implementation of the Investing in Sport Strategic Plan to develop the supply and quality of recreational facilities and activities. • Extend and improve the walking and cycling trail network in order to cater for the growing local and visitor demand for nature based experiences. • Develop partnerships with neighbouring and regional tourism bodies in order to collectively market the greater region and provide initiatives to increase the standard of tourism experiences. • Identify gaps in the current tourism product offer that are hindering overnight and longer stay visitation and establish business cases for addressing these gaps.
Health and Wellbeing Plan (2021-2025)	The key objective in the strategy is to increase active living.	An increase in the supply of trail infrastructure will provide greater opportunities for residents to undertake recreational activities such as cycling and walking.

Document	Summary	Relevance
Heritage Strategy 2012 - 2016	This heritage strategy sets out principles and actions for keeping, sharing and passing on the municipality's cultural heritage including the following goals: • Building and sharing knowledge of natural and cultural heritage places, collections, Indigenous and intangible heritage. • Managing cultural heritage responsibly. • Creating opportunities to engage with and enjoy our cultural heritage. • Developing and sharing heritage information with the community.	The following key action highlights the relevance of the heritage strategy to the study: • Engage with Vic Track over under-utilised or redundant railway infrastructure such as Castlemaine goods shed and Newstead railway station and goods shed (since developed for community use).
Municipal Public Health and Wellbeing Plan 2021 - 2025	This plan is based on the state Health and Wellbeing Plan, from which a number of goals and objectives have been identified. Of relevance to this study are the following priorities: • Tackling climate change and its impact on health • Increasing active living • Improving mental wellbeing • Reducing Injury	One of the key objectives of this plan is to get more people physically active. In order to achieve this, the following strategic direction has been identified: *'Enhance urban planning and design of the built environment and open spaces to encourage more frequent walking and cycling ... (including improving the quality, accessibility, and connectivity of existing footpaths, bike lanes and shared trails)'* Support for increasing the safety and accessibility of walking and bicycle tracks, on trails and footpaths was also identified during stakeholder consultation.
Integrated Transport Strategy (2020-2030)	Key objectives include: • Leverage the Shire's transport heritage assets to promote local tourism. • Enhance conditions for external investment and economic growth for new and existing businesses. • Enhance tourism experiences and create further opportunities for additional tourist services. • Promote Central Goldfields as a place of choice to work, live and play.	• The project will deliver a new experience for visitors to the region, leveraging a disused piece of transport infrastructure. • Investment in the proposed trail will support the growth of the local tourism industry which will have flow on benefits for economic output and investment attraction.

Document	Summary	Relevance
Walking and Cycling Strategy 2010 - 2020	This Strategy sets out Council's approach to improve and increase walking and cycling. The strategy identifies a network of off-road trails and the requirements the trail network has, including: • Be connected into and out of towns and to the other networks • Be of sufficient quality and provided with appropriate facilities • Avoid crossings and intersections with other vehicles • Be inviting, attractive and safe • Be clear and easy to understand Key actions include: • Build, improve and connect a network of off-road tracks for walkers and cyclists that will give people access from townships to their community and their local environment in a car-free environment. • These tracks will also be a major attractor to the area for recreational walkers and cyclists. • The Shire's natural and cultural beauty and significance will be easily accessible on these tracks with clear signage, quality maps and good facilities along the way.	This strategy identifies existing informal trails that would form part of the Castlemaine to Maryborough Rail Trail and suggests the following actions: • Improve and open the informal trails along the Maldon to Castlemaine and Newstead to Castlemaine railways to create off-road inter-town access, service cyclist commuters, and attract recreational walkers and cyclists. • Explore a quality off-road trail between Maldon and Newstead and create a great tourism drawcard for the area. The strategy also notes that Council will work towards the following: • Primary Trail Routes that allow access to a person in a motorised mobility aid with particular focus on those trail routes that connect to townships and the other walking and cycling networks. • providing a Trail Network that has access to public toilets, seats in shaded summer locations and drinking fountains at acceptable intervals • a Trail Network that avoids road crossings, or where road crossings are unavoidable provides at-grade crossings that slow traffic and give walkers and cyclists priority • improving the planting and amenity of the Trail Network • planning guidelines that will protect Primary Trail Routes against development that impinges on the access, views and visual amenity of these trails, and ensure compliance at a statutory and enforcement level • developing a clear, consistent, connected and complete Wayfinding system across the Shire that assists walkers and cyclists to comfortably navigate their way around

Document	Summary	Relevance
Public Open Space Strategy 2016	This strategy aims to deliver a diverse range of attractive, appealing and sustainable public open spaces that protect and enhance natural environments, support a range of physical activity participation opportunities and enhance the character of townships and neighbourhoods. The guiding principals to support this vision include: • All residents should have access to appropriate open space • A high level of connectivity to enhance overall walkability and to encourage active transport and informal physical activity participation • Use of open space should not be limited by age • A hierarchical approach to open space management • The development, maintenance and enhancement of sustainable open space environments that facilitate healthy lifestyles, community connectedness and social cohesion • Provision of facilities that support a range of sport, recreation, physical activities, community events, festivals and gatherings • Open space reserves to help support cultural expression and diversity through the use of public art, nature play, festivals, community gatherings, etc. • Utilise open space reserves to protect and enhance native flora, fauna, habitat, landscape and/or areas of environmental or cultural significance.	Recommendations, relevant to the Study, outlined in this strategy include: • Improve paths, trail; and connections • Connect walking and bike tracks to the Goldfields/Great Dividing Trail • Support community driven efforts to establish the Castlemaine to Maldon Rail Trail • Consider opportunities to improve the appeal of existing public open spaces for all ages; where appropriate including installation of park seating, drinking taps, shade/shelter, public toilets, informal gathering spaces, and improve paths, trails, connections and vegetation management. The strategy also notes the following, “Informal recreation participation accounts for the largest proportion of overall physical activity by the community, therefore reinforcing the importance of quality walking paths, trails and accessible open space facilities and programs. The way these facilities look, function and feel, including signage, way finding, accessibility and attractiveness, all impact on the appeal and usability of open spaces” Stakeholder engagement also identified the importance of walking trails for the Shire.

Document	Summary	Relevance
State Level Strategies, Policies and Plans		
Victorian Cycling Strategy 2018-28	The vision of this strategy is to increase the number of Victorians participating in cycling for transport through a focus on: • Investment in continuous, safer and lower stress routes that prioritise strategic cycling corridors • Increasing participation of under represented groups such as women, children and older people, creating a more inclusive cycling culture	The key points relevant to this study outline the benefits of continuous, safer trail networks and defines a strategic basis for Victorian Government funding commitments: • Trails that separate cyclists and motor vehicles are prioritised for investment as they offer safer, lower stress journeys that will encourage participation in cycling across broader demographics • There are funding opportunities when cycling infrastructure incorporated in to major transport projects • Prioritised investment in strategic cycling corridors with an emphasis on working with local councils to address gaps • Integration of cycling in to public transport networks encourages cycling for transport • Development of trails supports recreational cycling and sport, tourism and community events • Increased uptake of cycling reduces congestion on roads and public transport
Victoria's Trails Strategy, Tourism Victoria 2014-2024	The vision for this strategy is to position Victoria as a leading trail-based destination that provides a range of trail experiences while strengthening the State's economy and improving the health, wellbeing and lifestyle of the community. The key initiatives outlined in the strategy are: • improve the quality of trail experiences • increase awareness and visitation • support complementary tourism and retail businesses • understand trail-users, the market and the target demographic	This strategy is strategically aligned with the Study as demonstrated by the 'key initiatives'. In particular, the actions below as they aim to raise the profile of the trails by: • increasing attraction of cycling trails by marketing the trails in conjunction with other commercial opportunities that the area has to offer • building recognition of Victoria as a premier cycling destination to increase visitation
VicHealth Physical Activity Strategy 2019 - 2023	This Strategy by VicHealth aims to increase physical activity levels of people who are less active, with a focus on: • fear of judgement experienced by women • social sport, active recreation and play • walking and active travel.	The realisation of the Castlemaine to Maryborough Rail Trail has the potential to support the aims of VicHealth by promoting walking and active travel, encouraging active recreation and providing a shared use trail that can be used by everyone.

Document	Summary	Relevance
Visitor Economy and Recovery and Reform Plan (VERRP) 2021	The VERRP considers the unique, combined effects of the 2019–20 bushfires and the 2020 COVID-19 pandemic on the Victorian visitor economy. The plan provides a framework for industry and the Victorian Government to work together to restore and grow this vital sector. The 5 key themes identified are: • Strengthening our tourism offering • Making the most of our marketing spending • Supporting industry • Enhancing Regional Tourism Boards • Better coordinating efforts.	Relevant actions and objectives include: • Invest in and develop experiences that attract more visitors, who spend more during their stay. • Strategic collaboration and coordination across community and industry, and local, state and Commonwealth governments. • Focus on key experience pillars that are competitive strengths for Victoria, including: nature, epicurean, arts and culture and First Peoples' led experiences
Experience Victoria 2033 (2023)	Key objectives include: • Ensure Victoria maximises growth opportunities in the visitor economy between 2023 and 2033. • Ensure Victoria maximises the social and economic benefits of domestic and international tourism. • Drive, enable and guide investment in high-quality products and experiences across five product priorities (Wellness, Arts and Culture, First Peoples, Food and Drink, Nature).	• The trail will drive visitation to the region, which will support local consumption and deliver economic benefits (through jobs and increased spend). • The project will leverage the existing product strengths, which align with the product priorities, as well as support investment across the product categories (via increased visitation). • Social benefits will also be achieved through increases in recreation product, which will support health and wellbeing.
Plan Melbourne (2017-2050)	The key and relevant objective is "Regional Victoria is productive, sustainable and supports jobs and economic growth."	By creating a new visitor product, the project will support the growth of the local tourism industry and generate flow on benefits for jobs and economic output in the region.
Victorian Visitor Economy Masterplan Directions Paper (2022)	Key actions include: • Enhance our spectacular landscapes and waterways to deliver immersive nature based experiences. • Facilitate nature based infrastructure and visitor facilities adjacent to public land. • Support the development of immersive single and multi day nature based experiences.	• The proposed trail will leverage and enhance the nature-based attributes of the local region and activate an underutilised parcel of public land. • The trail will attract visitors interested in a single day nature-based experience to the region.
Victoria's Infrastructure Strategy (2021-2025)	Key actions include: • Plan for and facilitate regional nature-based tourism investments. • Foster healthy, safe and inclusive communities.	• Investment in the proposed trail will deliver a new nature-based visitor product to the region. • The project will support improved health outcomes for the community by increasing access to recreation infrastructure.

Document	Summary	Relevance
Regional Level Strategies, Policies and Plans		

Loddon Mallee South Regional Growth Plan	The Loddon Mallee South Regional Growth Plan is the strategic land use plan for the region to guide growth and change for the next 30 years.
	The Plan set outs the following vision:
	"In 2041 our communities continue to enjoy regional liveability with urban accessibility. We are a region with vibrant, innovative, sustainable and connected communities offering a diversity of lifestyles, building on our heritage, natural environment and agricultural landscapes.
	The region is home to some 300,000 people by 2041, with access to employment, infrastructure, educational opportunities, healthcare and other services. The region continues to attract new investment and a diverse range of jobs, anchored within a diversifying economy, capitalising on competitive advantages."
		The plan outlines the following key points relevant to the Study:
		• Further growth in tourism across the region will require adequate accommodation and facilities, promotion and continued investment in existing tourism infrastructure including walking trails.
		• The equine industry is an important existing and emerging sector in the region. The industry also contributes to the community through recreational activities such as riding and trail riding clubs.
		• Supporting the use and expansion of rail trails by improving connections between and access to trails is necessary to support a diverse economy and to access tourism products and opportunities. Transport implementation opportunities for ensuring amenity and usability could include:
		  • tourist routes for all users, including cyclists
		  • facilities such as wayside rest areas, signage and information hubs
		  • marketing such as package tours for day trips.

The Central Victorian Goldfields World Heritage Master Plan (2023)	Key objectives include: • Central Goldfields and Mount Alexander Shires are part of the Central Victorian Goldfields region, which is developing a Master Plan and concept for a World Heritage bid. • The bid is designed to build the profile of the region, as well as: Increase visitation and visitor dispersal, support jobs, encourage private and public investment and enhance community liveability.	• Part of the Rail Trail's visitor appeal will focus on the existing goldfields history and heritage assets of the region. • Increased trail utilisation will support private sector investment in tourism products and experiences. • Providing connectivity between Castlemaine to Maryborough, and across smaller towns in between, will encourage visitor dispersal, increase local consumption and generate flow-on economic benefits (including new jobs across the tourism industry).
Loddon-Campaspe Regional Economic Development Strategy (2022)	The key objective from the strategy is "Pursue diversification of the tourism sector by leveraging natural, cultural, and built endowments."	The proposed trail will capitalise on the region's nature-based strengths and existing built assets to attract visitors to the region, including the disused rail line and the Maryborough Railway Station,

Document	Summary	Relevance
Bendigo Region Destination Management Plan (2015-2020)	Key objectives include: • Investigate new uses for the disused train line between Castlemaine and Maryborough e.g. rail trail. • Utilise the region's natural assets to develop nature-based and recreational tourism experiences. • Improve and develop trails within and between Mount Alexander Shire towns.	• The trail will provide a new use for the disused train line between Castlemaine and Maryborough. • The project leverages the nature-based attributes of the region to provide a recreational trail experience for visitors.
Loddon Campaspe Integrated Transport Strategy (2015)	Key objectives include: • Support improved community health and environmental outcomes. • Link the region's key rail trails and other recreational/tourism bicycle networks to form a network of routes and access to centres and public transport services.	• The project will support improved health outcomes for the community by increasing access to walking and cycling infrastructure. • The proposed trail will capitalise on the opportunity to link to the existing Castlemaine to Maldon Trail, as well as the Castlemaine and Maryborough Railway Stations, creating hubs for connectivity and commercial activity.

B TRAIL CONDITION

3.1 SECTION ONE: CASTLEMAINE TO CAMPBELLS CREEK

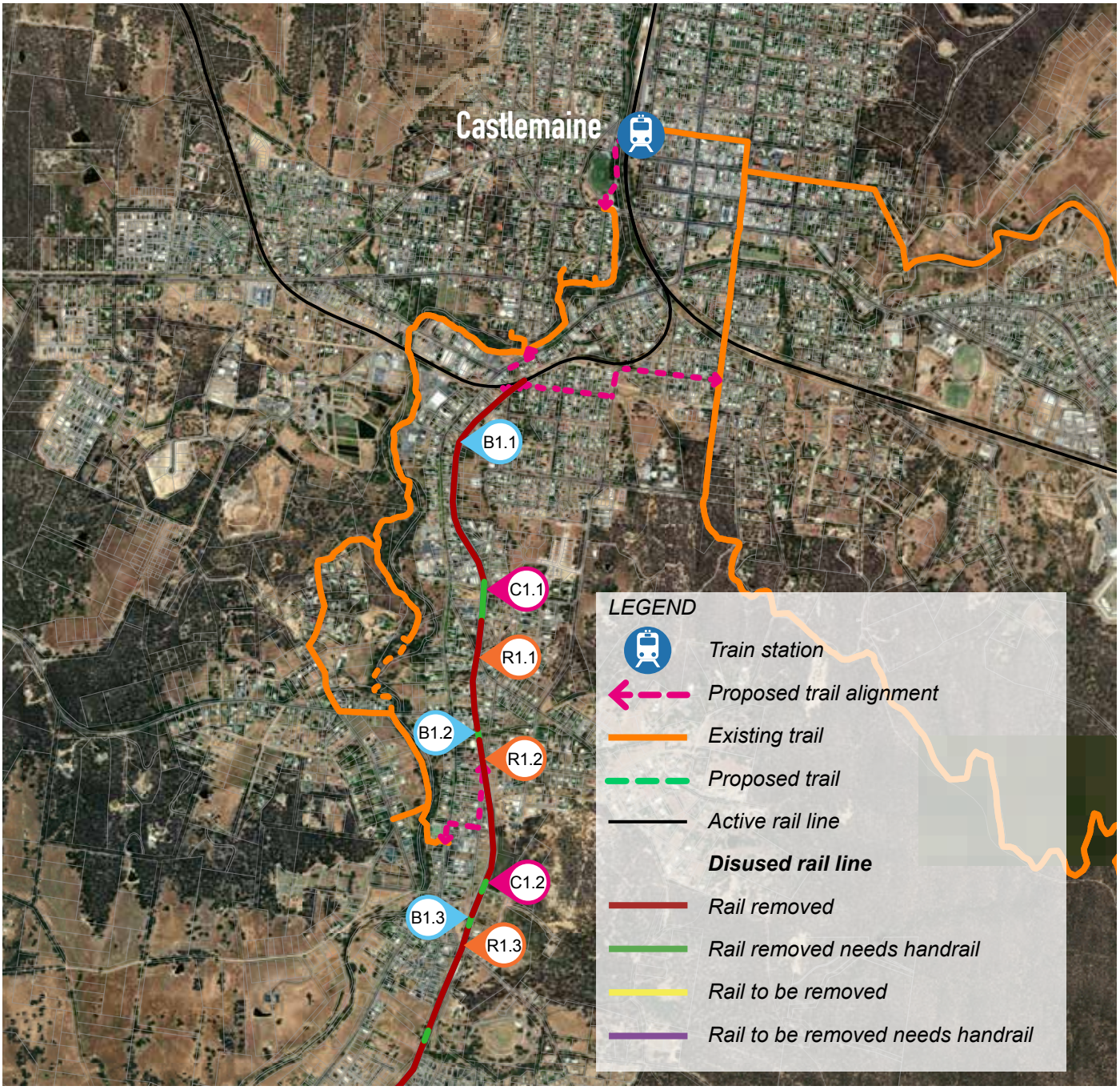
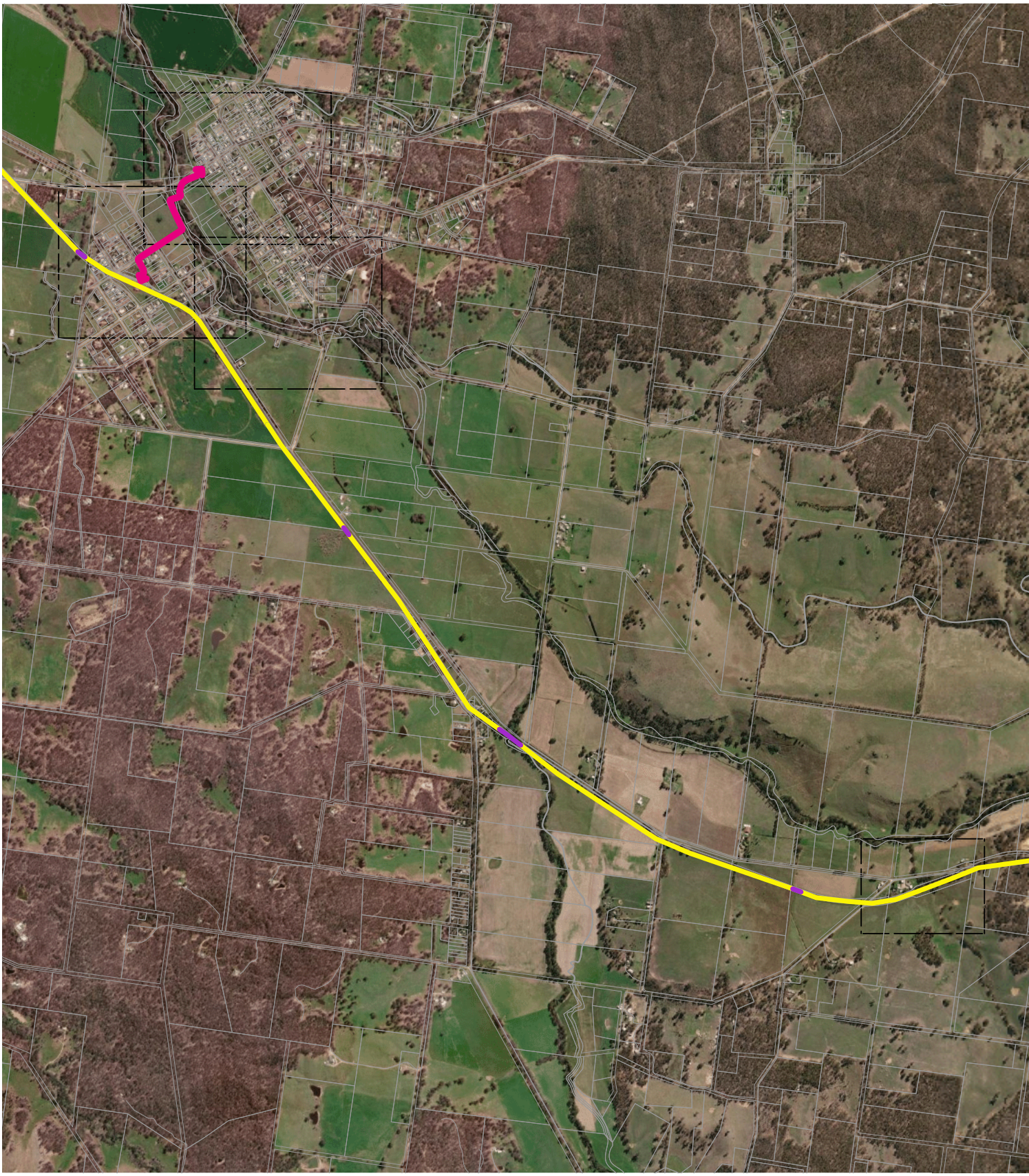


Figure 3.1: Castlemaine to Campbells Creek trail alignment

3.2 SECTION TWO: CAMPBELLS CREEK TO GUILDFORD

Figure 3.2: Campbells Creek to Guildford trail alignment

3.3 SECTION THREE: GUILDFORD TO NEWSTEAD



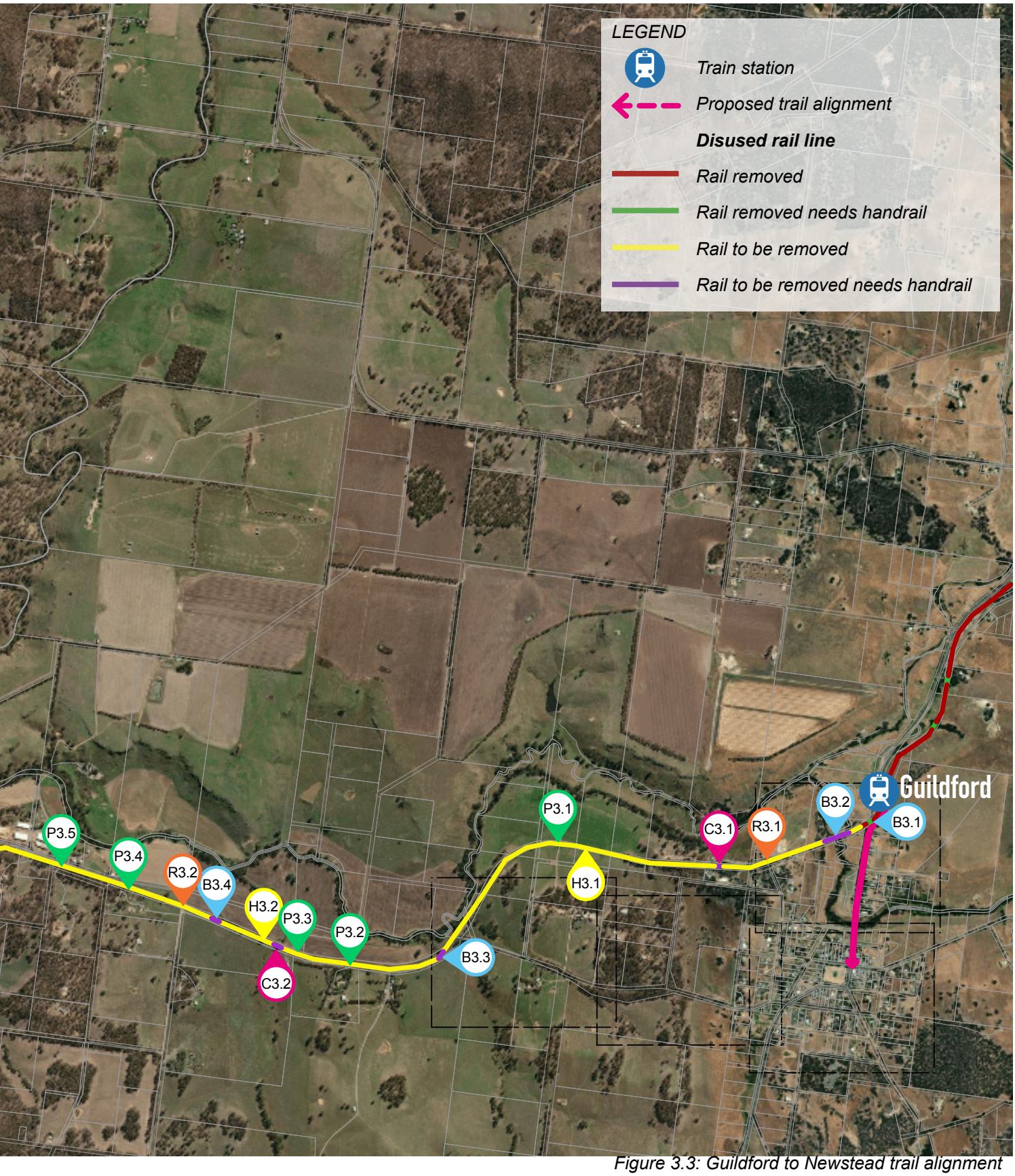


Figure 3.3: Guildford to Newstead trail alignment

3.4 SECTION FOUR: NEWSTEAD TO MOOLORT

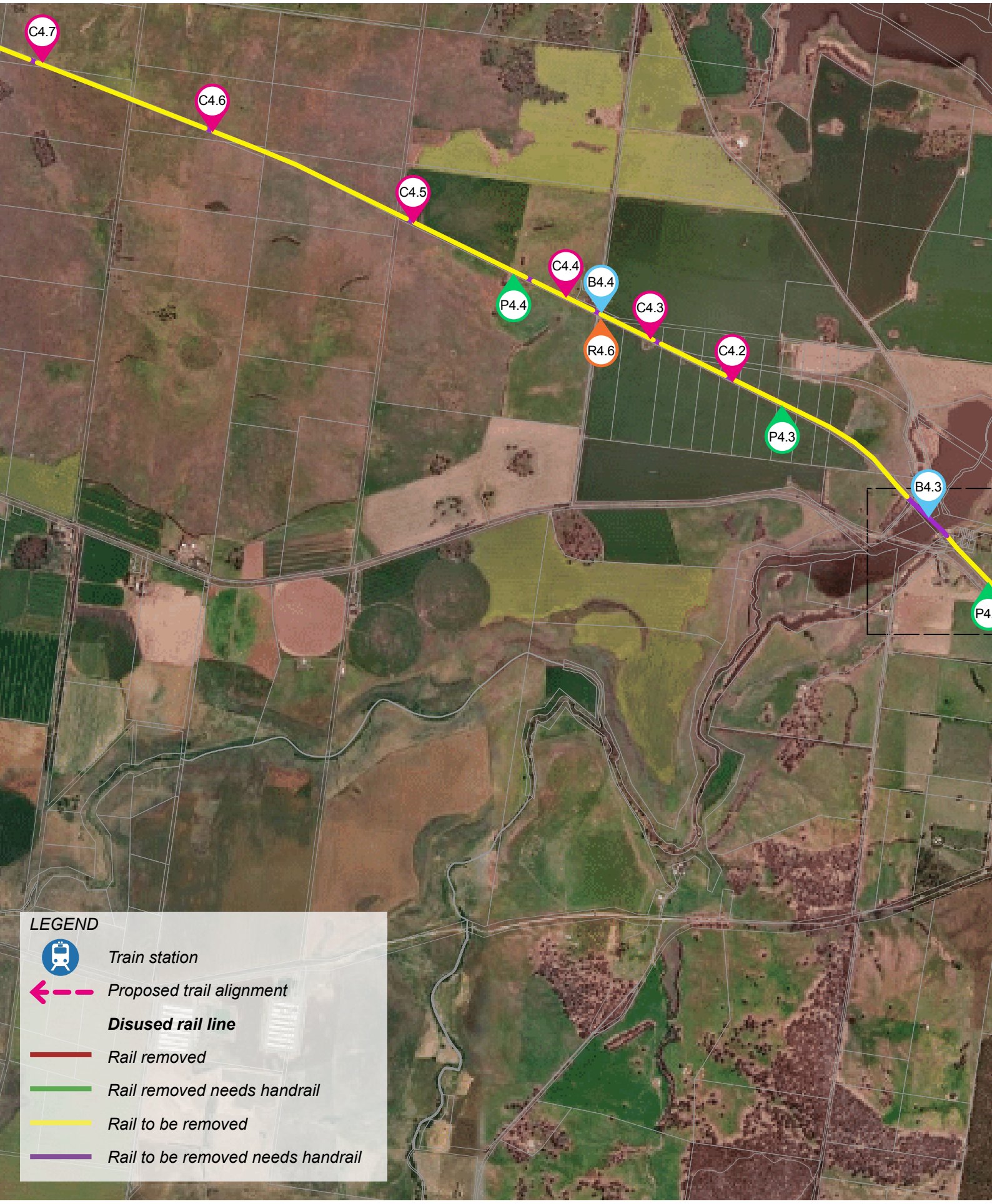


Figure 3.4: Newstead to Moolort trail alignment

3.5 SECTION FIVE: MOOLORT TO CARISBROOK

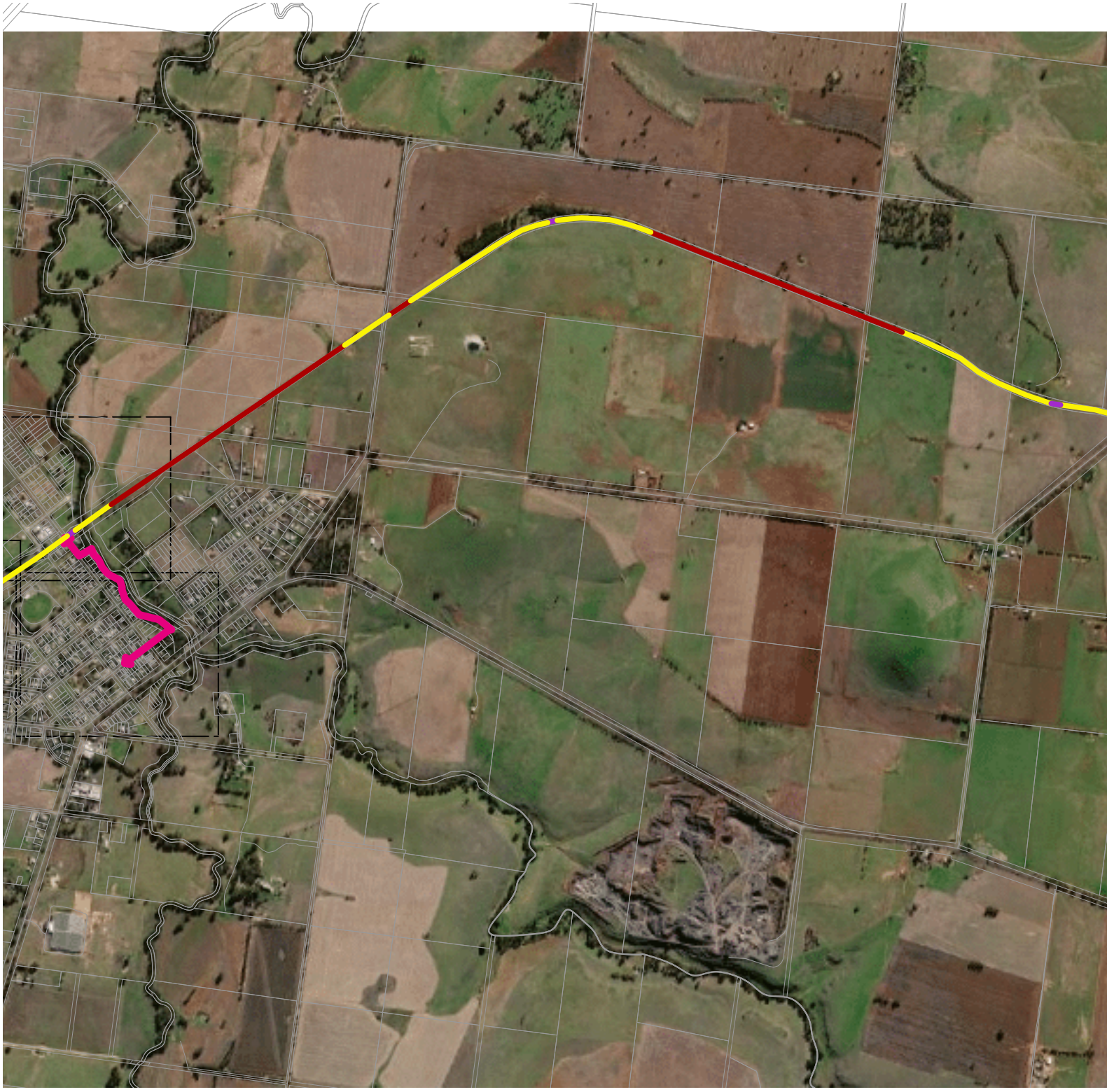
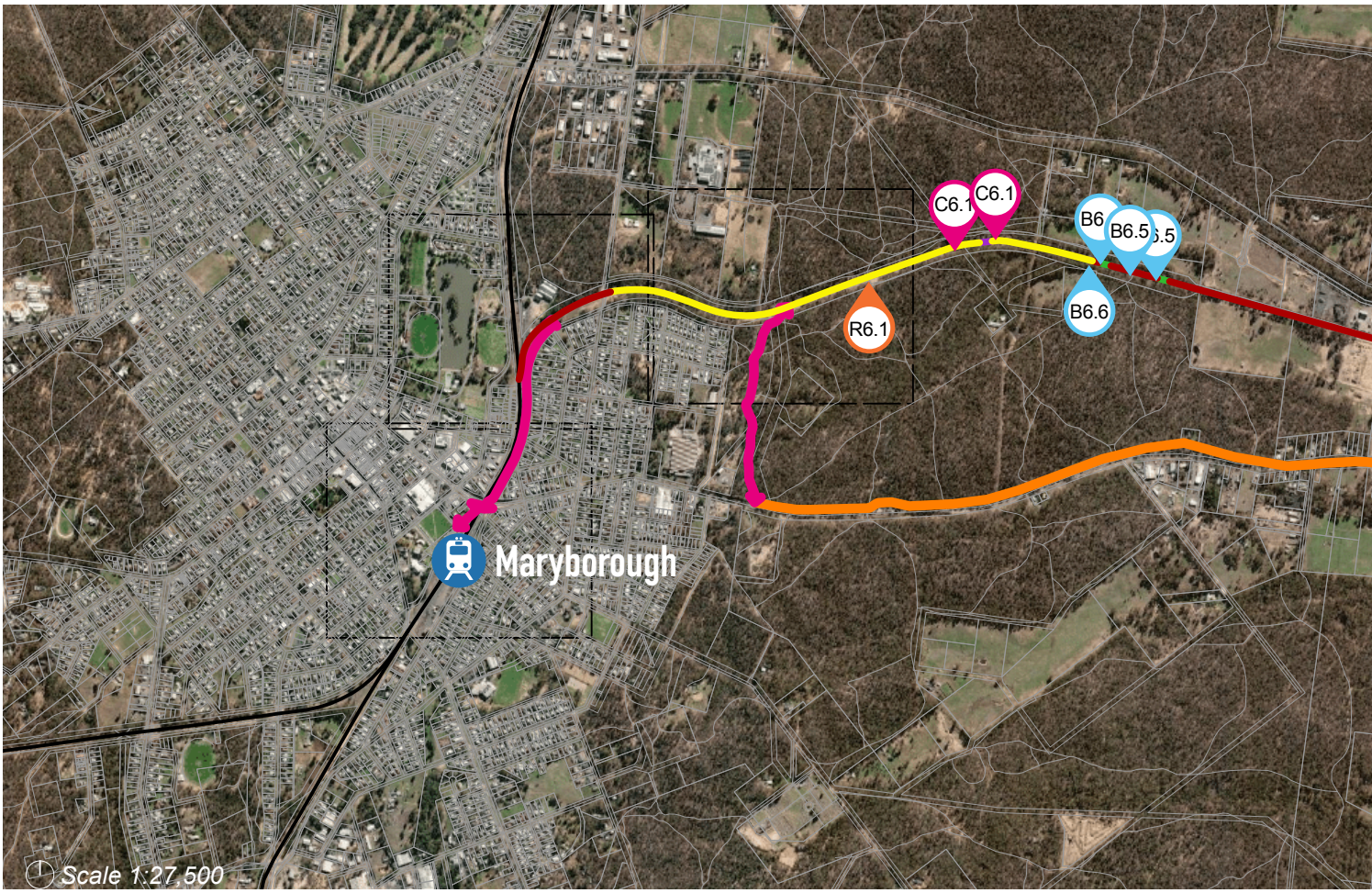


Figure 3.5: Moolort to Carisbrook trail alignment

3.6 SECTION SIX: CARISBROOK TO MARYBOROUGH



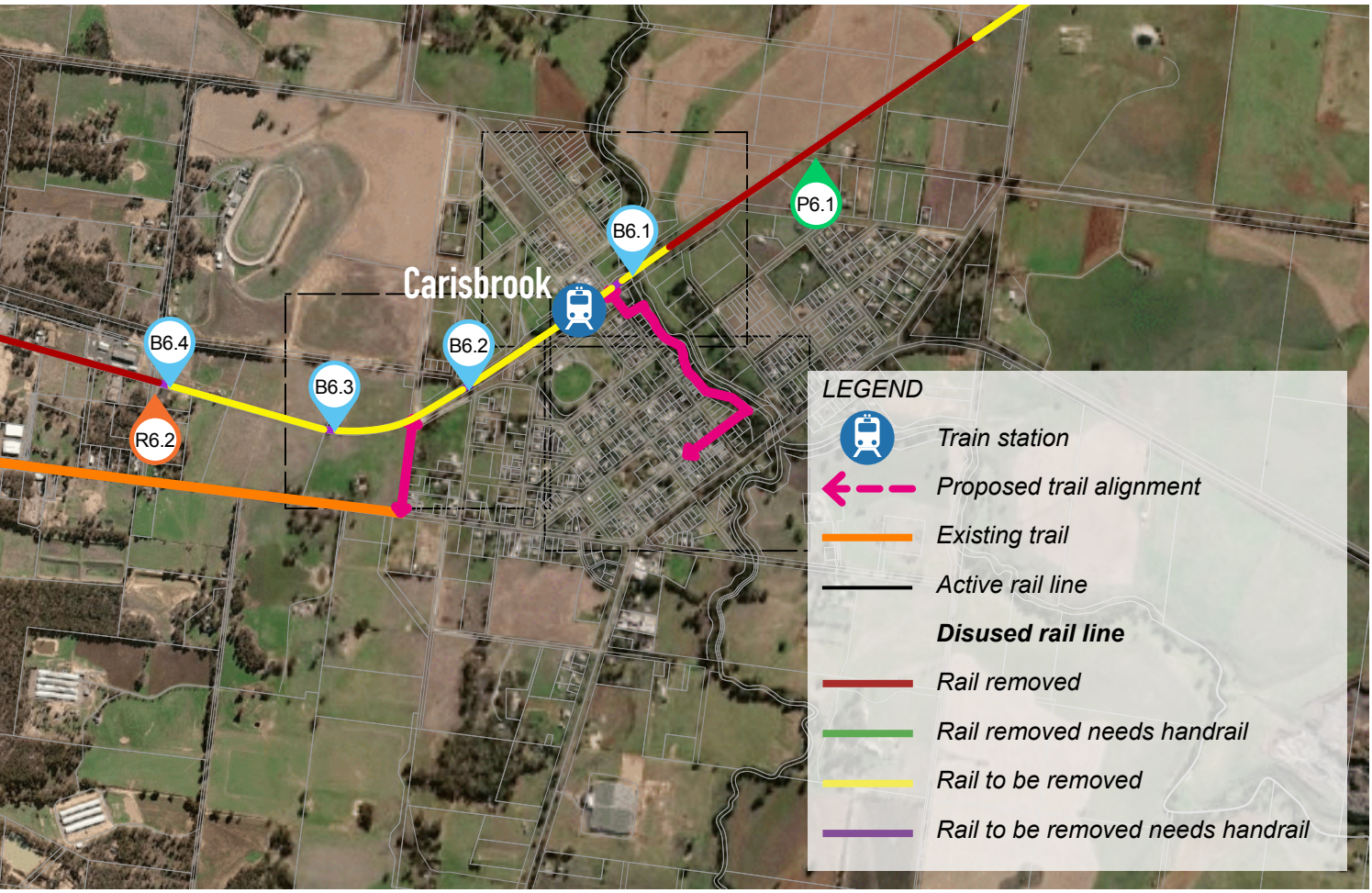


Figure 3.6: Carisbrook to Maryborough trail alignment

C INFRASTRUCTURE AUDIT

BRIDGES

Works identified as being required to facilitate a rail trail have been undertaken by a structural engineer. These recommendations are based on visual observation only. Further investigations are required prior to trail delivery.

B1.1: Lawrence Street Overpass	
Authority ID	-
Location	37° 4’ 32.09” S, 144° 12’ 18.282” E
Approx. length	23m
Works required for rail trail to occur*	• Ensure track and clearance area are clear of potential hazards • Vegetation/ weed removal • Ensure track and clearance area are clear of potential hazards, do not undermine existing bridge footings, Existing Bride structure remains out of scope from this review • Investigate recent Structural repair works and reviews with local council/ VicRoads/VicTracks or relevant authority
Other observations*	• Steel mesh balustrade appears to be added at a later date. Addition of steel posts and bracing indicate reinforcing has been added more recently.
**Visual observations only*	





B1.2: Drainage bridge	
Authority ID	-
Location	37° 5’ 15.4” S, 144° 12’ 21.078” E
Approx. length	6m
Works required for rail trail to occur	• Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Remove surface corrosion • Apply protective coating to Steel surfaces
Other observations	Rails already removed
**Visual observations only*	





B1.3: Drainage bridge	
Authority ID	-
Location	37° 5’ 42.51” S, 144° 12’ 19.332” E
Approx. length	15m
Works required for rail trail to occur	• Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Remove surface corrosion • Apply protective coating to Steel surfaces
Other observations	Rails already removed
**Visual observations only*	






B2.1: Drainage bridge	
Authority ID	-
Location	37° 6’ 17.57” S, 144° 11’ 45.822” E
Approx. length	10m
Works required for rail trail to occur	• Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Remove surface corrosion • Apply protective coating to Steel surfaces
Other observations	Rails already removed
**Visual observations only*	

B2.2: Hutchinsons Lane Bridge	
Authority ID	Campbell Creek - Castlemaine and Dunolly - No. 26 Hutchinsons Lane 133.740km
Location	37° 7’ 18.75” S, 144° 10’ 48.522” E
Approx. length	6m
Works required for rail trail to occur	• Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Bridge deck to be constructed (Remove timber decking and replace with precast concrete decking panels) • Remove surface corrosion • Apply protective coating to Steel surfaces • Minimum head height clearance to be displayed from both side
Other observations	Rail and ballast removed
**Visual observations only*	





B3.1: Midland Highway Bridge	
Authority ID	Guildford Midland HWY Bridge - 136.292km
Location	37° 8’ 31.19” S, 144° 10’ 2.772” E
Approx. length	30m
Works required for rail trail to occur	• Trail surface to be applied • Handrail may be required on top of balustrade in order to comply with Australian Standards (Balustrade to both sides of bridge) • Investigate and rectify seepage of water through abutments on both side • Minimum head height clearance to be displayed from both side
Other observations	Rails already removed
**Visual observations only*	






B3.2: Loddon River Bridge	
Authority ID	-
Location	37° 8’ 33.6” S, 144° 9’ 56.5” E
Approx. length	95m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Apply protective coating to damaged concrete surfaces • Investigate recent Structural repair works and reviews with local council/VicRoads/VicTracks or relevant authority
Other observations	Rails in place
**Visual observations only*	






B3.3: Kennedys Gully Bridge	
Authority ID	-
Location	37° 8’ 53.81” S, 144° 8’ 24.93” E
Approx. length	20m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Remove surface corrosion • Apply protective coating to Steel surfaces • Erosion of surrounding soil to be controlled
Other observations	Rails in place
**Visual observations only*	





B3.4: Drainage bridge	
Authority ID	-
Location	37° 8’ 48.24” S, 144° 7’ 32.58” E
Approx. length	13m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required
Other observations	Rails in place
**Visual observations only*	





B3.5: Drainage bridge	
Authority ID	-
Location	37° 8’ 38.91” S, 144° 5’ 49.91” E
Approx. length	13m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required
Other observations	Rails in place
**Visual observations only*	






B3.6: Larni Barramal Yaluk Creek Bridge	
Authority ID	-
Location	37° 8’ 10.83” S, 144° 4’ 46.19” E
Approx. length	114m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Investigate recent Structural repair works and reviews with local council/ VicRoads/VicTracks or relevant authority
Other observations	Rails in place
**Visual observations only*	





B3.7: Drainage bridge	
Authority ID	-
Location	37° 7’ 33.69” S, 144° 4’ 9.39” E
Approx. length	7m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Replace Timber Beams with new Steel beams
Other observations	Rails in place
**Visual observations only*	





B4.1: Green Gully Creek Bridge	
Authority ID	-
Location	37° 6’ 41.34” S, 144° 3’ 8.03” E
Approx. length	30m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Erosion of surrounding soil to be controlled
Other observations	Rails in place
**Visual observations only*	





B4.2: Butlers Creek Bridge	
Authority ID	-
Location	37° 5’ 43.08” S, 144° 1’ 7.35” E
Approx. length	30m
Works required for rail trail to occur	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Erosion of surrounding soil to be controlled
Other observations	Rails in place
**Visual observations only*	








B4.3: Joyces Creek Railway Bridge	
Authority ID	Joyces Creek - Castlemaine & Dunolly - No. 75.1 Baringhap Rd Bridge - 154.746km
Location	37° 5’ 0.71” S, 143° 59’ 50.172” E
Approx. length	275m
Works required for rail trail to occur	• Rail removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove surface corrosion • Apply protective coating to Steel surfaces • Erosion of surrounding soil to be controlled • Investigate recent Structural repair works and reviews with local council/ VicRoads/VicTracks or relevant authority
Other observations	Rails in place
**Visual observations only*	





B4.4: Moolort-Baringhup Road Overpass	
Authority ID	-
Location	37° 3’ 21.68” S, 143° 55’ 53.298” E
Approx. length	
Works required for rail trail to occur*	• Vegetation/ weed removal • Ensure track and clearance area are clear of potential hazards, do not undermine existing bridge footings, Existing Bride structure remains out of scope from this review • Investigate recent Structural repair works and reviews with local council/ VicRoads/VicTracks or relevant authority
Other observations*	Rails in place
**Visual observations only*	





B5.1: Drainage bridge	
Authority ID	-
Location	37° 3’ 12.96” S, 143° 55’ 25.998” E
Approx. length	7m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers
Other observations*	Rails in place
**Visual observations only*	





B5.2: Drainage bridge	
Authority ID	-
Location	37° 3’ 2.39” S, 143° 54’ 53.592” E
Approx. length	16m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	Rails in place
**Visual observations only*	





B5.3: Drainage bridge	
Authority ID	-
Location	37° 2’ 35.9” S, 143° 53’ 32.13” E
Approx. length	11m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	Rails in place
**Visual observations only*	





B5.4: Drainage bridge	
Authority ID	-
Location	37° 1’ 51.92” S, 143° 51’ 15.948” E
Approx. length	6m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	Rails removed
**Visual observations only*	





B5.5: Drainage bridge	
Authority ID	-
Location	37° 1’ 45.63” S, 143° 50’ 56.508” E
Approx. length	5m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	Rails removed
**Visual observations only*	





B5.6: Drainage bridge	
Authority ID	-
Location	37° 2’ 0.52” S, 143° 49’ 38.562” E
Approx. length	7m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	Rails removed
**Visual observations only*	








B6.1: Tullaroop Creek bridge	
Authority ID	-
Location	37° 2’ 30.25” S, 143° 48’ 42.972” E
Approx. length	140m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Erosion of surrounding soil to be controlled • Investigate recent Structural repair works and reviews with local council/VicRoads/VicTracks or relevant authority
Other observations*	Rails in place
**Visual observations only*	

B6.2: Drainage bridge	
Authority ID	-
Location	37° 02’ 40.3” S 143° 48’ 23.9” E
Approx. length	9m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	
**Visual observations only*	

B6.3: Drainage bridge	
Authority ID	-
Location	37° 02’ 49.7” S, 143° 47’ 55.9” E
Approx. length	20
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Rotting Timber bearing pads to be removed and replace with adequate steel packers • Erosion of surrounding soil to be controlled
Other observations*	
**Visual observations only*	



B6.4: Drainage bridge	
Authority ID	-
Location	37° 2’ 43.24” S, 143° 47’ 27.222” E
Approx. length	16m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Remove surface corrosion • Apply protective coating to Steel surfaces
Other observations*	Rails in place
**Visual observations only*	




B6.5: Drainage bridge	
Authority ID	-
Location	37° 2’ 28.71” S, 143° 46’ 27.168” E
Approx. length	5m
Works required for rail trail to occur*	• Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required
Other observations*	Rails removed
**Visual observations only*	





B6.6: Drainage bridge	
Authority ID	-
Location	37° 2’ 26.91” S, 143° 46’ 17.892” E
Approx. length	9m
Works required for rail trail to occur*	• Rail removal • Vegetation/ weed removal • Trail surface to be applied • Balustrade to both sides of bridge • Remove timber decking and replace with precast concrete decking panels • Structural repairs to wing walls • Structural repairs to abutments • Apply protective coating to Steel surfaces • Remove surface corrosion • Apply protective coating to Steel surfaces • Check condition of existing bearing pads and reinstate as required • Erosion of surrounding soil to be controlled
Other observations*	Rails removed
**Visual observations only*	

ROAD CROSSINGS

R1.1: Moscript Street crossing	
Location	37° 5’ 3.03” S, 144° 12’ 20.7” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Moscript Street required on both sides of street. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Moscript Street in both directions alerting road users of trail.

R1.2: Stephen Street crossing	
Location	37° 5’ 19.07” S, 144° 12’ 21.468” E
Road hierarchy	Local Road (LL)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Stephen Street required on both sides of street. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Stephen Street in both directions alerting road users of trail.

R1.3: Campbells Creek-Fryers Road crossing	
Location	37° 5’ 47.15” S, 144° 12’ 16.962” E
Road hierarchy	Link Road (LK)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Campbells Creek-Fryers Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Campbells Creek-Fryers Road in both directions alerting road users of trail.

R2.1: Donkey Gully Road crossing	
Location	37° 6’ 25.69” S, 144° 11’ 28.632” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Donkey Gully Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Donkey Gully Road in both directions alerting road users of trail.



R2.2: Goudges Lane crossing	
Location	37° 6’ 41.14” S, 144° 11’ 4.998” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Align trail to approach Goudges Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Goudges Lane in both directions alerting road users of trail.


R1.3: Godfrey Lane crossing	
Location	37° 7’ 5.05” S, 144° 10’ 51.102” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Align trail to approach Godfrey Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Godfrey Lane in both directions alerting road users of trail.

R2.4: Vaughan Springs Road crossing	
Location	37° 7’ 49.78” S, 144° 10’ 32.382” E
Road hierarchy	Local Road (LL)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Vaughan Springs Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Vaughan Springs Road in both directions alerting road users of trail.

R3.1: Franzi Street crossing	
Location	37° 8’ 37.96” S, 144° 9’ 40.19” E
Road hierarchy	Unformed Road (O)
Works required for rail trail to occur	• Align trail to approach Franzi Street at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Franzi Street in both directions alerting road users of trail.

R3.2: Newstead-Guildford Road crossing	
Location	37° 8’ 45.23” S, 144° 7’ 24.4” E
Road hierarchy	Link Road (LK)
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Newstead-Guildford Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Newstead-Guildford Road in both directions alerting road users of trail.

R3.3: Strangways School Road crossing	
Location	37° 8’ 41.49” S, 144° 6’ 7.33” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Align trail to approach Strangways School Road at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Strangways School Road in both directions alerting road users of trail.

R3.4: Birkins Road crossing	
Location	37° 8’ 29.77” S, 144° 5’ 20.36” E
Road hierarchy	
Works required for rail trail to occur	• Align trail to approach Birkins Road at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Birkins Road in both directions alerting road users of trail.

R3.5: Hepburn-Newstead Road crossing	
Location	37° 8’ 4.58” S, 144° 4’ 35.26” E
Road hierarchy	Arterial Road
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Hepburn-Newstead Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Hepburn-Newstead Road in both directions alerting road users of trail.

R3.6: Barkla Road crossing	
Location	37° 7’ 18.22” S, 144° 3’ 54.83” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Align trail to approach Barkla Road at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Barkla Road in both directions alerting road users of trail.

R3.7: McNabb Road crossing	
Location	37° 6’ 53.96” S, 144° 3’ 34.89” E
Road hierarchy	Local Road (LL)
Works required for rail trail to occur	• Align trail to approach McNabb Road at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on McNabb Road in both directions alerting road users of trail.

R4.1: Creswick-Newstead Road crossing	
Location	37° 6’ 46.08” S, 144° 3’ 15.45” E
Road hierarchy	Arterial Road
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Creswick-Newstead Road required on both sides of road. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Creswick-Newstead Road in both directions alerting road users of trail.

R4.2: Clarke Lane crossing	
Location	37° 6’ 28.68” S, 144° 2’ 53.47” E
Road hierarchy	Minor Road (MN)
Works required for rail trail to occur	• Align trail to approach Clarke Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Clarke Lane in both directions alerting road users of trail.

R4.3: Pyrenees Highway crossing	
Location	37° 6’ 12.63” S, 144° 2’ 34.41” E
Road hierarchy	State Highway
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Pyreness Highway required on both sides of highway. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Pyreness Highway in both directions alerting road users of trail.

R4.4: Butlers Lane crossing	
Location	37° 5’ 53.4” S, 144° 2’ 8.05” E
Road hierarchy	
Works required for rail trail to occur	• Align trail to approach Butlers Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Butlers Lane in both directions alerting road users of trail.

R4.5: Furze Bush Lane crossing	
Location	37° 5’ 47.22” S, 144° 1’ 44.32” E
Road hierarchy	-
Works required for rail trail to occur	• Align trail to approach Furze Bush Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Furze Bush Lane in both directions alerting road users of trail.

R4.5: Shiells Lane	
Location	37° 4’ 18.48” S, 143° 58’ 30.018” E
Road hierarchy	
Works required for rail trail to occur	• Align trail to approach Furze Bush Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Furze Bush Lane in both directions alerting road users of trail.

R4.6: Buftons Lane crossing	
Location	37° 3’ 5.13” S, 143° 55’ 1.008” E
Road hierarchy	
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Pyreness Highway required on both sides of highway. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Pyreness Highway in both directions alerting road users of trail.

R5.1: Bald Hill Road crossing	
Location	37° 2’ 14.86” S, 143° 52’ 26.478” E
Road hierarchy	
Works required for rail trail to occur	• Align trail to approach Butlers Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Butlers Lane in both directions alerting road users of trail.

R5.2: Baringhup Road crossing	
Location	37° 1’ 55.26” S, 143° 49’ 48.342” E
Road hierarchy	
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Pyreness Highway required on both sides of highway. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Pyreness Highway in both directions alerting road users of trail.

R5.3: Telegraph Track crossing	
Location	37° 2’ 28.58” S, 143° 45’ 41.64” E
Road hierarchy	
Works required for rail trail to occur	• Align trail to approach Butlers Lane at a right angle • Signage required on both sides alerting trail users of road crossing. • Signage required on Butlers Lane in both directions alerting road users of trail.

R6.1: Bucknell Street crossing	
Location	37° 2’ 32.15” S, 143° 48’ 39.342” E
Road hierarchy	
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Pyreness Highway required on both sides of highway. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Pyreness Highway in both directions alerting road users of trail.

R6.2: Chaplins Road crossing	
Location	37° 2’ 42.79” S, 143° 47’ 26.388” E
Road hierarchy	
Works required for rail trail to occur	• Concrete apron aligned at a right angle to Pyreness Highway required on both sides of highway. • Holding rails required on both sides to create an obvious stopping point. • Signage required on both sides alerting trail users of road crossing. • Signage required on Pyreness Highway in both directions alerting road users of trail.

PRIVATE ROAD CROSSINGS

P2.1	
Location	37° 6’ 19.99” S, 144° 11’ 40.428” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P2.2	
Location	37° 8’ 4.33” S, 144° 10’ 21.768” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.1 Franzi Track	
Location	37° 8’ 34.13” S, 144° 8’ 52.12” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.2	
Location	37° 8’ 55.9” S, 144° 8’ 2.9” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.3	
Location	37° 8’ 53.44” S, 144° 7’ 48.68” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.4	
Location	37° 8’ 41.47” S, 144° 7’ 11.32” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.5	
Location	37° 8’ 37.46” S, 144° 6’ 57.43” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.6	
Location	37° 8’ 35.04” S, 144° 5’ 36.73” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P3.7	
Location	37° 8’ 18.83” S, 144° 5’ 0.09” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.1	
Location	37° 5’ 41.7” S, 144° 0’ 56.85” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 5’ 10.9” S, 144° 0’ 1.21” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 4’ 34.97” S, 143° 59’ 11.11” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 4’ 9.91” S, 143° 58’ 9.42” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 2’ 46.36” S, 143° 54’ 3.822” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 2’ 44.47” S, 143° 53’ 58.7” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 2’ 26.65” S, 143° 53’ 3.18” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 2’ 9.83” S, 143° 52’ 2.202” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

P4.2	
Location	37° 2’ 15.01” S, 143° 49’ 11.04” E
Works required for rail trail to occur	Signage required on both sides alerting trail users of crossing.

CULVERTS

Works identified as being required to facilitate a rail trail have been undertaken by a structural engineer. These recommendations are based on visual observation only. Further investigations are required prior to trail delivery.



C1.1	
Location	37° 4’ 54.67” S, 144° 12’ 22.458” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert
Other observations	
**Visual observations only*	



C1.2	
Location	37° 5’ 37.32” S, 144° 12’ 21.252” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required • Intrusive investigation required to determine existing condition and required repair work
Other observations	
**Visual observations only*	





C2.1	
Location	37° 6’ 0.63” S, 144° 12’ 10.428” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required • Reinstate displaced Stone masonry joints as required • Investigate exposed corrugated Pipe and provide adequate cover
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.2	
Location	37° 6’ 33.76” S, 144° 11’ 14.058” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.3	
Location	37° 6’ 43.17” S, 144° 11’ 2.088” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.4	
Location	37° 7’ 9.9” S, 144° 10’ 49.128” E
Works required for rail trail to occur	• Maintenance and removal of excess material to ensure culvert is functional • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required • Reinstate displaced/missing brick works • Extend wing walls to maintain surrounding surface grading
Other observations	
**Visual observations only*	



C2.5	
Location	37° 7’ 43.02” S, 144° 10’ 40.83” E
Structural material and condition	Corrugate piping with stone walling Appears to be in well maintained, stable condition
Works required for rail trail to occur	• Nom. 50m handrail along both sides of the trail above culvert • Remove surface corrosion from corrugated pipes and apply protective coating
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.6	
Location	37° 7’ 48.03” S, 144° 10’ 35.622” E
Structural material and condition	Corrugate piping with concrete filled sandbags Appears to be in stable condition
Works required for rail trail to occur	• Weed removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Remove surface corrosion from corrugated pipes and apply protective coating
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.7	
Location	37° 8’ 5.29” S, 144° 10’ 21.612” E
Works required for rail trail to occur	• Maintenance and removal of excess material to ensure culvert is functional • Nom. 50m handrail along both sides of the trail above culvert • Reinstate mortar in brick joints as required • Reinstate displaced/missing brick works • Extend wing walls to maintain surrounding surface grading
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	



C2.8	
Location	37° 8’ 12.87” S, 144° 10’ 19.188” E
Structural material and condition	Brick culvert with brick end walls Cracks in brickwork in both then end wall and culvert arch
Works required for rail trail to occur	• Weed removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Reinstate mortar in brick joints as required • Reinstate displaced/missing brick works • Extend wing walls to maintain surrounding surface grading
Other observations	
**Visual observations only*	

C3.1	
Location	37° 8’ 38.99” S, 144° 9’ 28.98” E
Works required for rail trail to occur	• Maintenance and removal of excess material to ensure culvert is functional • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate mortar in brick joints as required • Extend wing walls to maintain surrounding surface grading
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	






C3.2 - Limestone Creek	
Location	37° 8’ 52.88” S, 144° 7’ 46.37” E
Works required for rail trail to occur	• Vegetation and debris removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	
**Visual observations only*	




C4.1	
Location	37° 6’ 14.7” S, 144° 2’ 37.1” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	


C4.2	
Location	37° 4’ 31.54” S, 143° 59’ 3.198” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	


C4.3	
Location	37° 4’ 22.82” S, 143° 58’ 41.28” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	
**Visual observations only*	


C4.4	
Location	37° 4’ 15.12” S, 143° 58’ 22.548” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Repair cracked concrete wall at the ends of Culverts
Other observations	
**Visual observations only*	

C4.5	
Location	37° 4’ 0.15” S, 143° 57’ 45.582” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	
**Visual observations only*	

C4.6	
Location	37° 3’ 41.87” S, 143° 56’ 56.532” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	
**Visual observations only*	



C4.7	
Location	37° 3’ 30.98” S, 143° 56’ 22.362” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required
Other observations	
**Visual observations only*	




C5.1	
Location	37° 2’ 51.26” S, 143° 54’ 19.872” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required • Reinstate weathered concrete wing wall at the ends of culvert
Other observations	
**Visual observations only*	


C5.2	
Location	37° 2’ 48.12” S, 143° 54’ 8.658” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced Stone masonry joints as required • Reinstate weathered concrete wing wall at the ends of culvert
Other observations	
**Visual observations only*	


C5.3	
Location	37° 2’ 11.12” S, 143° 52’ 9.51” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Remove surface corrosion from corrugated pipes and apply protective coating • Reinstate weathered concrete wing wall at the ends of culvert
Other observations	• Intrusive investigation required to determine existing condition and required repair work
**Visual observations only*	

C5.4	
Location	37° 1’ 39.22” S, 143° 50’ 21.618” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Maintenance and removal of excess material to ensure culvert is functional • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert
Other observations	
**Visual observations only*	

C6.1	
Location	37° 2’ 25.18” S, 143° 45’ 56.862” E
Works required for rail trail to occur	• Vegetation removal to ensure culvert is functional and vegetation does not undermine structural integrity • Nom. 50m handrail along both sides of the trail above culvert • Regrade surfaces (as required) on ether end of culvert to avoid water ponding inside culvert • Reinstate displaced/missing brick works
Other observations	
**Visual observations only*	

HAZARDS

H3.1: Gas pipeline	
Location	37° 8’ 34.78” S, 144° 8’ 57.89” E
Works required for rail trail to occur	

H3.2: Water main	
Location	37° 8’ 52.47” S, 144° 7’ 44.34” E
Works required for rail trail to occur	

H3.1: Missing track	
Location	37° 8’ 34.78” S, 144° 8’ 57.89” E
Works required for rail trail to occur	Stablisation of banks and construction of bridge

D CASE STUDIES

EAST GIPPSLAND RAIL TRAIL

The East Gippsland Rail Trail is located in the far east of Victoria, Australia, travelling through the low hills between the Great Dividing Range and the coastal lakes which open into Bass Strait at Lakes Entrance.

The Rail Trail is just under 100 km in length, with a 25 km link to Lakes Entrance via the Gippsland Lakes Discovery Trail. The trail provides the opportunity for users to experience the region's natural environment and heritage – including rolling farmland, forests and historic railway bridges.

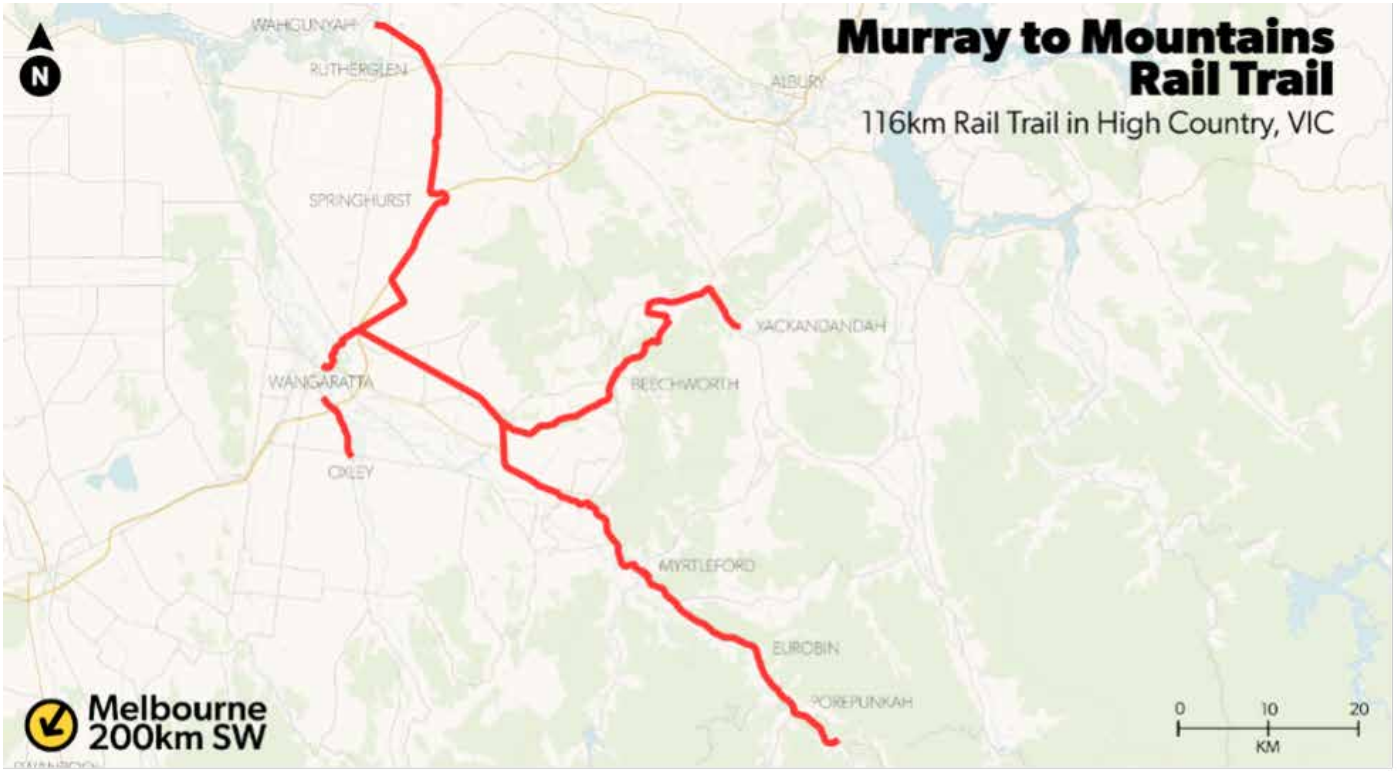
The connecting towns along the trail also offer visitor amenity, including food and beverage. One of the longest trails in Victoria, the 97km trail can be tackled in easy sections and is designed for riders from beginner to advanced

Source: bike-hounds.com/bike-tours/australia/victoria/east-gippsland-rail-trail-self-guided-tour/

MURRAY TO MOUNTAINS RAIL TRAIL

The Murray to Mountains Rail Trail is a 116 km sealed trail, which consists of three separate sections, the “Mountains” section (from Wangaratta to Bright and Beechworth), the “Murray” section (from Rutherglen to Wahgunyah), and the "Heritage" section (from Wangaratta to Oxley).

Source: intrepidtravel.com/au/australia/cycle-victorian-high-country-beechworth-bright-133839



PORT FAIRY TO WARRNAMBOOL RAIL TRAIL

The Port Fairy to Warrnambool Rail Trail is a continuous 38 km shared pathway which travels through a highly scenic, diverse and relaxed part of south-west Victoria. Encompassing historical, agricultural, Indigenous and nature-based themes.

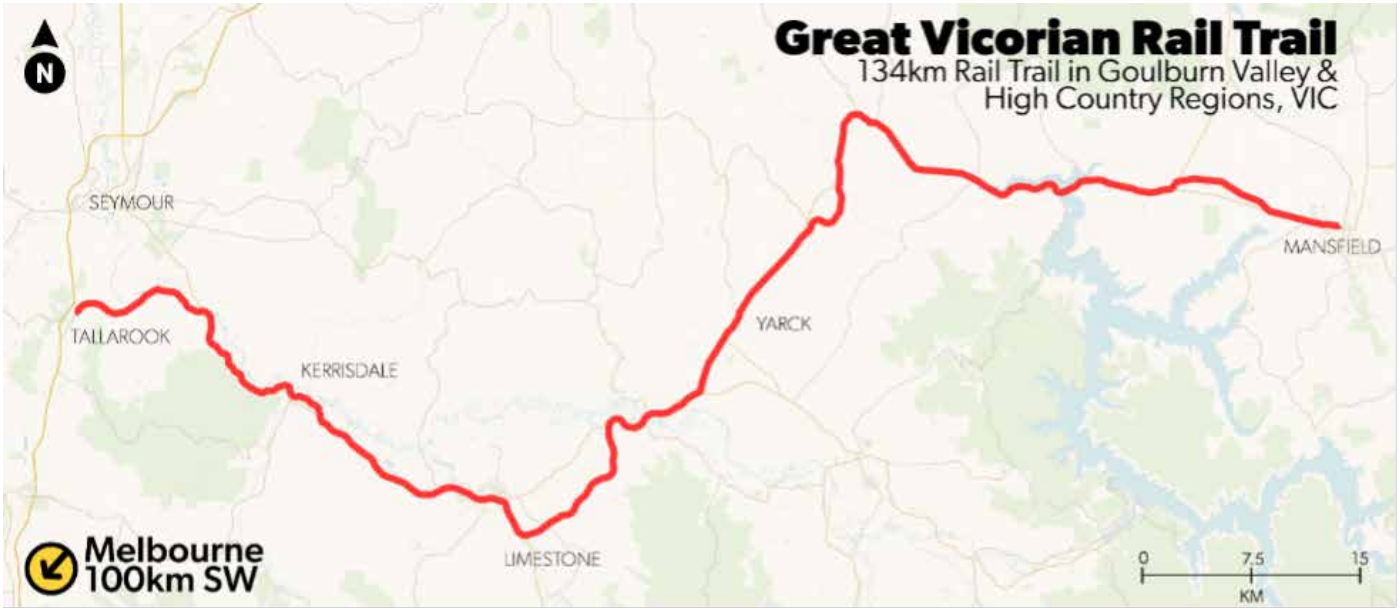
The trail connects through the historic towns of Port Fairy and Koroit, and is set amongst rural countryside, woodlands and native vegetation, as well as coastal sand dunes, the Merri River wetlands and Warrnambool breakwater precinct. The trail has a low level of difficulty and is suitable for use by cyclists and walkers of all ages and levels of fitness. Township sections of the trail are bitumen, allowing for use by mobility scooters, wheelchairs and the elderly.

Source: portfairytowarrnamboolrailtrail.com.au

GREAT VICTORIAN RAIL TRAIL

The Great Victorian Rail Trail is Australia's longest continuous rail trail, with Victoria's longest rail trail tunnel at Cheviot. The trail spans 134 km from Tallarook, through Trawool, Yea to Molesworth and Yarck to Cathkin and Alexandra. Located less than one hour from Melbourne, the trail travels through countryside following the heritage classified Goulburn River at Tallarook and passes through the Trawool Valley.

Source: greatvictorianrailtrail.com.au



HIGH COUNTRY RAIL TRAIL

Stretching over 80 kilometres from Wodonga, through Tallangatta and out to Shelley, the High Country Rail Trail travels along the Lake Hume shoreline.
The trail provides opportunity to explore the region's natural assets (including national/state parks), history (Old Tallangatta) and amenity (picnic areas and landscapes.

Source: victoriashighcountry.com.au/listing/high-country-rail-trail-huon/

TUMBARUMBA TO ROSEWOOD RAIL TRAIL

The Tumbarumba to Rosewood Rail Trail is a 21 km shared pathway set in the south-west slopes of NSW, connecting Tumbarumba with Rosewood (each of which includes trailheads).

The trail travels through scenic countryside and spectacular mountainsides with safe trails for users of all experience levels.

The Rail Trail itself has many historical displays and features four restored bridges from the original Rail line which are of significant historical importance.

Source: snowymagazine.com.au/explore-tumbarumba-khancoban/tumbarumba-rosewood-rail-trail

E RETURN ON INVESTMENT ASSUMPTIONS

Sealed Surface

Discount rate	7.0%

Year	Benefits	Costs	Discount factor	Discounted benefits	Discounted costs	Discounted net benefits	Net benefits
0	$ -	$ 37,684,000	1.00	$ -	$ 37,684,000	-$ 37,684,000	-$ 37,684,000
1	$ 8,208,880	$ 54,800	0.93	$ 7,671,850	$ 51,215	$ 7,620,635	$ 8,154,080
2	$ 8,920,179	$ 56,444	0.87	$ 7,791,230	$ 49,300	$ 7,741,929	$ 8,863,735
3	$ 9,693,113	$ 58,137	0.82	$ 7,912,467	$ 47,457	$ 7,865,010	$ 9,634,975
4	$ 10,533,021	$ 59,881	0.76	$ 8,035,591	$ 45,683	$ 7,989,908	$ 10,473,139
5	$ 11,445,707	$ 61,678	0.71	$ 8,160,631	$ 43,975	$ 8,116,655	$ 11,384,029
6	$ 12,437,477	$ 63,528	0.67	$ 8,287,616	$ 42,332	$ 8,245,285	$ 12,373,949
7	$ 13,515,185	$ 65,434	0.62	$ 8,416,578	$ 40,749	$ 8,375,829	$ 13,449,751
8	$ 14,686,276	$ 67,397	0.58	$ 8,547,546	$ 39,226	$ 8,508,320	$ 14,618,879
9	$ 15,958,841	$ 69,419	0.54	$ 8,680,552	$ 37,759	$ 8,642,793	$ 15,889,422
10	$ 17,341,675	$ 71,502	0.51	$ 8,815,628	$ 36,348	$ 8,779,280	$ 17,270,174
Present value benefits				$ 82,319,690			
Present value costs					$ 38,118,045		
Net Present Value						**$ 44,201,645**	
Benefit-cost ratio							**2.2**

GRAVEL SURFACE

Discount rate	7.0%

Year	Benefits	Costs	Discount factor	Discounted benefits	Discounted costs	Discounted net benefits	Net benefits
0	$ -	$ 31,138,000	1.00	$ -	$ 31,138,000	-$ 31,138,000	-$ 31,138,000
1	$ 8,208,880	$ 82,200	0.93	$ 7,671,850	$ 76,822	$ 7,595,028	$ 8,126,680
2	$ 8,920,179	$ 84,666	0.87	$ 7,791,230	$ 73,951	$ 7,717,279	$ 8,835,513
3	$ 9,693,113	$ 87,206	0.82	$ 7,912,467	$ 71,186	$ 7,841,281	$ 9,605,907
4	$ 10,533,021	$ 89,822	0.76	$ 8,035,591	$ 68,525	$ 7,967,066	$ 10,443,199
5	$ 11,445,707	$ 92,517	0.71	$ 8,160,631	$ 65,963	$ 8,094,668	$ 11,353,190
6	$ 12,437,477	$ 95,292	0.67	$ 8,287,616	$ 63,497	$ 8,224,119	$ 12,342,185
7	$ 13,515,185	$ 98,151	0.62	$ 8,416,578	$ 61,124	$ 8,355,454	$ 13,417,034
8	$ 14,686,276	$ 101,096	0.58	$ 8,547,546	$ 58,839	$ 8,488,708	$ 14,585,180
9	$ 15,958,841	$ 104,129	0.54	$ 8,680,552	$ 56,639	$ 8,623,913	$ 15,854,713
10	$ 17,341,675	$ 107,252	0.51	$ 8,815,628	$ 54,522	$ 8,761,107	$ 17,234,423
Present value benefits				$ 82,319,690			
Present value costs					$ 31,789,067		
Net Present Value						**$ 50,530,623**	
Benefit-cost ratio							**2.6**

F COST-BENEFIT MODEL ASSUMPTIONS

**ASSUM

Inflation	3.0%

Visitation		Year 1	Year 2	Year 3	Year 4
Additional Cycling Visitors		**51,303**	**54,125**	**57,102**	**60,242**
Daytrip	71%	36,669	38,686	40,814	43,059
Overnight	29%	14,634	15,439	16,288	17,184

Operating Expenditure		Year 1	Year 2	Year 3	Year 4
Hard Surface	$1,000 per km	$1,000 per km	$1,030 per km	$1,061 per km	$1,093 per
Gravel Surface	$1,500 per km	$1,500 per km	$1,545 per km	$1,591 per km	$1,639 per
Trail Distance	54.8 km				

Ave spend	Per person per day/night	Year 1	Year 2	Year 3	Year 4
Daytrip	$99	$99	$102	$105	$108
Overnight	$140	$140	$144	$149	$153

Visitor spend	ALOS	Year 1	Year 2	Year 3	Year 4
Daytrip	1.0	$3,621,101	$3,934,869	$4,275,826	$4,646,32
Overnight	2.2	$4,587,779	$4,985,310	$5,417,287	$5,886,69
Total spend		**$8,208,880**	**$8,920,179**	**$9,693,113**	**$10,533,**

Additional Travel Party Spend	Group Size	Year 1	Year 2	Year 3	Year 4
Daytrip	3.9	$14,122,293	$15,345,990	$16,675,720	$18,120,6
Overnight	3.9	$17,892,337	$19,442,708	$21,127,419	$22,958,1
Total spend		**$32,014,630**	**$34,788,698**	**$37,803,139**	**$41,078,**

PTIONS**

4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2	**63,556**	**67,051**	**70,739**	**74,630**	**78,734**	**83,065**
9	45,427	47,925	50,561	53,342	56,276	59,371
4	18,129	19,126	20,178	21,288	22,458	23,694

4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
r km	$1,126 per km	$1,159 per km	$1,194 per km	$1,230 per km	$1,267 per km	$1,305 per km
r km	$1,688 per km	$1,739 per km	$1,791 per km	$1,845 per km	$1,900 per km	$1,957 per km

4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	$111	$114	$118	$121	$125	$129
	$158	$163	$167	$172	$178	$183

4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
26	$5,048,930	$5,486,420	$5,961,818	$6,478,410	$7,039,764	$7,649,759
95	$6,396,777	$6,951,058	$7,553,367	$8,207,866	$8,919,078	$9,691,916
021	**$11,445,707**	**$12,437,477**	**$13,515,185**	**$14,686,276**	**$15,958,841**	**$17,341,675**

4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
571	$19,690,827	$21,397,037	$23,251,091	$25,265,798	$27,455,079	$29,834,061
10	$24,947,430	$27,109,125	$29,458,131	$32,010,678	$34,784,403	$37,798,471
781	**$44,638,257**	**$48,506,162**	**$52,709,221**	**$57,276,475**	**$62,239,482**	**$67,632,533**

G COST PLAN A

NEWTON KERR +PARTNERS

QUANTITY SURVEYORS AND CONSTRUCTION COST CONSULTANTS

CASTLEMAIN TO MARYBOROUGH RAIL TRAIL

ASPHALT TRAIL OPTION

COST PLAN A

FFLA

8TH JUNE 2023

PHONE 03 9822 1977
WWW.NEWTONKERR.COM.AU
ABN 31 837 935 121

Cost Plan Summary

Project: Castlemain to Maryborough Rail Trail
Building: Castlemain to Maryborough Rail Trail
Details: Stage A Cost Plan – Asphalt Option

Code	Description	Quantity	Unit	Rate	Subtotal	Factor	Total
	ASPHALT OPTION						
	PRE CONSTRUCTION				750,000		750,000
	SECTION 1 - CASTLEMAIN to CAMPBELLS CREEK				2,550,975		2,550,975
	SECTION 2 - CAMPELLS CREEK to GUILFORD				2,821,783		2,821,783
	SECTION 3 - GUILDFORD to NEWSTEAD				8,348,777		8,348,777
	SECTION 4 - NEWSTEAD to MOOLORT				10,201,868		10,201,868
	SECTION 5 - MOOLORT to CARISBROOK				6,083,907		6,083,907
	SECTION 6- CARISBROOK to MARYBOROUGH				5,302,762		5,302,762
	CASTLEMAIN TRAILS - CONNECTION TO GOLDFIELDS TRACK				9,356		9,356
	CAMPBELLS CREEK TRAILS				202,945		202,945
	GUILDFORD TRAILS				154,243		154,243
	NEWSTEAD TRAILS				682,188		682,188
	CARISBROOK TRAILS				228,125		228,125
	CARISBROOK TO MARYBOROUGH TRAIL CONNECTIONS				347,250		347,250
	TOTAL PROJECT COST (EXCL GST)						37,684,000

GENERAL NOTES

This is a Stage A Cost Plan for the proposed Castlemain to Maryborough Rail Trail

This Cost Plan has been prepared for the use of Fitzgerald Frisby Landscape Architecture only. Newton Kerr and Partners take no responsibility for the use of this document by other parties.

The following documentation was used as the basis for this Cost Plan:

Master Plan

183-002 Rail Alignment

20230504-1863-002 Appendix A

Appendix B

Appendix C

EXCLUSIONS

This Cost Plan EXCLUDES the following:

- Land costs
- Site remediation

Cost Plan Summary

Project: Castlemain to Maryborough Rail Trail
Building: Castlemain to Maryborough Rail Trail
Details: Stage A Cost Plan – Asphalt Option

Code	Description	Quantity	Unit	Rate	Subtotal	Factor	Total
	- Removal of contaminated material from bridges						
	- Scaffolding Joyces Creek Bridge						
	- Holding, finance and legal costs						
	- Headwork charges and permit fees						
	- Unfavourable ground conditions						
	- Rock excavation						
	- Removal of soft spots or contaminated soils						
	- Work outside normal working hours						
	- Any works associated with the possible upgrading of the existing infrastructure						
	- Provision of temporary power supplies and generators during supply disconnections and outages						
	- Relocation of any authority assets						
	- Cost escalation beyond June 2023						
	- All rates shall exclude Goods and Services tax						

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
PRE CONSTRUCTION					
	PRE- CONSTRUCTION				
1.A	Alignment and land agreement costs	1	Item	50,000	50,000
1.B	Environmental and heritage assessments and offsets	1	Item	600,000	600,000
1.C	Cultural heritage management plan	1	Item	100,000	100,000
	Sub-total				**750,000**
SECTION 1 – CASTLEMAIN to CAMPBELLS CREEK					
	Section 1 - Castlemaine to Campbells Creek 4.3km				
1.D	Builders Preliminaries	1	Item	148,493	148,493
1.E	Contamination testing of rail corridor	1	Item	15,050	15,050
1.F	Geotech report and structural review of bridges and culverts	1	Item	40,850	40,850
1.G	Planning permit application	1	Item	20,000	20,000
1.H	Arborist assessment and risk pruning	1	Item	25,800	25,800
1.I	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
1.J	Engineering and design fees (10% of construction cost)	1	Item	196,011	196,011
1.K	Project management (7.5% of construction cost)	1	Item	147,008	147,008
1.L	Trail head at Castlemaine Station including signage, shelter, drinking fountain and bike racks (assumed toilets are already provided at Castlemaine Station/ Camp Reserve)	1	Item	80,000	80,000
1.M	3m wide concrete path around Camp Reserve to connect to Campbells Creek Trail	500	m	210	105,000
1.N	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded	1,691	m	250	422,750
1.O	3m wide asphalt path on rail bed, rails already removed	2,609	m	180	469,620
1.P	3m wide asphalt path beside rail bed		m	180	
1.Q	Crossing over active rail line to relevant authority standards. This may include pedestrian control gates, concrete aprons, holding rails and signage either side of rail line	1	Item	75,000	75,000
1.R	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	5	No	31,000	155,000
1.S	Repairs to minor bridges (B1.2 and B1.3) including: - Site inspection by structural engineer - Structural repairs to wing walls - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	21	m	5,379	112,959
1.T	Repairs to culvert C1.1 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	32,300	32,300

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 1 – CASTLEMAIN to CAMPBELLS CREEK					*(Continued)*
2.A	Repairs to culvert C1.2 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	32,300	32,300
2.B	Interpretive signage allowance	1	Item	15,050	15,050
2.C	Furniture and trip facilities allowance	1	Item	64,500	64,500
2.D	Landscaping and weed control allowance	1	Item	51,600	51,600
2.E	Construction contingency 20%	1	Item	326,684	326,684
	Sub-total				**2,550,975**
SECTION 2 – CAMPELLS CREEK to GUILFORD					
	Section 2 - Campbells Creek to Guildford 6.5km				
2.F	Builders Preliminaries	1	Item	158,932	158,932
2.G	Contamination testing of rail corridor	1	Item	22,750	22,750
2.H	Geotech report and structural review of bridges and culverts	1	Item	61,750	61,750
2.I	Planning permit application	1	Item	20,000	20,000
2.J	Arborist assessment and risk pruning	1	Item	39,000	39,000
2.K	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
2.L	Engineering and design fees (10% of construction cost)	1	Item	209,790	209,790
2.M	Project management (7.5% of construction cost)	1	Item	157,343	157,343
2.N	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded		m	250	
2.O	3m wide asphalt path on rail bed, rails already removed	6,438	m	180	1,158,840
2.P	3m wide asphalt path beside rail bed		m	180	
2.Q	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	2	Item	31,000	62,000
2.R	Private road crossing/ lower order road crossing including	4	Item	1,500	6,000
2.S	Repairs to minor bridge (B2.1) including: - Site inspection by structural engineer - Structural repairs to wing walls including geotechnical investigation - Join abutment wall and wing wall with dowel bars and concrete repair mortar - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	10	m	6,189	61,890

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 2 – CAMPELLS CREEK to GUILFORD					*(Continued)*
3.A	Repairs to minor bridge (B2.2) including: - Site inspection by structural engineer - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Grade ballast (level in place) - Apply trail surface - Balustrade to both sides	6	m	3,431	20,588
3.B	Repairs to culvert C2.1 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Reinstate stone masonry joints - Provide cover to exposed corrugated pipe - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	39,300	39,300
3.C	Repairs to culverts C2.2 and C2.3 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	2	Item	32,300	64,600
3.D	Repairs to culverts C2.4 and C2.8 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Extend wing walls to maintain surrounding surface grading - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	2	Item	40,300	80,600
3.E	Repairs to culverts C2.5 and C2.6 including: - Remove surface corrosion from corrugated pipes and apply protective coating - Handrail along both sides of trail above culvert - Site inspection by structural engineer	2	Item	27,100	54,200
3.F	Repairs to culvert C2.7 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Reinstate displaced/ missing bricks - Extend wing walls to maintain surrounding surface grading - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	41,300	41,300
3.G	Interpretive signage allowance	1	Item	22,750	22,750
3.H	Furniture and trip facilities allowance	1	Item	97,500	97,500
3.I	Landscaping and weed control allowance	1	Item	78,000	78,000
3.J	Construction contingency 20%	1	Item	349,650	349,650
	Sub-total				**2,821,783**
SECTION 3 – GUILDFORD to NEWSTEAD					
	<u>Section 3 - Guildford to Newstead 12km</u>				
3.K	Builders Preliminaries	1	Item	497,729	497,729
3.L	Contamination testing of rail corridor	1	Item	42,000	42,000

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 3 – GUILDFORD to NEWSTEAD					*(Continued)*
4.A	Geotech report and structural review of bridges and culverts	1	Item	114,000	114,000
4.B	Planning permit application	1	Item	20,000	20,000
4.C	Arborist assessment and risk pruning	1	Item	72,000	72,000
4.D	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
4.E	Engineering and design fees (10% of construction cost)	1	Item	657,002	657,002
4.F	Project management (7.5% of construction cost)	1	Item	492,752	492,752
4.G	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded	12,066	m	250	3,016,500
4.H	3m wide asphalt path on rail bed, rails already removed		m	180	0
4.I	3m wide asphalt path beside rail bed		m	180	0
4.J	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	2	No	31,000	62,000
4.K	Private road crossing/ lower order road crossing including	12	No	1,500	18,000
4.L	Repairs to Midland Highway Bridge(B3.1) including: - Site inspection by structural engineer - Investigate and rectify seepage of water through abutments on both sides, including geotechnical report and installation of agi drain - Install precast concrete decking over ballast surface to withstand pedestrian load and occasional maintenance vehicle loads - Apply protective coating to damaged concrete surfaces - Apply trail surface - Balustrade to both sides	30	m	3,643	109,300
4.M	Repairs to Loddon River bridge (B3.2) including: - Site inspection by structural engineer - Structural repairs to abutments - Rail removal - Apply protective coating to damaged concrete surfaces - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	95	m	6,124	581,750
4.N	Repairs to minor bridges (B3.3, B3.4, B3.5, B3.6) including: - Site inspection by structural engineer - Rail removal - Replace existing bearing pads - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Assess and rectify movement in the wing wall including geotechnical report - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	160	m	6,595	1,055,200
4.O	Repairs to minor bridge (B3.7) including: - Site inspection by structural engineer - Structural repairs to abutments - Structural repairs to wing walls including geotechnical report - Rail removal - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Apply trail surface - Balustrade to both sides	7	m	9,049	63,340

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 3 – GUILDFORD to NEWSTEAD					*(Continued)*
5.A	Repairs to culvert C3.1 including: - Maintenance and removal of excess material - Reinstate mortar in brick joints - Extend wing walls to maintain surrounding surface grading - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	40,300	40,300
5.B	Repairs to culvert C3.2 including: - Maintenance and removal of excess material - Reinstate displaced stone masonry joints - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	1	Item	30,900	30,900
5.C	Interpretive signage allowance	1	Item	42,000	42,000
5.D	Furniture and trip facilities allowance	1	Item	180,000	180,000
5.E	Landscaping and weed control allowance	1	Item	144,000	144,000
5.F	Construction contingency 20%	1	Item	1,095,004	1,095,004
	Sub-total				**8,348,777**
SECTION 4 – NEWSTEAD to MOOLORT					
	Section 4 - Newstead to Moolort 14km				
5.G	Builders Preliminaries	1	Item	610,823	610,823
5.H	Contamination testing of rail corridor	1	Item	49,000	49,000
5.I	Geotech report and structural review of bridges and culverts	1	Item	133,000	133,000
5.J	Planning permit application	1	Item	20,000	20,000
5.K	Arborist assessment and risk pruning	1	Item	84,000	84,000
5.L	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
5.M	Engineering and design fees (10% of construction cost)	1	Item	806,287	806,287
5.N	Project management (7.5% of construction cost)	1	Item	604,715	604,715
5.O	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded	13,410	m	250	3,352,500
5.P	3m wide asphalt path on rail bed, rails already removed	680	m	180	122,400
5.Q	3m wide asphalt path beside rail bed		m	180	0
5.R	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	7	No	31,000	217,000
5.S	Private road crossing/ lower order road crossing including	2	NO	1,500	3,000
5.T	Trail head at Joyces Creek bridge including signage, shelter, drinking fountain, bike racks, toilet and 20 car parks	1	Item	280,000	280,000

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 4 – NEWSTEAD to MOOLORT					*(Continued)*
6.A	Repairs to minor bridges (B4.1 and B4.2) including: - Site inspection by structural engineer - Rail removal - Install precast concrete decking over ballast surface to withstand pedestrian load and occasional maintenance vehicle loads - Replace existing bearing pads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	60	m	5,805	348,282
6.B	Repairs to Joyces Creek Bridge (B4.3) including: - Site inspection by structural engineer - Rail removal - Install precast concrete decking over ballast surface to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	275	m	5,686	1,563,750
6.C	Repairs to culverts C4.1, C4.2, C4.3, C4.5, C4.6 and C4.7 including: - Maintenance and removal of excess material - Reinstate displaced stone masonry joints - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	6	Item	32,700	196,200
6.D	Repairs to culvert C4.4 including: - Maintenance and removal of excess material - Repair cracked concrete wall at the ends of culvert - Handrail along both sides of trail above culvert - Site inspection by structural engineer	1	Item	25,100	25,100
6.E	Interpretive signage allowance	1	Item	49,000	49,000
6.F	Furniture and trip facilities allowance	1	Item	210,000	210,000
6.G	Landscaping and weed control allowance	1	Item	168,000	168,000
6.H	Construction contingency 20%	1	Item	1,343,811	1,343,811
	Sub-total				**10,201,868**
SECTION 5 – MOOLORT to CARISBROOK					
	Section 5 - Moolort to Carisbrook 11km				
6.I	Builders Preliminaries	1	Item	354,894	354,894
6.J	Contamination testing of rail corridor	1	Item	38,500	38,500
6.K	Geotech report and structural review of bridges and culverts	1	Item	104,500	104,500
6.L	Planning permit application	1	Item	20,000	20,000
6.M	Arborist assessment and risk pruning	1	Item	66,000	66,000
6.N	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
6.O	Engineering and design fees (10% of construction cost)	1	Item	468,460	468,460
6.P	Project management (7.5% of construction cost)	1	Item	351,345	351,345
6.Q	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded	7,821	m	250	1,955,250
6.R	3m wide asphalt path on rail bed, rails already removed	3,008	m	180	541,440

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 5 – MOOLORT to CARISBROOK					*(Continued)*
7.A	3m wide asphalt path beside rail bed		m	180	0
7.B	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	3	Item	31,000	93,000
7.C	Private road crossing/ lower order road crossing including	2	Item	1,500	3,000
7.D	Repairs to minor bridge (B5.1) including: - Site inspection by structural engineer - Rail removal - Balustrade on both sides removal - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Structural repairs to abutments - Structural repairs to wing walls - Replace rotting timber bearing pads with adequate steel packers - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	5	m	14,138	70,690
7.E	Repairs to minor bridges (B5.2, B5.3, B5.4, B5.5 and B5.6) including: - Site inspection by structural engineer - Rail removal - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Structural repairs to abutments - Structural repairs to wing walls - Replace rotting timber bearing pads with adequate steel packers - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides - Control surrounding erosion	40	m	10,454	418,161
7.F	Repairs to culverts C5.1 and 5.2 including: - Reinstate displaced stone masonry joints - Reinstate weathered concrete wing wall at the ends of the culvert - Handrail along both sides of trail above culvert - Regrade surfaces on either end of culvert - Site inspection by structural engineer	2	Item	50,900	101,800
7.G	Repairs to culverts C5.3 including: - Remove surface corrosion from corrugated pipes and apply protective coating - Reinstate weathered concrete wing wall at the ends of the culvert - Handrail along both sides of trail above culvert - Site inspection by structural engineer	1	Item	47,700	47,700
7.H	Repairs to culverts C5.4 including: - Maintenance and removal of excess material - Regrade surfaces on either end of culvert - Handrail along both sides of trail above culvert - Site inspection by structural engineer	1	Item	27,900	27,900
7.I	Interpretation and amenity node including signage, seating, lookout area and public toilet	1	Item	290,000	290,000
7.J	Interpretive signage allowance	1	Item	38,500	38,500
7.K	Furniture and trip facilities allowance	1	Item	165,000	165,000
7.L	Landscaping and weed control allowance	1	Item	132,000	132,000
7.M	Construction contingency 20%	1	Item	780,767	780,767
	Sub-total				**6,083,907**

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 6– CARISBROOK to MARYBOROUGH					
	Section 6 - Carisbrook to Maryborough 7km				
8.A	Builders Preliminaries	1	Item	317,296	317,296
8.B	Contamination testing of rail corridor	1	Item	24,500	24,500
8.C	Geotech report and structural review of bridges and culverts	1	Item	66,500	66,500
8.D	Planning permit application	1	Item	20,000	20,000
8.E	Arborist assessment and risk pruning	1	Item	42,000	42,000
8.F	Additional studies/ reports, i.e. Bushfire Management Plan (allowance)	1	Item	15,000	15,000
8.G	Engineering and design fees (10% of construction cost)	1	Item	418,831	418,831
8.H	Project management (7.5% of construction cost)	1	Item	314,123	314,123
8.I	Trail head at Maryborough Station including signage, shelter, drinking fountain and bike racks (assumed toilets are already provided at Maryborough Station)	1	Item	80,000	80,000
8.J	3m wide asphalt path on rail bed, rails and sleepers to be removed, ballast to be graded	3,947	m	250	986,750
8.K	3m wide asphalt path on rail bed, rails already removed	2,347	m	180	422,460
8.L	3m wide asphalt path beside rail bed		m	180	0
8.M	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	3	Item	31,000	93,000
8.N	Private road crossing/ lower order road crossing including	2	Item	1,500	3,000
8.O	Repairs to Tullaroop Creek Bridge (B6.1) including: - Site inspection by structural engineer - Rail removal - Install precast concrete decking over ballast surface to withstand pedestrian load and occasional maintenance vehicle loads - Structural repairs to wing walls - Replace bearing pads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	140	m	8,443	1,182,063
8.P	Repairs to minor bridges (B6.2, B6.3 and B6.6) including: - Site inspection by structural engineer - Rail removal - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Structural repairs to wing walls - Structural repairs to abutments - Replace rotting timber bearing pads with adequate steel packers - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	28	m	10,859	304,065
8.Q	Repairs to minor bridges (B6.4 and B6.5) including: - Site inspection by structural engineer - Rail removal - Remove decking and replace with precast concrete decking to withstand pedestrian load and occasional maintenance vehicle loads - Remove surface corrosion and apply protective coating to steel surfaces - Apply trail surface - Balustrade to both sides	19	m	3,564	67,723

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
SECTION 6– CARISBROOK to MARYBOROUGH					*(Continued)*
9.A	Repairs to culverts C6.1 including: - Maintenance and removal of excess material - Regrade surfaces on either end of culvert - Reinstate displaced/ missing brickwork - Handrail along both sides of trail above culvert - Site inspection by structural engineer	1	Item	33,900	33,900
9.B	Interpretive signage allowance	1	Item	24,500	24,500
9.C	Furniture and trip facilities allowance	1	Item	105,000	105,000
9.D	Landscaping and weed control allowance	1	Item	84,000	84,000
9.E	Construction contingency 20%	1	Item	698,051	698,051
	Sub-total				**5,302,762**
CASTLEMAIN TRAILS – CONNECTION TO GOLDFIELDS TRACK					
	<u>Castlemaine trails - Conection to Goldfields Track</u>				
9.F	Builders Preliminaries	1	Item	444	444
9.G	Contamination testing	1	Item	455	455
9.H	Geotech report and structural review of bridges and culverts	1	Item	1,235	1,235
9.I	Arborist assessment and risk pruning	1	Item	780	780
9.J	Engineering and design fees (10% of construction cost)	1	Item	586	586
9.K	Project management (7.5% of construction cost)	1	Item	440	440
9.L	3m wide asphalt path	13	m	180	2,340
9.M	Wayfinding signage along suburban streets connection rail trail with Goldfields Track	6	No	350	2,100
9.N	Construction contingency 20%	1	Item	977	977
9.O					
	Sub-total				**9,356**
CAMPBELLS CREEK TRAILS					
	<u>Campbells Creek Trails</u>				
9.P	Builders Preliminaries	1	Item	12,460	12,460
9.Q	Contamination testing	1	Item	1,785	1,785
9.R	Geotech report and structural review of bridges and culverts	1	Item	4,845	4,845
9.S	Arborist assessment and risk pruning	1	Item	3,060	3,060
9.T	Engineering and design fees (10% of construction cost)	1	Item	16,447	16,447
9.U	Project management (7.5% of construction cost)	1	Item	12,335	12,335
9.V	3m wide asphalt path	510	m	180	91,800
9.W	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	2	Item	15,000	30,000
9.X	Wayfinding signage	8	No	350	2,800

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
CAMPBELLS CREEK TRAILS					*(Continued)*
10.A	Construction contingency 20%	1	Item	27,412	27,412
	Sub-total				**202,945**
GUILDFORD TRAILS					
	Guildford Trails				
10.B	Builders Preliminaries	1	Item	9,320	9,320
10.C	Contamination testing	1	Item	1,785	1,785
10.D	Geotech report and structural review of bridges and culverts	1	Item	4,845	4,845
10.E	Arborist assessment and risk pruning	1	Item	3,060	3,060
10.F	Engineering and design fees (10% of construction cost)	1	Item	12,302	12,302
10.G	Project management (7.5% of construction cost)	1	Item	9,227	9,227
10.H	3m wide asphalt path	510	m	180	91,800
10.I	Wayfinding signage	4	Item	350	1,400
10.J	Construction contingency 20%	1	Item	20,504	20,504
10.K					
	Sub-total				**154,243**
NEWSTEAD TRAILS					
	Newstead Trails				
10.L	Builders Preliminaries	1	Item	42,820	42,820
10.M	Contamination testing	1	Item	3,325	3,325
10.N	Geotech report and structural review of bridges and culverts	1	Item	9,025	9,025
10.O	Arborist assessment and risk pruning	1	Item	5,700	5,700
10.P	Engineering and design fees (10% of construction cost)	1	Item	56,522	56,522
10.Q	Project management (7.5% of construction cost)	1	Item	42,392	42,392
10.R	3m wide asphalt path	950	m	180	171,000
10.S	Lower order road crossing	2	Item	1,500	3,000
10.T	Shared path bridge over Loddon River balustrading	1	Item	250,000	250,000
10.U	Wayfinding signage	12	Item	350	4,200
10.V	Construction contingency 20%	1	Item	94,204	94,204
	Sub-total				**682,188**
CARISBROOK TRAILS					
	Carisbrook Trails				
10.W	Builders Preliminaries	1	Item	14,010	14,010

Cost Plan Detail

Project: Castlemain to Maryborough Rail Trail **Details:** Stage A Cost Plan – Asphalt Option
Building: Castlemain to Maryborough Rail Trail

Code	Description	Quantity	Unit	Rate	Total
CARISBROOK TRAILS					*(Continued)*
11.A	Contamination testing	1	Item	1,995	1,995
11.B	Geotech report and structural review of bridges and culverts	1	Item	5,415	5,415
11.C	Arborist assessment and risk pruning	1	Item	3,420	3,420
11.D	Engineering and design fees (10% of construction cost)	1	Item	18,493	18,493
11.E	Project management (7.5% of construction cost)	1	Item	13,870	13,870
11.F	3m wide asphalt path	570	m	180	102,600
11.G	Private road crossing	2	Item	1,500	3,000
11.H	Road crossing including concrete aprons, holding rails and signage either side of street and signage on road to warn vehicles of trail crossing	1	Item	31,000	31,000
11.I	Wayfinding signage	10	Item	350	3,500
11.J	Construction contingency 20%	1	Item	30,822	30,822
	Sub-total				**228,125**
CARISBROOK TO MARYBOROUGH TRAIL CONNECTIONS					
	Carisbrook to Maryborough trail connections				
11.K	Builders Preliminaries	1	Item	20,980	20,980
11.L	Contamination testing	1	Item	4,025	4,025
11.M	Geotech report and structural review of bridges and culverts	1	Item	10,925	10,925
11.N	Arborist assessment and risk pruning	1	Item	6,900	6,900
11.O	Engineering and design fees (10% of construction cost)	1	Item	27,694	27,694
11.P	Project management (7.5% of construction cost)	1	Item	20,770	20,770
11.Q	3m wide asphalt path	1,150	m	180	207,000
11.R	Wayfinding signage	8	Item	350	2,800
11.S	Construction contingency 20%	1	Item	46,156	46,156
11.T					
	Sub-total				**347,250**