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Southern Villages Iconic Trail

Feasibility Study for Highlands Trail Inc.



TRC

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ACKNOWLEDGEMENT

This report acknowledges the Gundungurra and Tharawal people as the Traditional custodians of the place now known as Wingecarribee Shire and Illawarra region. It recognises the continuous and deep connection to their Ngurra (Country) and that this is of great cultural significance to Aboriginal people, both locally and in the region. For Gundungurra and Tharawal people, Ngurra (Country) means everything, its physical, cultural and spiritual, its belonging. We pay respect to Elders past and present and extend that respect to all First Nations people.

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Executive Summary

The Southern Villages Iconic Trail (SVIT) Feasibility Study prepared by TRC Tourism investigates the potential for a new 100km+ point-to-point, shared-use trail linking the Southern Highlands villages of Wingello, Bundanoon, Exeter, Fitzroy Falls and Kangaroo Valley, located in the Southern Highlands of New South Wales.

Economic analysis and projections indicate that the proposed Southern Villages Iconic Trail would:

- Attract 74,400 (YR1) – 84,100 (YR10) visitors per annum
- Inject \$9-10 million into the local economy per annum
- Facilitate 38.3 FTE in planning and construction phase
- Facilitate 41.3–46.3 FTE (YR1-YR10) in operational phase
- Require \$12-13 million to construct to standard
- Require approx. \$520,000 annual maintenance budget
- Result in a Benefit Cost Ratio (BCR) of 3.7-2.6 at a 3-10% discount rate range
- Benefit from a phased implementation plan to separate costs into achievable, independent stage commitments.

The proposed trail offers a unique nature-based experience positioned as a long distance, town-to-town cliff escarpment ride, walk or run offering safe and accessible alignments that would interact with dramatic landscapes and points of interest encompassing cultural heritage, significant geological formations, flora and fauna.

Off road cyclists and recreational-level mountain bikers, collectively labelled ‘adventure cyclists’ would be the primary user focus, however a shared-use designation and associated design considerations will ensure the trail will also strongly appeal to pedestrians (walkers and runners).

The proposed trail is unique in that it would represent the only fully cyclable long-distance path in New South Wales that explores topography characterised by deep and broad canyons, high escarpment lookouts and waterfall viewing points.

Beyond broadscale economic and employment generation, it is suggested that the trail will create significant opportunity for the Illawarra region’s Traditional Owners, Custodians and Knowledge Keepers. The trail has the capacity to strengthen connection to country, represent and celebrate important cultural heritage, offer employment and skill development pathways for the Illawarra Aboriginal Community, provide opportunity for Aboriginal communities to work on country and foster connection between communities and visitors via the creation of a meaningful journey through nature.

The alignment of a proposed Wingecarribee-based ‘Green Team’ of Environmental Officers presents an ideal potential partnership in co-managing the proposed trail. It is highly recommended that a model of cooperative trail stewardship be further explored under the advice of the Gundungurra and Tharawal Traditional Owners, represented by the Illawarra Local Aboriginal Land Council. Future trail alignment and design principles should be managed in partnership with Illawarra Local Aboriginal Land Council. Nowra Local Aboriginal Land Council will also need to be consulted in due course (although the trail terminates in Kangaroo Valley on public roads, at the boundary of NLALC representation).

The trail will provide an opportunity to inform and engage visitors with a variety of environmental and ecological narratives, highlighting the importance of protecting and rehabilitating the region’s wilderness areas for the benefit of flora, fauna and cultural heritage. It may also provide a lightning rod for generating awareness and income that in part may contribute to landscape protection and regeneration.

The *NSW National Parks and Wildlife Service Cycling Strategy (2022)* supports cycling experiences that are “sustainable, located in suitable locations that ensure the protection of natural and cultural heritage values, and will support tourism and deliver health benefits to communities”, criteria fully embraced by the Southern Villages Iconic Trail. Further, the Department of Regional NSW’s *Adventure Cycling Strategy (2023)* highlights that “increased participation in adventure cycling...has created a significant opportunity to invest in quality experiences that stimulate local economies, bring communities together and improve community health and wellbeing.”

Reflecting on the *Adventure Cycling Strategy's* vision that “NSW will be the home of Australia’s Premier adventure cycling destinations”, the Southern Villages Iconic Trail would represent a primary pillar in achieving such an aim.

This Feasibility Study is a step in formalising intention and planning to best guide the process of developing the Southern Villages Iconic Trail moving forward.

The study recommends that the concept in part or entirety would appeal to and service a growing outdoor active market and deliver economic, tourism, commerce and employment opportunities along with positive community, environmental and cultural-value outcomes. It details the strong market demand for nature-based cycling experiences and identifies the growing ‘middle market’ adventure cycling sector as a primary opportunity experiencing significant growth.

The report also recognises the importance of the complementary pedestrian markets as being integral to the viability and success of the trail. Growth in bushwalking and trail running participation adds particular weight to the project’s rationale for servicing demand.

Overall regional visitation driven by the trail would contribute to growth in tourism and economic prosperity while also fostering local community transit and recreational use and associated positive health and wellbeing outcomes.

VISION for the Southern Villages Iconic Trail

“The Southern Villages Iconic Trail is a compelling multiday trail journey exploring the Southern Highlands and its dramatic escarpment landscapes infused with ecological wonders, tapestries of living aboriginal culture, historic villages and vibrant communities.”

Why Would the Project be an ‘Iconic’ Trail?

- Creates major tourism visitation drawcard
- Seeds business and economic development opportunities
- Establishes a focus for Traditional Owner Custodianship and showcasing of Aboriginal Cultural Heritage
- Creates opportunities for skills development, training and employment across multiple industries
- Facilitates active lifestyles, health and wellbeing among local community
- Creates impetus for environmental regeneration and sustainability initiatives
- Becomes a focus for educational opportunities in environment and cultural heritage studies
- Meets identified rising demand for outdoor active recreation opportunities
- Assists in curtailing illegal / informal trails in sensitive environmental areas
- Furthers numerous strategic planning goals across tourism, community, environment and land management.



Challenges

The opportunity presents some construction challenges on the pathway to realisation. The nature of the dramatic terrain defined by cliffs, deep valleys, ravines and an overall dramatic topographical profile means that trail alignments are necessarily complex in order to remain appropriately safe and suitable for an intended mid-level user, especially cyclists.

Land management and permissibility challenges are significant, as the draft alignment corridor interacts with numerous land holdings under both private and publicly managed tenures with different overlays of use permissibility. The Morton National Park Plan of Management would require updating to allow mountain bike use and some Crown Land sections would require access and terms of use agreements with management of those sections likely to require assumption of management by an entity other than Crown Lands NSW.

Critical to achieving the full length of the current draft alignment will be implementation of some form of ongoing land tenure agreement with private property holders, be that creation of an easement, right of way or other working agreement that seeks to maintain permissibility of passage in the long term.

The success of the trail rests in consistent consultation and early settling of corridor use agreements to the satisfaction of all stakeholders. A new incorporated, not for profit organisation should be commissioned and empowered as the responsible entity for trail development, coordination, management, funding and future maintenance critical to the project proceeding beyond concept.

Given the identification of a mid-level user market in terms of experience and/or rider skill, there is an increased requirement to consider development of and alignment with supporting services and facilitation, including transfers to/from trailheads, bike hire and servicing and accommodation mix, complimentary off-trail activities, food and beverage offerings and inbound access to the region (i.e. public transport).

Due to the challenging nature of the terrain necessitating intensive construction in parts, along with challenges of environmental and cultural permissibility and

patchwork profile of landowner and managers, it is recommended that the trail be implemented in staged iterations. These iterations - especially phase one - should be developed as worthwhile stand-alone experiences meaning should funding or commitments fall short on whole of project in the future, that work to date remains of high value contributing to community and visitation outcomes ongoing without reliance on future stages.

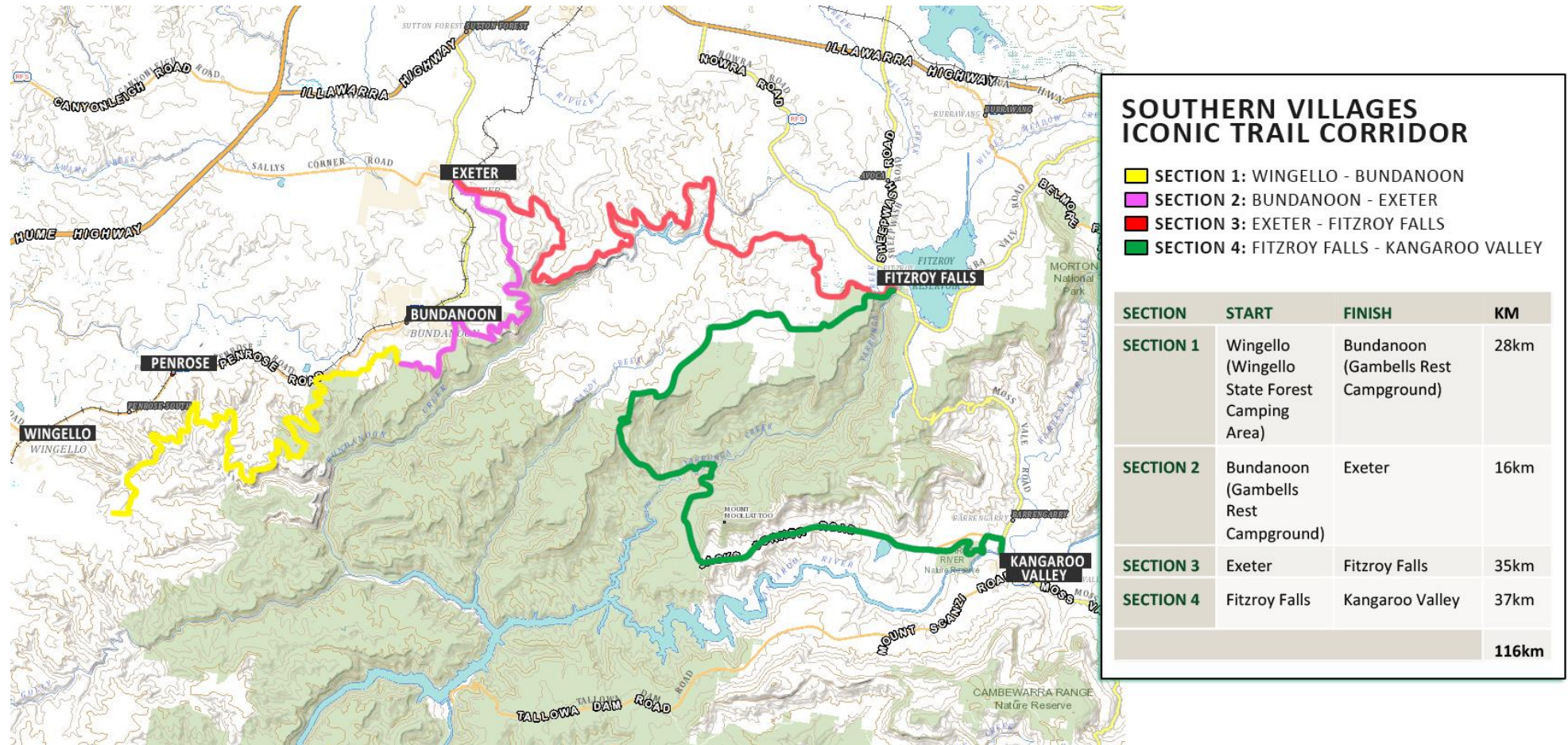
It is noted that the eastern study region for this trail is currently under a Native Title Claim by the South Coast peoples¹ and that the first action in furthering the SVIT project would be to connect with the Native Title Court, representing 13 applicants across the South Coast and Illawarra Regions, from whom permissions would need to be granted for the project to proceed. An Indigenous Land Usage Agreement would be required satisfactory to all parties.

Prioritisation

- The **Bundanoon to Exeter Stage One** is identified as the priority alignment for project commencement, being the link between the two major community centres of the trail and a higher use projection in the short term given accessibility and points of interest featured
- **Stage Two Exeter to Fitzroy Falls** and **Stage 3 Wingello to Bundanoon** could be developed concurrently, with equal weighting of importance
- **Fitzroy Falls to Kangaroo Valley upgrades** would complete the trail as the fourth and final stage
- **Short term stage alternatives:** with a target market encompassing bike packers and gravel grinders along with mountain bikers seeking 'adventure rides', it is suggested that until specific fully off-road alignments are built for Stage 2 (Exeter to Fitzroy Falls) that back road routes needing minimal investment to activate are be offered as a medium-term solution allowing a full Bundanoon to Fitzroy Falls ride experience earlier in the development phase. This stepped approach to opening a route is pertinent to riders more so than walkers in terms of an agreeable experience and suitable distances between nodes.

¹ http://www.nntt.gov.au/searchRegApps/NativeTitleClaims/Pages/details.aspx?NTDA_FileNo=NC2017/003

Figure 1. Map - Route Overview



Recommendations

1. An organisation be created (or identified) to lead the project with specific responsibility for ongoing trail project planning and thereafter coordination of trail management and promotion post-construction
2. A Steering Committee or similar be created with representation from all relevant stakeholder groups including (but not limited to): Illawarra Local Aboriginal Land Council, Wingecarribee Shire Council, Shoalhaven City Council, NSW National Parks and Wildlife Service, Forestry Corp NSW, Highlands Trails MTB Club, Southern Highland Bushwalkers Inc., Destination Southern Highlands
3. Aboriginal Community Stewardship be a primary driver of the project with foundational involvement in trail design, interpretation overlays and conservation management
4. Identification of and commitment by partner organisations to supply of component(s) of maintenance works (i.e. Forestry NSW agreement to support works on trails within its tenure)
5. Integration into trail maintenance operations of a proposed 'Green Team', a not-for-profit Aboriginal community-based organisation to be based in Wingecarribee Shire (project in motion). The Green Team Environmental Officers should be a critical component of the trail's management plan with contracted inputs into vegetation management, trail maintenance, regeneration and rehabilitation of natural environments
6. Development of funding strategy to identify and seek funding streams, grants and opportunities to finance the planning and development phase of the trail
7. Development of a funding model for operational phase of the trail, with consideration given to 'pay per use', retail door fee via ambassadorship businesses, merchandising and retail percentage alignments (i.e. brewery), regional targeted philanthropy, and annual contributions from stakeholder organisations
8. Full ground truthing of primary trail be completed based on preferred corridor alignment identified in this report, inclusive full audit of infrastructure requirements
9. Environmental and cultural heritage assessments be completed based on the results of ground truthing
10. Detailed design be completed for the entirety of the primary trail, with associated detailed construction and implementation costs identified
11. Undertake brand, waymarking and signage strategy
12. Alternative on-road alignments as identified in this report for short-term substitute routes undergo a road safety audit and risk assessment by accredited road safety assessor
13. As a key stakeholder, Highlands Trails to take on the role of volunteer-based trail management overseeing trail condition monitoring and volunteer maintenance works in cooperation and coordination with Green Team contracted works.
14. Trail be constructed/implemented in four phases with some parallel short term, on road alignments for early-stage experience delivery
15. Trail be shared use designation for entire length and multi directional (end to end promotion focused on single direction west to east experience)
16. Trail design be sympathetic to predominant likely user group/s and engagement profiles *per section*
 - a. **Wingello to Bundanoon Stage** designed with an increased focus on blue / intermediate skill level mountain biking user group recognising southwestern node links to Wingello singletrack MTB trail network (potentially expanded in future)
 - b. **Bundanoon to Exeter Stage** designed to predominantly green / easy user group with higher percentage of shared use (walk, run, ride)

- c. **Exeter to Fitzroy Falls section** intermediate / blue given more remote nature and increased percentage of cycle market traffic
 - d. **Fitzroy Falls to Kangaroo Valley** focused purely on ‘adventure ride’ user base (majority dirt road alignments)
17. Trail alignment consider (high quality) user experience as critical consideration in route planning; existing trails and roadways used for alignments where feasible to maintain sustainability and cost reductions but only where user experience is not lessened
 18. Trail alignment consider and identify sections of primary attraction to adaptive mountain bikers and other all abilities users
 19. Growing e-bike market be given consideration in developing trail design, infrastructure, facilitation, services and promotion
 20. Secondary loop trails be identified for short walk / ride experiences based on highlight Points of Interest
 21. Trail Experience intersect where appropriate and integrate with existing recreational facilities including:
 - a. Glow Worm Glen and Bundanoon proximity lookouts
 - b. Fitzroy Falls Short Walks
 - c. Wingello MTB Trails
 22. Existing campsites en route be refurbished to better attract and cater to increased overnight visitation by riders and walkers
 23. Promote accommodation opportunities to adjacent landholders – from bush camping to bunkhouse to cabins to glamping to luxury B&B
 24. Upgrades of significant Points of Interest en route i.e. Gunrock Falls, numerous escarpment lookouts adjacent Garbutts Road.
 25. Early engagement with NPWS with a view to conducive involvement in any future update of Morton National Park Plan of Management (last updated in 2000).



Proposed Implementation Stages

With funding streams not currently in place, and significant all-of-project costs identified, it is proposed that trail development and construction be implemented in three primary phases and five subset stages.

PHASE ONE

Stage 1: Bundanoon - Exeter [Trail Section 2]

> planning and development of *off-road* route

Stage 2: Exeter – Fitzroy Falls – Kangaroo Valley [Trail Sections 3 & 4]

> *on-road* alignment curated

PHASE TWO

Stage 3: Wingello – Bundanoon [Section 1]

> planning and development of *off-road* route

PHASE THREE

Stage 4: Exeter – Fitzroy Falls [Section 3]

> planning and development of *off-road* route (sections)

PHASE FOUR

Stage 5: Fitzroy Falls – Kangaroo Valley [Section 4]

> planning and development of *off-road* route



1 Introduction

1.1 Project Background

The Southern Villages Iconic trail is a concept proposal presented by Highlands Trails, a community-based mountain biking organisation that has advocated for and assisted in trail development and care across the Southern Highlands since 2010.

Highlands Trails, along with private company Wild Horizons and local volunteers, is the pioneer of mountain bike single-track trail development at Wingello State Forest and have been instrumental in developing and maintaining the current network.

Since 2013, Highlands Trails has worked closely with Forestry Corporation of NSW, who has accommodated mountain biking recreation alongside its primary timber production operations within Wingello State Forest.

Prior to the 2020 Morton bushfire, a small mountain biking network was established in Wingello in cooperation with Forestry Corporation of NSW. The 2020 bushfires all but wiped out that network, which is now mostly closed due to the danger of tree fall and degraded landscapes. Highlands Trails is currently working to recover the previous trail network and to explore opportunities for further development into the future.

This forward planning initiated the concept for a longer, point to point trail that would link the Southern Highlands villages, provide a major recreation asset for the community and the region and generate significant tourism and associated benefits.

The feasibility study has been funded by the UCI Wollongong 2022 Legacy Partner Program / NSW Government Office of Sport, and benefited significantly from the in-kind contribution to ground-truthing and stakeholder meetings by volunteers from Highlands Trails.

Specific benefits that the project should seek to achieve include:

- Create direct regional employment and potential for employment and businesses in surrounding locations
- Generate additional regional investment providing for additional commercial services
- Increased visitor stays in Wingecarribee Shire Council and Shoalhaven Shire Council by providing additional low impact, high yield, longer stay adventure-based activities and contributing positively to Gross Regional Product (GRP)
- Contribute to improved capital land values and act as a catalyst to additional investment attraction, both directly and indirectly associated with trail-facilitated outdoor activity
- Establish Wingecarribee Shire Council and Shoalhaven Shire Council as desirable places to live, work and invest
- Provide for greater economic diversity and regional resilience
- Complement and further strengthen existing nature-based tourism and community assets in the region
- Benefit other nearby mountain bike and walking trail projects by providing a significant contribution and focal point leading to extended visitor stays
- Contribute to environmental improvements and sustainability outcomes via increased weed and erosion management, expanded landscape stewardship, and regeneration of degraded spaces.

As a pillar of a broader sustainable tourism platform for the region, the Southern Villages Iconic Trail should maintain sustainability principles (as identified in the Shoalhaven 360 Model²) by:

- Making optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity
- Respecting the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance
- Ensuring viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

1.2 Value of Trails

The benefits associated with cycling, walking and running on trails include:

- Health and physical activity (in terms of increased life expectancy and reduced risk of disease and illness)
- Increased tourism revenues and greater business investment
- Attracting and retaining people within communities, particularly families and youth
- Providing outdoor classrooms for physical activity, sport, nature, culture and history
- Enhanced environmental awareness, improved understanding of natural heritage and stewardship for the environment

² <http://project2.thefifthelement.me/wp/>

³ Transport and Infrastructure Council. 2016. Australian Transport Assessment and Planning Guidelines, M4 Active Travel

⁴ GHD Report for AusCycling - Mountain Biking in Australia: An Economic and Participation Analysis

- Developing recognition and respect for Aboriginal culture and values
- Health system benefits (in terms of a reduction in costs borne by the health system as a result of physical inactivity)³
- Research and Australia-wide examples indicate attracting mountain bikers to purpose-built locations can have significant economic benefit. Research by GHD and AusCycling estimate that people who mountain bike spend approximately \$27.10 per ride.⁴

1.3 Heritage, Cultural and Environmental Benefits

For the Gundungurra and Tharawal people, the Southern Highlands is a highly significant cultural landscape where the community continues to demonstrate its living culture and connection to the land. The Feasibility identifies opportunities where Traditional Owners, local people and visitors can better experience the Aboriginal Culture and landscape using the proposed trail as a conduit of access and interpretation.

Trails that are designed to highlight the natural landscape will contribute to greater awareness and understanding of our ecosystems and natural places, leading towards advocacy and protection.

Trails should be developed with minimal impact to the environment and, if developed effectively, can contribute to ecosystem health particularly when combined with species management, recovery plans and restoration projects.

1.4 Stakeholders

The Feasibility Study recognises the need for fostering of strong relationships between user groups, land managers, Councils and associated stakeholders including:

- Gundungurra and Tharawal people
- Wingecarribee Shire Council
- Shoalhaven Shire Council
- Illawarra Local Aboriginal Land Council
- Nowra Local Aboriginal Land Council
- Wingecarribee Reconciliation Group
- NSW National Parks and Wildlife Service
- Forestry Corp NSW
- Crown Lands NSW
- Highlands Trails
- Southern Highlands Bushwalkers Inc.
- Destination Southern Highlands
- Visit Kangaroo Valley
- Private landowners
- Community at large and associated community groups.

1.5 Methodology – Consultation

The methodology consisted of background desktop research, on-ground landscape and alignment corridor assessments, base corridor mapping, strategic planning and high-level stakeholder consultation. A base search of the Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) was conducted to identify any known locations of sites of Aboriginal significance and cultural heritage.

The methodology used for the economic benefits analysis is in line with that required by the NSW Government and Australian Government for economic assessments to be included in submissions for government funding under regional infrastructure and tourism facilities funding.

The methodology recognises that trails need to be financially, socially and environmentally sustainable to ensure long-term viability and include a strong focus on good trail design to reduce costly maintenance of trails. Trail visitor access arrangements and identification of priority trail alignments is an important consideration with land managers. The Feasibility Study recognises the importance of detailed environmental and cultural heritage investigations very early on in the planning and development process.

Table 1. Summary of Plans, Strategies and Directions

DOCUMENT	CONTENT	TAKE OUTS
Department Regional NSW Adventure Cycling Strategy, 2023	<p>Strategic actions to grow adventure cycling experiences in NSW. Outlines the Government’s priorities to support the industry to grow in collaboration with local government, clubs, businesses and the broader community. Recognises that investment in adventure cycling experiences will help to deliver on the NSW Government’s <i>Visitor Economy Strategy</i> goal to make NSW the premier visitor economy of the Asia Pacific by 2030.</p>	<p>Aims to establish funding opportunities with eligibility for adventure cycling experiences in regional NSW.</p> <p>Directive to partner with proponents to promote regionally significant tracks, trails, tour and experience providers, events and competitions.</p> <p>Facilitates advice and information exchange to support councils and the community plan adventure cycling experiences, including access to Government funding.</p> <p>Seeks to undertake an adventure cycling trends, supply and demand study to inform prioritisation of a pipeline of regionally significant investment opportunities.</p> <p>Seeks to establish funding opportunities with eligibility for adventure cycling experiences in regional NSW.</p> <p>Supports opportunities for adaptive adventure cycling in the design of trails and tracks to provide access to all riders including people with a disability.</p>
NSW National Parks and Wildlife Service Cycling Strategy, 2022	<p>Guides NSW Parks and Wildlife Service’s approach to all cycling related activities within parks.</p>	<p>Recognises statutory obligation to conserve natural and cultural values while providing for appropriate visitor experiences.</p> <p>Recognises increasing demand, changes in equipment and desire for a variety of cycling experiences on park.</p> <p>Recognises the need for an NPWS statewide, coordinated and collaborative approach to planning and management of cycling experiences on park, including working with land managers across a range of land tenures where appropriate to enhance cycling experiences.</p> <p>Recognises the need to provide greater accessibility to cycling experiences in our parks that not all cycling activities will be appropriate in all parks.</p>

DOCUMENT	CONTENT	TAKE OUTS
<p>NPWS Sustainable Mountain Biking Strategy, Office of Environment & Heritage / NSW National Parks & Wildlife Service, 2011</p>	<p>Foundation document guiding the provision of high-quality mountain biking experiences in NSW addressing appropriateness and safety and environmental standards.</p> <p><i>NOTE: NPWS Morton National Park Plan of Management (PoM) was last updated in 2000. Any future planned update provides ideal opportunity for SVIT stakeholders and/or management organisation to be included in developing the next iteration of PoM, recreation.</i></p>	<p>Where regional planning identifies a high demand for new mountain bike experiences in a NPWS park that does not currently permit mountain biking in its plan of management (POM), and the proposed experiences satisfy criteria in the NPWS Cycling Policy, a draft amendment to the POM will be prepared for public exhibition.</p> <p>Subject to the NPWS Cycling Policy criteria, the NPWS will provide a diversity of cycling experiences that suit a variety of people, including families with children, road cyclists and mountain biking enthusiasts.</p> <p>Where a mountain bike experience that passes through one or more other land tenures could be particularly enhanced by providing a link or section through NPWS parks, creating such a link will be considered a priority, subject to assessment in accordance with the criteria set out in the NPWS Cycling Policy.</p> <p>The NPWS will consider opportunities for creating longer tracks that can contribute to regional tourism, as well as 1–4 hour single-track loops situated near urban centres. Where necessary, the NPWS will work in partnership with other land managers to deliver these experiences.</p> <p>Existing walking tracks may be designated ‘multi-use’ to also allow cycling and mountain biking where a track meets IMBA standards for visibility, width, surface condition and gradient for multi-use tracks.</p>
<p>National Parks and Wildlife Service Cycling Policy Review and Sustainable Mountain Biking Strategy Discussion Paper (Office of Environment and Heritage (OEH)) 2011</p>	<p>Summary of public submissions. 1061 submissions from individuals and user groups.</p>	<p>803 personal and 20 group submissions supported the provision of MTB experiences, including sections of singletrack, in some NPWS parks, agreeing it will reduce illegal use.</p> <p>Comments supported the argument that strategic formalised trails would reduce illegal trail creation and use. In addition, submissions indicated that provision of legal opportunities will:</p> <ul style="list-style-type: none"> • foster a love of nature • be sustainable if conducted on well-designed tracks • have similar environmental impacts to bushwalking if conducted on well-designed tracks • have health benefits • encourage children and families to get outdoors to experience nature.

DOCUMENT	CONTENT	TAKE OUTS
Wingecarribee Shire Council Recreational Walking Track Strategy	<p>Trail review and recommendations for walking trail network across the Wingecarribee Shire Council.</p> <p>Vision: A cohesive network of walking tracks that offers locals and visitors the opportunity to confidently explore the Southern Highlands, immersing themselves in the region’s rich biodiversity, proud heritage, and rugged landscapes.</p>	<p>75% of community use local walking tracks at least once a week and 31% use them daily (strong local demand).</p> <p>Motivations for community use are predominantly exercise and physical health, being in nature and mental wellbeing.</p>
Southern Highlands Destination Strategy 2020-2030	<p>Focuses on the region’s strengths, protecting what makes the area special, re-balancing the ageing population forecast, driving economic growth and vitality in a sustainable and resilient manner.</p> <p>Based on four key pillars of People, Place, Prosperity and Partnership, the Strategy looks at issues of economic, social, environmental, cultural and civic leadership.</p>	<p>Recognises a strong connection between tourism and economic development, combining the two into this single Destination Strategy.</p> <p>Identifies the need for opportunities and growth that will help attract young families to settle in the area, with attended attractive employment opportunities required.</p> <p>Predicts economy is likely to become more dependent upon tourism, leaving region more exposed to seasonal variations, competition from cheap overseas destinations and a potential lack of mid-week visitation.</p> <p>Recognises ‘natural beauty’ as a regional strength.</p> <p>Identifies a lack of visitor activities and experiences: a lack of commissionable tourism product in the region and the existing offering is not very sophisticated.</p> <p>Identifies Nature Based Experiences as a prime opportunity including mountain biking, hiking, eco tourism and adventure.</p>
Shoalhaven Economic Development Strategy 2017 - 2026	<p>Covers all employment, business and industry sectors seeking to grow employment, increase Gross Regional Product, sustain workforce participation in aging population and enhance liveability</p>	<p>Tourism and retail sectors will continue to play important roles [in Shoalhaven Shire], creating and building upon the natural lifestyle attributes of the area, as well as providing entry level employment opportunities for the area’s young.</p> <p>Identifies land activation of key villages and land parcels owned by Council, the Crown or Aboriginal Councils.</p> <p>Advocates implementation of enabling tourism infrastructure (Action 7.8.1) and develop and refine the tourism experience (Action 7.8.2) and continue to work with tourism operators and those seeking to engage with the sector to develop and refine offerings, products and experiences that enriches visitation.</p>

DOCUMENT	CONTENT	TAKE OUTS
<p>NSW Visitor Economy Strategy 2030</p>	<p>Defines strategy and direction for driving NSW visitor economies, placing visitors first with a focus on innovation and state competitive strengths.</p>	<p>‘Iconic walks, mountain bike trails and cycling’ along with ‘small town charm’ recognised as strengths for NSW and part of Strategic Pillar #3.</p> <p>SVIT aligns with Facilitate Growth strategic pillar and aim to “prioritise planning and investment in major projects that will have the most impact on the visitor economy.</p>
<p>Destination Sydney Surrounds South (DSSS) DMP 2018-2022</p>	<p>Provides practical, evidence based strategic framework to guide collaboration towards the target of doubling the value of the region’s overnight visitor economy by 2022.</p>	<p>Meets activity development goal: nature-based, agritourism and adventure.</p> <p>Possible candidate for Catalyst Project: Development of New Experiences: Nature-based and cultural experiences were the lowest ranking experiences reported by overnight travellers to DSSS by Tourism Research Australia, with a cumulative market reach of 2.7 million activities undertaken in 2016/17. A 2% share shift in nature-based tourism could be worth and additional \$42M in 2022 above baseline.</p>

1.6 Legislation and Policy

Legislation, planning instruments and policies that may guide development and implementation of the proposed trail includes, but is not limited to:

- National Parks and Wildlife Act 1974 (NSW)
- National Parks and Wildlife Regulation (2019)
- Native Title Act 1993 (Cth)
- Aboriginal Land Rights Act 1983 (NSW)
- Heritage Act 1977
- Environmental Planning and Assessment Act 1979 (NSW)
- Biodiversity Conservation Act 2016 (NSW)
- Native Vegetation Act 2003 (NSW)
- Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)
- Wingecarribee Local Environmental Plan 2010
- Shoalhaven Local Environmental Plan 2014
- State Environmental Planning Policy (Infrastructure) 2007
- Cycling in Parks Policy (NPWS 2018)
- Crown Land Management Regulation 2018
- Crown Lands Management Act 2016 (NSW)
- Forestry Act 2012
- Local Government Act 1993
- Local Land Services Act 2013 (NSW)
- Disability Inclusion Act 2014 No 41.

All NPWS land parcels will require a review of environmental factors (REF) for an environmental impact assessment for activities proposed on land reserved under the NPWS Act.



2 The Destination

The proposed trail corridor is hosted across two Councils, the majority being in Wingecarribee Shire Council and a short final section within Shoalhaven City Council

Wingecarribee Shire – often referred to and recognised as the Southern Highlands – is located 75 kilometres from the south-western fringe of Sydney and 110 kilometres from Sydney’s central business district. The Shire is predominantly rural in character with agricultural lands separating towns and villages, characterised by unique landscape and aesthetic appeal. Wingecarribee hosts approximately 80% of the proposed trail corridor.

The Shire has a total area of approximately 2,700 square kilometres, 56 per cent of which is north of the Wingecarribee River. It is comparable in size to that of urban Sydney, averaging 55 kilometres from east to west and 45 kilometres from north to south, with its geographic centre north-west of Berrima and its demographic centre to the south-east of Bowral. Much of the Shire is located at or above 640 metres above sea level. The Shire is an important catchment area for water supply to Sydney, Wollongong and the Northern Shoalhaven.

The main towns are Bowral, Moss Vale, Mittagong and Bundanoon, the latter township being the focal point of the Southern Villages Iconic Trail. There are smaller villages throughout the shire separated by a semi-rural landscape. The proposed trail intersecting with Wingello Exeter, Penrose, and Fitzroy Falls.

Eastern parts of the Shire, known as the ‘Yarrawa Brush’ by early settlers, are bounded by the Illawarra Escarpment and Morton National Park, the focus for the proposed Southern Villages Iconic Trail alignment.

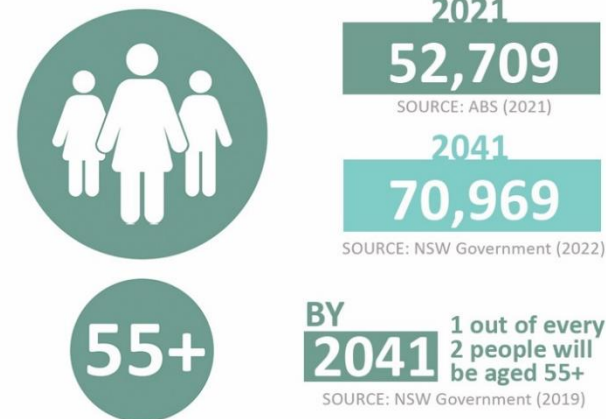
Population growth in the Southern Highlands and the broader region has accelerated in recent years, the 2021 Census reporting 52,709⁵ total population. By 2041, the

region is expected to have a population of 70,969⁶, an increase of 34% or almost 18,260 people. Southern Highlands population remains, however, older and ageing faster than the Sydney Metropolitan region and the State. Currently one in every three Southern Highlands residents is over the age of 55. On current trends, by 2041 one in every two people will be aged 55 years and older – i.e. half the population.⁷

Figure 2. Southern Highlands Population

SOUTHERN HIGHLANDS POPULATION

Population 2019-41 projected to add 18,260 residents.



⁵ ABS Statistics, 2021 Data

⁶ NSW Government, 2022 NSW Population Projections

⁷ Southern Highlands Destination Strategy 2020-2030

Tourism is also a key employer in the region, with Retail Trade together with Accommodation and Food Services providing almost a quarter of total employment. It is the seventh largest employment sector behind manufacturing and ahead of Professional Services.

The area is known to tourists as the Southern Highlands of New South Wales, and is represented by Southern Highland Tourism.

The region's proximity to Sydney combined with its rural lifestyle and its reputation as a garden district encourages a movement of residents from 'the City' as well as hosting a large number of holiday homes for Sydney-based residents.

The Southern Highlands is strategically located within an easy drive from Sydney, Canberra and Wollongong, and only an hour from the ocean. The region benefits greatly from having such a significant population of people so close that can act as visitors and/or consumers. The region is well connected via the Hume Highway, Illawarra Highway and the Main Southern Rail Line (even though some upgrades would improve accessibility).

The Southern Highlands sits atop the Great Dividing Range, providing a cool climate with four distinct seasons. This geography also provides a natural landscape of gorges, waterfalls and rolling hills, which the area is renowned for. The development of the Western Sydney Airport and Aerotropolis by 2026 will present a number of opportunities for the Southern Highlands, including tourism, with the potential to tap into a more lucrative international visitor market.

To the year ended December 2021 there were 1.43 million total domestic visitors to the Southern Highlands Region accounting for 1.06 million total domestic nights and \$360 million in total domestic expenditure. It is estimated that 2,500 jobs were dependent on this expenditure. Domestic day visitors spent \$104 per visit while overnight visitors spent \$531 per visit and \$201 per night.⁸

54% of visitation was for the purpose of a holiday, 30% visiting friends and relatives and 11% for business. A high percentage of visitation nominate 'to eat out/dine' (60%) and 'visit friends or relatives' (37%). 20% visit to sightsee. 18% go bushwalking

or visit rainforests and 12% visit national and state parks. There are no current international tourism statistics for the period due to COVID impacts.

Shoalhaven City Council is located to the south-east of Wingecarribee. It hosts approx. 20% of the proposed trail corridor from south of Fitzroy Falls / Griffins Farm Campsite to its Kangaroo Valley terminus. Most of this section is on existing dirt road or sealed roads, although a section of new trail is proposed for Kangaroo River Nature Reserve, managed by NSW National Parks & Wildlife.

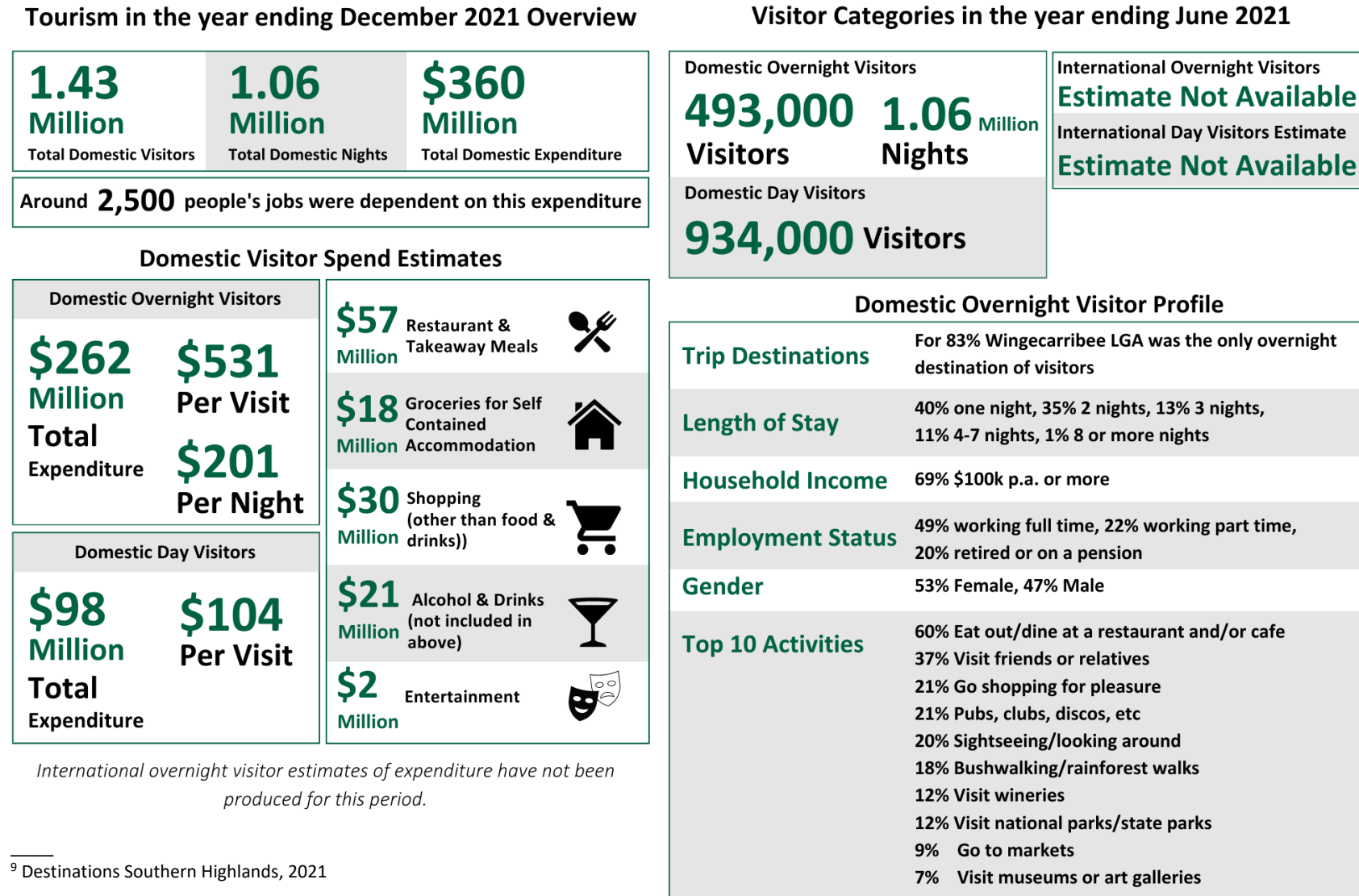
Shoalhaven's primary regional centre is Nowra-Bomaderry located 160 kilometres south of Sydney. Most of the population is concentrated along the coastal fringe, which is traversed by the Princes Highway. The major centres include Nowra-Bomaderry, Milton-Ulladulla, Huskisson-Vincentia, St Georges Basin District, Culburra Beach and Sussex Inlet. The area encompasses 4,531 square kilometres, including substantial areas of national park, state forest, bushland, beaches and lakes. The natural amenity of the area is a strong attractor, for both new residents, holiday makers and day trippers. The Shoalhaven is blessed with landscapes ranging from the lush rainforests, woodlands, rocky terrain, coastal plains, to farmland, floodplains and inland valleys.

The original inhabitants of the Shoalhaven area are the Wodi Wodi, Wandandian and Murramarang Aboriginal people. European settlement dates from 1822 when land was taken up near the mouth of the Shoalhaven River.

Proposed as the terminus for the Southern Villages Iconic Trail, Kangaroo Valley is located in the Shire's north-west, two hours' drive from both Sydney and Canberra. The trail corridor approaches from the north-west, through landscapes bordering Wingecarribee Shire and including a section of Morton National Park. Kangaroo Valley township is known as a picturesque holiday spot with water activities (paddle sports) on the Kangaroo River, waterfalls to explore nearby (Fitzroy Falls is nearby), and views of mountain escarpments. It features a historical pioneer museum, holiday parks, bike and watercraft rental and several renowned food outlets.

⁸ Southern Highlands Tourism Snapshot December 2021

Figure 3. Southern Highlands Tourism Snapshot December 2021⁹

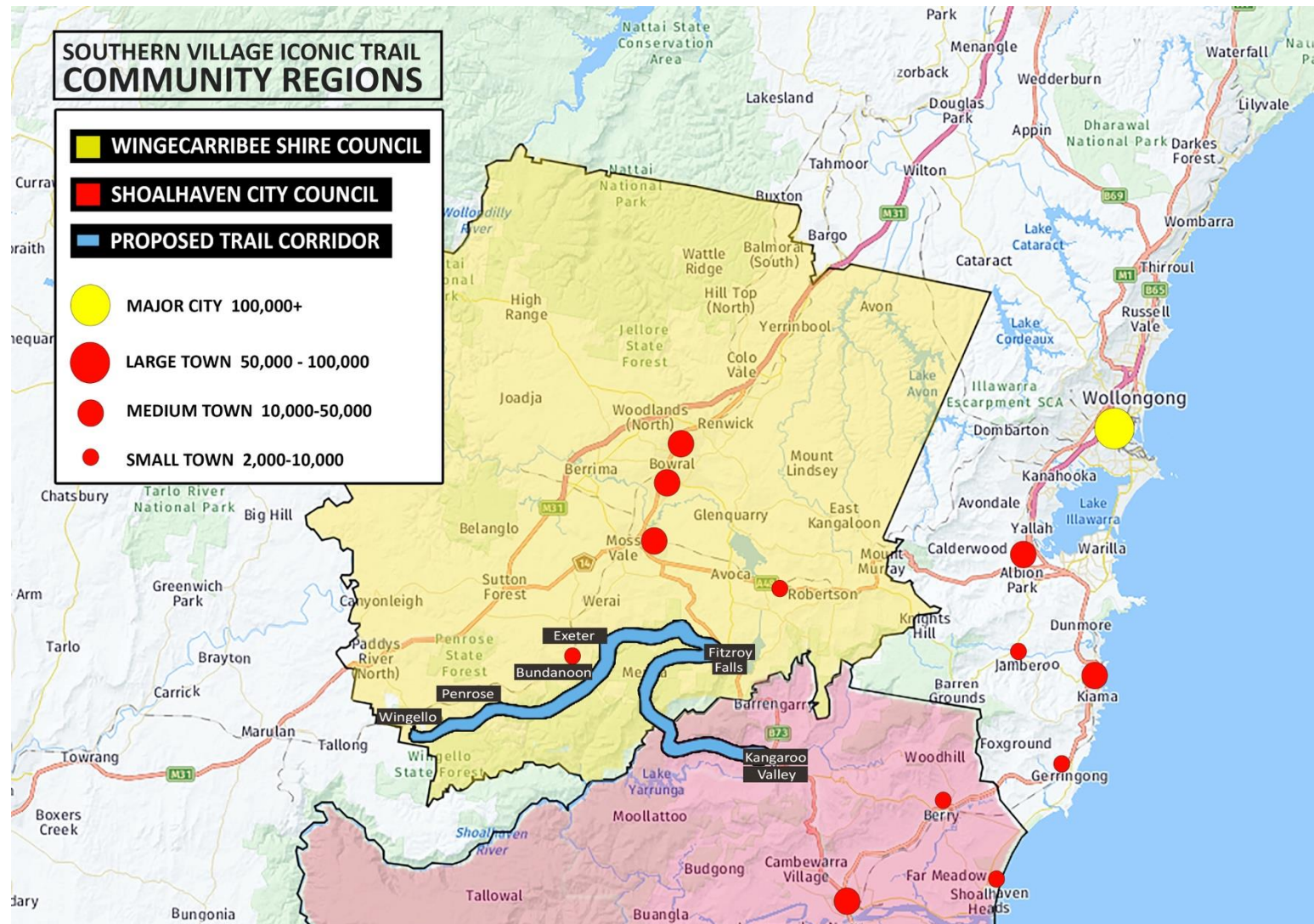


2.1 Southern Highlands Economic Strengths

- Strategic location: proximity to Sydney, Canberra, Wollongong and the new Western Sydney Airport and Aerotropolis. The area has good transport access in and out of the region through the Hume and Illawarra Highways and fixed rail
- Natural beauty: a pristine natural environment with numerous vistas, gorges, waterfalls and a rural landscape experiencing four distinct seasons
- Local lifestyle and amenity: towns and villages with distinct character, heritage and unique features. Relaxed lifestyle with a rural feel, but provides all creature comforts of the city. Good schools, recreational facilities, hospitals, allied health professionals; and other services
- Strong tourism sector: recognised tourist destination, receiving over 1.6-2 million visitors per year attracted to wineries, towns and landscapes. A strong tourism brand. Busy weekend trade with visitors injecting \$360 million into local visitor economy.



Figure 4. Shire Map



2.2 Traditional Owners

All of the proposed Southern Villages Iconic Trail passes through a region that are the traditional lands of the Gundungurra and Tharawal people, recognised as the Traditional custodians of the place now known as Wingecarribee Shire and Illawarra region.

The region is recognised administratively as part of the South Coast grouping of 13 Aboriginal Land Councils. The region inclusive of the study area is under a current Native Title Claim lodged in 2017.

The proposed trail alignment sits on land specifically represented by the Illawarra Local Aboriginal Land Council. The trail terminus at Kangaroo Valley is adjacent to the region under the custodianship of the Nowra Local Aboriginal Land Council. The Wingecarribee Reconciliation Group hosts reconciliation events in and around Wingecarribee, including walks.

There are no officially recognised sites of significance *within* the trail alignment corridor according to a search via Heritage NSW Aboriginal Heritage Information Management System AHIMS mapping facility, although this does not discount there may be sites of cultural significance in the region not officially recorded but known to Knowledge Keepers of local Aboriginal communities.

There is one sacred Aboriginal Place in Wingecarribee Shire, nearby but not intersecting with the trail corridor, called Nungunungulla (Jubilee Rocks). This Aboriginal cultural heritage site was declared by the State Government as the 100th Aboriginal Place in NSW¹⁰. Depending on the wishes of its Traditional Custodians, it may or may not be considered as a potential Point of Interest visitation node for trail users.

There are currently identified and recorded 32 sites of Aboriginal significance in the general region of the study area, however most sites are located well away from the alignment and no gazetted sites intersect directly with the route alignment. Three sites are located adjacent to the draft route:

- Nearby Gambells Rest Campground, to the north of Bundanoon Loop Road and east of Echo Point Rd on the boundary of Morton National Park.
- Two sites to the east of Meryla Rd in the Manchester Square area, North of Gunrock Creek and south of Bundanoon Creek.

Further consultation will be required with local Aboriginal Knowledge Keepers in order to ascertain the location and cultural significance of any other non-gazetted sites, with consultations to determine if the route alignment should alter to avoid or, indeed, alter to intersect with sites as advised for reasons of cultural interpretation and storytelling that may become integral to the final trail experience.

Perhaps the most sensitive of environments through which the study area passes is the Morton National Park which is the traditional Country of the Yuin people. Aboriginal sites have been recorded here and there are likely many more. The park's imposing mountains, particularly Didthul, are particularly significant in Aboriginal mythology, as is the majestic Fitzroy Falls. The park's plateau and surrounding country also contain sites of great importance to Aboriginal people, whose occupation of the area dates back over 20,000 years¹¹

¹⁰ <https://www.wsc.nsw.gov.au/Community/Aboriginal-Community>

¹¹ <https://www.nationalparks.nsw.gov.au/visit-a-park/parks/morton-national-park/learn-more#60FA2BA7866C47E3B1D979AF33B61984>

Figure 5. Aboriginal Land Council Map

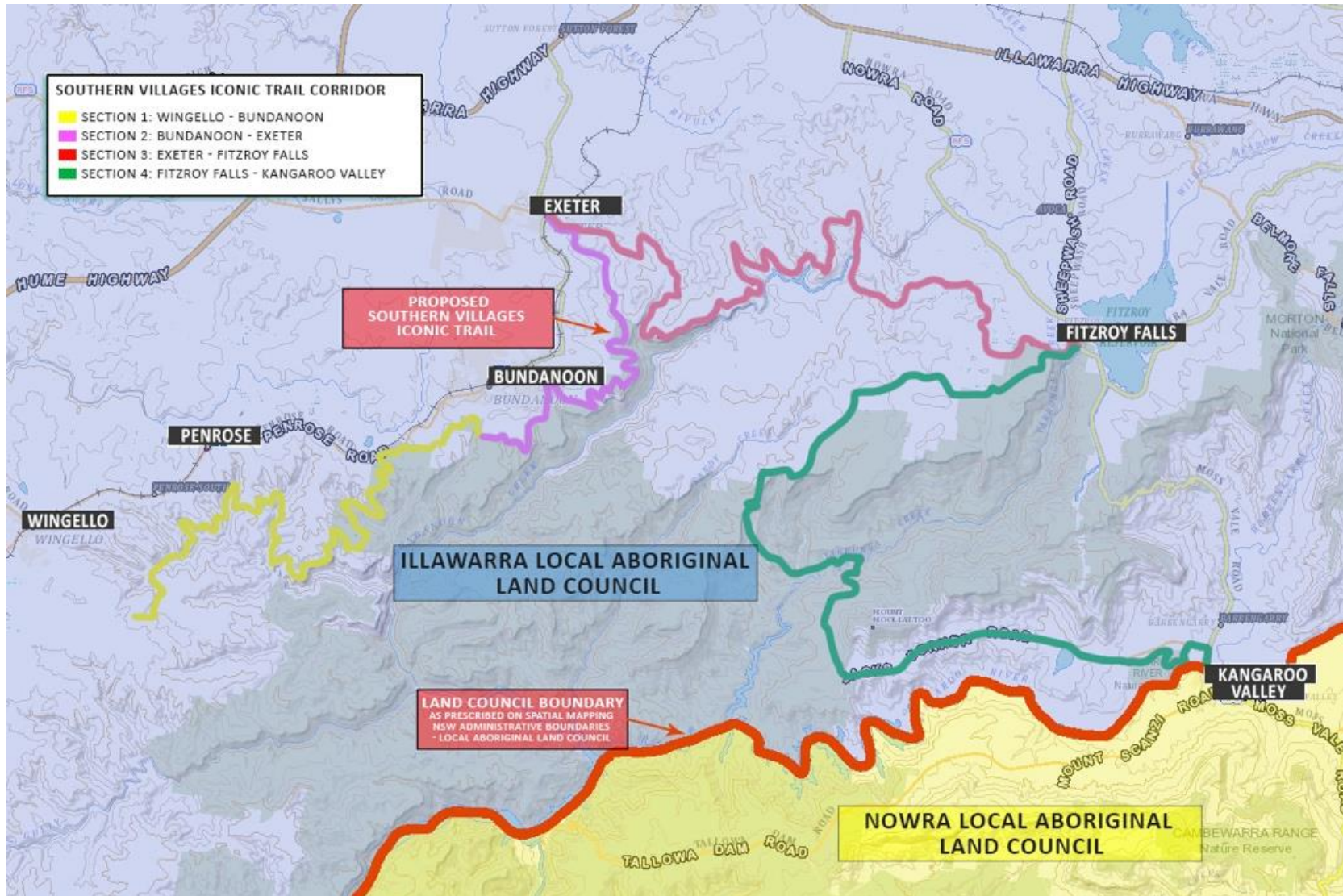
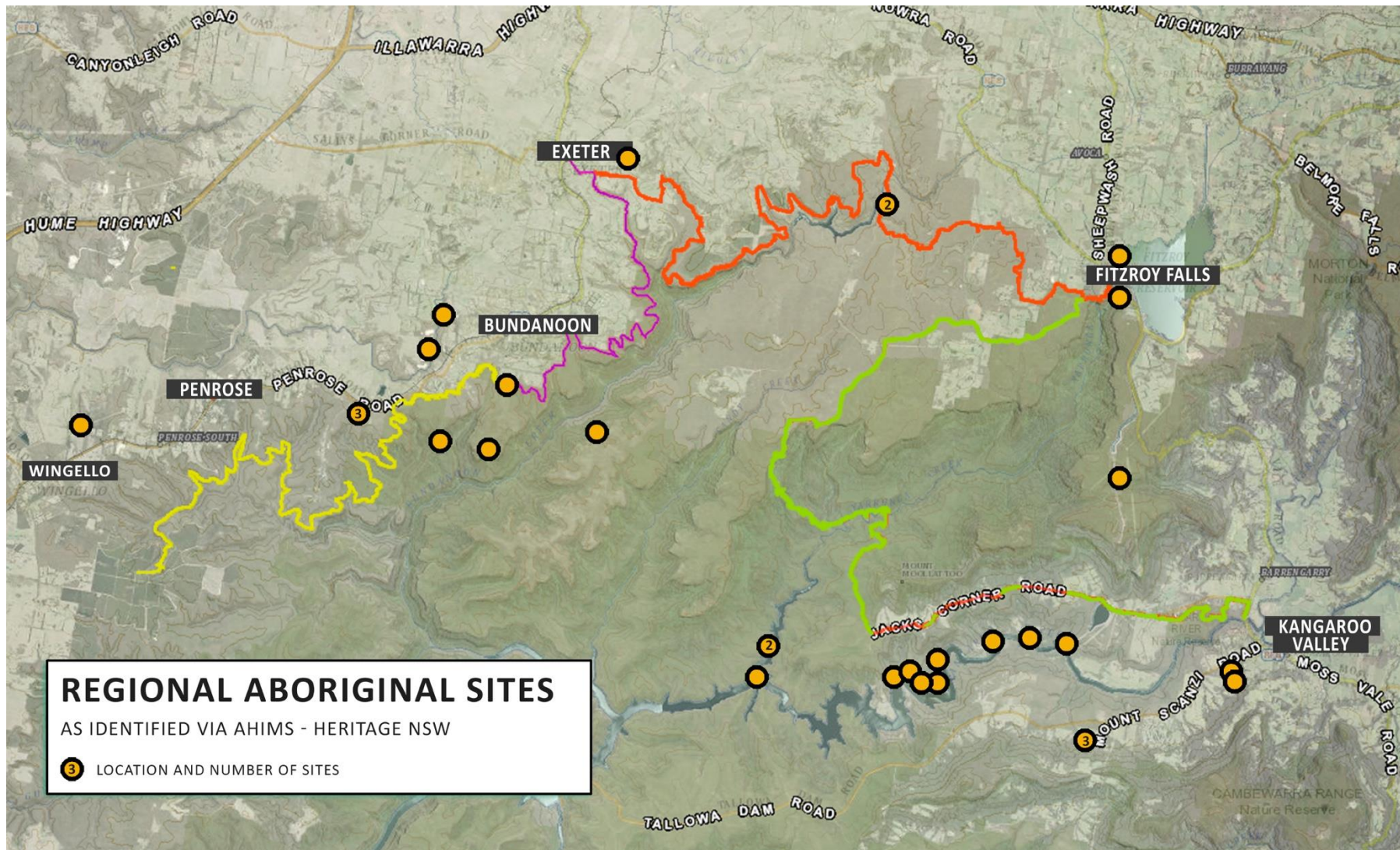


Figure 6. Recorded Aboriginal Sites - Heritage NSW



2.3 Geography

The Southern Highlands hosts a rich diversity of flora, fauna and geographical interest. The proposed study corridor passes through significantly protected and managed-environment areas including the Morton National Park, Wingello and Meryla State Forests and the Kangaroo Valley Nature Reserve.

The Southern Highlands is over 700m above sea level (ASL). It sits atop a plateau which straddles the Great Dividing Range. The study area is characterised by, and moves around high escarpments marking the edge of deep gorges and associated waterways, sitting at 250m AS. The region is known for its cool, temperate climate. Since non-Indigenous settlement of the Southern Highlands of New South Wales from the early 1800s, much of the native bush north of the sandstone gorges of Morton National Park was logged and cleared for forestry, agriculture, towns and roads, the result being the rolling green farmlands that surround the much more wild and remote escarpment and gorge country, much of which is near-inaccessible.

Much of the study corridor encompasses a Nationally Significant Ecological Community in the Southern Highlands Shale Forest and Woodland of the Sydney Basin Bioregion¹². These are critical remnants and listed in August 2015 as critically endangered under Australian environment law, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The ecological community is predominately found in the Southern Highlands of the Sydney Basin, predominately in the Wingecarribee Local Government Area (as defined at June 2017), but also in adjacent local government areas. It is associated with clay soils derived from Wianamatta shale.

The ecological community is dominated by eucalypt trees and typically has a herbaceous understorey, but is variable in vegetation structure, ranging from a tall wet sclerophyll forest to more open, grassy woodland. Reflecting this variation, three 'forms' of the ecological community are recognised: 'typical', 'tall wet' and 'short dry'. The Southern Highlands Shale Forest and Woodland supports a diverse range of fauna— providing essential resources and refuge for wildlife in the region such as shelter (e.g. hollows, nesting materials, roosting), food (e.g. nectar from flowers or

invertebrate prey) and migration routes. Included in this fauna are the threatened mammals, spotted-tailed quoll, long-nosed potoroo and koala, threatened birds such as scarlet robin, powerful owl and regent honeyeater and threatened amphibians and reptiles such as giant burrowing frog and Rosenberg's goanna, heath goannas.



¹² <https://www.agriculture.gov.au/sites/default/files/documents/southern-highlands-shale-forest-guide.pdf>

2.4 Existing Trail Recreation Offer

The Wingecarribee Shire is not known as a ‘trails destination’ despite hosting some of the state’s most significant canyon and escarpment landscapes, equivalent in prestige (if not coverage) to the more-renowned Blue Mountains.

Existing trails exploring lookouts and waterfalls all mostly short ‘out and back’ trails idea for day visitation only, categorised as regional or local in a trail hierarchy. Other walking trails are pathways located in and around major townships within the region.

Currently, Wingecarribee Shire hosts no formal long distance, multi day trail opportunities of state or national significance.

The *Wingecarribee Shire Council Recreational Walking Tracks Strategy 2020* identifies having a “clearly defined and well managed network of walking tracks across the Shire” as a primary strategic outcome.

The Southern Highlands Welcome Centre in Mittagong reports frequent queries from visitors about bushwalking opportunities, particularly those related to the renowned Box Vale Track (currently closed). Mt Alexandra provides for a range of trail-based activities, with multiple regional-level trail experiences offered. Other regional walking trail experiences exist at Berrima, Mt Gibraltar and at **Glow Worm Glen in Bundanoon – the only recognised offering within the study area, currently closed after 2020 bushfires, due to be opened in 2023.**

The Walking Tracks Strategy notes that “it is important that Council focuses on enhancing trails to a standard which enables them to be key attractions for the region.”

The Strategy currently identifies Mt Alexandra Reserve as a potential multi-disciplinary regional trails hub. Most of the Strategy’s recommendation focuses on areas to the north of the study area for this report.

There is limited formal mountain biking infrastructure in the form of the Wingello State Forest trails (16km)¹³¹⁴ and nearby Welby (15km), noting for a location to be regarded as a trail destination (for mountain bikers) it is generally accepted that a minimum of 80-100km of high-quality trail is needed.

Wingello in the past has hosted cross country mountain biking events and Bundanoon was the host village for the popular Southern **Highlands Fling** (ceased operation in 2017). There are maps available online describing on road riding routes exploring the escarpment features nearby Bundanoon¹⁵¹⁶.

Nearby regions do host mountain biking trails networks of significance, including Thredbo, Tathra and Canberra, with both the Illawarra Escarpment and Mogo trail networks to undergo major redevelopment in the near future.

Nature-based recreation offers currently located along the proposed alignment and found via land manager websites and other user generated mapping / inspiration include:

- **Wingello Mountain Bike trails** – limited set of mountain bike trails (closed at time of research due to bushfire damage). Maintained by Highlands Trails (owner of this report) in cooperation with Forestry Corporation (identified stakeholder in SVIT project)
- **Bundanoon Waterfalls** - Erith Coal Mine Falls, Fairy Bower Falls
- **Bundanoon Escarpment Lookouts** – Collection of formal and informal lookout points, mostly short walk access from formal and informal car parking, including: Mount Carnarvon, Echo Point, Bonnie View, Wishing Well, Grand Canyon, Sunrise Point, Stonequarry Lookout, Bundanoon Gorge
- **Bundanoon Short Walks** – Amphitheatre Lookout, Riverview Walking Track, Glow Worm Glen
- **Gunrock Creek Waterfall** – spectacular waterfall off Gunrock Falls Firetrail
- **Fitzroy Falls** - network of short walking trails and escarpment lookouts with formal visitor information centre, car park and facilities
- **Griffins Walking Track** –11km (one way) hike through the Yarrunga Creek Valley, with scenic views, wildlife, and camping
- **Kangaroo River Nature Reserve** – small reserve with walking tracks and Nelsons Creek.

¹³ <https://wisdom-site-southern-highlands-com-au-2018.s3.amazonaws.com/uploads/2019/08/Wingello-State-Forest-Trail-Ride-Map.pdf>

¹⁴ <https://www.trailforks.com/region/wingello/>

¹⁵ <https://www.nationalparks.nsw.gov.au/things-to-do/cycling-trails/bundanoon-cycling-route>

¹⁶ <https://wisdom-site-southern-highlands-com-au-2018.s3.amazonaws.com/uploads/2019/08/Bundanoon-and-Surrounds-Bike-Rides.pdf>

3 Trail Recreation – User and Market Overview

Outdoor active recreation, inclusive of walking, trail running, mountain biking and gravel riding, has become increasingly popular. In many parts of the world, trail networks have become significant visitor destinations which attract international visitors, contribute to economic sustainability and provide recreational opportunities and health benefits for regional and local communities.

Recent travel trends currently fuelling demand for trail-based experiences include:

- **Regenerative travel** – Soft adventure experiences like multi-day walks and wellness travel (i.e., spa holidays, yoga retreats) have been growing in popularity over the past few years, and the global COVID pandemic has only amplified the desire for this style of holiday. Destinations and experiences that leave travellers feeling calm and rejuvenated—whether it's an all-inclusive multi-day hike or an off-grid eco-cabin stay—are expected to be popular with travellers.¹⁷
- **Adventure and nature-based tourism** – Tourism Australia's most recent consumer research, called the Consumer Demand Project, demonstrates that people are developing a new appreciation for being out in nature post-COVID. Adventure and nature-based tourism is forecast to become a \$1.3T global tourism segment during 2023, according to the US based Adventure Travel Trade Association. This will include short walks and interpretive experiences, cycling, mountain biking in nature, and wellness experiences that speak to the improvement of mind, body and spirit.¹⁸

3.1 Trail user markets in Australia

Land-based trails designated for non-motorised recreation cover a broad range of users and activities:

- walking
- bushwalking
- trail running
- cycling
- mountain biking
- horse riding
- any other non-motorised, active or recreational activity that occurs on a trail (i.e. geocaching, regaining, orienteering).

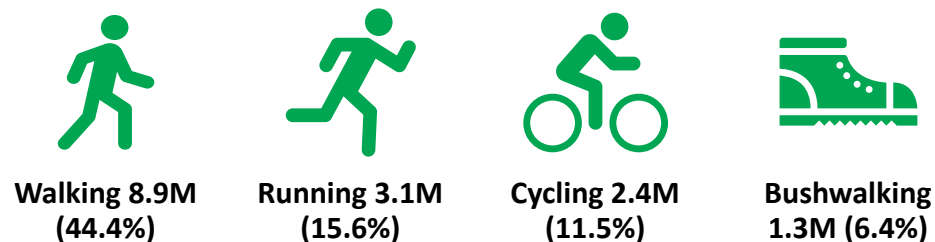
Trails that are designed for all abilities use and varying levels of mobility are also an important consideration in planning trail experiences. New trail developments such as Southern Villages Iconic trail should apply universal design principles and where possible comply with the Disabilities Discrimination Act in seeking to achieve access to nature-based experiences for all.

The top trail-based participation by Australians according to 2020 national data is included in Figure 7.

¹⁷ <https://www.luxurytraveladvisor.com/australia-new-zealand/tourism-australia-predicts-top-global-travel-trends-for-2021>

¹⁸ <https://getwherewolf.com/adventure-tourism-predictions-for-2021/>

Figure 7. Top trail-related sports and recreation activities per Australian participant¹⁹



The walking market in Australia is popular and growing with 8.9 million Australians (44.4%) undertaking some form of recreational walking activity. 1.3 million Australian adults (6.4% of the adult population) participate specifically in *bushwalking* activities annually, with 18% undertaking bushwalking activities at least once per week.

Within that market there are numerous pieces of the walking jigsaw:

- short walks
- day walks
- self-guided and supported
- self-guided but not supported
- guided and luxury small group guided journeys.

Recent estimates on mountain bike participation suggest that around one million Australians engage in mountain biking activity, ranging from beginner through to competition level.²⁰

Trail running is one of the world’s fastest growing sports. Since the mid-1990s, the popularity of trail running has grown at a rate of 15% each year. A report into trail-running in NSW in 2013 showed a 521% increase in event-based participation over three years 2010-2013²¹

¹⁹ Ausplay National Participation Survey 2020 – Top sports and activities

²⁰ Warburton Mountain Bike Destination 2019 – Instinct and Reason

²¹ <https://www.worldathletics.org/disciplines/trail-running/trail-running>

3.2 Mountain biking

A number of mountain bike riding styles have evolved since the sport began in the 1980s. Cross-country riding is the most popular style of riding due to its relative ease of participation by a broad range of users. Mature or core mountain bike riders however may seek out more adventurous trail experiences including gravity rides such as Gravity Enduro and jump and stunt focused styles such as Freeride and Dirt Jumping.

With the continual increase of mountain bike participation by a broad range of demographics, riders can be broadly divided into core and non-core riders:

3.2.1 Mountain bike user definitions – non-core vs core



NON-CORE MOUNTAIN BIKERS

- Beginners
- Road bikers that occasionally ride MTB
- Families seeking safe enjoyable places to ride away from cars
- School groups (often guided by tour operators)
- Off-road bike tourers
- With increased skill, may eventuate into Core Mountain Bikers.



CORE MOUNTAIN BIKERS

- High levels of expenditure on gear and equipment
- High amount of time spent mountain bike riding
- High willingness to travel to go mountain biking
- High likelihood of participating in competitive events.

Further segmenting the non-core versus core mountain bike riders is the uptake and participation in basic, intermediate and competition riding experiences.

Figure 8. Demographics of Basic, Intermediate and Competition riders²²



BASIC RIDERS

- MTB is an add-on holiday experience, learning a new skill and undertaking a different experience
- Predominately female
- Over 55 years of age
- Minimal MTB experience
- May undertake as a once holiday activity
- MTB will be part of a day trip
- Participating in MTB for health and fitness and being outside in the open air.



INTERMEDIATE RIDERS

- MTB is part of a holiday in a natural setting
- Undertaken with family or partner
- 6-10 years riding experience
- May undertake as a twice per year holiday activity
- MTB will be part of a day trip
- Participating in MTB for health and fitness and being outside in the open air.



ADVANCED OR COMPETITION RIDERS

- MTB is a core element of the holiday
- Thrill-seeking and adventure based
- Will undertake with family or friends
- Predominately male
- 11+ years MTB experience
- Income \$150K+ pa
- May undertake 3 times or more per year as a holiday activity
- MTB will be usually part of a 2-night trip
- Participating in MTB to challenge themselves, enjoy time outside in the open air, health and fitness, thrill seeking and adventure, recreation and social connection.

²² Warburton Mountain Bike Destination 2019 – Instinct and Reason

3.3 Adventure Cycling - Differentiation in a Growth Market

Although many reports focus on mountain biking as a focus discipline, there are growing markets that can be described as similar but distinct to mountain biking that also use trails and dirt roads for cycling recreation. They (along with mountain biking) are more broadly described under the label 'adventure cycling' defined as any style of cycling that travels off bitumen seeking an experience enjoyed in nature and on two wheels.

Most people participating in what is often called mountain biking but can in fact refer to any number of disciplines, do so for fun and enjoyment, with only a small proportion focused on competitions. A study of different adventure biking categories, quickly becomes a study of fragmentation. TRC Tourism recognises 17 categories with plenty of crossover between them.

The attractive points for adventure biking are that it enables people to choose who they ride with, generally family or close friends; it can be done anytime; it does not require a minimum level of competency (other than the ability to ride a bicycle) and allows people to choose trails to match their ability; people that may be self-conscious about their ability can choose where, when and who they ride with.²³

Regions looking to attract and facilitate the adventure biking community need to be mindful of the increasingly diverse nature of what 'adventure/mountain biking' actually is or is perceived to be by different markets. Curators of nature-based cycling also need to recognise that riders today demand a higher quality of experience and service across what is an increasingly fragmented market profile. The challenge for nature-base cycling regions is to target the biggest user base that best matches the style of riding best suited to the landscapes available.

Adventure cycling can be broken down into subset descriptors of mountain biking, bike packing/touring and gravel grinding. Each subset has different engagement profiles, if sometimes overlapping.

Mountain bikers use predominantly singletrack trails (although often use dirt and fire roads as connecting trails), seek more technical terrain with features that are increasingly designed and groomed for use (i.e. flow trails, jumps, berms). There are many different styles of mountain biking from cross country (XC) to all mountain, gravity, flow and downhill (DH), along with niche styles of trials, freeride, freestyle, 4X, and slalom. For the purposes of this study, the target user would predominantly be cross country riders, which is one of the largest markets and more traditional style of mountain biking focusing on using a mix of singletrack and dirt roads, riding variable terrain both ascent and descent profiles, to experience an adventure ride in natural environments. Rides would usually be 2 hours to full day. Many mountain bikers will seek out extensive networks of trails and/or require a critical mass of 50km-100km of trails to consider a destination for ride-specific travel.

Gravel grinding encompasses a fairly broad sweep of riding activity, but pertains mainly to long distance day rides – most often 100km+ – that seek out back country, dirt and fire track roads with little to no traffic. Gravel grinders will often seek high-end ascent profiles and likely compete with friends either in person or through online platforms (such as Strava). Gravel grind events – both competitive races and non-competitive challenges – are a rising phenomenon across the world, but particularly in North America and Australia where the countryside is vast and fairly unpopulated and landscapes attractive to ride through. Gravel grind bikes are versatile, adaptable and durable, with a focus on greater comfort for longer-form adventures and the types of rough, remote road routes and variable surfaces that comes with rural landscapes.

²³ Warburton Mountain Bike Feasibility Study 2019

Bike packing / back country touring is the birthchild of mountain biking and backpacking. It delivers the adventurous freedom of multi-day backcountry hiking, combined with the range and added thrills of riding a mountain bike. It's about exploring remote places via singletrack trails, gravel, and abandoned dirt roads, carrying only essential gear.

While backcountry touring can be done on gravel grind bikes, it is more often undertaken on a mountain bike, which delivers better capacity for loading up with luggage while maintaining better stability – important when your load is heavy and you are rolling over rough ground. Because mountain bikes tend to move more slowly than road bikes, and carrying loads tend to be much more than on gravel grind adventures, daily distances tend to be shorter for backcountry rides, favouring roughly the 60km mark and often entailing lots of stopping en route to admire vistas, or stop at the country bakery. More determined riders can, however, surpass 100km in a day, depending on terrain, climbing profile of the route, luggage load, weather and sunlight hours. Where gravel grinding is usually (but not always) a single day outing and orientated towards competitive or challenge-related goals, bike packing is all about slow travel exploration. It is based around multiday, often multi-week and sometimes multi-month journeys where the focus is on exploration of places, landscapes, towns and tourist attractions: simply, it is having a grand adventure on two wheels while being mostly self-sufficient. 'Mostly' because while hardcore riders take pride in being an island unto themselves in terms of sufficiency, the profile of bike packing has softened somewhat with riders now often staying at B&Bs, hotels, motels and caravan parks and eating out at cafes and restaurants.

Adventure biking markets can be further separated into the categories of local, domestic and international visitors, to gain an understanding of the needs and expectations of each. The cycle tourist is much more likely to undertake a range of other activities compared to non-cycle tourists, explaining why the cycle tourist's average spend is much higher than non-cycle tourists. Of interest is their tendency to eat at restaurants, go to licensed venues and go shopping; all activities which would benefit the economy of Wingecarribee and Shoalhaven Shires.



4 Activity Participation

4.1 Adventure Cycling Participation

Unfortunately, there are currently no robust statistics that specifically describe the ‘adventure cycling’ market, nor the subsets of bike packing / touring or gravel grinding, although it is worth noting that ‘gravel grinding’ events (i.e. Gears ‘n Beers, Wagga Wagga, 3000 capped participation in 2022) have proliferated in recent years and indicative measures such as significant growth in relevant social media channels and public groups focused on bike packing and gravel grinding communities.

For the purposes of this report we will outline statistics that have been captured in the mountain biking sphere, noting that (i) there will be significant crossover between mountain biking and other subsets (mountain bikers who also engage in bike packing or gravel grinding or both), and (ii) there is also likely to be a significant number of riders who focus on bike packing or gravel grinding as their primary form of cycle recreation.

4.2 Mountain Biking Participation – Australia

Mountain biking is recognised as one of the fastest growing recreational and tourism activities in the world. Some estimates on national mountain bike participation suggest that approaching **one million** Australians engage in some form of mountain biking activity, ranging from beginner through to competition level.²⁴

In terms of growth, the AusPlay report indicates that mountain biking has a market opportunity to grow considerably. Mountain biking was the sixth most popular recreational activity across Australia which adults participated in more during the April to June 2020 COVID-19 lockdown. These activities, particularly those that can be done solo or physically distanced, were more immune to COVID-19 disruption.²⁵

Data on actual participation in mountain biking in Australia is largely collated from four sources – Mountain Bike Australia’s (MTBA) statistics; *Ausplay Cycling – State of*

Play Report (2020); Mountain Biking in Australia - An Economic and Participation Analysis (AusCycling 2021); and recent research undertaken by Instinct and Reason on behalf of the Yarra Ranges Council for the Warburton MTB Trail Hub project in Victoria.

Determining exact levels of participation in mountain biking in Australia is difficult due to a lack of consistent data at a national level. The AusCycling report found the number is likely to align closer to the 2020 AusPlay survey which found that approximately 341,900 Australians participate in mountain biking. The data found that participation is generally skewed towards males, and that participation is predominantly casual and non-organised. TRC notes the variation range between participation numbers quoted in available reports (from 341,900 up to approaching 1 million) is likely due to the lack of capturing entry and beginner level recreational rider activity. This cohort represents a large percentage of riders who own and use mountain bikes off road but do not necessarily identify as ‘mountain bikers’ and are therefore not captured in standard data capture gateways (club membership, event participation, wheel counts).

In Australia, the national sporting association Mountain Bike Australia (MTBA) reported a membership increase of 60% over the past five years. During 2020, MTBA became affiliated with the broader AusCycling movement. AusCycling provides a single platform to unite all Australian cycling interests. Representing more than 52,000 members nation-wide, the vision of AusCycling is to make Australia a nation of bike riders, across all forms of cycling. Principle partners of this movement are the Federal Government’s Australian Sports Commission (SportsAus) and the Australian Institute of Sports – both with the objective of growing participation in sports for physical, recreational, social and mental wellbeing.

²⁴ Warburton Mountain Bike Destination 2019 – Instinct and Reason

²⁵ Early impact of COVID-19 on sport and physical activity participation (AusPlay, October 2020)

4.3 Mountain Biking Participation – NSW

NSW has the highest mountain biking participation rates in Australia, the State of Play Report (2020) stated that there were 85,122 mountain biker riders in NSW, with participation rates significantly higher in remote and regional areas. A recent report NSW Adventure Cycling Strategy (2023) found that number had risen to 135,000

NSW accounts for 33% of the total amount of trails nationwide, the highest percentage of trails in any state. There are 4,200 MTB trails across 240 areas with 80 sanctioned trail networks in 50 Local Government Areas ²⁶. NSW has the highest number of MTB clubs affiliated with Mountain Biking Australia / AusCycling, accounting for 53 clubs

The *NSW Adventure Cycling Strategy (2023)* recognises that “Mountain biking activities alone support around 1,500 full time jobs in NSW, with \$200 million of direct expenditure each year.’ It recognises that “the growth of adventure cycling has created both an opportunity to strengthen visitor economies and a need to provide appropriate spaces for the people of NSW to ride.”

4.4 MTB Economic Value

Demand for cycling products and experiences has grown at an unprecedented rate, with the global cycling market set to increase from \$130 billion to \$200 billion in 2027. As a key market segment, mountain bikes are expected to drive a significant portion of this growth, reflecting the strong demand for mountain biking activities.²⁷

The 2021 AusCycling report found that mountain biking participants spend between \$136.9 and \$630.8 million annually in Australia simply riding on local trails²⁸. This expenditure provides significant support to retail, accommodation and food, professional, scientific and technical services industries.

In addition to this local expenditure, mountain bikers also contribute significantly to the Australian tourism industry and broader visitor economy through regular travel to

mountain biking destinations. Approximately 40% of riders went on a bike-specific interstate holiday in the past 12 months, averaging a spend of \$2,485.75 per trip and travelling 1-2 times per year. Approximately 65% of riders went on 1-3 intrastate holidays in the past 12 months with an average spend of \$1,707.95 per trip.

Figure 9. Target markets



MOUNTAIN BIKERS (Includes Residents)

- Mostly male, 35-44 years old
- Higher disposable income
- Likely travel with partner and children, or with 3-5 friends
- Seeking at least a half day MTB experience, complemented by other destination experiences
- Attracted to MTB to escape confines of home, work and city, connect with nature, relax, socialise, undertake a personal challenge and adventure.



FAMILIES (Includes Residents)

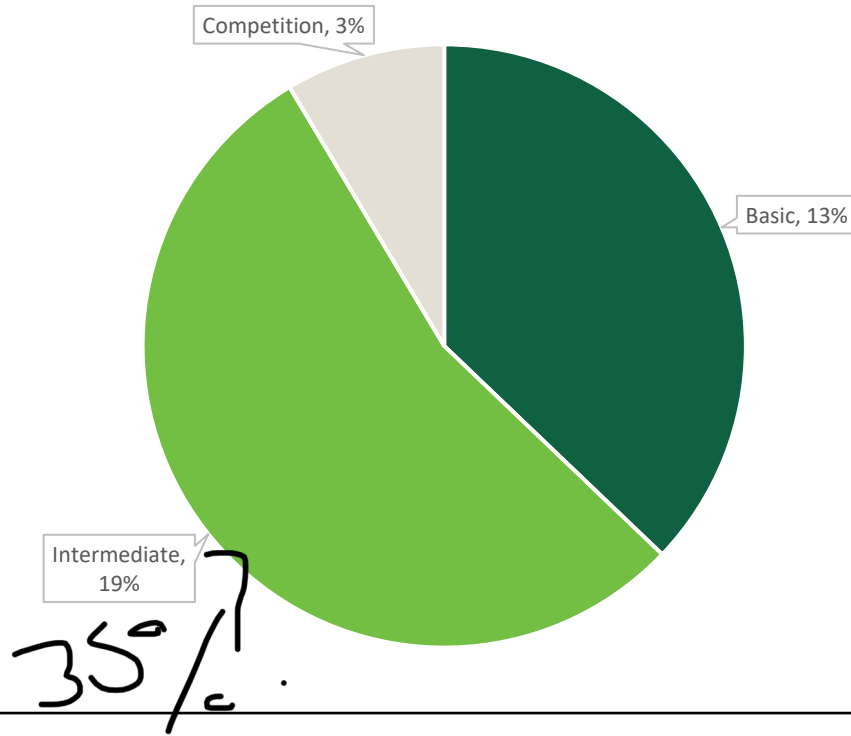
- As mountain bikers often travel with their families
- Beginner and social trails are a great way for mountain bikers to enjoy time together with their families.

²⁶ NSW Adventure Cycling Strategy, 2023

²⁷ Bicycle Market Size, Share and COVID-19 Impact Analysis 2020-2027, Fortune Business Insights, 2020.

²⁸ The discrepancy in these two figures results from the difficulty in estimating the total number of riders in Australia. The figure is agreed to be likely somewhere in the middle.

Figure 1. Category participation percentages of Australian adult (+18) mountain bike riders



32% of the adult Australian population has incorporated or considered a mountain bike experience in a holiday. Of this 82% have added an MTB experience into their holiday.²⁹

²⁹ Warburton Mountain Bike Destination 2019 – Instinct and Reason

³⁰ Latz Report May 2020

4.5 Electric Bikes

Electric and power assisted bikes (e-bikes) represent one of the fastest growing segments of the bike industry, as they allow riders to extend their cycling distances. E-bikes help in overcoming hilly terrain or lack of fitness, can assist in rehabilitation after injury or illness, and are a cost-effective and green transport solution. They also improve trail accessibility for older riders who can access areas and ride trails that they would not normally be able to.

Australian e-bike sales have just recorded their fourth consecutive year of rapid growth. For the 2019–20 financial year sales were 48,000 units, up almost 50% from 32,500 units sold in 2018–19. Using a \$3,000 average retail sale price estimate would mean \$216 million in annual retail sales this current 2020–21 financial year for a product category that virtually didn't exist in Australia five years ago and is only set for further development and growth.³⁰

Although there are no comprehensive studies, at present it is not thought that e-bikes cause any added negative impacts on trails or the environment compared to standard mountain bikes, recognising that e-bikes still require human power and pedalling, an electric motor only assisting with power through the pedal crank, rather than powering the actual rear wheel. There is no 'throttle'.

In terms of new trail developments that may attract e-bike users, the primary consideration is bike range and potential for recharging, be that along the trail (if the distance demands as such) or facilitations at overnight village nodes and accommodation. Trails with significant incline profiles – hills and valleys – will tend to attract greater e-bike usage and/or ebikes will allow a broader range of cyclists to engage in a trail where they may otherwise have been dissuaded by the amount of climbing required.

Given its passage through significant canyon country, the Southern Villages Iconic Trail will require a significant number of descents and ascents as the trail contends with the contours of the main escarpment corridors and valleys. Therefore, it is recommended that trail design and off trail facilitation, services and promotion devote some attention to the growing e-bike market.

4.6 Bush Walking

Enjoying a recreational trail on foot varies from leisurely strolls to a more intense and strenuous hike or trail run through rugged terrain. Walking can be done for commuting or exercising in urban areas or in national parks and reserves, offering overnight and multi-day experiences.

Walkers completing a more remote activity are generally looking to immerse in nature or challenge themselves on an adventure hike.

Bushwalking

- Bushwalking is currently rated in sixth position of the top 20 sports and physical activities undertaken by Australians
- 1.3 million Australian adults (6.4% of the adult population) and 21,000 children participate in bushwalking activities annually, with 18% of participants undertaking bushwalking activities at least once per week
- Peak participation age for men is 55–64 years and for women is 25–34 years
- 50% of Australian bushwalking participants walk for 3 hours or more on average
- Top reasons to participate in bushwalking are to be outdoors and enjoy nature, for fun and enjoyment and for physical health and fitness.

Recreational walking

- Recreational walking is currently rated in first place of the top 20 sports and physical activities undertaken by Australians
- 8.9 million Australian adults (44.4% of the adult population) and 18,900 children participate in recreational walking activities annually, with 91% of participants undertaking recreational walking activities at least once per week
- Peak participation is by women 65+ years (closed followed by women 55-64 years) and men over 65 years of age
- On average, majority of walkers spend 62 minutes on each walking occasion
- The top reason to participate in recreational walking is physical health and fitness (73% of participants)
- Since 2001, the participation in recreational walking by Australians has increased by 14.4%³¹
- Tasmanians have the highest rate of participation in recreational walking nationally, with 49.6% or 214,586 adult participants annually³²
- From an international perspective, international visitors engaging in bushwalking and rainforest walks increased by 7% to 1.9 million per annum (2018).

³¹ Ausplay Participation Trends since 2001

³² Ausplay National Sports and Physical Activity survey, Recreational Walking Participation December 2020

Figure 10. What bushwalkers are seeking³³

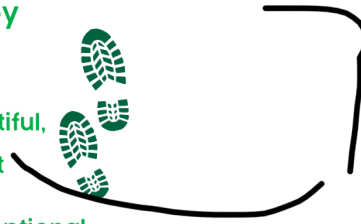
Iconic Walks

An iconic walk is a personal adventure, an achievable challenge that creates an overwhelming feeling of reward.

When people search the world for iconic walks, they consider one or more of these

common characteristics:

- diverse landscapes, often mountainous, coastal, pristine, beautiful, dramatic
- contact with locals, and local history and culture, including built animal encounters
- uncrowded
- length varying from tens to hundreds of kilometres, including optional side trips and sections.



For **backcountry longer walks**, people value:

- landscape variety
- solitude
- pristine environment
- adventure
- effort versus reward
- escape
- own pace (for some).

Popular shorter walks

- often include:
- landscape variety
 - history
 - effort versus reward
 - uncrowded track
 - comfort somewhere (during and/or at the end).



SOURCE: PWS, 2018 as cited in Tasmania's Next Iconic Walk Feasibility Study: Final Report. 23 July 2021 (Version 14) (SGS Economics and Planning)

³³ PWS, 2018 as cited in Tasmania's Next Iconic Walk Feasibility Study: Final Report. 23 July 2021 (Version 14) (SGS Economics and Planning)

4.7 Trail Running

With an estimated 20 million participants since 2010, trail running has been one of the world's fastest growing sports, according to the International Track and Field Federation.³⁴ Since the mid-1990s, the popularity of trail running has grown at a rate of 15% each year.³⁵ Indicative measures record the growth of trail running events as increasing 1000% in the last decade³⁶.

The International Trail Running Association (ITRA) was founded in 2013, with the aim to promote trail running around the world. In 2015, trail running was recognised by World Athletics as a discipline of athletics. Today ITRA is World Athletics' partner for the management of trail running worldwide.

In 2003 Ultra Running magazine reports that 18,000 people in North America completed an ultramarathon. In 2017 that figure had risen to 105,000, the majority on trail.

The economic spin-offs generated by trail running events can be quantified in millions of dollars – for example, more than US\$8.5 million was generated from the 2017 Ultra Trail du Mont Blanc (UTMB)³⁷, considered the global pinnacle of ultra-trail running events. In line with the sport's growth, so too has UTMB event grown considerably since, indicating an even higher economic return. Chamonix Tourist Office reports that UTMB it is now one of the busiest two weeks of the year.

UTMB hosts 10,000 runners (a capacity limit, with 32,000 runner applications received) from 111 nations competing across seven race distances ranging from 40 to 300km (the premier event the UTMB at 171km), the ultra routes passing through three nations (France, Switzerland and Italy). It hosts 20,000 spectators on course and 50,000 visitors to the event expo. The event attracts media across the globe including 230 journalists, 50 television channels, 250 hours public TV broadcast in 135 countries. Organisers live stream the event in five language streams, the YouTube Channel averaging 1 million views each year.

³⁴ <https://theconversation.com/the-trail-running-community-faces-its-biggest-challenges-yet-156260>

³⁵ <https://www.worldathletics.org/disciplines/trail-running/trail-running>

³⁶ <https://www.theguardian.com/lifeandstyle/2018/apr/02/ultrarunner-ultramarathon-racing-100-miles>

³⁷ <https://www.lyoncapitale.fr/actualite/coronavirus-et-trail-quel-impact-sur-l-utmb/>

³⁸ https://www.bmcc.nsw.gov.au/sites/default/files/docs/LPP_Report_2_Violet_Street_KATOOMBA_NSW_2780_X_687_2020.pdf

In Australia, the Ultra Trail Australia event started in Katoomba, Blue Mountains New South Wales in 2008, with 177 entries in a single distance (100km). The running festival now hosts a sell-out (capacity) 6,000 across five distances. It is estimated by race organisers that 8,000-9,000 spectators/supporters also attend. The Blue Mountains City Council's Event Strategic Plan identified the Ultra Trail event as a high yield event contributing an estimated \$12.5M in 2018 to the local economy and supporting local employment and associated businesses.³⁸

As with mountain biking, data capture outside of events is difficult to gauge, however it is thought that as a percentage of participation, more trail runners engage in events than mountain bikers do, meaning there is a larger unrecorded market in MTB, whereas most trail runners are captured by event data.

As an indicative measure, the largest trail running event in Australia (Ultra Trail Australia, 7,000 participants) is seven times as big as the largest mountain biking event (Otway Odyssey, 1000 participants); there are four times as many trail running events (450-500) as mountain biking events in Australia and the average trail running event attracts 2-4 times participation (600-800) as the average sized mountain biking event (200-300).

4.8 Trail Running Australian Event Statistics

On average across 2020-21 there were 119 event producers including commercial, club and not for profit based entities hosting an average of 331 promoted trail running events, based on a survey of all AU-based event calendars.

With an **average attendance of 465 per event**, this accounts for an approximate **154,113 trail run event entries per year across Australia** (noting this captures likely entries to multiple events by a single participant). With an averaged entry fee (averaged across all price points and all distances) of \$90 per entry (with entry fees ranging from \$30 to \$1500), this accounts for a spend of **\$13.8 million per year on trail running entry fees alone**³⁹.

Based on a number of economic analyses provided by some event producers using post event survey data, events of economic significance (300+ participants) account for **between \$130,000 to \$4+ million in local and regional economic stimulus per event**, accounting for direct regional expenditure on accommodation, food and catering, fuel, and services.

A report into trail running in NSW in 2013 showed a 521% increase in event-based participation over three years 2010-2013.⁴⁰ It is broadly recognised and reported by the trail running sector that growth has further increased significantly since that time as the pursuit has matured in terms of community and commercial involvement. Social media connectivity has further accelerated growth with a proliferation of well-followed trail running group pages, most with high observable levels of engagement.



³⁹ Trail Run Event Operator Survey, Adventure Types, 2021

⁴⁰ 'Trail Running Market Snapshot', Adventure Types, 2013

5 COVID-19 Summary of Impacts

The following summary of impacts from COVID-19 need to be considered in assessing rising demand for trail-based infrastructure in Australia:

- With COVID-19 lockdowns and travel restrictions, physical activities (non-team sport) grew among adults 18+ years. Substantial year on year growth saw Australians exercising more than 3 times per week. Almost three quarters of Australian adults being active during lockdown, with the core purpose of maintaining physical health and wellbeing. People who were able to keep fit and active reported significant impacts to mental health and feelings of optimism.⁴¹
- Increased demand for nature, outdoor and regional experiences. Those previously in city lockdowns are now desperate for regional, coastal and nature experiences. Domestic visitors are avoiding big cities - 51% of are seeking coastal destinations, 34% regional destinations, only 15% are desiring a city holiday.⁴²
- Internationally, our previous barriers of 'distance' (Australia is so far away and too big to travel around) and 'time' (time taken to travel and time to get from one destination to the next) are now our biggest drawcards. Australia is currently number one on the list of desired international travel destinations, our wide-open spaces and remote attractions are highly prized.⁴³ While international tourism is expected to take some time to

recover, we do need to be prepared for anticipated international travel bubbles as borders re-open to COVID safe destinations.

- Globally, mountain bike trail counts across the United States are showing increases of 100% to over 500% compared with the same time in 2019.⁴⁴ Mountain bike sales in the US are 'through the roof'. NPD Sports reports a 117% increase in sales in April and May compared with 2019 numbers.⁴⁵
- Online retailer Bicycles Online saw a 170% growth by Australians in mountain bike sales during April 2020, with many family purchases and first-time mountain bike rider purchases.⁴⁶ Supplies are not meeting demand, with many bikes imported from Asia. Lockdowns and shipping delays are causing backlogs in Australian bike orders.⁴⁷
- Tourism Research Australia has also forecast an increase in family group travel, as families reunite post travel restrictions.

These statistics demonstrate that our relationship with the outdoors is deepening, and our desire to travel more remotely and support regional communities is growing as travel restrictions are lifted. This demand has the potential to place pressure on existing visitor infrastructure and services. Careful visitor planning needs to be a high consideration with regards to regional distribution and provision of ample, safe and sustainable visitor infrastructure, amenities and experiences, including for mountain biking networks and destinations.

⁴¹ Ausplay State of the Nation – Early impact of COVID-19 on sport and physical activity participation August 2020

⁴² Tourism Australia presentation – Australian Regional Tourism Convention October 2020

⁴³ Tourism Australia presentation – Australian Regional Tourism Convention October 2020

⁴⁴ <https://www.forbes.com/sites/timnewcomb/2020/07/13/amidst-cycling-surge-sport-of-mountain-biking-seeing-increased-sales-trail-usage/?sh=5c6c9c8c3ddf>

⁴⁵ <https://www.forbes.com/sites/timnewcomb/2020/07/13/amidst-cycling-surge-sport-of-mountain-biking-seeing-increased-sales-trail-usage/?sh=5c6c9c8c3ddf>

⁴⁶ <https://www.afr.com/policy/health-and-education/inside-the-virus-bicycle-boom-20200413-p54jea>

⁴⁷ www.abc.net.au – Bikes in short supply after millions take up riding, 25 September 2020.

6 Market Position – Trail Destination Comparison

6.1 Mountain Biking

It is estimated that there are over 8,600 mountain bike trails in Australia, covering 15,322 kilometres, with NSW having the largest portion of the existing trails at 33%.⁴⁸

Tasmania is the most popular and commonly visited state for inter-state domestic mountain bike tourism, followed by Victoria, ACT and NSW. There is increasing demand for quality infrastructure to support cycle-based tourism including routes, trails and accessible maps.

The future challenge for operators is to create trail experiences and networks that meet a high-end user expectation in terms of a trail quality and condition, supporting services and trip facilitation.

Other mountain biking destinations in NSW that have recently received significant government and community funding for further development include:

- Eden Mountain Bike Hub
- Mogo Trails Hub
- Narooma Mountain Bike Trails Hub
- Kiwarrak Mountain Bike Park (near Taree)
- Dungog Mountain Bike Park (under further development)
- Mount Keira Trails (Wollongong)
- Oberon Recreational Mountain Bike Trails.

Existing NSW mountain bike networks of significance include:

- Thredbo Bike Park
- Jindabyne
- Tathra Trails
- Pomingalama Park (Wagga)
- Bomo Creek (Nowra)
- Glenrock Mountain Bike Park (Newcastle)
- Mount Canobolas (Orange)
- Manly Dam (Sydney)
- Royal National Park (road/trail mix)
- Blue Mountain National Park (road/trail mix).

Given its geographic proximity, Canberra mountain bike trails should also be noted as potential market attractors for NSW and interstate riders. ACT trail networks include:

- Stromlo Forest Park
- Majura Pines.

⁴⁸ Mountain Biking in Australia: An Economic and Participation Analysis (AusCycling 2021)

Most of the mountain bike facilities listed concentrate solely on technical mountain bike offerings limited to restricted networks not suitable for other forms of adventure riding and mostly of a capacity to only service 1-2 days of riding including repeat sections. They are not as suited to end-to-end style adventure rides as is the proposed experience design of SVIT.

International successful examples of comparable off-road cycling-centric trail with a shared use profile include:

- Old Ghost Road, NZ (pictured)
- Timber Trail, NZ.

These two trails are comparable multiday adventure ride offerings.

It is envisaged that the success of these comparable cycling experiences works to benefit the proposed SVIT project by generally increasing overall demand and expectation within the market as riders continually seek out new, high quality extended adventure ride experiences.

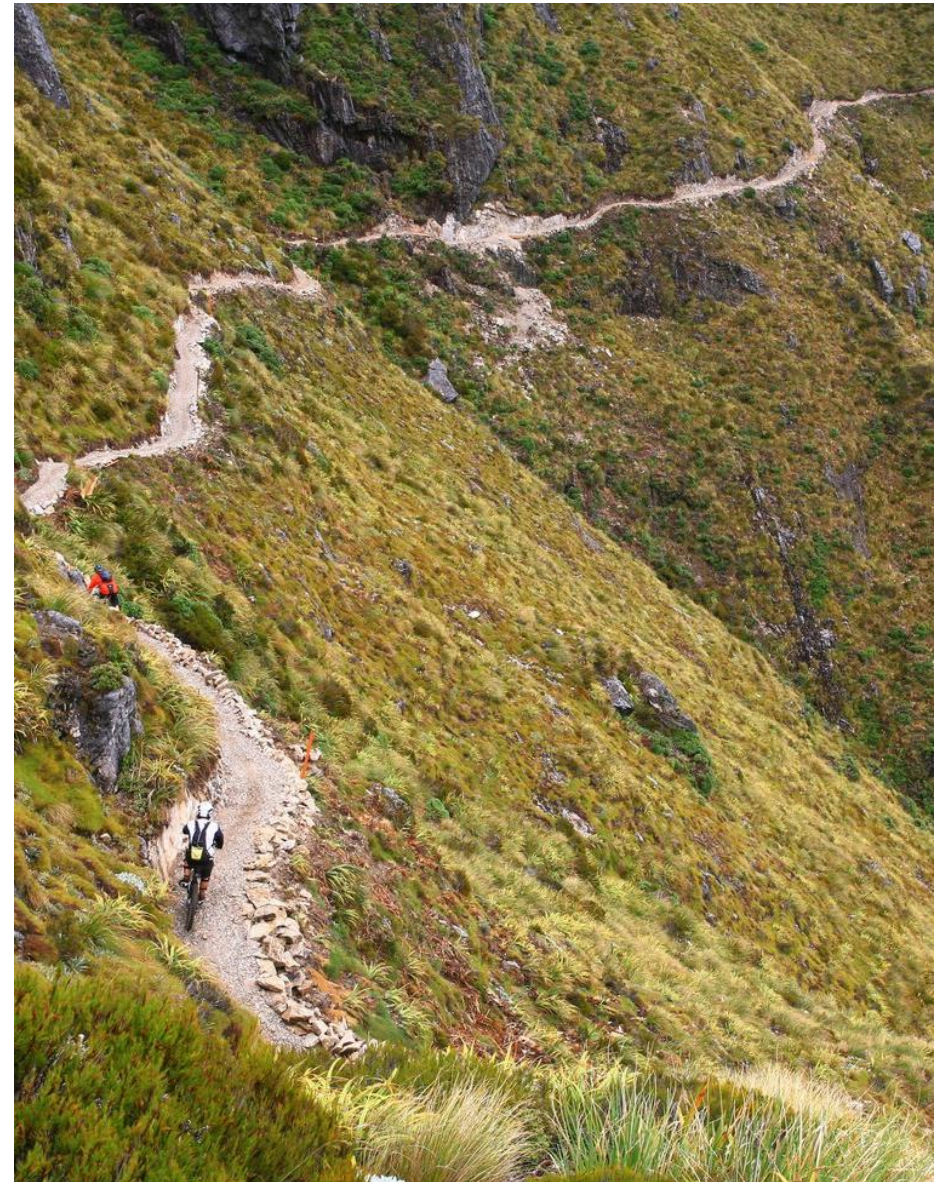


Table 2. Cycle and Walking Trails – Comparisons and Investments

NAME OF TRAIL	LOCATION	TRAIL DISTANCE (KMS)	GRADES	INVESTMENT	ECONOMY, VISITOR & SPEND	TRIP COUNTER & OTHER DATA
Hauraki Rail Trail - NZ	Hauraki / Coromandel - 2 hours from Auckland	160	Easy	<p>\$11million has been invested for development and on-going maintenance.</p> <p>They have a \$2 million project in the pipeline to improve the trail.⁴⁹</p>	<p>Est. \$39million boost to regional economy since opening and a \$5million visitor spend each year, Visitors are spending an average of \$172 per trip.</p> <p>85% of users are visitors to the region, and nearly 50% are day visitors, with visitors staying an average of one night in the area.⁵⁰</p>	<p>Trip counters along the trail show 18,693 trips in Thames in a year; Kopu logged 12,178; Hikutaia, 8487; Paeroa, 29,079; and Waterfall Bridge, between Waikino and Waihi, 34,049.</p> <p>The Karangahake Bridge counter logged 92,250 trips.</p> <p>50 full time positions had been created because of the trail.</p> <p>Figures show that local businesses were growing in response to the increase in visitors using the trail.⁵¹</p>
Otago Central Rail Trail NZ	Inland from Dunedin on the south east coast of New Zealand's South Island. Clyde to Middlemarch	152	Easy	<p>Trail development: \$26.3 million project to connect Central Otago's trail network and create 500 kilometres of continuous trail network. (Govt contributing \$13m towards the project, with the Central Lakes Trust contributing \$11.15m and the Otago</p>	<p>Users are spending \$NZ 177/day with the average length of stay in the region of 3.8 days</p> <p>The trail created 81 direct jobs and a total of 102 jobs. Accommodation derives 41-48% of the benefit, followed by food and consumables. The trail is contributing some</p>	<p>7 trip counters</p> <p>2015/16 - 13,406 2016/17 - 14,089 2017/18 - 14,392 Annual total is conservative figure and does not include at least 80,000 users on the trail commuting or short recreational rides. Source: http://www.otagocentrailtrail.co.nz/about-our-trail/</p>

49 <https://www.stuff.co.nz/travel/destinations/nz/117956343/auraki-rail-trail-matamatapiako-extension-to-open-before-christmas>

50 <https://www.stuff.co.nz/travel/destinations/nz/94123407/auraki-rail-trail-contributes-millions-to-local-economy>

51 <https://www.stuff.co.nz/travel/destinations/nz/94123407/auraki-rail-trail-contributes-millions-to-local-economy>

NAME OF TRAIL	LOCATION	TRAIL DISTANCE (KMS)	GRADES	INVESTMENT	ECONOMY, VISITOR & SPEND	TRIP COUNTER & OTHER DATA
				Community Trust contributing \$2m). ⁵²	\$3.55 million directly to New Zealand Gross Domestic Product (GDP) and \$5.2 million in total (Otago Central Rail Trail User Survey 2014/2015). ⁵³ Visitors (mostly cyclists; some walkers and horse riders) now number in excess of 15,000 per year that complete the whole Trail (this numbers up to 80.000 is including short rides). ⁵⁴	
Murray to the Mountains VIC	Wangaratta, Beechworth, Myrtleford and Bright in northern Victoria.	116	Mostly flat but a steady climb to Beechworth	Future investment plans: Trail extensions \$6.2million, Trail enhancements of current facilities \$11.6million, \$1.7million for mtn biking trail. ⁵⁵	In 2009 the average daily spend per visitor is \$244 per day. Attracts almost 60,000 annual visitor days in 2010. ⁵⁶	The high country region currently receives 103,000 cycle tourists per year, spending \$50 million when in region – more than any other regional destination Cycle tourism visitor growth is forecast to continue, with the mid-growth scenario projecting 255,000 visitors participating in cycling in Victoria’s High Country by 2025. ⁵⁷
Riesling Trail SA	Auburn and Clare in the	35	Easy	Govt grant money (\$42,000) has been awarded to	Visitors who come primarily to use the trail are estimated to	The Riesling Trail recently recorded its

⁵² <https://www.stuff.co.nz/national/80004695/central-otago-multimillion-dollar-cycle-trail-project-gets-financial-backing>

⁵³ <https://www.mbie.govt.nz/dmsdocument/1248-nz-cycle-trail-evaluation-report-2016-pdf>

⁵⁴ <http://www.otagocentralrailtrail.co.nz/assets/Strategic-Plan/OCRT-New-Zealands-Original-Great-Ride-A-Strategic-Plan-2019-2029.pdf>

⁵⁵ North East Victoria Cycling Optimisation Masterplan

⁵⁶ SGS Economics and Planning 2011

⁵⁷ https://www.rdv.vic.gov.au/__data/assets/pdf_file/0019/1740124/Attachment-A-Cycle-Tourism-Investment-Opportunities-in-Victorias-High-Country-FINAL-19-Feb-19_web.pdf

NAME OF TRAIL	LOCATION	TRAIL DISTANCE (KMS)	GRADES	INVESTMENT	ECONOMY, VISITOR & SPEND	TRIP COUNTER & OTHER DATA
	Clare Valley wine region of SA			connect the Riesling Trail, Walk the York and The Copper Trail. This will be combined with other contributions. ⁵⁸	spend \$1.08 million/year (\$215/person/visit with daily expenditure of around \$100). This does not count the other 50% of trail users who use the trail as a secondary purpose for their visit. ⁵⁹	50,000th user pa, a first for the Trail in any calendar year. ⁶⁰
The Munda Biddi Trail (WA)	Running from Perth to Albany off-road cycle touring	1088	Intermediate - Difficult	Trail extensions \$6 million project that completed the Munda Biddi Trail from Mundaring to Albany. Trail enhancements contribution of \$3 million through the Royalties for Regions program. ⁶¹	Attracts 21,000 users per year. ⁶²	It was estimated that at least 70 full time and 70 part time jobs would be created when the trail was fully developed and that visitors would contribute over 52 million dollars to the local economy. ⁶³

⁵⁸ <https://www.yorkeandmidnorth.com.au/2019/10/03/grant-success-in-quest-for-the-copper-trail/>

⁵⁹ <https://www.railtrails.org.au/2019/773-monaro-rail-trail-draft-feasibility-study>

⁶⁰ <https://www.northernargus.com.au/story/3567264/riesling-trail-records-its-50000th-user/>

⁶¹ <http://www.drd.wa.gov.au/projects/Tourism/Pages/Munda-Biddi-trail.aspx>

⁶² <https://www.mundabiddi.org.au/home>

⁶³ <https://www.railtrails.org.au/archives-1999-2003/archive-2002/290-munda-biddi-trail-name-launch-wa?showall=1&limitstart=>

6.2 Bushwalking / Trail Running

There are many comparable popular multiday walk offerings located across NSW and Australia, including:

- Great North Walk, NSW
- Royal National Park, NSW
- Six Foot Track, NSW
- Bibbulmun Track, WA
- Great Ocean Walk, Vic
- Grampians Peaks Trail, Vic
- Larapinta Trail + Jatbula Trail, NT.

Notably, there are very few extended village-to-village walks allowing users easy access to community-based facilities including roofed accommodation and catering / resupply, along with complimentary attractions. Most other multi day walks are remote and rely on camping accommodation.

Whilst the SVIT end-to-end may rely on some camping requirement given distances (i.e. Fitzroy Falls to Kangaroo Valley), sections such as Bundanoon to Exeter can be completed using off-trail roofed accommodation (B&Bs, lodges, hotels, motels). This makes the SVIT trail a unique experience prospect and broadens the likely market appeal.





CASE STUDY: THE TIMBER TRAIL, NORTHLAND NZ

The Department of Conservation’s concept of a cycle trail through Pureora Forest Park was agreed to in 2010. The trail starts in an old forestry village and heads south along disused logging roads and through mature forests to the farmland and village of Ongarue. New bridges and basic facilities such as toilets and signage were constructed. The total cost was NZD\$5million.

The business case for the trail estimated 4,000 overnight visitors and 3,000 day visitors by year 5, with a caveat that accommodation was provided at the midway point. The trail opened in March 2013 and within one year 3,000 cyclists were using it, many riding it in a single day due to a lack of accommodation.

The trail immediately received excellent reviews as the best 1-2 day remote mountain bike Great Ride in New Zealand. The constraint to growth in the markets was accommodation on the trail. Whilst accommodation at the start and end was developed and camping was available, it took time for the private sector to commit to building a lodge. In early 2017, a 50-bed dedicated trail lodge was opened (Timber Trail Lodge). Shared and ensuite rooms, a licensed restaurant and dedicated cycle touring facilities were provided. The lodge was initiated by local investors who received some financial assistance from a Ministry of Business, Innovation and Employment private sector support programme. The total lodge build cost NZD\$3.5million, with the NZ Government grant contributing one-third of this.

The development of the accommodation complemented a range of local transport and bike hire providers. There are now four significant providers surrounding the trail. There has also been the rejuvenation of the villages at the start and finish of the trail with the development of cafes and other accommodation. A proposed serviced camping operation was subsequently consented and opened in the 2018-2019 season.

The users of the trail were initially serious mountain bikers from the main North Island cities of Wellington and Auckland, who would do the trip in one day. This market stimulated the growth of the transport providers. The providers also offered transport from the trail at the halfway point to nearby accommodation, and this grew the market for a 2-day option with accommodation.

The market expanded to include the older (60-70 years) and family groups. The markets now predominantly come from throughout New Zealand and there are strong emerging markets from Australia and Europe. Specialised bike tour operators are making their presence felt and the current 10% overseas market share is likely to move closer to 25% within the next 5 years.

The customer profile for the Timber Trail Lodge is more varied than predicted. The assumption that the markets would be virtually all cyclists was wrong. The increase in the Timber Trail walkers has opened up the walking market and small group company retreats, and social groups are a strong emerging market for the lodge.

From over 3,000 visitors in the first year of the trail, growth has been solid for the first 5 years with now over 6,000 2-day riders and another 1,000+ day riders. Early market predictions for 2-day riders are up by 50%.

The Timber Trail has been incorporated into a major mountain bike event and the Te Araroa Trail, a 3,000 kilometre walk the length of New Zealand.

The impact of the trail for the local region has been regarded, both nationally and internationally, as a very successful part of the regional economic development program.

www.timbertrail.nz

7 The Proposed Trail

7.1 Experience Design Principles

The future planning and development of the Southern Villages Iconic Trail will be guided by the following principles, in consultation with community and stakeholders:

- High quality trail design
- Strong Aboriginal Community Stewardship & Partnerships
- Sustainable trails infrastructure and services
- Environmentally regenerative design approach where possible
- Inclusive user experience (shared use)
- Collaborative governance, management cooperation
- Coordinated marketing and promotion.

7.2 Signature Trail Designation

It is proposed that the Southern Villages Iconic Trail be developed to a 'Signature Trail' standard representing an outstanding trail experience that has the pulling power to persuade a visitor to travel to the Southern Highlands specifically to experience the trail and in doing so generate the greatest economic and local benefit. Intra and Interstate visitation would be the primary visitor profile with some international visitation based on SVIT being part of a larger overall Australian / NSW cycle or walk itinerary.

7.3 Single Use vs. Shared Use

Single use trails are developed for and used solely by a single users group, particularly in mountain biking, where design and construction can allow for challenges not suitable for other users. Single-use trails, often referred to as single-track trails need to be clearly identified to ensure the very best experiences are had by all users and to avoid conflict.

Shared trails generally include any trails that can be used by more than one user group, most often shared by walkers, runners and cyclists. Wider trails such as rail trails can

also be shared with horseriders. Most shared use trails are restricted to non-motorised travel. Shared use alignments allowing motorised travel alongside non-motorised are generally on existing roads with specific infrastructure to separate motorised and non-motorised users and/or wide verges to accommodation safety parameters and/or on lightly trafficked back country roads usually with speed limitations for safety.

Within the context of this Feasibility Report, proposed users of the Southern Villages Iconic Trail include adventure riders, mountain bikers, trail runners, and walkers on the majority of sections. Lengthy sections in the second half of the alignment from Exeter through Fitzroy Falls and Kangaroo Valley are on public roads with pedestrian and cycling users sharing with low-speed traffic on low volume roads, fire trails and management vehicle tracks. Consideration may be given to permissibility of horse riding on these and other sections as assessed in further trail alignment and design studies and according to existing land management guidelines.

Given shared use designation, trail design along singletrack (non-road) sections should aspire to a wider footprint of 1000-1800mm to allow occasional passing in a safe manner, while remaining an immersive trail experience for the user

7.4 Events

As a Signature Trail, the SVIT should attract and host a variety of events across cycling, walking and trail running, in both competitive and non-competitive (recreational) formats, using either all or part of the trail. The trail manager should coordinate all event manager applications and permit against set environmental and trail sustainability measures with consideration for other trail users and community impacts.

Well planned and executed events work to highlight the trail experience with exposure generated driving non-event period visitation. Events should be coordinated across a calendar year with a view to seasonality and avoid high public use periods where possible.

The Trail manager can apply an event fee as part of revenue raising measures and cost recovery for management and maintenance costs.

8 Proposed Trail Alignment

8.1 Overview

The Southern Villages Iconic Trail is conceived as a nationally significant, shared use (walkers, runners and cyclists), multi direction trail that connects significant Highlands Villages, communities and Points of Interest (POIs) of natural and cultural distinction. Users will experience the unique and dramatic landscapes of the Southern Highlands Escarpment, the trail linking up significant viewpoints, waterfalls and ecological zones featuring a diverse range of flora and fauna and places of cultural significance to the Traditional Custodians of the land, the Gundungurra and Tharawal people.

The full trail alignment features six primary village nodes inclusive of Wingello, Penrose, Bundanoon, Exeter, Fitzroy Falls and Kangaroo Valley. Although conceived as a two-way trail, for the purposes of this report and description the trail will be considered to start at Wingello, travelling in a large 'U' initially north-east (stage 1-2, east (stage 3) and then south and east (stage 4) to its terminus in Kangaroo Valley. Whilst the trail can be travelled in either direction, given the ascent profile, it is expected that most end-to-end users will travel Wingello to Kangaroo Valley.

The trail concept is designed to enable shorter walk and ride experiences along its length and further trail network master planning is recommended to activate logical short walk (in particular) options, notably in the Bundanoon and Bundanoon Lookout (east of Exeter) regions. Consideration should also be given to natural short-trip or alternative exit routes via firetrails leading to village nodes.

Online map reference (base):

<https://www.alltrails.com/explore/map/southern-villages-iconic-trail-master-05b8caa?u=m>

Table 3. Southern Villages Iconic Trail Sections

SECTION	START	FINISH	KM	DEVELOPMENT PRIORITY
SECTION 1	Wingello (Wingello State Forest Camping Area)	Bundanoon (Gambells Rest Campground) (Potential en route link to Penrose village)	28km	2
SECTION 2	Bundanoon (Gambells Rest Campground)	Exeter	16km	1
SECTION 3	Exeter	Fitzroy Falls	35km	3
SECTION 4	Fitzroy Falls	Kangaroo Valley	37km	4
			116km	

Figure 11. Overview map

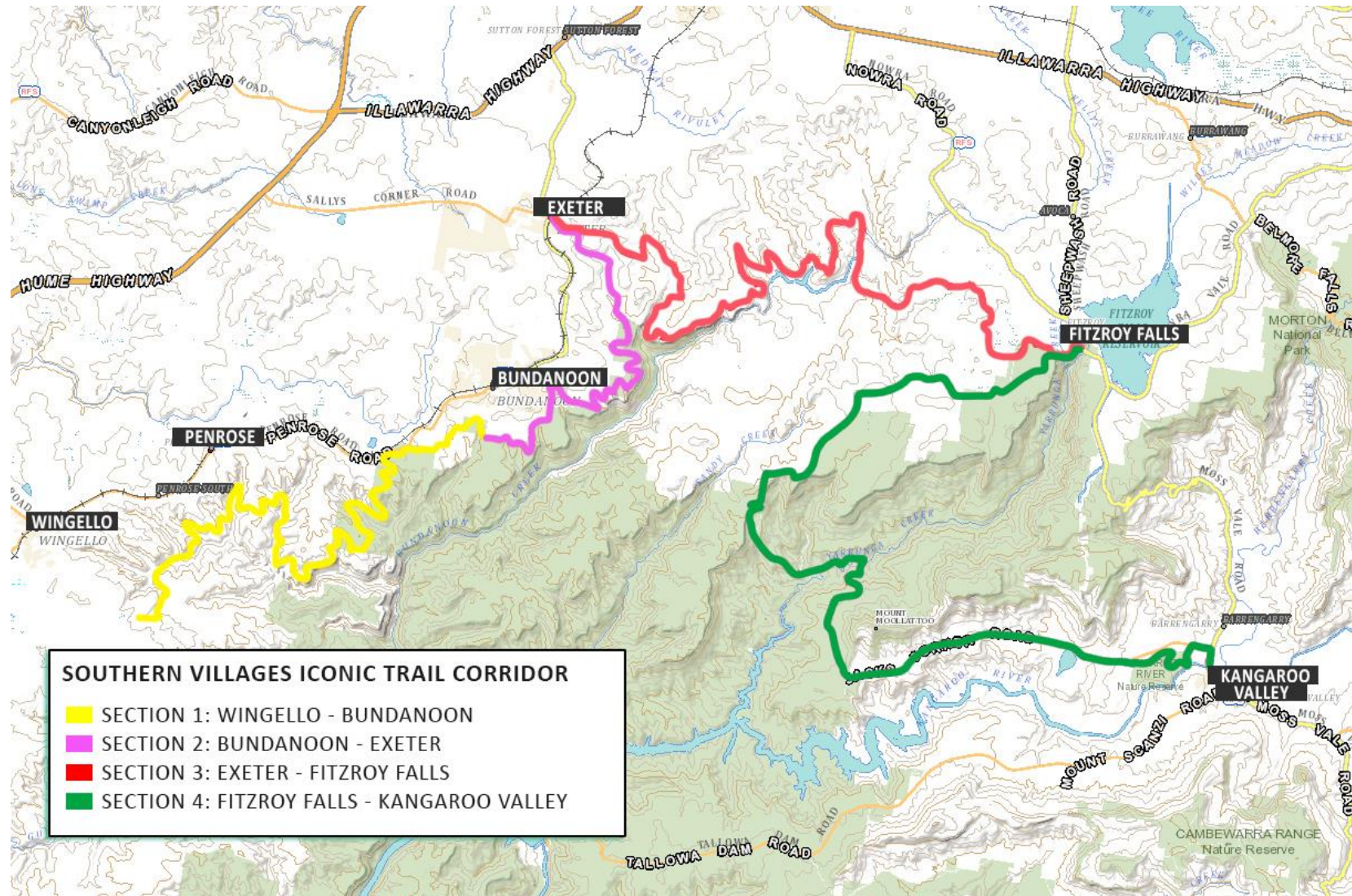


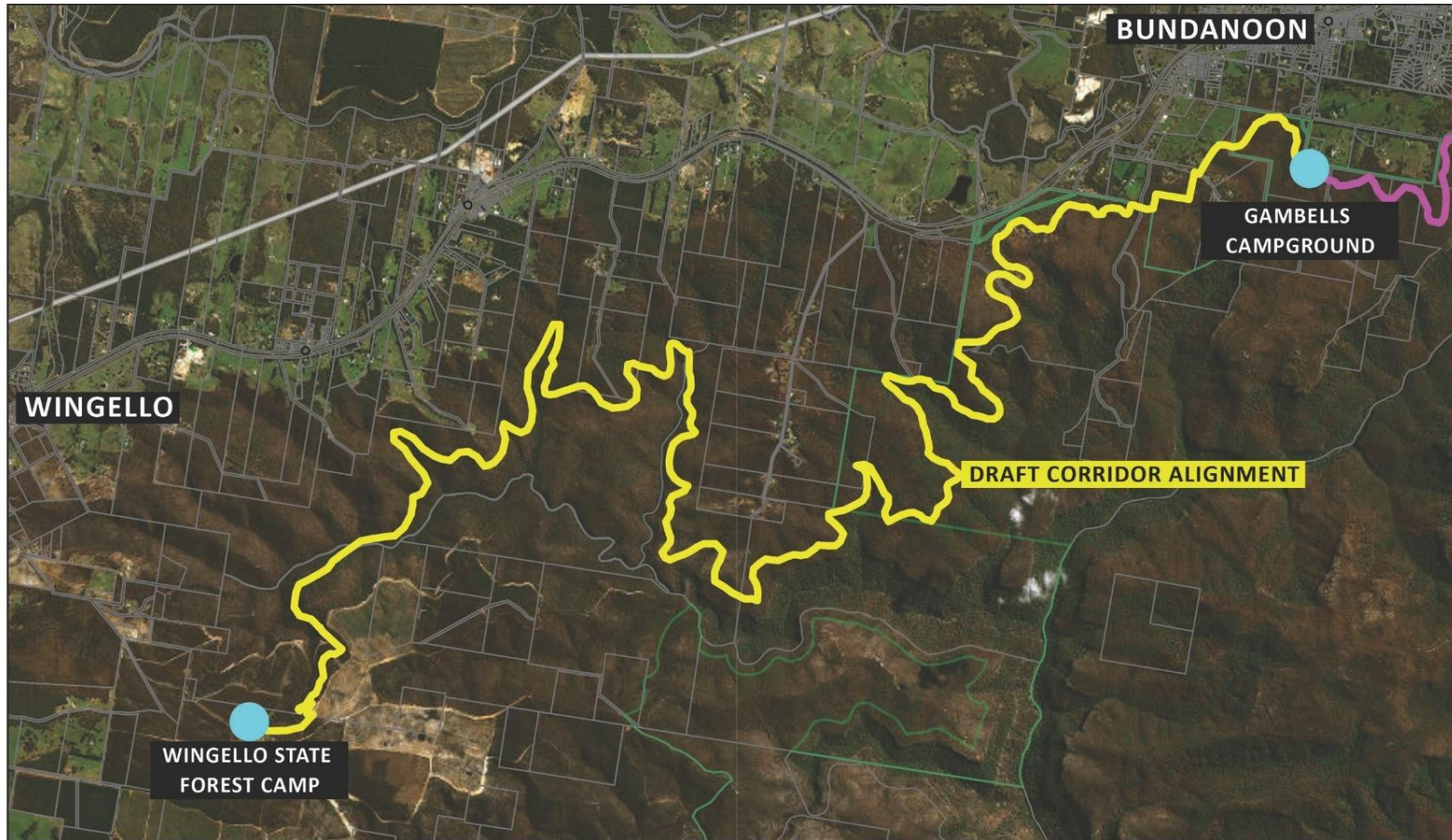
Table 4. Section One Wingello - Bundanoon

START	Wingello
FINISH	Bundanoon (Gambells Rest)
NODE/S	Wingello State Park, Gambells Rest
DISTANCE	28km
ENGAGEMENT PROFILE	Walkers: 2 days / Riders: 1-2 days
LAND MANAGERS	Forestry NSW, Crown Lands, Wingecarribee Shire Council, NSW Parks & Wildlife Service, Private Landowners
DESCRIPTION	<p>This section begins at traditional existing (under redevelopment) Wingello State Forest camp trailhead, which is also co-located nearby the existing formal Wingello MTB Trail Network maintained by Highland Trails in cooperation with Forestry NSW. Using existing trails for a short time, the alignment drops significantly into Oven Swamp Creek. Ground truthing is required to find an appropriate alignment.</p> <p>The concept trail then follows contours on the northern side of Oven Swamp Creek, maintaining height along the valley escarpment and sweeping into and out of numerous gullies. Passing the southern edges of Penrose township, the trail passes through mostly Crown land before entering Morton National Park on its western border. Here the trail features significant geographical points of interest and beauty, skirting under escarpments and touching on some informal trails before exiting the Park to the south of Coalmines Rd.</p> <p>A short private property link corridor is required to bridge back to the National Park, using boundary trails and some new alignments to reach the terminus of this section at Gambells Campground, where full parking and camping facilities exist. This trail node is located approximately 1km from the centre of Bundanoon, allowing easy village access. It is also a node for other short bushwalks leading to significant lookout points of interest including Mt Carnarvon, Wishing Well, Fern Glen, Sunrise Point Tooth’s Lookout, Nicholas Pass and Spooner Lookout – all reached via quiet road access and walking trail.</p>
REQUIREMENTS / RECOMMENDATIONS	<ul style="list-style-type: none"> • The trail would necessarily be a narrower gauge (900mm-1200mm) and mostly suited to mountain bikers, runners and walkers given the more technical terrain and gather node of the Wingello MTB trails at the south-western trailhead. It is envisaged this section would be used more heavily by mountain bikers wishing to transit from Bundanoon to the Wingello MTB Network and return, the link trail itself becoming a highlight attraction as a component of that overall network, thereby further activating Wingello MTB trails. • Consideration to be given to possible upgrades of the network of walking trails accessible from Gambells Rest (upgrades for walking only), as these would become a major POI node and encourage longer overnight stay at Gambells Rest or Bundanoon. • Mid-alignment safety access recommended where the trail approaches Penrose Rd on its southern side (to the south-east of Shangri La Rd) • Requires full initial ground truthing. Current alignment desk-based mapping only according to topography contours and land boundaries.

**ALIGNMENT
CHALLENGE**

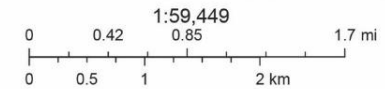
- Difficulty of terrain - steep topography in early stages (predominantly Crown Land) and crossing south to north of Oven Swamp Creek. Other challenges at Johnstones Creek crossing and minor gullies.
- Further investigations required regarding Crown Land permissibility and unidentified (likely Crown) land parcels
- Re-classification of land use within NSW National Parks – route enters National Parl east of Teudts Rd and exits west of Coalmines Rd. Some informal trails existing.
- Determination of how Crown Land is treated – potential transfer to Council for responsibility and new trail entity for management?
- CRITICAL (short) passage via private property on Coalmines Rd – easement or similar required/ preferred. Alternative requires road ride on Coal Mines Rd > Penrose Rd > Grey Gum Lane. Possible to have a path on the verge of road in the short 80km/h section (approx 250m). Rest of on-road is 50km/h.
- Requires a section of on-road riding between Wingello village and trailhead (currently Forest Road).
- Exit link to Penrose village problematic - Lukes Fire Trail and/or alternative to be investigated
- Requires a short section of on-road riding Gullies Rd / Church Street to access village centre.

Figure 12. Section One – SVIT Wingello - Bundanoon



10/1/2023, 2:22:53 pm

- | | | |
|--|---|---|
| NSW Administrative Boundaries - NPWS Reserve | NSW Administrative Boundaries - Suburb | NSW Land Parcel and Property - Property |
| SVIT SECTION 1 | NSW Feature of Interest - Place Point | Property |
| SVIT SECTION 2 | NSW Land Parcel and Property - Easement | Incomplete |
| NSW Administrative Boundaries - Parish | NSW Land Parcel and Property - Lot | |



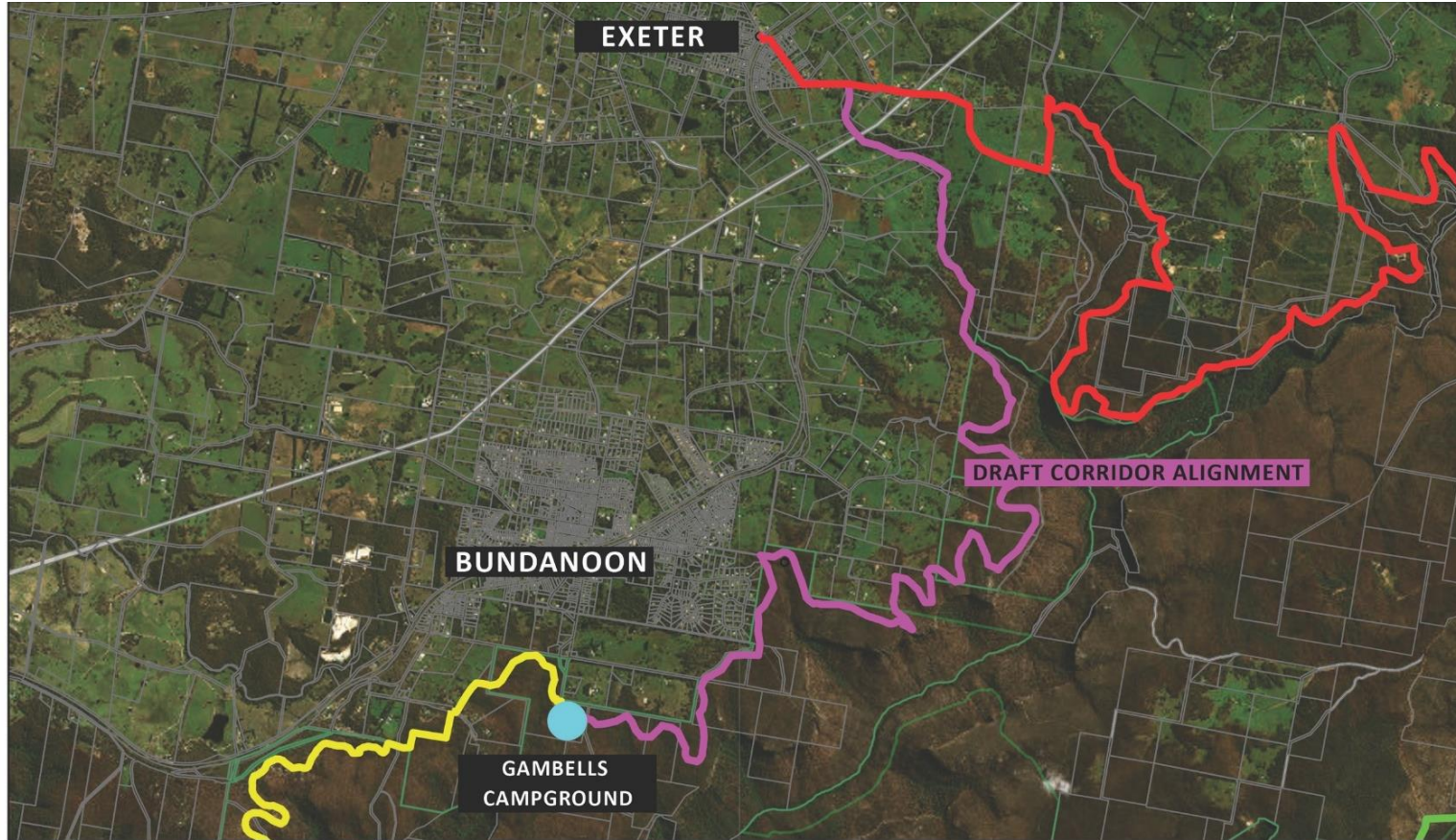
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Table 5. Section Two Bundanoon - Exeter

START	Bundanoon
FINISH	Exeter
NODE/S	Amphitheatre, Glow Worm Glen, Wanganderry Lookout, McNab’s Lookout
DISTANCE	16km
ENGAGEMENT PROFILE	Walkers: 1 day Riders: half day
LAND MANAGERS	NSW Parks & Wildlife Service, Wingecarribee Shire Council, Private Landowners
DESCRIPTION	<p>The shortest segment of the overall alignment, this section departs from Gambells Rest Campground, taking easy passage through light bushland to the north and away from the escarpment. Crossing Riverview Rd, the trail can either align on road or (preferably) a parallel new trail alongside before moving north at Dimmocks Creek Car Park (informal). From here, the alignment follows the Glow Worm Glen Walk (double track), routed to the north of the actual Glen around and over the headwaters of Dimmock Creek. Trail users would likely divert to visit the Glow Worm Glen POI. There are other diversion POIs accessed to the south in the Amphitheatre and Mark Morton Lookout. This section is all within the bounds of the Morton National Park.</p> <p>The trail continues to track north mostly along the escarpment following existing informal walking trails to Wanganderry Lookout. The trail diverts from traditional walking alignment (too steep and technical), instead contouring gullies where required, to re-join informal trail alignments at McNabs and Ross Lookouts.</p> <p>After diverting around Christmas Creek, the trail spears north-west along Indigo Creek, following its course partly through private properties before linking to an existing public easement trail that links School Lane and Rockleigh Rd across the Indigo Creek Valley. The trail accesses Exeter township and train station via School Lane.</p> <p>This 16km section links many escarpment viewpoints and POIs, along with to major village nodes and is considered a priority for walkers and riders given the ideal distance and access.</p>

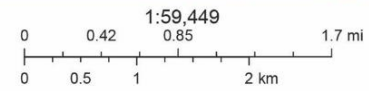
<p>REQUIREMENTS / RECOMMENDATIONS</p>	<ul style="list-style-type: none"> • Intensive consultation with relevant private landholders in the northern section to determine permissibility and preferred structure (i.e. easement, right of way, memorandum of understanding, financial compensation) • Inundation study required for Indigo Creek to determine best alignment and potential requirement for boardwalk infrastructure. • To stay within the National Park, infrastructure will need to be built across the Christmas Creek gully • Potential requirement for ride-able shared use boardwalk for Indigo Creek • Possible roadside trail for School Lane • Short Walks Trail Network Masterplan should be considered for leveraging the existing escarpment trails (formal and informal) located in the Bundanoon – Exeter region as a complimentary but integral project to the Southern Villages Iconic Trail alignment.
<p>ALIGNMENT CHALLENGE</p>	<ul style="list-style-type: none"> • CRITICAL: alignment requires easement or permissible passage through private properties with no current alternative • Re-classification of land use within NSW National Parks – route enters National Parl east of Teudts Rd and exits west of Coalmines Rd. Some informal trails existing. • Contouring of feeder gully sections may prove challenging / higher cost trail build / higher trail degradation risk • Christmas Creek crossing requires engineering and environmental study • Indigo Creek – potential water inundation. Requires engineering and environmental study • Minor steep incline accessing Exeter from Indigo Creek • RECOMMENDED: secondary study undertaken to define logical short walk loops leveraging existing formal and informal walks and SVIT alignment

Figure 13. Section Two – SVIT Bundanoon - Exeter



10/1/2023, 2:46:58 pm

- | | |
|--|---|
| NSW Administrative Boundaries - NPWS Reserve | NSW Land Parcel and Property - Easement |
| SVIT SECTION 1 | NSW Administrative Boundaries - Parish |
| SVIT SECTION 2 | NSW Land Parcel and Property - Lot |
| SVIT SECTION 3 | NSW Administrative Boundaries - Suburb |
| NSW Feature of Interest - Place Point | NSW Land Parcel and Property - Property |
| | Property |
| | Incomplete |



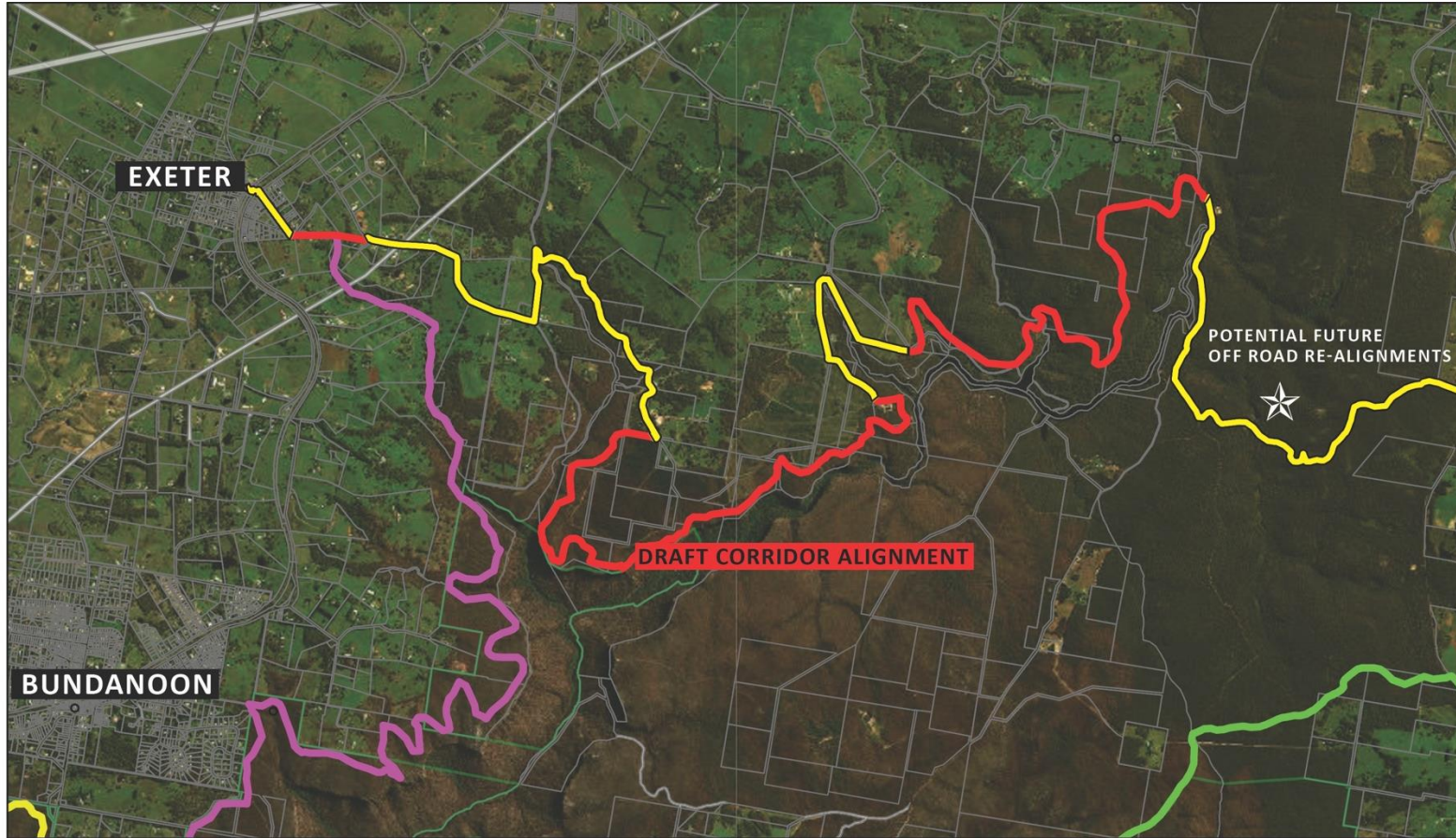
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Table 6. Section Three Exeter – Fitzroy Falls

START	Exeter
FINISH	Fitzroy Falls
NODE/S	Bundanoon Lookouts, Patons Clearing Camp Area, Gunrock Creek Waterfall, Fitzroy Falls waterfalls / lookouts
DISTANCE	36km
ENGAGEMENT PROFILE	Riders: 1-2 days (priority user) Walkers: 2 days (highlight sections only – likely short walk / car transit)
LAND MANAGERS	NSW Parks & Wildlife Service, Forestry NSW, Nowra Shire Council
DESCRIPTION	<p>Leaving Exeter township, the trail uses School Lane (potential roadside pathway) to access a short but steep easement linking across Indigo Creek through to Rockleigh Road. From this point, the SVIT route necessarily becomes an on road route with no viable off road alignments due to numerous private properties separating Exeter township from the Forestry NSW-managed State Park areas to the east. The trail follows Rockleigh Rd, turning left onto Stonequarry Creek Rd, and then right onto Rosedale Road. While not an ideal experience for walkers, the quiet back country lanes still provide an adequate experience as a transit route. It is suggested a secondary car park be established at the junction of Stonequarry Creek Rd and Rosedale (or alternatively further along Rosedale) to allow walkers to park and walk for access to the high-value escarpment trail sections proposed for the Bundanoon Escarpment.</p> <p>Leaving Rosedale Road, the proposed alignment picks up the high vantage points and canyon perspectives of Bundanoon Escarpment, paralleling south of Garbutts Road.</p> <p>Following the escarpment line, the trail reaches Bundanoon Reservoir, where alignments could pass behind or to the front of before weaving through variable forest to the north of Bundanoon Reservoir.</p> <p>Riders eventually intersect with Meryla Road, just to the north of Patons Camp – a potential overnight node for bike packers.</p> <p>At Gunrock Creek Fire Trail, the alignments heads west, visiting the impressive Gun Rock Creek Falls, before continuing across Redhills Rd making use of little-used fire trails to eventually reach the walking trail network and impressive vistas of Fitzroy Falls, a major highlight of the trail.</p> <p>Nearby, Twin Falls Bush Cottage offers rider friendly accommodation and private trails to explore.</p>

<p>REQUIREMENTS / RECOMMENDATIONS</p>	<ul style="list-style-type: none"> • High-level trail design for crossing of Indigo Creek (potential hike-a-bike due to incline) • Walkers’ car park and facilities for closer access to Bundanoon Escarpment – high quality walking loop could potentially service walkers. • 2-3 high quality lookout nodes for Bundanoon Escarpment • High percentage of on road sections and distances dictates this section be considered mostly for adventure ride, bike packing and gravel grind markets (beyond the Bundanoon Escarpment) • New trails required for section north of Bundanoon Reservoir • Upgrade of Patons Camp area • Works required to upgrade Gun Rock Creek Fire Trail section • Trail and viewpoint infrastructure for Gun Rock Creek Falls • Road safety for Red Hills Rd crossing. An alignment has been investigated by Highland Trails that crosses Red Hills Rd through the NPWS flora reserve. This exits through an easement on to Somerset Road before feeding into the rear of Twin Falls Cottages property • This negates the need to use Red Hills road and would improve interest / lessen the firetrail sections • Preference to engage Twin Falls Bush Cottages to assist deliver on accommodation demand. May involve trail experience on property • Bike racks / safety at Fitzroy Falls VIC • Upgrade of waterfall lookout trails (for integrated walk market, non ride) • Investigations into potential new trail flagged for near Manandoo Falls • Identify new singletrack alignments to replace firetrail / on-road portions wherever possible (and where opportunities arise) for future phase for development
<p>ALIGNMENT CHALLENGE</p>	<ul style="list-style-type: none"> • Majority on road – targeted at adventure riders • Features two drawcards for walkers in Bundanoon Escarpment (new facilities / lookouts and trails required) and Fitzroy Falls – separated by a significant drive with no viable walk link. • Still requires new trail development to link Bundanoon Escarpment area with Meryla Rd

Figure 14. Section Three - SVIT Exeter - Fitzroy Falls (West) 1



10/1/2023, 2:26:13 pm

- | | | |
|--|--|---|
| NSW Administrative Boundaries - NPWS Reserve | ON ROAD SECTION | NSW Land Parcel and Property - Easement |
| SVIT SECTION 2 | NSW Administrative Boundaries - Parish | NSW Land Parcel and Property - Lot |
| SVIT SECTION 3 | NSW Administrative Boundaries - Suburb | NSW Land Parcel and Property - Property |
| SVIT SECTION 4 | NSW Feature of Interest - Place Point | Property |

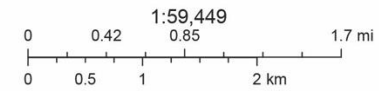
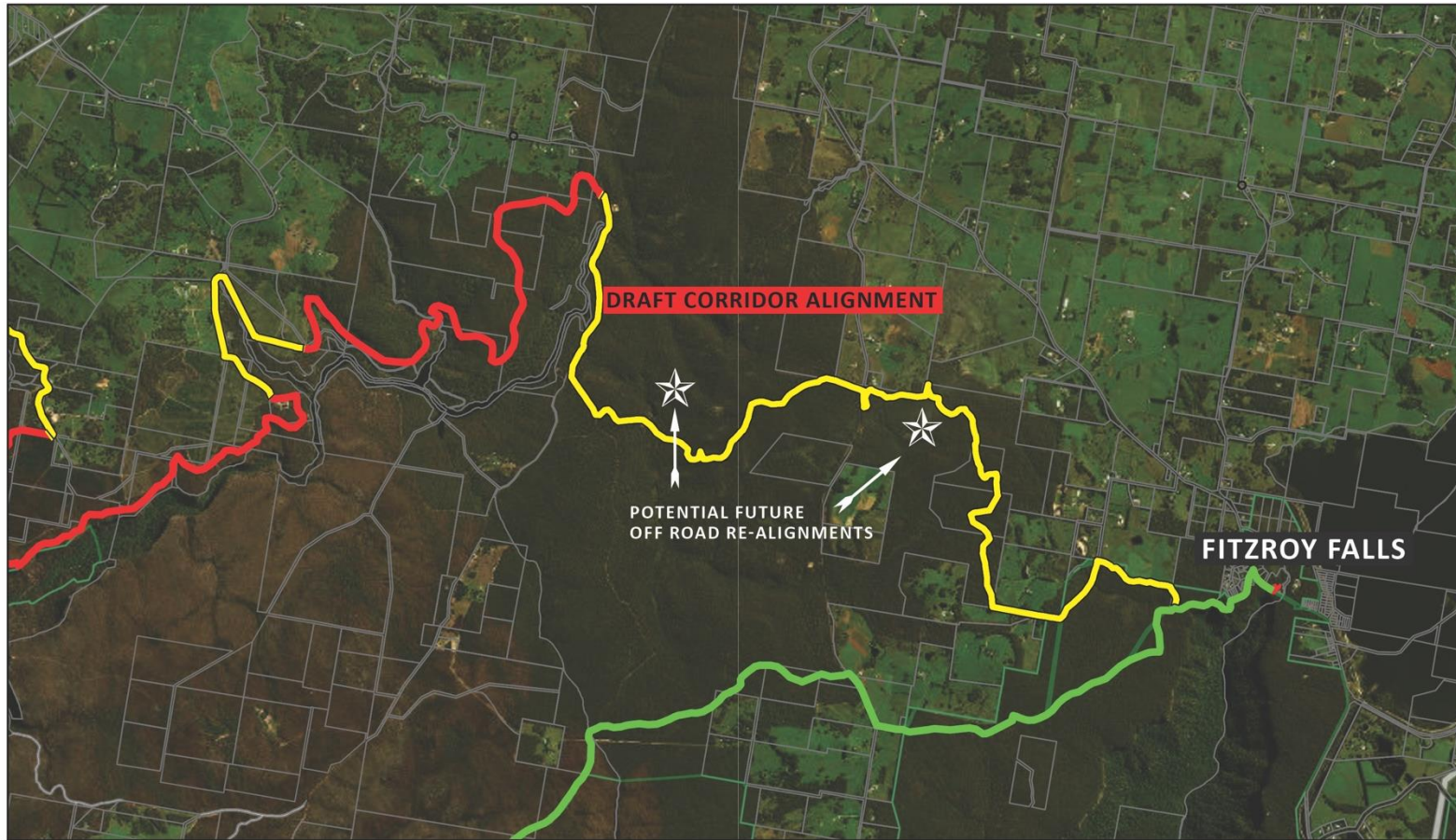


Figure 15. Section Three – SVIT Exeter – Fitzroy Falls (EAST) 1



10/1/2023, 2:27:25 pm

- | | | |
|--|--|---|
| NSW Administrative Boundaries - NPWS Reserve | NSW Administrative Boundaries - Parish | NSW Land Parcel and Property - Easement |
| SVIT SECTION 3 | NSW Administrative Boundaries - Suburb | NSW Land Parcel and Property - Lot |
| SVIT SECTION 4 | NSW Feature of Interest - Place Point | NSW Land Parcel and Property - Property |
| ON ROAD SECTION | | Property |

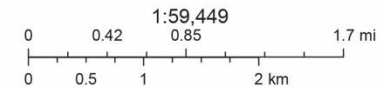
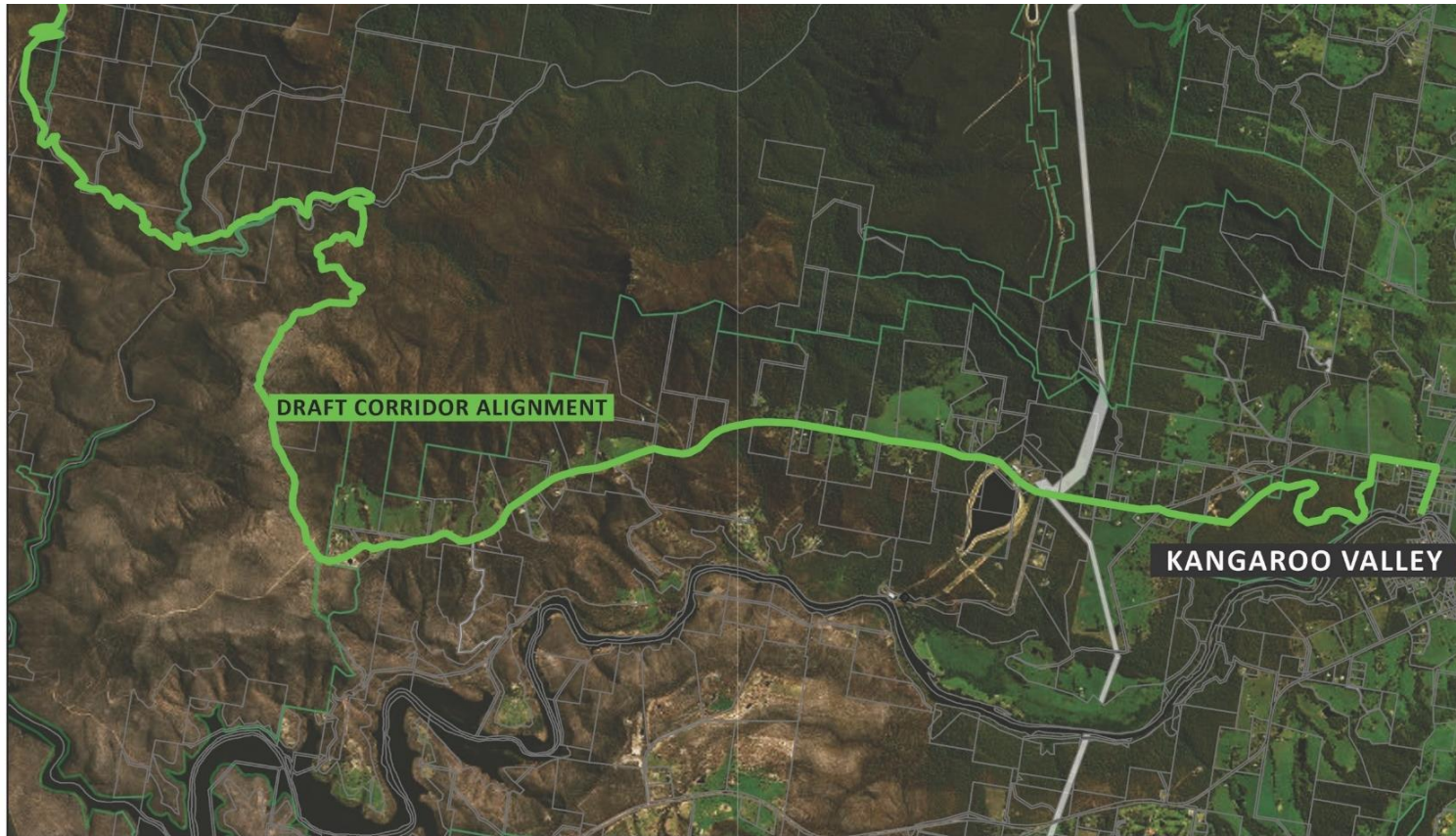


Table 7. Section Four - Fitzroy Falls – Kangaroo Valley

START	Fitzroy Falls
FINISH	Kangaroo Valley
NODE/S	Gales Flat / Griffins Farm campsites
DISTANCE	37km
ENGAGEMENT PROFILE	Walkers: 2 days Riders: 1-2 days
LAND MANAGERS	NSW Parks & Wildlife Service, Forestry NSW, Nowra Shire Council
DESCRIPTION	<p>Fitzroy Falls to Kangaroo Valley is already a recognised adventure cycling and walking route. From the National Parks website description:</p> <p><i>“Riding along trails on Fitzroy Falls to Kangaroo Valley cycling route, you’ll see the best of Morton National Park. Some sections of the 30km bike ride are steep, making it a challenging adventure for all types of bikers. Cycling to the top of Meryla Pass, head down through Yarrunga Creek Valley and finish in one of the most beautiful towns in the Southern Highlands. Some bike riders do the journey in a day, but there’s also the option make a weekend getaway to camp overnight at Griffins Farm.”</i></p> <p>https://www.nationalparks.nsw.gov.au/things-to-do/cycling-trails/fitzroy-falls-to-kangaroo-valley-cycling-route</p> <p>The majority of the route is currently wholly on fire and management vehicle roads with little to no traffic: Red Hills, Meryla and Griffins Fire Roads. The final section from the exit of Griffin Fire Road is currently along Jacks Corner Rd and Bendeela Rd, both sealed roads with a higher level of traffic, more so where the stretch becomes Bendeela Rad travelling in an eastern direction.</p> <p>The concept plan calls for the alignment to enter the western end of the Kangaroo Valley Nature Reserve, for a final singletrack experience (and associated interpretation) in the Reserve.</p>

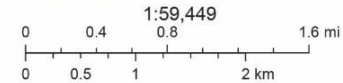
<p>REQUIREMENTS / RECOMMENDATIONS</p>	<ul style="list-style-type: none"> • This section of the Southern Villages Iconic Trail would require minimal re-rerouting (none in early stages). Signage upgrades required for the section to be recognised as part of the official SVIT route and other minimal investments required. Potential requirement to assess and upgrade campsite/s at Griffins Farm. • Long term, trail managers may wish to revisit alignments and seek alternative ‘better quality’ trail experiences requiring new trail and/or upgrades of current trail and road surfacing. • The section along Jack’s Corner Road would remain as an on-road section with no viable alternative off road nor enough verge for significant sections justifying new trail alongside the road. • Approaching Kangaroo Valley Recreation Park, it is proposed the trail deviate off Jack’s Corner Road and use existing trail alignments to convert to shared use, in order to transit through the park. This will considerably improve user experience and significantly improve safety by taking riders and walkers off road for a section of Jack’s Corner Rd that is significantly higher in traffic load than sections further west towards Griffins Fire Road end. • Ideally the trail would continue along the escarpment to its terminus at the Kangaroo Valley Bridge, however due to security and site closure in evenings, it is highly unlikely the Heritage Museum in place would allow public access to the land it manages, which would be required for this preferred alignment. • Therefore, the suggested route passes through Kangaroo Valley Recreation Park, before exiting to the north side using an existing public easement and access gate to the park. Users would then exit onto Bendeela Road and travel the remainder of the route (approx. 600m-1km) to Moss Val Rd and south to Kangaroo Valley Bridge. • Given the significant on road section of Jacks Corner and Bendeela Road, it is suggested a major trailhead and formal parking be established at the end of Jacks Road / Griffins Fire Road for the use of walkers and others who may want to arrange vehicular pick ups from this point.
<p>ALIGNMENT CHALLENGE</p>	<ul style="list-style-type: none"> • No current plans for singletrack sections Fitzroy Falls through Jacks Corner Rd – on road sections to be assessed for experience quality and alternatives • Jacks Corner Road - no available off road alternative. Traffic calming measures required for safety • Kangaroo Valley Recreation Park alignment, including likely bridge requirement • Final alignment into Kangaroo Valley – potential for road verge shared user pathway to Moss Vale Road.

Figure 16. Section Four – SVIT Fitzroy Falls – Kangaroo Valley (South)



10/1/2023, 2:30:31 pm

- NSW Administrative Boundaries - NPWS Reserve
- NSW Administrative Boundaries - Suburb
- NSW Land Parcel and Property - Lot
- NSW Land Parcel and Property - Property
- NSW Land Parcel and Property - Easement
- Property
- Incomplete
- NSW Feature of Interest - Place Point
- SVIT SECTION 4



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NOTE: current alignment majority on road except proposed section via Kangaroo Valley Recreation Park

9 Accommodation and Camping Nodes

There are numerous existing campsites along the proposed SVIT route as per table below. It is recommended that consideration be given to upgrades and or at least one new campsite to facilitate logical overnight stopovers by camp-based users. Significant potential exists for private landholders with adjoining land parcels to develop new camping options (from bush camping to glamping).

SECTION	SUB SECTION	SUB SECTION DISTANCE	PRIMARY USER	SECONDARY USER	ACCOMMODATION
Wingello - Bundanoon	Wingello - Bundanoon	0km	Ride / Run	Walk	Campsite – 0km Wingello Village – approx. 3km
Wingello - Bundanoon	Wingello - Bundanoon	28km	Ride / Run	Walk	Campsite – 28km Gambells Rest Bundanoon Village – 29km
Bundanoon - Exeter	Bundanoon - Exeter	16km	Ride / Walk / Run	All Abilities Access sections	Exeter – 16km
Exeter - Fitzroy Falls	Exeter - Patons Clearing Area Camp	22km	Ride	Walk / Run	Patons Clearing Camp Area (or nearby new alternative) - 22km
Exeter - Fitzroy Falls	Patons Clearing Area Camp - Twins Falls Bush Cottages – Fitzroy Falls	34km (+2km to falls)	Ride	Walk / Run	Twins Falls Bush Cottages (private booked cabin or camp accommodation) – 32km
Fitzroy Falls – Kangaroo Valley	Fitzroy Falls – Gales Flat Camping	15km	Ride	Walk / Run	Gales Flat Camping Area (Sandy Flat Camping Area nearby) – 15km
Fitzroy Falls – Kangaroo Valley	Gales Flat Camping – Bendeela Road	17km + 1km Or 19km	Ride	Walk / Run	Bendeela Recreation Area – 18km Or Bendeela Camping And Picnic Area – 19km

9.1 Potential for camping accommodation development

Existing campsites along the proposed route are a mix of well-developed with a high level of facility (i.e. Gambells Rest), and basic with no facilities (i.e. Patons Clearing Camp). It is suggested that Patons Clearing should be upgraded with added facilities (parking, toilets, picnic facilities).

Campsite offering at Exeter – there is currently no ability to camp at Exeter. Consideration may be given to encouragement of a commercial private camping operation to fill the accommodation gap. Alternatively users can use train services to return to Bundanoon where a campsite exists.

Wingello State Forest is currently undergoing regeneration with a campsite to be re-established at the proposed trailhead. It is recommended implementation consider the possibility of the Southern Villages Iconic Trail and the demand it may generate for camping facilities at the trailhead.

Camping / controlled semi-permanent glamping, Bundanoon Gorge Lookout: as an alternative / addition to Exeter accommodation development, consideration may be given to the establishment of a controlled semi-permanent camp placement in the vicinity of the Bundanoon Gorge Lookout/s section (Forestry NSW managed land)

There is significant opportunity for private landholders on adjoining or nearby and accessible land parcels to develop a range of camping accommodation, from basic bush camping with basic facilities to more facilitated and higher end glamping.

9.2 Roofed accommodation nodes

There are accommodation offerings located predominantly in the villages associated with the SVIT alignment, but also limited offerings located in the rural countryside (i.e. farm stays etc). Bundanoon and Kangaroo Valley host the most options however there is a predominance of mid to upmarket homes and a lack of economy options, especially for solo travellers and a lack in general of hotel / motel style (single room/ensuite) accommodation. The majority of options are self-cater AirBnB houses, cottages and Tiny Homes. Results of a general search for accommodation is outlined in Table 8.

Table 8. Village Node Accommodation (Existing)

VILLAGE NODE	APPROX ROOFED ACCOMMODATION OFFERINGS	STYLE
Wingello, Penrose and surrounds	14	Mainly AirBnB, farm stay, yurt.
Bundanoon and surrounds	60+	Mix of hotel / motel, Airbnb, guesthouses. Most accommodation of nodes along route, mid to upmarket
Exeter and surrounds	25	Mostly AirBnB, cottages, mid to upmarket
Fitzroy Falls and surrounds	10	Mostly AirBnB, cottages, mid market
Kangaroo Valley and surrounds	90+	Mostly AirBnB, cottages, upmarket + 1 x holiday park.

10 Land Tenure

The proposed trail corridor as currently drafted passes through approximately 50-57 individual land parcels, pending alignment modifications, including parcels identified more broadly within:

- National Park (1 Morton National Park)
- State Forest (2 Meryla State Park, Wingello State Forest)
- Nature Reserve (1 Kangaroo Valley Recreation Reserve)
- Crown Land (1-2)
- Private Property (3-8 depending on final alignment)
- Road Reserves (17 approx)
- Undetermined (2).

Initial land tenure searches contain two major undefined segments, to be confirmed in later stages:

Teudts Road Peninsula – an undefined section of land adjacent to private properties of Teudts Rd to both the east and west of the road alignment and to the southern lookout out of the peninsula. The draft alignment leaves Crown Land into undefined parcel paralleling the escarpment to the south, then making its way north again on the eastern side of the peninsula before entering Meryla National Park in a north-eastern direction. This is likely to be Crown Land.

South of Evelyn Avenue (Buchans Lookout) - an undefined section located north of Dimmocks Creek and west of Bundanoon Creek, the alignment skirts the rear (eastern) boundary of two private properties (address: Yuille Ave, Bundanoon) contouring around the Bundanoon Creek Escarpment. A walking track exists cutting across from nearby Buchans Lookout in the south towards Elsmores Lookout in the north, however it is not suitable for cycling use. The alignment therefore contours to re-join existing trail nearby Macnabs Lookout within the Morton National Park. This section is likely to be under management of NSW PWS.

A full list of identified land parcels potentially affected by the current draft alignment can be found in Appendix A.

Private Land Alignment Precedent⁶⁴

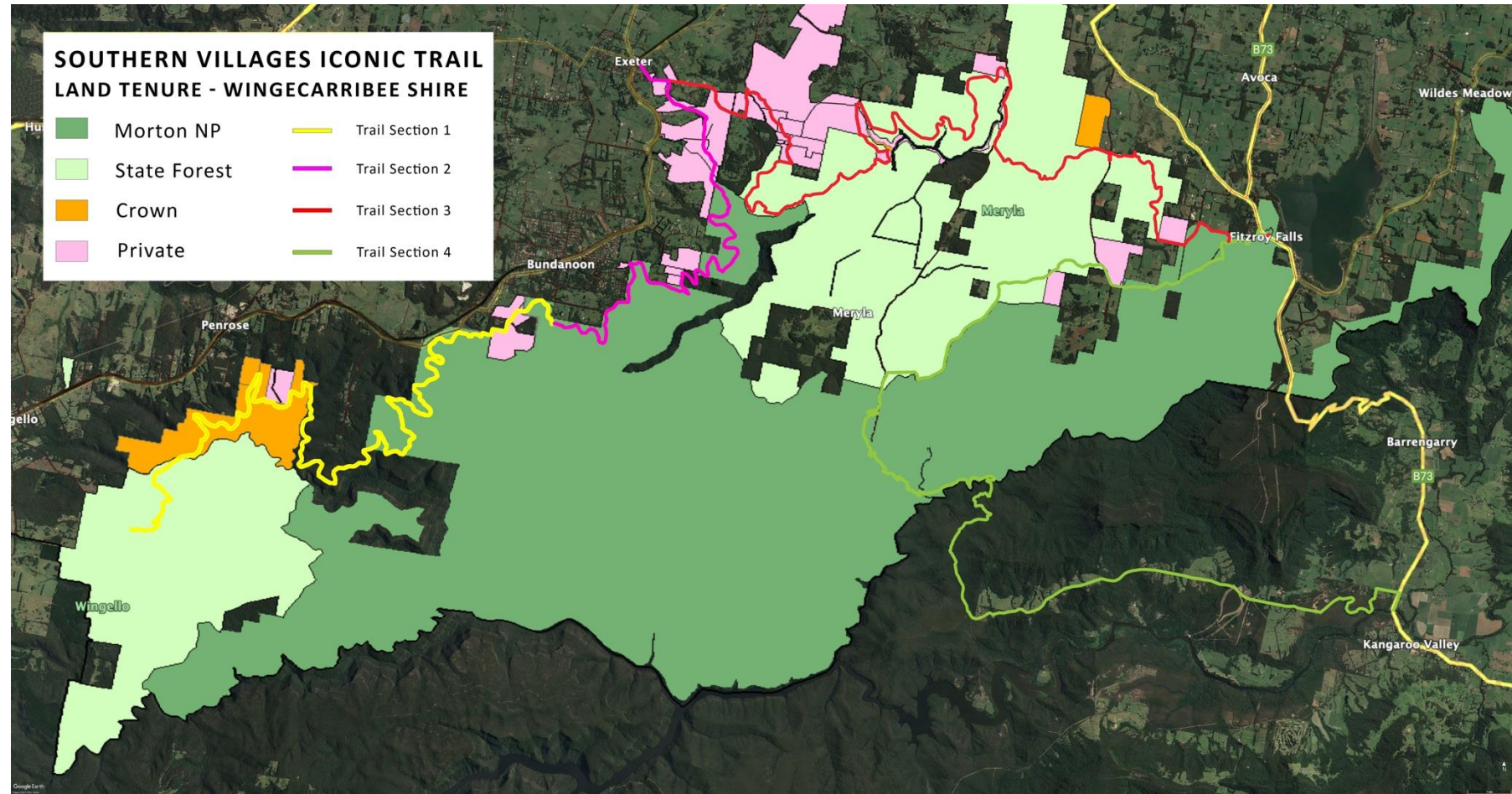
Alignments that require passage over private land tenures are possible with successful precedents set, each with their own contextual land management and agreement structures. One such example in NSW is the Hatchery Bay Trail which provides a link for the Jindabyne Trail Network connecting National Park and Thredbo Valley Tracks to the lakeside, township and services, adding value and serviceability to existing trail products and businesses.

The trail utilises private tracts of land to connect, with partnerships formed and managed by the Jindabyne Trail Stewardship custodian group.

Negotiations and agreements include stakeholders across National Parks Council, Snowy Hydo, Caravan Park (commercial), private landowners and private businesses.

⁶⁴ <https://www.jindabynetrailstewardship.org.au>

Figure 17. Land Tenure - Wingecarribee Shire



11 Estimated Costs of Implementation

11.1 Per Section Construction Materials Estimates

STAGE	SINGLE TRACK* 1200 – 1800MM	UPGRADED DIRT ROAD	ROADSIDE PATH	ROAD – EXISTING UNALTERED**	BRIDGES <5M ALLOWANCE	BOARDWALK ALLOWANCE	WAYFINDING ALLOWANCE	T/HEAD SIGNS	TOILETS	CAMP	CAR PARK	ROAD CROSSING
1	26.5km	1.5km	0	0	5	2km	140 signposts	2	0	0	0	2
2	13.5km	2km	0.5km	0	4	2km	100 signposts	6	0	0	0	4
3	13.5km	3km	0	12.5	3	1.5km	190 signposts	6	1	1	2	2
4	4.5km	0km	0.5km	31km	2	0.6km	190 signposts	5	?	upgrades	1	2
	58km	6.5km	1km	43.5km	14	6.1km	620	19	1	1	3	10

*encompasses both new sections and upgraded recognising that any existing singletrack will need significant refurbishment equivalent of new singletrack.

**may require some minor upgrades

11.2 Per Section Construction Costs Estimates

Allowances:

- Singletrack trail build at average \$50 / metre
- Dirt road upgrades at \$30 / metre
- Roadside gravel path at \$30 / metre
- Bridges @ \$25,000
- Boardwalk 1.8m width @ \$1000 / lineal metre
- Trailheads signage @\$6,000 / site
- Toilets \$80,000 - \$120,000
- Campsite upgrade \$200,000
- Wayfinding \$60/post
- Signage and branding 10%
- Project management 6%
- Project incidentals 10%
- Contingency 15%.

Stage	Single Track 1200 – 1800mm	Upgraded Dirt Road	Roadside path (gravel)	Bridges <5m allowance	Boardwalk allowance	Wayfinding allowance	T/head signs	Toilets	Camp	Car Park
1	\$1,325,000	\$45,000	0	5	2km	140 signposts	2	0	0	0
2	\$675,000	\$60,000	\$15,000	4	2km	100 signposts	6	0	0	0
3	\$675,000	\$90,000	0	3	1.5km	190 signposts	6	1	1	2
4	\$225,000	0	\$15,000	2	0.6km	190 signposts	5	?	upgrades	1
SUB TOTAL	\$2.9 million	\$195k	\$30k	\$350k	\$6.1 million	\$37k	\$114k	\$180k	\$200k	\$100k
TOTAL \$10.2 million materials not including incidentals, contingencies, project management										

The previous table represents broad desktop costings based on industry averages for standardised trail treatments and infrastructure. Costs may vary significantly according to context and timing, and will gain more accuracy only once full round truthing is undertaken to determine all-of-trail ground conditions and more accurate infrastructure requirements.

The inclusions above are based on general estimates determined from topographical mapping which does not accurately determine on ground requirements.

Most line items do not have defined scope and quotes have not been obtained. The line items above may not be all encompassing of the final construction scope. The construction cost estimate has the following assumptions and exclusions. The amount and type of these items as follows are determined during the ground truthing and design phase and are therefore not costed:

- Trail treatments such as rock armouring, specialised surfacing, rock walling per context not included (requires full survey) – allow 15%
- Engineering solutions such as bridges, retaining walls over 1000mm not included
- Fencing not included
- Biodiversity assessment and native vegetation planning, approvals and offsets
- Engineering, assessment, survey and design for trail and infrastructure
- Aboriginal Cultural Heritage Assessments
- Project preliminaries (5% allowance)
- Project management (10% allowance)
- Signage and wayfinding (5% allowance)
- Trail head design and construction
- Branding and marketing development
- Mobilisation and demobilisation, accommodation, daily work crew incidentals

- Approvals and permits
- Rights of Way / lessee / easement negotiations and legals
- Risk assessments – road carriage sections incl road crossing designs
- Ongoing trail maintenance (1.5%-4% allowance, lower scale due to high percentage of on road sections under other departmental budget maintenance remits.)

It is reasonable to assume an added cost of implementation of approximately \$2-3 million, resulting in an **estimate of \$12-\$13 million implementation cost of the entire project with an ongoing maintenance cost of between 1.5% and 4% (\$195,000 and \$520,000) annually.**

This figure may be subsidised by the structure of trail management integrating structured volunteer hours as part of a maintenance regime.

12 Implementation Plan

With funding streams not currently in place, and significant all-of-project costs identified, it is proposed that trail development and construction be implemented in three primary phases and five subset stages.

Phase One

Stage 1: Bundanoon - Exeter [Trail Section 2]

> planning and development of *off-road* route.

Stage 2: Exeter – Fitzroy Falls – Kangaroo Valley [Trail Sections 3 & 4]

> *on-road* alignment curated

Phase One completion realises a route from Bundanoon to Exeter on trail for pedestrians and riders, while concurrently curating an *on-road* route from Exeter to Kangaroo Valley using existing road alignments (making a full Bundanoon to Kangaroo Valley ride experience feasible, albeit mostly on road). This ensures a critical mass of available experience from ‘trail opening’ with adventure riders able to journey 80% of total Southern Villages Iconic Trail distance using a short-term alternative routing, while pedestrians access a high-quality village-to-village day walk section (16km) with a concentrated number of Points of Interest (POI).

Phase Two

Stage 3: Wingello – Bundanoon [Section 1]

> planning and development of *off-road* route

Phase Two completion concentrates on linking Wingello MTB trails to Bundanoon, extending the singletrack experience to potential multiday for riders while also creating an overnight walk experience Wingello-Bundanoon-Exeter, encouraging increased overnight stays.

Phase Three

Stage 4: Exeter – Fitzroy Falls [Section 3]

> planning and development of *off-road* route (sections)

Phase Three develops a missing link mostly off-road section suitable for pedestrians and riders from Exeter (albeit pedestrians may choose to be transferred to a secondary trailhead along the route to avoid long road-based portion of this leg). This development significantly improves the Exeter-Fitzroy Falls experience linking Exeter by trail via highlight escarpment lookouts to the significant POI that is Fitzroy Falls.

Phase Four

Stage 5: Fitzroy Falls – Kangaroo Valley [Section 4]

> planning and development of *off-road* route

Phase Four is the final phase, seeking to improve the alignment from Fitzroy Falls to Kangaroo Valley, noting that this section will remain reliant mostly on road alignments leveraging fire, management and dirt roads through state and national parks. It will be useable by walkers, although not as a singletrack experience. Existing campsites do however make it an attractive overnight proposition.

13 Economic Benefits

13.1 Overview – Medium (Likely) Case Scenario

The following provides an economic impact assessment of the Southern Villages Iconic Trail network and a cost benefit analysis of the proposed new trails. The results are indicative of the benefits to the region generated by pedestrians (walkers and runners) and bike users.⁶⁵

Two types of analysis have been undertaken:

- estimates of number of trail users (bike users and pedestrians including walkers and trail runners)
- development of 10-year projections and a benefit cost analysis.

Benefits are compared with the proposed project cost (of around \$13 million), for new trails and trail improvements.

The analysis of each of the trail user segments allows for a comparative assessment of the economic impacts of trail users on the regional economy.

13.1.1 Construction Phase Impacts

Construction costs for the trails development is estimated at \$10.2 million for materials and build alone (of an estimated total project cost of around \$13 million).⁶⁶ This includes new trails and associated infrastructure. It does not include project management and consultancies, contingencies, permitting and associated studies.

A total of 38.3 FTE jobs (31.9 direct jobs and 6.4 indirect/induced jobs) would be generated during the construction period. The direct jobs comprise 25.5 jobs in on-site construction and 6.4 jobs in materials/equipment supply.

⁶⁵ In this report walkers cover- recreational walkers, bushwalkers and trail runners and bike users cover- mountain bikes, recreational cyclists, gravel riders and bike packers.

⁶⁶ Estimated trails development cost, TRC January 2023

13.1.2 Trails Operations (Medium Case)

The medium case is the most likely outcome.

- Bike users (inc. MTB riders, recreational cyclists, gravel riders, bike packers) increase from around 46,200 in year 1 to around 52,400 in year 10. The major categories are mountain bikers and recreational riders. Day visitors account for around 68% of the users.
- Walkers (inc. recreational walkers, bushwalkers, trail runners) increase from around 28,200 in year 1 to around 31,700 in year 10. The major categories are recreational walker and bushwalkers. Day visitors account for around 80% of the users.
- Total annual trail users increase from around 74,400 in year 1 to 84,100 in year 10.
- The overnight visitors would stay in accommodation in locations along the trails and in other parts of the region.

13.1.3 Trail Operations - User Spending (Medium Case)

The following is total spending in the region based on trail user numbers (medium case). *It accounts for total spend by visitors regardless of how much of the total amount stays within region.* Total spending by bike users increases from \$6.652 million in year 1 to \$7.512 million in year 10 (constant \$2022 prices). For walkers, total spending increases from \$2.509 million to \$2.808 million. **Total spending for all users increases from \$9.161 million to \$10.319 million.**

13.1.4 Trail Operations – Jobs Generated (Medium Case)

Trail visitors and their spending generate jobs in the region across several sectors. For the medium case:

Users of the trails were estimated to generate a total of around **41.3 FTE jobs in year 1 increasing to 46.3 jobs in year 10**. Bike users of the trails were estimated to generate a total of around 29.8 FTE jobs in year 1 increasing to around 33.4 jobs in year 10. Walkers generate 11.6 FTE jobs in year 1 increasing to 12.9 in year 10.

The jobs generated are mainly in recreation services (e.g. support – shuttles, guides, bike hire etc. and other activities), accommodation, food service transport, and retail.

13.1.5 Trail Operations – Regional Income (Medium Case)

Trail users and their spending provides a major boost to regional income (wage & salaries and business profits.) *This figure accounts for spend by visitors less ‘leakage’ of income to recipients outside of region (i.e. non-local suppliers or end recipients of dollars spent in region).* It captures investment that stays in region. For medium case:

All users of the trails generate a total of around \$3.187 million in year 1 increasing to around \$3.573 million in year 10 (2031). Bike users generate a total of around \$2.296 million in year 1 increasing to around \$2.579 million in year 10. Walkers generate a total of around \$0.891 million in year 1 increasing to around \$0.994 million in year 10. Total regional income generated over 10 years is \$33.776 million (in constant 2022 prices).

13.1.6 Trail Operations – Other Benefits (Medium Case)

There are several other benefits that can be estimated for the trails. These are: health benefits and productivity benefits associated with exercise; and a consumer valuation of the trails experience (measured by a shadow price or the notional amount people would be willing to pay for a use of a trail).

As part of a regional impact assessment, health and productivity benefits were only measure for local users and regional users (adjacent LGAs). For the medium case, total other measured benefits increase from \$2.836 million in year 1 to \$3.253 million in year 10, for a 10-year total of \$30.460 million.

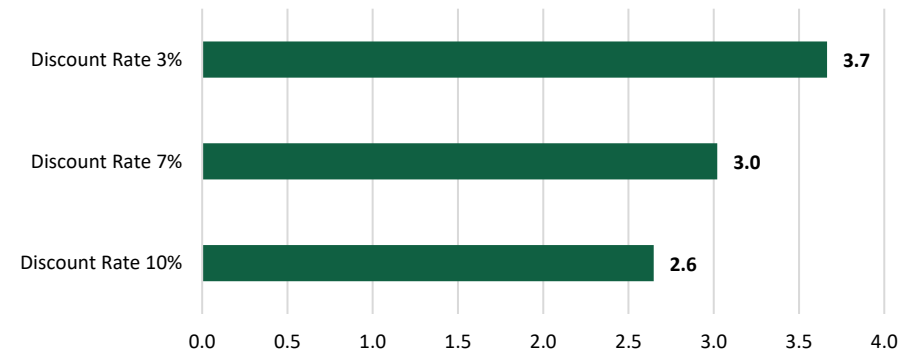
13.1.7 Benefit/Cost Analysis (Medium Case)

The following table and chart compares the costs of the trails development with the benefits associated with the increase in trails usage over the 10-year period.

The benefits are measured by: the increase in regional income generated by trail users over a 10-year period; the estimated health benefits; productivity benefits and the user value. The costs include construction costs, and asset maintenance costs. For the comparison, the present value of the benefits is calculated using 3 discount rates (3%, 7% and 10%). The capital costs covers the trail improvements and new trails.

The chart below compares Benefit Cost Ratios (BCR) for the 3 discount rates for the medium case. The BCR for a 3% discount rate is 3.7, for a 7% discount rate 3.0 and for a 10% discount rate 2.6.

Figure 18. Southern Villages Trails Development (Medium Case) Benefit Cost Ratio (BCR)



Source: MCA modelling & analysis, January 2023

The benefit cost analysis was also undertaken for all three cases. All cases deliver BCRs significantly above 1. For example, the low case has a BCR of 2.5 for a 7% discount rate.

Table 9. Benefit Cost Ratios Three Cases

BCRS	DISCOUNT RATE 3%	DISCOUNT RATE 7%	DISCOUNT RATE 10%
Medium Case	3.7	3.0	2.6
Low Case	3.0	2.5	2.2
High Case	4.3	3.6	3.1

Source: MCA modelling & analysis, January 2023

All users of the trails
will generate a total of around
\$3.187 million in year 1
increasing to around
\$3.573 million in year 10 (2031).

Regional (Captured) Income
MCA modelling & analysis, January 2023



13.2 Economic Benefits - Extended Analysis

This section extends analysis on the economic impact assessment of the Southern Villages Iconic Trail network and a cost benefit analysis of the proposed new trails. The results are indicative of the regional economic benefits generated by trail users.⁶⁷

The economic benefits of the trail arise from: spending by these users/visitors in the towns adjacent to the trail and other spending in the broader region; health and productivity benefits of active recreation activities; and a notional value of the trail for individual users. **Modelling assumptions are in Appendix C.**

Visitors from outside the region (particularly overnight visitors/users) generate significant expenditure covering: food and beverage; accommodation (for overnight stayers); recreation and other services; and transport.

The economic impacts of the development of the trail are modelled for both the construction phase and the operations phase. The impacts are measured in terms of full time equivalent jobs (FTE); and the increase in regional income that is generated by trail users and their spending in the region.⁶⁸

Three cases are examined: medium case (most likely); low case (20% below medium case); high case (20% above medium case). The medium case is detailed in the body of the report and the low and high cases are outlined in Appendices.

The economic impact analysis has been undertaken by MCA (Michael Connell & Assocs.) economic consultants.

⁶⁷ In this report walkers cover- recreational walkers on the trails, bush walkers and trail runners and bike users cover- mountain bikes, recreational cyclists, gravel riders and bike packers.

⁶⁸ Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending on the region. In the modelling of income generated, income tax and GST on spending, are both treated as leakages from the region.

⁶⁹ Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending on the region. In the modelling of income generated, income tax and GST on spending, are both treated as leakages from the region.

⁷⁰ With project management and other associated costs, the total cost of the project is estimated at around \$13 million.

13.3 Construction Phase – Economic Impacts

The economic impacts of the development of the trail are modelled for both the construction phase and the operations phase. The impacts are measured in terms of: full time equivalent jobs (FTE); and the increase in regional income that is generated by trail users and their spending in the region.⁶⁹

A significant number of jobs and an increase in regional income will be generated during the construction phase of the project.

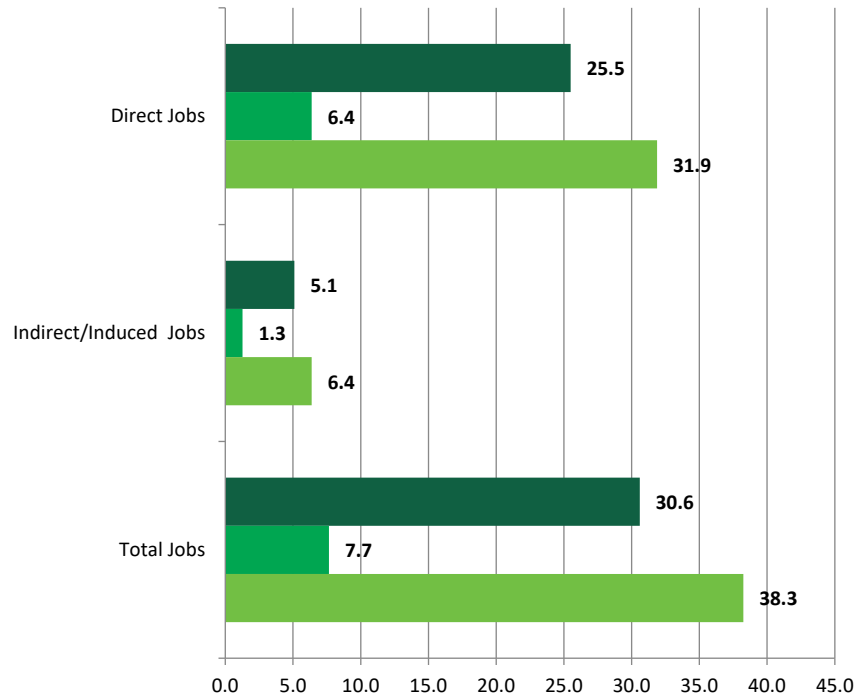
13.3.1 Trails Construction

Construction costs for the trails development is estimated at \$10.2 million.⁷⁰ This includes new trail segments and upgrades to related infrastructure. It does not include project management and consultancies, contingencies, permitting and associated studies.

13.3.2 Economic Impacts - Construction Phase

A total of 38.3 FTE jobs (31.9 direct jobs and 6.4 indirect/induced jobs) would be generated during the construction period. The direct jobs comprise 25.5 jobs in on-site construction and 6.4 jobs in materials/equipment supply.

Figure 19. Southern Villages Trail -Construction Phase FTE Jobs (no.)



	Total Jobs	Indirect/Induced Jobs	Direct Jobs
■ Construction Jobs (Region)	30.6	5.1	25.5
■ Materials Jobs (state)	7.7	1.3	6.4
■ Total Jobs - Construction Phase	38.3	6.4	31.9

Source: MCA Modelling & Analysis January 2023. Potential differences due to rounding.

Table 10. Construction Phase Southern Villages Trails - Jobs Generated (FTE no.)

CONSTRUCTION PHASE FTE JOBS	DIRECT JOBS	INDIRECT/ INDUCED JOBS	TOTAL JOBS
Construction Jobs (Region)	25.5	5.1	30.6
Materials & Equipment Jobs (state)	6.4	1.3	7.7
Total Jobs - Construction Phase	31.9	6.4	38.3

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

During the construction period a total of \$6.120 million in regional income would be generated (\$5.100 million direct income and \$1.020 million indirect/induced).⁷¹

⁷¹ This assumes the construction workforce would come from the region around the proposed trails.

13.4 Operations Phase – Economic Impacts

13.4.1 Analysing Trail Impacts

The operations phase economic impacts of the trail are driven by the expenditure of visitors/users in towns/villages adjacent to the trails and in the broader region. MCA's regional economic model is used to estimate the employment and income impacts of the trails network. The model allocates spending across relevant industry sectors and takes account of the significant shares of the gross spending by visitors/users, which leaks out of the region.⁷²

Two types of analysis was undertaken:

- Estimates of the number of trail users (bike riders and walkers) and development of 10-year projections and the total benefits to the region.
- Benefit cost analysis: comparison of benefits with the proposed project costs over the 10-year period.

Three user scenarios were examined: **medium case** (most likely user levels); **low case** (annual user levels 20% below the medium case) and **high case** (annual user levels 20% above the medium case).

Estimates were made for each type of trail user.

- Bike users comprise: mountain bikers; recreational cyclists; gravel riders; and bike packers (multi-day rides)
- Walkers comprise: recreational walkers; bush walkers; and trail runners.

The catchment area for the trails comprises: the LGAs where the trails are located; adjacent LGAs (including Wollongong); visitors from metropolitan areas; and some interstate /international visitors. The mix of day visits and overnight visitors were estimated.

The detailed analysis in this section covers medium case (most likely outcome). *Results for the low and high cases are included in Appendices.*

⁷² The spending by trail users is not the economic impact and does not represent the increase in regional income. There is a major leakage of this spending out of the region due to : the GST (10%); and a significant component of the value of services and products purchased by visitors comes from outside the region (e.g. food ingredients, soft drinks, beer, consumer products bought etc.). The model takes account of these leakages and estimates employment impacts and the increase in regional income that accrue to the region where the trail is located.

13.4.2 Southern Village Trails – User Estimates

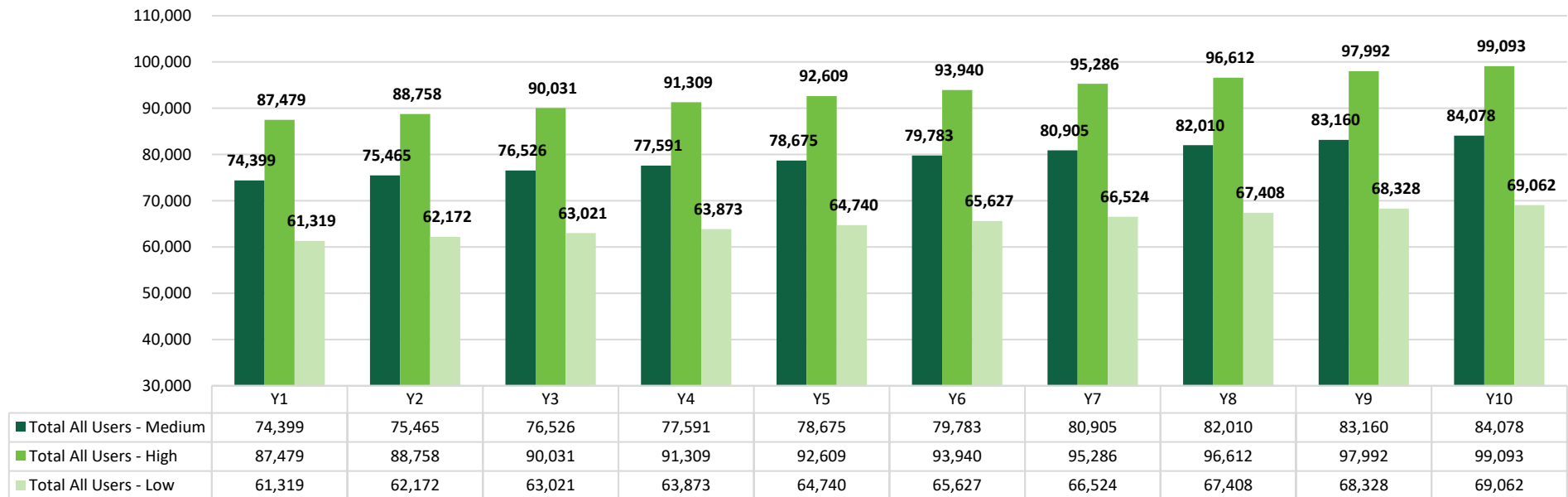
The following are estimates for trail users over a 10-year period. The trails are multi use and are around 100km in length, therefore they have the capacity to attract large number of users to segments of the trails.

Comparison of Cases

The following chart compares estimates of total users for each of the 3 cases.

- **For the medium case** total annual trail users increase from around 74,400 in year 1 to 84,100 in year 10
- **For the low case** (20% below the medium case), users total around 61,400 in year 1 and around 69,100 in year 10
- **The high case** is 20% above the medium case, with around 87,500 users in year 1 increasing to around 99,100 in year 10.

Figure 20. All Trail Users - Comparison of Cases



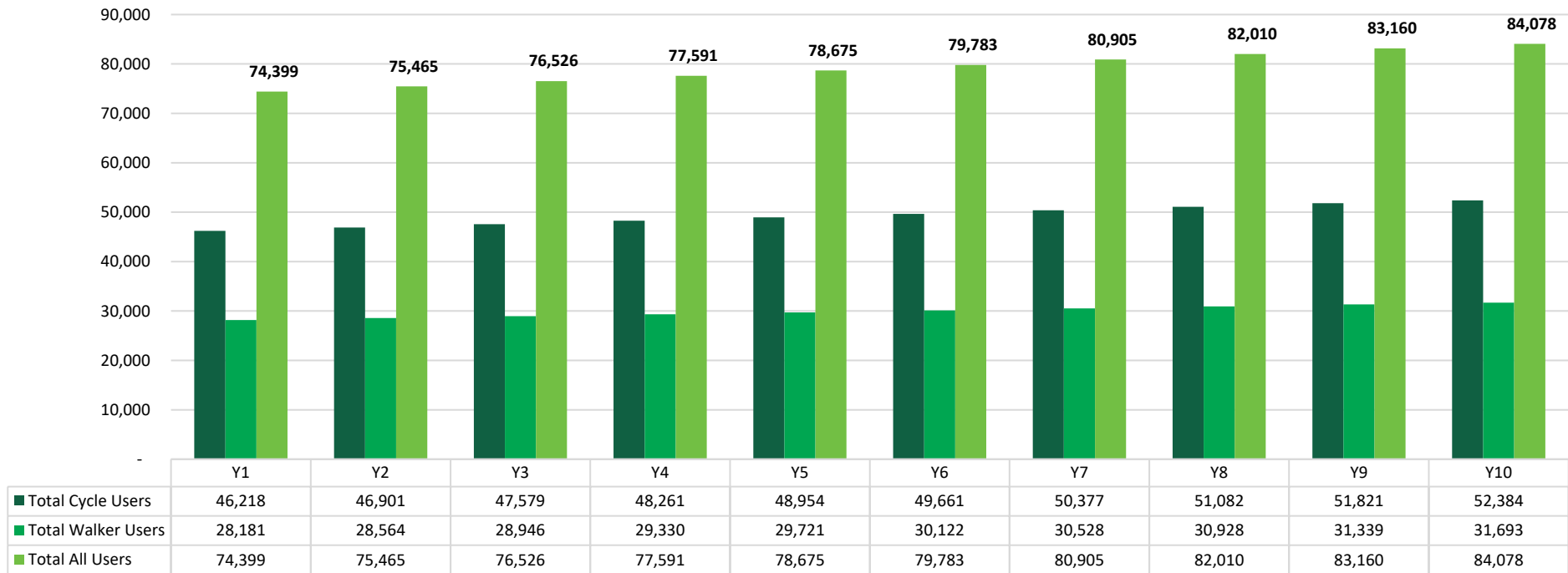
Source: MCA modelling & estimates, January 2023.

Medium Case - Trail Users

The medium case is the most likely outcome. The following tables show estimates for each type of user and the mix between day visitors and overnight visitors. The overnight visitors would stay in accommodation in locations along the trails and in other parts of the region.

- Bike users (inc. MTB riders, recreational cyclists, gravel riders, bike packers) increase from around 46,200 in year 1 to around 52,400 in year 10. The major users are mountain bikers and recreational riders. Day visitors account for around 68% of the users
- Walkers (inc. recreational walkers, bushwalkers, trail runners) increase from around 28,200 in year 1 to around 31,700 in year 10. The major categories are recreational walker and bushwalkers. Day visitors account for around 80% of the users
- Total annual trail users increase from around 74,400 in year 1 to 84,100 in year 10.

Figure 21. Medium Case: Trail Users by Type



Source: MCA modelling & estimates, January 2023.

Table 11. Medium Case: Bike Users by Type

Total Users – Bikes	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Medium Case										
Day Visitors										
MTB Trail Users	17,498	17,755	18,012	18,270	18,533	18,800	19,069	19,336	19,615	19,828
Rec Cyclists Trail Users	10,816	10,981	11,146	11,312	11,481	11,653	11,827	11,998	12,177	12,317
Gravel Riders Trail Users	3,500	3,551	3,602	3,654	3,707	3,760	3,814	3,867	3,923	3,966
Bike Packers	-	-	-	-	-	-	-	-	-	-
Total Day	31,813	32,287	32,760	33,236	33,720	34,213	34,710	35,201	35,715	36,110
Overnight Visitors										
MTB Trail Users	5,611	5,695	5,778	5,860	5,944	6,031	6,119	6,205	6,296	6,364
Rec Cyclists Trail Users	3,287	3,337	3,387	3,436	3,487	3,538	3,591	3,643	3,697	3,738
Gravel Riders Trail Users	1,122	1,139	1,156	1,172	1,189	1,206	1,224	1,241	1,259	1,273
Bike Packers	4,385	4,442	4,499	4,556	4,614	4,673	4,733	4,792	4,854	4,899
Total Overnights	14,404	14,614	14,820	15,024	15,233	15,448	15,667	15,881	16,106	16,274
Total All	46,218	46,901	47,579	48,261	48,954	49,661	50,377	51,082	51,821	52,384

Source: MCA modelling & estimates, January 2023.

Table 12. Medium Case: Walk Users by Type

Total Users -Walkers	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Medium Case										
Day Visitors										
Rec Walkers	11,578	11,737	11,898	12,060	12,225	12,394	12,563	12,731	12,902	13,056
Bushwalkers	7,781	7,889	7,996	8,103	8,213	8,325	8,439	8,551	8,667	8,762
Trail Runners	3,685	3,733	3,781	3,831	3,881	3,932	3,983	4,034	4,086	4,133
Total Day	23,044	23,359	23,675	23,994	24,318	24,651	24,985	25,316	25,655	25,952
Overnight Visitors										
Rec Walkers	2,155	2,182	2,209	2,234	2,261	2,289	2,317	2,345	2,374	2,397
Bushwalkers	2,369	2,403	2,436	2,468	2,501	2,536	2,571	2,606	2,642	2,671
Trail Runners	614	621	627	634	640	647	654	661	668	674
Total Overnights	5,138	5,205	5,271	5,336	5,402	5,472	5,543	5,612	5,684	5,742
Total All	28,181	28,564	28,946	29,330	29,721	30,122	30,528	30,928	31,339	31,693

Source: MCA modelling & estimates, January 2023.

Table 13. Medium Case: Total Users by Type

Total Users	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Medium Case										
Users Bike										
Total Day	31,813	32,287	32,760	33,236	33,720	34,213	34,710	35,201	35,715	36,110
Total Overnights	14,404	14,614	14,820	15,024	15,233	15,448	15,667	15,881	16,106	16,274
Total Bike Users	46,218	46,901	47,579	48,261	48,954	49,661	50,377	51,082	51,821	52,384
Users - Walking										
Total Day	23,044	23,359	23,675	23,994	24,318	24,651	24,985	25,316	25,655	25,952
Total Overnights	5,138	5,205	5,271	5,336	5,402	5,472	5,543	5,612	5,684	5,742
Total Walker Users	28,181	28,564	28,946	29,330	29,721	30,122	30,528	30,928	31,339	31,693
Total Trail Users										
Total Day	54,857	55,646	56,435	57,230	58,039	58,863	59,695	60,518	61,370	62,062
Total Overnights	19,542	19,819	20,091	20,360	20,636	20,920	21,210	21,493	21,790	22,016
Total All Users	74,399	75,465	76,526	77,591	78,675	79,783	80,905	82,010	83,160	84,078

Source: MCA modelling & estimates, January 2023.

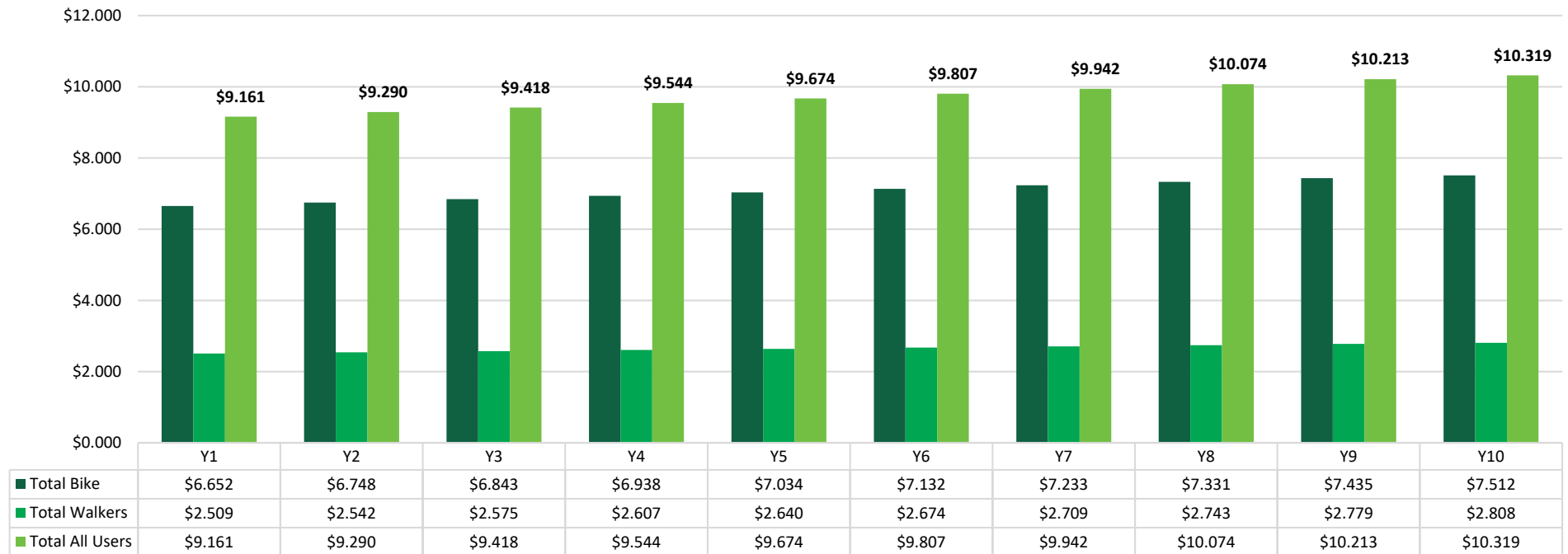
13.4.3 Medium Case – Spending in Region

The user projections drive the estimated spending in the region. Spending estimates are based mainly on TRA spending data and assumptions based on the experience with other trails.

The following is total spending in the region based on trail user numbers (medium case):

- Total spending by bike users increases from \$6.652 million in year 1 to \$7.512 million in year 10 (constant \$2022 prices)
- For walkers, total spending increases from \$2.509 million to \$2.808 million
- Total spending for all users increases from \$9.161 million to \$10.319 million.

Figure 22. Medium Case: Spending in Region - Trail Users (\$m 2022 prices)



Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Table 14. Medium Case : Spending by Bike Users (\$ million 2022 prices)

Spending – Bike Users \$ million - \$2022 prices Medium Case	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Day Visitors										
MTB Trail Users	\$0.668	\$0.678	\$0.688	\$0.697	\$0.707	\$0.717	\$0.728	\$0.738	\$0.748	\$0.756
Rec Cyclists Trail Users	\$0.407	\$0.413	\$0.419	\$0.426	\$0.432	\$0.438	\$0.445	\$0.451	\$0.458	\$0.463
Gravel Riders Trail Users	\$0.134	\$0.136	\$0.138	\$0.139	\$0.141	\$0.143	\$0.146	\$0.148	\$0.150	\$0.151
Bike Packers	0	0	0	0	0	0	0	0	0	0
Total Day	\$1.209	\$1.227	\$1.244	\$1.262	\$1.281	\$1.299	\$1.318	\$1.336	\$1.356	\$1.370
Overnight Visitors										
MTB Trail Users	\$1.840	\$1.868	\$1.895	\$1.922	\$1.950	\$1.978	\$2.007	\$2.035	\$2.065	\$2.087
Rec Cyclists Trail Users	\$1.078	\$1.095	\$1.111	\$1.127	\$1.144	\$1.161	\$1.178	\$1.195	\$1.213	\$1.226
Gravel Riders Trail Users	\$0.368	\$0.374	\$0.379	\$0.384	\$0.390	\$0.396	\$0.401	\$0.407	\$0.413	\$0.417
Bike Packers	\$2.157	\$2.186	\$2.213	\$2.241	\$2.270	\$2.299	\$2.328	\$2.357	\$2.388	\$2.410
Total Overnights	\$5.444	\$5.522	\$5.599	\$5.675	\$5.753	\$5.833	\$5.915	\$5.995	\$6.079	\$6.141
Total All	\$6.652	\$6.748	\$6.843	\$6.938	\$7.034	\$7.132	\$7.233	\$7.331	\$7.435	\$7.512

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Table 15. Medium Case : Spending by Walkers (\$ million 2022 prices)

Spending – Walkers \$ million - \$2022 prices Medium Case	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Day Visitors										
Rec Walkers	\$0.404	\$0.410	\$0.415	\$0.421	\$0.426	\$0.432	\$0.437	\$0.443	\$0.449	\$0.454
Bushwalkers	\$0.292	\$0.296	\$0.300	\$0.304	\$0.308	\$0.312	\$0.316	\$0.320	\$0.324	\$0.328
Trail Runners	\$0.128	\$0.129	\$0.131	\$0.133	\$0.134	\$0.136	\$0.138	\$0.139	\$0.141	\$0.143
Total Day	\$0.824	\$0.835	\$0.846	\$0.857	\$0.868	\$0.879	\$0.891	\$0.902	\$0.914	\$0.924
Overnight Visitors										
Rec Walkers	\$0.707	\$0.716	\$0.724	\$0.733	\$0.742	\$0.751	\$0.760	\$0.769	\$0.779	\$0.786
Bushwalkers	\$0.777	\$0.788	\$0.799	\$0.810	\$0.820	\$0.832	\$0.843	\$0.855	\$0.867	\$0.876
Trail Runners	\$0.201	\$0.204	\$0.206	\$0.208	\$0.210	\$0.212	\$0.215	\$0.217	\$0.219	\$0.221
Total Overnights	\$1.685	\$1.707	\$1.729	\$1.750	\$1.772	\$1.795	\$1.818	\$1.841	\$1.864	\$1.883
	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
Total All	\$2.509	\$2.542	\$2.575	\$2.607	\$2.640	\$2.674	\$2.709	\$2.743	\$2.779	\$2.808

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

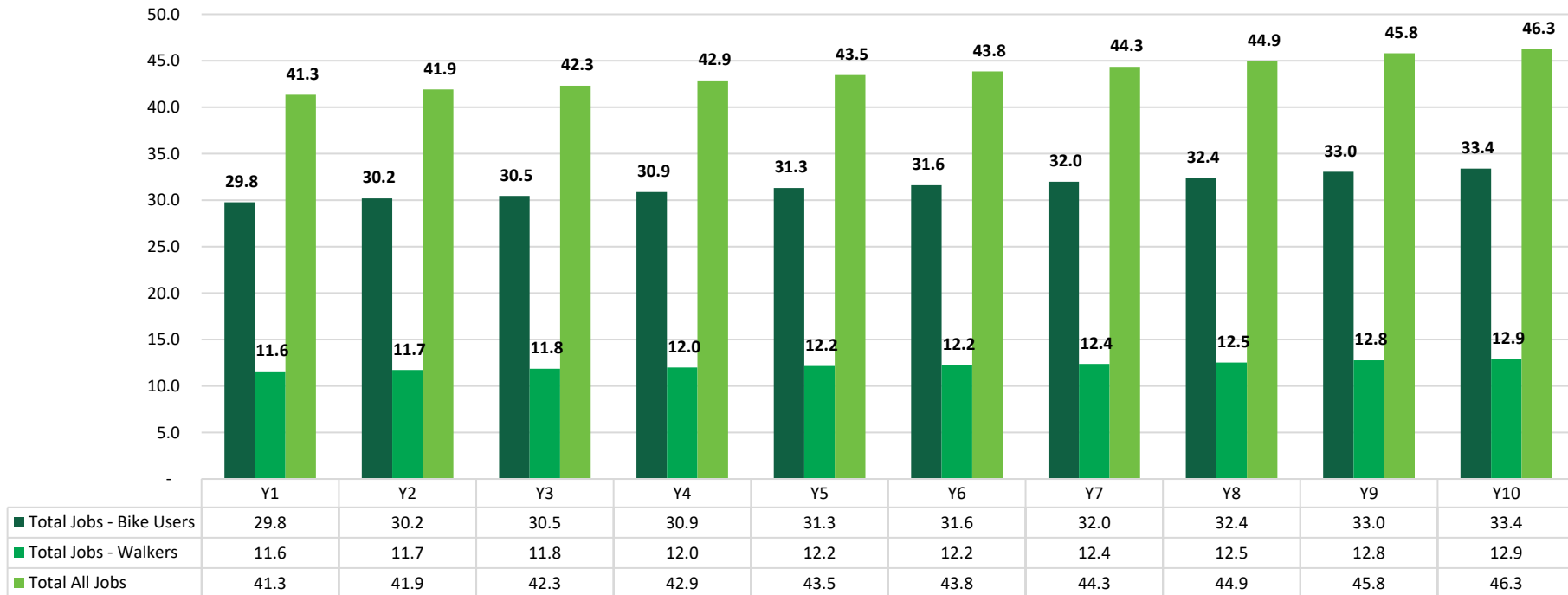
13.4.4 Employment Impacts - Jobs Generated

Trail visitors and their spending generate jobs in the region across several sectors.

- Users of the trails were estimated to generate a total of around 41.3 FTE jobs in year 1 increasing to 46.3 jobs in year 10
 - Bike users of the trails were estimated to generate a total of around 29.8 FTE jobs in year 1 increasing to around 33.4 jobs in year 10
 - Walkers generate 11.6 FTE jobs in year 1 increasing to 12.9 in year 10 .

The jobs generated are mainly in recreation services (e.g. support – shuttles, guides, bike hire etc. and other activities), accommodation, food service transport, and retail.

Figure 23. Medium Case: Jobs Generated by Trail Users (FTE no.)



Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Table 16. Medium Case : Jobs Generated by Trail Users (FTE no.)

Jobs Generated FTE	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Medium Case										
Bike Users - Jobs										
Day Visitors - Bike	5.9	6.0	6.1	6.2	6.3	6.4	6.4	6.5	6.6	6.7
Overnight Visitors - Bike	23.8	24.2	24.3	24.7	25.0	25.2	25.5	25.9	26.4	26.7
Total Jobs – Bike Users	29.8	30.2	30.5	30.9	31.3	31.6	32.0	32.4	33.0	33.4
Walkers - Jobs										
Day Visitors - Walkers	4.0	4.1	4.2	4.2	4.3	4.3	4.3	4.4	4.5	4.5
Overnight Visitors - Walkers	7.5	7.6	7.7	7.8	7.9	7.9	8.0	8.1	8.3	8.4
Total Jobs Wakers	11.6	11.7	11.8	12.0	12.2	12.2	12.4	12.5	12.8	12.9
Total Jobs										
Day Visitors	10.0	10.1	10.3	10.4	10.6	10.7	10.8	10.9	11.1	11.3
Overnight Visitors	31.4	31.8	32.0	32.5	32.9	33.2	33.6	34.0	34.7	35.0
Total All Jobs	41.3	41.9	42.3	42.9	43.5	43.8	44.3	44.9	45.8	46.3

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

13.4.5 Regional Income Impacts

Trail users and their spending provides a major boost to regional income (wage & salaries and business profits.)

- All users of the trails generate a total of around \$3.187 million in year 1 increasing to around \$3.573 million in year 10 (2031)
 - Bike users generate a total of around \$2.296 million in year 1 increasing to around \$2.579 million in year 10
 - Walkers generate a total of around \$0.891 million in year 1 increasing to around \$0.994 million in year 10
- Total regional income generated over 10 years is \$33.776 million (in constant 2022 prices).

Figure 24. Medium Case: Regional Income Generated by Trails Users (\$ million 2022 prices)



Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

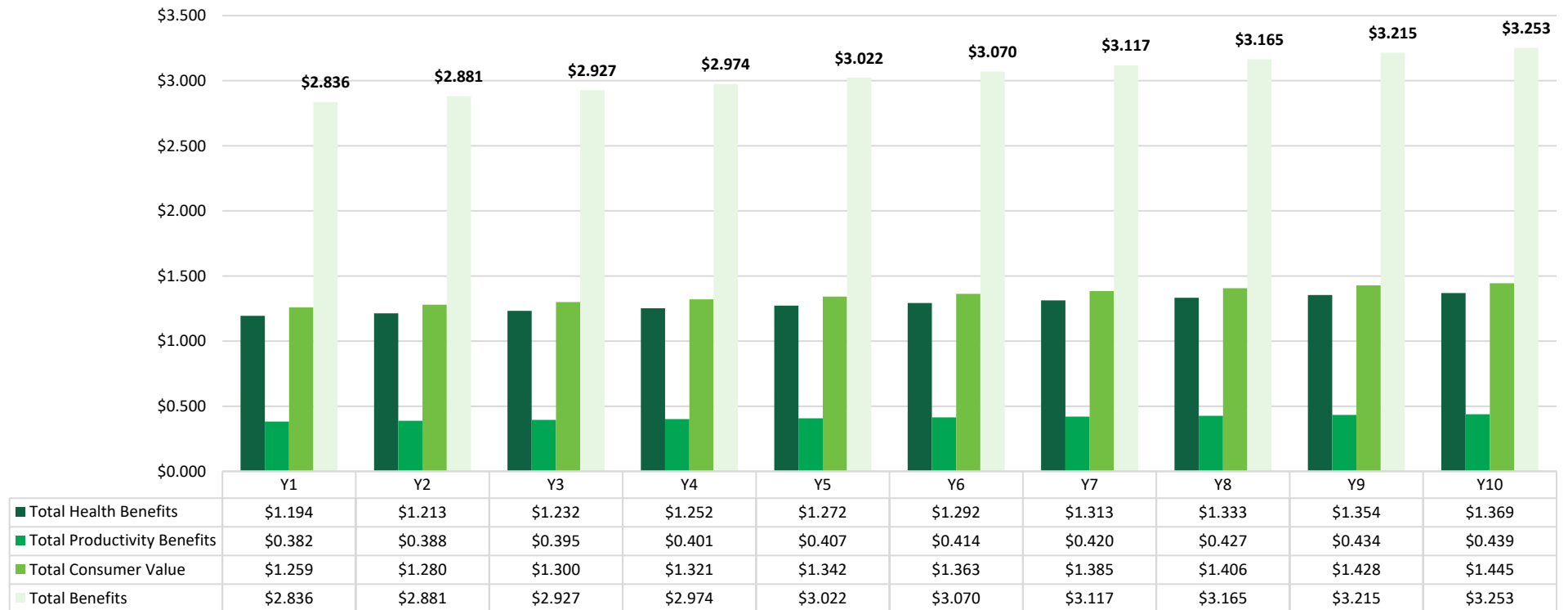
13.4.6 Other Benefits

There are several other benefits that can be estimated for the trails. These are: health benefits and productivity benefits associated with exercise; and a consumer valuation of the trails experience (measured by a shadow price or the notional amount people would be willing to pay for a use of a trail). These have been estimated for both types of users (bikes and walkers). These benefits are additional to the increase in regional income generated by trail users’ spending in the region.

As part of a regional impact assessment, health and productivity benefits were only measured for local users and regional users (adjacent LGAs).

For the medium case, total other measured benefits increase from \$2.836 million in year 1 to \$3.253 million in year 10, for a 10 year total of \$30.460 million.

Figure 25. Medium Case: Other Benefits - All Trail Users (\$million 2022 prices)



Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Table 17. Medium Case: Other Benefits by User Type (\$ million 2022 prices)

Other Benefits (\$ million - \$2022 prices) Medium Case	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Total 10 Years
Health Benefits											
Bike Users	\$0.770	\$0.782	\$0.794	\$0.807	\$0.820	\$0.833	\$0.845	\$0.858	\$0.872	\$0.881	\$8.262
Walkers	\$0.424	\$0.431	\$0.438	\$0.445	\$0.453	\$0.460	\$0.467	\$0.475	\$0.482	\$0.488	\$4.563
Total Health Benefits	\$1.194	\$1.213	\$1.232	\$1.252	\$1.272	\$1.292	\$1.313	\$1.333	\$1.354	\$1.369	\$12.825
Productivity Benefits											
Bike Users	\$0.247	\$0.250	\$0.254	\$0.258	\$0.263	\$0.267	\$0.271	\$0.275	\$0.279	\$0.282	\$2.646
Walkers	\$0.136	\$0.138	\$0.140	\$0.143	\$0.145	\$0.147	\$0.150	\$0.152	\$0.154	\$0.156	\$1.461
Total Productivity Benefits	\$0.382	\$0.388	\$0.395	\$0.401	\$0.407	\$0.414	\$0.420	\$0.427	\$0.434	\$0.439	\$4.107
Consumer Value											
Bike Users	\$0.812	\$0.825	\$0.838	\$0.851	\$0.865	\$0.878	\$0.892	\$0.905	\$0.919	\$0.929	\$8.715
Walkers	\$0.447	\$0.455	\$0.462	\$0.470	\$0.477	\$0.485	\$0.493	\$0.501	\$0.509	\$0.515	\$4.813
Total Consumer Value	\$1.259	\$1.280	\$1.300	\$1.321	\$1.342	\$1.363	\$1.385	\$1.406	\$1.428	\$1.445	\$13.528
Total Other Benefits											
Bike Users	\$1.828	\$1.857	\$1.887	\$1.917	\$1.947	\$1.977	\$2.008	\$2.038	\$2.070	\$2.093	\$19.623
Walkers	\$1.007	\$1.024	\$1.040	\$1.057	\$1.075	\$1.092	\$1.110	\$1.127	\$1.145	\$1.160	\$10.837
Total Benefits	\$2.836	\$2.881	\$2.927	\$2.974	\$3.022	\$3.070	\$3.117	\$3.165	\$3.215	\$3.253	\$30.460

Source: MCA Modelling & Analysis January 2023 - May be some differences due to rounding.

13.5 Benefit Cost Analysis – Trails Development (Medium Case)

The benefits and costs are analysed for a 10-year period for the trails development and improvements. The measured benefits are those associated with the user numbers over the 10-year period.

13.5.1 Trail Costs - 10 Years

The estimated construction cost of the trails project is \$10.2 million and other costs take the total to an estimated \$13 million.⁷³ The 10-year maintenance costs are \$1.950 million (assumed to be 1.5% of capital cost per year over 10 years), for a total 10-year project cost of \$14.950 million.

13.5.2 Measuring Benefits – Trail Users

The measured benefits (10 years) for the trails were estimated, and these comprise:

- **Regional income:** increase in regional income generated by the spending in the region by users of the trails over the 10-year period is \$33.775 million.
- **Health benefits:** exercise leads to avoided health costs (adjusted for injury) for participants. These benefits were estimated at \$12.835 million for local and regional trail users.
- **Productivity benefits:** fit employees are more productive, and this benefit for local and regional trail users was estimated at \$4.107 million over 10 years.
- **Consumer value:** there are no charges for using the trails. The consumer value is a shadow price that a trail user may be willing to pay for the experience. This was estimated to be \$13.528 million for all users over the 10-year period.⁷⁴

The total 10-year benefits were \$64.236 million (in constant \$2022 prices).

⁷³ TRC cost estimates January 2023

⁷⁴ The methodology used in estimating these benefits is outlined Appendix B. As part of a regional impact assessment, health and productivity benefits were only measure for local users and regional users (adjacent LGAs).

13.5.3 Benefit Cost Analysis

The following table and chart compares the costs of the trails development with the benefits associated with trails usage over the 10-year period.

- The benefits are measured by: the increase in regional income generated by trail users over a 10-year period; the estimated health benefits; productivity benefits and the user value.
- The costs include construction costs, and asset maintenance costs.
- For the comparison, the present value of the benefits is calculated using 3 discount rates (3%, 7% and 10%). The capital costs covers the trail improvements and new trails.

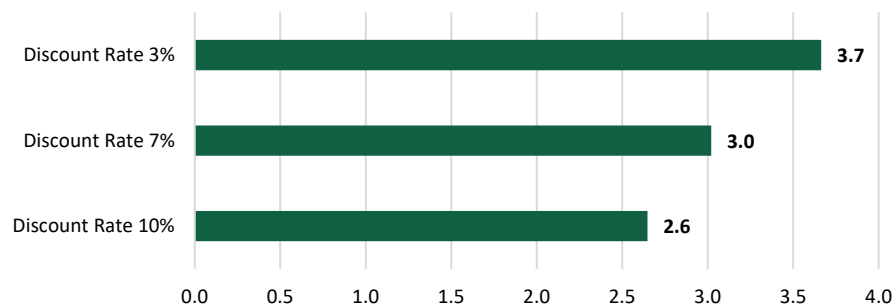
Table 18. Medium Case: Benefits and Cost Analysis –Trails Project - 10 Year Period (\$2022 prices)

Trails Project Medium Case Regional Cost Benefit (\$2022 prices) Period : 10 Years	Discount Rate 3%	Discount Rate 7%	Discount Rate 10%
Project Costs			
Capital Costs Trails & Infrastructure	\$13,000,000	\$13,000,000	\$13,000,000
Costs - Asset Maintenance (10 years)	\$1,950,000	\$1,950,000	\$1,950,000
Total Costs	\$14,950,000	\$14,950,000	\$14,950,000
Benefits - Total			
Direct Benefits Regional Income	\$33,775,778	\$33,775,778	\$33,775,778
Productivity Benefits	\$4,107,168	\$4,107,168	\$4,107,168
Health Benefits (local & regional)	\$12,824,752	\$12,824,752	\$12,824,752
User Value (shadow user price)	\$13,528,220	\$13,528,220	\$13,528,220
Total Benefits	\$64,235,918	\$64,235,918	\$64,235,918
Total Benefits (\$) Present Value	\$54,781,470	\$45,156,779	\$39,586,177
Benefit Cost			
Net Present Value (\$) Total Benefits	\$39,831,470	\$30,206,779	\$24,636,177
NPV/Cost	2.7	2.0	1.6
Benefit Cost Ratio (BCR)	3.7	3.0	2.6
<Total Benefits: Present Value/Total Capital Costs>			

Source: MCA modelling & analysis, January 2023

The chart below compares Benefit Cost Ratios (BCR) for the 3 discount rates. The BCR for a 3% discount rate is 3.7 , for a 7% discount rate 3.0 and for a 10% discount rate 2.6 .

Figure 26. Medium Case: Southern Villages Trails Development Benefit Cost Ratio (BCR)



Source: MCA modelling & analysis, January 2023

Comparison of Cases

The benefit cost analysis was also undertaken for all three cases (see Appendices). All cases deliver BCRs significantly above 1. For example, the low case has a BCR of 2.5 for a 7% discount rate.

Table 19. Benefit Cost Ratios – Three Cases

BCRs	Discount Rate	Discount Rate	Discount Rate
	3%	7%	10%
Medium Case	3.7	3.0	2.6
Low Case	3.0	2.5	2.2
High Case	4.3	3.6	3.1

Source: MCA modelling & analysis, January 2023

13.6 Economic Analysis References

- Ausplay National Sports and Physical Activity survey- Bushwalking Participation, December 2020
- LGA Area Profiles 2019, Wingecarribee Shire
- Mountain Biking in Australia: An Economic and Participation Analysis (AusCycling), GHD Advisory, March 2021
- Quantitative Analysis Warburton Trails, Instinct & Reason, December 2020
- 2022 NSW Population, Housing and Implied Dwelling Projections, New South Wales Department of Planning and Environment , 2022.

14 Governance and Management

In reviewing successful trail destinations, clear, effective governance is one of the central pillars that helps a defined trail destination operate effectively and become nationally and internationally recognised.

An effective governance model will be required for the Southern Villages Iconic Trail experience if it is to become a successful and sustainable outdoor active destination.

The most successful management models for contained trail experiences across Australia and New Zealand have the following characteristics:

- Governance and accountability is clear and simple to initiate and administer over the longer term
- The strengths and expertise offered by each partner in the model are recognised and the preferred model allocates responsibilities and authority accordingly
- The visitor experience and presentation of the trail is substantially improved or continually improving, and the new model facilitates commercial tourism positioning, product development and marketing
- The trail is supported by a range of funding sources with a revenue raising mechanism to enhance cash flow to enable self-generated investment into facilities, assets and services
- An effective control environment is in place to reduce key risks (to staff, volunteers and visitors) and each agency's operations are not adversely affected (i.e. there is no dilution of effectiveness or undue strain on existing resources and budgets)
- The benefits of the model are visible to the community, and it is inclusive of user and community groups.

Good governance provides for well made decisions based on evidence and made in a collaborative way aligned to a strong sense of vision and long-term planning for trails. An effective governance structure and mechanism is important for each destination, and it is important that the governance model is fit for purpose for that area.

Elements of a good governance model include:

- the partners and operators have a clear sense of a vision for the destination
- the partners have a clear understanding of their roles and accountabilities and work together in that framework
- having teams with the right skills and experience to drive outcomes
- having access to the necessary financial, human and support resources they need to develop the destination.

Many trail destinations in Australia struggle to gain the necessary funding for ongoing maintenance. This is in part due to many trails being on land run by government agencies whose business models generally do not have fee for services or where the fees don't directly hypothecate back into a destination's maintenance.

Establishing and maintaining proper management, governance and financial sustainability of trail destinations is also vital to achieving the broader economic benefits associated with iconic trails experiences and increased tourism.

New models are being developed across Australia and New Zealand to help deliver strong financial security for trail developments.

Governance Case Study

– Break O’ Day, Tasmania

In 2015 the Break O’Day Council opened trails in the Blue Tier/Weldborough area as part of a joint project which was undertaken with Dorset Council to establish the Blue Derby MTB Trail Network. Following this, Break O’Day worked on the next stage of creating trails with the construction of 110 km of high-quality mountain bike trails as part of the St Helens Mountain Bike Trail project.

Local community engagement about plans, issues and opportunities helped ensure that the destination’s experiences were delivered by managers, businesses and the community. It also helped ensure that local needs are considered in the trail management and development.

The trails plan attracted millions of dollars in investment to the area through infrastructure, business and employment opportunities. This investment opportunity reinforced the commercial interest in the trail project and a willingness to invest both from within and outside the Break O’Day Community. This project has changed Tasmania’s North East Region and has transformed St Helens into the Mountain Bike Hub of Northern Tasmania.

The Council has been the lead organisation in the early development of the project however it has always been moving to a more focused role supporting and delivering key maintenance functions while enabling the community to take the lead in managing and developing the Network in partnership with Council and other stakeholders (Pedal Heads MTB Club, schools, Parks and Wildlife Service, Sustainable Timbers Tasmania etc.).

“The Collective” - a management model

A number of options were considered and an Incorporated Association “Break O’Day Trails Collective” was established in 2019 to take responsibility for managing the MTB Trail Networks within the following areas, including but not limited to:

- management and operations
- financial management
- seeking sponsorship/corporate advertising
- grant funding
- financial buy-in from businesses, community groups and individuals
- merchandise
- membership
- coordinate/organise events – in most cases this would be in consultation with Council’s Community Services Department
- promotion
- attraction of events.

As an Incorporated Association the Break O’Day Trails Collective Inc.’ provides a clear separation and a focus for the Trail Network and its management. Into the future, it may have the capacity to include all trails, e.g. walking, cycling and more MTB trails.



14.1.1 Independent Not-For-Profit Management Model Benefits

The benefits of a not-for-profit trail management organisation model include:

- it is community driven
- more support and ownership by the community
- it increases the opportunity to obtain external funding, including government grants
- potentially more revenue streams available
- creation of employment opportunities for trail management and a small level of maintenance, possibly through a volunteer type arrangement under the guidance of Councils Trail Maintenance Crew
- streamlined decision making.

Other examples of organisations taking on trail management responsibilities in a similar manner to The Collective include:

- the Jindabyne Trail Stewardship organisation in NSW (<https://www.jindabynetrailstewardship.org.au>)
- Western Trails Alliance (WA, <https://www.westertrailsalliance.com.au>)
- Majura Pines Trails Alliance (ACT, <http://www.majurapines.org>) and
- the Mokihinui-Lyell Backcountry Trust, manager of the Old Ghost Road trail in New Zealand (<https://oldghostroad.org.nz/the-trust/>).



15 Where to from here?



16 Conclusion

The Southern Villages Iconic Trail stands to become a central pillar of the Southern Highlands nature-based tourism offering and with strategic implementation has the potential to grow a significant tourism market fuelled by the growing demand for outdoor active, nature-based experiences.

The trail would be conduit to attracting visitors - more than 84,000 per annum within the first ten years of operation - seeking to stay longer and spend more, injecting the local economy with significant economic stimulus estimated to be between \$9 and \$10 million annually. In turn this would facilitate existing business growth, create new business opportunities and engender population growth by positioning Wingecarribee as an attractive region for people to live and work. Importantly, the project would work to integrate with all villages, communities and private landholders along the route. Broader community benefit should be a consistent benchmark aim and local resident benefit a priority consideration throughout development.

The trail would create important connections to country and opportunities for the regional Aboriginal community both culturally and economically by acting as a focal point for developing employment, training and skills development opportunities in environmental management and tourism roles. With significant involvement of and direction from the regional Aboriginal community, the trail could also be used to create significant culturally appropriate interpretation, education and storytelling opportunities through Traditional Owner-led design input.

As a whole, the trail is a significant project requiring high-end investments financially (in the region of \$13-\$14 million construction and \$195-500k ongoing maintenance) and in terms of organisational resources, however the SVIT is in a unique position with major stakeholders including the Wingecarribee Shire Council supportive of the concept, Aboriginal representative organisations in principal open to further consultation and engagement with a view to advising development principles, and an energised and experienced trails-based leading proponent in the Highland Trails organisation.

In order to descale risk and maximise timely milestone success, trail development should be approached in staged sections with a parallel benefit realised in that there is capacity for the majority of the trail to operate from the completion of Phase One (Bundanoon to Exeter) using existing minor and remote dirt road linkages and minimal investments. This multi-pronged approach enables a primary market – adventure cyclists – to undertake the journey from initial stage opening with further refinements and experience improvements achieved over time.

The trail has the opportunity to leverage a unique positioning as a true Village-to-Village trail relevant to a tiered user market of riders, walkers and runners with different sections appealing in degrees to the different markets according to each section's design characteristics (length between nodes, on or off road, saturation of features).

If strategically implemented in whole or part, the Southern Villages Iconic Trail would also leverage currently under-utilised nature based recreational assets and potentially be an impetus for further revision and upgrading of walking trails in the area. This in turn would deliver Wingecarribee Shire Council a trail asset of national significance and position the Southern Highlands Region as an attractive year-round destination for outdoor active visitation.

Crucial to realising short term progress and long-term success of the Southern Villages Iconic Trail will be strong and sustained leadership by an organisation specifically tasked with furthering the project with coordinated support from all major stakeholders, most crucially the regional Aboriginal community and their organisational representatives.

APPENDIX A Land Tenure Identification

LAND ID	IDENTIFIED AS	MANAGER
LOT 7492_DP1201350	State Forest	Forestry NSW
LOT 6478_DP1204601	Crown Land	Crown Lands
Unidentified Lot #1	No ID	No ID – likely Crown Land
LOT 2_DP751259	National Park	NSW PWS
LOT 7_DP253557	Private Land	Private
LOT 46_DP751259	National Park	NSW PWS
LOT 50_DP751259	National Park	NSW PWS
LOT 51_DP751259	National Park	NSW PWS
Unidentified Lot #2	No ID	No ID – likely NSW PWS managed
LOT 39_DP751259	National Park	NSW PWS
LOT21_DP1044299	National Park	NSW PWS
Unidentified Lot #3	No ID	No ID – likely NSW PWS managed
LOT 93_DP751281	National Park	NSW PWS
LOT 91_DP751281	National Park	NSW PWS
LOT 2_DP1275829	Private Land	Private
LOT1_DP1275829	Private Land	Private

LAND ID	IDENTIFIED AS	MANAGER
Unidentified Lot #4	No ID	No ID – likely easement (creek)
LOT 26_DP1154427	Private Land	Private
Road Easement - School Lane, Exeter	Road Easement	Council
Road Easement - Rockleigh Rd, Exeter	Road Easement	Council
Road Easement - Stonequarry Creek Rd, Exeter	Road Easement	Council
Road Easement - Rosedale Rd, Exeter	Road Easement	Council
LOT 40_DP751281	State Forest	Forestry NSW
LOT 110_DP751281	State Forest	Forestry NSW
LOT 111_DP751281	State Forest	Forestry NSW
LOT 109_DP751281	State Forest	Forestry NSW
LOT 5_DP751281	State Forest	Forestry NSW
LOT 35_DP751281	State Forest	Forestry NSW
LOT 75_DP751281	State Forest	Forestry NSW
LOT 2_DP775687	State Forest	Forestry NSW

LAND ID	IDENTIFIED AS	MANAGER
LOT 1_DP775687	Council Water Treatment Plant	Council
LOT 15_DP751281 / Road Easement Garbuts Rd, Meryla State Forest	State Forest	Forestry NSW
LOT 3_DP219232	State Forest	Forestry NSW
LOT 1_DP775688	State Forest	Forestry NSW
LOT 1_DP526054	State Forest	Forestry NSW
LOT2_DP544300	State Forest	Forestry NSW
LOT 1_DP544300	State Forest	Forestry NSW
LOT 81_DP1208270	State Forest	Forestry NSW
LOT 303_DP751303	State Forest	Forestry NSW
LOT 14_DP880774	Private Property	Private
Road Easement Meryla Road, Meryla State Forest	State Forest	Forestry NSW
Road Easement Gunrock Falls Fire Trail, Meryla State Forest	State Forest	Forestry NSW
Road Easement - Redhills Rd	Road easement	Council
LOT 336_DP751303	State Forest	Forestry NSW
LOT 337_DP751303	State Forest	Forestry NSW
Unidentified Lot #4 - Morton National Park	No ID – Morton National Park	NSW PWS

LAND ID	IDENTIFIED AS	MANAGER
LOT 1_DP602679 – Road easement	Redhills Fire trail / Gunrock Creek Firetrail	Unidentified – likely NSW PWS
Unidentified Lot #5 - Morton National Park	No ID – Morton National Park	NSW PWS
LOT 102_DP751281	State Forest	Forestry NSW
Unidentified Lot #6 - Morton National Park	No ID – Morton National Park	NSW PWS
LOT 67_DP751281	National Park	NSW PWS
LOT 76_DP751281	National Park	NSW PWS
Road easement - Griffins Fire Trail	National Park	NSW PWS
Public Road - Jacks Corner Road – Bendeela Rd	Public Road	Nowra Council
LOT 289_DP751262 - Kangaroo Valley Nature Reserve	Nature Reserve	NSW PWS
Unidentified Lot#7	Public easement	Council
Public Road – Bendeela Rd-Moss Vale Road	Public Road	Nowra Council

APPENDIX B Literature Review

- Wingecarribee 2031 Community Strategic Plan (2017)
- Wingecarribee Regional Economic Development Strategy 2018-2022
- Southern Highlands Tourism Strategy 2012-2016
- Economic Opportunities and Infrastructure Review – Wingecarribee LGA, prepared by Cardno for Illawarra First
- Sustainable Mountain Biking Strategy, Office of Environment & Heritage / NSW National Parks & Wildlife Service, 2011 Foundation document guiding the provision of high-quality mountain biking experiences in NSW addressing appropriateness and safety and environmental standards.
- Mountain Biking in Australia: An Economic and Participation Analysis 2021, GHD / AusCycling
- Mountain Biking State of Play Report, SportAus (2020)
- NSW Government Adventure Cycling Strategy (2023)
- Ongoing impact of COVID-19 on sport and physical activity participation, SportAus Ausplay, 2022
- NSW Dept Transport Draft Regional Transport Plan
- Warburton Mountain Bike Destination Report, 2021
- Shoalhaven Tourism Recovery Action Plan
- Shoalhaven Destination Management Plan 2018-2023
- Shoalhaven 2032
- Kangaroo Valley Group of Nature Reserves Plan of Management 2009.

APPENDIX C Trail User Modelling Assumptions

The following are the assumptions use in modelling trail users over a 10 year period. Assumptions

Table 20. Trail User Assumptions

Trail Users	Modelling Assumptions	Data Source
Bike Riders		
Local Users – MTB & Cyclists Estimates for 2021 used as base year. Use of Trails	Population projections for Wingecarribee Shire (annual) to 2033 Bike riders <ul style="list-style-type: none"> • Low Case: Average participation rate (national) of 1.2 % applied to population. • Medium Case: Average participation rate (national) of 1.5 % applied to population. • High Case: Average participation rate (national) of 1.8 % applied to population. Assume 50 % of riders would use the trail. Assumes use of trails average of 15 times per year	2022 NSW Population, Housing and Implied Dwelling Projections, New South Wales Department of Planning and Environment , 2022 MCa assumption MCa assumption
Regional Users – MTB & Cyclists (Day Visitors) Estimates for 2021 used as base year. Use of Trails	Population projections for adjacent LGAs – Regional & Metro (annual) to 2033 Bike riders <ul style="list-style-type: none"> • Low Case: Average participation rate (national) of 1.2 % applied to population. • Medium Case: Average participation rate (national) of 1.5 % applied to population. • High Case: Average participation rate (national) of 1.8 % applied to population. Assume 25 % of riders would use the trail.	2022 NSW Population, Housing and Implied Dwelling Projections, New South Wales Department of Planning and Environment , 2022 MCa assumption MCa assumption

Trail Users	Modelling Assumptions	Data Source
	Assumes use of trails average of 5 times per year	
Interstate & internationals	All Cases:4000 per year	MCa assumption
Mix of Bike Users	<ul style="list-style-type: none"> • Mountain Bikers – 50% of all users • Recreation cyclists -30% of all users • Gravel Riders -10% of all users • Bike Packers -10% of all users 	MCa assumption
Day & Overnight Visits	<p>MTB, Rec Cyclists, Gravel Riders</p> <ul style="list-style-type: none"> • Locals: All Day visitors • Regionals: 75% day & 25% overnights • Metros: 60% day & 40% overnights • Interstate/International: 80% day & 20% overnights <p>Bike Packers</p> <ul style="list-style-type: none"> • Locals: none • Regionals: all overnights • Metros: all overnights • Interstate/International: all overnights 	
Walkers		
<p>Local Users - -Walkers</p> <p>Estimates for 2021 used as base year.</p> <p>Use of Trails</p>	<p>Population projections for Wingecarribee Shire (annual) to 2033</p> <p>Walkers</p> <ul style="list-style-type: none"> • Lo w Case: Average participation rate (national) of 4% applied to population. • Medium Case: Average participation rate (national) of 5 % applied to population. • High Case: Average participation rate (national) of 6 % applied to population. <p>Assume 60 % of local walkers would use the trail.</p> <p>Assumes use of trails average of 6 times per year</p>	<p>2022 NSW Population, Housing and Implied Dwelling Projections, New South Wales Department of Planning and Environment , 2022</p> <p>MCa assumption</p> <p>MCa assumption</p>

Trail Users	Modelling Assumptions	Data Source
Regional Users – Walkers Estimates for 2021 used as base year. Use of Trails	Population projections for adjacent LGAs – Regional & Metro (annual) to 2033 Walkers <ul style="list-style-type: none"> • Low Case: Average participation rate (national) of 4% applied to population. • Medium Case: Average participation rate (national) of 5% applied to population. • High Case: Average participation rate (national) of 6% applied to population. Assume 15% of walkers would use the trail. Assumes use of trails average of 2 times per year	2022 NSW Population, Housing and Implied Dwelling Projections, New South Wales Department of Planning and Environment , 2022 MCA assumption MCA assumption
Interstate & internationals	All Cases:5000 per year	MCA assumption
Mix of Walkers	<ul style="list-style-type: none"> • Recreational Walkers : Locals 60%; Regionals 40%; Metros 40%; Interstate/internationals 50%. • Bushwalkers: Locals 20%; Regionals 50%; Metros 50%; Interstate/internationals 30%. • Trail Runners: Locals 20%; Regionals 10%; Metros 10%; Interstate/internationals 20%. • 	MCA assumption
Day & Overnight Visits	Recreational Walkers & Bushwalkers <ul style="list-style-type: none"> • Locals: All Day visitors • Regionals: 75% day & 25% overnights • Metros: 60% day & 40% overnights • Interstate/International: 80% day & 20% overnights Trail Runners <ul style="list-style-type: none"> • Locals: All Day Visitors • Regionals: 75% day & 25% overnights • Metros: 60% day & 40% overnights: • Interstate/International: 80% day & 20% overnights 	MCA assumption

Table 21. Spending Assumptions

Trail Users- Spending Assumptions	Modelling Assumptions	Data Source
Bike Riders <MTB & Cyclists>		
Local Users	Average Spending : \$30 per day	GHD Report for AusCycling - Mountain Biking in Australia: An Economic and Participation Analysis. 2021 \$27 adjusted to 2022.
Regional & Metro Users (Day Visitors)	Average Spending : \$40 per day	MCA assumption
Regional & Metro Users/ Internationals/Interstate (Overnight Visitors)	Day visitors : \$40 per day Overnight visitors : \$164 per day	MCA assumption LGA Area Profile Wingecarribee Shire 2019, TRA
Walkers		
Local Users	Average Spending : \$30 per day	MCA assumption
Regional & Metro Users (Day Visitors)	Average Spending : \$40 per day	MCA assumption
Regional & Metro Users/ Internationals/Interstate (Overnight Visitors)	Day visitors : \$40 per day Overnight visitors : \$164 per day	MCA assumption LGA Area Profile Wingecarribee Shire 2019, TRA

Table 22. Measuring Benefits

Benefits Measurement	Modelling Assumptions	Data Source
Mountain Bikers & Walkers	GHD research used for both types of users	
Regional Income	MCa Regional Economic Model. Income generated by the spending in region by all trail users.	Users & spending estimates are the input to the model.
Health Benefits	Benefits = \$1.58 per km <ul style="list-style-type: none"> • MTB: average distance 30 km = \$47 per ride • Walk : average distance 18 km = \$28.50 Only estimated for local and regional users.	Mountain Biking in Australia: An Economic and Participation Analysis (AusCycling), GHD Advisory, March 2021
Productivity Benefits	\$7.60 per ride/walk Only estimated for local and regional users	Mountain Biking in Australia: An Economic and Participation Analysis (AusCycling), GHD Advisory, March 2021
Consumer Value	\$25 per trail use – used for MTB & Walkers Estimated for <u>all</u> trail users. Shadow price to provide an estimate of value of trail experience to the user.	Mountain Biking in Australia: An Economic and Participation Analysis (AusCycling), GHD Advisory, March 2021

APPENDIX D High Case Analysis

The economic impact analysis was undertaken for each of the trail user scenarios (Cases). This section shows the key results for the High Case, which has trail users 20% above the medium or most likely case.

Trail Users

For the high case, total trail users increase from around 87,500 in year 1 to 99,100 in year 10.

- Bike users increase from around 54,700 in year 1 to around 62,100 in year 10. Walkers increase from around 32,800 in year 1 to around 37,000 in year 10.

Table 23. High Case: Trail Users by Type -Bikes

Total Users – Bikes High Case	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Day Visitors										
MTB Trail Users	20,677	20,986	21,294	21,604	21,919	22,240	22,563	22,883	23,218	23,474
Rec Cyclists Trail Users	12,851	13,049	13,247	13,447	13,650	13,856	14,064	14,270	14,484	14,652
Gravel Riders Trail Users	4,135	4,197	4,259	4,321	4,384	4,448	4,513	4,577	4,644	4,695
Bike Packers	-	-	-	-	-	-	-	-	-	-
Total Day	37,664	38,233	38,800	39,372	39,952	40,543	41,140	41,729	42,345	42,820
Overnight Visitors										
MTB Trail Users	6,653	6,754	6,854	6,952	7,053	7,157	7,263	7,366	7,475	7,557
Rec Cyclists Trail Users	3,912	3,973	4,032	4,091	4,152	4,214	4,278	4,340	4,405	4,454
Gravel Riders Trail Users	1,331	1,351	1,371	1,390	1,411	1,431	1,453	1,473	1,495	1,511
Bike Packers	5,101	5,170	5,239	5,307	5,376	5,447	5,519	5,590	5,665	5,719
Total Overnights	16,997	17,248	17,495	17,741	17,992	18,250	18,512	18,769	19,040	19,241
Total All	54,661	55,481	56,295	57,113	57,944	58,793	59,652	60,498	61,385	62,061

Source: MCA modelling & analysis, January 2023

Table 24. High Case: Trail Users by Type -Walkers

Total Users -Walkers	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
High Case										
Day Visitors										
Rec Walkers	13,494	13,685	13,877	14,072	14,270	14,472	14,676	14,878	15,083	15,268
Bushwalkers	9,097	9,226	9,355	9,484	9,616	9,750	9,887	10,021	10,160	10,274
Trail Runners	4,262	4,319	4,378	4,437	4,497	4,558	4,620	4,681	4,743	4,800
Total Day	26,853	27,231	27,610	27,993	28,382	28,781	29,182	29,580	29,986	30,342
Overnight Visitors										
Rec Walkers	2,486	2,519	2,550	2,581	2,613	2,646	2,681	2,714	2,748	2,776
Bushwalkers	2,783	2,823	2,863	2,902	2,941	2,983	3,026	3,067	3,110	3,145
Trail Runners	697	705	713	720	728	737	745	753	762	769
Total Overnights	5,965	6,046	6,126	6,203	6,283	6,366	6,452	6,534	6,621	6,690
Total All	32,818	33,277	33,736	34,196	34,665	35,147	35,634	36,114	36,607	37,032

Source: MCA modelling & analysis, January 2023

Table 25. High Case: Trail Users All

Total Users	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
High Case										
Users Bike										
Total Day	37,664	38,233	38,800	39,372	39,952	40,543	41,140	41,729	42,345	42,820
Total Overnights	16,997	17,248	17,495	17,741	17,992	18,250	18,512	18,769	19,040	19,241
Total Bike Users	54,661	55,481	56,295	57,113	57,944	58,793	59,652	60,498	61,385	62,061
Users - Walking										
Total Day	26,853	27,231	27,610	27,993	28,382	28,781	29,182	29,580	29,986	30,342
Total Overnights	5,965	6,046	6,126	6,203	6,283	6,366	6,452	6,534	6,621	6,690
Total Walker Users	32,818	33,277	33,736	34,196	34,665	35,147	35,634	36,114	36,607	37,032
Total Trail Users										
Total Day	64,517	65,463	66,410	67,364	68,335	69,324	70,322	71,309	72,331	73,162
Total Overnights	22,962	23,295	23,621	23,945	24,275	24,616	24,964	25,303	25,660	25,931
Total All Users	87,479	88,758	90,031	91,309	92,609	93,940	95,286	96,612	97,992	99,093

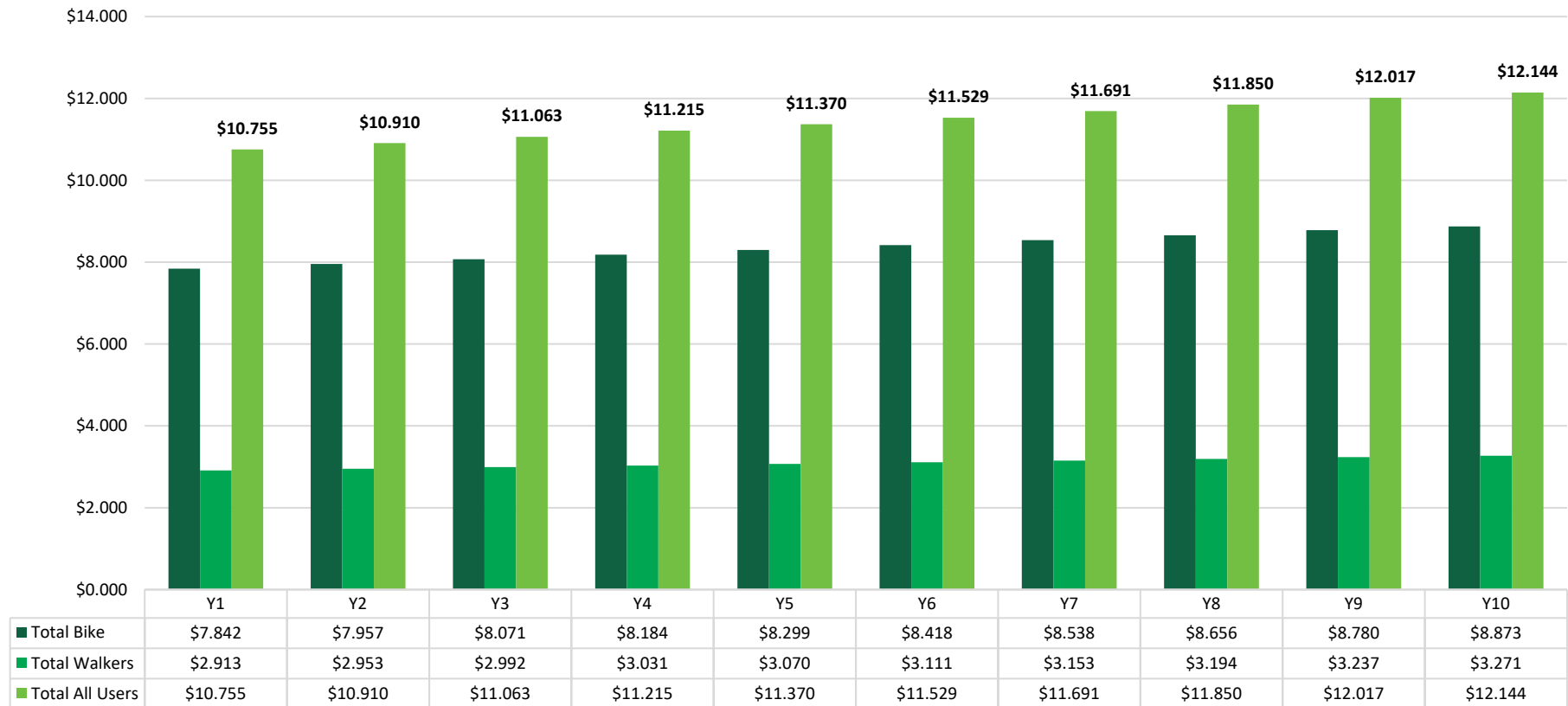
Source: MCA modelling & analysis, January 2023

Spending in the Region

Total spending in the region by trail users increases from \$10.755 million to \$12.144 million (in constant \$2022 prices).

- Day visitors account for \$2.387 million in spending in the region (year 1) increasing to \$2.701 in year 10
- Overnight visitors account for \$8.388 million in spending in the region (year 1) increasing to \$9.443 in year 10.

Figure 27. High Case: Spending in Region - Trail Users (\$m 2022 prices)



Source: MCA modelling & analysis, January 2023

Table 26. High Case: Spending by Trail Users (\$ million 2022 prices)

Spending in Region	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
High Case										
Users Bike										
Total Day	\$1.430	\$1.452	\$1.473	\$1.494	\$1.516	\$1.539	\$1.561	\$1.583	\$1.606	\$1.624
Total Overnights	\$6.412	\$6.505	\$6.598	\$6.689	\$6.783	\$6.879	\$6.977	\$7.073	\$7.174	\$7.249
Total Bike	\$7.842	\$7.957	\$8.071	\$8.184	\$8.299	\$8.418	\$8.538	\$8.656	\$8.780	\$8.873
Users - Walkers										
Total Day	\$0.956	\$0.970	\$0.983	\$0.996	\$1.009	\$1.023	\$1.037	\$1.051	\$1.065	\$1.077
Total Overnights	\$1.957	\$1.983	\$2.009	\$2.035	\$2.061	\$2.088	\$2.116	\$2.143	\$2.172	\$2.194
Total Walkers	\$2.913	\$2.953	\$2.992	\$3.031	\$3.070	\$3.111	\$3.153	\$3.194	\$3.237	\$3.271
Total Trail Users										
Total Day	\$2.387	\$2.421	\$2.456	\$2.490	\$2.526	\$2.562	\$2.598	\$2.634	\$2.671	\$2.701
Total Overnights	\$8.368	\$8.489	\$8.607	\$8.724	\$8.844	\$8.967	\$9.093	\$9.216	\$9.346	\$9.443
Total All Users	\$10.755	\$10.910	\$11.063	\$11.215	\$11.370	\$11.529	\$11.691	\$11.850	\$12.017	\$12.144

Source: MCA modelling & analysis, January 2023 . May be some differences due to rounding.

Regional Jobs

For the high case, spending by trail users in the region generates a total of 48.5 FTE jobs in year 1 increasing to 54.5 jobs in year 10. Bike users account for around two thirds of the jobs in each year.

Table 27. High Case: Jobs Generated by Trail Users (FTE no.)

Jobs Generated FTE	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
High Case										
Bike Users - Jobs										
Day Visitors - Bike	7.0	7.1	7.2	7.3	7.5	7.5	7.6	7.7	7.9	8.0
Overnight Visitors - Bike	28.1	28.5	28.7	29.1	29.5	29.8	30.1	30.5	31.2	31.5
Total Jobs – Bike Users	35.1	35.6	35.9	36.4	36.9	37.3	37.7	38.3	39.0	39.4
Walkers - Jobs										
Day Visitors - Walkers	4.7	4.8	4.8	4.9	5.0	5.0	5.1	5.1	5.2	5.3
Overnight Visitors - Walkers	8.7	8.9	8.9	9.1	9.2	9.2	9.4	9.5	9.6	9.8
Total Jobs Walkers	13.4	13.6	13.8	13.9	14.1	14.3	14.4	14.6	14.9	15.0
Total Jobs										
Day Visitors	11.7	11.9	12.1	12.2	12.4	12.5	12.7	12.8	13.1	13.3
Overnight Visitors	36.8	37.3	37.6	38.1	38.7	39.0	39.5	40.0	40.8	41.2
Total All Jobs	48.5	49.2	49.7	50.4	51.1	51.5	52.2	52.9	53.9	54.5

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Cost Benefit Analysis

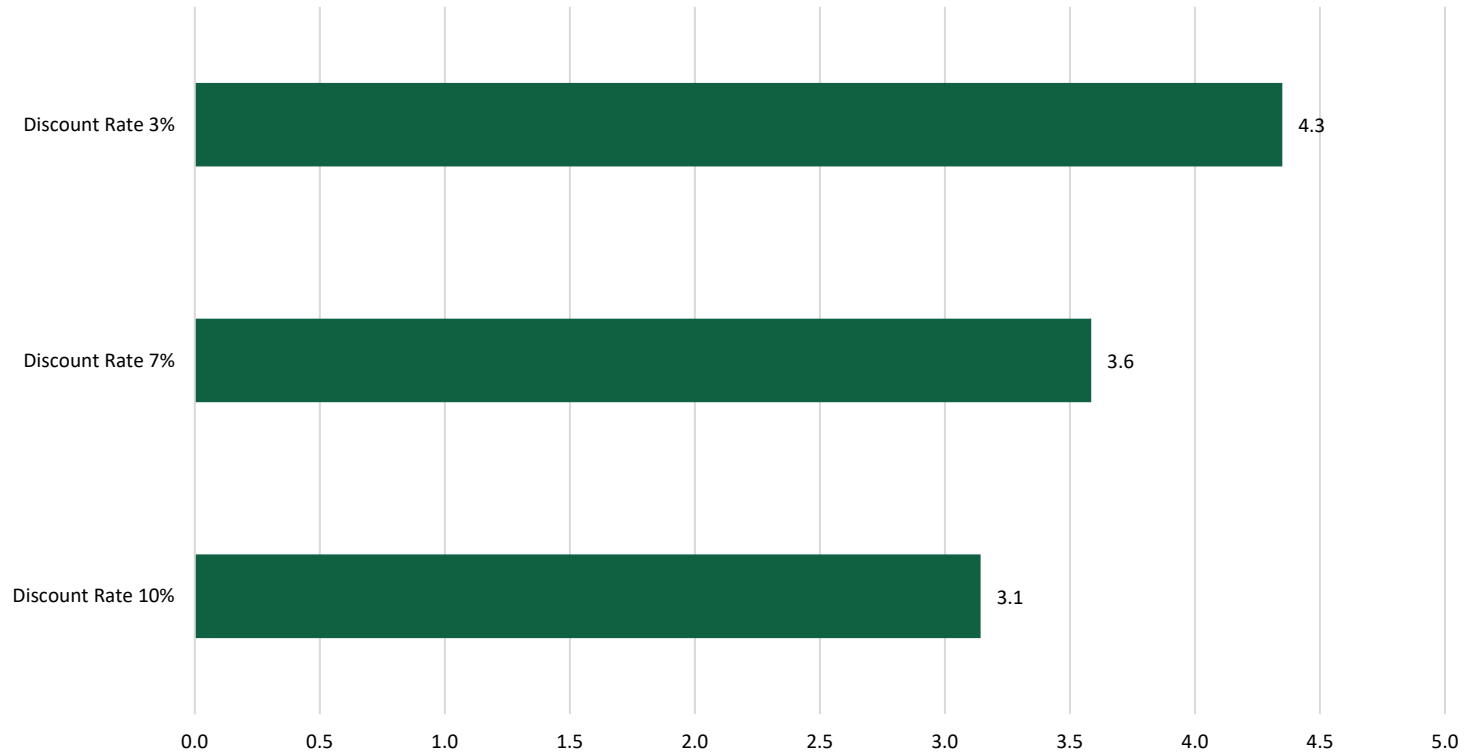
The high case produces higher Benefit Cost Ratios (BCR) compared with the medium case. For this case, the BCRs are: 3% discount rate 4.3; 7% discount rate 3.6 ; and 10% discount rate 3.1.

Table 28. High Case: Benefits and Cost Analysis –Trails Project - 10 Year Period (\$2022 prices)

Trails Project - High Case	Discount Rate	Discount Rate	Discount Rate
Regional Cost Benefit (\$2022 prices)	3%	7%	10%
Period : 10Years			
Project Costs			
Capital Costs Trails & Infrastructure	\$13,000,000	\$13,000,000	\$13,000,000
Costs - Asset Maintenance (10 years)	\$1,950,000	\$1,950,000	\$1,950,000
Total Costs	\$14,950,000	\$14,950,000	\$14,950,000
Benefits - Total			
Direct Benefits Regional Income	\$ 39,701,759	\$ 39,701,759	\$ 39,701,759
Productivity Benefits	\$4,928,601	\$4,928,601	\$4,928,601
Health Benefits (local & regional)	\$15,389,703	\$15,389,703	\$15,389,703
User Value (shadow user price)	\$16,233,864	\$16,233,864	\$16,233,864
Total Benefits	\$76,253,927	\$76,253,927	\$76,253,927
Total Benefits (\$) Present Value	\$65,027,962	\$53,600,178	\$46,986,173
Benefit Cost			
Net Present Value (\$) Total Benefits	\$50,077,962	\$38,650,178	\$32,036,173
NPV/Cost	3.3	2.6	2.1
Benefit Cost Ratio (BCR)	4.3	3.6	3.1
<Total Benefits: Present Value/Total Capital Costs>			

Source: MCA modelling & analysis, January 2023

Figure 28. High Case: Trails Development - Benefit Cost Ratio (BCR)



Source: MCA modelling & analysis, January 2023

APPENDIX E Low Case Analysis

The economic impact analysis was undertaken for each of the trail user scenarios (Cases). This section shows the key results for the Low Case, which has trail users 20% below the medium or most likely case.

Trail Users

For the low case, total trail users increase from around 51,300 in year 1 to 69,100 in year 10.

- Bike users increase from around 37,800 in year 1 to around 42,700 in year 10. Walkers increase from around 23,500 in year 1 to around 26,400 in year 10.

Table 29. Low Case: Trail Users by Type -Bikes

Total Users – Bikes Low Case	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Day Visitors										
MTB Trail Users	14,318	14,524	14,729	14,936	15,146	15,360	15,575	15,789	16,012	16,182
Rec Cyclists Trail Users	8,781	8,913	9,045	9,178	9,313	9,450	9,589	9,726	9,870	9,981
Gravel Riders Trail Users	2,864	2,905	2,946	2,987	3,029	3,072	3,115	3,158	3,202	3,236
Bike Packers	-	-	-	-	-	-	-	-	-	-
Total Day	25,963	26,342	26,720	27,101	27,488	27,882	28,280	28,673	29,084	29,400
Overnight Visitors										
MTB Trail Users	4,569	4,636	4,703	4,768	4,835	4,905	4,975	5,044	5,117	5,171
Rec Cyclists Trail Users	2,661	2,702	2,742	2,781	2,821	2,863	2,905	2,946	2,990	3,023
Gravel Riders Trail Users	914	927	941	954	967	981	995	1,009	1,023	1,034
Bike Packers	3,668	3,714	3,759	3,805	3,851	3,898	3,946	3,993	4,043	4,079
Total Overnights	11,811	11,979	12,144	12,308	12,475	12,646	12,821	12,993	13,173	13,307
Total All	37,774	38,321	38,864	39,409	39,963	40,529	41,101	41,666	42,257	42,708

Source: MCA modelling & analysis, January 2023

Table 30. Low Case: Trail Users by Type -Walkers

Total Users -Walkers	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Low Case										
Day Visitors										
Rec Walkers	9,663	9,790	9,918	10,048	10,180	10,315	10,451	10,585	10,722	10,845
Bushwalkers	6,465	6,551	6,637	6,723	6,810	6,900	6,991	7,081	7,174	7,250
Trail Runners	3,108	3,146	3,185	3,224	3,264	3,305	3,346	3,387	3,429	3,466
Total Day	19,235	19,487	19,740	19,995	20,255	20,520	20,788	21,053	21,324	21,561
Overnight Visitors										
Rec Walkers	1,824	1,846	1,867	1,888	1,909	1,931	1,954	1,976	1,999	2,017
Bushwalkers	1,955	1,982	2,009	2,034	2,061	2,089	2,117	2,145	2,174	2,197
Trail Runners	531	536	542	547	552	558	563	569	575	579
Total Overnights	4,310	4,364	4,417	4,469	4,522	4,577	4,634	4,690	4,747	4,793
	-	-	-	-	-	-	-	-	-	-
Total All	23,545	23,851	24,157	24,464	24,777	25,098	25,423	25,743	26,071	26,355

Source: MCA modelling & analysis, January 2023

Table 31. Low Case: Trail Users All

Total Users -Walkers	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Low Case										
Day Visitors										
Total Day	25,963	26,342	26,720	27,101	27,488	27,882	28,280	28,673	29,084	29,400
Total Overnights	11,811	11,979	12,144	12,308	12,475	12,646	12,821	12,993	13,173	13,307
Total Bike Users	37,774	38,321	38,864	39,409	39,963	40,529	41,101	41,666	42,257	42,708
Users - Walking										
Total Day	19,235	19,487	19,740	19,995	20,255	20,520	20,788	21,053	21,324	21,561
Total Overnights	4,310	4,364	4,417	4,469	4,522	4,577	4,634	4,690	4,747	4,793
Total Walker Users	23,545	23,851	24,157	24,464	24,777	25,098	25,423	25,743	26,071	26,355
Total Trail Users										
Total Day	45,198	45,829	46,460	47,096	47,743	48,403	49,068	49,726	50,408	50,961
Total Overnights	16,121	16,343	16,561	16,776	16,997	17,224	17,456	17,682	17,920	18,101
Total All Users	61,319	62,172	63,021	63,873	64,740	65,627	66,524	67,408	68,328	69,062

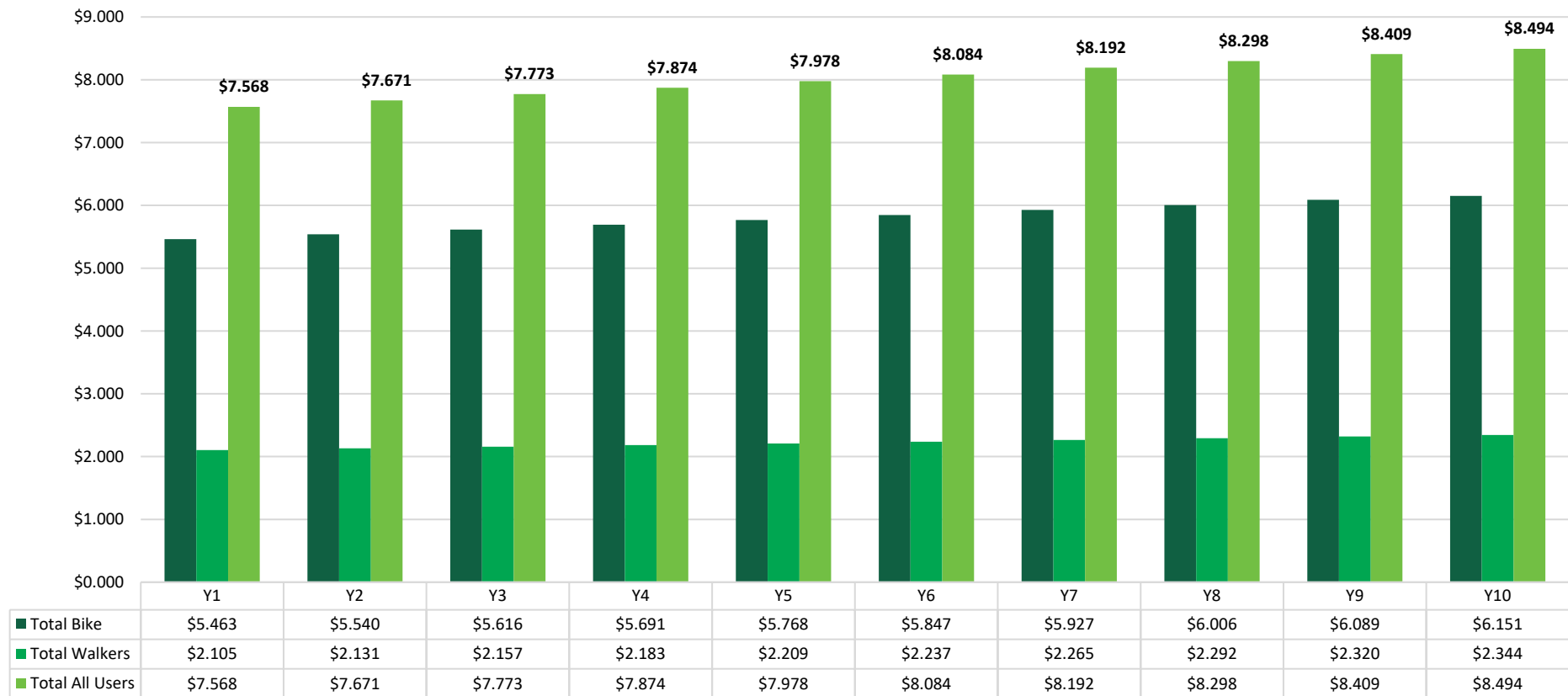
Source: MCA modelling & analysis, January 2023

Spending in the Region

Total spending in the region by all trail users increases from \$7.568 million to \$8.494 million (in constant \$2022 prices).

- Day visitors account for \$1.679 million in spending in the region (year 1) increasing to \$1.889 million in year 10
- Overnight visitors account for \$5.889 million in spending in the region (year 1) increasing to \$6.606 in year 10.

Figure 29. Low Case: Spending in Region - Trail Users (\$m 2022 prices)



Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Table 32. Low Case: Spending by Trail Users (\$ million 2022 prices)

Spending in Region	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Low Case										
Users Bike										
Total Day	\$0.988	\$1.002	\$1.016	\$1.030	\$1.045	\$1.060	\$1.075	\$1.090	\$1.105	\$1.117
Total Overnights	\$4.476	\$4.538	\$4.600	\$4.661	\$4.723	\$4.787	\$4.853	\$4.916	\$4.984	\$5.034
Total Bike	\$5.463	\$5.540	\$5.616	\$5.691	\$5.768	\$5.847	\$5.927	\$6.006	\$6.089	\$6.151
Users - Walkers										
Total Day	\$0.691	\$0.700	\$0.708	\$0.717	\$0.726	\$0.735	\$0.745	\$0.754	\$0.763	\$0.771
Total Overnights	\$1.414	\$1.431	\$1.449	\$1.466	\$1.483	\$1.501	\$1.520	\$1.538	\$1.557	\$1.572
Total Walkers	\$2.105	\$2.131	\$2.157	\$2.183	\$2.209	\$2.237	\$2.265	\$2.292	\$2.320	\$2.344
Total Trail Users										
Total Day	\$1.679	\$1.702	\$1.725	\$1.748	\$1.771	\$1.795	\$1.820	\$1.844	\$1.868	\$1.888
Total Overnights	\$5.889	\$5.970	\$6.048	\$6.127	\$6.206	\$6.289	\$6.373	\$6.455	\$6.541	\$6.606
Total All Users	\$7.568	\$7.671	\$7.773	\$7.874	\$7.978	\$8.084	\$8.192	\$8.298	\$8.409	\$8.494

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Regional Jobs

For the low case spending by trail users in the region generates a total of 34.1 FTE jobs in year 1 increasing to 38.1 jobs in year 10. Bike users account for around two thirds of the jobs in each year.

Table 33. Low Case: Jobs Generated by Trail Users (FTE no.)

Jobs Generated FTE	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Low Case										
Bike Users - Jobs										
Day Visitors - Bike	4.9	4.9	5.0	5.1	5.1	5.2	5.2	5.3	5.4	5.5
Overnight Visitors - Bike	19.6	19.9	20.0	20.3	20.5	20.7	21.0	21.2	21.6	21.9
Total Jobs – Bike Users	24.4	24.8	25.0	25.3	25.7	25.9	26.2	26.5	27.1	27.3
Walkers - Jobs										
Day Visitors - Walkers	3.4	3.4	3.5	3.5	3.6	3.6	3.6	3.7	3.7	3.8
Overnight Visitors - Walkers	6.3	6.4	6.4	6.5	6.6	6.6	6.7	6.8	6.9	7.0
Total Jobs Walkers	9.7	9.8	9.9	10.0	10.2	10.2	10.3	10.5	10.7	10.8
Total Jobs										
Day Visitors	8.2	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.2	9.3
Overnight Visitors	25.9	26.3	26.4	26.8	27.1	27.4	27.7	28.0	28.6	28.8
Total All Jobs	34.1	34.6	34.9	35.4	35.8	36.1	36.5	37.0	37.7	38.1

Source: MCA modelling & estimates, January 2023. May be some differences due to rounding.

Cost Benefit Analysis

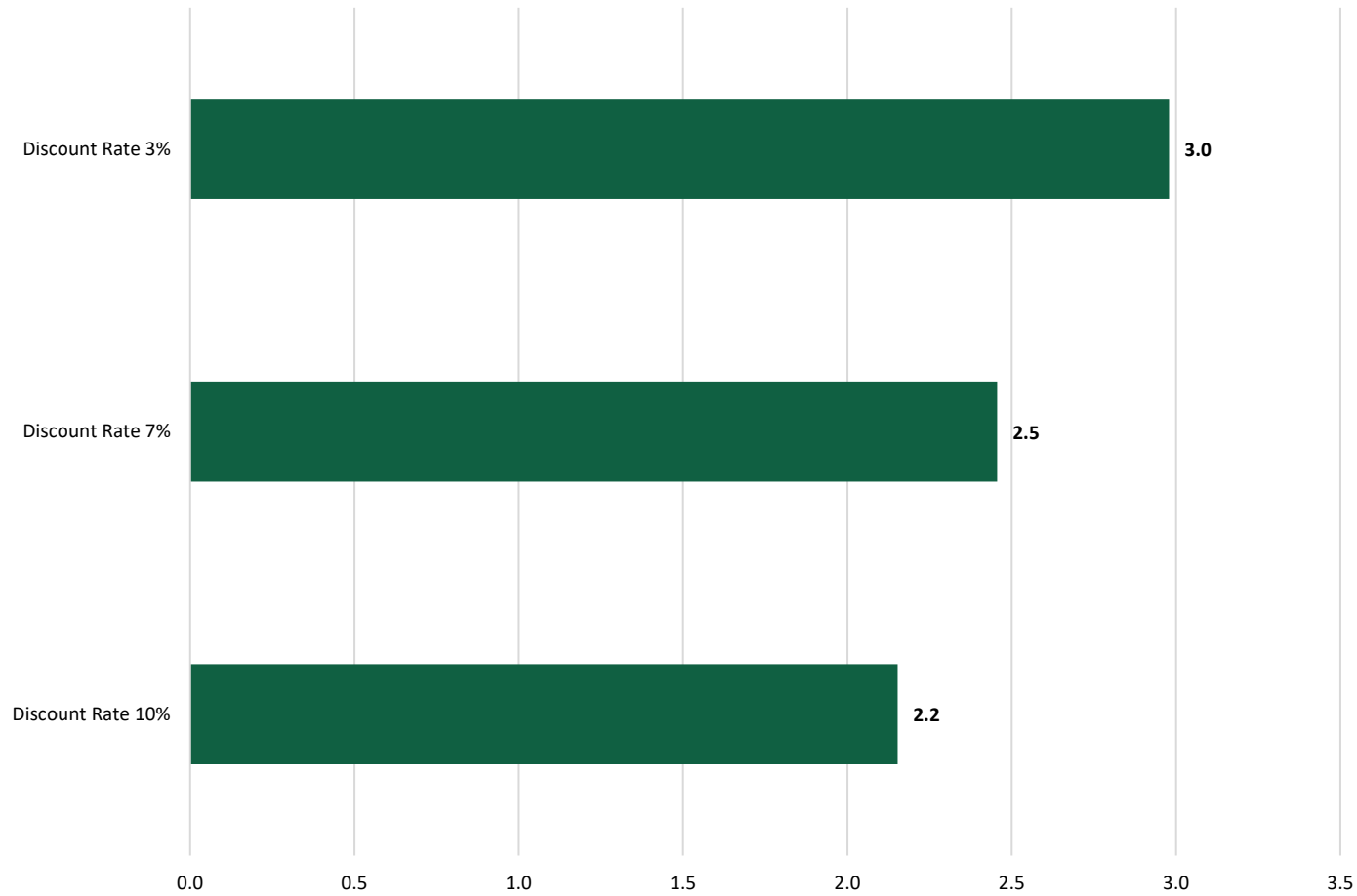
The low case produces lower Benefit Cost Ratios (BCR) compared with the medium case. For this case, the BCRs are: 3% discount rate 3.0; 7% discount rate 2.5; and 10% discount rate 2.2.

Table 34. Low Case: Benefits and Cost Analysis –Trails Project - 10 Year Period (\$2022 prices)

Trails Project	Discount Rate	Discount Rate	Discount Rate
Low Case			
Regional Cost Benefit (\$2022 prices)	3%	7%	10%
Period: 10Years			
Project Costs			
Capital Costs Trails & Infrastructure	\$13,000,000	\$13,000,000	\$13,000,000
Costs - Asset Maintenance (10 years)	\$1,950,000	\$1,950,000	\$1,950,000
Total Costs	\$14,950,000	\$14,950,000	\$14,950,000
Benefits - Total			
Direct Benefits Regional Income	\$27,849,797	\$27,849,797	\$27,849,797
Productivity Benefits	\$3,285,734	\$3,285,734	\$3,285,734
Health Benefits (local & regional)	\$10,259,802	\$10,259,802	\$10,259,802
User Value (shadow user price)	\$10,822,576	\$10,822,576	\$10,822,576
Total Benefits	\$52,217,909	\$52,217,909	\$52,217,909
Total Benefits (\$) Present Value	\$44,534,978	\$36,713,379	\$32,186,182
Benefit Cost			
Net Present Value (\$) Total Benefits	\$29,584,978	\$21,763,379	\$17,236,182
NPV/Cost	2.0	1.5	1.2
Benefit Cost Ratio (BCR)	3.0	2.5	2.2
<Total Benefits: Present Value/Total Capital Costs>			

Source: MCA modelling & analysis, January 2023

Figure 30. Low Case: Trails Development Benefit Cost Ratio (BCR)



Source: MCA modelling & analysis, January 2023

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