



Central  
Coast  
Council

# MOUNTAIN BIKE FEASIBILITY STUDY DISCUSSION PAPER

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Final Report

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Prepared by Otium Planning Group in conjunction with World Trail.





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# 1 EXECUTIVE SUMMARY



This project investigated the feasibility of establishing a mountain bike trail network within the Central Coast Council area. The study included site visits, industry review, community surveys, workshops and consultation with a range of stakeholders.

## 1.1 CURRENT SITUATION

Within the region there is an established public mountain biking facility located at Ourimbah State Forest which has approximately 18 km of trail network. A private facility at Kulnura - Cedar Brush Creek has another 27 km of authorised trail network. There are a number of other locations where mountain biking is allowed as a shared use along the fire trails (including Kincumba Mountain and Rumbalara), but additional unauthorised trails have been constructed. This includes on Council land and within National Parks. Unauthorised trails have been identified at Kincumba Mountain, Bouddi National Park and Brisbane Water National Park.



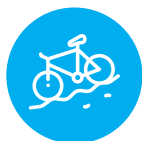
### 23 LOCATIONS

including State Forest, National Parks, Council and Private land being used for mountain biking (authorised and unauthorised use)



### 14 LOCATIONS

where mountain biking is permitted (including shared use on fire trails)



### 18 KM

of authorised mountain bike trails at Ourimbah Mountain Bike Park in Ourimbah State Forest



### ESTIMATED 38 KM

of unauthorised trails with reports of additional unauthorised trails

## 1.2 COMMUNITY ENGAGEMENT

An extensive engagement program was undertaken with mountain bike riders, the general community and other stakeholders. This included a community survey (receiving 1949 responses) to understand community views on mountain biking on the Central Coast. Workshops and meetings were also held with the mountain bike industry, conservation groups, traditional custodians of the land, National Parks and Forestry NSW.

### The key findings were:

- « **81.5%** of survey respondents currently **participate in mountain biking**.
- « A large proportion of mountain bike riders on the Central Coast are **typically riding two or more times** per week (60%), with a preference of flow trails (46%).
- « **Only 25%** of the mountain bikers who completed the survey **are members of a mountain bike club**.
- « The **most popular** locations identified for mountain biking were **Ourimbah (40%) followed by Kincumba (22%)**.
- « **Kincumba** was chosen as **the most preferred location** due to its location / proximity and ease of access to residential areas (54%).
- « Current trail types being ridden (in order of highest to lowest highest response) includes general Trails, Cross Country, Flow and Gravity. However, the **preferred trails to ride were Flow, general Trails, Gravity and Cross Country**. While the preferred types were all reasonably even in response rates indicating that diversity should be a focus for any proposed developments. It may also indicate a current lack of flow trails being available.
- « Almost **30% of current mountain bike riders** (responding to the survey) were **not aware that some trails were unauthorised**, indicating that improved education/awareness/signage strategies are important considerations in any strategy.
- « There is **concern** from some in the community regarding the development of the **unauthorised trails in COSS (Coastal Open Space Strategy)** land and that these trails could be a threat to protection of the environmental values in these areas.
- « Similar **concerns** were expressed regarding the potential for unauthorised trails to cause **damage to cultural heritage sites**.
- « There is a **need for a planned, authorised trail network to meet growing demand** for mountain bike riding and management action to close and revegetate the unauthorised trails.

### A range of benefits from mountain biking were identified, these include:

- « **Economic** – mountain biking can have a positive impact on the economy. This can be from tourism perspective and additional spend within the community.
- « **Social and health benefits** – opportunity to socialise with friends and family, participating in a healthy and physically active pursuit, positive health impacts including reducing physical and mental health problems.
- « **Environmental benefits** – increasing access and connection to natural environments, well-built trails in the right location can reduce unauthorised trail development, passive surveillance can reduce antisocial behaviour and illegal dumping in areas. Increased connection with nature also helps to support conservation activities.

### A range of issues and concerns were identified through the consultation. These include:

- « **User conflicts** - concern around behaviour of some users of the shared trails.
- « **Environmental Impacts** – many of the unlawful trails are not professionally built and could be causing erosion and spreading weeds as a result of their location, construction method and limited ongoing maintenance.
- « **Demand** – there is a large population of mountain bikers on the coast, which will only increase over time due to population growth and increasing popularity of mountain biking. There are currently limited authorised trails available to meet the demand. This means that unauthorised trails will continue to propagate and the potential for damage to sensitive landscapes will remain unmanaged.
- « **Awareness and education** - there would appear to be a lack of awareness about the locations and trails that support mountain biking on lawful trails. Improved signage and education will be needed to address this.

### 1.3 OPTIONS FOR MOUNTAIN BIKE TRAIL PROVISION

There are a number of options and strategies for responding to current and future demand for mountain bike trails, any forward plan could involve a combination. The options include:



**Retain Status Quo** with limited provision of purpose-built mountain bike trails and continued support for shared use on fire trails and service tracks. This is unlikely to address the spread of unplanned trails arising from the increasing demand in the community for places to ride within natural areas. The development of unlawful/unauthorised trails is a direct response to community need but risks causing damage to environment and cultural heritage sites.



**Improve partnerships** in provision– the Central Coast Mountain Bike Club is currently operating and maintaining the trails at Ourimbah. Working with the club and other groups to improve the extent of trails at Ourimbah (or other locations) is an option that relies on community or other agency partners to develop and maintain trails.



**Expand and enhance the shared trail network** for recreational riders – this may address some of the recreational riding demand which is for trail networks within natural areas. It does not address demand for flow and other more specialist trails which would be left to specific club or other agency managed sites. A detailed assessment of opportunities could identify additional service track and fire trail sections that could support an overall recreational shared trail network.



**Develop a regional trails plan** - Identify suitable sites for new shared trails, identify opportunities for urban bike parks (skills circuits, pump tracks) to meet localised demand and implement some local or regional flow trails which can complement the existing shared trail network. This plan would be prepared in partnership with other land managers and mountain bike riders.



**Increase education and awareness** – better information about where to ride and trail etiquette on shared networks. Education, signage and awareness are key factors in any successful strategy to respond to increasing demand. About 30% of riders are currently unaware of where they can lawfully ride, which trails can be ridden and the difficulty of the trails.



**Increased enforcement** – This would involve the closing and revegetation of unauthorised trails in sensitive areas. This would need to be informed by a detailed trail audit to identify priority locations. If new trails in suitable locations are developed to cater to the demand, then increased enforcement can be pursued for any unauthorised trails developed. The closure of trails should be undertaken in partnership with local MTB clubs and users, so they understand the reasons, are able to assist in the work and have an opportunity to be involved in the location and construction of trails in sanctioned locations.

## 2 CONCLUSION AND RECOMMENDATIONS





## 2.1 OVERALL FEASIBILITY CONCLUSION

The Central Coast Region has potential to develop a number of mountain bike trail destinations that would appeal to a regional catchment, including attracting riders from Greater Sydney. Some opportunities were also identified that may offer opportunities for nationally significant trails with the potential to attract users from across the country and overseas.

However, most of the identified opportunities are on state owned or managed land which could be supplemented with local opportunities on Council Managed areas. While there is demonstrated demand from local residents for more trails and especially lawful trails, there is also significant concern for the Coastal Open Space System reserves which are highly valued by the community and existing unauthorised trails have the potential to impact on conservation and cultural heritage values.

Council has immediate concerns that need to be addressed in terms of impacts from unauthorised trails and increasing demand for places to ride. The strategy that is most likely to be successful involves:

- « Collaboration with mountain bike riding groups to locate and develop new sustainable riding opportunities which meet both local access and regional access needs.
- « Adopting an education and awareness campaign including signage.
- « Closure and revegetation of unauthorised trails unless they have been audited and all stakeholders agree they can be converted into a sanctioned trail.
- « Establishing shared or club management and maintenance of sanctioned trail networks on public or leased land.

Should Central Coast Council consider that positioning the Central Coast as a mountain bike trails destination aligns with their longer term tourism and economic development strategy then the Regional Trails Plan developed in partnership with state land managers and the mountain bike community should be the precursor to the preparation of a detailed feasibility/ business case for development of one or more nationally significant trail networks with 80 km or more of tracks. This would need to be a partnership project and the selected sites would not be on council managed lands.

## 2.2 RECOMMENDATIONS

The following recommendations are offered for consideration.

1. Undertake a detailed trails audit and trail management program for Council managed natural reserves that assesses existing trails, identifies and confirms the shared trail network and any single use (MTB) trails that can be sustained. The audit and assessment should include:
  - « Identification of trails to be closed and revegetated based on audit results or identification of impacts that cannot be mitigated. (see Recommendation 2)
  - « Identification of trails where simple low-cost management action (such as additional signage and user education) can address the current issues.
  - « Determination of some “focus trails” as part of the shared trail network, to host environmental education and interpretive elements that increase the opportunities for recreational riding with a focus on experiencing nature.
  - « Identification of trails that need to be realigned, upgraded or repaired to ensure they are sustainable. Upgrading to include improved signage and wayfinding.
  - « Identification of future strategic trail links that can help reduce user conflicts and mitigate impacts.
2. Establish agreed trail assessment criteria to identify unauthorised trails that should be closed:
  - « Trails not constructed to a suitable standard and at risk of causing erosion.
  - « Trails within ecologically or culturally sensitive areas which are likely to cause damage to those values and are not supported by land managers or traditional owners.
  - « Trails which have unsafe features or poor design creating unacceptable risk to riders or other users.
3. Develop an education and awareness program including signage, social media and website content on Council's website and rider sites such as Trailforks<sup>1</sup> to provide information on mountain biking and the location of authorised in the Central Coast region. Interaction with this and other rider sites should also seek to remove reference to, or highlight the status of, the unauthorised trails.

<sup>1</sup> www.trailforks.com

4. Prepare a Regional Trails Plan. This could be led by Council and prepared in collaboration with state land managers and mountain bike rider groups. The plan should include the following elements:
  - « Develop a vision for the region and if the plan integrates with tourism and economic development strategies or is just focused on the needs of residents.
  - « Establishment of a stakeholder engagement group including relevant government agencies and rider groups.
  - « Identification of key sites for investigation. This can include both natural reserves as well as other public land (working with the stakeholder engagement group) and should investigate:
    - A regionally significant and/or national trail network (Ourimbah State Forest is considered the most suitable, subject to agreement from landowner)
    - Local and regional trails
    - Urban bike parks (pump tracks and skills development tracks)
    - Adaptive mountain biking opportunities
    - Potential sites for acquisition to complement existing sites, provide access to sites or offer a new location for trails.
  - « Opportunities for partnerships to embellish or establish new trails and facilities with other clubs or government agencies.
  - « Identification of unauthorised trails that need closure and remediation/ revegetation.
  - « Focus on larger length trails and single use networks being developed in partnership with clubs on public land identified in the site selection criteria.
  - « Within council reserves identify opportunities to deliver shared use opportunities on fire trails and access trails, that can be managed sustainability and protect values.
  - « Consider prioritising nature focused shared trail rides that cater to family, recreation and nature riding demand. These should provide interpretive elements and a focus on local environmental or cultural values.
  - « Development of a management and maintenance framework for the ongoing operation of any site including consideration of funding and resourcing requirements.
5. Adopt a trails approval process that allows local users and the community to have a say on any new trail proposals. This should include the following:
  - « Site suitability assessment (soils and vegetation)
  - « Constraints assessment (conservation and cultural heritage)
  - « Access assessment (linkage to bike way access or carparks)
  - « Demand (supported by local riders and rider groups)
  - « Community approval (local community support, concerns can be addressed)
  - « Management assessment (does council have the resources to maintain the trail or is a local club or volunteer group agreeing to be responsible for maintenance)
  - « Construction plan assessment (meets MTBA/ IMBA trail standards)

### 3 INTRODUCTION



The Central Coast Council (Council) have identified an increase in mountain bike participation as both a sport and a recreation activity, which has created an increase in demand for suitable areas to ride. While Council currently provides for mountain bike riding on fire and management trail systems in its natural reserves, it has noticed that a number of unauthorised trails have also been constructed in some reserves. The construction of unauthorised mountain bike trails poses environmental, heritage and reputational risk to Council in terms of legislation, community expectations and the experience of other reserve users. Unauthorised mountain bike trails may also pose a risk to riders where construction is poor or where the level of difficulty is unknown to the rider. The aims of the feasibility study are therefore:

- « Identify the role that Council's natural reserves may play in the provision of mountain bike experiences across the Central Coast.
- « Protect areas of high conservation and heritage value.
- « Minimising the key drivers for the building of unauthorised trails.
- « Maximise the safe use of Council Reserves by all visitors.

### 3.1 THE PROJECT METHODOLOGY

The following outlines the project methodology for the feasibility study.



### 3.2 LITERATURE REVIEW

A review of previous and existing plans, reports and policies relating to natural reserves and mountain biking on the Central Coast region was undertaken. Relevant key themes identified in the literature are summarised below.

Table 1: Background Literature Review

Source	
Central Coast Community Strategic Plan 2018-2028	<p>Sets a 10-year strategic plan for the Central Coast region. Five themes are outlined within the plan:</p> <ul style="list-style-type: none"> <li>« Belonging</li> <li>« Smart</li> <li>« Green</li> <li>« Responsible</li> <li>« Liveable</li> </ul> <p>Key focus areas relating to mountain biking within these themes include the cherished and protected natural beauty and healthy lifestyles for a growing community.</p>
Delivery Program and Operational Plan 2018-19 – Central Coast Council	<p>Outlines the actions Council will take to deliver on the Community Strategic Plan. It sets a Corporate Vision of 'A vibrant and sustainable Central Coast'</p>
Central Coast Destination Management Plan 2018-2021	<p>Guides the tourism development and destination management to help ensure the long-term viability and sustainability of the sector in the Central Coast region.</p> <p>The vision is 'the natural choice for leisure, business and major events in regional NSW'</p> <p>The plan recognises the importance and opportunities for sporting events and outlines the following action</p> <p><i>2.2 – Develop a business case for new mountain bike trails to attract a world class event to the Central Coast</i></p>

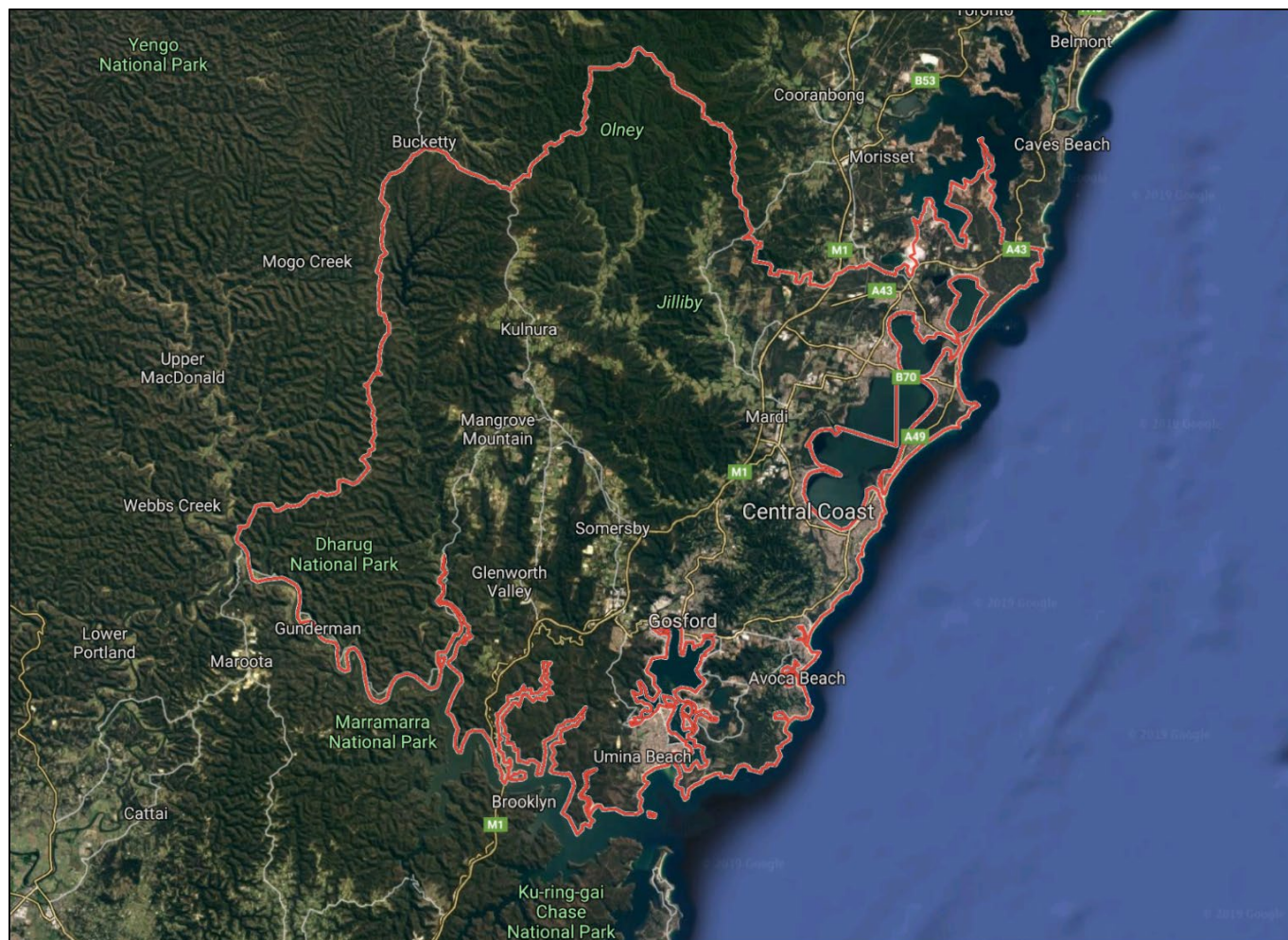
Source	
Central Coast Tourism Opportunity Plan 2019 - 2024	Provides strategic direction to guide tourism and the opportunities it creates for the Central Coast. The key challenges and opportunities have been identified including future tourism capital investment and product development. These opportunities include opportunities to upgrade suitable mountain biking trails.
Central Coast Council - Bike Plan	<p>The Bike Plan outlines the policies and desired improvements required to achieve Councils vision for:</p> <p><i>'People of all ages and abilities can walk and cycle on safe, inclusive and connected facilities'</i></p> <p>Action plan item 8.5: Provide more and better information</p> <p>Including to develop and launch a 'Cycling on the Central Coast' web site to promote all information on cycling including mountain biking</p>
Plan of Management – Kincumba Mountain Regional Reserve	<p>Outlines how the Kincumba Mountain Regional Reserve is to be managed in the future. Kincumba Mountain Regional Reserve is seen as a valuable community asset that provides a variety of visitor experiences appropriate to the reserve with the objective of achieving ecological sustainable management.</p> <p>The action under 4.3.2.6 provided that Council develop a Code of Practice for the use of mountain bikes within Kincumba Mountain Regional Reserve. The Code of Practice will identify authorised and unauthorised trails and establish a framework of participation for its ongoing management.</p>
Central Coast Council Mountain Bike Event – July 2016	<p>A survey was undertaken to understand the behaviours of mountain bike riders, seek thoughts on existing trails and facilities and understand how to encourage mountain bike riders to the Central Coast.</p> <p>Key findings included:</p> <ul style="list-style-type: none"> <li>« Majority of riders are members of a club</li> <li>« Regularly (once a month) travel outside of their local area to ride</li> <li>« Central Coast trails seen as 'better' or 'about the same' compared with trails in other locations</li> <li>« However, facilities are generally considered worse than other areas (noting parking, toilets, taps/water and wayfinding signs)</li> </ul>
Wyong Soft Adventure Market Assessment - 2016	An assessment of a soft adventure product being developed for Wyong was undertaken and included trends and opportunities. Existing mountain bike events were identified as was the opportunities that the state forests provided for mountain biking opportunities.
Presidents Hill Feasibility Assessment - 2015	This report undertook an assessment of the suitability of Presidents Hill (Waterview Park) for the development of Mountain Biking trails. This report identified that the site would only be suitable to construct a small-scale mountain bike facility (less than 5km) of trails for novice and intermediate mountain bikers.

## 4 THE CENTRAL COAST



The New South Wales Central Coast is one hour's drive north of Sydney and covers an area of 168,000km<sup>2</sup>. More than half of the region is comprised of National Parks, State forests, regional and local open space and conservation areas. In 2018 the estimated residential population of the Central Coast region was 342,047 this is up from 336,611 in 2016 and 322,657 in 2011<sup>2</sup>

Figure 1: Central Coast Local Government Area



The area is also expected to experience strong growth in the coming years as the table below indicates.

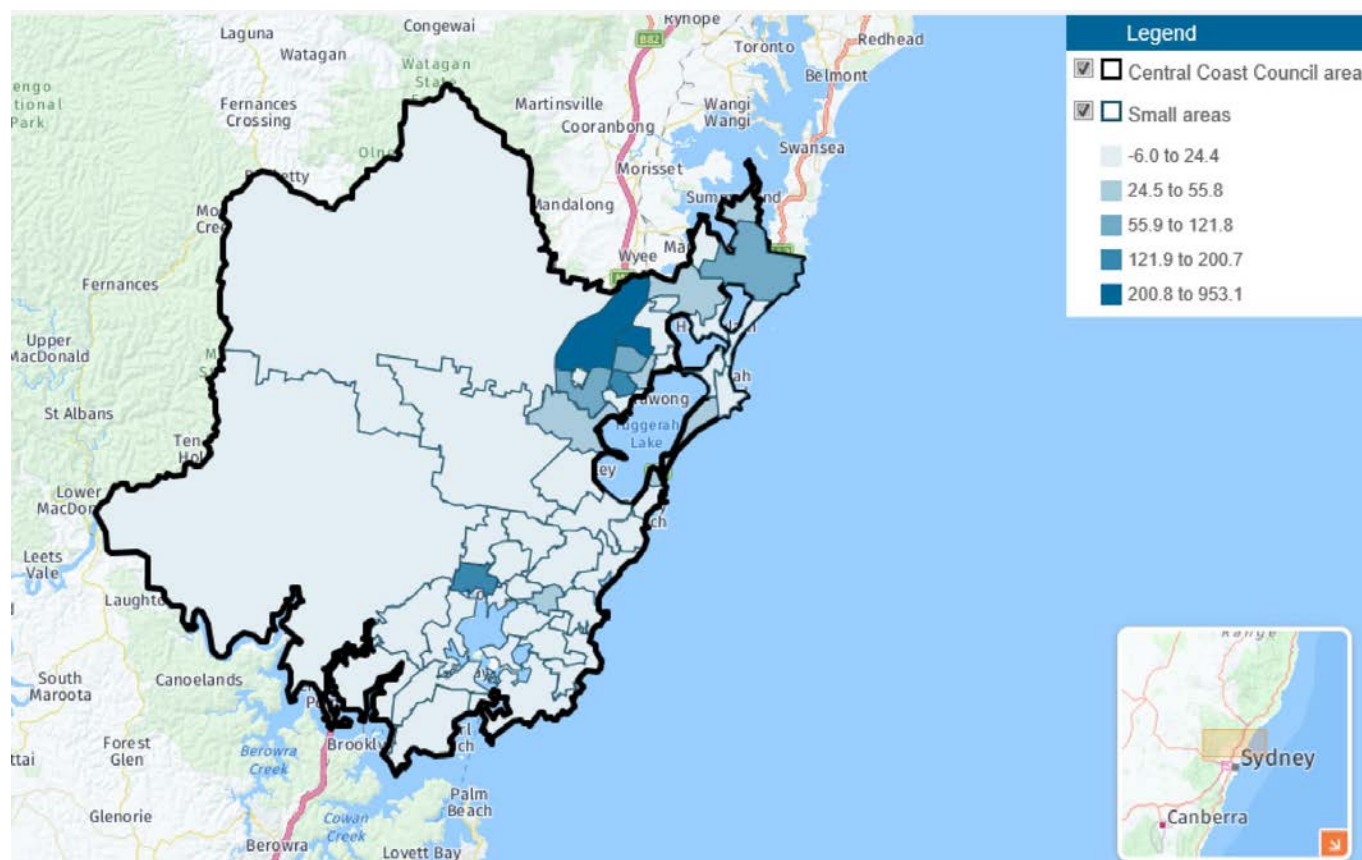
Table 2: Population growth to 2036 in the Central Coast

	2016	2021	2026	2031	2036	Total Change	Average annual change
Total Population	335,309	354,915	373,925	394,019	414,615	79,306	1.07%

<sup>2</sup> Profile Id - <https://profile.id.com.au/central-coast-nsw>

The below map demonstrates the population growth expected from 2016 to 2036. The map shows the overall percentage for the Central Coast and demonstrates that, with the exception of West Gosford and Erina in the south, the growth is expected to the region's north eastern corridor, particularly Woongarah, Warnervale – Wallarah – Bushells Ridge.

Figure 2: Outline of Growth Area for Central Coast LGA<sup>3</sup>



This growth is further evidenced in the below table, which outlines the areas with the highest growth expected until 2036.<sup>4</sup>

Area	2016	2021	2026	2031	2036	Total Change	Avg. annual % Change
Central Coast Council area	335,309	354,915	373,925	394,019	414,615	+79,306	+1.07
Avoca Beach - Picketts Valley - Copacabana - MacMasters Beach	9,057	9,175	9,230	9,236	9,247	+189	+0.10
Bateau Bay	12,373	12,693	13,324	14,098	14,535	+2,162	+0.81
Berkeley Vale - Chittaway - Glenning Valley	13,410	13,775	14,328	14,457	14,627	+1,217	+0.44
Blue Haven	6,531	6,617	6,472	6,390	6,302	-229	-0.18
Budgewoi - Halekulani - Buff Point	9,570	9,877	10,218	10,314	10,474	+904	+0.45
Charmhaven - Lake Haven	6,247	6,417	6,519	6,875	7,241	+994	+0.74
East Gosford - Point Frederick	6,323	7,145	7,196	7,330	7,533	+1,210	+0.88
Erina	5,075	5,686	6,090	6,455	6,788	+1,714	+1.47
Ettalong Beach - Booker Bay	6,202	6,769	6,953	7,096	7,235	+1,033	+0.77
Forrester's Beach - Wamberal	9,805	10,348	10,522	10,593	10,591	+786	+0.39

<sup>3</sup> Forecast ID - <https://forecast.id.com.au/central-coast-nsw>

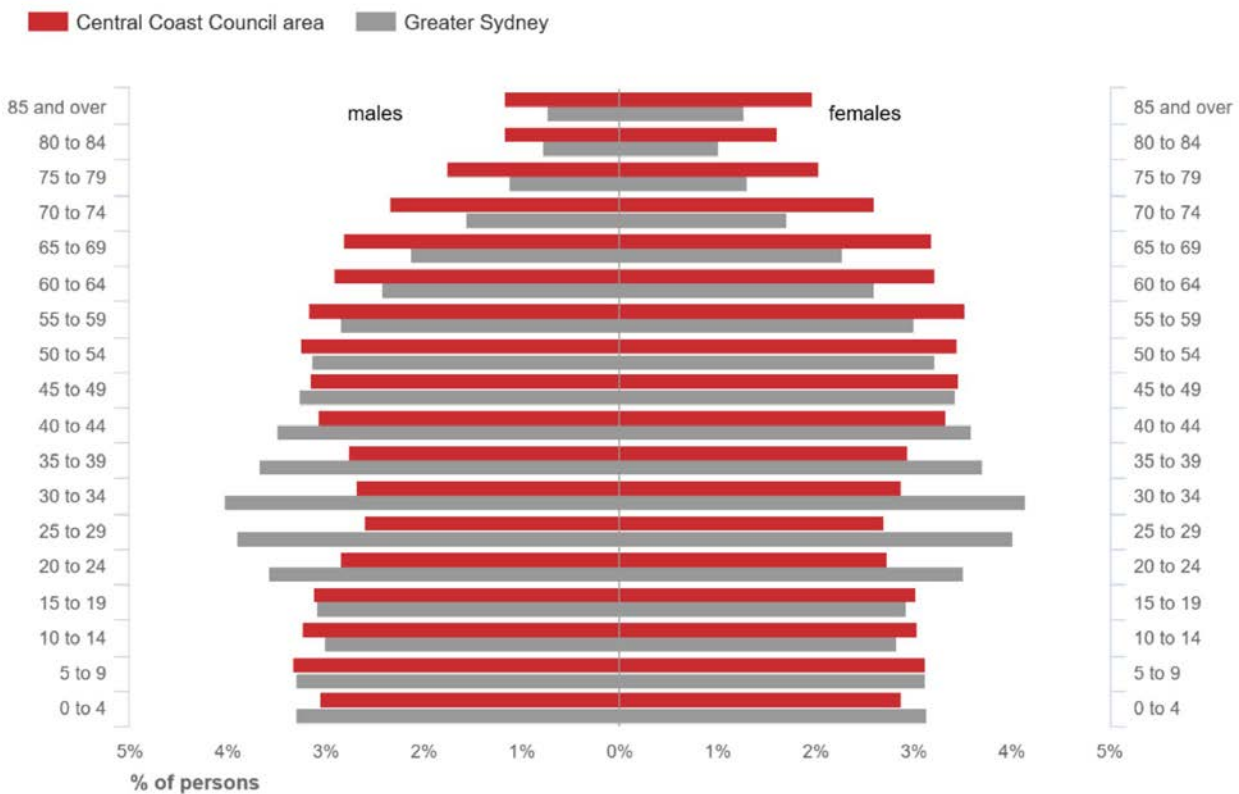
<sup>4</sup> Forecast ID - <https://forecast.id.com.au/central-coast-nsw>



Area	2016	2021	2026	2031	2036	Total Change	Avg. annual % Change
Gorokan	8,473	8,720	8,906	9,036	9,156	+682	+0.39
Gosford - West Gosford	4,970	6,187	7,653	9,361	11,028	+6,058	+4.07
Green Point	6,530	6,602	6,493	6,474	6,489	-41	-0.03
Gwandalan - Summerland Point	5,844	6,197	6,115	6,575	7,847	+2,003	+1.48
Hamlyn Terrace	6,218	8,541	10,535	11,113	10,943	+4,725	+2.87
Holgate - Matcham - Erina Heights	2,430	2,338	2,290	2,275	2,284	-146	-0.31
Kanwal - Wyongah	6,226	6,358	6,907	8,014	9,342	+3,115	+2.05
Kariong	6,559	6,467	6,471	6,531	6,682	+123	+0.09
Killarney Vale - Tumbi Umbi	12,565	12,640	12,707	12,817	12,968	+403	+0.16
Kincumber	7,224	7,335	7,422	7,475	7,497	+273	+0.19
Kincumber South - Bensville - Empire Bay - Killcare	9,641	9,671	9,852	9,813	9,845	+205	+0.11
Lake Munmorah - Chain Valley Bay	8,449	8,940	10,091	12,927	15,328	+6,879	+3.02
Lisarow - Mt Elliot	5,419	5,398	5,414	5,590	5,900	+481	+0.43
Long Jetty - Shelly Beach - Toowoona Bay - Blue Bay	9,449	10,204	10,793	10,899	10,973	+1,524	+0.75
Manning Park	2,531	2,524	2,569	2,613	2,666	+135	+0.26
Mountains	3,959	4,019	4,115	4,214	4,314	+355	+0.43
Narara - Niagara Park	10,902	11,105	11,177	11,018	10,963	+61	+0.03
Noraville - Norah Head	4,124	4,148	4,136	4,119	4,141	+17	+0.02
North Gosford - Wyoming	14,123	15,582	16,795	16,832	16,939	+2,817	+0.91
Ourimbah - Palmdale - Kangy Angy	4,585	4,634	4,710	4,897	5,208	+623	+0.64
Point Clare - Tascott - Kooilewong - Woy Woy Bay	7,757	7,802	7,938	7,946	8,004	+247	+0.16
San Remo - Doyalson - Colongra	4,778	4,893	4,946	5,508	5,948	+1,170	+1.10
Springfield	4,208	4,048	3,968	4,009	4,085	-123	-0.15
Terrigal - North Avoca	14,126	15,339	15,265	15,219	15,103	+977	+0.34
The Entrance - The Entrance North	5,788	6,551	7,521	8,261	9,007	+3,219	+2.24
Toukley - Canton Beach	5,842	6,316	6,710	6,942	7,123	+1,281	+1.00
Tuggerah - Mardi	5,975	5,932	5,987	6,632	7,839	+1,864	+1.37
Tuggerawong - Tacoma - Rocky Point	2,291	2,326	2,338	2,370	2,458	+167	+0.35
Umina Beach - Pearl Beach - Patonga	17,819	18,055	18,061	18,183	18,348	+528	+0.15
Valleys	4,333	4,400	4,480	4,583	4,741	+408	+0.45
Wadalba	2,934	4,546	5,693	6,880	7,609	+4,675	+4.88
Warnervale - Wallarah - Bushells Ridge	1,107	2,188	4,931	8,089	11,648	+10,541	+12.49
Watanobbi	3,978	3,967	3,895	3,875	3,879	-99	-0.13
Woongarah	5,313	6,928	10,024	13,490	15,983	+10,670	+5.66
Woy Woy - Blackwall	12,775	12,966	13,300	13,419	13,619	+844	+0.32
Wyong	4,329	5,209	5,512	5,828	6,747	+2,418	+2.24
Yattalunga - Saratoga - Davistown	7,142	7,340	7,352	7,346	7,389	+247	+0.17

Figure 3: Breakdown of age and gender in Central Coast compared with greater Sydney area

### Age-sex pyramid, 2016



Source: Australian Bureau of Statistics, Census of Population and Housing, selected years between 1991-2016 (Enumerated data). Compiled and presented in profile.id by .id, the population experts.



#### Key Findings of Demographic Analysis:

- « High proportion of 50 plus males and females in Central Coast compared with greater Sydney.
- « Lower proportion of 20-44-year-old males and females when compared with greater Sydney.
- « High median age of 42, compared with greater Sydney at 36, NSW and Australia are 38.
- « Similar proportions of youth (to 19 y.o.) as that for greater Sydney.
- « High proportion of Aboriginal and Torres Strait Islander population at 3.8% compared with greater Sydney 1.5% and NSW 2.9%.
- « Lower proportion of couples with children, 28% compared with greater Sydney at 35% and NSW at 32%.
- « Higher proportion of older couples with children 12% compared with greater Sydney at 8% and NSW 10%.
- « Higher proportion of lone person households at 25% compared with greater Sydney at 20% and NSW at 22%.
- « Low proportion of medium and high-density housing, 22% compared with greater Sydney 44% and NSW 33%.
- « Low Median weekly household income of \$1,256 compared with greater Sydney \$1,745 and NSW \$1,481, however there is also lower median weekly mortgage repayment and weekly rent compared with greater Sydney and NSW.
- « Lower proportion of households renting at 26% compared with greater Sydney 33% and NSW 30%.
- « Lower proportion of people born overseas 15% compared with greater Sydney 37% and NSW 28% and a low proportion of people have language at home other than English 6% compared with greater Sydney 36% and NSW 25%.
- « The SEIFA index of disadvantage Central Coast was considered more disadvantaged (989) compared with greater Sydney 1018 and NSW 1001. The areas of Holgate, Erina Heights, Forresters Beach, Wamberal were considered the lowest level of disadvantage. While Wyong, Toukley, Canton Beach and The Entrance were considered to be the areas of the highest disadvantage.

## 5 MOUNTAIN BIKING



## 5.1 INTRODUCTION TO MOUNTAIN BIKING

While there are a number of different mountain biking styles, mountain biking typically involves cycling off road on a variety of unsealed surfaces through a natural setting. This usually involves manoeuvring through specifically designed trails which encounter obstacles such as trees, rocks, man-made structures and other technical trail features.<sup>5</sup> Mountain Biking offers significant health, fitness, sport, recreation, and tourism opportunities. It is emerging as a particularly attractive activity for regions characterised by outstanding environmental landscapes.

Increasing interest in mountain biking aligns with one of the key 'megatrends' identified by the Australian Sports Commission: "from extreme to mainstream". This megatrend captures the rise of lifestyle, adventure and alternative sports which are particularly popular with younger generations. These sports typically involve complex, advanced skills and have some element of inherent danger and/or thrill-seeking. They are also characterised by a strong lifestyle element and participants often obtain cultural self-identity and self-expression through these sports.

Evidence from a number of studies and across the sport and recreation industry is that mountain biking in Australia is increasing in popularity rapidly<sup>6</sup>. This popularity is arising from a general participation demand, more people wanting to ride on trails in natural areas. Increased participation in active recreation is an overall emerging trend and, in many locations, this means walking, riding and running on trails. In addition, the increasing availability of mountain bikes, decreasing prices and increased awareness of the activity helps drive increased participation. The increasing availability and affordability of E bikes is also driving demand with many more people now able to cycle and explore off path trails.

There are a range of different trail types for mountain bike riders. The following table outlines the key types.

Table 3: Trail Types<sup>7</sup>

Type	Description
Cross Country (XC)	Primarily single-track oriented with a combination of climbing and descending, and natural trail features of varying technicality. Cross country trails appeal to the majority market and can cater for timed competitive events. Typically, bikes are lightweight with shorter travel, dual suspension or have no rear suspension.
All Mountain (AM) (same as Gravity Enduro)	Similar to cross country and primarily singlet rack oriented, with greater emphasis on technical descents, with non-technical climbs. All mountain trails can cater for timed competitive events. All mountain trails may use uplift to the trailhead. Bikes are typically light weight with medium-travel dual suspension.
Gravity Flow	Similar to gravity enduro however are usually more targeted towards beginner-intermediate level riders. Typically have long descents with minimal climbing, with low to moderate gradients, lots of berms rollers and rollable jumps. The trails are usually accessed by shuttle.
Downhill (DH)	Purely descent trails with emphasis on steep gradients for speed and technical challenge with a focus on skill development, can cater for timed competitive racing. Downhill trails usually require uplift to the trailhead. Bikes are designed for descending, built for strength overweight and typically long-travel dual suspension.
Freeride (FR)	Typically, descent focused trails with emphasis solely on technical challenge and skill development. Feature built and natural terrain technical features, drops and jumps. Appeals to the more experienced market, caters for competitions judging manoeuvres and skills. Bikes typically medium to long-travel dual suspension built for strength.
Park (PK)	Built feature environment with emphasis on manoeuvres, skill development and progression. Appeals to wide market including youth and can cater for competitions judging aerial manoeuvres. Can include jump tracks, pump tracks and skills parks. Typically, dirt surfaced but can include hardened surfaces. Bikes are typically built for strength, with short travel suspension.
Touring (TO)	Typically, long distance riding on reasonably uniform surface conditions and lower grades. Touring trails are dual direction linear trails or long-distance circuits with a focus on reaching a destination. Touring trails can include rail trails, access/fire roads and single track. While there is a limited market for long distance mountain biking, touring trails can be ridden in sections making them accessible to all. Bikes may be carrying panniers or towing trailers, and are usually robust with limited suspension, however, for short sections or day trips most mountain bikes are suitable.

<sup>5</sup> Queensland Mountain Bike Strategy, 2018.

<sup>6</sup> Sustainable Mountain Bike Strategy, NSW National Parks and Wildlife Service

<sup>7</sup> Queensland Mountain Bike Strategy, 2018.

There are also a range of different mountain bike users with different skills and abilities who seek a range of experiences on the trails. The following table provides an overview of the different mountain bike user types.

Table 4: Mountain Bike Users

Type	Experience Sought	Classification Sought	Market Potential
Leisure	Includes general cyclists of all ages and abilities and potentially the largest market. They ride infrequently, often have limited skills and require very accessible trails. Not members of clubs and more likely to use highly accessible routes close to home or make the journey to trail facilities with amenities and services such as bike hire, cafés and toilets.	Generally, seek White (Easiest) and Green (Easy) classification trails. Progress to Blue (Moderate) trails.	Large
Enthusiast	Purely recreational mountain bikers with moderate skills and variable fitness and ride weekly. They are typically aged 29-49 and form the existing market majority. Typically, don't compete in events and possess limited outdoors experience. Prefer trails with good trail signs, seek technical but not too challenging trails. Most likely to take short breaks to mountain bike.	Mostly Green (Easy) and Blue (Moderate) classification trails. Progress to Black (Difficult) trails.	Moderate
Sport	Competitive mountain bikers, who ride regular routes multiple times a week and are members of mountain bike clubs. They are a small but influential market. They are willing to seek less accessible trails, have a high fitness level and are technically proficient but may have limited outdoor skills. They ride a very wide variety of trails.	Green (Easy) to Double Black (Extreme)	Small but influential
Adaptive mountain biking	Riders with disability lived experience who require modified or specialised riding equipment to participate, such as hand cycles. There is an emerging group of people who use off-road hand cycles to participate.	All Classifications as per the Adaptive Trail Rating (ATR) system	Small
Independent	Skilled outdoor enthusiasts who ride once a week and are technically proficient with good level of fitness. Generally, a small market. Often involved in other outdoor activities, capable of planning their own rides and ride a very wide variety of trail classifications. Adventure is more important than the technical challenge and they seek more remote trails.	White (Easiest) to Black (Difficult)	Small
Gravity	Highly skilled technical riders who seek very challenging trails, typically ride at least once a week and are often members of clubs. They represent a small market that requires purpose-built trails often with an uplift facility, which are repeatedly used in a concentrated manner. Gravity riders seek specific trails with the highest classifications.	Blue (Moderate) to Double Black (Extreme)	Small

## 5.2 THE MOUNTAIN BIKE INDUSTRY

When discussing trends in the mountain biking industry, it is necessary to firstly break down what is meant by 'the mountain bike industry'. Essentially, the mountain bike industry can be thought of as a conglomeration of different business areas, including:

- « Bike and equipment manufacturing and retail.
- « Mountain bike event organising (both competitive and recreational).
- « Mountain bike guided tours and skills tuition.
- « Commercial shuttle operations (including the use of chairlifts as uplift facilities).
- « Provision of traditional tourism services targeting mountain bike tourists (accommodation, food and beverage, etc.).
- « Trail design and construction.

While the mountain bike industry is quite diverse, the trends in the industry tend to cross the various different business areas, with each influencing, and being influenced by, the others. For example, the popularity of the enduro World Series (the highest level of gravity enduro racing), influences the development and manufacturing of gravity enduro bikes, leading to an increase in the consumer uptake of such bikes, which in turn leads to increases in local attendance at similar events, which in turn leads to the development of more gravity enduro trails. These various factors all influence, and are influenced by, each other.



Figure 4: IMBA Green XC Trail Derby, Tasmania (photo by World Trail)

## 5.3 GROWING POPULARITY OF GRAVITY ENDURO EVENTS

Gravity enduro racing appears to be riding a wave as the most popular competitive discipline currently. This is probably because it is closer to the type of riding that the majority of people like to do with their friends – riding the descents as fast as possible, and then riding together on the climbs and socialising. By contrast, traditional cross-country disciplines (Olympic, marathon and short-course) appear to require more commitment and discipline and appear to be less attractive and accessible to the average rider.

The flipside to increasing growth in gravity enduro racing seems to be a decrease in participation in more traditional cross-country competitive disciplines. Some of Australia's oldest and longest running long-format cross-country races have recently ceased, citing causes such as low participation and attendance and increasing costs to run events. It is not clear if this is an accurate assessment, or simply an anecdotal snapshot in time. After all, cross-country mountain bike racing remains an Olympic event and is still the flagship UCI World Cup and World Championship event.



Figure 5: Gravity Trail Derby, Tasmania (photo by World Trail)

## 5.4 BIKE DEVELOPMENT

Typically, the most popular mountain bikes in the market today have 29-inch wheels, tubeless tyres, hydraulic disc brakes, 10-12 gears (rear derailleur only) and front and rear suspension. The most popular frame materials are aluminium and carbon fibre, with steel and titanium less common, but still not uncommon. The modern mountain bike is low maintenance, light, responsive and forgiving.

Improvements and decreasing production costs in electric battery and motor technology is driving the increasing penetration of E-bikes (electric bikes) into the market. E-bikes are also referred to as pedal assist bikes – that is, the battery and motor supply power to the drivetrain when the rider is pedalling, providing assistance to the rider, increasing the average speed and extending the range for the average rider. They do not have a throttle like a motorbike and don't really allow riders to ride faster than a skilled rider already can. The main impact of E-bikes is that riders who believe they are too old, too unfit, too inexperienced or are otherwise not capable of going mountain bike riding, are now able to experience the sport using an E-bike. The real benefit of E-bikes therefore is that they have the potential to greatly increase participation and expand the market for mountain bike trails, beyond the stereotypical adventure/thrill seeking mountain bike rider cliché .

## 5.5 GRAVITY FLOW TRAILS

Increasingly, mountain bike riders are looking to ride gravity flow trails. These trails have some cross-over with the gravity enduro phenomenon but are usually more targeted towards beginner-intermediate level riders. The key elements of gravity flow trails are:

- « Long descents, with minimal climbing;
- « Typically, shuttle accessed, point-to-point trails;
- « Low – moderate gradients (say 5-10%);
- « Lots of berms, rollers and rollable jumps;
- « No need to pedal or brake hard, unless you choose to;
- « Anyone with basic bike handling skills can ride a gravity flow trail, but experienced riders ride faster and hit jumps/gaps that inexperienced riders don't even see.

This developing market utilises access via vehicles (or other means such as chairlift), offers the opportunity for mountain bike riders to experience wilderness and forests through long rolling descents and enjoy a mountain bike experience that is high on thrills and enjoyment and low on hard work, sweat and exertion. This style of trail is tapping into a growing market segment that wants to be uplifted to the top of the hill



Figure 6: Gravity Flow Trail, Blue Derby, Tasmania (photo by Flow MTB)

## 5.6 INCREASING WOMEN'S PARTICIPATION

Women's participation in mountain bike is growing slowly, but many commercial tour operators are actively looking to expand this market through product packaging and cooperative marketing. For example, over the last two years Mt Buller Alpine Resort in Victoria has offered a women's mountain bike weekend called 'Mind, Body, Bike' that includes social rides, guided tours and skills tuition, with additional optional elements like food and wine, yoga, cooking classes, massage and mindfulness.

A wide range of women's specific products are now available from bikes to apparel to accessories. Performance, pricing and styling is on par to men products.



Figure 7: Women in Mountain Biking (photo by Shutterstock)



## 5.7 GROWTH OF PUMP TRACKS

Pump tracks are becoming more common. Once hidden in backyards of only the most dedicated mountain bike riders, pump tracks are now being constructed at the trailheads of mountain bike destinations and in urban areas where local municipal governments are seeing the value in this emerging form of recreational infrastructure. While traditionally constructed with soil, crushed rock or clay, the modern, best-practice pump tracks are being constructed with a smooth, low maintenance asphalt surface, sub-surface drainage and landscaping elements including vegetation, turf, lighting, shelters, bench seating and more.

The key benefits of asphalt pump tracks are:

- « They can be constructed for low budgets.
- « They can be constructed in small areas.
- « They can be constructed quickly;
- « They can be used by bikes (BMX, mountain bike, balance bikes, kids' bikes), skateboards, scooters and even in-line skates;
- « They have lower inherent risk than skate parks – there are no 'falls from heights', no sharp edges, no forced risks. All obstacles are rollable;
- « Minimal maintenance and lifespan approaching 15 years;
- « Excellent environment for learning bike handling skills;
- « Suitable for all ages and all skill levels.



Figure 8: Gladstone Pump Track (photo by World Trail)

## 5.8 INCREASING ACCEPTANCE OF MOUNTAIN BIKING AS A LEGITIMATE MAINSTREAM SPORT

While mountain biking has been in the Olympics now since the Atlanta 1996 Olympic Games, it is reaching a new level of acceptance as a mainstream sport. Its rise coincides with a decrease in popularity of many traditional, structured sports like football, cricket, basketball etc.

Specific children's mountain bike programs are growing in popularity all around Australia. This is possibly being driven by the increasing lack of fitness and physical activity amongst young people. Parents and teachers see mountain biking as a means of engaging young people in an activity that promotes physical activity and exposes them to the outdoors.



Figure 9: World Cup Cross Country Mountain Bike Racing (photo by Shutterstock)

## 5.9 GROWTH OF MOUNTAIN BIKE TOURISM AS AN ECONOMIC DRIVER

Mountain bike tourism is tourism where the primary purpose of the visit is to ride mountain bikes. It is similar to many other popular adventure/ outdoor sports, like snow skiing, scuba diving, rock climbing, surfing and golf. Enthusiasts of these sports organize their holidays around their preferred sporting activities.

Previously, many Australian mountain bike riders looked overseas for their mountain biking holidays. Destinations such as Canada, USA and New Zealand offered some of the world's leading mountain bike destinations. While these destinations are still among the world's best and no doubt on the wish lists of many Australian riders, the quality and size of some Australian trail destinations is now comparable to these overseas destinations, convincing many Australian mountain bike riders to spend their money in Australia instead.

Mountain bike tourism brings sustainable economic benefits. It brings money into the local economy and creates job opportunities as new businesses spring up to service the visiting riders. Detailed later in this report is a number of successful Australian mountain biking destinations and provides benchmarks including estimates of mountain bike tourism visitation.

With the success of mountain biking destinations like Derby in Tasmania, Government agencies around Australia have started to appreciate the economic value that mountain bike trails can bring, particularly in rural areas of Australia, where many traditional industries are declining. Looking around Australia there are many mountain bike tourism projects recently completed or currently underway, demonstrating the value and benefits that government agencies see in developing mountain biking products, these include;

### Victoria

- « Creswick - currently in planning stages. Seeking to construct around 100km of predominantly cross-country trails. \$2.56M in funding secured.
- « Warburton - currently in planning stages. Seeking to construct around 100km of cross- country and gravity trails. Council has secured around \$12M in funding.

### Queensland

- « Wangetti Trail - currently in planning stages. Seeking to construct around 100km of shared-use walking and mountain bike trail to become new iconic multi-day wilderness experience. \$41M secured for construction funding in 2019 QLD State budget.
- « Eungella -Finch Hatton – Mackay Regional Council is currently planning an international standard trails destination based in the Pioneer Valley with trails through National Park and State Forest lands. Funding is yet to be finalised.

### Northern Territory

- « Alice Springs - NT Government recently announced a plan to design and build the Red Centre Adventure Ride in the West MacDonnell Ranges. Due to be completed at the end of 2019. Funding of \$12M secured.

### Tasmania

- « St Helens – Currently in the construction phase. Around \$4.5M in funding secured for project construction.
- « Kentish - Currently in construction stage 1. Seeking to construct around 100km of mountain bike trails. Seeking around \$4.1M in funding, with some funding already secured for Stage 1 of construction.
- « Derby – Recently completed Stage 2 of construction, now home to over 100km of purpose-built mountain bike trails.
- « Maydena – mountain bike park opened in January 2018 in southern Tasmania, predominantly focused on gravity and advanced riding.

### South Australia

- « Adelaide - planning and works underway to develop and position Adelaide as leading mountain bike destination.

### New South Wales

- « Jindabyne - NSW government recently announced plans to extend the Thredbo Valley Track all the way to Jindabyne. \$9.8M in funding secured.
- « Wollongong - planning works underway to look at developing Mt Keira at Wollongong as a major mountain bike tourism destination.
- « Orange - planning works underway to look at developing Mt Canobolas at Orange as a major mountain bike tourism destination.

## 5.10 HEALTH BENEFITS

Mountain Bike riding can provide a number of health benefits. The Australian Health Policy Collaboration has released the Australian Health Tracker<sup>8</sup> which seeks to provide data on chronic diseases, conditions and their risk factors. The Health Tracker provides rates for children and adults who are overweight and obese, and those who are physically inactive. This provides that 63.4% of Australian adults (18 years and older) are either overweight or obese. In addition, 66.3% of Australian adults are not getting enough physical activity.

Mountain biking can play a positive role in reducing the risk of physical and mental health problems. Furthermore, physical inactivity has significant economic implications. The annual economic cost of physical inactivity in Australia (healthcare, productivity and mortality costs) was estimated to be \$13.8 billion in 2008<sup>9</sup>. Similarly, reducing inactivity by 10% is estimated to lower health sector costs by \$96 million annually and increase leisure-based productivity by \$79 million, home-based productivity by \$71 million and workforce productivity by \$12 million<sup>10</sup>. Although health care costs are not the responsibility of local government, it would be reasonable to assert that health care costs are a burden for the community, and that the more money spent on healthcare related to physical inactivity, the less money available for other types of health care and other projects/spending which can benefit communities and regions.

## 5.11 IMPACT ON THE ENVIRONMENT

Understanding the environmental impacts of mountain biking can be somewhat difficult as the amount of detailed research is still limited compared with other forms of recreational activities such as hiking. It is understood that the largest environmental impacts for mountain biking are during the initial construction of the trails.<sup>11</sup> Some studies have compared the environmental impacts of mountain biking against other recreational activities including hiking and horse riding, when conducted on authorised and properly designed trails for each respective activity.

One particular study in Canada investigated the plant density, diversity and soil exposure before and after 500 one way passes by bikers and hikers. The findings of this was that there was no significant differences between hiking and mountain biking on the three areas investigated.<sup>12</sup> Another study in Australia investigated the impacts of mountain biking compared to hiking on subalpine grassland.<sup>13</sup> Vegetation and soil were measured including different intensities of use which included (none, 25, 75, 200 and 500 passes across slope, 200 pass up and down slope) for mountain biking and for hiking (200 and 500 passes across slope). This study outlined that mountain biking up and down a moderate slope had a greater impact when compared with riding across the slope. It also outlined that there was more damage than hiking but only at high use (500 passes). Overall however the study concluded that hiking and mountain biking appear to have similar environmental impacts.<sup>14</sup>

The research into soil erosion and compaction has outlined that the soil type (erodibility) and the amount of moisture have the greatest influence on the significance of mountain biking effects on soil.<sup>15</sup> An early study into soil erosion found that mountain biking generated less sediments when compared to horses and hikers.<sup>16</sup> Another study found that mountain bike trails were similar to hiking and multi-use trails when comparing trail impact indicators such as width, incision, and soil loss.<sup>17</sup> Slope was noted as an important factor that can change the condition of a trail rather than the level of use.<sup>18</sup> Riding technique and skill level could also play a factor on erosion.<sup>19</sup>

Trail design and management are much larger factors in environmental degradation than the type or amount of use.<sup>20</sup> Studies have demonstrated that poorly designed or located trails are the biggest cause of trail impacts.<sup>21</sup> The best trail alignments avoid the habitats of rare flora and fauna and greatly minimize soil erosion, muddiness, and tread widening by focusing traffic on side-hill trail alignments with limited grades and frequent grade reversals.<sup>22</sup>

Mountain biking as with all forms of recreational activities has some impact on the environment. While there is still limited detailed research into mountain biking impacts, those studies that have been completed have generally identified that the impacts to authorised, well designed and located mountain biking trails are similar to those of hiking and are considered to have less impact when compared to horse riding. The indications are that unauthorised trails will generally result in poorer surface conditions and account for greater impact on habitats.

<sup>8</sup> <http://www.atlasesaustralia.com.au/ahpc/>

<sup>9</sup> <https://www.vichealth.vic.gov.au/media-and-resources/publications/physical-activity-and-sedentary-behaviour>

<sup>10</sup> Cadilhac et al. 2011 cited in <https://www.vichealth.vic.gov.au/media-and-resources/publications/physical-activity-and-sedentary-behaviour>

<sup>11</sup> Marion, J.L., Wimpey, J., 2007. Environmental impacts of mountain biking: science review and best practices. In: Webber, P. (Ed.), *Managing Mountain Biking*, IMBA's Guide to Providing Great Riding. International Mountain Bicycling Association (IMBA) Boulder, pp. 94–111.

<sup>12</sup> Ibid.

<sup>13</sup> Pickering, C.M, Rossi, S. Barros, A. 2011. Assessing the impacts of mountain biking and hiking on subalpine grassland in Australia using an experimental protocol. *Journal of Environmental Management*, Vol 92 Issue 12, pp 3049-3057.

<sup>14</sup> Ibid.

<sup>15</sup> Quinn, M, Chernoff, G. 2010. *Mountain Biking: A review of the ecological effects: A literature review for Parks Canada National Office.*

<sup>16</sup> Pickering, C.M, et al. 2010. Comparing hiking, mountain biking and horse riding impacts on vegetation and soils in Australia and the United States of America. *Journal of Environmental Management*, Vol 91, pp 551-562.

<sup>17</sup> Pickering, C.M, et al. 2010. Comparing hiking, mountain biking and horse riding impacts on vegetation and soils in Australia and the United States of America. *Journal of Environmental Management*, Vol 91, pp 551-562.

<sup>18</sup> Ibid.

<sup>19</sup> Quinn, M, Chernoff, G. 2010. *Mountain Biking: A review of the ecological effects: A literature review for Parks Canada National Office.*

<sup>20</sup> Marion, J.L., Wimpey, J., 2007. Environmental impacts of mountain biking: science review and best practices. In: Webber, P. (Ed.), *Managing Mountain Biking*, IMBA's Guide to Providing Great Riding. International Mountain Bicycling Association (IMBA) Boulder, pp. 94–111.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

## 6 MOUNTAIN BIKING ON THE CENTRAL COAST



Mountain biking is a popular pastime on the Central Coast, having grown over a long period into a strong and active local mountain bike culture. Consequently, the Central Coast has many bike shops, a bike hire facility, various shared cycle paths as well as a BMX and Road Cycling club.

The Ourimbah Mountain Bike Park is the main sanctioned venue for mountain bikers on the Central Coast and is the focus of most organised club events. There are plenty of trails to suit all riders; from the family loop for those just getting started, to the cross country and gravity trails that are used in National Cup events. All in all, there are over 18kms of trails to explore. The Ourimbah Mountain Bike Park is operated by the Central Coast Mountain Bike Club under a Forest Permit issued by the Forestry Corporation of NSW. The Club funds events, developments and maintenance of infrastructure through memberships, fund raising and grants. Ourimbah Mountain Bike Park is free for general use. Commercial operators and organised groups/schools need to seek appropriate approvals. There are a range of commercial operators using Ourimbah Mountain Bike Park for events / shuttle / skills clinics which is providing local employment, tourism and recreation opportunities.

The Convict 100, a 65km Marathon Cross Country race is well known as one of Australia's most challenging Mountain Bike marathon races, following the historic Convict Trail through the Dharug and Yengo National Parks. The course features a mix of fast fire trail, technical rock gardens, rocky descents and spectacular ridgeline views.

## 6.1 MOUNTAIN BIKING LOCATIONS ON THE CENTRAL COAST

The Central Coast has a wealth of natural areas and the Coastal Open Space System (COSS) is a valued asset which has been planned and enhanced over many years. One of the issues of concern is the potential impacts of mountain bike trails on the COSS. The following map outlines the COSS system.





Figure 11: Mountain biking locations across the Central Coast region.



Table 5: Mountain Bike Locations identified in Central Coast Region

Name	Location	Land Area Ha	Zone	Site Observations	Identified Activities	Approved Activities	Land Tenure	Land Manager
Blackwall Mountain	Access via Maitland Bay Rd	40ha	Non-Urban	No site visit	Council reports unsanctioned MTB trails	Riding permitted on some fire trails	Central Coast Council	Central Coast Council
Bouddi National Park	NP is accessed from Putty Beach Drive, or Scenic Road Central Coast NSW	1681.9 ha	Non-Urban	World trail visited the site and noted a number of unsanctioned trails. The site lacked adequate infrastructure	20 km Unsanctioned trails throughout the NP (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Camping, Swimming, Fishing and Mountain Biking on Fire Trails	National Park	NSW National Parks & Wildlife
Bradleys Reserve North Avoca	Access via Bradleys Rd	27ha	Community Use	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Existing walking track with some unsanctioned technical features. Has a few kilometres of trail from the highway down to the lagoon foreshore	Central Coast Council Reserve COSS	Central Coast Council



Name	Location	Land Area Ha	Zone	Site Observations	Identified Activities	Approved Activities	Land Tenure	Land Manager
Brisbane Water National Park	Access is via Woy Woy Rd	14520 ha	Non-Urban	No site visit. Reports of unsanctioned MTB Trails	Offers great walks, cycling and fishing spots. The park protects ancient Aboriginal rock engraving sites	Mountain bike riding permitted on a 20km fire trail loop called Tommo's loop and Rocky Ponds Cycling Loop	National Park	National Parks and Wildlife
Davis Town Road Bushland	Access via Avoca Beach Rd	4.63 ha	Freehold	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Green Point - Bushland reserve - private parcel in between Davidson Road and Pixie Avenue Reserves, no approved activities	Central Coast Council Reserve COSS	Central Coast Council
Glenworth Valley	Access via Peats Ridge Rd	3970ha	Non-Urban	No site visit	Popran National Park allows MTB on some trails. Glenworth Valley is advertising they will invest in 120km of MTB trails	Mountain biking, horse riding, quad biking, kayaking, abseiling, laser skirmish, camping.	National Park	National Parks and Wildlife
Jilliby State Conservation Area	Central Coast 1.25hr Drive from Sydney 30 min from Gosford NSW	3,884 ha	Non-Urban	No site visit	Area is approved for 4WD touring, mountain biking, horse riding and bush walks through the forest	Plan of Management states mountain biking only permitted on roads and management trails not permitted off roads, trails or walking tracks	National Park	NSW National Parks & Wildlife
Katandra Reserve	Access via Katandra Rd	190ha	Non-Urban	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)		Central Coast Council Reserve COSS	Central Coast Council
Kincumba Mountain Reserve	Access via Island View Dr	660 ha	Non-Urban	17 trails totalling 18km Picnic areas Car parking Proximity to school & residential zoning Kiosk for event hire	18 km of Unsanctioned Trails throughout the reserve. (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Multiple walking tracks through rain forest and mountainous terrain. Riding not permitted on walking tracks, riding is permitted on some fire trails	Central Coast Council Reserve COSS	Central Coast Council
McPherson State Forest	Access via Gorge Downes Drive	6500ha	Non-Urban	No site visit	No available information	Existing walking tracks	State Forest	Forestry Corporation of NSW

Name	Location	Land Area Ha	Zone	Site Observations	Identified Activities	Approved Activities	Land Tenure	Land Manager
Munmorah State Conservation Area	Access via Pacific Hwy	997ha	Non-Urban	No site visit	Reports of unsanctioned mountain bike trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Camping, Swimming, Fishing.  Plan of Management only states mountain biking permitted on roads and management trails not permitted off roads or trails or walking tracks	National Park	National Parks and Wildlife
Mt Alison	Access via Pacific Hwy	130ha	Non-Urban	No site visit	Council reports unsanctioned MTB trails	Riding permitted on some fire trails	Central Coast Council	Central Coast Council
Olney State Forest	Access via Martinsville and Wattagan Forest Rds	20,000ha	Non-Urban	No site visit	The Hunter Mountain Bike Association manages a mountain bike track in Olney State Forest	Forest Permit Arrangement with Forestry Corporation of NSW to allow mountain biking	State Forest	Forestry Corporation of NSW
Ourimbah Mountain Bike Park in Ourimbah State Forest	Central Coast 1.25hr Drive from Sydney 30 min from Gosford Red Hill Rd Ourimbah Central Coast NSW	Permit Area 216ha (State Forest total is 3,175ha)	Non-Urban	World trail visited the site and noted a number of well built and maintained trails. Site lacked adequate infrastructure.	Variety of riding opportunities for all skill levels.  Regular club race events, popular weekend destination with local riders	A trail network of 18 km (trail breakdown is 11 green, 22 blue, 9 black) with a mix of XC and DH trails. A Shuttle Service is available 7 days per week  Forest Permit Arrangement with Forestry Corporation of NSW to allow mountain biking. Central Coast Mountain Bike Club are the primary permit holder.	State Forest	Forestry Corporation of NSW
Pixie Avenue Bushland	Access via Pixie Av	7.87 ha	Freehold	No site visit.	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Green Point – Bushland reserve, no approved activities	Central Coast Council Reserve COSS	Central Coast Council
Rumbalara Reserve	Access via Maidens Brush Rd, Mt Elliott	358ha	Non-Urban	Evidence of some unauthorised trails	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Fire trails use allowed	Central Coast Council Reserve COSS	Central Coast Council
Strickland State Forest	Access via Strickland Forest Rd	490ha	Non-Urban	No site visit	No information available	Existing walking tracks and identified for permitted hunting	State Forest	Forestry Corporation of NSW

Name	Location	Land Area Ha	Zone	Site Observations	Identified Activities	Approved Activities	Land Tenure	Land Manager
Trail Share-Kulnura Cedar Brush Creek	Collins Rd via Brush Ck Rd, 1.5 hrs from Sydney, 30 min from Gosford	NA	Non-Urban	No site visit. Sanctioned trail network	Mix of IMBA Green to Black Diamond Trails, with some North Shore Features	6 trails totalling 27km (There are 4 grades, ranging from the 4 km entry-level green trail, with wide tracks and minimal climbing, to the challenging 8km black and red trails packed with technical singletrack, aerial platforms, roller-coaster downhills and over 400m of vertical climbing. The terrain is highly varied and will challenge every rider in one or other dimension <sup>23</sup> )  Accommodation Coaching	Private Property	Privately operated by Trail Share
Wambina Nature Reserve	Access via Matcham Rd	55ha	Non-Urban	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	No sanctioned activity	National Parks	National Parks and Wildlife
Wambina Road Reserve	Access via Matcham Rd	27ha 43ha	1/ DP1087483  133/ DP1142189	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Riding permitted on some fire trails.	Central Coast Council Reserve COSS	Central Coast Council
Wyong State Forest	Access via Watagan Forest Rd	490ha	Non-Urban	No site visit	No information available	Existing walking tracks	State Forest	Forestry Corporation of NSW
Wyrribalong National Park	Cromarty Hill Rd	515ha	Community Use	No site visit	Reports of unsanctioned MTB Trails (no breakdown of trail difficulties can be provided as these are unsanctioned trails)	Plan of Management only states mountain biking permitted on roads and management trails not permitted off roads or trails or walking tracks	National Park	National Parks and wildlife

<sup>23</sup> <https://www.trailshare.re-zycle.com/>

## 7 CONSULTATION SUMMARY



The following section provides a summary of the consultation and community engagement outcomes. More detailed information on the engagement and survey can be found within the Engagement Report (separate report).

## 7.1 COMMUNITY SURVEY

A community survey was developed to seek the community's feedback on mountain biking on the Central Coast. The aim of the survey was to understand community views, participation and demand, current riding locations and the opportunities and risks for mountain bike riding on the central coast. The survey was hosted on-line and propagated widely through social media and council's communication channels.

A total of 1949 responses were received to the survey. Out of these 1590 (81.58%) currently participated in mountain biking within the Central Coast. A series of questions were asked both riders and non-riders to gather more information. A summary of the responses is outlined below.

### 7.1.1 Mountain Bike Rider Information

#### Riding Characteristics

Over 50% of the current mountain bikers would rate their ability as intermediate with only 8% indicating they are a beginner. Approximately 60% of respondents were also riding two or more times a week with the most popular times being Saturday and Sunday morning followed by Friday afternoons.

Table 6: Survey Result – How would you rate your ability?

How would you rate your ability?	
Beginner	8.03%
Intermediate	53.11%
Advanced	38.86%

Table 7: Survey Result – How often do you go mountain biking?

How often do you go mountain biking?	
Three or more times a week	27.91%
Twice a week	32.28%
Once a week	20.51%
Once a fortnight	8.87%
Once a month	9.39%
Once a year	1.03%

Table 8: Survey Result – What day and time do you normally go mountain biking?

What day and time do you normally go mountain biking?	Morning	Lunch time	Afternoon	Night
Monday	47.94%	21.01%	56.61%	15.98%
Tuesday	45.17%	19.31%	59.85%	17.37%
Wednesday	39.00%	19.76%	59.62%	20.79%
Thursday	37.55%	20.33%	56.96%	26.01%
Friday	44.56%	19.56%	62.07%	15.82%
Saturday	77.05%	35.70%	46.85%	5.90%
Sunday	76.04%	37.20%	48.57%	5.40%

Over 90% of respondents are spending between 1-4 hours mountain biking and generally riding with friends.

The responses indicate that just over half ride between 1-2 hours which would indicate a high degree of recreational riding on locally accessible trails. Riders are more likely to travel to a destination if there is more than 2 hours' worth of riding. This is supported with the proportion of rides in weekday mornings and afternoons, indicating shorter duration recreational riding at local destinations.

Table 9: Survey Result - Length of time mountain biking

How long do you usually undertake the activity for?	
Less than 1 hour	1.42%
1-2 hours	51.26%
2-4 hours	42.67%
4-6 hours	4.20%
More than 6 hours	0.45%

Table 10: Survey Result – Who do you ride with?

When you go riding, who do you ride with?	
Alone	20.80%
With friends	61.17%
With family	11.27%
With a club	1.22%
With an organized group (but not part of a club)	5.54%
Once a year	1.03%

Significantly only 25% of respondents were members of a mountain bike club. This means that self-directed, recreational riding is a dominant motivation and that competition is not a significant driver of participation.

Table 11: Survey Result – Are you a member of a mountain bike club?

Are you a member of a Mountain Bike club?	
No	75.24%
Yes	24.76%

### Trail Preferences

Trail riding was the type of trail most ridden followed by cross country, however this could reflect the availability of trails as opposed to the preference of riders. When asked their preferred trail to ride, a much greater proportion indicated a desire to ride flow trails which supports the assumption this is an unmet need and that there is lack of diversity in the current trail network.

Table 12: Survey Result – What type of trails do you ride?

What type of trails do you ride on the Central Coast	
Trail Riding	76.84%
Descent / Gravity	51.94%
Cross Country	67.16%
Flow Trail	58.32%
Fire Trails Only	17.55%
Other	4.19%

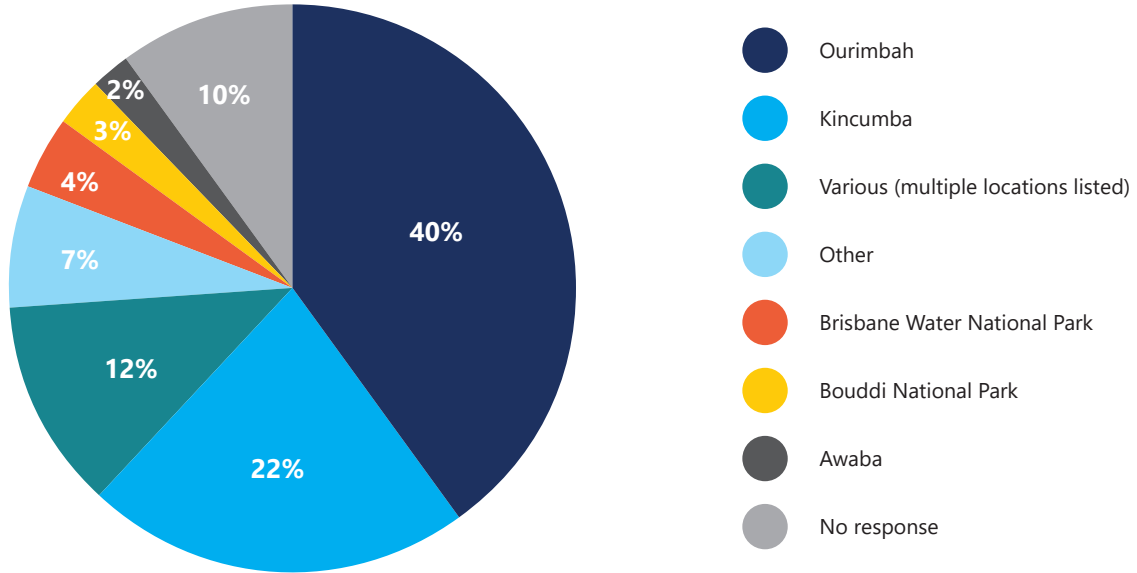
Table 13: Survey Result – Preferred trail

What is your most preferred trail to ride?	
Flow Trail	47.10%
Trail Riding	44.71%
Descent / Gravity	40.06%
Cross Country	39.42%
Fire Trails Only	7.16%
Other	2.58%

### Riding Locations

The most popular location for mountain biking on the Central Coast was Ourimbah Mountain Bike Park, followed by Kincumba Mountain Reserve. Approximately 12% listed multiple locations across the Central Coast.

Figure 12: Survey Result – Location Most Often Ridden



When asked to explain location preference, the main reason for Ourimbah was the trail network / trail diversity and options (66%). The location / access and proximity score next highest with 19%.

However, at Kincumba 54% of respondents identified that the main reason was the location / ease of access and proximity. The trail network / trail diversity scored next highest at 28%.

Figure 13: Survey Result – Why do you ride Ourimbah State Forest

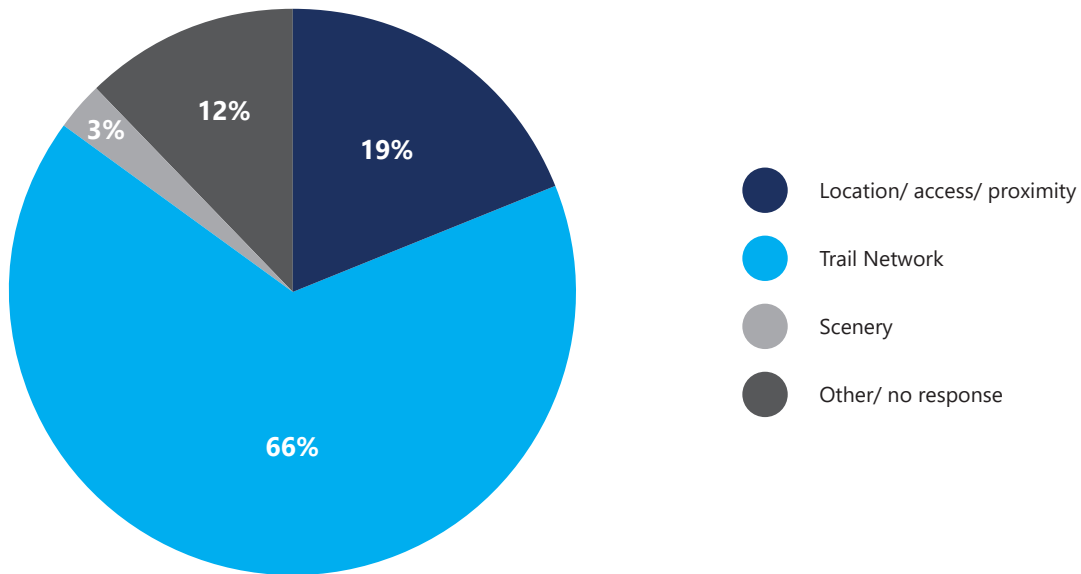
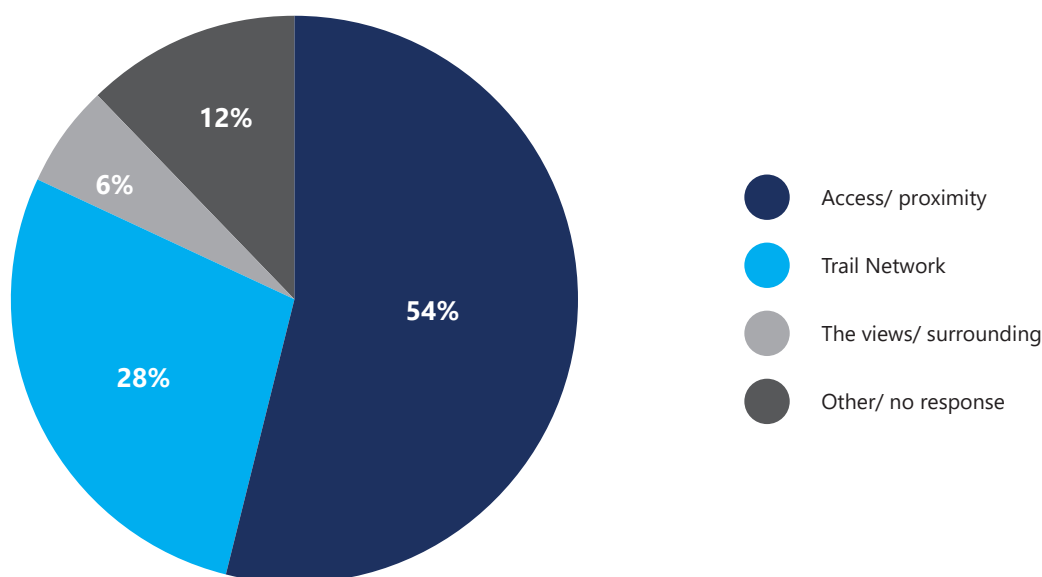


Figure 14: Survey Result - Why do you ride Kincumba?



### Essential Facilities and Priorities for Preferred Locations

Trail signage, car parking and water were considered the essential facilities that should be provided at mountain biking locations (followed closely by toilets and site information). Respondents were also asked what facilities are required at their preferred location with 45% of respondents indicating toilets and water were the highest priorities at Ourimbah.

At Kincumba, trail improvements/sanctioned trails were the highest priority (39%).

Table 14: Survey Result – Essential Facilities Required

What do you think are the essential facilities that should be provided at mountain biking locations?	
Car parking	67.65%
Public Transport	4.57%
Trail Signage	80.10%
Toilets	56.75%
Seating	9.28%
Water	61.18%
Site Information	55.84%
Fencing to protect	35.65%
Other	9.14%

### Travel Time and Use of Multiple Locations

#### Travel Time and Use of Multiple Locations

Over 65% of respondents are travelling 30 minutes or less to their most frequently used mountain bike location. This aligns with proximity being a key factor in the location chosen for a majority of respondents. Approximately 65% of respondents also ride in other locations.

Table 15: Survey Result – Travel Time

How long does it take to travel to this location?	
Less than 15 minutes	30.28%
15-30 minutes	35.07%
30 minutes – 1 hour	20.21%
1-2 hour	12.29%
More than 2 hours	2.15%

Table 16: Survey Result – Other locations for mountain biking

Is there another location on the Central Coast you frequently use for mountain biking?	
No	35.11%
Yes	64.89%



## Unauthorised Trails and Other Outdoor Recreation

Over 70% of respondents are aware that unauthorised mountain bike trails have been constructed and the majority of respondents attributed this to a lack of authorised trails. A secondary motivating factor was the convenience of a local option (location / proximity) as sanctioned trails were too far away to be accessible for some respondents.

Table 17: Survey Result – Unauthorised trails

Are you aware that some unauthorised mountain bike trails have been developed on some Council reserves?	
No	29.70%
Yes	70.30%

### 7.1.2 Non-Riders

There were 350 respondents who did not currently ride mountain bikes. These were asked a series of questions regarding their thoughts on mountain bike riding, current activities and any concern regarding mountain biking on the Central Coast. Out of the non-riders, approximately 46% indicated that they would consider mountain biking if formal trails were provided.

Table 19: Survey Result – Would you consider mountain biking?

Would you consider mountain bike riding if formal trails were provided in some natural areas	
No	39.49%
Yes	46.31%
Unsure	14.20%

### Non-Rider Outdoor Recreation Activities and Locations

The most popular activity undertaken by non-riders was bushwalking with over 68%.

Table 20: Survey Result – Recreation activities undertaken by non-riders

What activities do you do?	
Bushwalk	68.89%
Picnic	1.85%
Photography	2.96%
Art	0.74%
Relaxation	7.78%
Other	17.78%

Approximately 85% of respondents also visit other bushland or natural reserves on the Central Coast with over 50% of respondents indicating that they undertake bushwalking, hiking and walking in these areas.

Table 18: Survey Result – Bushland Reserves

Do you visit any bushland or natural reserve areas on the Central Coast?	
No	15.34%
Yes	84.66%

### Activity Frequency

more frequently than non-riders, with nearly 60% of riders using reserves twice a week or more compared with only 28% of non-riders. There was a diverse range of preferred locations provided, with Bouddi National Park, Kincumba, Rumbalara and Wyrabalong all proving popular. Close to 50% of respondents indicated they would visit their preferred location once a week or more.

Table 21: Survey Result – Frequency of visits to bushland reserve

How often do you visit this location?	
Three or more times a week	14.01%
Twice a week	14.01%
Once a week	20.62%
Once a fortnight	12.06%
Once a month	31.91%
Once a year	7.39%

### 7.1.3 All Respondents – Views and Attitudes Towards Mountain Biking

All respondents were asked a series of questions regarding their level of support for a range of strategies towards mountain biking. There was support of over 90% agreeing or strongly agreeing to allow mountain bike riding on all fire trails as a shared use. Over 85% agreed with development of new shared trails that would allow for mountain biking as well, while approximately 87% agreed for the development of limited mountain bike trails in suitable locations. Over 75% of respondents also indicated that they are concerned about the lack of clarity regarding which mountain bike trails are authorised.

When reviewing the responses, it is important to remember that overall 18.4% of respondents were not Mountain Bike riders and 81.6% were. Responses to the following issues were not reflective of these proportions, indicating that Riders share many concerns about non-sanctioned and unplanned trails for mountain biking and conversely that non-riders were not necessarily unsupportive of developing sanctioned trails for mountain biking.

Table 22: Survey Result: Mountain Biking Strategies

What day and time do you normally go mountain biking?				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Continue to allow mountain bike riding where currently allowed (on some existing fire trails as shared use)	78.90%	16.57%	2.67%	1.86%
Allow mountain bike riding on all fire trails as a shared use	74.32%	16.50%	5.52%	3.66%
Development of new shared trails which allow mountain biking as well	70.66%	15.14%	8.12%	6.08%
Development of limited mountain bike only trails in suitable locations	67.31%	19.93%	7.63%	5.13%
Lease specific areas to clubs to provide mountain bike trails	53.87%	24.44%	13.42%	8.26%
Only State managed areas such as State Forests and National Parks should provide mountain bike trails	4.38%	8.64%	46.20%	40.77%
Council should not provide any mountain bike trails	3.37%	3.14%	16.92%	76.57%

Table 23: Survey Result: Concern Regarding Bushland Reserves

Are you concerned about the following?		
	Disagree	Strongly Disagree
Behaviour of some mountain bike riders on shared trails?	30.12%	69.88%
Allowing mountain bikes in nature conservation reserves?	29.51%	70.49%
Construction of unauthorised mountain bike tracks?	51.94%	48.06%
Construction of unauthorised walking tracks?	45.21%	54.79%
Lack of proper / authorized trails for mountain bike riders?	86.66%	13.34%
Lack of clarity regarding which mountain bike trails are authorized?	75.29%	24.71%
Increasing numbers of mountain bike riders in Council managed reserves?	25.06%	74.94%

## 7.2 STAKEHOLDER ENGAGEMENT

### 7.2.1 Mountain Bike Industry

A focus group was held with mountain bike riders on the Central Coast. This included representatives from the local mountain bike club, bike shops and riders. The following provides a summary of the key discussion points.

- « The Central Coast Mountain Bike Club operate from Ourimbah Mountain Bike Park in the Ourimbah State Forest which is managed by the Forestry Corporation with the club having a permit to operate. There is potential to expand at this location. The Club currently has gravity and cross-country trails and any new developments need approval from Forestry. The Ourimbah Mountain Bike Park is currently run by Club members (volunteers) with free access to the mountain bike community/ general public. They have large use on the weekends and over 18km of trails but believe there is the ability to have 85km of trails.
- « There is high demand for mountain biking reported from local bike shops, approximately 85% of sales are in mountain bikes.
- « Number of Sydney residents also coming to Central Coast as it is only an hour away and there are limited facilities in Sydney.
- « There is a significant risk with the current network of trails as there are limited trail markings and signage.
- « Kincumba is a popular spot as it has multiple entry points, in a central location and allows a quick ride with good elevation.
- « There is a limited relationship with Council, previous proposals to develop mountain biking have not been supported.
- « Opportunity for the Mountain Bike Community to work as a group with Council, they have a desire for good quality trails to be built and to achieve this without impacting the environment or heritage sites. Support for proposed dual use trails on climbing trails.
- « Desire of the mountain bike community to have a trail network but trails that are built are blocked by Council and new trail alignments occur as a result, they are just told there is no opportunity for trails to be built and therefore illegal trails are being developed. There is a financial opportunity for tourism and healthy living in supporting the industry. A willingness of the group to see positive changes and be part of the solution.

### 7.2.2 Environmental Conservation Groups

A workshop was held with representatives from environment and conservation groups. A summary of the key points is provided below:

- « Overall there was a significant concern regarding the damage that unauthorised mountain bike trails could have on the environment. This includes erosion, spreading of weeds, impacts to flora and fauna as well as damage to cultural heritage sites.
- « There was concern around locations where mountain bikers are riding and in particular COSS land. The COSS land has a particular value that should be protected.
- « There was a general agreement that mountain biking on fire trails is acceptable, however it was acknowledged that a majority of mountain bikers prefer single track riding.
- « There was a general agreement that mountain biking is an active and healthy pursuit and can be provided for in the right location.
- « That unauthorised trails in high value land should be closed and revegetation should be undertaken.
- « Some concern around the conflict between users, particularly walkers and mountain bikers.
- « A discussion and request for successful dual use trails found in other locations (examples have been provided in the case studies – see Smithfield and Atherton).

### 7.2.3 Forestry Corporation of NSW

The Central Coast Mountain Bike Club have a Forest Permit with the Forestry Corporation of NSW. This permit is issued under the Forestry Act 2012 and comes with a designated parcel of land and a set of conditions and an annual fee. The permit area is audited every year or as needed to determine if the area is being managed accordingly. The Club (permittee) has various responsibilities under the conditions, including maintenance of the trails. There is currently a network of approximately 18km of mountain bike trails including Downhill, Cross Country and a children's development area with a few others approved including a second Downhill, flow/gravity and a pump track.

Should the club wish to develop infrastructure on the site, they may seek permission in writing from Forestry NSW. The Club is required to obtain any relevant approvals such as environmental assessment and any local government approvals. As the area is a timber reserve FCNSW will communicate with the club in advance if the timber needs to come out of the Club's permit area.

FCNSW has had issues with unauthorised trails being built but not just in relation to mountain biking, with trail bikes, horse riding and 4wd as well. Engagement with the Mountain Bike Club and auditing process under the permit has assisted to reduce this. There has been an increase in demand for trails across NSW over the past few years with about 15 approved mountain bike parks across the State and other agreements on State Forests in NSW. Demand has also increased for commercial operators to offer experiences and products such as events, shuttle services, tours and skill clinics. Each commercial operator requires their own Forest Permit and also permission from the Club to operate within the Mountain Bike Park.

Mountain bike riding is allowed in State Forests on formed roads. There is approximately 60,000km of formed roads within NSW State Forests. Designated and purpose-built mountain bike single trails must be under a Forest Permit to ensure due diligence, trail ownership/accountability and communication. Single trails not managed under a Forest Permit are considered unauthorised.

### 7.2.4 National Parks and Wildlife

Discussions with National Parks and Wildlife staff around mountain biking in the region indicated that there was a mix of sanctioned and unauthorised trails in National Parks. Key points from the discussion are provided below:

- « Bouddi National Park has an estimated 15-20km of trails.
- « There are also trails located within Brisbane Water National Park however the extent of the trail network is unknown.
- « Unauthorised trail building has increased in the past couple of years, causing damage to some environment and heritage sites.
- « MTB Events have also been held without any approvals.

### 7.2.5 Department of Premier and Cabinet

Mountain Biking was discussed with a Senior Project Officer within the Department of Premier and Cabinet. A summary of the discussion is outlined below:

- « A NSW Mountain Biking Strategy is currently being prepared.
- « Some cross-agency networks have recently been established in Northern Sydney. Hornsby, Ku-ring-gai and Northern Beaches Councils are working together with National Parks and other state land managers to look at ways to respond to the rising demand for mountain biking.
- « Hornsby Shire Council have developed a network of trails at Old Mans Valley. This has been built and managed by Council with 30km sanctioned and 150km unsanctioned trails.
- « Rider numbers are certainly increasing, and the issue of unauthorised trails being built is one that is happening across the state.
- « There are some examples of private developments coming in to try and target mountain biking as well. However, this is a pay for use situation.
- « Glenworth Valley – is expected to have 15km of trails by the end of the year, with a view to a much bigger network over time.

### 7.2.6 Traditional Custodians of the land

A meeting was held with representatives from Darkinjung local Aboriginal Council. Darkinjung have concerns with unauthorised trails being built through land they own which is also causing damage to cultural heritage sites (in particular at Kincumba). Development of any trail network (if it is on their land) needs to be approved at a board level.

## 8 CASE STUDIES



Below are number of case studies providing an overview of mountain bike trail building projects with trail types, visitation numbers (if known), management and operation methods, issues and challenges faced, and key learnings identified from the projects.

## 8.1 OLD MANS VALLEY – NSW (HORNSBY SHIRE COUNCIL)

Hornsby Shire Council is located in northern Sydney with almost 70% of the area being bushland. In 2008 an Unstructured Recreation Strategy was undertaken for the Council which highlighted the increasing popularity of mountain biking. One of the recommendations was for further investigation into developing mountain bike trails. Site feasibility studies were undertaken, and Old Mans Valley was selected as the most appropriate site. There was opposition from some members of the community regarding the proposal, however Council approved development of stage 1 of the track. Initially a Trailcare Program undertook the maintenance of the trails, however this is now professionally maintained. Water and toilets are not located on site but are located nearby. A small pump track is also located on site. The Council looked at the likely benefits of providing for mountain biking including the following:

- « Access to authorised mountain bike trails promotes healthy living for a large age range.
- « Youth participation and reductions in antisocial behaviour.
- « Creating opportunities for strong economic and social return.
- « More access to scenic bushland areas for public on bike ready tracks.

Some of the challenges identified throughout the project were:

- « Unknown process – first by a Sydney local government area.
- « Controversial – bushland area and the proximity to homes.
- « Meeting the market, eg, design, for a successful mountain bike facility.
- « Site constraints (amount of space, the terrain and Plan of Management).
- « Competing land uses.
- « Traffic plan for parking & bike crossings.

### Key Learnings

- « Trying to stop mountain biking without any plan generally fails and increases opportunities for conflict.
- « Be proactive - do something or more asset damage will occur and trail user conflicts will increase.
- « Communicate, consider and educate – so all stakeholders have a good understanding of the issues.
- « Good partnerships lead to good decisions and sustainable outcomes.
- « The result is a popular off-road cycling facility which has reduced unauthorised riding.
- « Averaging approximately 900 laps per week over the past 4 years.
- « An average of 300 users per week.

Figure 15: Hornsby Mountain Bike Trail



## 8.2 BLUE DERBY - TASMANIA (DORSET COUNCIL)

Blue Derby is the single largest and most ambitious mountain bike project ever in Australia, involving the construction of 125km of purpose-built mountain bike trails in the stunning wilderness of northeast Tasmania.

The driver behind this project is economic development through mountain bike tourism. An emerging form of tourism, mountain bike tourism provides good returns on investment and provides new incentives for people to visit regional areas. The township of Derby, around which the trail network is based, was once a prosperous tin mining town, but has been declining for many years since the tin mining operations ceased. Since the project commenced in 2014, however, the township has seen a reversal of fortune, with new businesses opening providing hospitality and accommodation services, property sales increasing and tourism visitation increasing massively.

The Blue Derby Trails project is led by Dorset Council, and was made possible with funding through the Australian Government's Regional Development Australia Fund. Project partners include Break O'Day Council, Forestry Tasmania, Parks & Wildlife, and public, private and community sectors. World Trail has been the lead contractor on all design and construction of trails.

The Blue Derby trail network has been constructed to attract riders of all skills and abilities. The trail network includes IMBA green trails (Beginner) through to IMBA Black Diamond (Most difficult), with most of the trails falling into the IMBA Blue (Intermediate) classification. This mix of trails allows for riders to develop their skills and have the opportunity to develop their skills. Advanced riders have many options to enjoy themselves and test their ability on the advanced trails. Gravity trails are well catered for in Blue Derby due to their growing popularity.

Current visitation numbers for Blue Derby are approximately 45,000 riders per year.

Blue Derby is managed by Dorset Council who employ a trail maintenance team to ensure the trails are maintained to a high standard. Providing well maintained trails is key to encouraging riders to visit and return regularly to Blue Derby.

### Key learnings from the project include:

- « Consultation with key stakeholders early in the project feasibility stage;
- « Proactive council;
- « Front end development of relationships with land managers and council;
- « Front end community consultation;
- « Professionally designed and constructed trails;
- « Develop strategies to boost local economic benefit.

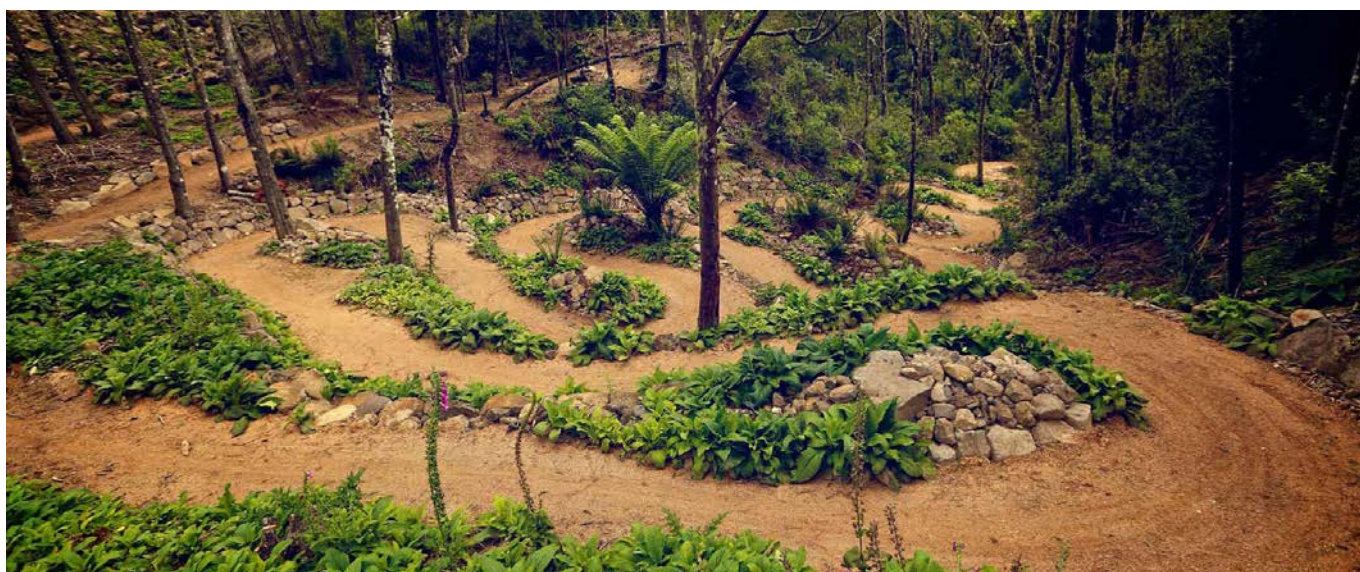
In recognition of this great project, Dorset Council recently won a national Award for Excellence in Economic Development for the Blue Derby Mountain Bike Trails. The project was presented as the winner of the Community Economic Development Award at the Economic Development Australia (EDA) Conference in Queensland in September 2015.

Prior to this, the Blue Derby project also won the Delivering Excellence – Smaller Council's Award at the Local Government Association of Tasmania's Awards for Excellence in July 2015.

### OVERALL PROJECT BUDGET:

Approximately \$4.5 million in Federal and State funding

Figure 16: Blue Derby Trails, Tasmania (photo by World Trail)



### 8.3 SMITHFIELD MOUNTAIN BIKE TRAILS – CAIRNS, QLD (QUEENSLAND PARKS AND WILDLIFE SERVICE)

Smithfield mountain bike trails are located within the Smithfield Conservation Park. This park borders the Kuranda National Park and the Wet Tropics World Heritage Area. The park is managed for the conservation of natural and cultural values and to provide a diverse range of recreational opportunities for visitors through partnerships with key stakeholders. Due to its high conservation value certain areas of the park are restricted.

Figure 17: Signage Smithfield Mountain Bike Park



The Smithfield network consists of 35km of trails and has been constructed to attract riders of all skills and abilities. The trail network includes IMBA green trails (Beginner) through to IMBA Double Black Diamond (Most difficult), with most of the trails falling into the IMBA Blue (Intermediate) classification. This mix of trails allows for riders to develop their skills and have the opportunity to develop their skills. Advanced riders have many options to enjoy themselves and test their ability on the advanced trails. These trails are also shared use trails with bushwalkers, however primarily only encouraged shared use on the easier (green) trails. This is generally encouraged as a result of the additional trail width, better line of sight and slower speeds, smoother surface and less obstacles compared with the more difficult trails.

Figure 18: Signage Smithfield Mountain Bike Park



This park has also hosted many events including several rounds of the UCI Mountain Biking World Cup. The first of these was held in April 2014, with subsequent World Cup events planned for 2015 and 2016, followed by the UCI Mountain Biking World Championships in 2017.

Current visitation numbers for Smithfield are approximately 30,000 riders per year.

Smithfield is managed by QPWS (Queensland Parks and Wildlife Service). Funding for trail construction and trail maintenance has been provided by the Cairns Mountain Bike Club, Tourism QLD, Sport and Recreation Qld and Cairns Regional Council.

**Key learnings from the project include:**

- « Front end consultation between the Cairns Mountain Bike Club and QPWS;
- « Front end community consultation;
- « Event Promotion;
- « Good multi-use outcomes with walkers, runners and riders sharing access and ascent trails;
- « Highly valued resource for local riders and as a strong contributor to local economy through competitive events and the International UCI events.

**OVERALL PROJECT BUDGET:**  
 Approximately \$1.5 million

Figure 19: Smithfield Trails, Cairns (photo by Flow Magazine)





## 8.4 FALLS CREEK MOUNTAIN BIKE TRAILS – FALLS CREEK, VICTORIA (FALLS CREEK ALPINE RESORT MANAGEMENT BOARD)

In 2009 Falls Creek Resort Management Board commissioned a concept plan for a purpose-built mountain biking network in the resort, with the aim of creating a new summer-based tourism attraction.

With the completed concept plan for the resort, they successfully applied for funding, receiving over \$2 million from Government agencies to support the project.

Stage 1 construction works commenced in the summer of 2011/2012, with stage 3 works winding up in around March 2014.

This represents another 'world-class' trail network for Australia, in line with some of the European and North American ski-resort style mountain bike destinations.

The Falls Creek trail network has been constructed to attract riders of all skills and abilities. The trail network includes IMBA green trails (Beginner) through to IMBA Double Black Diamond (Most difficult), with most of the trails falling into the IMBA Blue (Intermediate) classification. This 40 km mix of trails allows for riders to develop their skills and have the opportunity to develop their skills. Advanced riders have many options to enjoy themselves and test their ability on the advanced trails. The trail network includes about 5km of lift-accessed downhill trails and 10km of Gravity trails which appeal to the growing mountain bike trend.

Falls Creek Mountain Bike network is managed and maintained by Falls Creek Management Board who oversaw the development of the network.

### Key learnings from the project include:

- « Working in remote locations;
- « Development of alternative trail treatments;
- « Consideration of seasonal visitation;
- « Develop a signature event;
- « Promote long stay durations to long capitalise on significant distance;
- « Need to continue to evolve the product.

### OVERALL PROJECT BUDGET:

Approximately \$2.5 million

Figure 20: Falls Creek Trails, Victoria (photo by Flow Magazine)



## 8.5 MT BULLER MOUNTAIN BIKE TRAILS – MT BULLER, VICTORIA (MT BULLER AND MT STIRLING ALPINE RESORT MANAGEMENT BOARD)

The Mt Buller Alpine Resort Management Board embarked on a program to construct mountain bike trails in 2006 with the preparation of a concept plan. Their goal was to attract increased visitation to the resort in the non-winter period. Construction of trails began in the summer of 2007/2008 and has continued every year since then.

Subsequent to the development of the Master Plan the project was developed in six stages over the past seven years, gradually expanding and improving the mountain biking trail network, to the point where it is now attracting in excess of 20,000-30,000 specific mountain bike visitors per summer and hosts some of the biggest mountain biking events.

The mountain's signature event, Bike Buller, run by Rapid Ascent, is a three-day mountain biking festival. It has grown from 252 participants in 2009 to 691 participants in 2013. The event organizers believe that the 2013 event also attracted about 1300 spectators and estimate the financial impact of the event to be around \$2.3 million. The resort has also hosted rounds of the Australian National Mountain Biking Series, with competitors claiming the trails are among the toughest and best on the circuit.

Mt Buller Trail network has been developed in in the following stages:

- « Master Plan Development;
- « Construction Stage 1 2007/2008;
- « Construction Stage 2 2008/2009;
- « Concept Plan Development for an IMBA Epic Ride 2009;
- « Construction Stage 3 2009/2010;
- « Construction Stage 4 2010/2011;
- « Construction Stage 5 2011/2012;
- « IMBA Epic ground-truthing 2012;
- « Construction Stage 6 2012/2013.

The Mt Buller trail network has been constructed to attract riders of all skills and abilities. The trail network includes IMBA green trails (Beginner) through to IMBA Double Black Diamond (Most difficult), with most of the trails falling into the IMBA Blue (Intermediate) classification. The purpose-built trails allows for riders to develop their skills with a majority of the network catering for the intermediate to advanced rider. Facilities include:

- « Over 100km of quality cross-country trails, including 40km of singletrack
- « A 50km long-distance cross-country descending trail
- « Four downhill trails serviced by shuttles
- « Australia's first modular pump track, setup in the Mt Buller Village
- « A range of tours, camps, clinics and skills sessions for all levels and types of riders
- « Accommodation

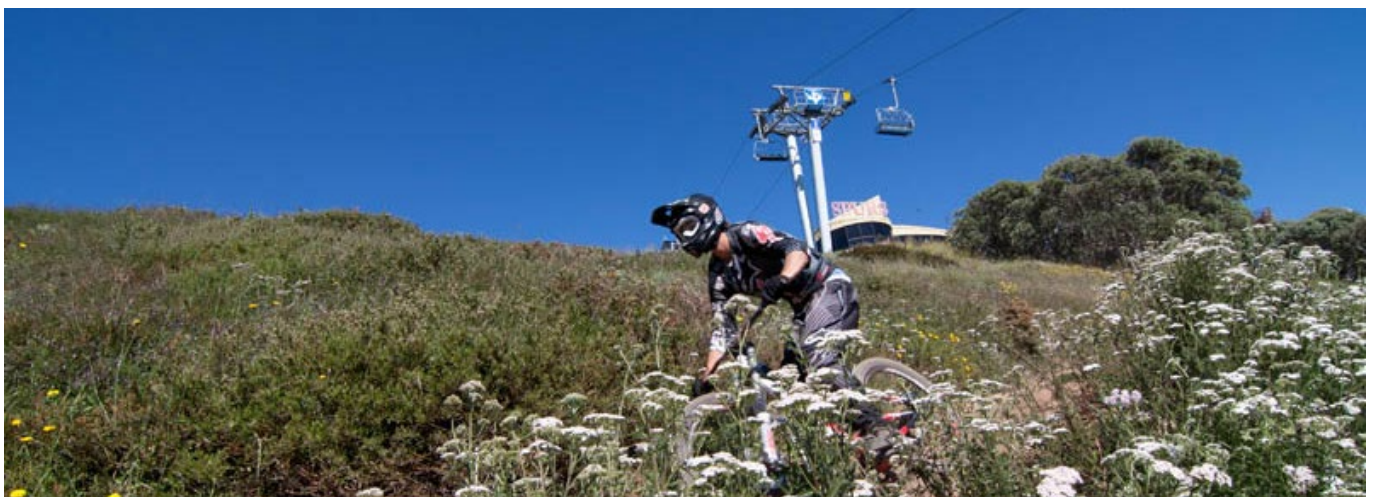
Mt Buller Mountain Bike network is managed by Mt Buller and Mt Stirling Alpine Resort Management Board who oversaw the development of the network and who manage the ongoing trail maintenance. Current visitation numbers are not available.

**Key learnings from the project include:**

- « Ensure chairlift will service summer visitation;
- « Ensure commitment of retail operators to operating during the summer;
- « Critical mass of product prior to opening.

**OVERALL PROJECT BUDGET:**  
\$2.5 million

Figure 21: Mt Buller Trails, Victoria (photo from mtbuller.com.au)



## 8.6 ATHERTON FOREST MOUNTAIN BIKE PARK – ATHERTON, QUEENSLAND (QUEENSLAND PARKS AND WILDLIFE SERVICE)

In 2010 a concept plan was developed for mountain bike trails in the Sylvia Creek valley, Atherton. Since then four contracts have been awarded by the land manager, QPWS, to construct new mountain biking trails. The land managers and the local mountain biking community have proactively supported the development of this extensive trail network, with a number of local mountain bikers being employed by the trail building contractors. Feedback from the Australian mountain biking community has been excellent.

The current trail network is in excess of 60km long with a trailhead in the centre of Atherton and a 2km shared-use link track into the mountain biking single trail proper. Trail styles included in the network include, cross-country, downhill and all-mountain in a variety of difficulty levels, showcasing beautiful rainforests, Eucalypt forests and more.

The Atherton network has been constructed to attract riders of all skills and abilities. The trail network includes IMBA green trails (Beginner) through to IMBA Double Black Diamond (Most difficult), with most of the trails falling into the IMBA Blue (Intermediate) classification. The easy (green) trails are also shared use with bushwalkers with signage in place to provide information to riders and bushwalkers. The additional trail width and walking in the opposite direction to the mountain bikers assists allow these trails to be shared.

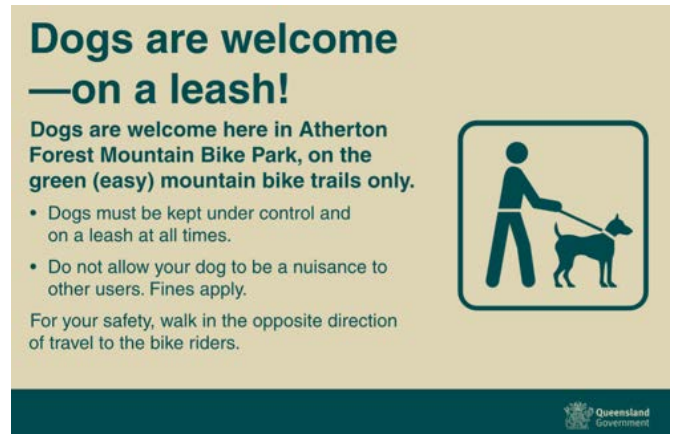
Figure 22: Signage Atherton Mountain Bike Park



Figure 24: Atherton Forest Park Trails, Atherton (photo by Flow Magazine)



Figure 23: Signage Atherton Mountain Bike Park



Atherton Trail Network (volunteer based) is managed by QPWS and TRC (Tablelands Regional Council) who oversaw the development of the network and who manage the ongoing trail maintenance.

### Key learnings from the project include:

- « Front end consultation between the Cairns Mountain Bike Club and QPWS;
- « Front end community consultation;
- « Event Promotion;
- « Utilise the legacy from events with additional investment.

The Trail Network has been developed in the following stages:

- « Concept Plan development 2011;
- « Stage 1 2011;
- « Stage 2 2012;
- « Stage 3 June 2013;
- « Stage 4 September 2013;
- « Stage 5 July 2014

### OVERALL PROJECT BUDGET:

Approximately \$2 million in Federal and State funding

## 8.7 STROMLO FOREST PARK – ACT (CHIEF MINISTERS DEPARTMENT, TERRITORY VENUES & EVENTS, CANBERRA OFF ROAD CYCLISTS)

In 2003 the ACT was ravaged by bushfires that burnt many homes, took several lives and burnt out the historic Mt Stromlo Observatory. Prior to the fires the area had been popular with local mountain bikers, although there were no formal trails in place at that time.

Following the fires, the ACT government decided to invest heavily in developing Mt Stromlo into a multi-disciplinary recreational venue of world class standard. World Trail were engaged to undertake the design of a network of downhill and cross-country mountain biking trails, working alongside Stephen Hodge (responsible for the design of the road cycling criterium track), Robert de Castella (responsible for the design of the cross-country running circuit) and many others to ensure the park would work seamlessly as an integrated recreational facility.

As the project developed and Stromlo Forest Park took shape, World Trail encouraged the venue managers to think big, and the idea that the park could one day host rounds of the UCI Mountain Biking World Cup and the UCI Mountain Biking World Championships took root. Eventually, with a lot of behind the scenes planning, meetings, liaison and hard work, this became a reality. In 2008 Stromlo Forest Park was the venue for Round 6 of the UCI Mountain Biking World Cup and in 2009 it hosted the pinnacle of international mountain biking events, the UCI Mountain Biking World Championships. Today the park continues to be a major mountain biking destination in

Australia with strong visitation figures. Over 40km of trails are available as well as having a pump track, purpose-built event pavilion, a 1.2km road criterium track, 2.5km grass cross country running track, equestrian trails, toilet facilities and drinking water.

World Trail's involvement at Stromlo Forest Park included:

- « Detailed design of the mountain bike trail network, including multi-use trails, cross country trails, downhill trails and 4X track;
- « Project management of the entire mountain bike park construction;
- « Construction of cross-country trails;
- « Consultation on the development of signage;
- « Installation of signage;
- « Extensive consultation with stakeholders and identified user groups;
- « Construction of new trails and modifications to existing trails as required by the UCI for a round of the 2008 Mountain Biking World Cup and the 2009 Mountain Biking World Championships.

### OVERALL PROJECT BUDGET:

Approximately \$900,000 (mountain bike trails), overall facility in excess of \$7 million

Figure 25: Stromlo Trails, Canberra (photo by Flow Magazine)

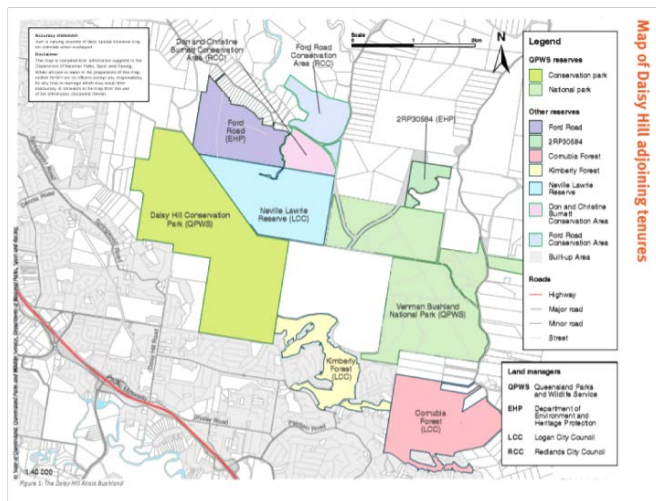
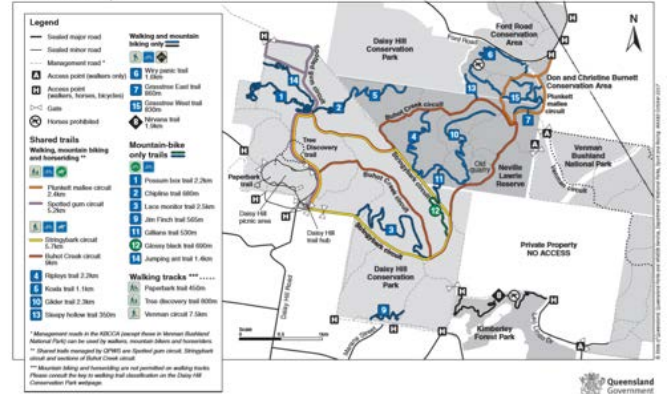


## 8.8 KOALA BUSHLAND COORDINATED CONSERVATION AREA (DAISY HILL, QLD)

The Queensland Government, Logan City Council and Redland City Council forged a formal long term conservation agreement in 1996, creating the Koala Bushland Coordinated Conservation Area (KBCCA) Bringing together Daisy Hill Conservation Park and Koala Centre, Venman Bushland National Park, Don and Christine Burnett Conservation Area and Ford Road Conservation Area. The KBCCA is approximately 25km south east of Brisbane and covers an area over 1500ha of remnant bushland. It is managed by all of these parties. The area is surrounded by urban development, and provides vital habitat for turtles, water rats, platypus, water dragons and frogs including the vulnerable tusked frog. The area includes open eucalypt forests, melaleuca wetland and patches of lowland rainforest and is home to possums, gliders, powerful owls, glossy black cockatoos, swamp and red necked wallabies and a variety of reptiles and other birds. The KBCCA also protects important koala habitat. There is approximately 37km of trails (including Daisy Hill and the nearby Cornubia and Underwood) with (20km) in Daisy Hill (across multiple tenures) with XC trails.

Daisy Hill receives around 4600 wheel passes monthly (about 55,000 passes per year) Counters in the park demonstrated that mountain bike participation increased as new styles of trails were provided. This entire area caters for a range of different user groups including horse riding, walking, and mountain biking.

The Koala Bushland Coordinated Conservation Area (KBCCA) map  
Including Daisy Hill Conservation Park and Venman Bushland National Park  
Tracks and trails map



A number of the trails are shared use (some with horse riders, walkers and mountain bikers) with the Give Way code used. The shared trails are wider and easier to ride with better line of sight. The amenities include toilets and picnic spots.



The trails are managed and maintained by State Government NPWS, there is a mountain bike club that operate from Daisy Hill and the nearby Underwood and Cornubia Forests and they are provided with event permits throughout the year. A trail alliance volunteer group also works closely with Council and State Government on identifying issues as they may arise.

## 8.9 GLENROCK STATE CONSERVATION AREA (NSW)

Glenrock State Conservation Area is located is a small (544ha) reserve approximately 5km south of Newcastle. The area is managed by the National Parks and Wildlife Service (NPWS) with the conservation area used by visitors for many different activities including bush walking, trail running, horse riding and hang gliding.

In 2008, NPWS engaged World Trail to undertake an audit and review of the existing, mostly informal network of mountain bike trails to determine a feasible network of trails that could be formalised and promoted for use by mountain bikers. World Trail's recommendations were adopted, and the trail network formalised and included in the 2010 NPWS Glenrock State Conservation Area Plan of Management. Several works were undertaken to improve the network, including construction projects by World Trail in 2011 and 2012 and others by volunteers and NPWS staff.

Given the success of the network, in 2016 World Trail was engaged by NPWS to prepare a concept plan for an expanded network in the conservation area, with some

new areas of the park potentially made available for further trail expansion. The plan recommended a 29.2km network of fourteen trails, incorporating some existing formal and informal trails.

There is currently 14km of cross-country mountain biking trails and 20km of linked management trails in the northern section of the park. There are trails to suit all levels (15 green, 24 blue, 5 black and 1 double black) winding through open forest and woodlands. There are a number of regular mountain biking events held at Glenrock, including:

- « Port to Port – 4-day stage race
- « Hunter School MTB Championships – 2-day event with over 250 school children participating
- « Shimano MTB Grand Prix Race Four – 1-day event
- « Skills Coaching
- « Hunter Schools MTB coaching
- « Local bike store group rides



A large proportion of the trail building and maintenance is undertaken by a volunteer group, the Glenrock Trails Alliance, formed in 2004. The group's aim is to see a sustainable and enjoyable network of single trail within the

park and to advocate for access to the south of the park, through a sustained open working relationship with the NPWS.

## 9 SITE SELECTION CRITERIA



When considering suitable locations for mountain bike trails or a network, the following considerations are relevant:

- « Potential environmental and heritage impacts and mitigation strategies
- « Importance of the trail development to the local and wider community in terms of recreation, economy and health outcomes
- « Level of significance the trail network may have (national, regional or local)
- « Effects on the local community and existing users of a proposed location

Central Coast Council will need to consider these questions in analysing the results of the site selection matrix, to ensure the selected site fits into the overall planning strategies for the region. In addition, any of the sites considered suitable below would then require a detailed assessment to investigate if a trail network could be established given constraints around environmental and cultural heritage considerations.

Based on the findings of the mountain bike trail inventory, a site selection matrix has been developed to identify the most suitable sites for riding in the Central Coast. The site selection matrix is based on criteria derived from MTBA Trail Guidelines<sup>24</sup> general trail planning, design and construction principles.

Trail networks fall into three levels of significance, local, regional and national. For the purposes of this report, and as a strategy for establishing criteria to determine a site's suitability, the local significance model will be adopted as the minimum requirement.

The criteria for a local significance trail network are as follows:

Table 24: Local Significance Criteria

Criteria	Metric	Minimum infrastructure desired
Length of trails	Up to 20km	<ul style="list-style-type: none"> <li>« Car Park</li> <li>« Toilets</li> <li>« Water</li> <li>« Trail Head Signage</li> <li>« Trail Markers</li> </ul>
Number of loops	2 +	
Proportion of single track	>80%	
Minimum area of site	>250ha	
Location	Selected Areas	
Road access	Must have clear public road access	
Trail classification range	IMBA Green to Double Black Diamond	

Below are the criteria for regional and national significance mountain bike trail networks. This may assist Council to determine if sites are suitable should they wish to progress the action identified in the Central Coast Destination Management Plan<sup>25</sup> item 2.2 being the development of "... a business case for new mountain bike trails to attract a world class event to the central coast".

The criteria for a regional significance trail network are as follows:

Table 25: Regional Significance Criteria

Criteria	Metric	Minimum infrastructure desired
Length of trails	20km – 80km	<ul style="list-style-type: none"> <li>« Car Park</li> <li>« Water</li> <li>« Toilets</li> <li>« Trail Head Signage</li> <li>« Trail Markers</li> </ul>
Number of loops	2 +	
Proportion of single track	>50%	
Minimum area of site	>500ha	
Location	<40km from 15,000 population	
Road access	<10km from highways and primary roads.	
Trail classification range	Mixture of trail classifications, IMBA Green and Blue required as a minimum.	

<sup>24</sup> Australian Mountain Bike Trail Guidelines 2019

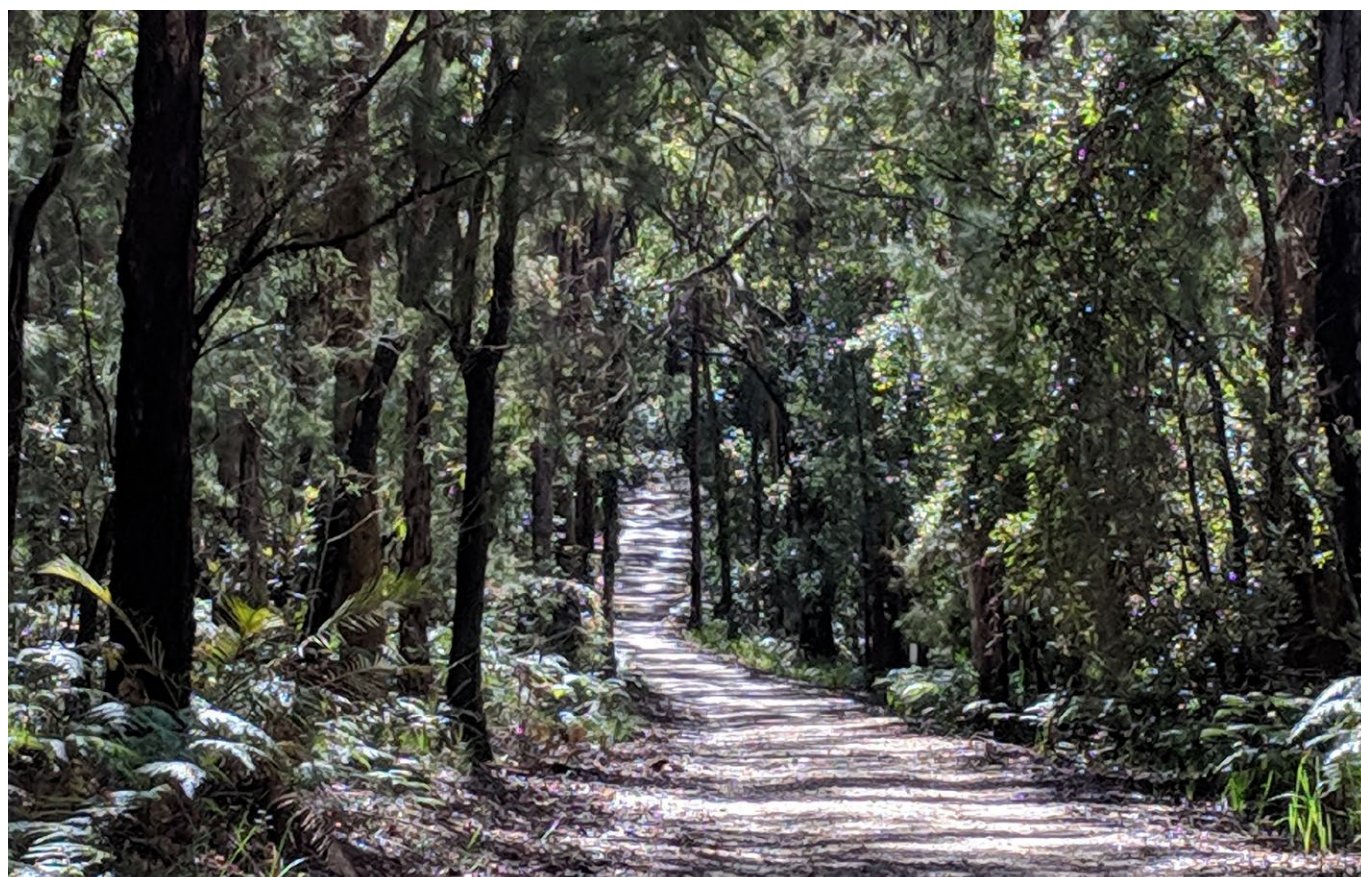
<sup>25</sup> Central Coast Destination Management Plan 2018-2021



The criteria for a national significance trail network are as follows:

Table 26: National Significance Criteria

Criteria	Metric	Minimum infrastructure desired
Length of trails	>80 km	<ul style="list-style-type: none"> <li>« Car Park</li> <li>« Toilets</li> <li>« Water</li> <li>« Trail Head Signage</li> <li>« TrailMarkers</li> <li>« Accommodation</li> <li>« Bike hire- rider services</li> <li>« Café</li> <li>« Event hosting capabilities</li> </ul>
Number of loops	2 +	
Proportion of single track	>50%	
Minimum area of site	>1500 ha	
Location	<180 km from airport/major transport links.	
Road access	<20 km from major highways	
Exclusion zones	>90 km from another national scale centre	
Other	Must be within 1 km of a national or state road	
Trail Classification range	Mixture of trail classifications, IMBA Green and Blue required as a minimum.	



In addition to the significance models developed in the Australian Mountain Bike Trail Guidelines, World Trail considers an additional 13 criteria that help assess the feasibility of potential mountain bike destinations. These criteria highlight the constraints and opportunities of a proposed location with the aim of identifying a suitable trail model.

These criteria are outlined below:

### **1. National and International Connectivity.**

The potential to access both local, domestic and international travellers strengthens the viability of a region as a potential location for mountain bike tourism. Access to a region by established travel routes strengthens the regions potential as a major mountain bike tourism destination. This level of access would support potential opportunities for a destination to offer premium international events, such as World Cups, World Championships, and other Domestic and Regional mountain bike events. Hosting of events is seen as an opportunity to showcase the trail product to the broadest market.

### **2. Proximity to regional population centre**

Proximity to regional population centres provides a ready market for mountain bike tourism. This may have a flow on effect by encouraging more local riders to participate in the sport, while providing additional regional economic stimulus.

### **3. Connectivity of the Township to the Trail Head**

When analysing a regions potential as a mountain bike destination, World Trail consider the opportunity to ride in-ride out of a commercial centre to the trail network, less than a few hundred metres from the commercial centre to be the ideal scenario.

### **4. Accommodation**

The ability to offer accommodation in close proximity to any potential trail network is a key criteria World Trail uses to evaluate a regions potential. This is based on the current availability of accommodation and the opportunity to develop future accommodation options as demand facilitates.

### **5. Hospitality option**

Hospitality options provide facility for mountain bike riders who regularly frequent café's and other hospitality services when out riding. This provides a great opportunity to stimulate local economies.

### **6. Natural Attributes**

Mountain bike riders are seeking outdoor experiences, a picturesque environment will help to promote a potential trail network.

### **7. Tenure**

Availability of suitable land parcels for development of a trail head, competitive overlay and trail network are key criteria to the successful development of a mountain bike destination. The tenure of the land parcels that facilitate this must be public property, be lease hold with the opportunity to lease, or be free hold which can be purchased. The land parcel must be able to accommodate a trail network of up to approximately 85 km, with the opportunity to extend this network as demand increases.

### **8. Events**

The opportunity for a mountain bike trail destination to host events is considered highly desirable when identifying a suitable location for a trail town. Mountain bike events are an important motivator for many visitors and can often be the way that many riders visit a destination for the first time. Events include elite (for example, the Enduro World Series held in Derby in 2017 and again in 2019, which is an elite level event, but attracts many spectators) and mass-participation events (for example, 24-hour cross-country and Enduro style events). The venue may also host National and Regional events such as the Australian mountain bike marathon championships and local club events which encourage participation in the sport.

### **9. Trail Products**

Provision of a range of mountain bike riding products enhances the opportunities for visitation to a region by a diverse clientele. This is a key consideration when identifying a suitable location, ensuring trail products can be developed to offer a number of mountain bike experiences, catering for all levels of rider ability and fitness levels.

### **10. Retail Services**

Proximity to regional business centres provides access to shopping centres, bicycle shops, tour operators, medical services and all other services mountain bike riders may require.

### **11. Emergency Services**

Proximity to emergency services is considered desirable for a mountain bike trail destination. Ideally services would generally lie within 100 km of any response location in the trail network.

### **12. Existing Outdoor Adventure Culture**

An active outdoor culture will provide additional outdoor experiences for mountain bike tourists wishing to combine mountain biking with other outdoor activities. This provides opportunity for economic stimulus to existing and new tourism operators.

### **13. Communications**

Communications play an important role in developing a region's development by providing connectivity for emergency services, media events, social media and general communications for visitors.

The following table outlines the assessment of the sites in relation to their potential trail significance. Please note that the information presented in the below table has been gathered from a variety of sources. No assessment of permissibility or compliance with relevant environmental or planning legislation has been made. Inclusion of sites in the table does not indicate that the relevant consent/regulatory authority has or will grant approval for the specified land use or the use is operating in accordance with relevant legislation and approvals. Land managers have not and may not endorse the ratings and other information presented within the table.

Table 27: Site Assessment against local significance criteria

Site	Length of trails	Proportion of single track	Area in ha	Location	Road access	Exclusion zones	Other	Trail Classification range	Rating
Blackwall Mountain	No Data unsanctioned, >20km could be constructed.	None	<250ha Approx. 40ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Bouddi NP	20km unsanctioned, 10km fire trails, could be increased to >80km.	Currently 66% unsanctioned single trail, remaining 33% sanctioned fire trail	>250ha Approx. 1681ha	20 min from Gosford	Clear public road access	Zone 1 along the coastal shoreline is currently an exclusion zone.	Tenure will allow expansion.	IMBA Green – Double Black Diamond.	National
Bradleys Road Bushland R0234	No Data unsanctioned, > <20km sanctioned	100%	<250ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Brisbane Water National Park	No data on unsanctioned, 20km fire trails. >80	0% single trail, possible to develop 100% single trail.	>250ha Approx. 14520ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow expansion.	IMBA Green to Double Black Diamond	National
Charmhaven	No Data unsanctioned >20km	100%	>250ha Approx. 455ha	30min from Gosford.	Clear public road access	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow expansion	IMBA Green	Excluded due to lack of elevation and tenure.
Davistown Road Bushland R0231	No Data unsanctioned, <20km	None	<250ha Approx. 4.6ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Glenworth Valley	No data on unsanctioned, >80km could be constructed.	Potentially 100%	<250ha Approx. 3970ha	40min from Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow for trail network expansion	IMBA Green to Double Black Diamond	National Significance.

Site	Length of trails	Proportion of single track	Area in ha	Location	Road access	Exclusion zones	Other	Trail Classification range	Rating
Jillby State Conservation Area	No Data >80km	Potentially 100%	>250ha Approx. 3884ha	30 min from Gosford	Clear public road access	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow expansion	IMBA Green – Double Black Diamond.	National
Kincumba Mountain Reserve	18km unsanctioned, 15km fire trails, could be increased to 20km – 80km	Currently 50% unsanctioned single trail, 50% sanctioned fire trail	>250ha Approx. 660ha	Gosford	Clear public road access	None Identified. Require further information on cultural and environmental constraints	No opportunity to expand.	IMBA Green to Double Black Diamond	Regional
McPherson State Forest	No data on unsanctioned, >80km could be constructed.	100%	<250ha Approx. 6500ha	15min from Gosford.	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	IMBA Green to Double Black Diamond	National Significance.
Munmorah State Conservation Area	18km sanctioned, could be increased to 20 - 80km.	Currently 100%	>250ha Approx. 997ha	50 min from Gosford	Clear public road access	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow some expansion.	IMBA Green – Blue	Regional
Mt Alison	No Data unsanctioned, >20km could be constructed.	None	<250ha Approx. 130ha	30min from Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Olney State Forest	No data on unsanctioned, >80km could be constructed.	100%	<250ha Approx. 20,000ha	1hr from Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow for trail network expansion as required. The site is readily accessible from the Pacific Motorway.	IMBA Green to Double Black Diamond	National Significance.
Ourimbah Mountain Bike Park in Ourimbah State Forest	18km sanctioned, could be increased to >80km.	Currently 100%	>250ha Approx. 3175ha	30 min from Gosford	Clear public road access	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow expansion.	IMBA Green – Double Black Diamond	National
Pixie Avenue Bushland Green Point RO232	No Data unsanctioned, <20km	None	<250ha Approx. 7.87ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area

Site	Length of trails	Proportion of single track	Area in ha	Location	Road access	Exclusion zones	Other	Trail Classification range	Rating
Rumbalara Reserve / Katandra Reserve and Ferntree Reserve	No Data unsanctioned, >20km sanctioned	100%	>250ha Approx. 600ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow expansion	IMBA Green to Double Black Diamond	Regional
Strickland State Forest	No Data unsanctioned <20km could be constructed.	100%	<250ha Approx. 490ha	15min from Gosford.	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	IMBA Green to Double Black Diamond	Local Significance.
Trail Share-Kulnura	27km sanctioned trails, At maximum	100% sanctioned single trail on private land	<250ha Approx. 170ha	40km to Gosford	Moderate access	None Identified. Require further information on cultural and environmental constraints.	Expansion into state forest possible with inter agency co-operation.	IMBA Green – Double Black Diamond	Regional - while the size on its own is smaller than local it directly adjoins a State Forest therefore an opportunity as a regional rating
Wambina Nature Reserve	No Data unsanctioned, <20km sanctioned	None	<250ha Approx. 55ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Wambina Road Reserve R0080	No Data unsanctioned, <20km sanctioned	None	<250ha Approx. 70ha	Gosford	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will not allow trail development	None	Excluded due to land area
Wyrabalong National Park	No data unsanctioned, 20km – 80km could be constructed.	100%	>250ha Approx. 515ha	30 min from Gosford.	Clear public road access.	None Identified. Require further information on cultural and environmental constraints.	Tenure will allow expansion.	IMBA Green to Double Black Diamond	Regional

## 9.1 SITE ASSESSMENT OUTCOMES

A site assessment criterion was developed to assess existing sites within the Central Coast. The following outlines a summary of the key findings:

### 9.1.1 Suitable National level sites

#### **Ourimbah Mountain Bike Park within Ourimbah State Forest;**

- « Adequate tenure for expansion;
- « Forest Permit Arrangement with Forestry Corporation could be increased to allow for expansion;
- « Existing MTB club and infrastructure;
- « 30 min Gosford and within close proximity from Sydney;
- « Ourimbah if developed further could meet much of the demand on the Central Coast;
- « The current trail network would need to be expanded requiring further professionally built trails to meet demand;
- « Current 18km of trails would need to be expanded to greater than 80km to meet the demands of a nationally significant site;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Jilliby National Park;**

- « Adequate tenure for expansion if negotiated with the land manager;
- « 30 min Gosford and within close proximity to Sydney;
- « Jilliby offers the opportunity to develop a national significance trail network close to Gosford due to its connectivity and significant land parcel size.
- « This site would be developed as a separate project to Ourimbah if the current Ourimbah trail network cannot be developed;
- « Information provided during the development of this report has indicated sanctioning of the unsanctioned trails and development of new trails would not be supported by the land manager;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Bouddi National Park;**

- « Adequate tenure for expansion in zone 2 if approvals can be sought from the land managers;
- « Currently has sanctioned mountain biking allowed on some fire trails;
- « 20 min from Gosford and within close proximity to Sydney;

- « Draft report by NSWNP outlining how it would engage with the mountain biking community to develop sustainable mountain biking opportunities after investigating options for biking opportunities in the park;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction.
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Brisbane Water National Park**

- « Adequate tenure for expansion if negotiated with the land manager;
- « Largest Land Parcel within close proximity to Gosford;
- « 20 min from Gosford and within close proximity to Sydney;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **McPherson State Forest**

- « Substantial tenure for expansion if negotiated with the land manager;
- « 15 min from Gosford and within close proximity to Sydney;
- « Provides great opportunity to develop a Nationally significant trail network close to Gosford;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Olney State Forest**

- « Substantial tenure for expansion if negotiated with the land manager;
- « 1hr from Gosford and within close proximity to Sydney;
- « Provides great opportunity to develop a Nationally significant trail network within a reasonable distance from Gosford;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

### 9.1.2 Suitable Regional level sites

#### **Kincumba Mountain Reserve;**

- « Limited tenure for expansion;
- « Regional to Gosford and within close proximity to Sydney.
- « Currently contains numerous unsanctioned trails.
- « Centrally located and easily accessible;
- « Requires cultural and environmental investigations to confirm site's suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Wyrrolong National Park**

- « Limited tenure for expansion;
- « 30min from Gosford and within close proximity to Sydney;
- « Suitable for Green to Blue difficulty trails
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction.

#### **Trail Share Kulnura**

- « Limited tenure for expansion;
- « Proximity to Gosford and Sydney;
- « Requires inter agency support to provide tenure to expand
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Munmorah State Conservation Area**

- « Limited tenure for expansion;
- « Proximity to Gosford and Sydney;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction.

#### **Rumbalara/ Katandra/ Ferntree Reserves**

(as these reserves adjoin each other they have been combined for this section of the report)

- « Limited Tenure for expansion if assessed as an individual land parcel;
- « Proximity to Gosford and Sydney;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

#### **Wyong State Forest;**

- « Adequate tenure for expansion if negotiated with the land manager;
- « 30 min Gosford and within close proximity to Sydney;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

### 9.1.3 Suitable Local level sites

#### **Strickland State Forest;**

- « Limited tenure for expansion;
- « 15 min from Gosford and within close proximity to Sydney;
- « Currently a well-known site designated for high public usage;
- « Requires cultural and environmental investigations to confirm sites suitability for trail construction;
- « Suitable for Green to Double Black Diamond difficulty trails.

### 9.1.4 Excluded sites

#### **Davistown Road Bushland R0231**

- « Excluded due to lot size below 250ha.

#### **Pixie Avenue Bushland Green Point R0232**

- « Excluded due to lot size below 250ha.

#### **Wambina Road Reserve R0080**

- « Excluded due to lot size below 250ha.

#### **Wambina Nature Reserve**

- « Excluded due to lot size below 250ha.

#### **Charmhaven**

- « Excluded due Freehold Land Tenure;
- « Excluded due to lack of elevation.

#### **Bradleys Road Bushland R0234**

- « Excluded due to lot size below 250ha.

#### **Blackwall Mountain**

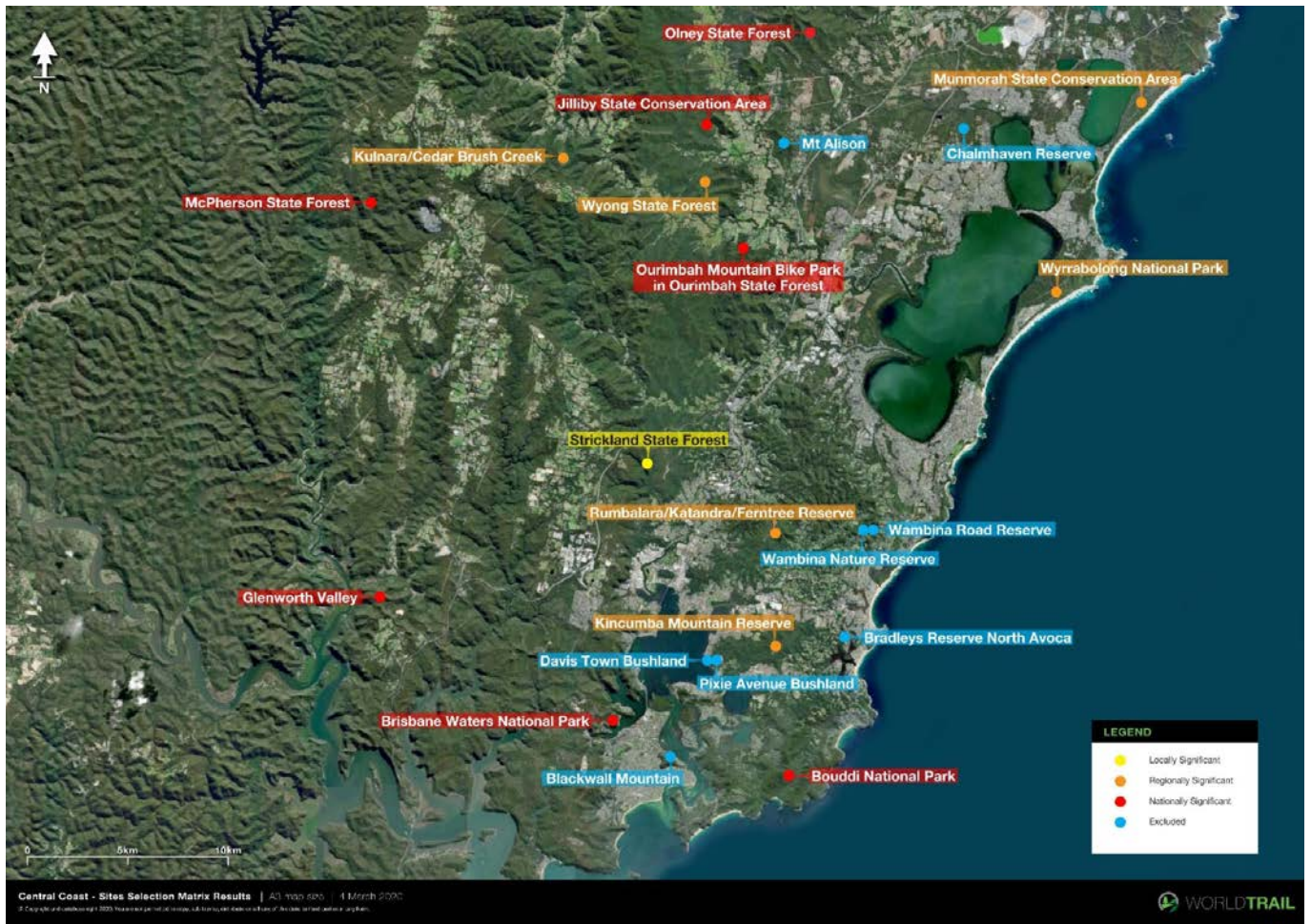
- « Excluded due to lot size below 250ha.

#### **Mt Allison**

- « Excluded due to lot size below 250ha.

### 9.1.5 Summary of Sites

The following map provides a summary of the sites and the suitability based on the site assessment.





# 10 FEASIBILITY ANALYSIS AND CONCLUSIONS



## 10.1 DEMAND FOR MOUNTAIN BIKE TRAILS

There is significant existing demand for mountain biking opportunities in the Central Coast region. Out of the 1949 completed surveys over 80% currently participate in mountain biking. Adding to this 46% of the non-riders would consider taking up mountain biking if formal trails were provided. With population growth and the proximity to Sydney, participation in mountain biking on the Central Coast is likely to continue to increase which in turn increases the demand for trails.

The market research undertaken for this study includes consideration of general participation data, survey results and stakeholder consultation. The clear indication is that there are insufficient authorised trails to meet the demand. The combination of unmet demand and a desire for locally accessible trails has meant that a number of unauthorised trails have been built.

There is strong desire for locally accessible trail networks. This is no different to most outdoor recreation and self-directed active recreation. Residents will want to walk, ride, exercise, run and experience nature close to home if possible. Further, they will value the residential areas that allow them to do so. The Central Coast has a wealth of natural areas and the desire to walk, run or cycle through them is expected. This is demonstrated through 54% of survey respondents who ride at Kincumba suggested proximity and access as being a key reason for riding at that location. In addition, 51% of survey respondents typically undertake mountain biking for only 1-2 hours with high participation during the week, suggesting a preference for trails that can be easily accessed locally. In other words, riders using Kincumba are more motivated by its proximity and ease of access than the quality or diversity of the trail network. On the other hand, Ourimbah users are more motivated by the quality and diversity of the trail network.

The surveys further suggested that there is also strong demand for a larger regional or national scale trail network. Ourimbah Mountain Bike Park in Ourimbah State Forest is the main location for riders on the Central Coast (40%) with the main reason being the trails and the trail network. This shows that mountain bikers will be willing to travel to a suitable destination if it provides a variety of trails. It would be suggested that this would be more likely to be when participants have additional time (over two hours) worth of riding time available. Current trails being ridden (in order of highest response through the community engagement) include Trail, Cross Country, Flow and Gravity but the preferred trails to ride provide a slightly different perspective with Flow, Trail, Gravity and Cross Country.

While the preferred trails were all reasonably even in response rates indicating that these trails should be a focus for any proposed developments. It may also indicate a current lack of flow trails being available. The majority of riding currently would appear to be from a recreation perspective with over 75% of respondents not a member of a mountain bike club. This presents an opportunity for any future trail developments to be developed to allow for both day to day recreation riding while also providing the opportunities for competitive mountain bike events. This position is supported by a number of Council documents that outline the opportunities for mountain biking on the Central Coast (see Section 2.2).

General indications from active recreation participation data reinforce that self-directed outdoor activity is increasing, often fitness or exercise related and often undertaken in natural environments as a preference.

The recent results from the Ausplay participation surveys illustrate.

Figure 26: NSW 18-19 Top Activities\* (Ausplay)

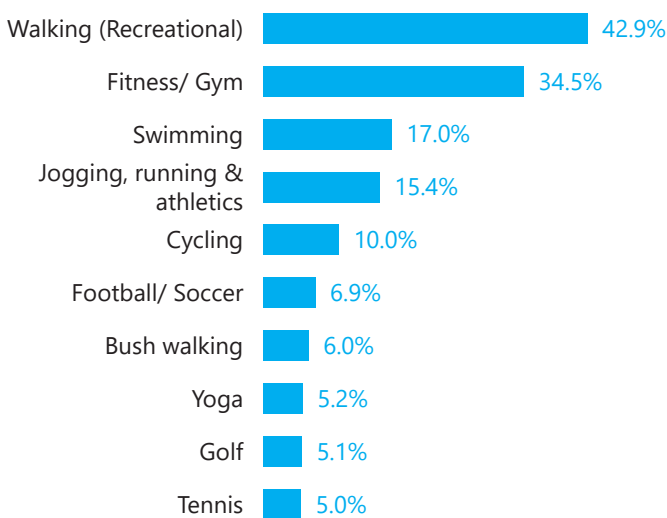
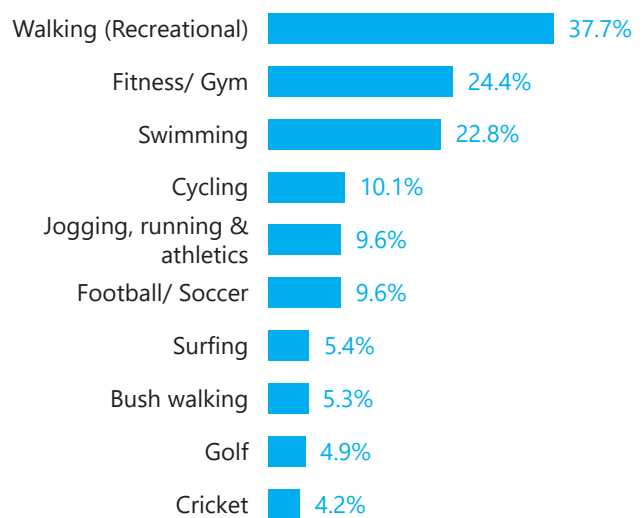


Figure 27: Central Coast LGA Top Activities\* \*\* 18-19 (Ausplay)



\* Sample count is greater or equal to 10. For sample size less than 10, estimate has a high relative margin of error and is considered too unreliable to report.

\*\* Based on respondents who provided a valid postcode and therefore overall state result may not match other parts of this report.

## 10.2 RISKS AND BENEFITS OF PROVIDING TRAILS

There are a number of risks and benefits that need to be considered in providing mountain biking trails on the Central Coast. The following risks have been identified:

### 10.2.1 Risks

The potential risks associated with mountain bike trail provision are summarised below:

#### **Concerns regarding environment and cultural heritage:**

The consultation identified that there is significant concern regarding damage to the environment. These concerns included erosion, spreading of weeds, impacts to flora and fauna and damage to cultural heritage sites. There was also particular concern regarding COSS land and its value and protection of the land. As discussed in Section 4.10, the current available research is limited, but in general the impact of properly constructed trails is likely to have similar impact to bush walking. However, impacts will increase with higher levels of use intensity combined with poor (unsustainable) trail design. Trail alignment and soil types also influence the appropriate design responses and suitability of a site to host any trails.

Dealing with environmental risks including dispersal of weeds, erosion and habitat or species impact, will require assessment of site suitability, trail alignment and trail design. Often trail design will need detailed investigation of alignment options to minimise impacts and avoid sensitive areas. However, for users the aesthetic of the trail and the naturalness of the site are highly important. In managing risk, there is a balance needed between creating a desirable trail versus protecting values, but they do not need to be mutually exclusive. The outcome of an assessment will determine if:

- « The local soil conditions and sensitivity of the vegetation community, specific fauna or flora species is such that no trail should be provided as the impact cannot be effectively managed. Sites in this category are also unlikely to support walking trails.
- « The local conditions and habitat constraints are such that the construction methods required are too visually intrusive or not financially viable.
- « Management of environmental risk is possible with appropriate trail alignment, design and user management.
- « Trails represent limited additional environmental risk, due to the ability to mitigate risks through design and/or existing use and infrastructure.

Cultural heritage concerns are more complex and recommended trail planning and design requires collaboration with and consent of traditional owners. Trails should not be in place if there are concerns from traditional owners regarding impacts on culturally significant sites and no agreed mitigation is possible.

**Risk of inaction:** The level of demand for mountain bike trails and riding opportunities is likely to increase. The impacts of lack of supply are already evident in the spread of unauthorised trails. There is a risk that

not communicating a clear direction for the future of mountain biking on the Central Coast and providing clear information on a range of local and regional (lawful) options, that unauthorised trails will continue to propagate and subsequent impacts on natural areas will be greater than if a demand management and lawful provision approach is undertaken.

Unauthorised trails can pose a risk to the safety of both mountain bikers and other recreation users. Without adequate signage regarding trail difficulty or appropriate construction standards, an unauthorised trail also presents a risk to the rider who may not have a level of skill appropriate to the trail.

More active enforcement can assist but can be resource intensive and a management model that focuses only on prohibition and enforcement has a limited chance of success. Mountain bike riders expressed concerns during the consultation, that Council have not been supportive of previous approaches to work together to find shared solutions to providing sustainable trails in suitable areas.

Reviewing strategies in other locations (see case studies in Section 7) demonstrate that a collaborative model for addressing need is usually successful. Engaging the users in the development of solutions and establishing a planning framework for determining suitable locations for trails has the dual benefit of educating user groups as well as facilitating them to invest in the solutions.

**Conflict between users:** The consultation highlighted concerns, mostly raised by walkers but also some riders, regarding conflict between riders and walkers on shared trail networks or where unsanctioned trails intersected with walking trails and shared trails. The concerns were around rider speed, riders giving way or walkers not moving to one side and the risk of injury to either party. Some comments were also received re conflicts between trail runners and other users.

Managing this potential conflict has been resolved in numerous locations with the adoption of trail etiquette or user protocols to be respectful of all users. The combination of signage and education programs has been relatively successful in shared trail networks with many examples detailed in Section 7.

The biggest risk may occur where there are single use tracks (i.e. designed just for walkers or just for riders) and these are not clearly designated (as can be the case with unauthorised trails). If a rider is travelling at speed on a gravity track (which are usually one-way) and are not expecting to see a walker there is potential for collisions.

Managing this risk requires the establishment of an authorised trail network, closure of unauthorised trails, good trail design, signage and education of users.

**Resourcing trail management:** Once a direction has been determined from Council it is important that adequate resourcing is provided to implement any actions. Regardless of the approach adopted, there is a need to ensure those responsible for trail maintenance are adequately resourced to inspect frequently and repair or resolve issues in a timely manner. If not, trails can become dangerous, eroded and unstable.

There are many examples of joint and shared management between councils and community groups and many examples where leased sites are established and managed solely by the lessee. Regardless of the model adopted it is important that the following resource needs are considered:

- « Regular inspection and user reporting of issues
- « Prompt repair of trail surface failures or damage from storms
- « Maintenance of signage and wayfinding
- « Education and awareness/ promotion
- « User management, control of unsanctioned behaviour or construction of unauthorised trails

### 10.2.2 Benefits

There are multiple potential benefits from providing mountain bike riding in the community these are summarised below.

**Environmental Awareness and Education:** The market analysis indicated there were many more recreational riders who were not riding to compete, rather riding for recreation. Research has previously indicated the strong preference of recreational riders for natural areas. The same rationale that applies to provision of walking tracks applies to riding trails. Exposing people to the natural environment and providing targeted education and interpretation can increase appreciation or valuing of natural areas and awareness of the need to protect these areas.

While this can increase support for and appreciation of the protection and management of natural areas it also offers opportunities to shift behaviours and other values associated with the environment.

**Health benefits:** Mountain biking can provide significant health benefits this is discussed in Section 4.9. the activity is suitable for a range of age groups. With the advent of e-bikes providing pedal assist, even more people will be inclined to exercise in natural areas. Much of the emerging evidence around regular contact with nature and regular exercise support the significant physical and mental health benefits that accrue from exercising in natural environments.

Although health care costs are not the responsibility of local government, it would be reasonable to assert that health care costs are a burden for the community, and that the more money spent on healthcare related to physical inactivity, the less money available for other types of health care and other projects/spending which can benefit communities and regions.

Investing in infrastructure that enables residents to be outdoors and physically active has significant benefits for local communities as well as individuals.

**Recreation benefits for local community:** As discussed in Section 9.1, there is increasing participation in outdoor and nature-based recreation. Introducing new participants to the sport, the environment and the outdoors has a range of benefits. In addition to the health benefits, having people recreate in these spaces ultimately helps residents to value and understand the importance of maintaining and protecting the environment.

Providing the infrastructure for recreation opportunity is a fundamental role of local government and participation numbers suggest that investing walking riding and running infrastructure is just as critical as the need for sports fields and facilities. The social benefits of providing for outdoor recreation include:

- « Increased social interaction and cohesion'
- « Improved mental and physical health
- « Support for local economies
- « Increased productivity

**Potential tourism and economic benefits:** There are a range of tourism benefits associated with mountain biking. Given the proximity of Sydney there is a lot of riders who would frequent any significant regional trail development. Council had previously undertaken a survey in 2016 to understand mountain bike riders. This survey showed that 75% of respondents had spent at least one night at a mountain biking destination and had spent an average of \$83 each in the local area on the day of the event. In 2013, World Trail undertook a survey of 1300 riders and this showed that 82% of riders had been on a mountain bike holiday (at least an overnight stay) with 67% of these having 3 or more mountain bike holidays a year. Typically (74% of respondents) are spending \$500 or more on the holiday.

The tourism benefits are also cumulative in that the provision of additional activities such as mountain bike trails can add to the range of other activities and both increase duration of stay (of visitors) and increase the return visits. The Central Coast already has a reputation for its natural areas, walks and coastal reserves, the additional provision of well-planned select trail locations will contribute to overall destination appeal and the tourism economy.

### 10.3 CURRENT PROVISION SUMMARY

There are currently 14 locations (only 4 of these are Council land) where mountain biking is permitted in some form on the Central Coast. The large majority of these are on fire trails as a shared use. While this is responding to and meeting some demand, only 17.55% indicated that they ride fire trails, with only 7.16% suggesting that it is their preferred trail. Shared use fire trails do provide for recreation use and can be an important link to any single use trail networks. They are integral to any future trail network planning.

The most significant authorised trail network is located at Ourimbah Mountain Bike Park in Ourimbah State Forest. There is an 18 km trail network with 11 green, 22 blue, and 9 black trails which includes a mix of cross country and downhill trails. Given the population of the Central

Coast and surrounding areas, as well as anticipated future growth, there would appear to be insufficient number of trails to meet the demand. The mountain bike community is willing to work with council and other landowners to develop high quality trails without impacting the environment or culturally significant heritage sites. This collaborative approach has worked in other locations as demonstrated through the case studies in Section 7.

**The high number of unauthorised trails and the expressed demand for both locally accessible and regional level (drive to) trails indicates there is significant unmet demand and substantial support for collaboration on future provision with user groups able to develop and maintain trails.**

### 10.4 OPTIONS FOR DEVELOPING MOUNTAIN BIKE OPPORTUNITIES



**Retain Status Quo** with limited provision of purpose-built mountain bike trails and continued support for shared use on fire trails and service tracks. This is unlikely to address the spread of unplanned trails arising from the increasing demand in the community for places to ride within natural areas. The development of unlawful/ unauthorised trails is a direct response to community need but risks causing damage to environment and cultural heritage sites.



**Improve partnerships in provision** – the Central Coast Mountain Bike Club is currently operating and maintaining the trails at Ourimbah. Working with the club and other groups to improve the extent of trails at Ourimbah (or other locations) is an option that relies on community or other agency partners to develop and maintain trails.



**Expand and enhance the shared trail network** this may address some of the recreational riding demand which is for trail networks within natural areas. It does not address demand for flow and other more specialist trails which would be left to specific club or other agency managed sites. A detailed assessment of opportunities could identify additional service track and fire trail sections that could support an overall recreational shared trail network.



**Develop a regional trails plan** – identify suitable sites for new shared trails, identify opportunities for urban bike parks (skills circuits, pump tracks) to meet localised demand and implement some local or regional flow trails which can complement the existing shared trail network. This plan would be prepared in partnership with other land managers and mountain bike riders.



**Increase education and awareness** – better information about where to ride and trail etiquette on shared networks. Education, signage and awareness are key factors in any successful strategy to respond to increasing demand. About 30% of riders are currently unaware of where they can lawfully ride, which trails can be ridden and the difficulty of the trails.



**Increased enforcement** – This would involve the closing and revegetation of unauthorised trails in sensitive areas. This would need to be informed by a detailed trail audit to identify priority locations. If new trails in suitable locations are developed to cater to the demand, then increased enforcement can be pursued for any unauthorised trails developed. The closure of trails should be undertaken in partnership with local MTB clubs and users, so they understand the reasons, are able to assist in the work and have an opportunity to be involved in the location and construction of trails in sanctioned locations.

It is likely that a combination of the above options needs to be considered in any final strategy. For example, Ourimbah State Forest is providing a range of mountain biking opportunities however the survey results also suggest that this alone will not meet the demand that is currently available. It is evident that proximity is also a key factor into the development of the trail network in the Central Coast and therefore additional considerations are required for local opportunities to ride for 1-2 hours. The above options in isolation are unlikely to achieve any meaningful results in responding to the concerns and issues identified by the community.

## 10.5 SUMMARY OF TRAIL OPPORTUNITIES

The detailed site assessments are discussed in Section 8.1

There are a number of sites that present an opportunity for future investigation and development. Seven sites meet the criteria for a national level development, six sites meet the regional criteria with one meeting the local criteria. Out of these 14 sites only 2 are on Council land. Therefore, it is important that any future direction involves working closely with other government agencies. Locations that are close to residential areas and can accommodate the development of up to 20 km of trails are likely to meet the needs of riders who are looking to ride for up to 1-2 hours. These sites that are close to residential areas would also be suitable to include urban bike parks (such as a pump track) to provide additional opportunities for riders.

Sites that meet the regional criteria that would allow the development of between 20-80 km of trails would support the riders looking for 1-4 hrs riding at a time. This would include a range of trail difficulties and styles to be constructed. Should Central Coast wish to support a nationally significant network, sites would need to support a trail network in excess of 80 km and this could only be achieved if state land managers were supportive. It is recommended that the region can support 2 locally significant sites, a regionally significant site and possibly

a nationally significant site. The provision of a nationally significant destination requires detailed planning and an interagency collaboration. However, Council could act as a supporter and catalyst for such a project as there would be significant tourism and economic benefits to the region.

While there are some opportunities identified on council owned or managed lands, it must be acknowledged that more detailed investigation and site review is required for any new proposal. Not the least of which is the preparation of cultural heritage and environmental studies or assessments to inform any planning or decision making. The council sites where further investigation for regional or local level trail development are:

- « Kincumba Mountain Reserve
- « Rumbalara/ Katandra/ Ferntree Reserves

Trails investigation for these sites are subject to the planning frameworks and assessments discussed later in this document. However, these sites provide some opportunities already (mostly shared trails) and undertaking more detailed planning in conjunction with the user groups could identify what are and are not sustainable options for the two sites and how best to prioritise any new trail development and closure and revegetation of unauthorised trails.



## 10.6 MANAGING MOUNTAIN BIKING IN THE CENTRAL COAST

A key part of the feasibility assessment for providing Mountain Bike Trails is to consider what management approaches would work in the Central Coast region.

The following points summarise the key considerations in developing a management approach:

1. There is current demand for mountain bike trails and trends indicate this may grow. This demand includes access to local opportunities for general riding and gravity and flow tracks as well as destination/ regional sites with multiple styles and grades.
2. A number of authorised trails are already provided across a number of sites, however there are also several unauthorised trails.
3. The general community, some land managers and traditional owners have all expressed concern regarding the potential impacts of unauthorised trail development and unauthorised riding on walking tracks.
4. The assessment of potential sites identified multiple opportunities with many of these managed by state agencies.
5. The local mountain bike community is very active and club-based facility has already been developed and

is maintained by the club. the riding community has expressed a strong desire to collaborate on planning, developing and maintaining trails.

6. Any successful approach would need to be regionally focused and involve a shared plan between council, state agencies and mountain bike riders and clubs.
7. A management framework needs to consider both infrastructure and users.
8. Council already manages a significant natural area resource and any approach would need to consider available resources and the existing management plans in place for individual sites.
9. Immediate priorities include the management of unauthorised use and trails as well as forward planning for new trails in appropriate and sustainable locations.

**The recommended framework involves two components:**

1. Planning and Management Framework (proactive strategy)
2. Use Management Issues Framework (reactive strategy)

These are illustrated below:

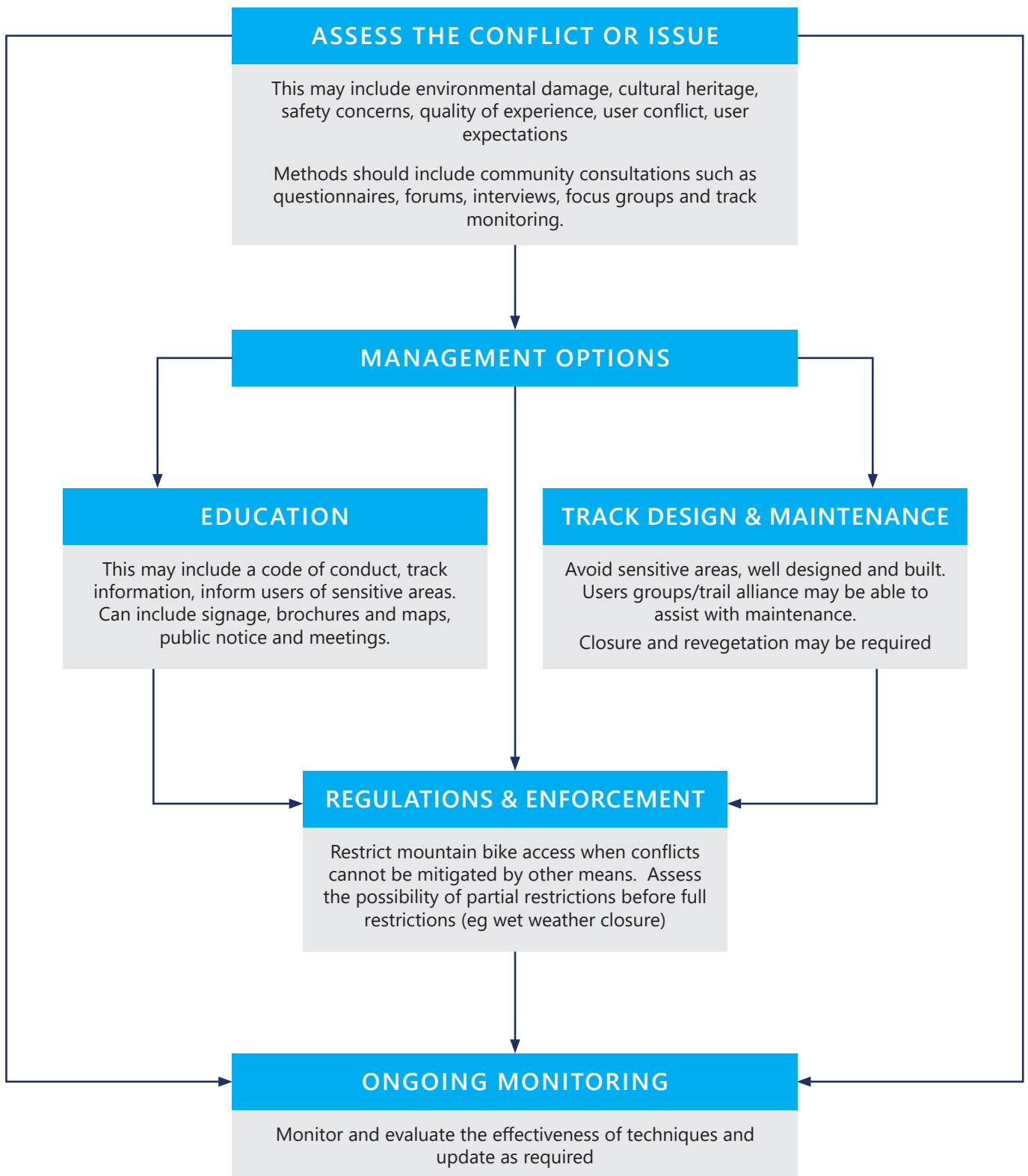
Figure 28: Planning and Management Framework



*This report has completed most of the baseline information- with the exception of the detailed trails audit which should focus on council lands as a priority so as to be able to rapidly address potential environmental or cultural heritage impacts.*

The proposed approach to managing mountain biking issues (reactive management) is illustrated below, this framework explains the flow of dealing with issues as they arise during management of mountain biking.

## Reactive Strategy - Framework for Managing Mountain Biking Issues



<sup>26</sup> Adapted from - Chiu, L, Kriwoken, L. 2003. Managing Recreational Mountain Biking in Wellington Park, Tasmania, Australia. Annals of Leisure Research, Vol 6 No 4 pp339-361.



# 11 WARRANTIES AND DISCLAIMERS



The information contained in this report is provided in good faith. While Otium Planning Group has applied their own experience to the task, they have relied upon information supplied to them by other persons and organisations.

We have not conducted an audit of the information provided by others but have accepted it in good faith. Some of the information may have been provided 'commercial in confidence' and as such these venues or sources of information are not specifically identified. Readers should be aware that the preparation of this report may have necessitated projections of the future that are inherently uncertain and that our opinion is based on the underlying representations, assumptions and projections detailed in this report.

There will be differences between projected and actual results, because events and circumstances frequently do not occur as expected and those differences may be material. We do not express an opinion as to whether actual results will approximate projected results, nor can we confirm, underwrite or guarantee the achievability of the projections as it is not possible to substantiate assumptions which are based on future events.

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