



**Macedon
Ranges**
Shire Council

Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock Shared Trails Feasibility Report

28 August 2019



Photo credit: Hubert Weisrock

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Acknowledgements

This report, Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock Shared Trails Feasibility Report, was prepared by TRC Tourism Pty Ltd for the Macedon Ranges Shire Council.

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Document Register

Version	Report	date
V2	Trail Feasibility Report	14/08/18
V3	Trail Feasibility Report	3/10/18
V4	Trail Feasibility Report	27/11/28
V5	Trail Feasibility Report	28/08/19



EXECUTIVE SUMMARY

The Experience

The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock experience is proposed as a combined rail trail shared use trail experience linking rural landscapes, towns and heritage through Woodend, Kyneton and Hanging Rock. The experience will link to events, local food and produce and can be undertaken as a day trail or as an overnight riding experience staying at accommodation within the Macedon Ranges.

Guiding Principles

1	The Daylesford to Hanging Rock Trail experience will become a distinctive brand for visitor and community trails within one hour of the Melbourne CBD.
2	The trails will contribute strongly to community spirit and wellbeing by being fun, enjoyable and safe and well used by visitors and locals of all ages and popular with children. The trails will encourage a culture of shared use similar to successful Victorian low volume shared use trails ¹ .
3	The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock shared use trail will provide the links and connections to future Macedon Ranges trails and will ensure visitors and the local community (including commuters) are well served with good trails.
4	Safety and the comfort of all trail users on the Daylesford to Hanging Rock Trails will be fundamental to the experience and will be evidenced by an increase in trail use for recreation, tourism and commuting by users of all ages and ability.
5	Trail experiences will be designed to encourage shared, low volume cycling, walking and running across a range of abilities and suitable for all bike types and will be asphalt capped where possible. Trail routes will be planned off roads where possible with great trail experiences being the priority. Sections of the disused rail corridor from Carlsruhe to Tylden will be designed to incorporate safe horse riding.
6	The management, maintenance, marketing and information services for the trail will be facilitated through an effective and sustainable management model. Trails will protect, enrich and contribute to regional biodiversity.

¹ www.ridehighcountry.com.au/rail-trails/murray-to-mountains

Target Markets

Demand for trails is predominantly driven by tourism (nature based and adventure), physical activity and as a way for people to commute. Trail based events are becoming increasingly popular, while public awareness campaigns focused on health and wellbeing are likely to continue to promote active living (Tourism Victoria 2014).²

Boosting the number of people, walking, running and cycling will be key to making the Macedon Ranges neighbourhoods more vibrant and result in healthier Victorians. The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock shared use trails aim to get more people on bicycles by delivering a safer, lower-stress, better-connected network and by building a more inclusive cycling culture.

Daylesford to Hanging Rock Rail Trail

Cost Benefit Analysis

A cost benefit analysis was completed for a potential Daylesford to Hanging Rock Rail Trail (between Daylesford and Macedon Ranges) and concluded that the Daylesford to Hanging Rock Rail Trail (DHRrT):

- would generate between \$2 - 4.1 million per annum in direct and indirect expenditure
- would support between 25-51 new jobs in the local economy

The report also suggested that the Rail Trail would attract between 4,460-6,690 visits by local residents per annum plus an additional 31,300-62,580 visits per annum by domestic and international tourists.³

Cyclists on the Murray to Mountain Rail Trail in north-eastern Victoria are spending an average \$244 a day compared to the \$159 average spend of other travellers in the region.⁴



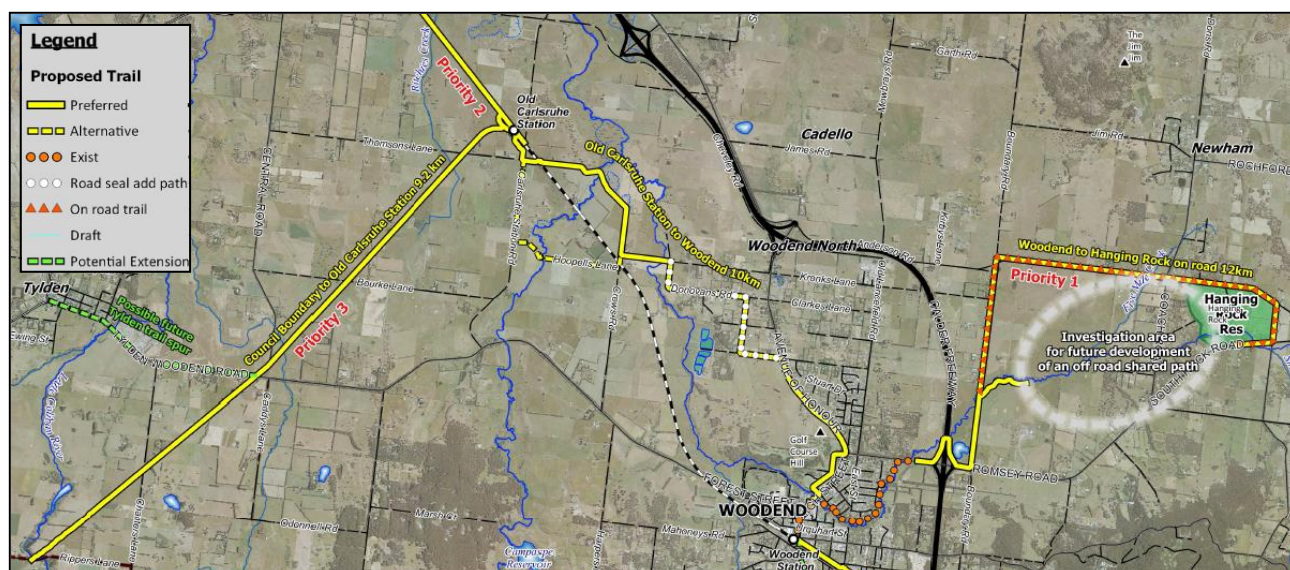
IMAGE 1 - CYCLISTS ON THE MURRAY TO MOUNTAIN RAIL TRAIL

² Regional Development Victoria - Loddon Campaspe Regionally Significant Trails Strategy 2018-2023

³ Regional Development Victoria - Loddon Campaspe Regionally Significant Trails Strategy 2018-2023

⁴ Bicycle Network Victoria www.bicyclenetwork.com.au

Figure 1. Overview of Trail - Tylden to Hanging Rock



Infrastructure

The shared trail routes will have a clear objective to reduce the interaction between cyclists and walkers with vehicles as much as possible.

Separation between cyclists and motor vehicles offers the prospect of safer, lower-stress and more direct journeys⁵.

The main infrastructure will be the shared use trail. The choice of trail width is generally based on the level and type of use that could be expected and the relationship between cyclist operating speed, volumes of pedestrians and cyclists, and mix of pedestrians and bicycles. A 3 metre wide path (rather than wider) is recommended as unlike urban commuter trails path speeds are less important and higher speeds are counter-productive e.g. not encouraging inexperienced and new cyclists and other walkers and runners.

Toilets, rubbish bins, doggy bags and drinking water will be available in each of the townships being less than 10 kilometres apart along the trail.

The trail will for the majority of the journey be within the disused section of rail, adjacent to the active rail corridor and along road reserves on purpose built 3.0 metre wide asphalt paths providing opportunity for a wide range of users including recreational cyclists, walkers, runners, scooters, wheelchairs and goffers.

Whilst the recommended trail surface is 3.0 metre wide asphalt, the most suitable surface material and width in some sections of the trail may differ due to the particular requirements of that section (ie land topography, physical impediments, trees, environmental considerations, etc) This will be determined at detailed design.

⁵ Victorian Cycling Strategy 2018-28

**Indicative Infrastructure Costs |
Council Boundary (Tylden) to Old Carlsruhe Station | 9.2 km**

**Total \$4,636,255
Annual Maintenance \$92,725**

**Indicative Infrastructure Costs |
Old Carlsruhe Station to Woodend (Visitor Information Centre) | 10 km**

**Total \$4,699,457
Annual Maintenance \$93,989**

**Indicative Infrastructure Costs |
Old Carlsruhe Station to Kyneton | 6 km**

**Total \$3,946,645
Annual Maintenance \$78,933**

**Indicative Infrastructure Costs |
Woodend Visitor Information Centre to Braemar College and Hanging Rock | 12km**

**Total \$2,971,922
Annual Maintenance \$59,438**

**Total Project Cost \$16,254,279 ** GST Exclusive
Estimated Annual Maintenance \$325,086**

** Based on 2021 figures, future anticipated indicative cost should factor in 3% annual rise

Strategic Considerations

- *Victoria’s Regional Statement sets out the government’s commitments to rural and regional Victoria. Tourism presents exciting opportunities for regions to promote public transport as a way of visiting popular destinations for weekend getaways and family holidays, accessing rail trails, and attending regional events.*
- *The Victorian Government is seeking to prioritise investment in strategic cycling corridors with the current and potential highest levels of demand, in essence providing arterials for people who cycle for transport. They will be within and outside road reserves, on local and state roads, and will be designed to maximise the separation of cyclists and motor vehicles.*
- *Transport for Victoria, through its Active Transport Victoria unit, will work with councils and state government agencies to deliver the strategy, ensuring cycling investments are coordinated and have maximum effect⁶*
- *The Daylesford to Hanging Rock Rail Trail is identified in the Loddon Campaspe Regionally Significant Trails Strategy as a priority development.*

The Council chose the themes ‘Liveability, Efficiency and Sustainability’, as priorities for the future reflecting the community’s wishes for these themes to be considered in everything the Council will do. The Council Plan was developed around five main priorities:

- *Promote health and wellbeing*
- *Protect the natural environment*
- *Improve the built environment*
- *Enhance the social and economic environment*
- *Deliver strong and reliable government*

The planning for the Macedon Ranges Shared Trails considered these priorities with a strong focus on contributing to participation in recreation and leisure by providing enjoyable, comfortable and safe physical activity opportunities across the municipality⁷.



IMAGE 2 - THE AVENUE OF HONOUR PROVIDES A GREAT TRAIL WELCOME TO WOODEND

⁶ Victorian Cycling Strategy 2018-28

⁷ Council Plan 2017–2027, Macedon Ranges Shire Council, Gisborne Victoria

Next Steps

- High level project feasibility assessment and consultation are now complete.
- State and Federal Government funding support is required to advance.
- Once funded the project is ready to move to more detailed design and implementation.
- Detailed design phase will include further land manager and land owner consultation.



IMAGE 3 - THE HERITAGE 1926 RAIL BRIDGE NEAR TYLDEN PROVIDES A PLEASANT START TO THE MACEDON RANGES SECTION OF THE RAIL TRAIL

1 Introduction

The Macedon Ranges Shire Council is seeking to develop enjoyable, user focussed and safe walking and cycling opportunities for the Shire. This includes a rail trail from Daylesford (Tylden) to Carlsruhe and then a shared path from the Old Carlsruhe Station to Kyneton and also to Woodend linking to a trail to Hanging Rock.

This Trail Feasibility Study is the first of two studies. The next linked study explores and makes recommendations for the best options for shared use trails between Woodend and Macedon and through to New Gisborne and Riddells Creek.

The Trail Feasibility Study provides realistic components to meet the criteria for funding by State and/or Federal Governments. The Feasibility Study details the benefits and preferred route and includes a rail trail component on the Macedon Ranges section of the disused rail corridor and a rail trail on the active rail corridor to Kyneton. These trails will provide links to future shared trails between other Macedon Ranges communities.

The Trail Feasibility Study is a high level feasibility analysis funded entirely by Council. It is not prudent or viable for Council to fund the extent of detailed investigations required until such time as the trails are ready to and have been funded to construct. The majority of more detailed investigations and considerations will occur at detailed design phase once funded either as an entire trail or more likely in standalone sections.

The trail routes focus on the needs of the users making them fun, enjoyable and as safe as possible. The trail alignments have considered engineering requirements, environmental approvals, cultural heritage and the important considerations of the local community.

Visitors have been well catered for by securing the best alignments for cycling, walking and running between the attractive rural towns of Kyneton and Woodend and onto Hanging Rock.

The Macedon Ranges Shire Council Plan 2017 – 2027 has outlined the key priorities for investing in services and facilities that reflect the vision for the Shire, the community and the future. The feasibility study links strongly to the Shire's future with a focus on improving public health and wellbeing and good decision-making.

The towns in the area provide special destinations for cyclists and other trail users and are a significant component to the overall trail and visitor experience. The Feasibility Study presents the results of research, consultation and analysis drawn together and presented in the form of a cycling and trail experience management framework.

This Feasibility Study draws together the results of consultation, analysis of socio economic benefits and the development of concepts. It includes recommendations represented in a concise, action-orientated document suitable for dissemination to Council and stakeholders.

An important component of this study is the initial engineering safety advice to ensure the options proposed conform to National Road Safety Strategy Priorities, Standards, legislation and policy, particularly for recommendations for on road routes.

The objectives, policies and provisions of the *Macedon Ranges Planning Scheme 2018* including special planning controls (known as overlays) have been considered.

The study area includes significant vegetation areas and places of special heritage significance including those protected under the *Heritage Act 2017* and under the stewardship of Heritage Victoria. These important features have been recognised and considered in the planning and siting of the trail. Where required a permit application process will be undertaken.

The Feasibility Studies includes the results of discussions with agencies that have management responsibility for the disused and active rail corridor (VicTRack and VLine) and road network (VicRoads and Macedon Ranges Shire

Council). A public exhibition process of the draft studies was undertaken and feedback was invited from land management authorities, adjoining land owners, stakeholder groups and the general community.

As a result, 47 written submissions were received and 378 online surveys completed, 95% of survey respondents were in support of the development of shared trails in the Macedon Ranges.

Feedback received during the public exhibition of the draft studies was valuable in informing the final studies. The Feasibility Studies are produced at a level that enables trail sections to be 'project ready' for State and Federal Government funding. Once trail sections are funded detailed design will happen inclusive of detailed engineering, cultural heritage, environmental and other considerations. Additional consultation with adjoining landowners will also take place at that time to address any outstanding concerns.



IMAGE 4 - EXAMPLE OF TRAIL HEAD / ROAD CROSSING INFRASTRUCTURE ON THE MURRAY TO MOUNTAINS RAIL TRAIL

2 The Task

The Macedon Ranges Shire Council is one of Victoria's fastest growing non-metropolitan municipalities situated 40 minutes by car north-west of Melbourne in an area rich in beauty and character. The population of the Shire in 2017 was 47,850 and is projected to grow to 64,902 by 2036. The major population centres are Gisborne, Kyneton, Lancefield, Macedon, Mt. Macedon, Riddells Creek, Romsey and Woodend.

The Macedon Ranges community has increasingly sought the provision of safe walking and cycling opportunities and the Shire has responded with a key action of the recently completed Council Plan 2017-2027 to *“invest \$1.1M in planning, renewing and building new footpaths and cycling paths to improve access and community connections”*.

A TRC Tourism team has been appointed to investigate and consider various options to develop the preferred and realistic costed options. The options will include the support and in-principle approval of land management authorities and will have factored in cultural heritage, environmental and other relevant considerations.

This Trail Feasibility Study provides the next step towards providing improved cycling, walking, running and community connections for Macedon Ranges residents and visitors.

The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock experience is proposed as a combined rail trail shared use trail experience linking rural landscapes, towns and heritage through Woodend, Kyneton and Hanging Rock. The experience will link to events, local food and produce and can be undertaken as a day trail or as an overnight riding experience staying at accommodation within the Macedon Ranges.

2.1 Critical factors for success

To be a premier experience, the Rail Trail and town connecting journey must be a distinctive experience that enriches the trail journeys of visitors and residents.

Successful trails offer visitors and residents a distinctive and encouraging experience - something special and different from other places.

They offer experiences that:

- Have a clear positioning that provides a compelling message for the market
- Showcase distinctive natural or cultural landscapes and enable users to interact with nature, local people and culture
- Are linked experiences that include character and variety and encourage use by a wide range of users including new users
- Offer ways for visitors to immerse themselves in landscape and activity through off road free flowing trail experiences.

Specifically, great trail based experiences:

- Offer diversity in experience and environment
- Have limited overlap with busy roads and visitor nodes
- Feature trails designed to match the experience and purpose

- Showcase a point of difference from other products
- Provide day cycling experiences up to 50 kilometres
- Promote sustainability and protect and enrich the environment.

2.2 Creating a distinctive experience

The following draft Ambition Statement, Positioning Statement and Guiding Principles are proposed as a guide to the development of the trails:

2.2.1 Ambition Statement

Macedon Ranges Trails are Australia's ultimate integrated cycling experience, connecting the best of destination, community, nature and culture.
The Ambition encompasses:

► **Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock Trail**

◀ is the description of the offer, which helps to reinforce that it is more than just a shared use rail trail as it has strong links to attractive towns, unique destinations and represents exploration and mild adventure.

► **Australia's ultimate integrated cycling experience**

◀ tells us that the experiences linked across the landscape provides enjoyable, fun, safe and practical recreational, visitor and commuter activity that meet the expectations of locals and visitors and encourage use.

► **Connecting the best of nature, culture and community**

◀ the opportunities presented by the region's unique landscape, natural and heritage features, growing local product and proximity (50 minutes) from Australia's fastest growing capital city.
<http://www.abs.gov.au/ausstats>

2.2.2 Positioning Statement

Macedon Ranges Trails: Engage with the landscape, attractive historic heritage towns and destinations and link communities through safe, enjoyable and spirited trails.
The Positioning encompasses:

► **Engaging with the landscape**

◀ reinforces that the Macedon Ranges Trails are more than just a physical adventure. The trails offer engagement with the rural landscape from the historic rail corridor, to the farm gate through the Avenue of Honour to Woodend and to spectacular Hanging Rock.

► **Immersing yourself in heritage and attractive rural towns**

◀ the historic rail trail provides the corridor and links across rural landscape to the well preserved historic towns of Kyneton and Woodend.

► **Linking the community through safe, enjoyable and spirited trails**

◀ whether a visitor or local the Macedon Ranges Trails engage the rider, walker or runner into the spirited community of the Macedon area through trails that welcome all and strengthen the ties between the people and the community.

The goal will be to create a shared trail experience that delivers on this positioning.

2.3 Guiding Principles

1	The Daylesford to Hanging Rock Trail experience will become a distinctive brand for visitor and community trails within one hour of the Melbourne CBD.
2	The trails will contribute strongly to community spirit and wellbeing by being fun, enjoyable and safe and well used by visitors and locals of all ages and popular with children. The trails will encourage a culture of shared use similar to other successful Victorian low volume shared use trails ⁸ .
3	The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock shared use trail will provide the links and connections to future Macedon Ranges trails and will ensure visitors and the local community (including commuters) are well served with good trails.
4	Safety and the comfort of all trail users on the Daylesford to Hanging Rock Trails will be fundamental to the experience and will be evidenced by an increase in trail use for recreation, tourism and commuting by users of all ages and ability.
5	Trail experiences will be designed to encourage shared, low volume cycling, walking and running across a range of abilities and suitable for all bike types and will be asphalt capped where possible. Trail routes will be planned off roads where possible with great trail experiences being the priority. Sections of the disused rail corridor will be designed to incorporate safe horse riding.
6	The management, maintenance, marketing and information services for the trail will be facilitated through an effective and sustainable management model. Trails will protect, enrich and contribute to regional biodiversity.

⁸ www.ridehighcountry.com.au/rail-trails/murray-to-mountains

3 Target Markets

Demand for trails is predominantly driven by tourism (nature based and adventure), physical activity and as a way for people to commute. Trail based events (such as races and mountain biking competitions) are becoming increasingly popular, while public awareness campaigns focused on health and wellbeing are likely to continue to promote active living (Tourism Victoria 2014).⁹

Boosting the number of people, walking, running and cycling will be key to making the Macedon Ranges neighbourhoods more vibrant and result in healthier Victorians. The Macedon Ranges shared use trails aim to get more people on bicycles by delivering a safer, lower-stress, better-connected network and by building a more inclusive cycling culture.

The Macedon Ranges shared use trails will include initiatives that result in more direct, separated (from vehicles) cycle paths to link the towns and important destinations, like workplaces, schools and public transport stops.

The Victorian Cycling Strategy (2018-28) informs us that about 60 percent of Victorians are curious about cycling but are deterred by real or perceived safety concerns. Women, children and seniors are far fewer than the typical cyclist, who is male and under 45. A majority of Victorians have real and perceived safety concerns that put them off cycling. An approach to better separate pedestrians, bicycles and motor vehicles, reducing the need for cyclists to mix with other road users will encourage those curious about cycling to get on board¹⁰. Initial community consultation indicated that there is real concern for cyclists particularly children on Macedon Ranges roads whilst there is a strong desire for these kids to be cycling.

The Four Types of Cyclists

People can be grouped into four types according to their cycling attitudes and behaviours, according to a study by the City of Portland USA and applicable here. This is based mainly on their level of comfort when cycling and their interest in or intent to cycle for transport. This study is used internationally (including in Australia) to better understand people’s propensity to cycle and what can be done to encourage them. ¹¹.

The four cycling attitude types include:

<p>1. Strong and Fearless</p>	<p>2. Enthused and Confident</p>	<p>3. Interested but Concerned</p>	<p>4. No Way, No How</p>
<ul style="list-style-type: none"> • People willing to bicycle with limited or no bicycle-specific infrastructure. 	<ul style="list-style-type: none"> • People willing to bicycle if some bicycle-specific infrastructure is in place. 	<ul style="list-style-type: none"> • People willing to bicycle if high-quality bicycle infrastructure is in place. 	<ul style="list-style-type: none"> • People unwilling to bicycle even if high-quality bicycle infrastructure is in place.

The largest group, and the group most likely to use these trails are the *interested but concerned cyclists* whom vary in age and cycling ability. They are curious about cycling and like to ride but are afraid to do so

⁹ Regional Development Victoria – Loddon Campaspe Regionally Significant Trails Strategy 2018-2023

¹⁰ Victorian Cycling Strategy 2018-28

¹¹ Victorian Cycling Strategy 2018-28

and are put off by the need to ride close to motor vehicles and pedestrians, especially on higher-speed, higher-volume roads or where conflicts are more likely.

This indicates that investment in cycling infrastructure to make it safer and lower-stress is worthwhile, to encourage interested but concerned people to cycle¹².

People are more inclined to cycle when they see it as something a diverse range of people do and when they feel accepted. Participants in the consultation for the Victorian Cycling Strategy (2018-28) thought the attitudes and behaviours of cyclists and other road users would improve if they saw women, children, seniors and people from other underrepresented groups cycling. To attract a more diverse range of people to cycling, it's important to make cycling a more comfortable experience. Separating cyclists and motor vehicles makes cycling more comfortable by reducing traffic stress¹³.

E-bikes will become more popular over the next decade, as they counteract barriers to cycling such as hilly terrain and longer distances. E-bikes may also suit people who have stopped cycling because of injury, illness or age. This is particularly important for Victoria's ageing population.

The Macedon Ranges trail experience has the potential to attract users interested in new experiences, exploring new places through day trips, weekends away, or for local people commuting to work, school or sport or for enjoyment, recreation and fitness. With a variety of trails, support services and complementary activities in the region families and less experienced riders will be encouraged to get involved in cycling and the trails will be a feature for walking running and events. Trails need to be specifically designed to encourage children and young people to use trails and for parents and care givers to be confident in having children use the trails. The community will be encouraged to develop a culture of trail use and less reliance on motor vehicles.

¹² Source: Roger Geller, *Four types of cyclists*, City of Portland Oregon <https://www.portlandoregon.gov/article/15472>

¹³ Victorian Cycling Strategy 2018-28

3.1 Insights into the cycling target markets

The trails will cater for a range of cycling target markets to varying degrees including:

Social trail riders	Active retirees, Middle Aged Men In Lycra (MAMILs), or 55+ market	Endurance trail rider	Interested, curious but concerned people	Commuters
<ul style="list-style-type: none"> A mixture of age groups - from young to older. They ride with groups of friends or family, and look for day or overnight trips. They generally ride up to 50km / day on easy - moderate terrain. Seeking challenge but nothing risky or extreme. Sense of adventure and achievement is important. Scenery and points of interest are very important. They require good information online and in print, rustic to mid-range accommodation for overnight trails. This group are interested in experiencing cafes, cellar doors, historic sights and small towns / villages along the way, and they like to showcase their activities on social media. 	<ul style="list-style-type: none"> Groups of working or semi-retired men. They participate in regular social riding activities and like 'bragging rights' associated with their activities. Enjoy a mix of riding, sightseeing and other activities. Budget - mid level accommodation with quality dining options. Will participate in events and offer potential for repeat visitation. 	<ul style="list-style-type: none"> in the age group of 22-50, predominantly male and higher income groups. They have a strong interest in challenging terrain, steep climbs and descents. They will ride long distances, up to 75km / day and are compatible with multi-day experiences. They may complete more than one segment of a multi day ride per day, depending on conditions. This group will travel to destinations that offer quality experiences and will spend on riding experiences and equipment. 	<ul style="list-style-type: none"> wishing to bicycle if high-quality bicycle infrastructure is in place, interested in exploring new places through day trips, weekends away or for local people commuting to work, school or sport or for enjoyment, recreation and fitness. Often women, children, seniors and people looking for a variety of trails, support services and complementary activities in the region that will encourage these people to get involved in cycling 	<ul style="list-style-type: none"> Victorians who cycle to work, school and sport or for enjoyment or have limited transport options. While the number of people cycling to work is low compared with the number using other modes of transport, work journeys are typically the longest journeys we take. These current and potential users will be looking for a variety of trails between towns in the region and will be encouraged to continue and develop further into cycling, walking, running and being involved in events.

3.2 Macedon Ranges Tourism Demand Analysis

3.2.1 The Region

The demand for trails is predominantly driven by tourism (nature based and adventure), physical activity and as a way for people to get around. The previous section focussed on encouraging use particularly by the local community. Macedon Ranges, due to its proximity to Melbourne, is popular with a range of visitors, it should be noted however that much of the visitor analysis described here combines both the Daylesford & Macedon Ranges, as Daylesford is also a well-known attractor to the area.

Accessible by car or train from Melbourne in less than one hour, the Macedon Ranges provides a taste of country Victoria. The towns and villages in this region offer community markets, culinary experiences, parklands and gardens, historic architecture, wineries, art and culture, gold-rush heritage, spa and well-being experiences, together with outdoor activities such as walking and cycling.

The region is well known for the iconic Hanging Rock which has been featured in both print and film and is a significant place for local indigenous people. Autumn creates an explosion of colour in the Macedon Ranges and is a popular time for visitors to the region.

The main towns and villages that make up the Macedon Ranges are Gisborne, Kyneton, Lancefield, Macedon, Malmsbury, Mount Macedon, Riddells Creek, Romsey and Woodend.

3.3 Attractions

TripAdvisor 'Top 10 Things To Do' in Macedon Ranges are a mixture of nature based activities and other attractions and include:

1. Hanging Rock Reserve
2. Mount Macedon
3. Piper Street, Kyneton
4. Edgar's Mission
5. Mount Macedon Memorial Cross
6. Forest Glade Gardens
7. Woodend Children's Park
8. Gisborne Peak Winery
9. Paramoor Winery
10. Gisborne Olde Time Market

3.4 Cycling

The Macedon Ranges Ride Guide already features 16 trails (on and off-road) that are suitable for a wide range of ages and abilities. Wombat State Forest offers over 100km of single track trails for mountain biking. Bike riding experiences do appeal to a smaller, more niche market, but would still increase visitation to the region.¹⁴

Demand for trails is predominantly driven by tourism (nature based and adventure) and physical activity. Trail based events (such as races and mountain biking competitions) are becoming increasingly popular, while public awareness campaigns focused on health and wellbeing are likely to continue to promote active living (Tourism Victoria 2014).¹⁵

Daylesford to Hanging Rock Rail Trail Cost Benefit Analysis

Cyclists on the Murray to Mountain Rail Trail in north-eastern Victoria are spending an average \$244 a day compared to the \$159 average spend of other travellers in the region.¹⁶

A cost benefit analysis was completed for a potential Daylesford to Hanging Rock Rail Trail (between Daylesford and Macedon Ranges) and concluded that the Daylesford to Hanging Rock Rail Trail (DHRrT):

- would generate between \$2 - 4.1 million per annum in direct and indirect expenditure
- would support between 25-51 new jobs in the local economy

The report also suggested that the Rail Trail would attract between 4,460–6,690 visits by local residents per annum plus an additional 31,300-62,580 visits per annum by domestic and international tourists.¹⁷

¹⁴ Colmar Brunton – Daylesford & Macedon Ranges RTB - Market Research and Gap Analysis – May 2015

¹⁵ Regional Development Victoria – Loddon Campaspe Regionally Significant Trails Strategy 2018-2023

¹⁶ Bicycle Network Victoria www.bicyclenetwork.com.au

¹⁷ Regional Development Victoria – Loddon Campaspe Regionally Significant Trails Strategy 2018-2023

The Macedon Ranges Visitor Economy Strategy 2019-2029¹⁸ suggests that the region is already known as a cycle friendly destination and that there is a need for local businesses to understand the needs of cyclists and modify their current offering to meet these. A lack of formalised cycling trails was identified, including no link between Woodend and Hanging Rock. Investment into mountain bike trails and endorsement of more mountain bike trails was recommended, to bring the quality of the Macedon Ranges cycling options up to the level of other cycling destinations.

3.5 Equestrian

Equestrian usage of the Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock Shared Trails has been considered as part of this feasibility study, however due to the narrowness of the available corridor and close proximity to active railway and roads in several locations along these routes, it is not proposed to cater for horse riding along all sections of trail.

The proposed “rail trail” section from Carlsruhe to Daylesford has been identified as being better able to provide for a safer horse riding experience and further consideration of equestrian usage for this section of trail will occur during detailed design.

Whilst several informal horse riding trail opportunities currently exist in the Macedon Ranges, one of the short term priorities recommended in Council’s Sports and Active Recreation Strategy 2018-2028¹⁹ is for Council to facilitate an *Equestrian Facilities Plan* in conjunction with equine clubs, groups and associations to determine amongst other things, opportunities to establish safe trail riding locations in collaboration with other land management agencies.

The Macedon Ranges Shared Trails Feasibility Studies supports this approach.

¹⁸ Macedon Ranges Visitor Economy Strategy 2019--2029

¹⁹ Macedon Ranges Sports and Active Recreation Strategy 2018-2028

4 Visitor Profile

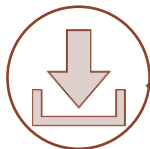
Key visitor demographics and travel behaviour reviewed in the Macedon Ranges Visitor Economy Strategy 2019-2029²⁰, provide some insights into existing market segments that are likely to be expanded from the development of the trails. In particular, the nature based offering catering for bush walking and the previously mentioned current cycling activities will be enhanced. Other market segments identified include:



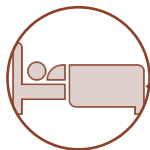
Holiday daytrip visitors dominate the market (46%), but are underrepresented in the domestic overnight (24%) and international (17%) markets



The VFR market is highly significant to the region, representing a high proportion of international (62%) overnight (51%), and daytrip (33%) visitors



There is a lower proportion of holiday overnight visitors as compared to regional Victoria, which may be driven by the region's proximity to Melbourne



Overnight domestic and international travel is dominated by adults travelling alone or in couples



Older visitors/retirees 65+ years were a key market segment across all three visitor markets (daytrip, overnight and international), representing more than 20% of visitors across each



The Macedon Ranges nature based offering was a key attractor with 'bushwalking/ rainforest walks' one of the top 6 activities for domestic visitors



The region attracted a high proportion of traditional western markets (UK, NZ and USA) and captured less of the emerging growth markets which are aligned to the regions strengths (such as China and India)



12% of day trip visitors fell in the highest household income bracket (\$200,000+)

²⁰ Macedon Ranges Visitor Economy Strategy 2019-2029

5 The Experience

5.1 The Trail

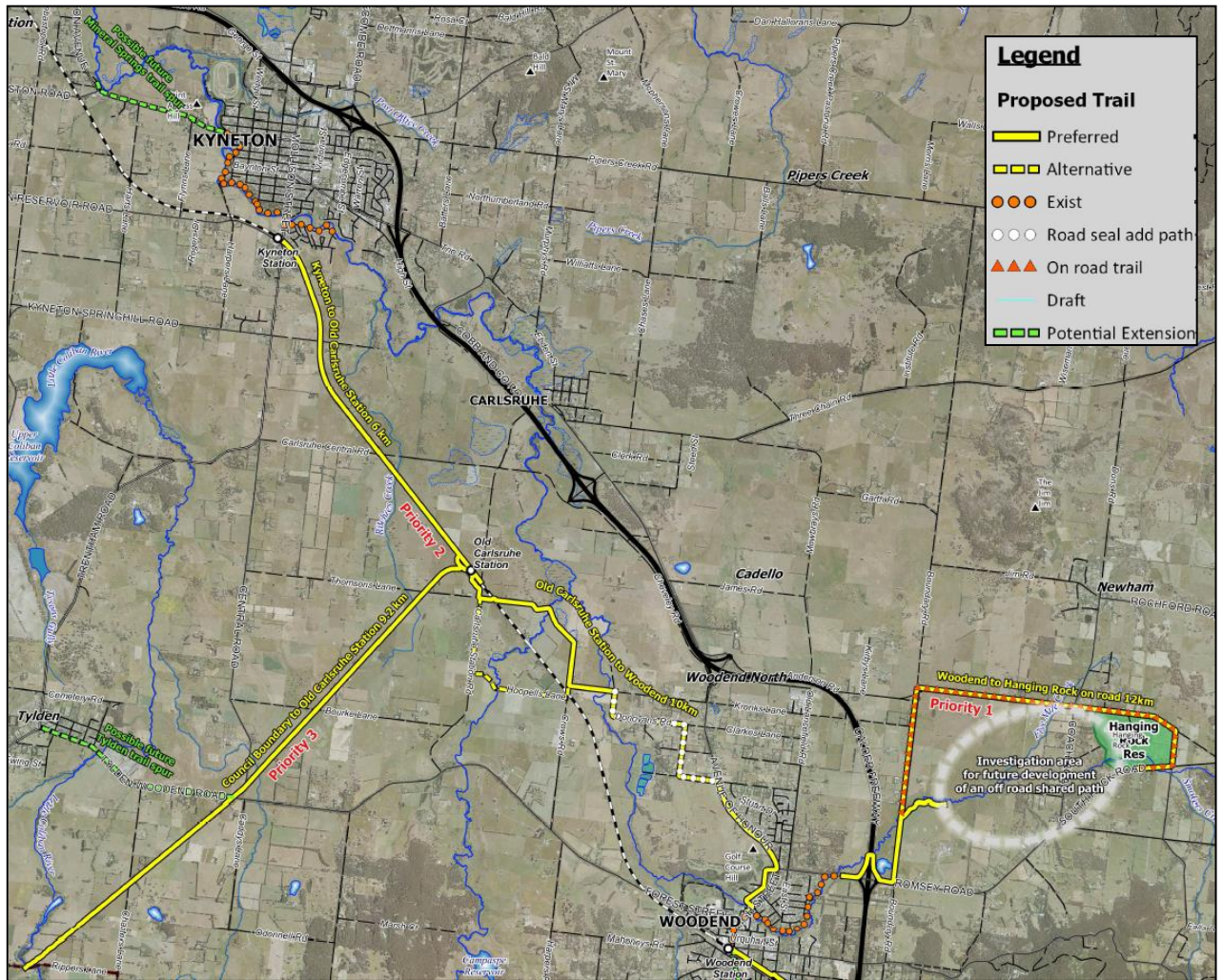
The Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock experience is proposed as a combined rail trail shared use trail experience linking rural landscapes, towns and heritage through Woodend, Kyneton and Hanging Rock. The experience will link to events, local food and produce and can be undertaken as a day trail or as an overnight riding experience staying at accommodation within the Macedon Ranges.

The trails are strongly linked to the local community’s priorities of enjoyable, safe, recreation, commuting, fitness and social trail experiences and provide strong links to important Hanging Rock and town connecting trails.

The trails will ensure future strong links between and within the towns and important services such as schools with many step on and step off opportunities. The trails will be developed to encourage a wide range of users through wide asphalt shared paths with an open and flowing nature that links the user with landscape features.

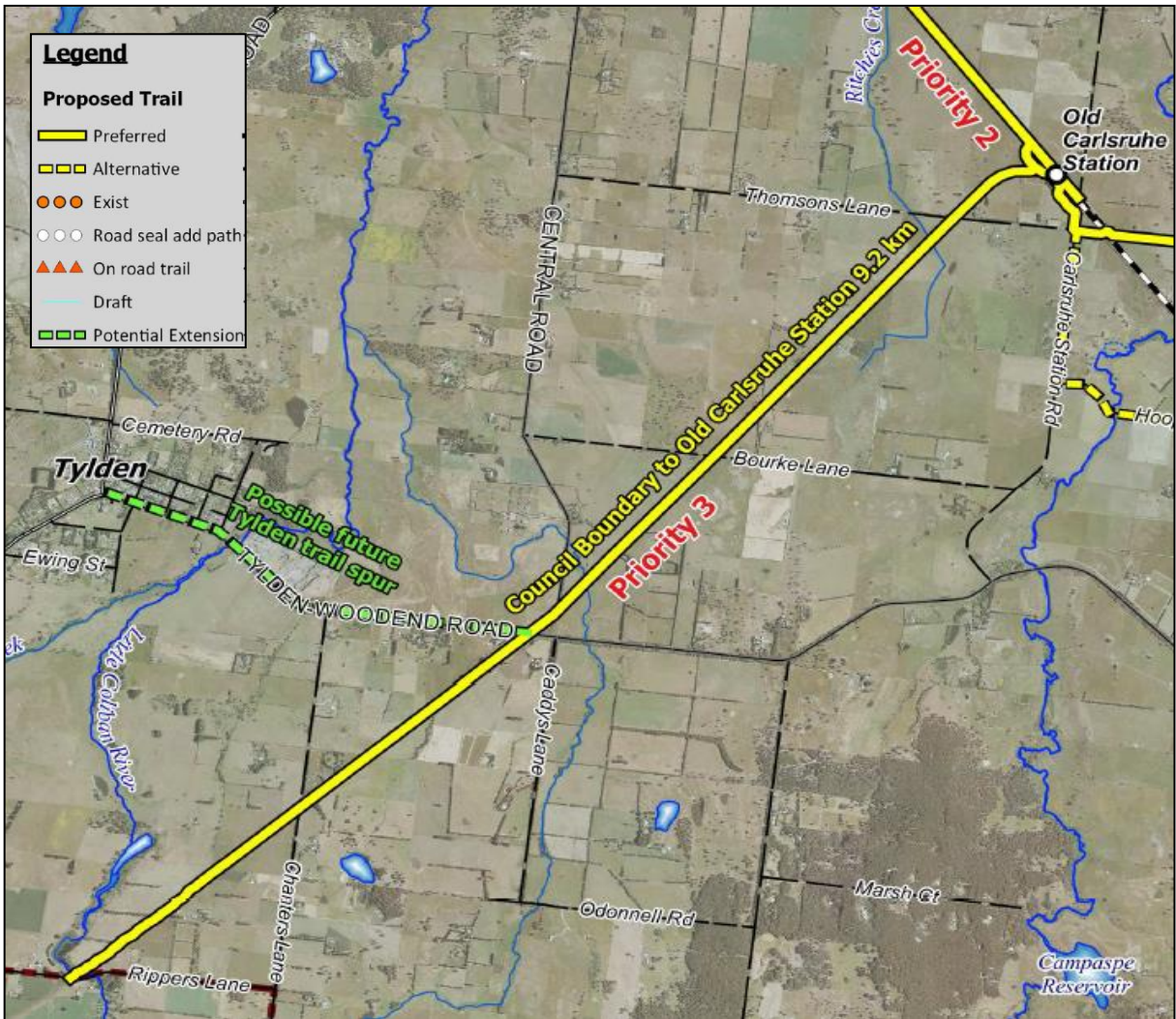
5.1.1 Daylesford (Tylden) to Woodend, Old Carlsruhe Station to Kyneton and shared path to Hanging Rock





MAP 1 - OVERVIEW OF DAYLESFORD (TYLDEN) TO WOODEND, KYNETON AND HANGING ROCK SHARED TRAILS

5.1.2 Council Boundary (Tylden)* to Old Carlsruhe Station



MAP 2 - COUNCIL BOUNDARY TO OLD CARLSRUHE STATION

Recommended Shared Trail Route Investigation	Assessment Against Principles and Premier Shared Trail Criteria
<p>Recommended and only option.</p> <p>Rail trail shared use following the disused rail trail from Council Boundary (Rippers Lane Tylden) to Old Carlsruhe Station.</p> <p>This section of trail has been identified as development priority 3 of 6.</p>	<p>The only disused rail available for rail trail options.</p> <p>Clear and significant contributor and component of the Daylesford to Woodend Rail Trail.</p> <p>There is also potential for a future spur or loop trail beyond the preferred route to be developed linking the trail into the Tylden township.</p>

*Hepburn Shire Council will take responsibility for the section within their shire from Tylden to Daylesford.

Recommended Route

The trail experience within the Macedon Ranges Shire Council starts on the northern side of Rippers Lane where the historic 1926 Little Coliban River railway bridge welcomes trail users to the trail. The substantial bridge spans the Little Coliban River and provides an impressive trail feature. The bridge support structure appears in excellent condition however access to the bridge is currently blocked by blackberry thickets and

future trail access and development will be reliant on engineering and heritage assessment. Future access across the bridge will provide a memorable gateway to this Macedon Ranges section of the trail.

The trail follows on the publicly owned old rail alignment through attractive grazing land passing through several cuttings and creeks including Richies Creek. Remnants of the rail era remain including the old Tylden Siding, old timber bridges and sleepers and the Old Karlsruhe Station where the disused line meets the current active Melbourne to Bendigo railway. The trail will cross two roads and two country lanes with the Tylden – Woodend Road providing the opportunity for a central drop off and pick point for trail users. At the Old Karlsruhe Station the trail separates to Woodend to the southeast on shared use trails and Kyneton to the northwest along the active rail line corridor.

The land that was the rail reserve for the Karlsruhe & Daylesford Railway within the Macedon Ranges Shire Council municipal area, is owned by VicTrack. The majority of the VicTrack land on either side of the old rail line is leased to surrounding neighbours for cultivation and grazing whilst the majority of the central disused line of approximately 10 metres width is not leased. A small section of the disused rail line is currently leased and further negotiations will take place with the lessee and lessor. There are wider unleased sections at the Tylden Siding site and at Old Karlsruhe Station.

Initial consultation has taken place with the lessees and landowners adjacent to the Karlsruhe to Daylesford Railway Reserve. There have been some concerns expressed including, future trail users encroaching on their privacy, potential for dogs to access private property and impact upon livestock, increased risk of bushfires, impact of any plantings, weed control and the trail interrupting the movement of stock from one side of the line to the other. None of these issues impact upon the viability of the trail. Further dialogue and consultation with neighbours will be essential to address these concerns and to continue with the progression of trail development once the trail has been funded and detailed design commences.

The issues regarding stock movement can be resolved with the provision of stock fencing, new bridges and stock access gates. The infrastructure to assist neighbours and lessees have been allowed for in the budget (see 5.2.1 Infrastructure).

Placement of a 3.0 metre asphalt shared path will provide opportunity for a wide range of users including recreational cyclists, walkers, runners, prams, scooters, wheelchairs and gofers. The shared path will require significant preparatory and construction work including the removal of the old sleepers and material and bridging of the major and minor rivers and creeks. Associated works include car parks, toilets, information, advisory and interpretive signs and traffic safety systems for road crossing. Toilets, rubbish bins, doggy bags and drinking water are proposed for the Old Karlsruhe Station site, existing toilets are available in each of the townships being less than 10 kilometres away. Prior to construction engineering, technical and heritage assessments will be required for the heritage listed Little Coliban River Bridge and for the design of low level bridges and trail facilities.

Safety testing will be required on the disused line and at the old station sites to test for potentially hazardous substances including asbestos.

Due to the impact from previous rail operations, stock grazing and weed infestation it is unlikely that there will be any impact on native vegetation or wildlife from the trail construction. There will be however great opportunity to restore the landscape and provide a vegetated corridor to enrich biodiversity, improve the trail experience and to provide improved screening between the trail and adjacent landowners.

The Karlsruhe and then onto Daylesford under the Hepburn Shire Council Railway Reserve provides a unique opportunity to experience the rural landscape and the heritage railway corridor. The 9-kilometre trail section would be suitable for cyclists, walkers and runners and with some modification to path design, horse riding can occur safely and unencumbered on an adjacent natural surface.

An example of how this approach works is the 17 kilometre Amy Gillett Bikeway which is popular with leisure cyclists and families. Designed for cyclists, walkers and horse riders, the bitumen track follows an old railway corridor running from Oakbank to Mount Torrens in the Adelaide Hills with horses using the verge adjacent to the track. Named in honour of champion Australian cyclist Amy Gillett, this family-friendly track is bitumen and mostly flat, with four loop trails taking in other points of interest.



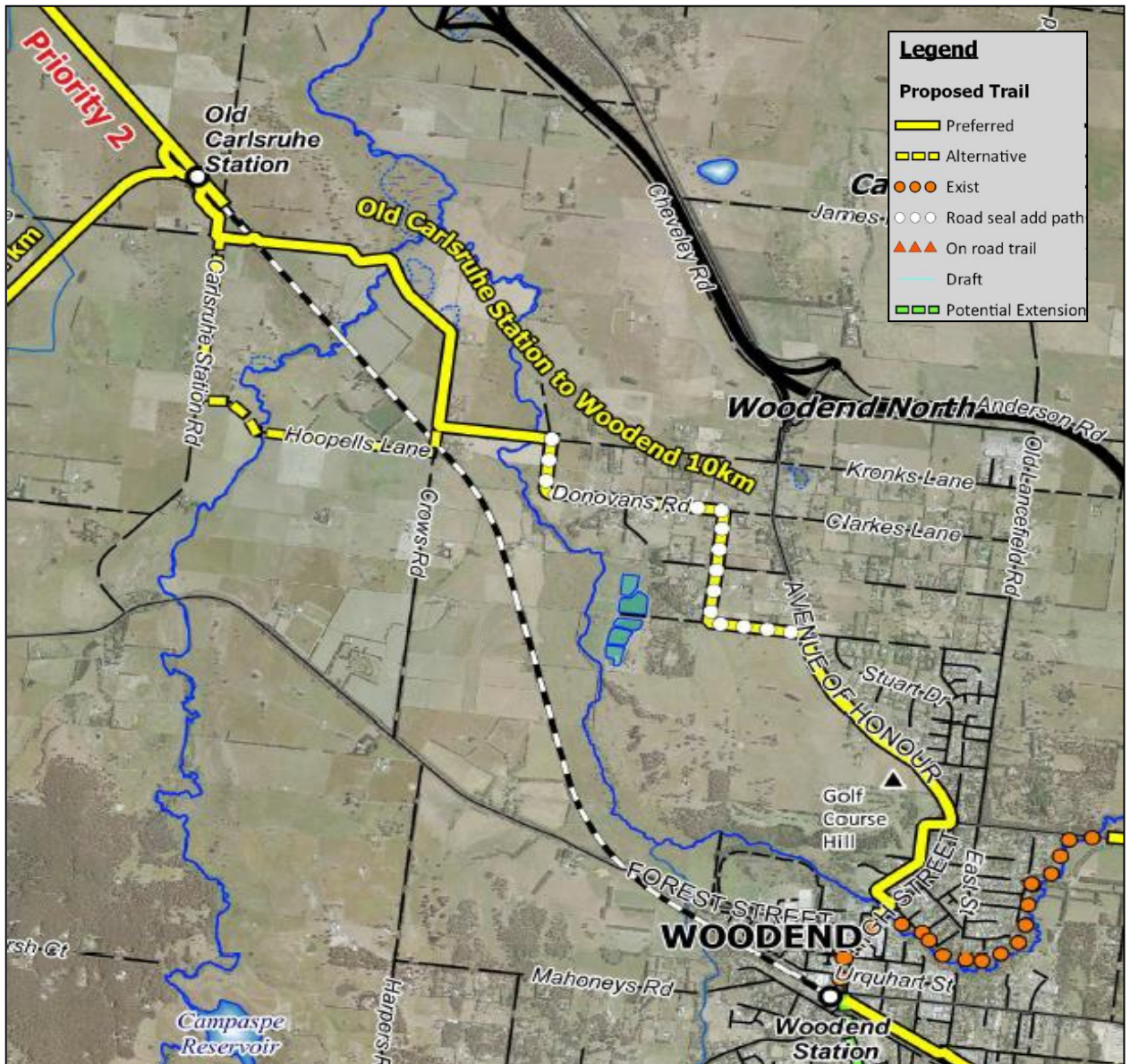
IMAGE 5 - THE KIDMAN TRAIL SA IS ALSO A SHARED USE TRAIL CATERING FOR CYCLING, WALKING, RUNNING AND HORSE RIDING. IT IS AN EXAMPLE OF LONG DISTANCE SHARED USE AND HORSE OFF ASPHALT. LESS MODIFIED THAN THE AMY GILLETT TRACK AND IS PROMOTED MORE FOR HORSE RIDING (PHOTO, TRAILS SA).

In terms of equestrian use, parking at the old Karlsruhe station for horse floats would enable the trail to be utilised by horse riders to Tylden and possibly Daylesford or part thereof and return. Other sections of trail within this study will not incorporate horse riding due to the narrowness of the available land.

With the development of the shared trail in this area there will be opportunity to explore spur trails to other attractions including to the Tylden township.

Six different sections of shared trails were investigated as part of the Macedon Ranges Shared Trails Feasibility Studies, the Tylden to Old Karlsruhe section has been identified as development priority 3.

5.1.3 Old Carlsruhe Station to Woodend



MAP 3 - OLD CARLSRUHE STATION TO WOODEND

Recommended Shared Trail Route Investigation	Assessment Against Principles and Premier Shared Trail Criteria
<p>Shared use trail Old Carlsruhe Station via Dunbars Road, Donovan's Road, Parkers and Montgomerys Lanes to the Avenue of Honour. Adjacent to and on minor roads and on road reserves to arrive at the Woodend Visitor Information Centre via the Gilbert Gordon Oval Recreation Reserve</p> <p>This section of trail has been identified as development priority 2 of 6 (as part of the Kyneton to Woodend section).</p>	<p>This route showcases a pleasant rural landscape along Dunbars Road to Crows Road. The route proposes an on and off-road purpose-built trail and will include bridging over the Campaspe River on Dunbars Road and over Five Mile Creek on Russell Road. This proposed trail alignment ensures the trail flows through the landscape and is fun, enjoyable, safe and avoids the use of fast roads. Trail users will immerse themselves in the landscape and experience the welcome to Woodend through the wide impressive Avenue of Honour.</p>

Recommended Route

The trail leaves the heritage Karlsruhe station precinct and crosses the active rail line via the existing road crossing and progresses on quiet country lanes including Dunbars and Crows Road and approaches the Campaspe River on a wide section of road reserve. With some innovation and investment this section of trail will provide pleasant comfortable cycling and walking on quiet country lanes on predominantly asphalt paths however the detailed design phase may indicate other more suitable surface treatment. The Dunbars and Crows Road provides width for placement of 3.0 metre asphalt path.

Current access across the river is via a stone paved ford which is generally dry during the summer but would be inundated during the winter and would be subject to flooding. A pedestrian and cycling bridge will be required to provide all weather access across the Campaspe River. A heritage overlay applies to the existing stone paved ford.

Placement of a bridge at this site will need to consider potential flooding, heritage significance and the sustainability of the structure. Design for the bridge structure should ensure it appropriately responds to its surrounding landscape and character whilst providing comfortable access for pedestrians and cyclists via a year-round crossing. This could be achieved via a low-level boardwalk arrangement that would need to be robust and at a height that minimised damage during flooding or alternatively a swing bridge arrangement that would eliminate the potential for flood damage.

Further detailed design will be required to ensure a structure that is resistant to flood damage, does not impact on the heritage values and remains within the wide road reserve corridor. Another suitable route that has similar qualities to Dunbars Road is Hoppells Lane, an unmade road reserve between Carlsruhue Road and Crows Road which also crosses the Campaspe River. This alternative route could be considered during the detailed design and landowner consultation stage if sustainable or affordable engineering solutions cannot be found for the Campaspe River crossing on Dunbars Road.



IMAGE 6 - FORD OVER THE CAMPASPE RIVER WILL REQUIRE BRIDGING

The trail follows along Crows Road to the intersection with Russell Road where cyclists and walker would turn east. Russell Road is a fast traffic road and there is room on the southern side for a shared two way path to separate cyclists and walkers from vehicles on the road reserve. Where the road reaches Five Mile Creek there are drains on the approaches to the road bridge which presents issues for a conventional shared path and the road bridge over Five Mile Creek narrows the riding surface creating risk to cyclists and walkers.

To continue comfortable, enjoyable and safe riding and walking it is proposed to bridge over the drains on the south side of the road with a two-way boardwalk style pathway that passes the narrow bridge and links to the wider road reserve where a 3 metre asphalt path would link to Donovans Road. With the success of the shared trail there is likely to be increased traffic and dust within the area of the Carlsrhue Station. The Macedon Ranges Shire Council will consider sealing the approach roads during detailed design of this section of trail. Donovans Road, and the unmade Parkers Lane provide quiet, pleasant back road approaches to Montgomerys Lane and the gateway to Woodend through the Avenue of Honour. This semi-rural approach is comfortable, enjoyable and provides agreeable views to the ranges. The back roads and lanes are currently gravel and contribute to resident dust problems. It is proposed that rather than building new asphalt trails on the road reserves, these quiet roads would be sealed (funded from the trail project) and that the trail will follow the new quiet sealed roadways. If required traffic slowing measures could be taken if there is the potential for the sealing to cause increase in either vehicle speeds or volume. The unmade road reserve on Parkers Lane would not be developed as a road as part of this project, it would contain the purpose built trail only.

It is proposed that the path will follow the western boundary of the Avenue of Honour road reserve enabling cyclists and walker of all abilities to enjoy the Avenue without the interaction with vehicles. The Avenue of Honour with its majestic oak trees provides the perfect back drop to the purpose-built asphalt trail that leads visitors to the recently built war memorial at the Avenue's southern end. Initial consultation has occurred with the Woodend RSL whom have had similar aspirations to provide walking access along the Avenue and to interpret and acknowledge its significance. Further consultation would occur during detailed design phase with the Woodend and broader RSL and Heritage Victoria to ensure the utmost priority is placed on the protection and enhancement of the attributes of the Avenue of Honour both physically and spiritually.

The new path would be designed to Australian Standards for Walking and Cycling Trails ensuring people with a range of abilities including those in wheelchairs are able to visit the Avenue and the new war memorial in comfort and where trail furniture such as seating and bike racks would be provided. The main trail used by cyclists would pass further from the memorial behind the golf club's maintenance depot (the golf club has been consulted) allowing cyclists to park their bicycles away from the memorial and walk to the memorial.

The proposed asphalt path will be 3.0 metres wide (to comply with existing cycling and walking standards) but may be narrower and of a different material should detailed design indicate. The trail will be on the western side to reduce the need to cross the road twice, which is not desirable, and a walking path provided to the war memorial. Protection of the oak trees and the respect and integrity of the Avenue is of paramount importance to the Shire and best practice approach is required for the protection of the oak trees. The Australian Standard 4970 – 2009²¹ Protection of Trees on Development Sites provides the best tree protection advice, which is based on plant biology, current best practice and recently published literature. Establishing a Tree Protection Zone (TPZ) is the principal means of protecting trees on development sites with the TPZ being established through the combination of the tree root and crown area being isolated from construction disturbance.

The greatest risk to the health of the trees and the integrity of the Avenue would come from unplanned or unauthorised earthworks during path construction, consequently tree protection is most effective when considered at the earliest stage of development planning.

To eliminate risk an arborist would be engaged to provide expert advice and produce a Preliminary Arboricultural Report and a Tree Protection Plan. The Preliminary Arboricultural Report would be fundamental to the safe layout and type of path. This is the stage where the exact on-ground siting of the path takes place by the Shire and the arborist. If there are any threats to the oak trees relating to the alignment and the TPZ the

²¹ Australian Standard® Protection of trees on development sites AS 4970-2009

Shire will take preventative action. This action may include alternative trail surface materials, negotiating with neighboring properties to move the trail alignment further to the west or to use alternate construction methods for the trail in these short sections to remove any impact upon the trees. An allowance for such considerations has been made in the estimated costs. Should the logistics of using the western side of the Avenue be insurmountable the trail could take a less desirable alignment on the eastern side.

From the Avenue the trail follows the wide road reserve along North Street to the oval and recreation area before using existing paths to arrive at the Woodend Visitor Information Centre.

Six different sections of shared trails were investigated as part of the Macedon Ranges Shared Trails Feasibility Studies, the Old Carlsruhe Station to Woodend section has been identified as development priority 2 (as part of the Kyneton to Woodend section).

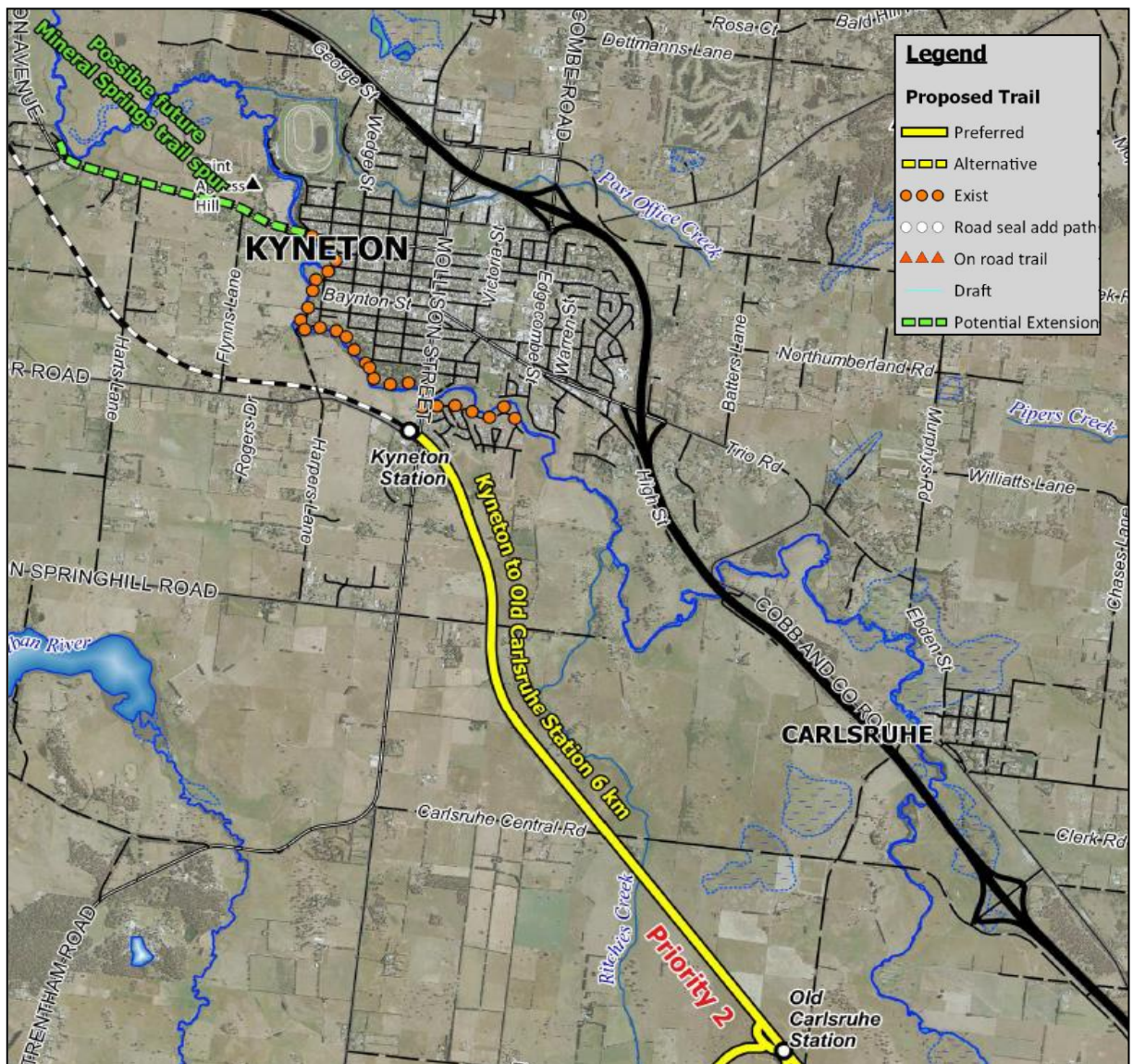
Other Shared Trail Route Options Investigated for this Section

Option	Shared Trail Route Options Investigated	Assessment Against Principles and Premier Shared Trail Criteria
2.	Shared use trail on the active rail corridor to Woodend Station	This option was investigated but not recommended. Using the active rail line in this section exposes the trail user to noise and the proximity of fast trains affecting enjoyment and comfort. The section from the Old Carlsruhe Station is in parts overgrown with blackberries and other weeds and the existing maintenance track is in parts close to and at a similar level to the active rail line. The old bridge over Campaspe River is attractive but provides limited or no access for the trail requiring a new river crossing. The entry landscape to Woodend is degraded and a crossing of the fast Tylden Woodend Road is required adding an additional safety and comfort issue.
3.	Shared use trail adjacent to and on minor roads, fast roads and on road reserves to enter Woodend via Tylden Woodend Road and Forest Street or the active rail corridor from Forest Street	This option was investigated but not recommended. The long Carlsruhe Road has limited appeal due to its straight nature and open countryside. The Tylden Woodend Road has some width to the road reserve however bends and gradient and the fast nature of this road impact on trail users’ enjoyment, comfort and safety.



IMAGE 7 - THE CLOSE PROXIMITY TO THE RAIL AND SEVERAL ROAD RAIL CROSSINGS MAKES THE ACTIVE RAIL CORRIDOR LESS APPEALING TO WOODEND.

5.1.4 Old Carlsruhe Station to Kyneton



MAP 4 - OLD CARLSRUHE STATION TO KYNETON

Recommended Shared Trail Route Investigation	Assessment Against Principles and Premier Shared Trail Criteria
<p>Follow the active rail line between Old Carlsruhe Station and Kyneton Station - 6 km - Kyneton loop 5.1 km</p> <p>This section of trail has been identified as development priority 2 of 6 (as part of the Kyneton to Woodend section).</p>	<p>Potential premier shared trail experience with views, landscapes and direct approach to Kyneton Station. Active rail has reasonable screening from the trail due to vegetation and numerous sections of trail above the rail line and minimal road crossings.</p> <p>There is potential for a future spur or loop trail beyond the preferred route to be developed along Burton Avenue linking the Kyneton Mineral Springs with the Kyneton township.</p>

Recommended Route

The proposed shared path Rail Trail to Kyneton will in the main follow the east side of the active rail line. VLine policy requires that the proposed trail should not have contact with the existing rail vehicle maintenance tracks or equipment. The majority of the VLine tracks and equipment are situated on the western side of the line.

The trail leaves the Old Carlsruhe Station precinct and travels along a short section of the active line corridor on the western side to the Thompson road rail crossing. From here the trail travels through the railway reserve on the eastern side and skirts the old station property to meet the active rail reserve north of the station precinct.

The rail reserve provides good access for placement of a shared path for cycling and walking due to the reserve width and trees that provides separation from the active line. The vegetation on the rail reserve is predominantly introduced pasture grasses with scattered trees and stock fencing is provided along the whole boundary. There is one section of the reserve south of Carlsruhe Central Road that narrows for approximately 60 metres with stock fencing coming within 10 metres of the active rail line. Discussions will be required with the neighbour to find agreement to progress the trail access through this area.



IMAGE 8 - ACTIVE RAIL CORRIDOR TO KYNETON

Placing a shared use trail on the eastern side will require clearance of the grassy understorey and construction of three minor creek crossings and a 40 metre ramp up to and down Pleasant Hill Road. For security and safety reasons the trail will also require fencing to be placed between the trail and the active rail corridor.

The rail reserve provides attractive views across the landscape and the Pleasant Hill Road Bridge provides a view into past stone masonry skills. The entrance into Kyneton from Pleasant Hill Road Bridge is proposed as an area for expansion of the town. This new town extension will provide the links to wetlands and with good trail alignment planning will provide a pleasant welcome to Kyneton. Kyneton Station is available for drop off and pick up from the train or vehicle.

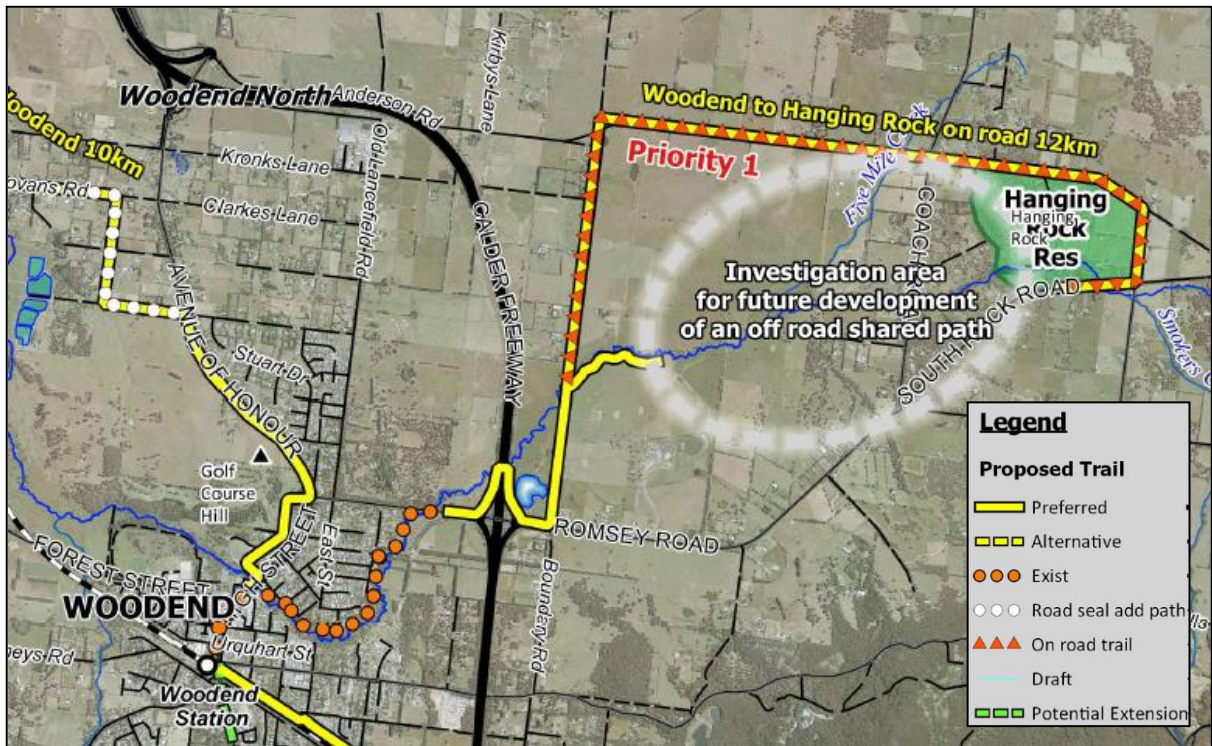
One of the premier Kyneton attractions are the trail loops along the Campaspe River through the Botanic Gardens, the Kyneton Mineral Springs Reserve, the centre of town and the heritage areas of Piper Street and High Street. Trail loops are proposed that connect these areas along the river reserve and along attractive town roads that also take the trail users to the Tourist Information Office. From the Tourist Information Office the trail follows suburban roads for a short distance downhill to the Campaspe River to link with the river trails that are being developed. Two new pedestrian and cycling bridges are planned (outside of this study and the estimated costs herein) to cross the Campaspe River to complete the experience enabling riders to ride back to Woodend or to catch the train.

Six different sections of shared trails were investigated as part of the Macedon Ranges Shared Trails Feasibility Studies, the Old Karlsruhe Station to Kyneton section has been identified as development priority 2 (as part of the Kyneton to Woodend section).

Other Shared Trail Route Options Investigated for this Section

Option	Shared Trail Route Options Investigated	Assessment Against Principles and Premier Shared Trail Criteria
2.	Follow roads and road reserves between Old Karlsruhe Station and Kyneton Station	This option was investigated but not recommended. Not a direct route, few road reserves available limited opportunity along existing roads to provide appropriate trail

5.1.5 Woodend to Hanging Rock



MAP 5 - WOODEND TO HANGING ROCK

Recommended Shared Trail Route Investigation	Assessment Against Principles and Premier Shared Trail Criteria
<p>Initial Section – Woodend to Five Mile Creek @ Boundary Road</p> <p>Follow Five Mile Creek from the Visitor Information Centre through Campaspe and Ruby McKenzie Parks on existing shared use trails. Cross Romsey Road to a shared use path on the road reserve and beneath the Calder Freeway via the underpass. A two way shared path would then follow on the eastern side of Boundary Road road reserve or potentially Braemar College land to the bridge over the Five Mile Creek with an initial extension into Braemar College.</p> <p>Long Term Final section - Five Mile Creek at Boundary Road to Hanging Rock</p> <p>Access “cross country” through Braemar College and then private property and road reserves to Hanging Rock is preferred because of its direct approach and significant views towards Hanging Rock and of the Macedon Ranges. Various options are possible subject to land availability with access to Hanging Rock via Coach Road reserve and then either Colwells Road or Macted Drive.</p>	<p>Preferred option to commence trail experience out to Hanging Rock.</p> <p>This is a potential premier shared trail experience, with views, landscapes, wide quiet road reserves and direct approach to Hanging Rock. This option is the preferred option but requires access across private land and hence is viewed as a long term proposition.</p>

<p>Short to Medium Term</p> <p>From the Five Mile bridge in Boundary Road cyclists could follow an on-road advisory route along Boundary Road, Andersons Road, Colwells Road, Straws Lane, South Rock Road into the current main entrance to Hanging Rock. En route warning signs provided for motorists with potential traffic calming or speed reductions where possible. Cyclists to be advised primarily through social media.</p> <p>This section of trail has been identified as development priority 1 of 6.</p>	<p>This option is not ideal but provides for a safer cycling experience than currently exists to access Hanging Rock.</p>
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Recommended Route

Initial Section – Woodend to Five Mile Creek @ Boundary Road

Preferred option : Follows the existing shared path through parklands along Five Mile Creek to Romsey Road. At Romsey Road a pedestrian and cycling crossing point will be required to provide safe access to the north side of Romsey Road, to the Calder Freeway underpass and to Boundary Road reserve and Braemar College to the Five Mile Creek bridge.

Further technical assessment of the proposed pedestrian crossing will be required. Initial discussions with Vic Roads who manage this road have indicated that pedestrian and cycling crossing at this site may be appropriate subject to further analysis of the approach site distances and inclusion of crossing infrastructure as described in Austroads Guide to Road Design Part 4A Unsignalised and Signalised Intersections²²

A two-way shared path would be provided on the road reserve and under the Calder Freeway via the existing underpass which will provide access to the road reserve on Boundary Road. From this point access to Hanging Rock will be along the Boundary Road reserve This route from the Woodend Visitor Centre provides the added significant advantage of being a school commuting route from Woodend to Braemar College through the off-road shared path network.

It is proposed to continue the trail on to the Braemar land for student access to the College with appropriate arrangements for future community access. This Braemar trail section will continue to Hanging Rock when future access arrangements are resolved.

Final section - Five Mile Creek @ Boundary Road to Hanging Rock

The development of a shared off road trail experience from Woodend to Hanging Rock has been desired and considered by the community and Council over the last 20 years. Unfortunately, the road reserves are narrow and contain native vegetation making it difficult to implement, requiring private land access along these road sides.

Cycling and walking from Braemar College to Hanging Rock cross country through private land with views, landscape, wide quiet road reserves and a direct approach to Hanging Rock would be the best shared trail experience and impact upon less land owners. Unfortunately, some of the route options considered are not supported by the current landowners consulted at this time. Council does however have options to pursue

²² Austroads Guide to Road Design Part 4A Unsignalised and Signalised Intersections

potential cross country/ private land trail creation through either compulsory or voluntary land acquisition processes.

This approach is not recommended at this stage. Rather a long term strategic and voluntary acquisition process is recommended for further investigation after this study.

This strategic acquisition approach has been used successfully in a number of localities to establish trail corridors for public benefit through negotiated and mutually beneficial land acquisition (see example below).

In the interim short to medium term period it is recommended that from the Five Mile bridge on Boundary Road cyclists could follow an on-road advisory route along Boundary Road, Andersons Road, Colwells Road, Straws Lane, South Rock Road into the current main entrance to Hanging Rock. Enroute warning signs would be provided for motorists with potential traffic calming or speed reductions where possible. Cyclists to be advised primarily through social media.

Six different sections of shared trails were investigated as part of the Macedon Ranges Shared Trails Feasibility Studies, the Woodend to Hanging Rock section has been identified as development priority 1.

Case Study : Government, community and landowners working together for cooperative trail benefits

In 2001 the South Australian community sought access to a significant coastal cliff section to add to the long distance Heysen Trail that stretches across South Australia. Through a complex intractable mix of private land blockages and poorly aligned coastal reserves this spectacular and popular potential public coastal trail was doomed to never eventuate.

However following a strong community campaign, the SA Government, Council and walking groups endeavoured to resolve the issues amicably through dialogue, negotiation and generating the support of the landowners²³.

The community support and commitment encouraged the SA Government to find the resources to commence access negotiations with several cliff top landowners. The negotiations included land subdivision and purchase options that provided linear trail access including buffer zones and links to public land. Negotiations resulted in the State Government having to purchase land parcels and one whole property at market value including way more land than was required for the trail alignment.

Strong commitment to a negotiated outcome avoided unpleasant and unpopular compulsory acquisition. The commitment of the State and local government smoothed the way for subdivision allowing the trail area to be separated from the larger land parcels and enabling the State Government to sell the surplus land at a later date.

All parties benefitted from the process with property owner receiving market rates for parcels of their land and the State Government later selling the parcels of land not required. The timing of the process enabled the government to not be out of pocket as property value climbed enabling the government to sell the land well above the purchase price.

As a result in April 2001, a new section of South Australia's Heysen Trail along the scenic Waitpinga Cliffs west of Kings Head was opened. The four kilometre re-route of the trail along scenic coastal cliffs followed the acquisition by the Government of key sections of land. An additional benefit was that an

²³ SA Department of Environment and Heritage 2000–2001 Annual Report

area of 65 hectares of significant remnant vegetation was also added to the adjacent Newland Head Conservation Park.

An example of community, government and land owners combining to achieve significant outcomes for conservation, recreation, tourism and preservation of a spectacular coastline for public use.

5.2 Levels of service Daylesford (Tylden) to Woodend, Old Carlsruhe Station to Kyneton Rail Trails and Shared Path to Hanging Rock

The Daylesford to Woodend Rail Trail will enable cyclists to experience a return trip in one day from Woodend or Daylesford or cycle one way, stay overnight at the end of the trail and return the next day. Alternatively, users may choose to ride or walk small sections of the trail. Visitors could base themselves at one of the smaller towns and conduct shorter return trips over a two to three day period.

The trail will take around three hours to ride from Daylesford to Woodend (around 44 km). Alternatively, visitors may wish to ride to Kyneton on the active rail corridor a further 6 km and return by train.

The shared path from Woodend to Hanging Rock will follow existing shared paths along the Five Mile Creek to link with shared paths placed on the broad road reserves. These options are the best fit however further discussion will be undertaken to reduce the use of roadways.

It is recommended that the trail is developed for a broad range of users with cycling to be the most popular activity and with a choice of full day or short rides the trail should be suited to a full range of bikes and riders from road riders, to those more used to urban riding and inexperienced riders such as children. The trail may not be suited to fast road riding styles due to the shared nature of the experience and occasional narrow sections and the potential for debris across the trail.

Commercial and independent drop off and pick-ups require good year round access and car parking which is well signed both for the access roads and at the major and minor trail heads. Subject to the refinement of the trail route appropriately landscaped car parking would be required at:

- the Council boundary at Rippers Lane small car park up to 10 car spaces catering for other visitors who will also be attracted when the heritage bridge is made accessible and restored
- Tylden Woodend Road small car park for drop off pick up 6 car parks
- Old Carlsruhe Station site as a cross road for trail options and due to the large area available could be parking for 20 sites and room for horse floats and hitching rails. It is recommended that a simple unisex toilet be placed at this site
- no car parking is recommended along the active rail trail to Kyneton as encouraging other visitors or infrastructure to the active rail line is not advised. Car parking at the drop off and pick up points and within the town would be adequate.

Within the car park area allowance should be made for emergency and maintenance vehicles to access the trail however there will be limitations on weights across the bridges which will require additional planning.

The trail is expected to encourage a drop off and pick up service to be provided by accommodation houses, service providers and by private individuals. It is not proposed to provide accommodation directly on the trail as the trail opens up new opportunities for self-contained accommodation from old fashioned bed and breakfasts to farm stays. Visitors to the trail will be looking for places to stay along the way.

The trail beyond the Old Carlsruhe Station will be 3.0m width asphalt surface and it is not anticipated that additional services will be required as it is a relatively short distance to Woodend and Kyneton. Infrastructure including crossing the Campaspe River will be required and designed to conform with the expectations of the users (focus on safety and comfort), as will the walking and cycling access to Russell Road.

Traffic road junctions and the importance of separating cyclists and pedestrians from cars is a major consideration in continuing the approach to safety, comfort and connectivity of the shared routes.

Placement of trail head signs, way marking will continue throughout ensuring orientation, safety and continuing the shared trail theme.

5.2.1 Infrastructure

The main infrastructure will be the shared use trail. The choice of trail width is generally based on the level and type of use that could be expected and the relationship between cyclist operating speed, volumes of pedestrians and cyclists, and mix of pedestrians and bicycles. A 3 metre wide path is recommended (rather than wider – eg. up to 4 metres as per Austroads 2017) as unlike urban commuter trails path speeds are less important and higher speeds are counter-productive to the proposed users (e.g. not encouraging to inexperienced and new cyclists and other walkers, runners and in some cases horse riding).

The trail will for the majority of the journey be within the disused section of rail, adjacent to the active rail corridor and along road reserves on purpose built 3.0 metre wide asphalt paths providing opportunity for a wide range of users including recreational cyclists, walkers, runners, scooters, wheelchairs and goffers.

Whilst the recommended trail surface is 3m wide asphalt, the most suitable surface material and width in some sections of the trail may differ due to the particular requirements of that section (ie land topography, physical impediments, trees, environmental considerations, etc), which will be determined at detailed design.



IMAGE 9 & 10 – 3M ASPHALT PATHS ENCOURAGE A RANGE OF USERS (MURRAY TO MOUNTAINS TRAIL)

It is important that appropriate sight lines are provided between a cyclist’s eye height and other trail users to assist in minimising conflict, and between a cyclist’s eye height and the path surface so that cyclists can stop in the event that a hazard exists on the path (e.g. mud deposited during inundation, potholes due to washouts, broken glass, and fallen tree limbs).

It is the intention to achieve the best alignment possible to provide enjoyable, comfortable, convenient and safe travel, within the available resources. Landscaping, weed control and revegetation are important

considerations (especially removal and exclusion of vegetation that has thorns that may puncture tyres), and planting sizes at maturity²⁴.

Strategies for intersections and road crossings at which cyclists and pedestrians need to be separated from cars to increase the safety and comfort will need to be further detailed by road traffic experts. The shared trail routes will have a clear objective to reduce as much as possible interaction between vehicles and users. The level of interaction with roads and vehicles will depend on negotiations with a range of landowners.

IMAGE 11,12,13. EXAMPLES OF ROAD CROSSINGS, TREATMENTS NEAR TREES AND THE PATH ITSELF (MURRAY TO MOUNTAINS TRAIL):



IMAGE 11 - ROAD CROSSING TREATMENT (MURRAY TO MOUNTAINS TRAIL)



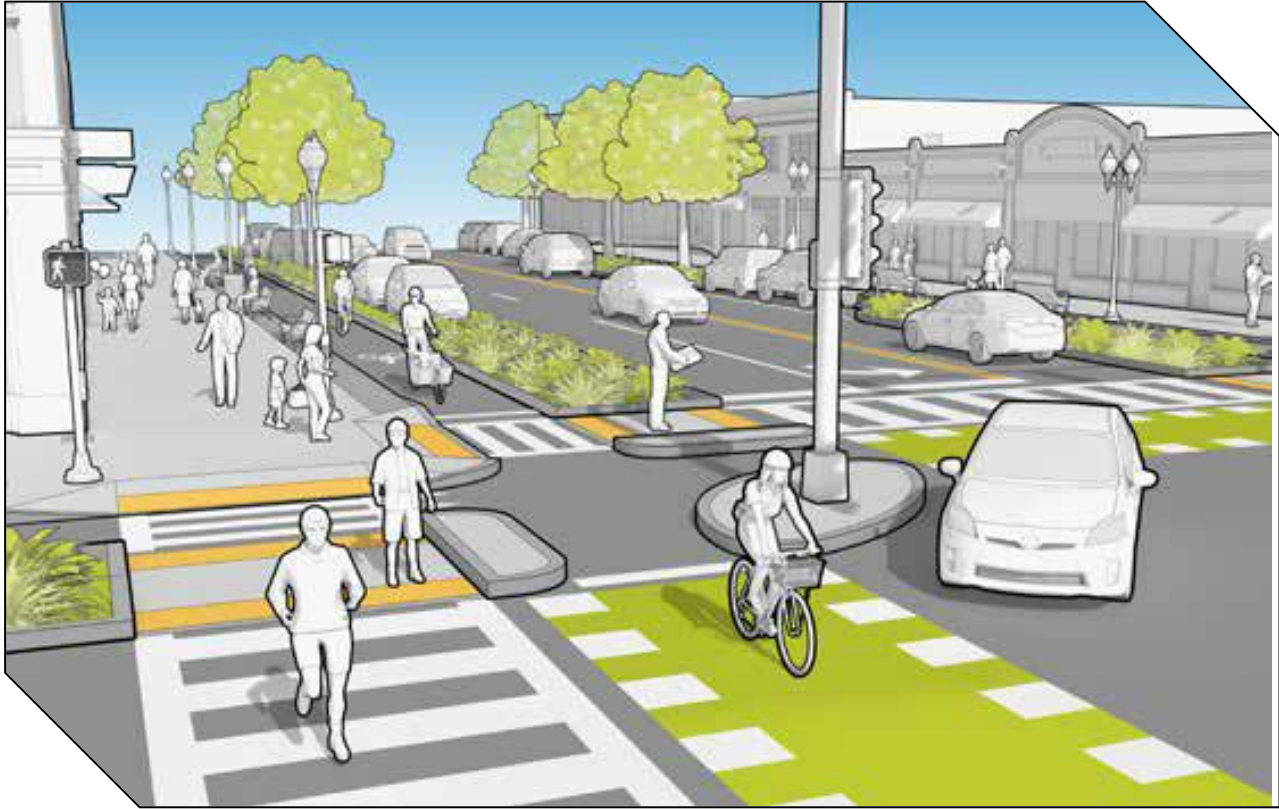
IMAGE 12 - THE PATH MATERIALS AND WIDTHS WILL VARY DEPENDING ON LOCAL CONDITIONS (MURRAY TO MOUNTAINS TRAIL)



IMAGE 13 - ASPHALT TRAIL BLENDING INTO LOCAL ENVIRONMENT (MURRAY TO MOUNTAINS TRAIL)

²⁴ Guide to Road Design Part 6A:Paths for Walking and Cycling 2017 Austroads Sydney

The *Guide to Road Design Part 6A: Paths for Walking and Cycling* provides guidance for designers and other practitioners on the design of paths for safe and efficient walking and cycling. The guide provides information on considerations that will be considered in the development of the shared use trail and covers the requirements of path users, e.g. operating spaces, factors that influence path locations, and geometric design criteria for a path and related facilities such as intersections between paths, and road ways²⁵.



Source: Massachusetts Department of Transportation 2015, *Separated Bike Lane Planning & Design Guide*.

A range of strategies are available to provide separation between cyclists, vehicles and pedestrians however the objective is to minimise this interaction and is reliant on effective agreements with adjacent landowners.

Separation between cyclists and motor vehicles offers the prospect of safer, lower-stress and more direct journeys²⁶.

SHARED PATH WIDTHS	Suggested path width (m)		
	Local access path	Regional path	Recreational path
Desirable minimum width	2.5	3.0	3.5
Minimum width – typical maximum	2.0–3.0	2.5-4.0	3.0 – 4.0

²⁵ Guide to Road Design Part 6A:Paths for Walking and Cycling 2017 Austroads Sydney

²⁶ Victorian Cycling Strategy 2018-28

The path width from AUSTRROADS 2017 suggests path widths and acceptable ranges of width for shared paths. Lesser widths should only be adopted where cyclist volumes and operational speeds will remain low. A greater width may be required where the numbers of cyclists and pedestrians are very high or there is a high probability of conflict between users (e.g. people walking dogs, in-line skaters etc.)²⁷. It is likely that the volumes of cyclists and other users and the trail design will encourage lower speeds suggesting the Council Boundary to Hanging Rock (Daylesford to Hanging Rock Rail Trail) and Old Karlsruhe Station would fit into the Regional Path category.

It is recommended that the trail be 3.0 metres asphalt seal in width narrower in tight sections on the disused section of rail trail. If possible and to be considered at detailed design stage the trail should utilise recycled materials and consider a colour that is compatible with the surrounding environment.

Further design considerations will be required to enable safe horse riding within the corridor where horse riding and asphalt surfaces are generally not compatible.

In many cases there will be more than one type of user to be accommodated and their requirements may differ. For example, where the trail joins Woodend and follows the Avenue of Honour it is also intended to attract cyclists from the adjacent high speed road environment, however cyclists wanting to minimise their travel time should be provided with the option to safely continue to use the main road to reduce travel time.

With the increasing use of personal mobility devices and encouragement to increase cycling and walking, there is a growing need to ensure path widths are provided that accommodate safe movements of path users, including passing or overtaking movements. This is again the case where school children and others will be encouraged to join the shared use trails at certain times of the day.

Where the trail enters Woodend along Donovans Road it travels along a number of quiet residential side streets. It would be impracticable to build a 3.0m wide asphalt path through these streets and be potentially unpopular whilst the residents continue to suffer dust from the existing gravel road. A more pragmatic solution would be to seal the existing road way (funded under this program) and direct the trail along the quiet residential streets. The treatment would differ for the undeveloped Parkers Road which would suit 300 metres of flowing attractive shared path. If required where gravel roads are sealed traffic calming and slowing measures could be taken if there is the potential for the sealing to cause increase in either vehicle speeds or volume. The existing use of the disused rail corridor includes the grazing and movement of stock (by lease on the buffer zone but often there are no fences) which will require a cooperative approach to fencing and placement of strategic gates. Most of the small low level bridges that cross the creek lines on the disused rail corridor have collapsed or have been taken away requiring purpose built bridges which preferably will be of a light weight design for pedestrians, bikes and in some cases horses. Where possible the bridges should not need to be designed for vehicle access provided that emergency and maintenance vehicles can be provided with alternative access.

Infrastructure required along the active rail line will include as a minimum the 3.0m wide shared path and associated bridges across creeks. Additional infrastructure will be subject to a separate risk assessment process and the needs and requirements of VicTrack and may include security fencing between the trail and the active rail line.

²⁷ AGRD06A-17_Guide_to_Road_Design_Part6A_Paths_for_Walking_and_Cycling

Indicative Costs

Indicative Infrastructure Assessment Council Boundary (Tylden) to Old Carlsruhe Station 9.2 km				
Item	unit	qty	rate	amount
New asphalt shared path 3.0 average width	sqm	27,600	53	\$1,462,800
Little Coliban Bridge	sqm	125	1060	\$132,500
Low Level Bridges x 4	sqm	100	1590	\$159,000
Fencing for stock*	lm	18,000	16	\$286,200
Car Parks x 3	sqm	1000	64	\$63,600
Toilet	unit	1	84,800	\$84,800
Landscape and restoration including weed control	Contract	1	53,000	\$53,000
Signs road entry, safety and trail head 4 minor 1 major	Signs	20	318	\$6,360
Alignment and land agreements costs**				\$530,000
Contamination testing old rail line corridor	Test	40	530	\$21,200
Environment and heritage assessments and offsets				\$53,000
Site establishment costs				\$646,600
Engineering and design fees 10%				\$349,906
Project management 7.5%				\$262,430
Contingencies 15%				\$524,859
			***Total	\$4,636,255

*subject to assessment and negotiation with lessee re responsibility

** Allowance for land purchase and neighbour land adjustments

*** Figures based on 2021 figures and future anticipated indicative cost should factor in suggested 3%annual rise

Indicative Infrastructure Old Carlsruhe Station to Woodend Visitor Information Centre 10km				
Item	unit	qty	rate	amount
New asphalt shared path 3.0m to Russell Road 4.5km	sqm	13,500	53	\$715,500
Campaspe River - bridge over heritage ford	sqm	100	1590	\$159,000
Asphalt residential roads 5.0m road 3km	sqm	15,000	64	\$954,000
Avenue of Honour 3.0m path 3km	sqm	9,000	53	\$477,000
Avenue of Honour - tree & heritage protection				\$106,000
Landscape and restoration including weed control	Contract	1	21,200	\$21,200
Signs road entry, safety and trail head	Signs	20	318	\$6,360
Traffic control and vehicle separation	Contract	5	26,500	\$132,500
Alignment and land agreements costs**				\$530,000
Environment and heritage assessments and offsets				\$127,200
Site establishment costs				\$318,000
Engineering and design fees 10%				\$354,676
Project management 7.5%				\$266,007
Contingencies 15%				\$532,014
			***Total	\$4,699,457

** Allowance for land purchase and neighbour land adjustments

*** Figures based on 2021 figures and future anticipated indicative cost should factor in suggested 3% annual rise

Indicative Infrastructure Old Carlsruhe Station to Kyneton 6km				
Item	unit	qty	rate	amount
New asphalt shared path 3.0 average width 6 km including veg removal	sqm	18,000	64	\$1,144,800
Low Level Bridges and crossing including Pleasant Hill Road	each	5	31,800	\$159,000
Fencing security and agricultural	lm	12,000	27	\$318,000
Landscape and restoration weed control	Contract	1	53,000	\$53,000
Signs road entry, safety and trail head 4 minor 2 major	Signs	10	530	\$5,300
Alignment and land agreements costs				\$795,000
Environment and heritage assessments and offsets				\$79,500
Site establishment costs				\$424,000
Engineering and design fees 10%				\$297,860
Project management 7.5%				\$223,395
Contingencies 15%				\$446,790
			***Total	\$3,946,645

*** Figures based on 2021 figures and future anticipated indicative cost should factor in suggested 3% annual rise

Indicative Infrastructure Woodend to Hanging Rock 12km				
Item – Initial section plus short term option for final section	unit	qty	rate	amount
Woodend Visitor Info Centre to Woodend – Wallan Road - widen and upgrade path	sqm	4000	53	\$212,000
Woodend – Wallan Road and Boundary Road traffic and safety systems	sqm	100	1590	\$159,000
Access under Freeway - Boundary Road Reserve and Braemar Access 3.0m 6 km	sqm	18,000	53	\$954,000
Braemar College student trail from Boundary	sqm	6,000	53	\$318,000
Road Foot and cycle bridge over Five Mile Creek, Braemar	sqm	50	1590	\$79,500
Boundary and Andersons Road en route advisory – signage, traffic calming	Contract	1	53,000	\$53,000
Landscape and restoration including weed control	Contract	1	53,000	\$53,000
Signs road entry, safety and trail head	Signs	20	318	\$6,360
Traffic control and vehicle separation	Contract	5	26,500	\$132,500
Long term investigation study				\$53,000
Environment and heritage assessments and offsets				\$127,200
Site establishment costs				\$95,400
Engineering and design fees 10%				\$224,296
Project management 7.5%				\$168,222
Contingencies 15%				\$336,444
			***Total	\$2,971,922

*** Figures based on 2021 figures and future anticipated indicative cost should factor in suggested 3% annual rise

Indicative costs	
Infrastructure costs Council Boundary (Tylden) to Old Carlsruhe Station 9.2 km	\$4,636,255
Infrastructure costs Old Carlsruhe Station to Woodend Visitor Information Centre 10km	\$4,699,457
Infrastructure costs Old Carlsruhe Station to Kyneton 6km	\$3,946,645
Infrastructure costs Woodend to Hanging Rock 12km	\$2,971,922
Project Total	\$16,254,279 ***GST Exclusive
Estimated annual maintenance	\$325,086
*** Based on 2021 figures and future anticipated indicative cost should factor in suggested 3% annual rise	

5.2.2 Strategic Considerations

The strategy's legislative and policy context

- *Victoria's Regional Statement* sets out the government's commitments to rural and regional Victoria. Tourism presents exciting opportunities for regions to promote public transport as a way of visiting popular destinations for weekend getaways and family holidays, accessing rail trails, and attending regional events.
- The Victorian Government is seeking to prioritise investment in strategic cycling corridors with the current and potential highest levels of demand, in essence providing arterials for people who cycle for transport. They will be within and outside road reserves, on local and state roads, and will be designed to maximise the separation of cyclists and motor vehicles.
- Transport for Victoria, through its Active Transport Victoria unit, will work with councils and state government agencies to deliver the strategy, ensuring cycling investments are coordinated and have maximum effect²⁸.
- The Daylesford to Hanging Rock Rail Trail is identified in the Loddon Campaspe Regionally Significant Trails Strategy as a priority development.

The Council chose the themes 'Liveability, Efficiency and Sustainability', as priorities for the future reflecting the community's wishes for these themes to be considered in everything the Council will do. The Council Plan was developed five main priorities:

- Promote health and wellbeing
- Protect the natural environment
- Improve the built environment
- Enhance the social and economic environment
- Deliver strong and reliable government

The planning for the Macedon Ranges Shared Trails considered these priorities with a strong focus on contributing to participation in recreation and leisure by providing enjoyable, comfortable and safe physical activity opportunities across the municipality²⁹.

Land Owners, Neighbours and Land Managers

Key land owners, neighbours and managers linked to the trail alignment include VicTrack, VLine and VicRoads. The support of these organisations is pivotal in ensuring the experiences provided by this project are delivered:

- VicTrack are the landowners of the disused rail line and the active rail line corridor. In principle notification received from VicTrack that a rail trail and other shared use paths on VicTrack land would be permissible in principle, pending further assessments and detailed design in consultation with VicTrack.
- VLine as managers of the active rail line between Old Karlsruhe Station and Kyneton are important stakeholders in this project. Assessment of the proposed rail trail alignment has taken place with VLine and changes have been made recognising the needs of VLine. The proposed trail will avoid interaction with the line, maintenance tracks and active rail infrastructure. Further risk assessments and risk mitigation will take place in collaboration with VLine in the next stage of the project development.

²⁸ Victorian Cycling Strategy 2018-28

²⁹ Council Plan 2017–2027, Macedon Ranges Shire Council, Gisborne Victoria

- Vic Roads have responsibility for major roads within the trail alignment area. Vic Roads support the placement of a shared path on land under their management and in particular the road reserve and underpass beneath the Calder Freeway (a key access point for the Hanging Rock trail). They have also provided advice regarding pedestrian and cycling access and will be further consulted particularly where trails are to cross major roads.
- Braemar College are a future partner in the development of a shared path from Woodend to Hanging Rock. Braemar College supports the development of the shared path from the town to Hanging Rock as it will provide opportunity for students and staff to safely commute to the Woodend Campus. Braemar also supports the placement of a shared trail along the Five Mile Creek corridor on their property as a future route to Hanging Rock. In placing this trail a formal long term community access agreement will be required. The route through Braemar to Hanging Rock is clearly the preferred option and is reliant on future access across several properties to the north east of Braemar.
- The best shared trail experience from Woodend to Hanging Rock is cross country to Hanging Rock. The route has been discussed with property owners in the area and they are reluctant to have the trail alignment on their property or there are other property ownership issues that restrict access for the trail.
- Consultation has taken place with neighbours to the disused rail line between Tylden and Old Carlsruhe Station. These neighbours in most cases lease the buffer land to the old rail line. Some neighbours have concerns about the change of land use and potential impact on their farm production and lifestyle. Further consultation will be required through the next stages of the project to ensure their concerns are understood and where possible addressed.

Protection of Environment and Heritage Values

The design of the trails has included a focus on protecting the natural environment, heritage and rural character. The trails provide great opportunity to combine sustainable trail development with restoration and the all-important ongoing maintenance of the biodiversity of these special areas.

Roadside vegetation plays an important role as a wildlife habitat and are important locations of rare, threatened and endangered flora including (*Vittadinia muelleri*) and Woolly Buttons (*Leptorhychos panaetiodes*), native grasses and fauna species. Tracts of remnant vegetation are fragmented in the area and roadside areas represent one of the largest reserves of native vegetation species.

The construction of the bicycle pathways and trails may require permits for vegetation removal which may involve offsets to compensate for any loss of biodiversity. Revegetation of the disused rail corridor and road reserves has been recommended in this plan which would contribute to any future vegetation offsets required.

The planning for the trail has recommended trail alignments on road reserves with planning seeking to avoid the removal, destruction or lopping of native vegetation by providing alignments that avoid areas of native vegetation.

It is proposed that the next stage of the trail program will include vegetation and biodiversity surveys and if required application for permits to remove vegetation as part of bicycle pathway and trails development.

Heritage places have been identified along the route including those registered with Victorian Heritage and on the Macedon Ranges Heritage Overlays. A permit exemption has been sought from Victorian Heritage based on the approach the Shire will take to protect significant trees (described in 5.1.3 Old Carlsruhe Station to Woodend). Further applications for permit exemptions may be required on the progression of the project.

Lifestyle and Liveability

The design of the trails system will seek to improve liveability and to strengthen community resilience, inclusion, safety, accessibility and connectivity by ensuring that shared use trails are placed where people will use them. The trails will link the communities across the Council area and encourage the whole community particularly children and youth to get on their bikes for enjoyable experiences and to use the trails as part of their everyday lives such as commuting.

The trails are designed to provide for positive change in the lifestyle and character of the region as well as enhance the liveability of the Shire. The proposed trail alignments and design have sought to provide benefits associated with:

- personal enjoyment by ensuring the trails are fun, free flowing, include a level of comfort and safety where people of all ages and abilities can achieve optimal health and enjoyment especially families, kids, and people who are not really confident on the roads
- social interaction is sought through organised trail groups, independent connection and young people being encouraged to be active and engaged with their community
- physical and mental health benefits from the free flowing, well directed and enjoyable trails which at times through challenge and physical activity provide personal achievement
- trails that encourage community involvement, strengthen community resilience and create communities where most kids can walk or ride to school and grow healthier, developing happier, more independent kids
- welcoming visitors on the trails and developing community pride.

5.2.3 Independent tourism product

Council Boundary to Hanging Rock (Daylesford to Hanging Rock Rail Trail) and Old Karlsruhe Station to Kyneton will be a mostly independent product with the target markets seeking a day riding experience using their own resources to travel to the track from accommodation or using the commercial drop off and pick up options available.

The proximity of the trail to Melbourne, beautiful scenery, range of food and wine options, as well as the natural and cultural attractions, will all be key drivers in the success of the product from a tourism perspective.

5.2.4 The services

Typical track destination support services include:

- Transport for people, bikes and to and from trailheads and accommodation
- bike hire
- car parking at or near trailheads
- food purchase and/or supply

5.2.5 The proposed business model

It is envisaged that the experience will be delivered by Local Government with State and Federal Government contribution through funding, as well as land access agreements for the rail corridor and State Government roads. Local Government will take the leadership role in project management, implementation, marketing and ongoing maintenance with community support. The private sector will be offering the accommodation, supported product and other services as required. Community cycling groups and the broader community

including schools will provide input into the project through encouragement, promotion, advocacy, advice and in some cases contributing land for the trail corridor and community on ground maintenance and management.

5.2.6 The challenges

- Establishing long term agreements to develop shared use trails where there is strategic opportunity to provide the best safe, enjoyable, cost effective and sustainable trail alignments
- Establishing long term agreements with State Government and rail transport providers for shared trail access on the busy active rail corridor
- Providing safe popular and well used cycling routes between the towns where there are competing interests between vehicle use and safe and efficient cycling
- Coordination, promotion and establishment of agreed standards for shared use rail trails across Council boundaries
- Providing appropriate investment funding and maintenance resources to ensure the very best and well used sustainable trail experiences are established and maintained.

5.2.7 Indicative Costs

Initial Indicative cost for implementation - Daylesford (Tylden) to Woodend, Kyneton and Hanging Rock trail.

Total Trail Estimate <u>\$16,254,279***</u>
<u>*** Based on 2021 figures, future anticipated indicative cost should factor in suggested 3% annual rise</u>

5.2.8 Maintenance

Maintenance of assets, risk and protecting the experience is estimated at \$325,086 p.a. Trail maintenance costs vary depending on conditions such as weather, construction standards, usage patterns, type of trail and whether the maintenance is outsourced at full professional trail contractor rates.

The use of qualified, experienced and contractors in the construction phase will contribute to reduced maintenance costs. The proposed maintenance costs are based on industry levels (2% of investment costs) and outcomes and assumptions about the future track and environmental conditions. Further more accurate assessments of future maintenance commitment should be undertaken as part of future design and documentation for the project.

Future arrangements for maintenance and the financial investment in trail maintenance is influenced through inputs such as volunteer assistance, sponsorship and other support.

A clear, concise Trail Management Plan is recommended and should be a component of the trail design and construct package to direct strategic trail resources into future trail maintenance and will provide a more accurate budget for appropriate trail maintenance.

Defining the level of service required to maintain a trail is an important component of a Trail Management Plan. The Level of Service is the defined service quality for a class of trail against which service performance may be measured.

A risk assessment and monitoring process should measure the condition of the trail against the walking trail or cycling classification and level of service to ensure the trail meets the expectation of the user and the duty

of care of the trail manager. It should also reflect the trail vision and contribute to the protection of the trail, environmental values and the objectives of the land owners.

The total trail project will involve the construction of more than 37 kilometres of trails at an approximate total project establishment cost close to \$16.3 million. Future maintenance demands will be reduced through careful planning and good construction.

A maintenance plan for the shared use trails trail is an important consideration and should include as a minimum; maintenance programming and scheduling, resourcing, monitoring including risk assessments and reporting procedures.

Primary outcomes

- the maintenance strategy/plan provides ongoing popular, enjoyable and safe cycling, walking and trail running experiences
- track assets continue to resist damage from water runoff and other erosion and users continue to remain on the path and do not create new paths
- track maintenance costs are within the \$325,086 p.a. figure and maintenance investment is well targeted
- minimal track closures are recorded due to swift attention to issues such as tree fall, flooding and land subsidence
- trail users don't stray from the path and always feel reassured that they are on the correct trail due to the sign information being up to date and well maintained
- there are very few incidents involving trail users.

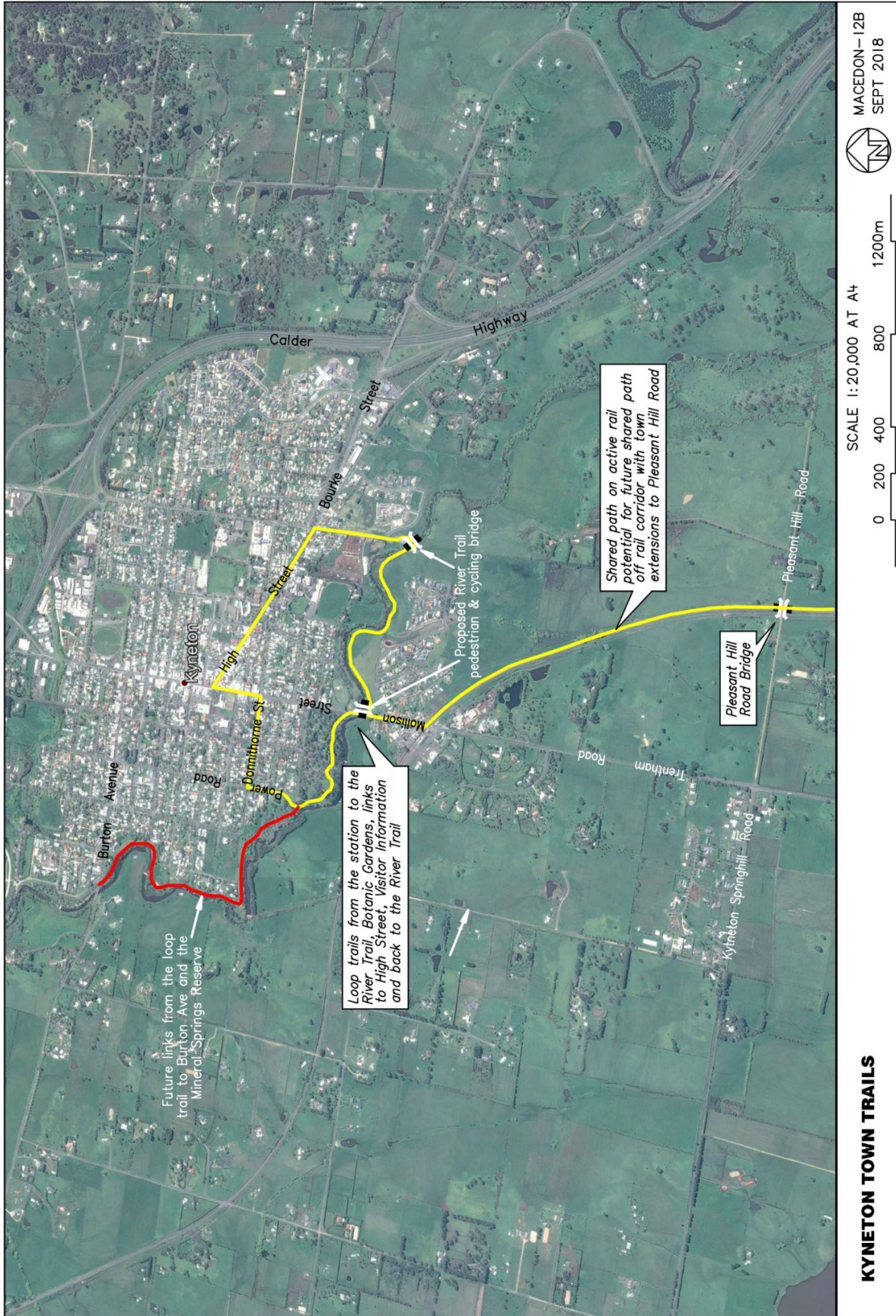
It is envisaged that the trail will be managed and maintained by Council as the local authority albeit the funding for such may come from other levels of government or other bodies.

Maintenance of trail assets, risk and experience protection. Estimate \$325,086 p.a.

6 Next steps

- High level project feasibility assessment and consultation are now complete.
- State and Federal Government funding support is required to advance.
- Once funded the project is ready to move to more detailed design and implementation.
- Detailed design phase will include further land manager and land owner consultation.

APPENDIX 1. DAYLESFORD (TYLDEN) TO WOODEND SHARED USE TRAIL MAPS





RIPPERS LANE (COUNCIL BOUNDARY) TO CHANTERS LANE

SCALE 1:8000 AT A4

0 100 200 400m

MACEDON-4B
SEPT 2018





SCALE 1:8000 AT A4
 0 100 200 400m
 MACEDON-3C
 SEPT 2018

CHANTERS ROAD TO TYLDEN - WOODEND ROAD

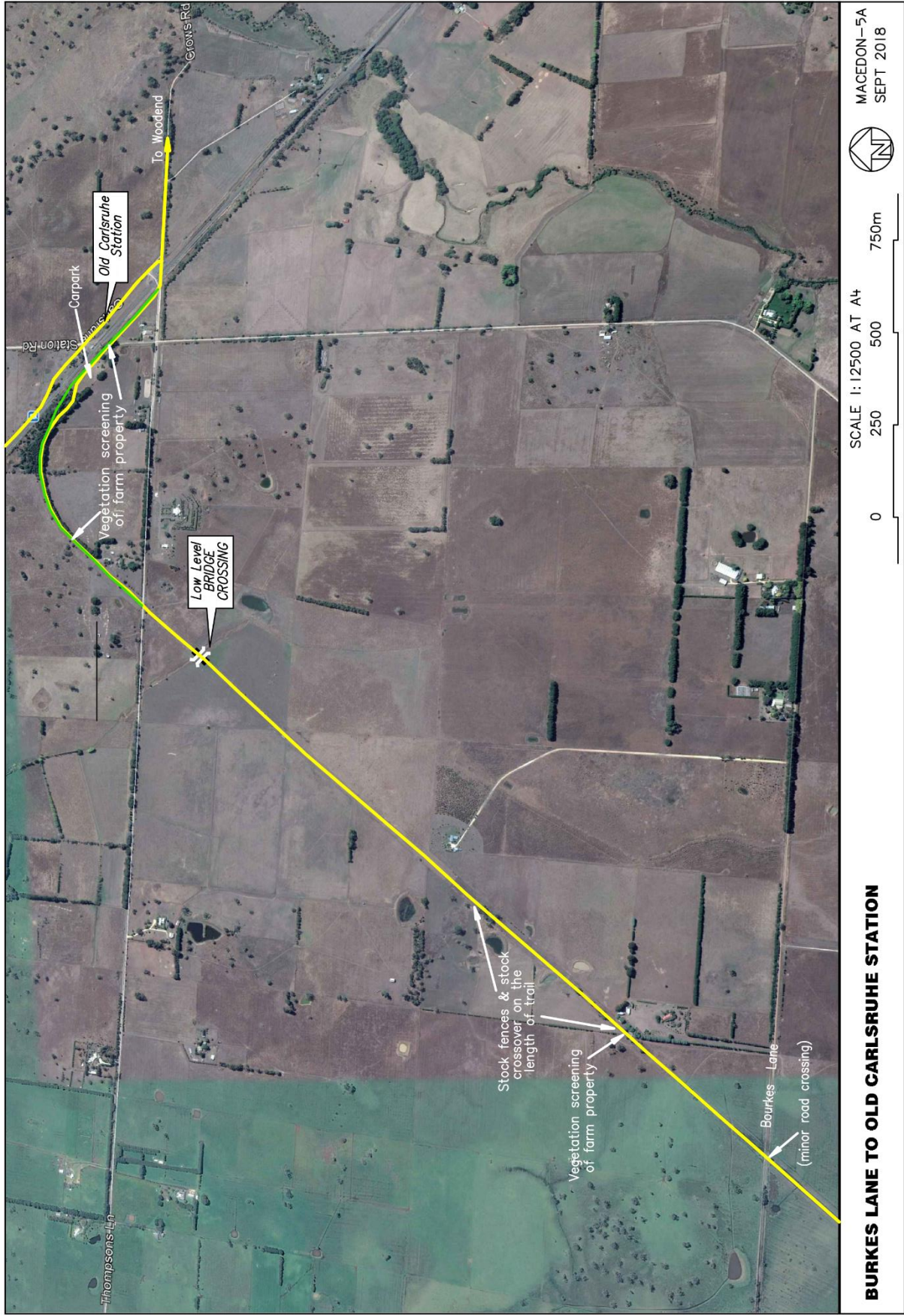


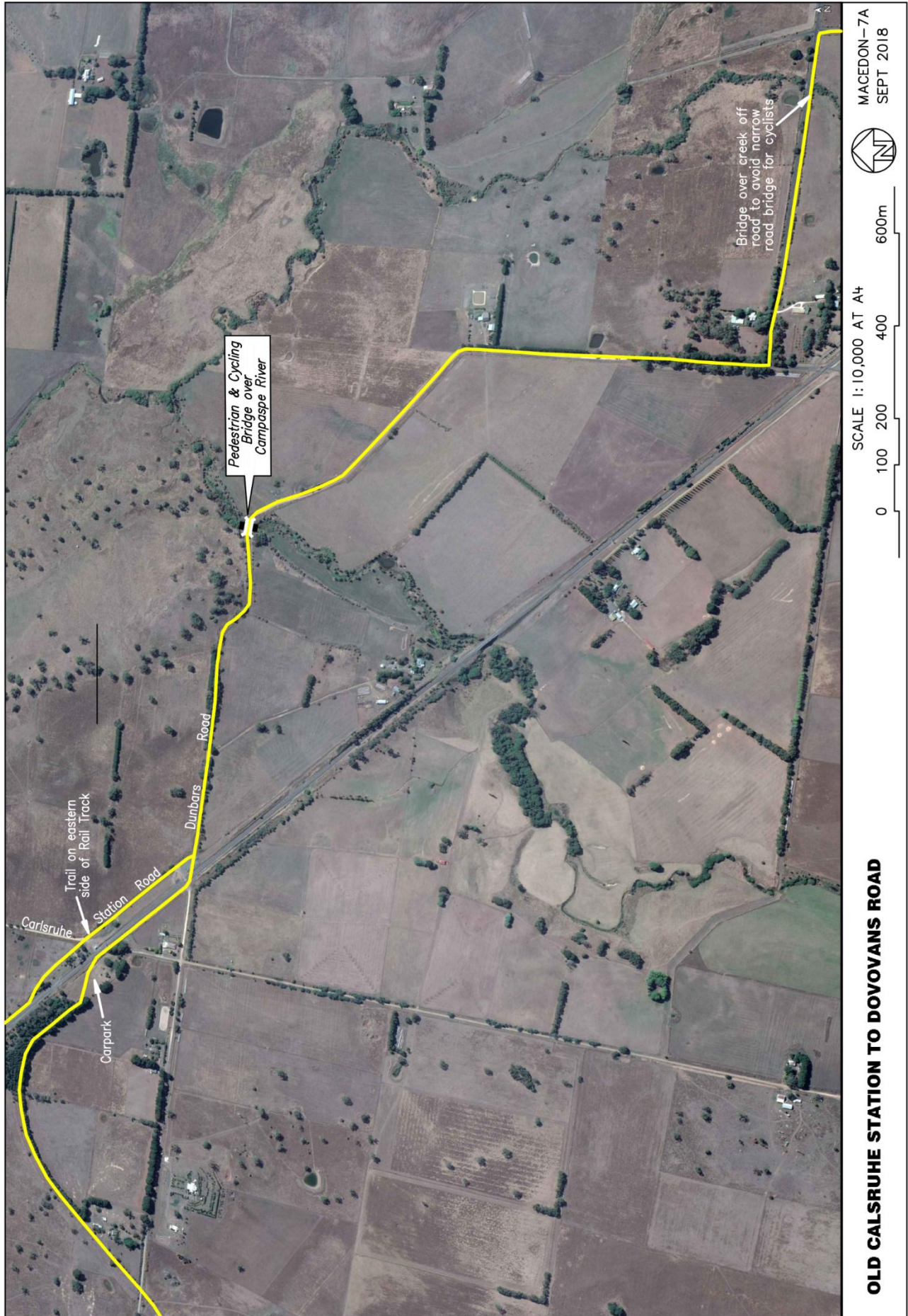
TYLDEN - WOODEND TO BOURKES LANE

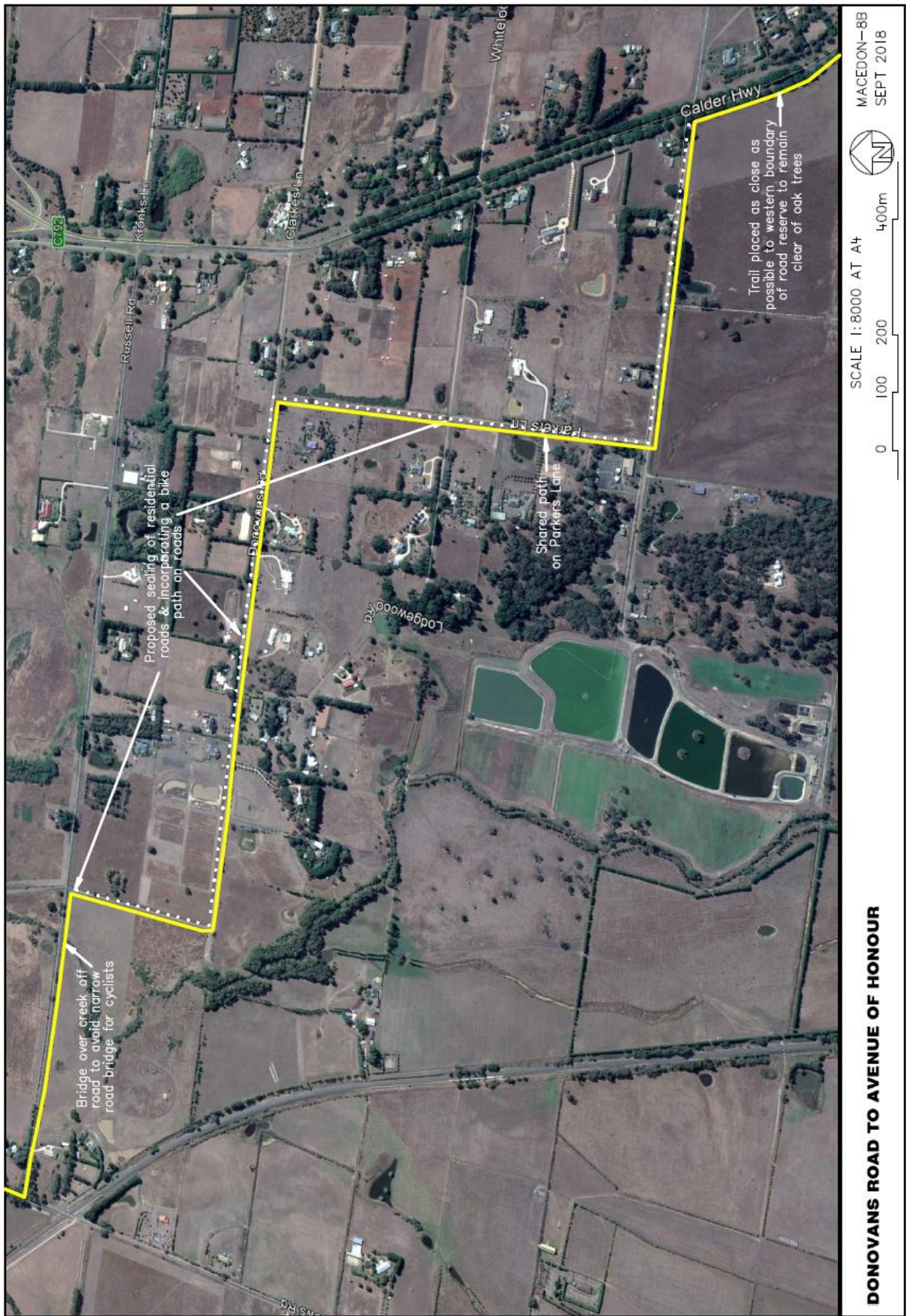
SCALE 1:7500 AT A4

0 150 300 450m

MACEDON-2B
SEPT 2018







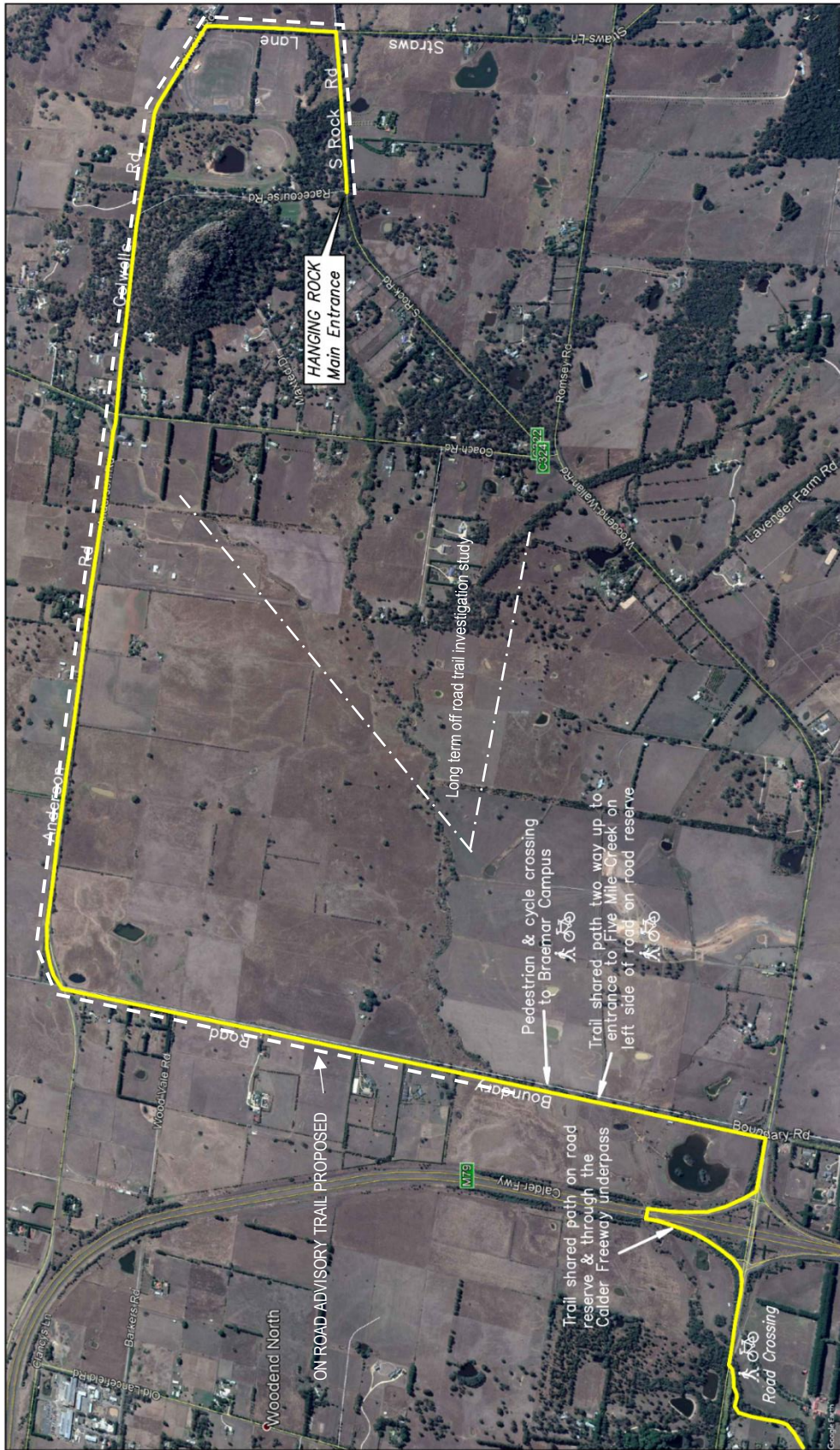


AVENUE OF HONOUR

SCALE 1:8000 AT A4

0 100 200 400m

MACEDON-9A
 SEPT 2018



ON ROAD ADVISORY TRAIL PROPOSED

HANGING ROCK Main Entrance

Long term off road trail investigation study

Pedestrian & cycle crossing to Braemar Campus

Trail shared path two way up to entrance to Five Mile Creek on left side of road on road reserve

Trail shared path on road reserve & through the Calder Freeway underpass

Road Crossing

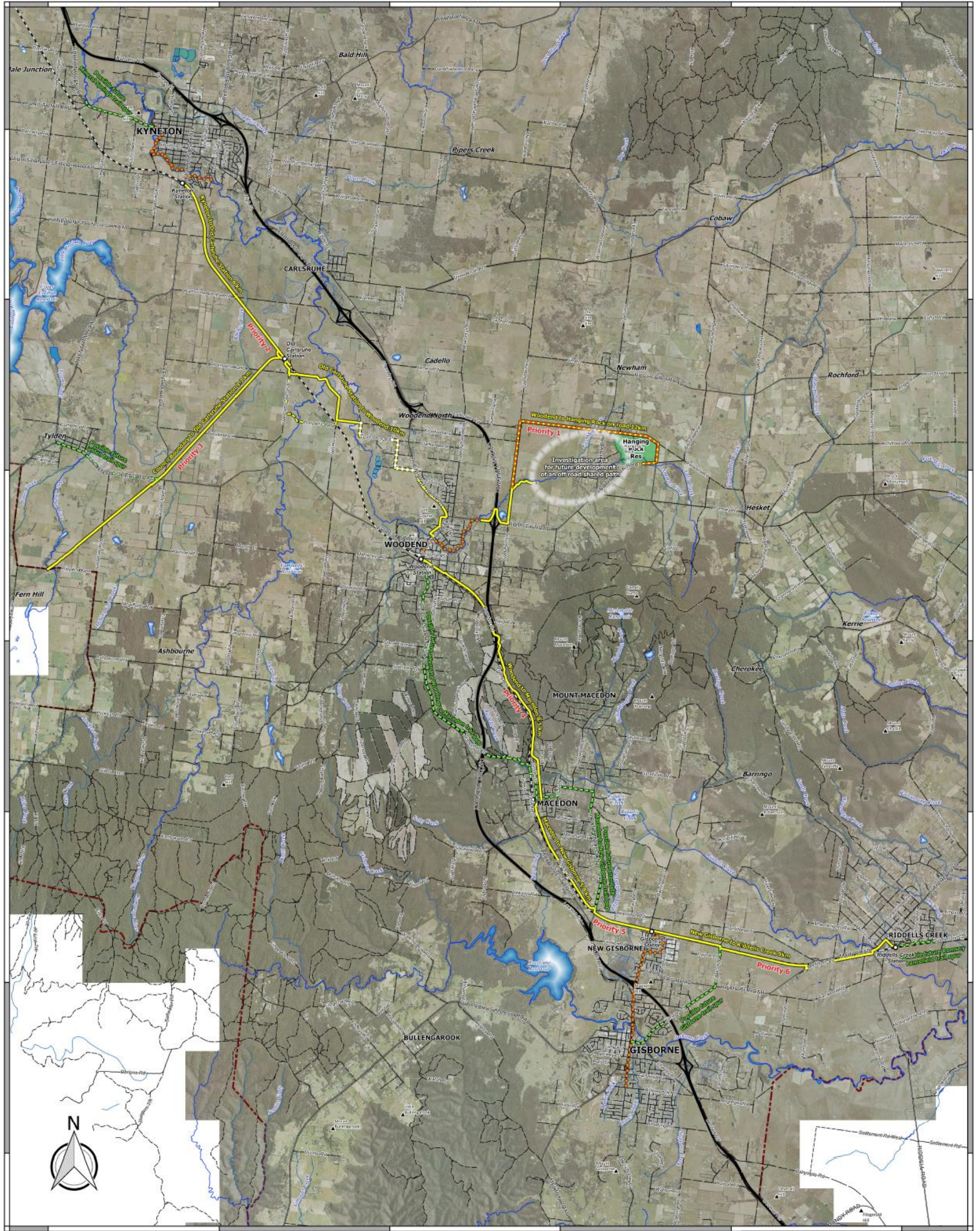
MACEDON- IIE
NOV 2018



SCALE 1:20000 AT A4

CALDER FREEWAY TO HANGING ROCK

APPENDIX 2. MACEDON RANGES SHARED TRAILS OVERVIEW MAP



MACEDON RANGES Shared Trails Feasibility Studies

Legend				
Proposed Trail	Roads by Class	Railways	Water Bodies	Waterways
Preferred	Freeway	Operational	Flat/subject to inundation	Major
Alternative	Highway	Dismantled	Pondage	Medium
Exit	Arterial	Railway Station	Pondage-sewerage	Minor
Road seal add path	Sub arterial		Large river	Geographic point
On road trail	Collector		Lake/Dam	
Draft	Local		Swamp	
Potential Extension	ZWD			
	4WD			
				Municipal boundary



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