

Developing Mountain Biking in Queensland: Regional Solutions



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The logo for Queensland Outdoor Recreation Federation (QORF) features the letters 'QORF' in a bold, green, sans-serif font. The 'Q' and 'O' are significantly larger than the 'R' and 'F'.The logo for 'way to be...' features the text 'way to be...' in a blue, lowercase, sans-serif font. Below it, the words 'RESEARCH. PROJECTS. TRAINING' are written in a smaller, blue, uppercase, sans-serif font. To the right of the text is a blue circular icon consisting of concentric, slightly irregular lines.

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1.0 OVERVIEW

Mountain biking is a popular and growing sport and recreation pursuit. It is also an emerging force in tourism, with more opportunities being created for people to experience their environment in different and deeper ways.

To reap the potential social, economic and health benefits of mountain biking throughout Queensland this document outlines proposals for 6 regional mountain bike resources along the east coast that can:

- Provide access to unique experiences in the Queensland landscape
- Support the delivery of a range of special events
- Disperse pressure on existing heavily used sites
- Establish Queensland as a world class mountain bike destination, and
- Support regional communities through economic diversification.

Why?

- Over 54% of QLD households have at least one working bicycle
- Growth in mountain biking as tourism has been in excess of 20% since 2008
- Multiple competitive mountain bike events happen every weekend throughout Queensland
- Hallmark mountain bike events feed millions of dollars into local and state economies

To leverage these opportunities, Queensland needs high quality and sufficient mountain bike trails to meet consumer recreational needs and enable event and tourism development. This document outlines six Regional Mountain Bike proposals for safe, engaging, well designed and desirable destinations. Addressing the need for destinations that meet tourism and rider demands, four ride centres are proposed from the Gold Coast to Sunshine Coast. These include:

1. Nerang National Park - 70+ km ride destination in the proposed GC cycle precinct

Close proximity to major population; expanded tourism product; allows riders to experience the 'green' behind the 'gold'; offers a central location for world class mountain bike events; large enough to attract international visitation.

2. Koala Coast, Daisy Hill Forest Reserve – ride centre

Existing usage is high; site remediation and connecting trails will expand ride experiences for families, experienced riders, sport training and touring visitors. With the development of network links, 3 days+ of riding will be available (e.g. Daisy Hill, Venmans, Cornubia, Karingal, Bayview)

3. Walkabout Creek, D'Aguilar National Park – trail centre

Expands and formalises family ride adventures at Walkabout Creek, connects trails to Gap Creek, Mt Coot-tha Forest Trail network, Mt Nebo, Samford and Bunyaville Regional Parks. These will meet growing needs for sport training rides, family / recreational riding, long distance routes, and skill development, all on the doorstep of central Brisbane.

4. Parklands Regional Park, Sunshine Coast – 50km singletrack trail network

15 minutes to beach and hinterland. Diversity of trail grades, rider development, a challenging venue for advanced riders, suitable for racers and multi-sport events.

Individually and collectively, these offer a variety of substantive destinations to cater for:

- Families and beginners,
- The fit cross country racer,
- Youth development,
- Social and competitive events, and
- Skills areas and technical trail features to allow riders to practice and build capacity.

Regional trail networks in the Far North and Townsville extend the Queensland mountain bike experience, providing people with trails that carry people into World Heritage terrain. These trails variously offer ocean views, the opportunity to explore dormant volcanos, or the chance to touch the wilderness through backcountry trails. Regional trail networks enable extended rides as people take long touring journeys through an ever-changing landscape.

5. Townsville and Region – trail centre

A stepping stone to explore west to Charters Towers, east to Magnetic Island, north to Wallaman Falls, south to the Burdekin, and onto the Whitsundays. Touring rides, mountain bike events, looping trails.

6. Tropical North Queensland – regional trail centre

Already growing as a MTB destination and recent host of a UCI World Cup, Tropical North Queensland has demonstrated the opportunity that comes from world-class trails. The foundation is laid to attract world MTB competition and festivals, provide access to unique landscapes and enable 3-5 day touring networks by connecting small towns.

Combined, the suite of Ride Destinations have the potential to provide communities and visitors alike with healthy lifestyle experiences that can provide a boost to local economies and enhance social capital. These outcomes require investment to reap the return: in trail building and infrastructure, and also in smart design and development. This will ensure mountain bike trails are attractive, interesting, playful, and world leading; and enable a desirable and positive return on investment for Queensland.

The following document presents an overview of opportunities, and a proposed way forward that is readily actionable to maximise the social, economic and health benefits of mountain bike resources to Queensland. While the focus is on lands in the Protected Area Estate, a partnership approach with other land managers is vital to take advantage of the opportunities available. Already, local/regional councils, water authorities, tourism and mountain bike riders have demonstrated their readiness to contribute to coordinated planning and delivery of MTB trails. With a leading role provided by State Government, that enthusiasm can be harnessed and the returns realised.



2. INTRODUCTION & BACKGROUND



2.1 What is mountain biking?

Mountain biking is a popular outdoor activity that involves the riding of dedicated bikes off road.

Mountain biking is not a singular experience. It is pursued in a range of styles, but has been demonstrated to be an activity that can be accessed by most people with a mountain bike – whether their bike is a \$150 outlet store special or a \$10,000+ wonder bike.

Mountain bike (MTB) riding provides people with a chance to connect with nature, escape the everyday, have fun, get fit, be part of a community, go somewhere or nowhere, be challenged, be alone or to spend time with friends. When communities have well designed and located trails, mountain biking has proven to be a healthy, outdoor activity for children and families, friends and colleagues, men and women, casual riders, serious enthusiasts and competitive riders.

2.2 Background to proposal

Since 2006 MTB riders, land managers and other stakeholders have met to discuss issues, opportunities and development for mountain bike riding throughout Queensland. The Qld MTB Forum has recognised that whilst the activity has grown organically, supply does not match demand; and nor does it cater for community, event, sport or tourism growth. As a group the members of the MTB Forum has realised the relevance of a coordinated approach to MTB development; and the opportunities that can be accessed through investment in key regional mountain bike developments.

The following proposal is the result of the efforts of the State Wide MTB Regional Solution and Advocacy Working Group and the Qld MTB Forum¹ who have consulted with their networks to identify pre-eminent MTB development opportunities on the Protected Area Estate, managed by QPWS.

The aim of this Regional Solution document is to present a selection of MTB trail development priorities in Queensland that are viable community assets and are economically and environmentally sustainable. It is our intention to reinforce that not only can MTB trails contribute to healthy and active communities; but that well designed, constructed and supported trails also contribute to regional development and the enrichment of people's lives as they move through nature and interact with our diverse landscapes.



¹ The Working Group and Qld MTB Forum are coordinated by QORF. Through these networks the project has coordinated advice and support from representative riders, QPWS staff, local government authorities, Mountain Bike Australia, commercial service providers, event managers and other land managers.

2.3 The vision for MTB in Queensland

*“To contribute to vibrant and healthy Queensland communities through the development of a **network of regional world-class mountain biking resources** that enhance Queensland’s recreational, social, environmental and economic opportunities.”*

What do the **Regions of Queensland** offer?

- **Engaging** landscapes from native forest to world heritage settings to ocean vistas;
- Diverse **experiences** through the variety of culture, heritage and experience from city to country, beach to bush;
- Tourism and business **infrastructure** that can support development and increased visitor numbers;
- **Fine**, cool winter days. **Warm** summer mornings and evenings;
- Geographic and environmental **choice** that accommodates seasonal variation and different riding experiences;
- Complementary **activities** within and without the protected area estate (PAE) that suit a wide range of visitors and travellers including trail running, rock climbing, canoeing, fishing, hiking and camping;
- Established MTB **events** and supportive MTB Clubs and trail care groups;
- The genesis of world class **routes, trails and reputation** (e.g. Smithfield Regional Park, Atherton Tablelands, Daisy Hill Regional Park, D’Aguilar National Park)

To achieve these outcomes and realise Queensland’s MTB potential our **key principles** of planning for this proposal include:

- applying a **regional focus** to identify opportunities that align with the conservation and environmental values of the landscape;
- developing **sustainable**, well designed and constructed **world class** MTB trails that fit with IMBA² Guidelines;
- enabling efficient and effective trail maintenance models for **asset management** of trails and related infrastructure;
- prioritising mountain bike development in areas with **existing demand**, close to population bases, that hold scenic amenity and/ or demonstrate economic development opportunities, and have local support;
- taking a **partnership approach** that draws on the expertise, resources and capacity of land managers, trail care groups, MTB clubs and commercial enterprises;
- **extending opportunities** for visitation, spend and length of stay.

² IMBA - International Mountain Bicycling Association

2.4 Mountain biking in Queensland

Contrary to some perceptions, mountain biking is not singularly the realm of the young or the masculine. Across the range of styles of mountain biking, the activity offers the chance for young and old, male and female, the intrepid and the sedate to experience the natural environment on mountain bike trails.

While mountain bike riding is growing in popularity, sections of the population are not well represented. The opportunities for growth and development remain widespread as more people recognise the health, financial and social advantages of riding their mountain bike for holidays, exploration and pleasure.

*MTB in QLD – What do we know?*³

Over 54% of all QLD households have at least one working bicycle

Import sales of adult bikes **increased by 21%** from 2009/10 to 2011/12

Recreational cycling (such as mountain biking) is more than **twice as popular** than cycling for transport purposes

Cycling participation is higher for **males** than females

Queensland children cycle at **higher rates** than adults

Cycling as a holiday activity has **increased in popularity by 25%** for domestic visitors and 17% for international visitors

Growth in mountain biking for tourism has **been in excess of 20%** since 2008

More people in Australia are cycling than **ever before**

³ Sources: Tourism Research Australia (2013); Australian Bicycle Council, Australian Cycling Participation 2013; Bicycle Industries Australia, 2013.

2.5 Why invest in Regional MTB Solutions

- Effectively leverage world class mountain bike events held in Queensland to build participation and tourism potential (e.g. UCI World Cup series 2014, 2016; Commonwealth Games, 2018)
- Develop the appeal, accessibility and desirability of mountain biking for the Queensland tourism market
- Encourage healthy and active lifestyles
- Develop tourism for regional communities through economic diversification and increased visitation
- Expand Queensland's diversity as a year round destination for outdoor recreation
- Provide spaces and experiences that increase community stewardship and a sense of connection with the environment
- Decrease health costs through healthy physical activity
- Meet community demand, reduce the potential for user conflict
- Boost opportunity for local and regional business provision of cycling goods and services

Economic Benefits: Recreational Trails

Trail and mountain bike tourism have been found to provide economic stimulus for local regions. For example:

Oregon, USA (2013)

- 17.4m people visited Oregon
- 4.5 m rode a bike while visiting
- Overnight cycling visitors spend 8x more than day travellers
- \$6.6m pulled into state's economy by MTB events and tours (McNamee et al, 2013; Travel Oregon, 2013)

7Stanes, Scotland

- \$214m contribution of MTB to Scottish economy
- 400,000+ riders visit 7 Stanes each year
- \$36m return to local community (EKOS, 2007)

Rotorua, New Zealand

- Cycle tourism contributes \$15m to the local economy
- Value is 5x the return on timber revenue
- \$2.5m spend per day during 2006 UCI MTB World Championships in Rotorua (Cycling News, 2006; NZ Herald, 2012)

Cairns, Qld

- 10, 000+ spectators to the 2014 UCI MTB World Cup
- Estimated \$10m contribution to Qld economy (Cairns Post, 2014)

Regional planning is needed to identify & prioritise areas for high quality, sustainable & accessible mountain bike trails.

Events engage diverse participation in different regions & boost financial returns. These need coordination to reduce overlap.

State, national & international events increase exposure. Quality local services encourage welcome & visitor spend.

2.6 MTB trail network success markers

To reap the potential of positive returns from investment in mountain bike trails, networks and hubs requires a targeted and planned approach. Lessons learned from successful models throughout the world, including Rotorua and the New Zealand Cycle Trail project; 7Stanes, Scotland; and the successful mountain bike trail networks of Fruitia, Colorado and Moab, Utah all indicate that economic and social success stems not just from developing quality, sustainable trail, but also investing in infrastructure, signage, promotion and long term maintenance.

In overview, **successful** MTB trail networks:

Provide diversity of experience.

There is a variety of riding difficulty, duration and scenery to captivate and engage riders of all levels and abilities.

Offer skill-building opportunities.

At least a third of all trails are green to cater for the sedate or novice rider; and skills parks form part of the MTB riding network.

Commit to **consistent, informative and correct signage and mapping** of trails.

Are **actively supported by the land manager**. Trails and trail infrastructure are seen as integral land assets that are managed, maintained, developed and enhanced through ongoing land manager commitments and relationships with community volunteers and supporters.

Are **informed by coordinated** and clear plans for mountain biking that ensures management, promotion and trail care are prioritised for **rider benefit**.

Are **purposefully planned**, designed and constructed to meet user needs, engage the public and take **best sustainable advantage of the landscapes features**.

Allocate resources to invest in a process of ongoing trail review to adjust trail alignment as heavy use, unseasonal weather or unanticipated change informs amendments.

Have the **support of local community** – riders, business, land managers, service providers. (*Note: the extent and nature of support needed can vary across land tenure & purpose*)



3. REGIONAL SOLUTIONS

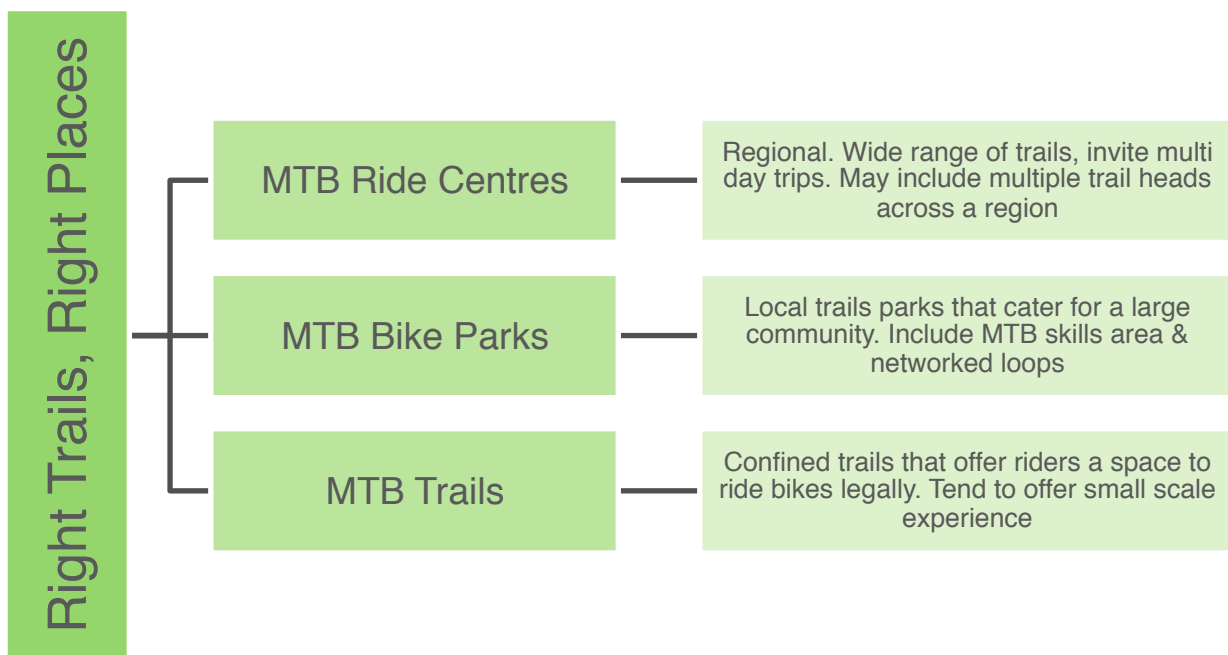


3.1 Regional opportunities

Drawing on the expertise of the Working Group, mountain bike clubs, and industry networks, a broad range of potential mountain bike developments and refinements have been determined. Each would provide valuable service to local communities and riders. Here, six indicative key regional solutions for mountain biking are presented. These are intentionally limited to the protected area estate and offer just some of the many opportunities that exist across the Queensland landscape.

International experience has demonstrated that with commitment of vision and resources it is possible to create networks of mountain bike hotspots that can:

- provide people with a way of experiencing, exploring and connecting with Queensland's outdoors;
- deliver health benefits from physical activity;
- enhance the tourism opportunities on offer in different regions;
- support regional economic development through spending on tourism, events, bike care, accommodation, food and drink; and
- further Queensland's reputation as an adventurous, outdoor, welcoming and diverse residential and tourism destination.



Regional Solutions are representative of areas that have been identified by MTB riders as desirable, proximal places to ride. This is indicated by the existing use, range and rate of illegal trail use that has been conducted, and the ongoing growth at each location. Each area is also supported by proactive MTB clubs and trail care groups who wish to not only ride, but expand opportunities for others, and make a contribution to the development and maintenance of high quality, well designed and located MTB trails.

In essence the overarching regional proposal for MTB in Queensland posits the ideal of a series of Ride Centres throughout the state. These would serve to meet current and latent local demand, yet importantly also provide a network of trails, touring networks and distinct destinations for riders to experience a breadth of riding experiences throughout the state.

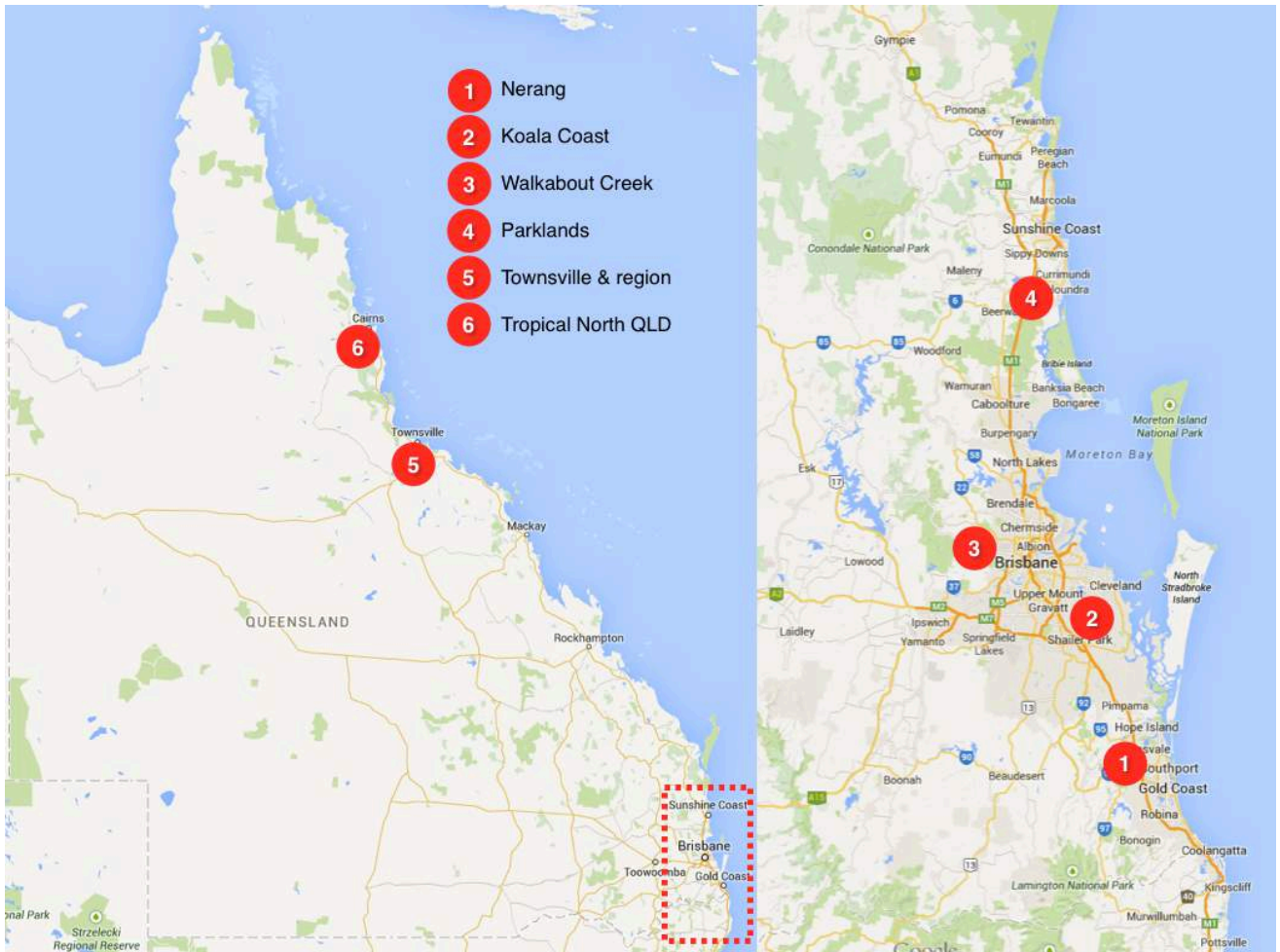


Figure 3.1: Qld MTB Ride Centres & Regional Trail Networks

While the ride centres remain heavily centred in South East Queensland, this is an artefact of Queensland’s population, known current demand and the lack of an extensive network of trails in the area. Regional networks and connecting trails are proposed for Townsville and the Tropical North, but in the South East, a series of Ride Centres is identified as the most practical solution, with each providing a hub for quality riding, supplemented by surrounding resources across a range of jurisdictions.



MTB Trails	Features	Trail Grades	Facilities
Nerang Trail Centre	70km Ride Centre as part of a cycling precinct. Supported by a cycling centre at the Trailhead, this is a MTB destination in itself.	Green Blue Black Forest road	√ Trailhead √ Café √ Toilets √ Public Transport √ Skills Park
Koala Coast Trail Centre	Creating connections across different land managers, the Koala Coast trails open up the recreational opportunities for regional residents in this desirable bushland setting.	Green Blue Forest Road	√ Trailhead √ Toilets √ Shelter
Walkabout Creek Trail Centre	A gateway for MTB with connections to Brisbane's green perimeter – Mt Nebo, Samford, Gap Creek. With a Junior Skills Park already under development, this area offers a fantastic venue for beginner riders, families and long distance rides all within the confines of Brisbane City.	'White' Green Blue Forest road	√ Trailhead √ Café √ Toilets √ Public Transport √ Jnr Skills Park √ Play Area
Parklands Regional Mountain Bike Park	Existing intermediate level riding facilities providing challenging and technical trails.	Green Blue Black	√ Parking (limited) √ Mapped & signed × No trailhead × No toilet
Townsville & Region Trail Centre	Regional mountain bike centre Situated on the edge of the outback, the reef and the wet tropics, Townsville offers a series of MTB routes to choose from that allow people to explore, test their skills, or have a fabulous family adventure.	Green Blue Black Forest road	√ In Towns: √ Cafes Toilets √ Bike Shops √ Accommodation
TNQ Regional Trail Centre	Recreational mountain bike destination. Offering a unique mix for Qld of forest and ocean & supported by a range of regional towns, TNQ offers riders the chance to experience rainforest, mountains, coast & billabong across an accessible landscape.	Green Blue Black Forest road	√ In Towns: √ Cafes √ Toilets √ Bike Shops √ Accommodation

Opportunities exist to build additional infrastructure and services around quality trails including:

- Bike hire
- Shuttle services
- Bike wash down facilities
- Tuition – how to ride
- Play Areas
- Showers
- Cafes
- Shelters

3.2 Nerang Trail Centre

The Nerang National Park is situated 15km due west of Surfers Paradise and lies almost at the geographical centre of the City. The park's eastern, southern and western boundaries are neighbored by urban / rural residential properties in the suburbs of Gaven, Nerang & Maudsland. The northern boundary of the park is adjacent to the densely populated urban residential suburb of Pacific Pines.

Such a proximal location offers clear opportunities to develop Nerang National Park as a world class cross country (XC) trail destination. The cycling precinct is adjacent to Nerang National Park in the south eastern corner of the park and is the current and most used entry point into the park by riders. The cycling precinct is approximately 8 Ha and is managed by the City of Gold Coast (CoGC) which also provides other cycling related recreational opportunities, track cycling and road racing on a closed criterium circuit.

Development of the Nerang Trail Centre would provide opportunities for the local Queensland community to ride in a world class venue; and could attract and extend the visit of domestic and international tourists drawn to the experiences available in the surrounding area. In addition to MTB, from the Nerang Trail Centre people could readily experience the best the Gold Coast has to offer – beaches, theme parks, riding, shopping, swimming, walking, dining, exploring and staying.

By using the leverage of the Commonwealth Games and investing in Nerang National Park world class MTB trails, Queensland could showcase not only the sports in competition, but establish and embed a benchmark destination that offers recreation solutions and provides economic returns to the wider community.

The Vision

The Nerang MTB trail centre would offer a valuable resource for people keen to explore their environment on trails close to amenities. Already used by numerous riders, trail runners and orienteering groups, the current trails are considered to be raw and challenging. Lacking in managed development, and built to meet the needs (and skills) of experienced riders, there are limited opportunities for new riders, beginners and families.

The proposal for Nerang NP is to create a high quality, proximal trail centre with an appealing mix of well-planned and located IMBA standard trails that provide riders of all levels with interesting, engaging and enjoyable ride experiences. With a long term target of 100km, and a Stage 1 proposal for 70km of trail, riders will have numerous opportunities to cycle different routes, enhance their skills, ride for leisure, pleasure, development or challenge; and have enough variety to support endless new, day riding opportunities on a mix of managed trails that include quality one way single track.

The vision is to build high quality, world class trails designed to:

- provide interesting rider experiences,
- meet local conditions to enable sustainable riding all year round;
- attract riders to the design features and encourage the local community to pursue an active, healthy lifestyle;
- offer the best of scenic amenity available.

*“What’s a great MTB destination? Somewhere that is **easily accessible**. It has **good car parking** and other resources close to hand - like cafes and bike shops. It can easily **stage an event**, but still **handle social rides** at the same time. It has a **variety of riding** that can be **ridden in any weather**; and it’s rewarding. It’s scenic, there are good descending sections and the ‘ups’ are tough, but not soul destroying.”*

- Ian Harwood, **Event Manager & MTB rider**

Partners

QPWS/ DNPRSR; CoGC; local MTB Clubs/ Trailcare; Commonwealth Games Organising Committee (CoGC).

A Partnership with the City of Gold Coast (CoGC)

QPWS/ DNPRSR	CoGC
Provide 70km of all weather, sustainably designed & built XC trail catering for breadth of XC rider ability.	Create a world class 'Trail Head' at the cycling precinct
Build to IMBA standards	Masterplan for the precinct – in play
Stacked Loop Approach with Technical Trail Features (TTF) incorporated into design with 'B Lines' provided.	Provision of trail head amenities: <ul style="list-style-type: none">• Toilets, showers• Skills/ Jump park• Event staging
16km Green rated trail 46km Blue rated trail 8km Black rated trail	Vehicular parking Commercial space for lease e.g. Bike shop/ Café or other commercial entities.



Opportunities

Problems Solved

- lack of MTB facilities in GC region (Hinze - 5.4k Green/ Blue; Eagle Heights 3.3km Black Diamond; Upper Coomera 1.4km Green; Burleigh Heads 1.25km Green)
- substantive illegal building of MTB trail (over 60km)
- enhanced & extended quality of trail - attracts riders, improves safety, increases access for beginner riders and families

Transport available

- 2 minutes off the M1 at exit 69
- Nerang Trail Station only 2.5km away. Allows for train commute followed by ride on back streets, through parkland & on footpath.
- Allows youth & those without private transport (including tourists) to visit

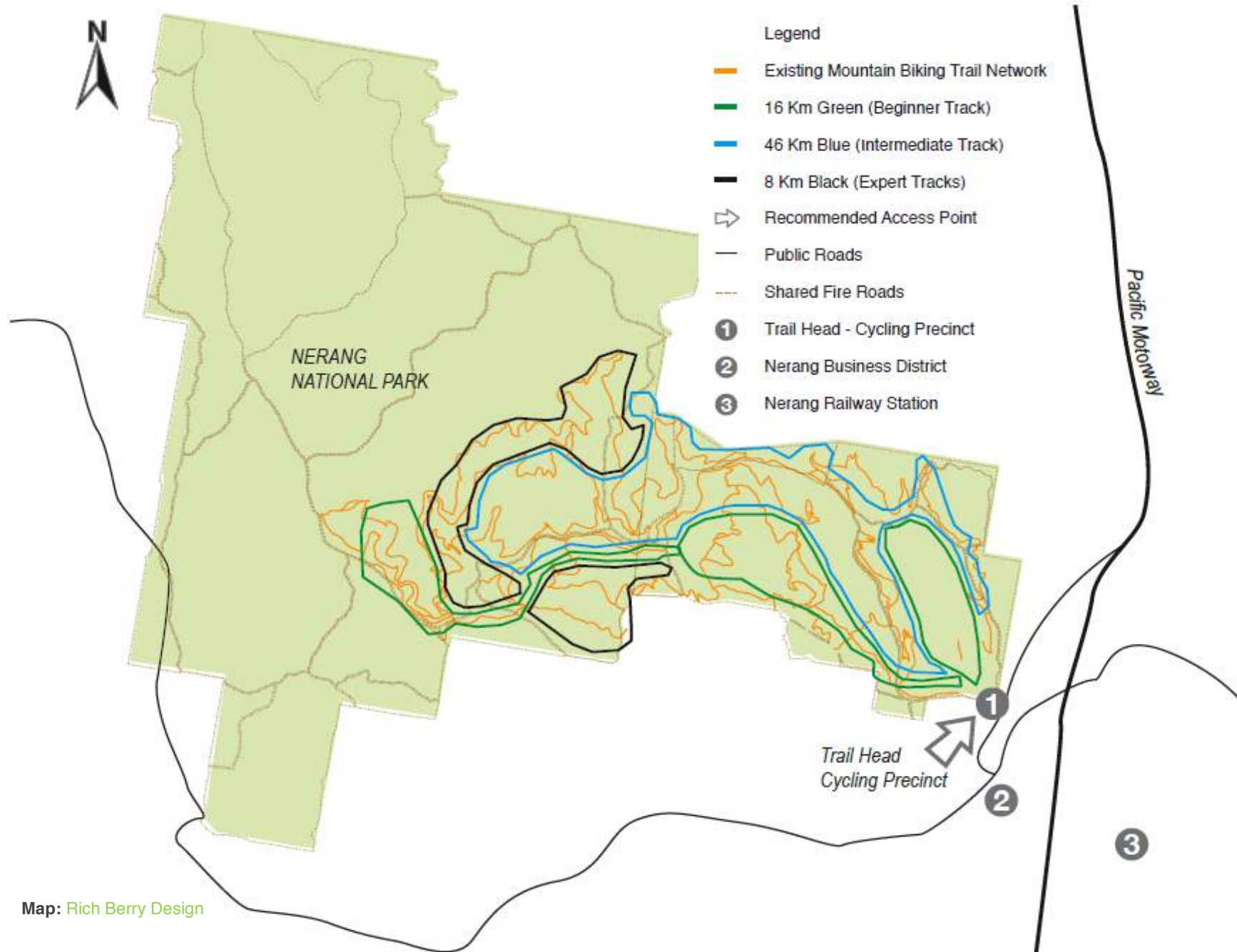
Existing Opportunities

- CoGC support for building adventure tourism market
- Visitors can experience the 'Green behind the Gold'
- Accommodation, cafes, bike shops, tourism infrastructure already in place
- Event Ready - with legal trail, MTB events could be staged now
- Commonwealth Games MTB Racing traversing the NP

Success Factors

- Natural Beauty
- Climate
- Quality - well built trail, open year round, caters for events and social riders, variety of rides in the same space, clear signage, support infrastructure, coffee shop - sense of welcome

Concept Map of MTB Trails for Nerang National Park



Indicative costs

Trail Upgrade & Construction		
Upgrade existing trail	28km Blue	\$336,000
	2.5km Black	\$33,750
Construct new trail	16km Green	\$560,000
	18km Blue	\$720,000
	5.5km Black	\$247,500
TOTAL – Upgrade & Construction		\$1,897,250*
Other Costs		
Network alignment & scoping		\$50,000
Signage		\$125,000
Project Management		\$155,000
Decommission illegal trail		\$147,500
TOTAL – Other Costs		\$477,500
Maintenance		
Year 1 – covered by defects liability		\$Nil
Ongoing		\$95,000/yr

*It is expected costs can be reduced through economies of scale

Future Opportunities

Develop Secondary Trail Head at Pacific Pines with Trail Extension to link to the network in the southern section of the park. Utilise existing fire trail of acceptable gradient with inclusion of bypass single track (Green rated) to avoid steep and dangerous fire trail.



3.3 Koala Coast Trail Centre

The Koala Coast region lies approximately 20km south east of the Brisbane central business district and includes growing population areas crossing the boundaries of Brisbane City (BCC), Logan City (LCC) and Redlands City Councils (RCC). Both state and local government hold significant resources in this region, with Redland and Logan City Councils proactively recognising the social and economic value of mountain bike riding, and enhancing the trail product available.

As an area undergoing ongoing rapid urban expansion and offering the largest range of trails to the south of the Brisbane River, the existing mountain bike trails are experiencing heavy use. In Daisy Hill Forest Reserve, trail counters demonstrate in excess of 1,000 MTB ride passes are made on key trails in any given week. While the numbers are indicative only, this pattern has been consistent, with new trails achieving immediate success within Daisy Hill and Logan City developments (e.g. Cornubia; Daisy Hill Jumping Ant – 1,000 ride passes on opening weekend).

The Vision

To address the demand for current and future provision of mountain bike trails, and to grow the potential for social and economic returns consistent with the environmental values of the land, two development goals need to be addressed:

1. Conduct remedial work on existing trails and management trails to make these safer and more rideable (Daisy Hill).
2. Develop the connections between the various land managers' estates to create a network of trails that cater for families, experienced riders, sport training, and touring visitors.

Partners

QPWS/ DNPRSR; Logan City Council, Redlands City Council; local MTB Clubs/ Trailcare

Actions



Opportunities

Better trails, safer trails, more desirable trails.

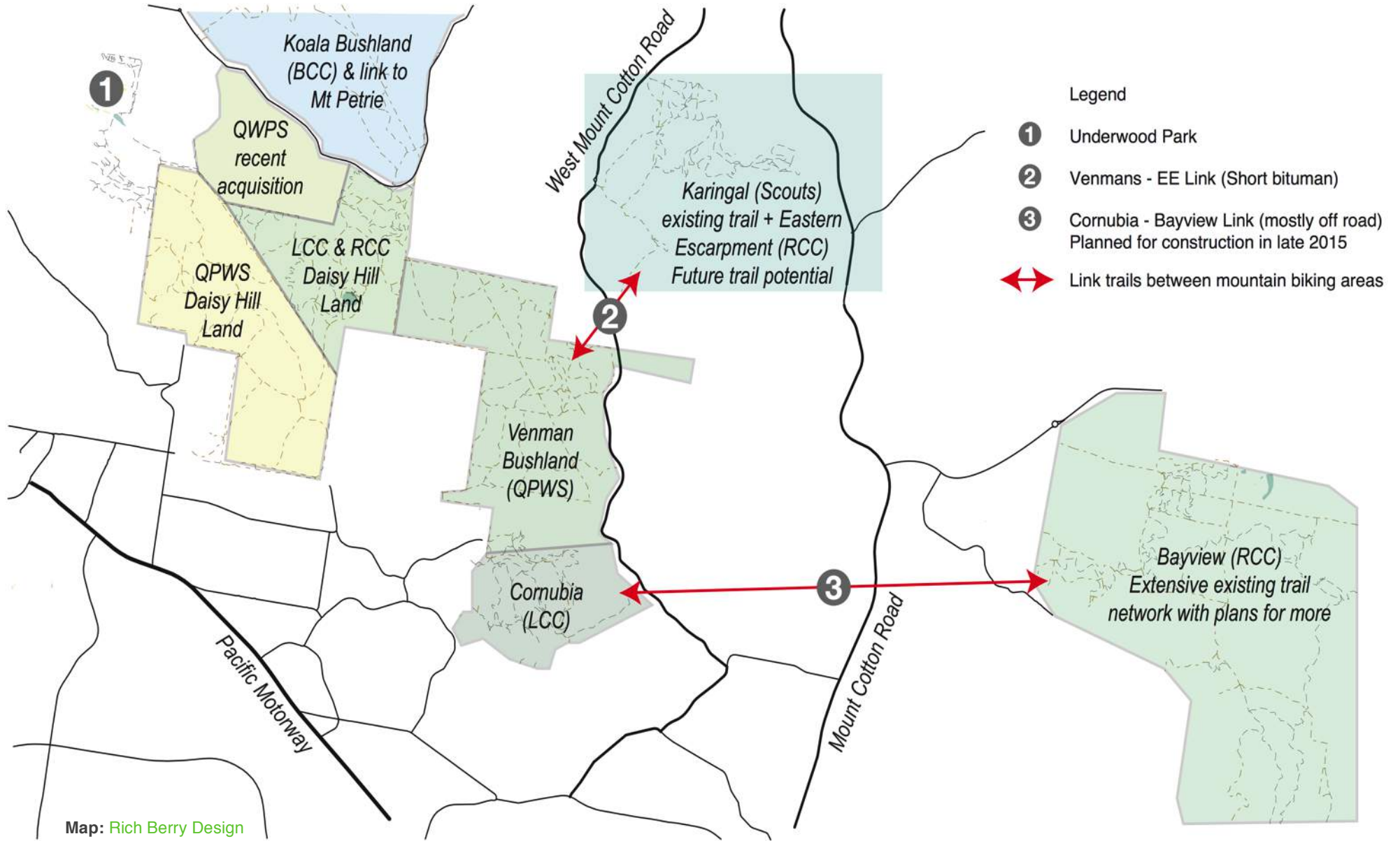
Current use & growth are significant. Intervention is needed to relieve pressure on existing trails particularly within DH Forest Reserve.

Cross tenure, well managed and planned recreational trail networks that seamlessly link existing and new community developments (e.g. Underwood Park to Daisy Hill Forest Reserve to KBCP to Venmans, to LCC Cornubia & RCC Bayview/ Eastern Escarpment).

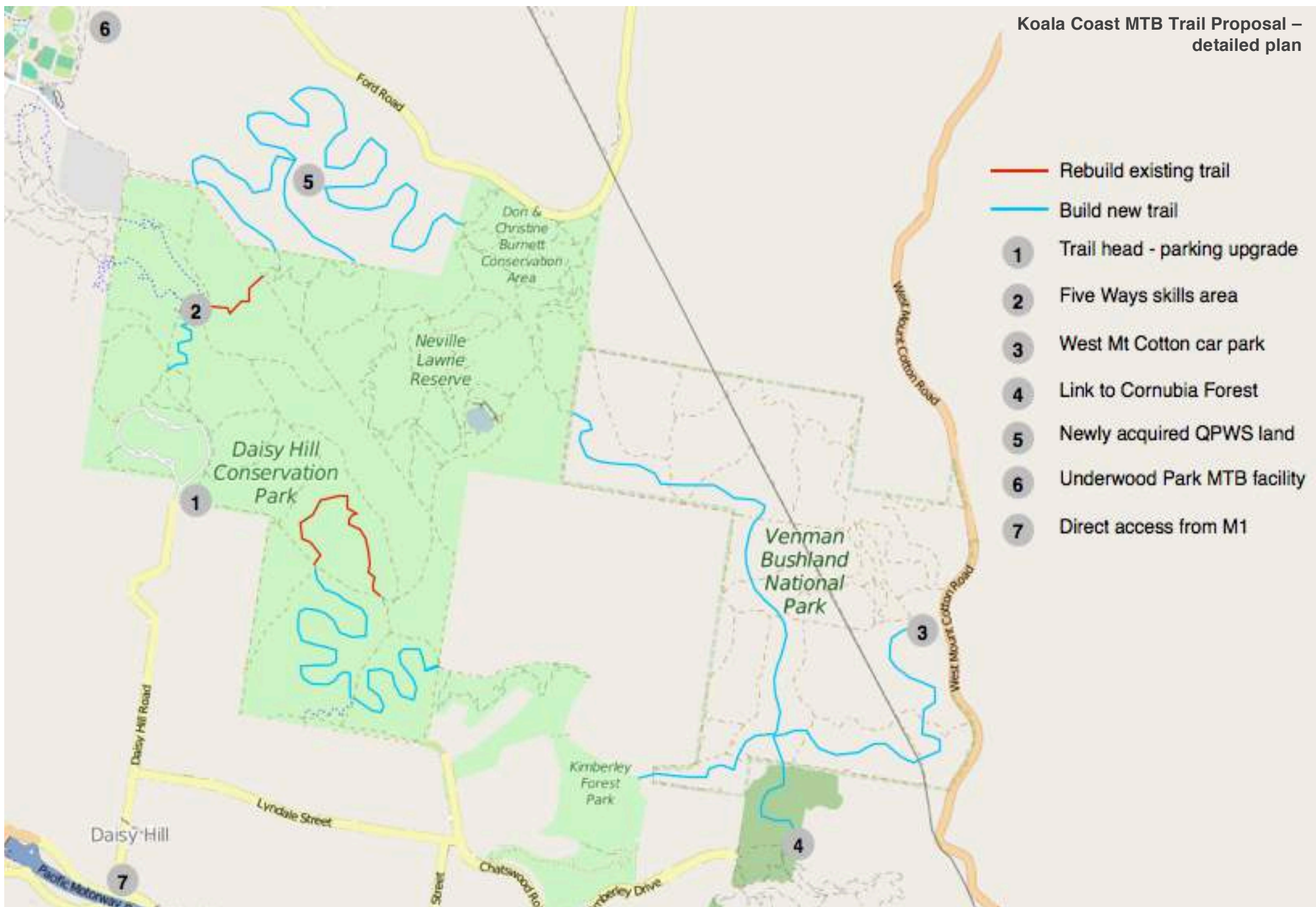
Increased accessibility for beginners and young families through the provision of one way, green singletrack trail experiences.

Reduced accidents and incidents by re routing riders off dangerous sections of management roads which involve water bars and have steep descents. Well designed singletrack slows the rider, AND increases the experience and sense of speed.

Koala Coast MTB Trail Proposal – regional context



Koala Coast MTB Trail Proposal –
detailed plan



“I really like riding with my friends and family every weekend at Daisy Hill”

- Sophie Winkcup, age 7



- This area is already a **regional destination** and it has the potential to be a **hub for multi-day riding** with the development of loops into neighbouring jurisdictions.
- The trails at Daisy Hill provide a fantastic **resource for beginner riders**. Cornubia caters to the skilled to advanced rider. Underwood Skills Park will provide a training venue for riders to develop and practice their skills.
- Venman Bushland can offer an intermediate riding experience and provide the opportunity to develop quality **XC race venue**.
- Stay and Play. A range of services are embedded in the communities of the Koala Coast, with strong potential for **bike hire, bike shops, cafes, accommodation and training** enterprises to develop.
- There is **community commitment**. More than **1,500 hours** have been contributed to volunteer trail building and trail care in the Daisy Hill/ Cornubia area in the last 3 years.

Indicative Costs

Trail Upgrade & Construction		
Upgrade existing trails	Turning Japanese trail – 1.8km	\$57,500
	Tunnel of Love trail – 0.5km	
Construct new trail	Carpark to Five Ways link – 0.6km	\$610,000
	Turning Japanese to Snake – 3.2km	
	Snake to Nirvana – 1.7km	
	Ford Rd block trail – 7.5km	
	Venman North-South trail – 5.7km	
	Leo Lindo – Venman link – 1.3km	
	West Mt Cotton carpark link – 3.3km	
Venman – Cornubia link – 1.1km		
TOTAL – Upgrade & Construction		\$667,500
Infrastructure		
Signage upgrade		\$24,000
Five Ways skills features & seating		\$40,000
Trail head parking upgrade		TBC
TOTAL - Infrastructure		\$64,000
Other expenses		
Project management		\$50,000
Maintenance		\$33,800/yr

3.4 Walkabout Creek Trail Centre

Walkabout Creek Visitor Centre is 12km from the Brisbane CBD and the recreation gateway for D'Aguilar National Park; the closest and largest national park to a capital city in Australia. The construction of the new Activity Centre through 2015 will add exciting outdoor experiences to Walkabout Creek, including a Junior Mountain Bike Skills Park.

Walkabout Creek is the gateway to D'Aguilar NP for 2 mill. Brisbane residents

400,000 visitors per year to D'Aguilar NP

55% of users of the Horse Trail Network are MTB riders

1,000+ mountain bike visits per week on Gap Creek MTB singletrack

1 in 4 of all tourism trips has an adventure component

The Vision

In order to enhance mountain bike experiences for a wider audience, two specific projects are proposed.

1. New mountain bike singletrack is proposed to link Walkabout Creek to the popular trails at Gap Creek managed by Brisbane City Council. This link provides a conduit for residents in The Gap to ride on purpose-built singletrack from Walkabout Creek; forms an attractive circuit for events; and draws riders from over-crowded trails at Gap Creek. Additional singletrack to the north of Walkabout Creek provide contoured, narrow trails for novice and experienced riders and form circuits for recreational riding, training and events.
2. To enhance the management road around Enoggera Dam by rerouting three steep sections to create easier climbs. Currently this multiuse circuit is very scenic and enjoyable except for three steep ascents which preclude the majority of riders and create difficulties for fire management vehicles.

Neither of these projects can progress unless Seqwater agree to open access to the parkland and management road below the dam wall. This missing link below the dam wall prevents completion of the circuit and easy access to Walkabout Creek. In discussions relating to this proposal, Seqwater has indicated that public access is possible.

Partners

QPWS/ DNPRSR; Seqwater; BCC; local MTB Clubs/ Trailcare



“The inclusion of MTB trails at Walkabout Creek will provide a venue for MTB skills to teach skills that develop riders so they can ride their mountain bike **safely and responsibly**. It will help us to enable people to have more fun, enjoyment and confidence when mountain biking and will directly help support a local small business.”

- Rowan Lamont, MTB Skills coach

Walkabout Creek Trail Centre: MTB



Map: Rich Berry Design

Opportunities

- Enhances Walkabout Creek as a Trail Centre;
- Draws more mountain bikers, trail runners and others;
- Provides facilities for mountain bike and trail-based events;
- Provides for school based mountain bike programs at The Gap SHS and Kenmore SHS;
- Enhances opportunities for bike clubs, shops and coaches to use purpose-built trails.

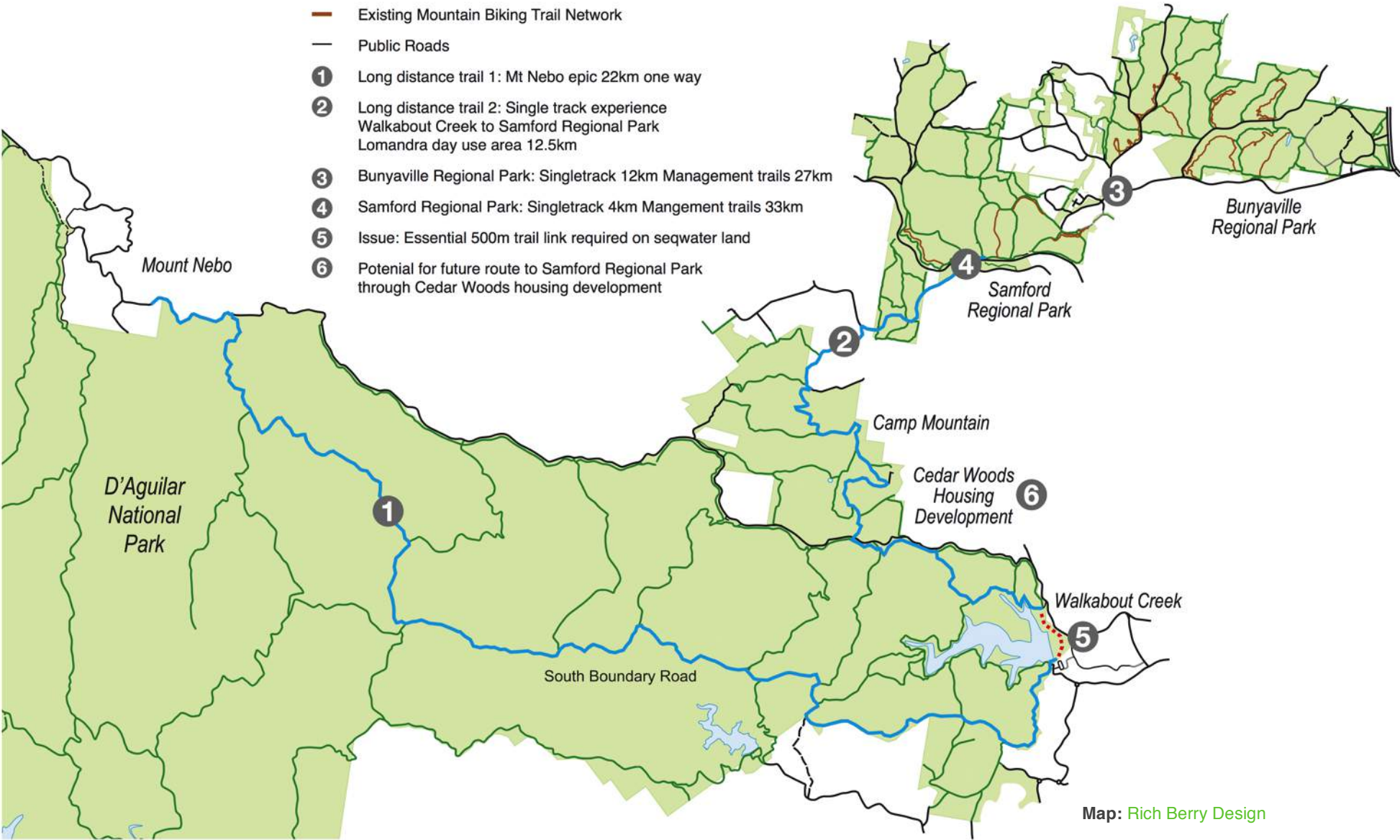
In addition to mountain biking in the near vicinity, Walkabout Creek Visitor Centre can easily be marketed as the gateway to long distance epic rides in D'Aguilar National Park. The 25km ride along South Boundary Road to Mt Nebo is currently the most popular epic mountain bike ride in Brisbane. Used for endurance riding and training, the trail passes through open Eucalypt forest which gradually changes to rainforest as the trail climbs. These qualities offer attractive pull factors for overseas visitors.

An additional long distance route could be marketed as the Singletrack Experience. It is easy to ride north from Walkabout Creek on management trails to mountain bike singletrack in Samford and Bunyaville Regional Parks. To achieve this merely requires signage and promotion. The trails are already there (refer to following map).

Walkabout Creek Trail Centre Long Distance Trails

Legend

- Proposed long distance rides on existing trails
- ⋯ Essential 500m trail link on seqwater land
- Existing Mountain Biking Trail Network
- Public Roads
- 1** Long distance trail 1: Mt Nebo epic 22km one way
- 2** Long distance trail 2: Single track experience Walkabout Creek to Samford Regional Park Lomandra day use area 12.5km
- 3** Bunyaville Regional Park: Singletrack 12km Management trails 27km
- 4** Samford Regional Park: Singletrack 4km Mangement trails 33km
- 5** Issue: Essential 500m trail link required on seqwater land
- 6** Potential for future route to Samford Regional Park through Cedar Woods housing development



Map: Rich Berry Design

Experiences Available

- Event Staging
- Social riding
- Family recreation
- From 30 min to three day ride experiences. For example, interstate and overseas visitors will have three days of mountain bike riding on offer from Walkabout Creek Trail Centre:

Day 1: Purpose-built skills park, singletrack and scenic Enoggera Dam Circuit

Day 2: Mt Nebo Epic

Day 3: Singletrack Experience in Samford and Bunyaville Regional Parks



Indicative Costs

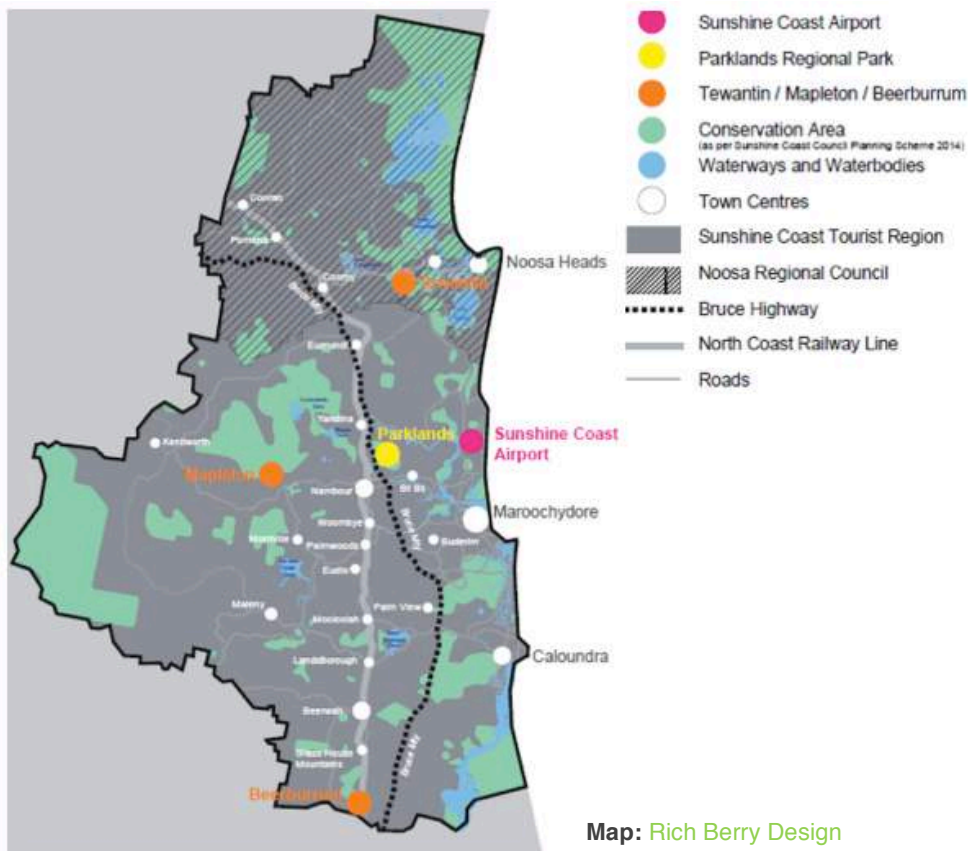
Project 1 – new singletrack		
Trail construction	Mt Coot-tha link – 4km	\$200,000
	Jeep Break trail – 1.5km	
	Duck Creek link – 2.5km	
Project management		\$15,000
Maintenance		\$10,000/yr
Project 2 - Enoggera Dam Circuit		
Linkages Walkabout Creek to below Dam Wall undertaken with Activity Centre work		\$Nil
Linkage below Dam Wall to South Boundary already exists on Seqwater land		\$Minimal
Enhancement work on existing management road to re-route three steep inclines is difficult to cost - consideration needs to be given to the best alignment. The labour to achieve this outcome is therefore costed on a daily basis following consultation with local staff		\$2,500/day

“I can’t wait to ride out of my gate through Bunyaville, Samford Range, Upper Kedron to Gap Creek. **Awesome!** That ride would have lots of highlights: singletrack, views to the city and bay, character building climbs, long coasting descents, open eucalypt forest & dams. Sounds like a **great day out to me.**”

- Steve Schuhmacher, local rider

3.5 Parklands Trail Network

Parklands Regional Park is located north east of Nambour on the Sunshine Coast. A 650ha Regional Park, Parklands consists of a mix of dry sclerophyll forest and subtropical rainforest gullies. Located just 15 minutes from the coast, it is readily accessible to the 280,000 local Sunshine Coast residents and can add a new element to the experiences available for visitors to this region.

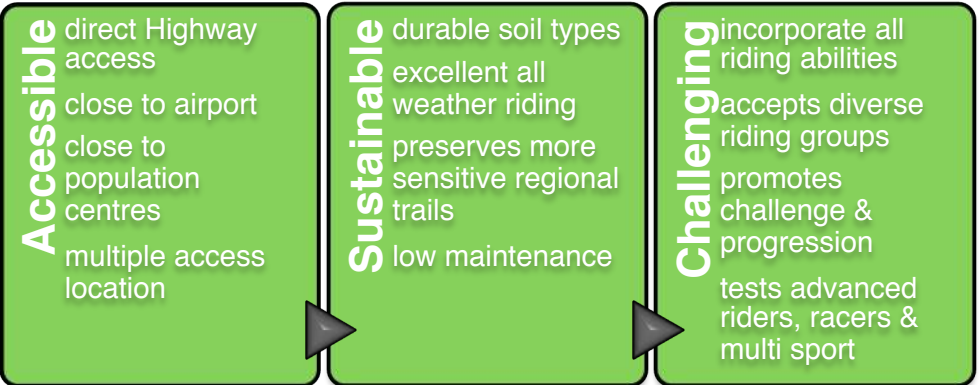


Accessible by road, Parklands prominent location on the junction of the Bruce Highway and the Nambour - Bli Bli Road provides the site with very efficient access for the local population and enables day trip visitation from the whole South East Queensland region.

Partners

QPWS/ DNPRSR; SCRC; local MTB Clubs/ Trailcare

Opportunities



“Parklands has got **so much potential**, it’s just missing the variety of trails needed to be world class. We have so many **school and tourist groups** that would be able to use the trails if they catered for a wider skill range.”

- John Searston, **Have Fun Tours**

Vision

Development of the Parklands Trail Network would provide a valuable facility central to the Sunshine Coast Region and complementary with existing trail riding opportunities available from the Glasshouse Mountains to Noosa. Parklands is unique in providing a significant variety of terrain, very sustainable soils conditions and a low ecological rating due to past resource operations. With a vision as a central, skill developing MTB Park, when complete, this site will create a drawcard ride centre, expanding on other regional facilities (e.g. Tewantin, Dularcha, Glass House Mountains, Hennessey Hill, Bellthorpe) to create a genuine multi day ride destination.

These outcomes can be achieved by:

- **Managing the environment.** Parklands terrain provides an ideal base for MTB trail construction. Expanding and consolidating trails on the weathered stone and ridge gravels provides the potential for all weather riding.
- Being **accessible 24 hours a day.** Current mid-week utilisation of the trails is high, with night riding particularly popular throughout the year. Proximity allows regular after work riding and the affordability of lights have led to a dramatic uptake in night time riding.
- **An additional 35km of constructed singletrack.** This would create a destination for riding, expand the user base, and diversify the trail grades - proven to be successful elements for trail centres.
- **Enhancing facilities.** Formalise and expand car parking, create a trail head, establish an event staging area to create a sense of place and promote improved sense of security and social interaction for participants.
- **Multi sport, junior races, enduro events.** Parklands is close to the Maroochy River, accessed by a 1.6km gravel road to the north, and opens up opportunities for multi-sport events. With an internal trail head and staging area utilising the old gravel carpark, event organisers would have a central location for spectators, supporters and vendors.

Summary of proposed trails

Green – Beginner – 10km /13.9km total

Proposed	1km access track from the carpark to skills area 0.5km Skills Area 5km beginners loop 2km beginner 'flow' trail 1.5km total length of side tracks to bypass steep sections of fire trail and improve usability of existing multi-use trails
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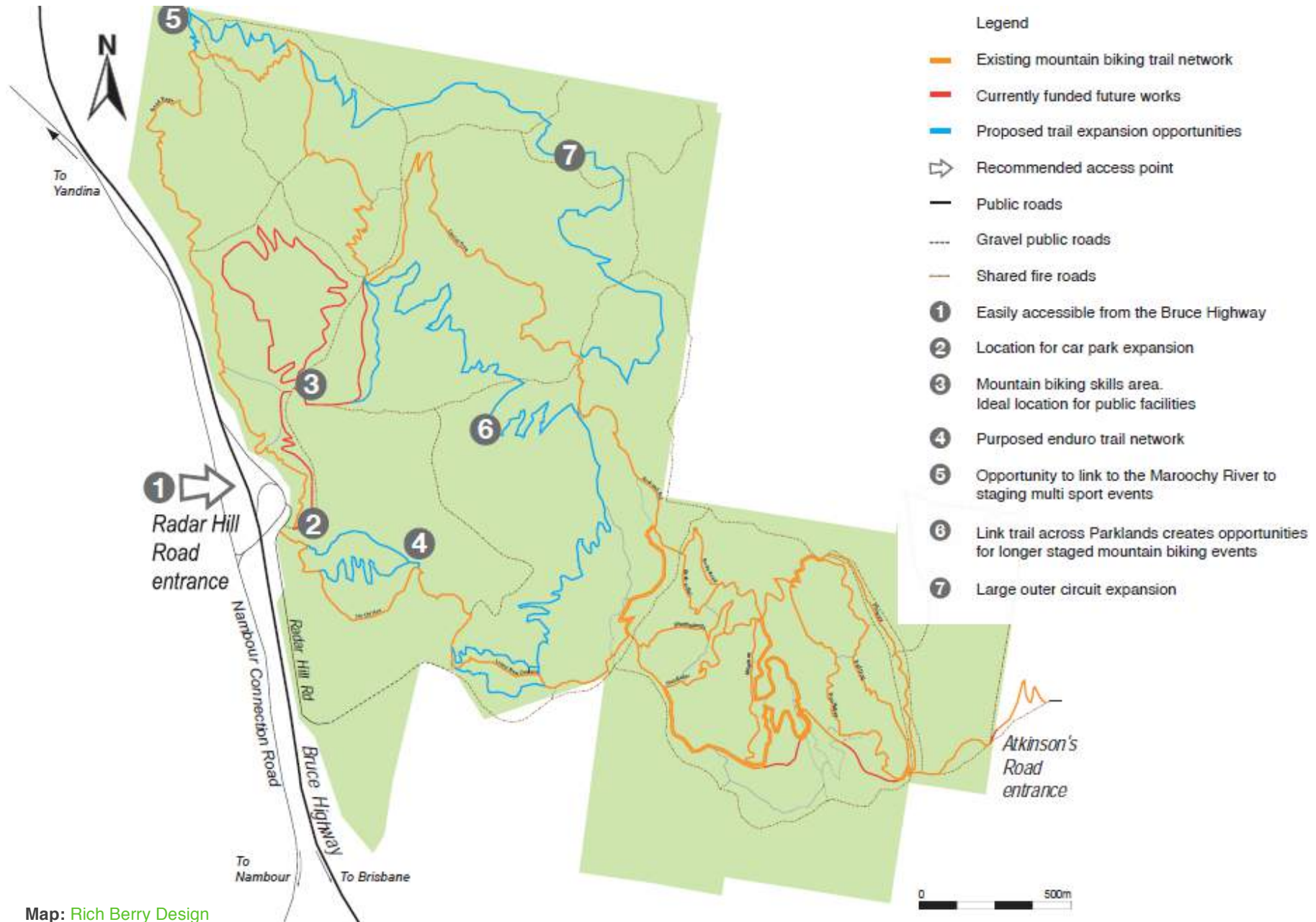
Blue – Intermediate - 18km new / 43km total

Proposed	9km 'Progressive' trail loops, transition up from Beginner standard, all weather, easy access 9km (4km+5km) 'Flow' trails – one way, all weather, required for training & hosting 'Gravity Enduro' format racing events. Potential training trails for the Commonwealth Games teams. Suitable for a broad range of fitness levels while still providing a rewarding riding experience
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Black – Advanced - 7km new

Proposed	3km technical trail, one way, utilising iconic rock slabs and features for a memorable challenge 4km (2x2km) Freeride lines, single direction, variety of features to promote creative line choices. Feature trails for promotion of the venue and challenges in the sport
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Parklands Trail Centre Proposal



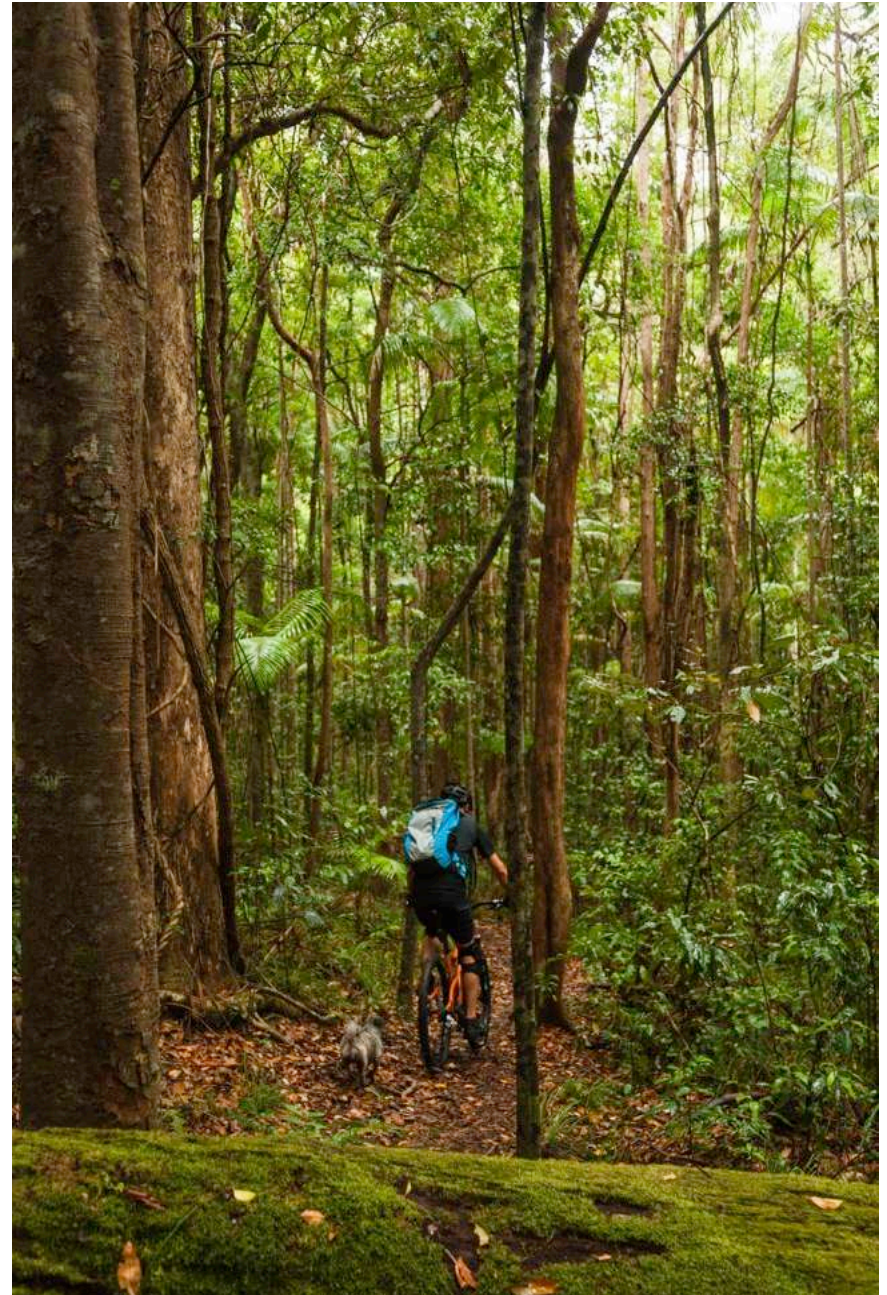
Map: Rich Berry Design

Indicative costs

Trail Construction	
Beginner (Green) – 10km	\$250,000
Intermediate (Blue) – 18km	\$450,000
Advanced (Black) – 7km	\$175,000
TOTAL - Construction	\$875,000
Infrastructure	
12 space extension to primary car park	\$54,000
Landscaping and formalisation of event staging area	\$21,000
TOTAL - Infrastructure	\$75,000
Other Expenses	
Project management	\$65,625
Maintenance	\$43,750/yr

*Car park costs based on allocation of 30m² per vehicle at \$150/m² for an AC surfaced car park including spoon drains, bollards and mulch/landscape around the edge. Excludes retaining walls or cut/fill.

**Landscaping costs include mulching/garden bed at \$25/m² and timber bollards installed at \$140 each.



3.6 Townsville & Region Trail Centre

Townsville and region offer a diverse taste of riding in Queensland. Located in the Tropics and adjacent to the Great Barrier Reef and Tropical Rainforest, Townsville offers a central point for exploring west to the gold town of Charters Towers, east to Magnetic Island, north to Wallaman Falls, and south to the Burdekin and onto the Whitsundays.



The Vision

Home to **Australia's 3rd largest mountain bike club** (and Queensland's largest), and with local MTB events selling out, Townsville is a hotspot of MTB activity. To reap the potential of the trails and to expand opportunities, the area needs support to connect existing and potential, sustainable regional MTB venues. This would lift Townsville onto the world stage of international mountain biking destinations.

Currently the region offers a range of riding opportunities. Each area offers distinct riding experiences, but all would benefit from the development of linkage trails and signage, the introduction of key infrastructure, promotion and expansion of trail options such as looping tracks. For example:

Douglas Mountain Bike Reserve

Unallocated State Land, currently under Permit to Occupy held by Rockwheelers MTB Club

This venue is 15 minutes from Townsville CBD, adjacent to residential housing estates, nearby shops, tavern and cafes. The area would benefit from additional linking trails to join existing trails at the site, increasing both the number and variety of riding loops.

Pallarenda

Cape Pallarenda Conservation Reserve – Many Peaks Range

Under the Radar is located 10km north of Townsville City centre and 20mins from the trails at Douglas. The 44ha park borders the Town Common creating an expanse of coastal woodlands, vine thickets, deep water lagoons, seasonal wetlands and sheltered beaches. Offering scenic cross country riding, the existing 17 km point to point trail could be extended, opening up opportunities for beginner riders. Shorter loop trails would be advantageous to create a 30minute taster experience, not just a one hour, or two hour return ride. Where Smedley's Hill Trail provides a steep technical climb and long flowing down hill, opportunities for beginners would expand the network and visitor appeal.

Mt Stuart

Townsville City Council, State Quarry Reserve

Mt Stuart has an existing downhill MTB network that provides a gravity riding location along with two existing downhill MTB tracks in the adjoining road reserve. Successful Townsville racing series is held in both downhill and Gravity. This area is also adjacent to residential suburbs.

Charters Towers

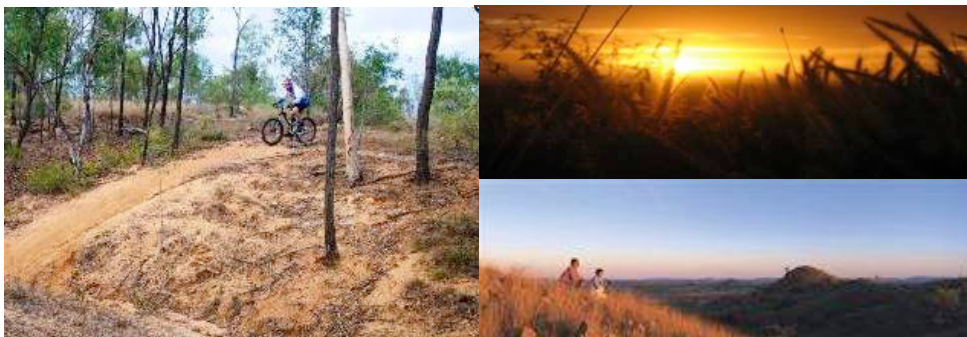
Private Property, NPRSR

Charters Towers provides a centre for riding in the Burdekin. Forest roads are available for shared use in the Dalrymple National Park offering an easy riding experience from Fletcher Creek Camping Reserve to the Burdekin River. Currently, while local riders are aware of the ride opportunities in and around Charters Towers and Ravenswood, visitors and beginners need the ride opportunities packaged and cross promoted.

Magnetic Island

Council, NPRSR

Off the coast of Townsville lies Magnetic Island. Though dotted with short taxing climbs, the island provides a mix of clear turquoise water and sandy beaches, surrounded by tropical forest and wildlife. Whilst riders can brave the roads, the development of linking trails and refinement of existing fire trails would provide the opportunity to circumnavigate the island. Just a 25 mins ferry ride from Townsville CBD, overnight or day rides would be possible.

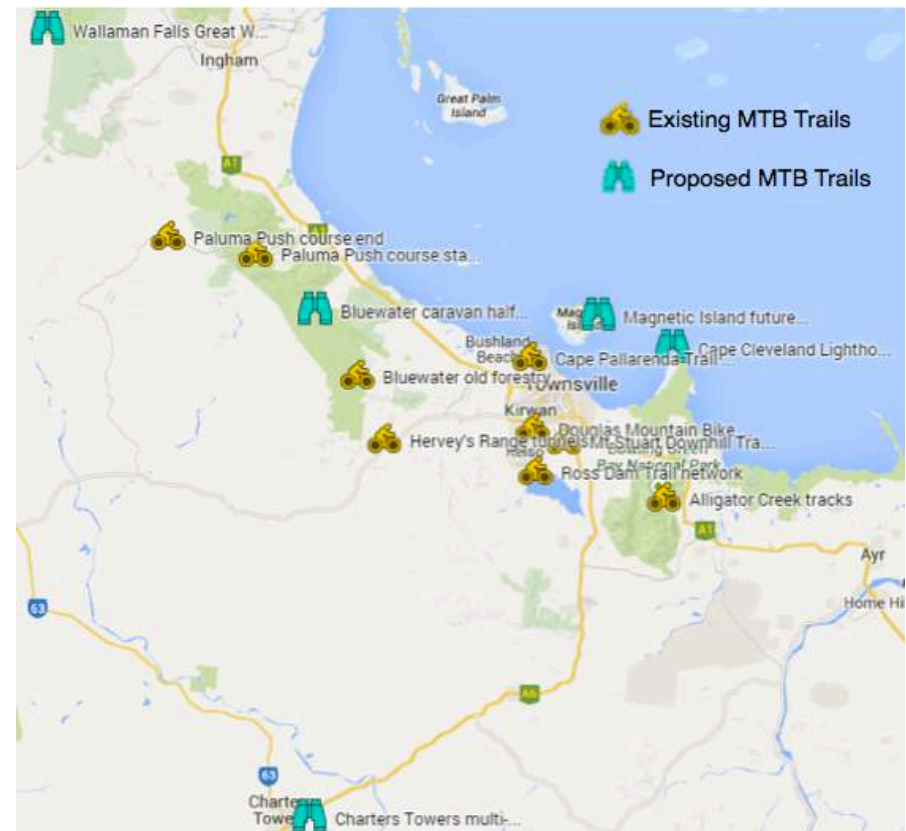


Paluma

Paluma Range National Park, Paluma State Forest (Rockwheelers)

In and around Paluma offers a variety of landscape and MTB opportunity. Currently the home of the Paluma Push MTB event, fire trails offer an extensive opportunity for riding through rainforest, to coast. Two potential opportunities of signage and connection are proposed. The first is fire trail development of 20km connecting Paluma to Jourama Falls. The second, a 30 km extension of the Bluewater Forestry track to Paluma, including upgrade of Mount Spec Road. Combined, this area could accommodate multi-day bike packing adventure rides and tours.

Townsville Region Trail Opportunities – Existing/ Proposed



Partners

QPWS/ DNPRSR; Townsville CC; Charters Towers RC; local MTB Clubs/ Trailcare

Opportunities

- Local community support – Rockwheeler MTB with 470+ members who deliver:
 - Club race series – 100 people
 - Monthly social rides – 40 to 80 people
 - Night rides – 20 people
 - Ride clinics – 25 people
 - Trail maintenance – 25 to 30 people
- There is existing potential to leverage
- Expansive new opportunity to be realised
- Significant MTB & multi-sport event popularity, including:
 - Paluma Push – 650 riders
 - Hot Rock 8 hour enduro – 330 riders
 - Damn Dark 12hr – 250 riders
 - Gravity Enduro series – 140 riders

Actions

The existing regional MTB venues require investment to expand the variety of riding loops and facility upgrades. This can fuel the local Townsville MTB culture and complement other ride opportunities throughout Queensland. Together, the mix will service visitors with diverse riding interests and skills from all over the world. Importantly it will also appeal to event promoters who require world class venues with close proximity to a major population centre for nationally recognised events (e.g. multi-day event, 24 hour race).

Connect

- existing venues
- e.g. Bluewater to Paluma; Paluma to Jourama Falls, Ross Dam to Douglas

Permit

- grant access for MTB - e.g. Great Walks

Construct

- fire trail
- Singletrack (e.g. Magnetic Island, Cape Cleveland Lighthouse)
- epic trails

Inform

- signage
- online/ smartphone navigation aids
- promote opportunities



3.7 TNQ Regional Trail Centre

Tropical North Queensland (TNQ) offers a number of advantages as a MTB destination. Across the region is a mix of topography, climate, world heritage landscapes and scenic attractions, including the tablelands of the Great Dividing Range, coastal beaches, rainforests, waterfalls, ocean views, woodlands, historic mining towns, the tourism city of Cairns and access to the Great Barrier Reef Marine Park. Added to this, Tropical North Queensland has a growing number of riders living in, and visiting, the area for MTB riding following the success of local lobbying and land manager cooperation to establish and maintain quality MTB trails and networks in the area.

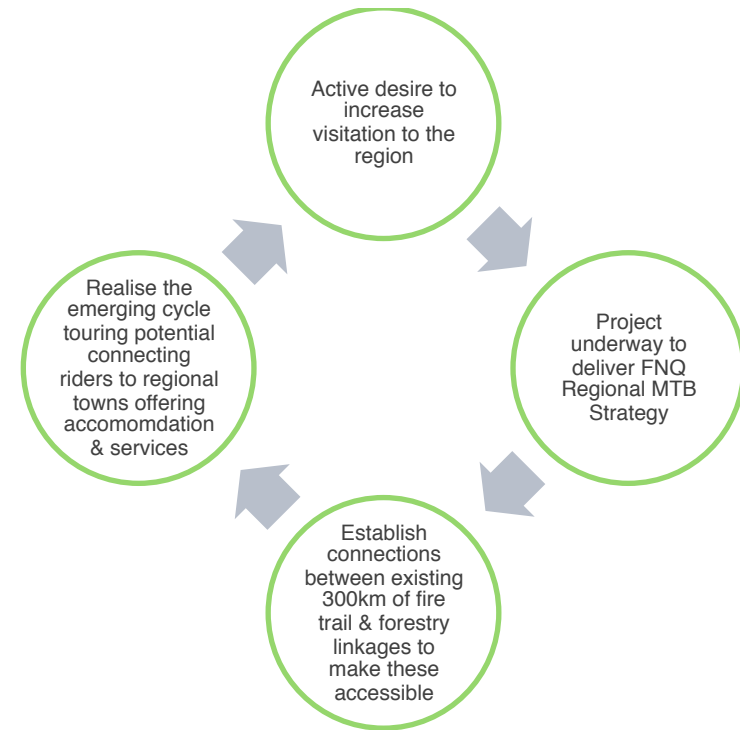
This Regional Solution highlights the need to expand on these initial steps to:

- **take advantage of the extensive network of existing tracks** that link regional towns and turn the region into a true riding destination;
- **finalise** implementation of developed **concept plans** at the three existing ride centres; and
- **assess second tier priorities** (e.g. Mission Beach) to develop a well-considered concept plan for these areas.

These priorities are integral to help the area reach its potential and expand engagement.

The Vision

Currently, the wider TNQ community is actively engaged with mountain biking for its recreation, business and cycle tourism potential. The likely economic benefits are well recognised, but a quality product needs to be finalised to ensure excellent visitor experiences that cater for elite competition, epic multi-day rides, social riders and holiday makers. Already in Tropical North Queensland there are well defined and conceived supporting plans for trail networks; and clear goals to amplify the existing resources available. Some of these include:



Opportunities

The connection of linkages and consolidation of existing trail is not only a resolution for National Parks, Recreation, Sport and Racing (NPRSR), even though the extent of trail linkages is largely in the protected area estate. Rather, the regional solution is one that requires the coordinated efforts, communication and investment of the range of regional land managers. Already in play, Atherton Forest Mountain Bike Park offer 60km of XC singletrack on the parks estate. In addition there are 25km of trails at Mareeba and 45 km in Cairns. All three mountain bike parks have a mix of green and blue trail, with additional trail planned and required to consolidate the bike parks as distinct and repeat day destinations. Dirt roads provide a further extensive network of potential riding, but for these to be part of the community solution and tourist product they need mapping, on the ground signage and the support infrastructure that makes the user experience desirable.

Smithfield MTB Park

Purpose built, UCI World Cup facility. Further trail development would enable negotiations for a regular Enduro World Series event on the World Series calendar AND increase capacity for other style events such as 12/24 hour events, MTB Festivals. Larger trail network is needed.

Atherton Forest MTB Park

Quality design and construction has made this a world class destination. Additional singletrack development would enable delivery of original concept plan & increase usage, provide completion of alignments & harden seepage areas to give all weather access.

Davies Creek MTB Park

Trails work is being done to IMBA standards. Additional trails are needed to increase trail length and ride options. Davies Creek complements the regional riding experiences and is centrally located between Cairns and Atherton.

Currently undefined and developed trail linkages

Between: Cairns, Kuranda, Port Douglas, Mission Beach, Innisfail, Mareeba, Atherton, Herberton, Ravenshoe, Millaa Millaa.



Coast to Coast (Mission Beach to Port Douglas)



Country Climbs to Urban Fringe (Tablelands to Cairns)



Historic Mining Adventure (Herberton, Urbanbank, Mt Garnet)



Tall Timbers Territory (Milanda, Ravenshoe, Millaa Millaa)

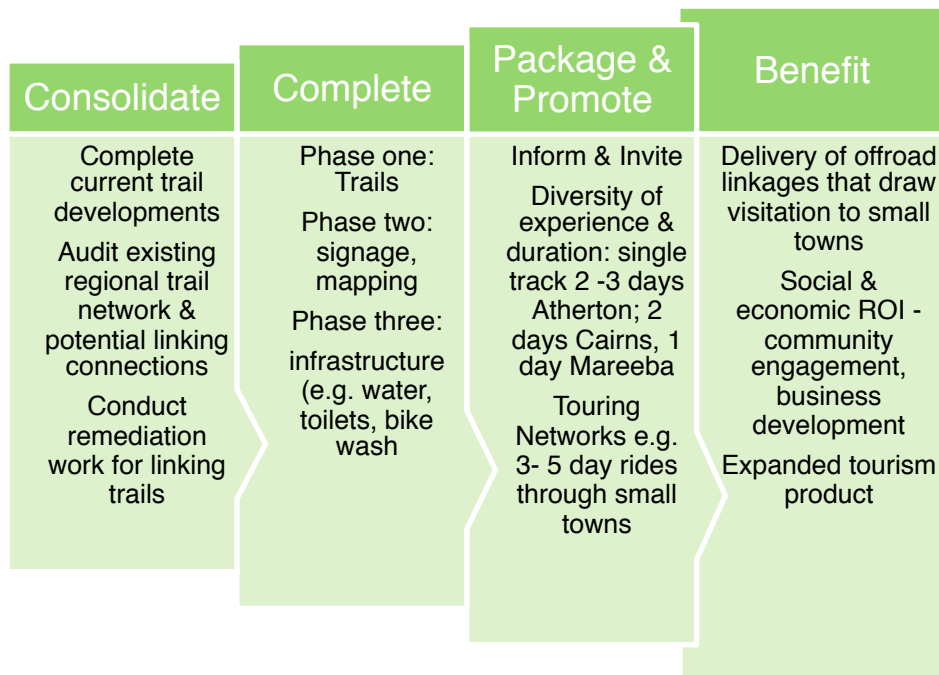
Partners

QPWS/ DNPRSR; FNQCOM; Sunwater; Ride Cairns; local MTB Clubs/ Trailcare



Actions

1. **Consolidate.** Make the connections available – this allows wet season rides and diverse multi day touring experiences. To achieve quality outcomes also requires ensuring mapping and signage are completed and promoted.
2. **Complete.** Implement and refine site hardening and deliver on existing concept plans.
3. **Promote** the destination for its diversity and range of experiences in an engaging and world renowned location.
4. **Benefit** from increased visitation and opportunity for regional towns; engage the community in healthy physical activity and tourism interactions; diversify the potential quality experiences accessible for visitors and locals alike.



Indicative Costs

- \$480,000 for a link between Black Mountain Road and the Smithfield MTB Park as per the Concept Plan
 - Detailed information on costings is included in the Concept Plan.
 - This is a critical linkage so that all three MTB hubs in the northern region are connected by off road tracks or dirt roads.
- \$200,000 for Sunny Savanna for remediation of degraded areas on key link tracks in the northern Tablelands (Mareeba)
- \$200,000 for Atherton to progress implementation of the Concept Plan for AFMBP.
 - This includes one new descending track and site hardening in key locations.
- \$350,000 for a trail audit and mapping of the linkage areas proposed between Mission Beach, Tablelands, Cairns and Port Douglas, and preparation and installation of signage.

Detailed Concept Plans are available for the Sunny Savanna project promoted by Mareeba Mountain Goats, Smithfield MTB Park extensions promoted by Cairns MTB Club, and the AFMBP trail network promoted by Tableland Cycle Sports. The broader linkages throughout the region have been previously outlined in a Vision Document being promoted by TiMBa (Tablelands Integrated Mountain Bike Alliance) since 2009.

“Tropical North Queensland has it all for mountain-bike riding! You can pick from multi-day cross-country epics to downhill racing, easy trails for families and beginners, or participate in local to international-level events. You can’t beat mountain-biking for exploring the FNQ environment!”

- Mark Knowles, Tableland Cycle Sports

REFERENCES & ADDITIONAL CONSIDERATIONS



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4.1 Image credits

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5.0 Risk management considerations

To manage risk and develop quality destinations, land managers need a clear vision; an understanding of the desired outcomes; and excellence in planning, design and delivery.

For mountain biking, underlying elements of risk management can be achieved through:

- implementing universal standards for design, construction and maintenance;
- establishing and maintaining clear and informative signage; and
- undertaking education of trail users to build awareness of their rights and responsibilities as riders and shared users of space.

Part of effective Risk Management involves building quality trail that suits the environment, provides the desired experience for MTB riders, and withstands use and environmental pressures over time with moderate grooming and care. These principles help minimise the financial risk of trail building, and enhance the safety of the trails in general. To develop meaningful regional solutions for mountain biking in Queensland a combination of upgrading and revision work; as well as purpose built trails will be required. The following extracts from IMBA help to highlight how planning, design and building of sustainable MTB single track should occur, on any estate.

5.1 Trail planning & construction principles

Many risks associated with MTB trails can be managed through good trail design:

- Determine trail users
 - What experience do they want?
 - What length of trail will appeal to them?
 - What level of fitness and ability do they have?
 - How often will they use the trail?
- Identify control points.
- Scenic views; unique vegetation; escarpments; rock outcrops and boulders?
- Configure loops.
- Create easy trail loops close to the trail head and more challenging trails further away.
- Plan a contour route.
- Connect control points with a contoured trail.
- Determine type of trail flow.
- Mountain bikers enjoy a trail with flow and rhythm; one turn flows into the next, a descent is followed by a rise.
- Develop protocol for trail inspection.
- Provide good sight lines.
- Include skills areas/ challenge parks for riders to learn skills.
- Provide optional lines so there are easier, alternate routes for different abilities.

5.2 Essential elements of sustainable trails

- Locate trail on side slope.
- On flat terrain water collects and can't be drained away. Side slope makes it easier to keep users on the trail.
- Avoid the fall line.
- Water follows the path of least resistance, channels down the trail, creates an erosion scar and potentially dumps sediment in the creek system.
- The trail gradient should never be more than half the side slope. This is most difficult to apply when the side slope is flat.
- Average sustainable gradient should be 10% or less. In south-east QLD, the average sustainable gradient is closer to 5%.
- Maximum sustainable gradient is determined by soil type.
 - Rocky soils can have gradients up to 15%;
 - Loamy soils can have gradients up to 10%;
 - Sandy or fragile soils can only have gradients of 5%.
- The best drainage is provided by grade reversals.
- Roll the trail up and down the side slope, never going up or down for long e.g. no more than 5-10m in one direction.
- Outslope the tread to sheet water off.
- Adapt trail design to soil texture. Mixed soils are the most durable.
 - Uniform soils dominated by one particle type, such as sand, are the most erosion prone.
- Minimise user-caused soil displacement.
 - Design consistent flowing trails (no sudden sharp turns), provide bermed turns and hardened tread where necessary.
- Prevent user-created trails.
- Provide a sought-after experience to appealing destinations.

(IMBA, 2007)

5.3 Smart signage

To keep people safe on trails and to encourage a sense of welcome and quality, good directional signage and maps are essential. With many people carrying smartphones or at least a digital camera, signage needs to accommodate the reader at a location; as well as offer effective information for those who capture data and go.

1.3.1 Mapping

Maps are used for two purposes; a) to plan a trip, and b) to navigate a trip. To accommodate to these different needs it is worth considering the following:

1. Information required to plan a trip

- Recommended loops
- Distance conveyed by scale bar
- Recommended loop distance conveyed in text
- Sources of water, shelter, toilets, services
- Technical difficulty of trails
- Physical difficulty of trails (climb, conveyed by contours or trail profiles)
- Points of access/ egress

2. Information required to navigate

- Accurate representation of track junctions
- Terrain conveyed by contours, hachures or shading
- Recording of notable features

1.3.2 Photograph the Map

Trailhead maps need to be designed to be photographed. This means they should:

- Use bold colours and be designed to be usable on a small screen
- Protected by non-glare glazing which is easy to clean
- Well-lit, not partially shaded nor silhouetted by the sun
- Created for the needs of the recreational trail user
- Oriented to north
- Offer simple topology of the trail network and access points.
- Be complemented by trail information signed on the ground.

On the ground navigation, and online and hard copy mapping, need to be clear, sufficient and visible. Examples of good trail signage and mapping on sites managed by government can be found at:

- You Yangs - Vic
 - <http://parkweb.vic.gov.au/explore/parks/you-yangs-r.p>.
- Stromlo Bike Park - ACT
 - <http://www.stromloforestpark.com.au/facilities/bike-park>
- Lysterfield MTB Park - Vic
 - <http://parkweb.vic.gov.au/explore/parks/lysterfield-park/things-to-do/mountain-biking>
- Glenrock, Newcastle - NSW
 - <http://www.nationalparks.nsw.gov.au/glenrock-state-conservation-area/mountain-biking-trails/cycling>
- Eagle MTB Park, Adelaide - SA
 - <http://www.recsport.sa.gov.au/whats-on-where/eagle-mountain-bike-park.html>

5.4 Trail etiquette

Risk is also managed by education for riders and other users to help them understand the responsibilities of riding in National Parks. We recommend the following as an inclusion for MTB riders wherever trails are promoted. For example, on websites, information boards at trail heads, in brochures and through MTB clubs, events and tourism providers.

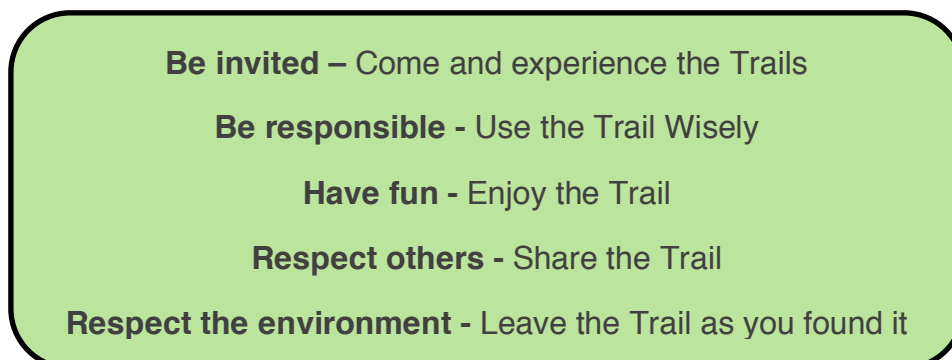
Protect yourself	Respect others	Protect the environment
Control your speed Ride according to the conditions Ride within your ability Develop your skills	Slow to approach others Pass with care Ride only where permitted Train when trails are not busy	Stay on the trail Avoid riding on muddy trails Avoid skidding Contribute to trail care

Other jurisdictions have embraced this practice and offer good models. For example, the New Zealand Mountain bikers' code encourages riders to: Respect others; Respect the rules; Respect the track. To ensure people understand the practical aspects of what this means the following signage helps to promote good practice in mountain biking in direct and meaningful ways:



Source: Nga Haerenga, The New Zealand Cycle Trail

Ultimately we want people to:



(Adapted from West Coast Wilderness Trail, Trail Code)

6.0 Regional considerations

Each region in Queensland offers diversity of experience and riding. Whilst this proposal highlights some suggested MTB Regional Solutions, it is just the first step in determining the specific possibilities for each region, and the riding experiences that can be developed. In essence we have identified the potential for some regions – there are more opportunities within each region; and more regions within Queensland.

To kickstart regional decision making the following overview questions can inform MTB and recreational trail development. We recommend that each region in Queensland work collaboratively to determine their priorities across different land tenure to reap the greatest rewards that suit local and regional needs.

Concept	Questions
Identify Need	<ul style="list-style-type: none"> Who is already riding? Where are they riding? What is the appeal of these environments? What are your hotspots? Why are these areas popular?
MTB now	<ul style="list-style-type: none"> What types of riding are catered for? How well? What type of demand is current, latent, potential? What do neighbouring regions offer and how can you leverage each other?
User Groups	<p>Are you seeking to:</p> <ol style="list-style-type: none"> 1. Meet local riders' needs? 2. Build people's skills? 3. Cater for short break / weekend escapes? 4. Attract cycle tourists?
Outcomes	<p>Are you wanting to:</p> <ol style="list-style-type: none"> 1. build participation? 2. Support high performance MTB? 3. establish desirable cycle touring routes? 4. develop a trail hub? 5. host international events? 6. establish a skills park ...?
Trail Readiness	<ul style="list-style-type: none"> How resilient is the landscape? Do you have pull factor scenic amenity? Can trails be built that can be open through different weather? How accommodating is the community? Do you have complementary services in the region to support MTB riders?

Sharing Trails

To get people of diverse abilities involved, green trail is integral. To keep people coming back they need variety and development.

1. Are there existing trails that can be safely shared with MTB riders?
2. Can you expand opportunity without building substantially more trail?
3. Where can you build single track that brings the greatest return?

Partners

Will all land managers cooperate?
What incentives need to be determined?
What barriers exist to MTB trails?
How can local business & tourism assist?
What support can you offer trail care groups?
How can industry contribute?

Finances

(See below also)

User pays?
Community service?
Lease/ rental agreements?
Commercial opportunities?

7.0 Resourcing solutions

A range of options are available to offset the resourcing, development and maintenance of MTB trails – and to ensure appropriate use and respect for trails.

7.1 Potential funding sources for QPWS

User fees, licensing fees and tourism investments can contribute to affordable and strategic parks management (see Tourism and Transport Forum, 2014). While fees for users are not always well regarded or well administered, **leverage of fees** can offset the costs of maintenance and contribution to preservation. This is not the only solution however.

Whakarewarewa Forest MTB trails in Rotorua New Zealand provide more than 100km of free trails to riders and the trails have reaped substantial reward for the community through the local and visitor appeal of this destination. The building and maintenance of the MTB trails are managed by a **consortium of informal contributions** including:

- volunteer efforts by the Rotorua Mountain Bike Club and committed individuals;
- contributions from charitable trust funding to trail development;
- work crews from the Department of Corrections;
- permission from Te Arawa who own the forest lands; and
- staff with Rotorua District Council.

Good local examples of **cooperative trail development and maintenance** can be found in the MTB trail development relationship for Atherton Tableland Trail Networks and for trails in Daisy Hill Regional Park. Both locations have relied on cooperative and consensual activities between various stakeholders. For example Daisy Hill has seen recent partnering between:

- local QPWS rangers,
- Logan Community Trail Care Alliance (Logan City Council),
- South East Queensland Trails Alliance, the Brisbane South Mountain Bike Club (BSMC), and
- the Qld Government Department NPRSR, Friends of Parks grant program.

In this instance volunteers worked with rangers, a commercial trail builder and council representatives to undertake trail construction, revegetate, refurbish existing trail and install signage totems in an act of cooperative goodwill and shared responsibility. See

<http://www.seqta.net.au/logan-community-trail-care-alliance-lcta/daisy-hill-friends-of-parks-project-wrap-up> for further information.

Other jurisdictions similarly utilise diverse techniques to enable income to support the maintenance and management of quality MTB trails. These include:

- Event Fees – commercial rates or percentage of profit from for profit events
- Trail Adoption – Formal relationship and recognition for volunteer trail care
- Corporate sponsorship – contributing to community and corporate social principles

7.2 Progressive capital expenditure

In addition to offsetting and partnership arrangements, and the identification and administration of external funding sources, mountain bike trails can be funded through ongoing capital works programs that progressively deliver the quality and diversity of trail required. More substantive projects can be scaled for delivery over a 2 -3 year period to final completion, which provides community with progressive benefits; can enable positive marketing and engagement by community, events and local business; and serves to soften the budget impacts.

7.3 Community resourcing

Mountain bike riders, clubs and trail care groups are proactive contributors to the development of MTB trails and MTB Ride Centres. Throughout Queensland, cooperative groups of MTB riders can work with other stakeholders including land managers, tourism entities, local business and regional councils to identify, scope, plan and deliver on regional opportunities for MTB. Successful outcomes have already evolved through this commitment, most specifically for the Tablelands Integrated Mountain Bike Alliance (TiMBA), Tableland Sport and Recreation Association and Tablelands Cycle Sports who, over time, have secured funding to investigate, plan and develop with their partners the Atherton Forest Mountain Bike Park.

Lessons learned from these, and similar, MTB community leaders include:

- **The power of networks.** Work collectively with other stakeholders in the region to identify shared outcomes and benefits allowing each to leverage from the success of others. E.g. Local/ Regional Council; Futures Corporation; Chamber of Commerce; Regional Tourism Organisation; other Recreation Groups etc.
- Well run and organised **events** can draw in business income and local stakeholder interest, especially when evaluation is done to demonstrate number of additional visitors, duration of stay and spend. This adds to building compelling argument for further development.
- There is **no need to reinvent**. Mountain biking is a popular and successful contributor to small and large towns and regions throughout the world. There is value in copying, and modifying to draw out the core attractions of each local area.
- **Trail care groups** contribute key community support for the ongoing maintenance and preservation of mountain bike networks. Log the hours of volunteer labour contributed by trail care workers to demonstrate the community's fiscal contribution to MTB trails.
- **Establish a Foundation.** Long term trail care, governance and support can be managed through establishing a foundation that assists in maintaining and marketing the trails/ ride centre. This puts emphasis on the tourism potential of substantive and quality MTB trails, and allows for coordinated management of trail assets with the support of volunteer programmes (see Munda Biddi Trail Foundation WA, as a successful Australian example).

7.4 Potential funding for MTB groups & councils

- Current programmes will need to be sought as names change and programmes evolve. Please note, some grant funding requires dollar for dollar matching:
- Department of State Development, Infrastructure and Planning. See Grants and Funding webpage for information on current funding opportunities - <http://www.dsdip.qld.gov.au/grants-and-funding/>
- Tourism and Event Queensland. Regional Development Program for applicable events that demonstrate future growth and sustainability potential and increase local economic activity and development. Round currently closed: <http://teq.queensland.com/Events/Regional-Development-Program>
- Department of National Parks, Recreation, Sport and Racing. Get Playing Plus – assists councils and community not for profit sport and recreation organisations to identify, develop and deliver infrastructure projects: <http://www.nprsr.qld.gov.au/funding/get-playing-plus.html>
- Department of National Parks, Recreation, Sport and Racing. Friends of Parks Small Grant Funding. Closed: <http://www.nprsr.qld.gov.au/about/employment/volunteering/friends-of-parks.html>
- Department of National Parks, Recreation, Sport and Racing. Infrastructure Programme. See: <http://www.nprsr.qld.gov.au/funding/overview/infrastructure-program.html>

To review current funding opportunities refer to:

- Australian Government Department of Infrastructure and Regional Development. E.g. Community Development Grants Programme. See <http://investment.infrastructure.gov.au/funding/> for list of current funding programmes.
- Philanthropic Funding may be possible. Review grant programmes from ANZ, for example: <http://www.anz.com/personal/private-bank/products-services/philanthropy/granting/granting-programs/>

8.0 Trails for the regions

The proposed Regional Solutions presented in this report offer indicative and viable solutions to developing effective and quality mountain bike opportunities in Queensland. We believe these priorities can deliver substantive and appealing networks for locals and visitors alike but equally, can be supplemented by other regional trail developments. In addition to the priorities presented in the report, and existing capital works already underway, are other regional trail opportunities, some of which are presented in the table below.

Site / Location	Proposal
South East	
Plunkett RP	<p><u>Ride Centre.</u> Develop a trail network in the regional park to provide formal recreational space for the high density urban development occurring on its borders. Unique sandstone trail surface for riding and located in corridor between Gold Coast and Brisbane.</p> <p>A comprehensive and well -built MTB trail network would alleviate some of the current incompatible use of the park; and meet the recreational needs of expected, local population growth.</p>
Samford RP/ Bunyaville RP/ D'Aguilar NP	<p><u>Ride Centre.</u> Establish linkages between popular MTB riding sites at Bunyaville, Samford and D'Aguilar NP.</p> <p>Close to major population base & existing networks. Linkages off each park through collaboration with Brisbane City Council and Moreton Bay Regional Council would extend available trails and establish a core, repeat use network of interconnecting trails.</p>
South West	
Carnarvon NP (Goodliffe/ Wilderness Way)	<p><u>MTB Trails - Tourism.</u> Formalise 27.5km of existing fire break & 15km of council maintained public road (Wilderness Way) to form a loop track. The track and road network are established therefore no significant construction costs, and MTB signage and maintenance would extend the tourism potential and diversity for the area.</p>
Barakula SF	<p><u>MTB Trails – Tourism.</u> Develop the firebreak East/ West along the range traverse to create a 75km Trail through relatively remote country. 40km north of Chinchilla.</p>

Mapleton NP

MTB Trails - Tourism.

Current MTB use in area with high scenic amenity. Value in formalising multi-use trail to facilitate MTB use/ linkages in the Mapleton area & providing MTB access through Delicia Road to Sunshine Coast Hinterland Great Walk. This ride would be further extended by opening the Great Walk to shared MTB and walkers. Desirable tourism potential, modest grade trail, camping facilities already established. Mapleton – Gheerulla, with some additional singletrack could create a desirable ride destination for families.

**Curra SF, Gympie NP,
Woondum NP,
Goomborian NP**

Community MTB Linking Trails.

Formalise 30km of existing fire trails to meet high demand from locals & build visitor appeal. With minimal infrastructure, signage, track work & drainage, existing tracks could expand existing trail network with local council land (e.g. Victory Heights). Concept complements Gympie Base recreational zone plan 2013.

**Corella State Forest
(North Deep Creek
Gympie)**

Recreation Hub including substantive MTB Trails

Located 10km north of Gympie, Corella SF has 70km of trail in the 8000ha forest. The trail surface is hard, providing good traction with little erosion from wet weather. This is unmaintained back country riding offering a different experience for those looking for long rides, big climbs and some technically challenging riding. At this time there is no signage, but the area has the potential to attract riders and play host to endurance events. Neighbouring Victory Heights has an additional 8.5km of single track, and with a management overlay, the area could sustain expansive riding along with other recreational pursuits.

Cordalba SF

Ride Centre.

Extend the existing trail network constructed in partnership with Mountain Biking Bundaberg from 23km to 120km, including some constructed features. The Promised Land Mountain Bike Trail Network in Cordalba SF was established in 2013 to meet local demand. Expansion would allow for major event hosting bringing significant benefits for local tourism and hospitality. Potential exists to establish MTB touring link to National Horse Trail Network in the Goodnight Scrub NP; and to provide a regional venue for a range of other complementary recreational uses.

Central

Mount Maurice SF/ Briffney Creek Bushland Reserve

Community MTB Linking Trails.

Development of MTB trail network connecting adjacent urban areas. Located close to residential Gladstone there are existing tracks and powerline corridors that could be formalised and linked to create shared recreational networks.

Mount Archer NP Moores Creek/ Frenchville Rd

Community Trail Network.

Develop a trail network that connects Frenchville Rd and German St, partly on PAE and partly on adjoining local government tenure. A 20km trail network could be developed on heavily disturbed Council sites (ex -quarry) & the fringe of Mount Archer NP, connecting to local residential allotments. The area is already used for recreation.

Crediton SF/ Eungella NP

Ride Centre – Events, Tourism.

The Mackay Highlands offer excellent opportunities for local and tourism MTB riding, utilising existing fire roads &/or old logging tracks, linked with new singletrack to create a genuine XC MTB trail network. New track would divert MTB riders away from existing walking tracks in Eungella NP, with some dual use trail viable. Existing, successful events already on MTB calendar.

Conway NP Flame Tree Creek Ridgeline

MTB Trails – Community, Tourism.

Conway Circuit is an existing 30km shared use trail popular with MTB and trail runners. A new linking trail between Conway Circuit and Shute Harbour Rd, on the eastern side of Airlie Beach would provide alternative access, taking riders off the difficult final section and opening up usage to beginner/ intermediate riders.

North

Bowling Green Bay NP, Cape Cleveland Section

Epic Trail

Potential exists to create a 40km round trip to/ from the decommissioned light house. Located in an area only 30km from Townsville CBD, the ride would provide a distinctly attractive and unique riding experience.

Girringun NP, Abergowrie SF Herbert River Region, Ingham

MTB Trails - Tourism, Community

This area includes 50km Wet Tropics Great Walk and linked trails which are suitable for MTB riding. The area features Australia's highest waterfall, Wallaman Falls and is within 2.5km drive from Townsville & 60mins from Ingham. Existing facilities for campers and walkers can serve MTB riders if signage can be upgraded to designate MTB riding.

**Kuranda NP, Speewah RP,
Davies Creek NP, Dinden
West Forest Reserve,
Bilwon SF**

Ride Centre - Sunny Savannah Touring Trail

As part of the FNQ MTB Trail Network, 'Sunny Savannah' trail connections would connect the towns of the new Mareeba Shire Council. A mix of public dirt roads, forestry maintenance roads and singletrack the Sunny Savannah network would provide 195km of rideable and signposted track across QPWS, local government and private land, with accommodation provided in towns along the ride. This initiative makes use of existing tracks but needs some purpose built trails and signage.
