

**DIRTART**

WORLD LEADERS IN TRAILS

GEORGE TOWN MOUNTAIN  
BIKE FEASIBILITY STUDY

“

We are **mountain bikers** at heart, and will never grow tired of playing in the dirt. We bring with us a true passion and commitment to supporting the progression of our sport.”

Simon French – Director



## about us.

*Dirt Art* are a team of specialist consultants, designers and construction experts dedicated to the design, construction and management of innovative and sustainable mountain bike, and walking trails and facilities. We produce fresh and exciting trail concepts based upon proven construction technologies.



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# George Town Mountain Bike Feasibility Report

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## 2 EXECUTIVE SUMMARY

Mountain biking is one of the fastest growing adventure-based activities in the world, fed significantly by the sport shedding its 'extreme' sport image, and emerging into a mass-market recreational pursuit. With ongoing growth in user numbers, mountain bike tourism continues to prosper, offering significant economic development potential for established and emerging mountain bike destinations.

The purpose of this report is to explore the mountain bike development potential at George Town, in Tasmania. George Town is located 40-minutes drive from Launceston, on the eastern banks of the Tamar River at its exit into Bass Strait. The town has an industrial heritage, fuelled by maritime, mining and forestry industries.

The town is surrounded mostly by private land tenure with key opportunities existing on land managed by private mining companies, Sustainable Timber Tasmania (STS), George Town Council and the Tasmanian Parks and Wildlife Service (PWS). *Dirt Art* has worked to propose an iconic network of trails, which aim to provide an attractive proposition for visiting mountain bike riders.

The planning process has been based around the following strategic objectives;

- Develop a clear pathway towards establishing George Town as a competitive mountain bike destination
- Develop a trail network plan that compliments and where possible enhances the natural values of the site, where possible allowing these values to be sensitively experienced by trail users
- Develop a trail network plan that is sensitive to the cultural values of the target area
- Develop a trail plan that offers significant opportunities for economic development and business development
- Target trail experiences to the "wants and needs" of local riders
- Target proposed trail experiences for both the non-enthusiast, and the enthusiast mountain bike rider

- Focus trail concepts on experiences that offer a true point-of-difference, and will attract significant intrastate, national and international interest
- Provide cost-effective, feasible trail concepts and design, which offer conditions for world-class trail construction
- Develop a variety of trail concepts that facilitate longer distance, descending and 'backcountry' trail riding experiences
- Develop a range of trail experiences that provide a variety of genuine commercialisation opportunities.

The strategic planning process has involved the following key tasks;

- Liaise with key stakeholder agencies
- Explore and review the site including analysis of; existing trails, infrastructure and existing roads and pathways
- Undertake a current mountain bike market analysis
- Develop a staged concept plan for a proposed multi-year trail development process
- Develop a budgeted implementation plan
- Undertake an economic impact statement
- Explore operational models and commercialisation opportunities
- Develop a budgeted operational plan, including trail maintenance considerations.

A total of 105.8km (approx.) of new trail concepts have been proposed, across both cross country/trail and gravity riding styles, suitable for all rider skill levels.

The George Town Mountain Bike Project offers potential for development as one of Tasmania's key mountain bike destinations. The project would have a profound impact on the local economy, with the estimated economic impact being;

- 10 FTE jobs during trail construction
- 40,000+ annual visits (post stage two construction)
- \$5,342,000 per annum direct economic impact
- \$12,160,000 per annum direct + indirect economic impact
- 3+ new businesses created as a direct result of the project
- 10+ new FTE jobs created as a direct result of the project

*Dirt Art* suggest that the project has genuine potential for development as a significant mountain bike destination. The project possesses a number of key attributes that make the site perfectly suited to a mountain bike destination development, these include;

- Unique coastal environments
- Diverse terrain and topography
- Good useable elevation
- Peri-urban location.

*Dirt Art* suggests that for a relatively low capital expenditure investment, the George Town has significant potential to have a profound positive impact on the local and surrounding region.



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PROJECT OVERVIEW



## 3 PROJECT OVERVIEW

### 3.1 PROJECT METHODOLOGY

*Dirt Art* has employed the following methodology in developing this mountain bike feasibility study;



## 3.2 PLANNING AND DESIGN CONTEXT

### 3.2.1 Overview

The development of any mountain bike trail or facility must be undertaken with an approach that is sensitive and considerate to the natural environment in which the development area is located. *Dirt Art* have carefully considered the natural environmental values of the site in developing this mountain bike feasibility study, ensuring minimal disturbance to the natural environment and disruption to other current user groups. An environmentally sensitive approach also improves trail experience, and lowers planning and construction costs.

*Dirt Art* undertake a comprehensive background analysis during the formation of all mountain bike feasibility studies. This background research ensures all relevant past planning and research documents are considered when formulating the final facility plan.

*Dirt Art* also place a strong emphasis on developing a plan that will target strong visitation and return on investment opportunities. The feasibility study has proposed trails and facilities that will cater for key demands, and provide significant points of difference to attract visiting riders. *Dirt Art* have developed the study to capitalise on the key attributes of the George Town area, to ensure that future trail developments will provide a wide range of sustainable, world-class and in-demand mountain biking experiences.

### 3.2.2 Natural Environment, native flora and fauna

The area proposed for development has wide-ranging environmental values though notably, no areas of the proposed site are seen to have high or very high environmental values.

New trails proposed in this study feature predominantly gentle, sustainable gradients, which eliminate any issues associated with erosion and sediment dispersion, resulting in a greatly reduced or eliminated environmental impact.

### 3.2.3 Other user groups

The proposed development areas have limited evidence of use by other formal user groups. The proposed trail network has carefully considered other users where relevant, and where possible has avoided any potential conflict between users. This has been achieved by;

- Proposing trails, where possible, away from areas frequented by other users
- Limited trail crossings of existing trails
- No MTB use proposed on existing walking trails

### 3.2.4 Project aims and aspirations

The proposed development has been carefully structured around the aspiration of developing the George Town area as a leading mountain bike destination, which would provide a range of trail experiences that will generate significant intrastate and national attention. It should be noted that to achieve this, a large volume of high quality trail is required, and where possible, trails should showcase the stunning views and high quality natural environments.

### 3.2.5 Stakeholder consultation

Throughout the project *Dirt Art* has liaised with a number of key land manager and stakeholder groups, these include;

- *George Town Council*
- *Parks and Wildlife Tasmania*
- *Private land owners/managers*

A summary of all consultation undertaken can be found in Section 5.

## 3.3 PREVIOUS REPORTS AND PLANS

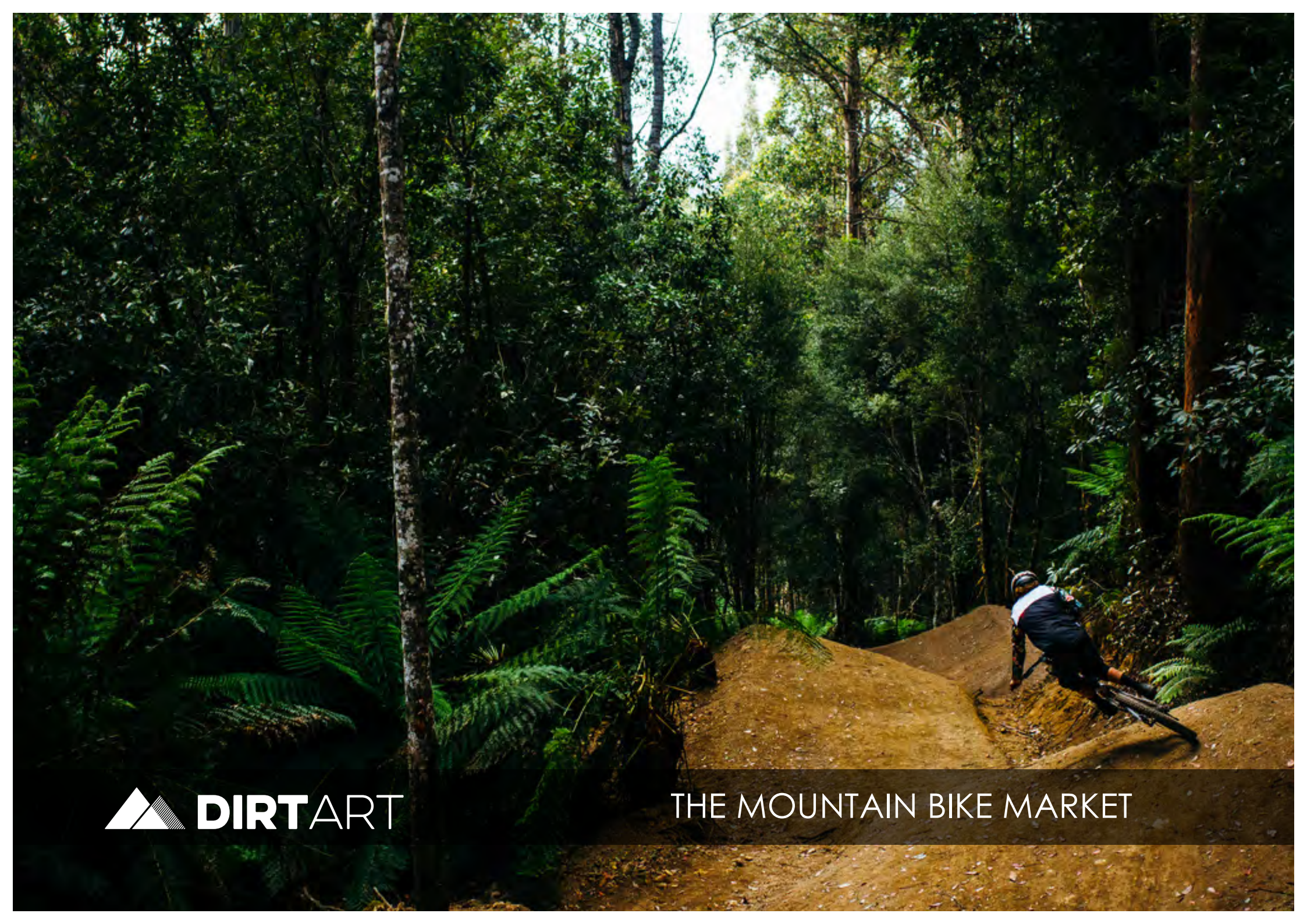
### 3.3.1 World Trail site visit report

Consultants, World Trail (WT) complete a site visit report in May 2017. The report was based on a single day tour of the area with members of council. The report found the following;

- 'Good' potential exists for mountain bike trail development in George Town
- Mount George would act as a functional entry point to the trail network
- The trail network would have potential for iconic coastal views
- Reasonable elevation is available throughout potential development areas
- An area zoned for permanent and future production forest to the east of George Town was suggested as the primary focus for trail development

*Dirt Art* agree with the general sentiments of the WT report, importantly acknowledging that there is potential for mountain bike trail development at George Town.

*Dirt Art* has removed the focus of trail development from the timber production area suggested by *World Trail*, and instead proposed a focus of development in the Tipogoree Hills Conservation Area. The conservation area is located a similar distance from George Town and offers significantly improved trail potential, while removing the risks associated with developing trail in production forest areas.



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THE MOUNTAIN BIKE MARKET

## 4 THE MOUNTAIN BIKE MARKET - OVERVIEW

### 4.1 THE MOUNTAIN BIKE MARKET - NATIONAL AND LOCAL

#### 4.1.1 History

Mountain biking has been well established in Australia since the early 90's, though the sport really began to prosper in the mid-late 90's, which saw a period of some of the first purpose-built mountain bike infrastructure in Australia. In 2004 some of Australia's first large-scale mountain bike parks were developed, namely Glenorchy Mountain Bike Park in Tasmania and Mount Stromlo in Canberra. Prior to these developments, mountain biking was taking place largely on existing walking trails and on informal trails created by the riders themselves.

Between 2005 and present day there have been significant advances in mountain bike technology, which is contributing to defining the type of riding experience achievable for and desired by riders. While some trends in riding have come and gone, the disciplines of downhill and cross-country have remained, with some blurring between these styles of riding with the emergence of the all-mountain bicycle.

#### 4.1.2 Current market

The current mountain bike market is dominated by longer travel cross-country mountain bikes, broadly referred to as 'all-mountain' or 'enduro' bicycles. This style of bike is incredibly capable at both climbing and descending, and has effectively increased the capability of the average rider.

Currently riders are seeking a broad range of experiences from local urban and peri-urban trails through to remote wilderness style longer distance riding experiences. Generally speaking the mountain bike tourist market is seeking these destination, adventure experiences in more remote natural environments, involving longer distance loops or point-to-point trails. Trails

proximate to urban areas are typically most popular with local riders because of their accessibility and convenience, though visitors drawn to an area for other experiences may also ride them.

Research consistently indicates that the current demographic of riders is predominately male, with an age of 30-40 years and a high disposable income.<sup>1</sup> This market is a key target for tourism as they are seeking longer, destination-based stays and typically seek out high quality dining and accommodation options.

Demand for gravity-based trail experiences in Australia is very high, with a major undersupply affecting this segment of the market across Australia.

### 4.1.3 Mountain bike tourism markets

#### 4.1.3.1 Overview

Tourists engaging in mountain biking can be divided into two distinct categories, the 'complementary market'; those who engage in mountain biking as a complementary activity (not as a primary motivator or sole purpose for travel), and the 'enthusiast market'; those who have travelled with mountain biking being the primary reason for their trip.

#### 4.1.3.2 Complementary tourist market

Mountain bike riding as a complementary activity has risen dramatically in popularity in recent years, as the sport has moved beyond the 'extreme sport' image of the past, and more towards the more accurate perception of the sport as a safe, inclusive and fun adventure activity. The emergence of mountain biking as a commercially viable complementary activity has been driven largely through the development of safer, more beginner-friendly trails, and by the growing number of commercial operators including the sport in their activity programs. Commercial viability of mountain biking as a complimentary activity requires a lower

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<sup>1</sup> Koepke, J. (2005) Exploring the Market Potential for Yukon Mountain Bike Tourism, Cycling Association of Yukon, Canada, page 5.



volume of trail than for the enthusiast market, though the required quality and maintenance demand of trails will be higher. As a complementary activity, mountain biking offers genuine avenues for commercial return, while also potentially lengthening the duration of stay for existing guests. In addition to this, targeted marketing may draw in guests that may otherwise have travelled to an alternative location.

#### **4.1.3.3 Enthusiast tourist market**

The enthusiast market is defined by the principle of mountain biking acting as a primary motivator/purpose for their travel. The enthusiast market seeks out new and exciting mountain bike destinations, and typically travel multiple times annually to engage in mountain biking.

The mountain bike enthusiast market is typically populated by 25-45-year-old males with a high disposable income, who are seeking opportunities to travel to destinations with the primary purpose of going mountain bike riding. While mountain bike riding may be a primary travel motivator, the availability of alternative activities will still influence this traveller as they will often look for destinations where they can viably travel with family, their spouse or non-enthusiast travelling companion/s. The mountain bike enthusiast is typically travelling for multi-day stays and is seeking unique and high-quality trail experiences. These users will typically seek higher volumes of trail, as they will often ride 30-40km+ per day.

#### 4.1.4 The success stories - Australia

Current participation data for mountain biking in Australia is distinctly lacking, although as new commercial venues emerge more data is becoming available. Traditionally the recording of trail usage numbers has been a relatively rare practice, but in a current climate, often characterised by particularly frugal government and corporate investment, this practice is increasingly being used to justify investment in trails. Sample data from some of Australia's key mountain bike destinations can be found below.

**Blue Derby (Tasmania)** is widely-regarded as the current mountain bike destination market leader in Australia. Housing a purpose built 80km trail network, Blue Derby combines a ride in/ride out town, with high quality trails, and unique Tasmanian wilderness. A range of trail experiences are on offer, with stand-out experiences being the destination's wilderness descents; the Blue Tier Trail and Atlas.

**Thredbo (NSW)** has a long history of mountain bike activity, and is currently the only ski resort in Australia with a dedicated season-long lift-assisted trail network. Thredbo is investing significantly in trails over the next two seasons, which has already seen resort visitation increase significantly. Unfortunately, Thredbo's mountain bike visitation statistics are not publicly available.

**Mount Buller (Victoria)** have invested over \$2m over a five-year period in developing predominantly all-mountain and cross-country mountain bike trails. Data for the resort from the 2011/12 summer recorded a total rider count of 23,000 over a five-month period.<sup>2</sup> The resort notes a 6% increase in mountain bike visitation between 12/13 and 13/14, though this small increase is likely related to the development staging at the time, and the style of trail being developed at Mount Buller, which is similar to many other cross-country trail networks closer to urban centres.

More recently, Mount Buller has slowed down trail development, and is seeing a fairly static annual visitation.

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<sup>2</sup> [www.world-trail.com](http://www.world-trail.com) accessed 25<sup>th</sup> November 2012.

**You Yangs (Victoria)** consistently records annual rider visitation over 150k p.a.<sup>3</sup>

#### 4.1.5 The success stories - International

Internationally, New Zealand is Australia's closest competitor in the mountain bike tourism market. While New Zealand offers significant volumes of trails, not all trails are necessarily of a world-class standard, often involving fire trails and access roads to add volume to trail distances. Examples of participation in some international regions can be seen below.

**Bike Park Wales (Wales, United Kingdom)** is a network of 29.5km of gravity-based trails with a commercial shuttle service. The facility nearly doubled anticipated visitation in its first year of operation, and has been entirely booked out for each day for its first two years of operation. The facility currently attracts over 60k riders a year, and is continually expanding shuttle capacity to meet demand.

Despite its modest volume of trails, Bike Park Wales has had a huge impact on the international mountain bike market, and has largely defined the model for all-mountain, descending-focused trail centres. Bike Park Wales is an excellent example of an all-mountain descending based trail centre, which still caters for the downhill market.

**Rotorua (North Island, New Zealand)** is perhaps New Zealand's most recognised and loved mountain bike destination. The 120km+ trail network is regarded around the world for its fast, flowing trails through a working pine forest. Research by APR consulting found that approximately 33% of visitors to the forest in 2007 were Australian.<sup>4</sup> It was recently reported that mountain bike activity in Rotorua is generating \$10.2m per annum, as opposed to the \$4.6m (one time) in export revenue potentially

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<sup>3</sup> Data provided by Parks Victoria staff July 2011.

<sup>4</sup> Recreational Use and Economic Impact of Whakarewarewa Forest (2009 Update), APR Consultants

generated by logging the forest.<sup>5</sup> While visitation numbers are not publicly available, it is generally considered that annual mountain bike visitation tops 250k.

**Whistler Mountain Bike Park (Canada)** is arguably the world's most recognised mountain bike park, offering one of the highest volumes of trail in one venue anywhere in the world. The Whistler Bike Park received approximately 200k riders per year, but it is estimated that a similar volume of users rides the surrounding valley trail network annually.

A 2016 report commissioned by the Whistler Off Road Cycling Association (WORCA) found that mountain biking contributed over \$79m p.a. to the regional economy of British Columbia. The report also found that over 500k individual rides were undertaken in the region in 2016.<sup>6</sup>

**Park City (Utah, United States of America)** projects that mountain bike visitation will top 1-million users.<sup>7</sup>

**Oregon (United States of America)** found that cycle tourism (predominantly mountain biking) was worth over \$400m to the State in 2013, with cycle tourists spending on average 20% more than general tourists.<sup>8</sup>

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<sup>5</sup>The New Zealand Herald January 17<sup>th</sup>, 2012, Bikes bring more money than wood from Rotorua forest

<sup>6</sup> CSTA Economic Impact of Mountain Biking 2016

<sup>7</sup> Information provided by Park City Regional Tourism Board

<sup>8</sup> Information provided by Destination Oregon.

## 4.1.6 The future

### 4.1.6.1 *The future- general*

The sport of mountain biking has continued to see sustained and expanding growth both in Australia and overseas. With current demand for high-quality riding opportunities still far exceeding supply, there exists significant potential to see excellent return on investment when developing world-class mountain bike trails and facilities.

The next few years will likely see the all mountain category of riding continue to grow, resulting in an increasing demand for more challenging, descending-focused riding. *Dirt Art* suggests that the next five years will see a huge increase in demand for chairlift or shuttle accessed descending cross country and all mountain trail experiences.

### 4.1.6.2 *The future- E bikes*

While traditional bike technology is likely to continue to stabilise, the rapid emergence of the E-bike is likely to have a profound impact on the sport. In *Dirt Art's* view, E-bikes will never replace the traditional mountain bike, but as technology improves the bikes will become a much more common feature on the trails. E-bikes make the sport more accessible to newer and less-capable riders, and increase the ride duration for more experienced riders.

It is important to recognise the distinction in E-bikes between high-powered throttle assisted bikes and lower-powered pedal-assisted bikes. Pedal assisted bikes have no additional impacts on trails, whereas throttle powered bikes are illegal in most public areas, and will cause significant additional damage to trails.

## 4.2 THE GENERAL CYCLING MARKET

### 4.2.1 Overview

While aspects of the proposed development are targeted at the enthusiast mountain bike rider, much of the initial stage of the proposed development is targeted at the recreational cyclist who may be a visitor to the area regardless of the mountain bike program on offer. This complementary market of users is better analysed by looking at data relating to the general recreational cycling market. *Dirt Art* suggest that many visitors with some cycling experience will be highly-motivated to engage with the proposed mountain bike activities, despite not recognising themselves as a mountain bike rider.

### 4.2.2 Cycling participation data

Research for the Australian Bicycle Council and Austroads surveyed 8,375 randomly selected households, who were interviewed regarding cycling participation. This survey sample represented 20,879 individuals.<sup>9</sup>

Key findings included:

- 36.3% of Australians had participated in cycling in the last year
- 24.3% of Australians had participated in cycling in the last month
- 17.4% of Australians had participated in cycling in the last week
- 85.5% of those who cycled in the past month did so for recreational purposes.

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<sup>9</sup> National Cycling Participation Survey (2015) conducted by CDM

Unlike many cycling participation surveys, the *National Cycling Participation Survey* does include children in the data, providing a more holistic picture of cycling participation in Australia.

There is no currently specific data on mountain bike participation rates in Australia, however it widely accepted that mountain biking makes up a substantial proportion of the overall cycling participation rates; noting studies have shown that approximately 70% of the bicycles sold in Australia are mountain bikes.<sup>10</sup>

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<sup>10</sup> *The Australian Bicycle Industry Report 2006*



 **DIRTART**

THE SITE



## 5 THE GEORGE TOWN SITE

### 5.1 LOCATION

George Town is located in the North East of Tasmania, on the east river bank at the mouth of the Tamar River. George Town is Australia's third oldest settlement, and has a rich maritime history.

A location map can be found over the page.

### 5.2 DEMOGRAPHICS

George Town has a population of 6,764 (2016 Census).

The Median age is 43.

MAP: Overview Location



MAP: Detailed location



## 5.3 LAND TENURE

### 5.3.1 Overview

The land tenure across the proposed development area is a mix of the following agencies/companies;

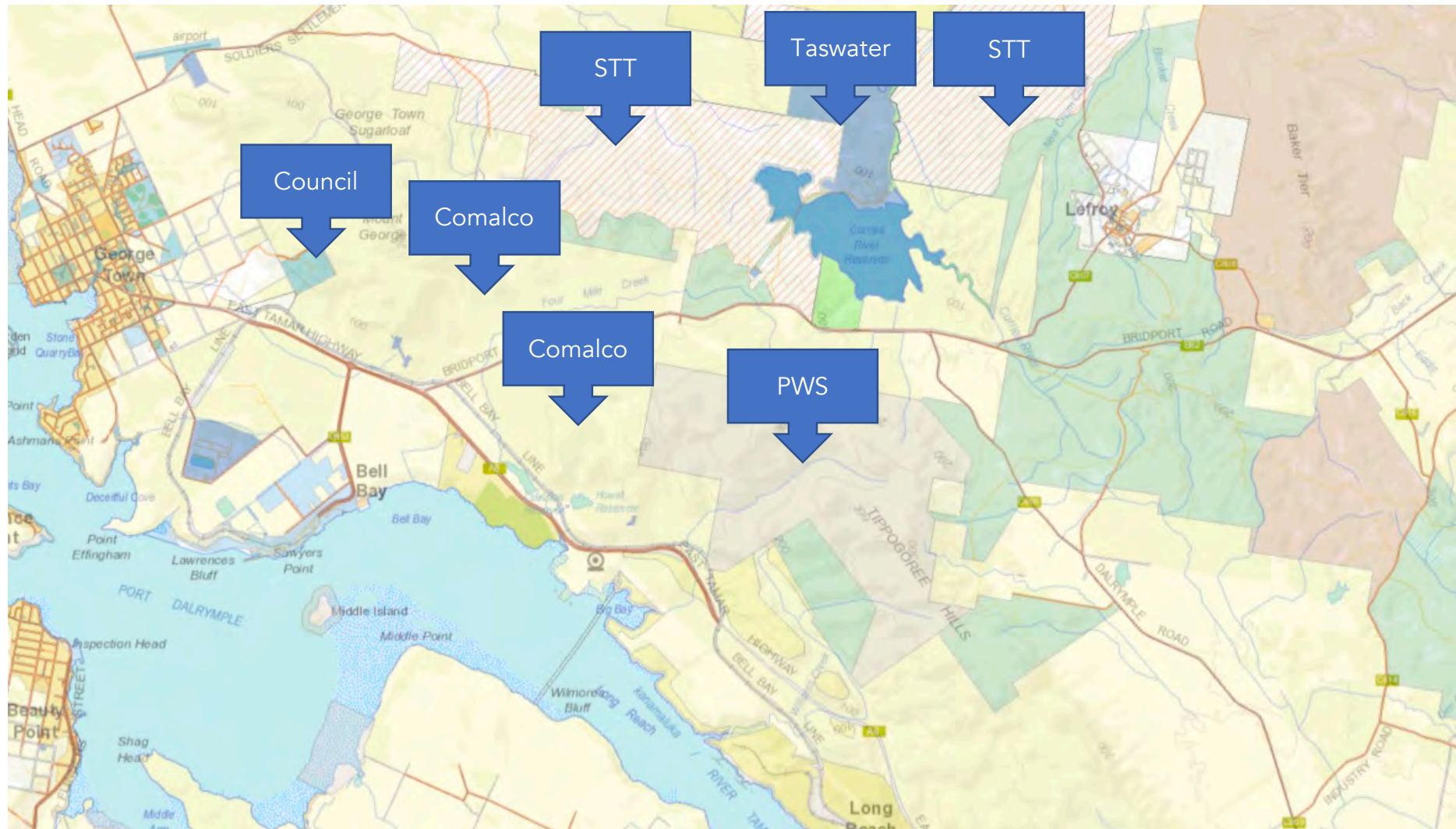
- Private: Comalco
- Crown: Georgetown Council
- Crown: Tasmanian Parks and Wildlife Service

A land tenure map can be found over the page.

Due to the patchwork of land tenure, *Dirt Art* recommends that a single management body control the development and maintenance of the trails.

*Dirt Art* has worked to minimise the tenure variations across the site, whilst ensuring that the best environments have been proposed for use. Minimising tenure variation will have a major positive impact on the ease of implementation and ongoing management of the facility.

### 5.3.2 Land tenure map



### 5.3.3 Land tenure risk scale

Land tenure classifications have various risk ratios for trail projects. While all risks may be adequately managed, it is important to recognise fundamental risk variation across different land tenure.

- High Private free hold- Agricultural and residential
- V Private freehold- Industrial
- V Parks and Wildlife Service- National Park and World Heritage Area
- V Sustainable Timber Tasmania- Permanent production forest
- V Sustainable Timber Tasmania- Future production forest
- V Parks and Wildlife Service- Regional/Conservation Reserve
- Low Council

## 5.4 QUICK FACTS

Site location	George Town, Tasmania
Predominant geographical features	Rolling hills (20-40% grades), with some steep (40-60%+ grades).
Total elevation variation	~300m maximum elevation range
Rainfall	Annual : 677 (www.bom.gov.au)
Total existing trails for inclusion	0km (approx.)
Total volume of new proposed trails	108.9km (approx.)

## 5.5 SERVICES AND AMENITIES

A breakdown of services and amenities can be found below;

Service type	Availability/description
Accommodation	Various- 2 to 5 star options
Food and beverage	Yes
Medical	Yes
Supermarket	Yes
Bike Retail Store	No
Bike hire	No
Existing tourism operators	No

## 5.6 KEY SITE ATTRIBUTES

### 5.6.1 Strengths

When exploring potential for mountain bike trail development, it is important to consider the key strengths and attributes of the site. These key strengths must be leveraged to ensure the project has a competitive advantage in an industry where many small towns are now vying for the title of Australia's next 'mountain bike town'.

*Dirt Art* consider the key strengths of the site as;

- **Attachment to Tasmania's growing brand and reputation as Australia's leading mountain bike state/territory:** Tasmania is now widely recognised as Australia's leading mountain bike destination. With many visitors now travelling to the state with mountain biking as a primary motivator for travel, there is a significant opportunity for George Town to leverage a captive audience
- **General location:** George Town is located just 40 minutes from Launceston. Launceston is a primary entry portal for riders visiting the Blue Derby Mountain Bike Trails, and the upcoming Wild Mersey Mountain Bike Trails.
- **Vicinity to George Town:** The proposed trail network provides opportunities for a ride in/out experience from George Town, also benefitting from the services in the town.
- **Elevation opportunities:** Through the introduction of trails in the Tipogoree Hills Conservation Area, the project has gained a maximum elevation opportunity of approximately 300m.
- **Coastal Trail opportunities:** The project provides opportunity for trails with unique coastal views.



## 5.6.2 Weaknesses

When exploring potential for mountain bike trail development, it is important to consider the key weaknesses of the site. *Dirt Art* consider the following as potential weaknesses of the site, and has attempted to work through these weaknesses in developing the project plan.

- Generic dry forest types: The project area offers a fairly consistent dry eucalypt forest type, which lacks the iconic and picturesque forest views of locations such as Blue Derby and Maydena Bike Park.
- Land tenure risks: The project area includes parcels of private land. These private land areas of course offer opportunities for lease and access agreements, though the risk of relying on these parcels for key connectivity in the network will require careful management and planning.

## 6 FEASIBILITY ANALYSIS

### 6.1 OVERVIEW

When examining the feasibility of a project, a broad range of factors require consideration. The feasibility analysis rankings assess a range of factors that are key influencers on viability of pursuing a project, from factors such as construction viability and cost effectiveness through to market appeal and ongoing maintenance and management costs.

A total score has been given, which ranks the development out of 100, with 100 being a perfect score for feasibility across a broad spectrum of factors.

## 6.2 FEASIBILITY ASSESSMENT ATTRIBUTE RANKING TABLE

Value	George Town
Wilderness values	6
Other environmental values	7
Elevation opportunities	7
Connectivity to town	8
Construction complexity/cost	7
Town infrastructure	8
Commercial opportunities	7
Accessibility	8
Land tenure risks/challenges	6
Potential for hero trail opportunities	7
<b>Total</b>	<b>71</b>

<50	Poor viability- Pursuing the development is not recommended
51-75	Good Viability- Development has fair-good viability
75-100	Excellent viability- Development has excellent viability

*Dirt Art* suggest that the George Town Project has 71/100, 'Good-Excellent' feasibility rating. The use of the Tipogoree Hills Conservation Area has provided the project with vastly improved elevation and wilderness values, which will allow for the creation of more iconic trail experiences that have stronger market appeal.



 **DIRT**ART

CONSULTATION

# 7 CONSULTATION

## 7.1 OVERVIEW

Public and stakeholder consultation has formed a major and valuable component of this project. *Dirt Art* has consulted with a broad spectrum of the community, key stake holders and the riding community, at a number of stages throughout the study. The consultation process has been multi-faceted, including an online survey, and a number of face-to-face meetings.

A summary of consultation can be found below.

## 7.2 KEY LAND MANAGEMENT AGENCIES

### 7.2.1 George Town Council

George Town Council is strongly supportive of the project and concept as presented. The council sees the project as a key driver of tourism and economic development, and considers it one of the key council projects over the next 12-24 months.

### 7.2.2 Sustainable Timber Tasmania

Sustainable Timber Tasmania has not been actively consulted as land under their management is not currently contained in the concept.

### 7.2.3 Comalco/BHP Billiton

Comalco/Bell Bay (CBB) holds a significant portion of the land required to develop the project, importantly providing connectivity between Mount George and the Tipogoree Hills Conservation Area. As a key stakeholder, CBB has been liaised with continually throughout the project, including the conduction of an on-site meeting.

Minor changes to the concept have been made to the concept following discussions with CBB, which have moved trails away from existing leased areas, and placed these trails into an area set aside by the company for future recreation.

### 7.2.4 Tasmanian Parks and Wildlife Service

*Dirt Art* has liaised with the PWS regarding the inclusion of the Tipogoree Hills Conservation Area. The advice gained was that the area was at the lowest reserve classification and that there are no immediate barriers for developing mountain bike trails in the area.

The concept will require further consultation with the PWS, and will require approvals through the agency's Reserve Activity Assessment process.

## 7.3 COMMUNITY CONSULTATION

Community consultation will occur during the next phased of the project.



 **DIRT**ART

Proposed New Trails

## 8 PROPOSED NEW TRAILS

### 8.1 OVERVIEW

The proposed trail network for George Town provides a clear pathway towards the development of a world-class network of mountain bike trails, which focus on the following key market segments; all mountain and enduro, back country/wilderness trail riding, and beginner friendly trails. *Dirt Art* suggests that these areas of the market are in demand, under catered for in the current market, and offer the most direct opportunities for commercialisation.

The proposed network has capitalised on the unique strengths of the site, while also taking into account the regional, state-wide and national trail market place, to establish a range of experiences that complement the regional area, and will attract significant attention from Australian and international riders.

The proposed trail network plan offers 105.8km of concept trail alignments, covering a broad range of different trail experience, and suited the full range of rider abilities.

Notably all proposed trail alignments are conceptual in nature, and will require a detailed design process and route flagging to confirm viability and precise location.

### 8.2 OPPORTUNITIES ANALYSIS

#### 8.2.1 Land areas overview

*Dirt Art* has searched the entire municipal area for viable land opportunities suitable for trail development. Much of the municipal area is private agricultural land, with crown land areas predominantly consisting of production forest. The primary entry point for



the trails is proposed as Mount George, which provides a small council-managed land parcel with good vertical elevation range, and a sealed road to the high point.

### 8.2.2 Mount George

Tenure	Crown- Council
Proposed trail volume	9km
Overview	
<p>Mt George acts as the primary entry portal for the trail network. The council-managed land parcel provides an elevation range of approximately 150m. A number of trails have been proposed, which focus on creating a micro-bike park zone with an arterial climb and a number of descents of varying difficulty.</p>	

### 8.2.3 Comalco Bell Bay

Tenure	Private Freehold- Comalco Bell Bay
Proposed trail volume	35.5km
Overview	
<p>The Comalco Bell Bay owned land parcel critically connects the two main trail areas at Mount George and Tipogoree Hills Conservation Area. While trail volume has been minimised due to the private land tenure, the linking trails required to connect the two crown land trail areas require a reasonable volume of trail.</p>	

## 8.2.4 Tipogoree Hills Conservation Area

Tenure	Crown- Parks and Wildlife Service
Proposed trail volume	64.4km
Overview	
The Tiogoree Hills Conservation Area has been proposed as the primary trail area, as it features favourable land tenure, better forest types and greater elevation opportunities. A short linking loop trail through Comalco Land is required to connect the reserve to the main road area. It is expected that many riders will wish to drive to this area, so a parking area should be investigated.	

## 8.2.5 Rejected land spaces

Through the concept development process, *Dirt Art* has analysed and rejected a number of land areas. These land areas were predominantly areas of permanent or future production forest. The primary reasons these forestry areas were rejected are as follows;

- Generally lower environmental value
- Potential for harvesting to have major disruptions to the network
- Potential for harvesting to cause significant damage to the trail network
- Elimination of environmental values post harvesting
- Limited elevation opportunities in these areas

### 8.3 OVERALL TRAIL DIFFICULTIES (TDRS) BREAKDOWN

Green Circle	Blue Square	Black Diamond	Double Black Diamond
28.8km	46.3km	30.7km	0km
27%	44%	29%	0%

The above TDRS breakdown provides a diverse facility, that will cater for the broadest possible market of riders. While a strong focus has been placed on the beginner/intermediate (green circle/blue square) market (71% of total trails), it is important to acknowledge the strong demand for more challenging black diamond and above trails. The proposed trail difficulty breakdown offers a diverse network of high-quality trails for all abilities.

## 8.4 GUIDING DESIGN PRINCIPLES

New trail concepts proposed have been developed based upon a number of guiding principles. All trails are listed in priority (numbered) order, based upon a suggested staging approach to trail construction. Overall project priority staging can be found in the action plan for this project. Guiding principles for the new trail concepts proposed are as follows;

- Develop trails in a way that is sympathetic to the environmental, cultural and social values of the George Town area
- Connect key land marks and points-of-interest with high quality trails
- Provide high-quality, purpose built beginner trail experiences that focus on fun, free-flowing trail experiences
- Design trails to provide structured trail heads/intersections, to allow simple navigation and optimal network flow
- Develop a range of new trails to provide multiple, long distance riding loop options in the area
- Develop an area focusing on iconic descending trail experiences, capitalising on maximum available elevation in the area

## 8.5 OVERVIEW OF THE CONCEPT DESIGN PROCESS

All new trails proposed in this document have been developed as working desktop concepts, and do not represent detailed trail designs. *Dirt Art* undertakes a structured concept design process, based upon the below workflow;



*Dirt Art* has ground-truthed trails to approximately 100m corridor accuracy. Concepts have in most cases been designed to feature average gradients of approximately 4-7%, and to reside in areas conducive to construction of economical, high-quality trail infrastructure. Average gradients have been calculated using detailed contour and elevation data for the target area.

Due to the conceptual nature of trail alignments, and the highly varied topography of the site, a comprehensive on-ground design phase will be required for all new trails proposed. During the detailed design process, alignments and trail distances will be subject to change.

## 8.6 SUMMARY OF PROPOSED NEW TRAILS

Trail Number	Trail Difficulty	Trail Length (km)
1	Green Circle	4.6
2	Green Circle	3.5
3	Green Circle	3.5
4	Blue Square	2.2
5	Black Diamond	2.2
6	Blue Square	11.6
7	Blue Square	4.1
8	Green Circle	9.7
9	Blue Square	9.7
10	Black Diamond	14.6
11	Black Diamond	13.9
12	Blue Square	15.3
13	Green Circle	3.7
14	Green Circle	3.8
15	Blue Square	3.4
	Total	105.8

# George Town - Trail Concept Plan

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## 8.8 PARKING AND ACCESS

### 8.8.1 Overview

While the aim for the project will be for riders to base themselves in George Town and ride out into the trail network, given the length of the trail system and geographical nature of the site, many riders will elect to park at areas closer to each component of the trail system.

The George Town Sports Centre has been proposed as the entry point to the trails, though it is likely that riders will park at both Mount George, and at an area near the Tipogoree Hills Conservation Area.

### 8.8.2 Primary access point- George Town Sports Centre

The George Town Sports Centre on George Street has been proposed as the primary access point for the trail network. The rationale for this is as follows;

- The area is the largest and most appropriate council land parcel closest to the trail network
- The area provides adequate parking opportunities
- The area offers amenities (toilets)
- The area is close to the George Town CBD
- The area has potential for developing a pump track and skills park

*Dirt Art* suggests the following works be completed in this area;

- Formalised parking areas
- Pump Track
- Skills Park



- Signage
- Link trail to Mount George (Trail One)

### 8.8.3 Secondary access point- Mount George

It is expected that some riders will chose to drive to and begin their ride at Mount George. It is not expected that large volumes of riders will park in this area, rather riders will likely use the road to the Mount George Lookout as vehicle uplift access for the gravity trails on Mount George.

No formal works should be required in this area to accommodate the trail network beyond the standard trail signage proposed in the trail development plan.

### 8.8.4 Tipogoree Hills Conservation Area

Tipogoree Hills Conservation Area will likely be a popular area for riders to drive and park. Due to the large trail development area, parking at this area allows riders to ride further through the trails in this area. *Dirt Art* suggests that a car park is developed in this area, with a minimum parking capacity of 50 cars.

## 8.9 PROPOSED TRAILS- MOUNT GEORGE

### 8.9.1 Overview

The Mount George area has been proposed as a 'micro bike park' area, with an arterial climbing trail connecting to three descents of varying difficulty.

### 8.9.2 Primary access for the trail system

Mount George is proposed as the primary entry point for the trail network. The site sits immediately adjacent to town, and offers a sealed road access to some 150m of vertical elevation. Key opportunities at the site are;

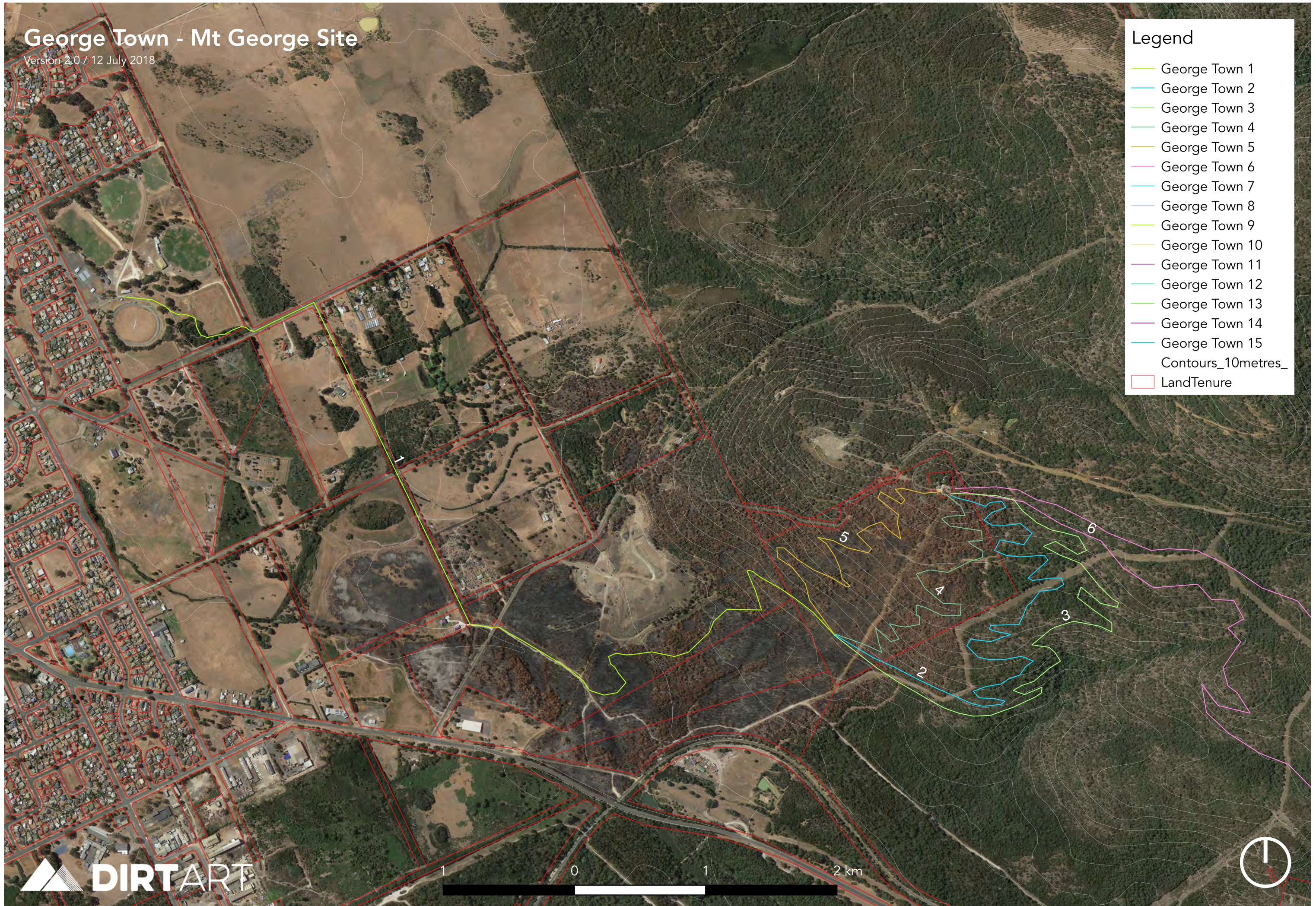
- Sealed road summit access
- Views (including lookout tower)
- Summit car park
- Functional entry point into broader trail network

# George Town - Mt George Site

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### 8.9.4 Trail One

<b>LENGTH</b>	<b>4.6 KM</b>
<b>TDRS</b>	Green
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Dual direction link trail
<b>DESCRIPTION</b>	Trail one is a dual direction connector trail linking the Mount George trail area with the township of George Town. The trail begins at the proposed trail head at the George Town Sports Centre, and finishing at the base of Mount George.
<b>PROPOSED USES</b>	Mountain biking/walking
<b>TENURE</b>	Crown- Council
<b>CONSTRUCTION</b>	Excavator
<b>SURFACE</b>	Gravel surface

### 8.9.5 Trail Two

<b>LENGTH</b>	3.5 KM
<b>TDRS</b>	Green
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction climb
<b>DESCRIPTION</b>	Trail Two is the main arterial climbing trail up Mount George. The trail provides a gently climbing, beginner friendly experience that provides access to the Mount George descending trails, and the broader trail network.
<b>PROPOSED USES</b>	Mountain biking/walking
<b>TENURE</b>	Private Freehold- Comalco
<b>CONSTRUCTION</b>	Excavator
<b>SURFACE</b>	Natural surface

### 8.9.6 Trail Three

<b>LENGTH</b>	3.5 KM
<b>TDRS</b>	Green
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction descent
<b>DESCRIPTION</b>	Trail Three is single direction descending trail that forms a beginner-friendly loop with Trail Two. The trail offers a gently descending flow trail experience that can also be accessed via vehicle uplift on the road to the summit lookout of Mount George.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Private Freehold- Comalco
<b>CONSTRUCTION</b>	Excavator
<b>SURFACE</b>	Natural surface

### 8.9.7 Trail Four

<b>LENGTH</b>	2.2 KM
<b>TDRS</b>	Blue
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Dual direction link trail
<b>DESCRIPTION</b>	Trail Three is single direction descending trail that forms an intermediate loop with Trail Two. The trail offers a gently descending flow trail experience that can also be accessed via vehicle uplift on the road to the summit lookout of Mount George.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Council
<b>CONSTRUCTION</b>	Excavator
<b>SURFACE</b>	Natural surface

### 8.9.8 Trail Five

<b>LENGTH</b>	2.2 KM
<b>TDRS</b>	Black
<b>TRAIL STYLE</b>	Technical
<b>FORMAT</b>	Dual direction link trail
<b>DESCRIPTION</b>	Trail Three is single direction descending trail that forms an advanced loop with Trail Two. The trail offers a steeper, more challenging descending trail experience that can also be accessed via vehicle uplift on the road to the summit lookout of Mount George.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Council
<b>CONSTRUCTION</b>	Excavator
<b>SURFACE</b>	Natural surface



## 8.10 COMALCO SITE

### 8.10.1 Overview

The privately held Comalco Site provides a critical link between trail the proposed Mount George and Tipogoree Hills Conservation Area trail areas. While trail on the private land has been minimised, a reasonable length of trail is required to connect the two primary trail areas.

While providing a critical connection between trail zones, the land parcel also offers good opportunity for trail development with conditions conducive to building high quality trails, and good surrounding area views.

# George Town - Comalco Site

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### 8.10.3 Trail Six

LENGTH	11.6 KM
TDRS	Blue Square
TRAIL STYLE	Flow
FORMAT	Single direction loop
DESCRIPTION	Trail Six is a loop format trail connecting the two key trail areas. The trail offers excellent ridgeline views.
PROPOSED USES	Mountain biking
TENURE	Private Freehold- Comalco
CONSTRUCTION	Excavator

#### 8.10.4 Trail Seven

LENGTH	4.1 KM
TDRS	Blue Square
TRAIL STYLE	Flow
FORMAT	Single direction loop
DESCRIPTION	Trail Seven is a loop format trail connecting the two key trail areas. The trail offers excellent ridgeline views, with a sustained climb and descent.
PROPOSED USES	Mountain biking
TENURE	Private Freehold- Comalco
CONSTRUCTION	Excavator

### 8.10.5 Trail Eight

<b>LENGTH</b>	<b>9.7 KM</b>
<b>TDRS</b>	Green Circle
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail Eight is a loop format trail connecting riders up into the Tipogoree Hills area trail network. The ~10km loop also provides an excellent stand-alone beginner riding experience.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Private Freehold- Comalco
<b>CONSTRUCTION</b>	Excavator

## 8.11 TIPOGOREE CONSERVATION AREA SITE

### 8.11.1 Overview

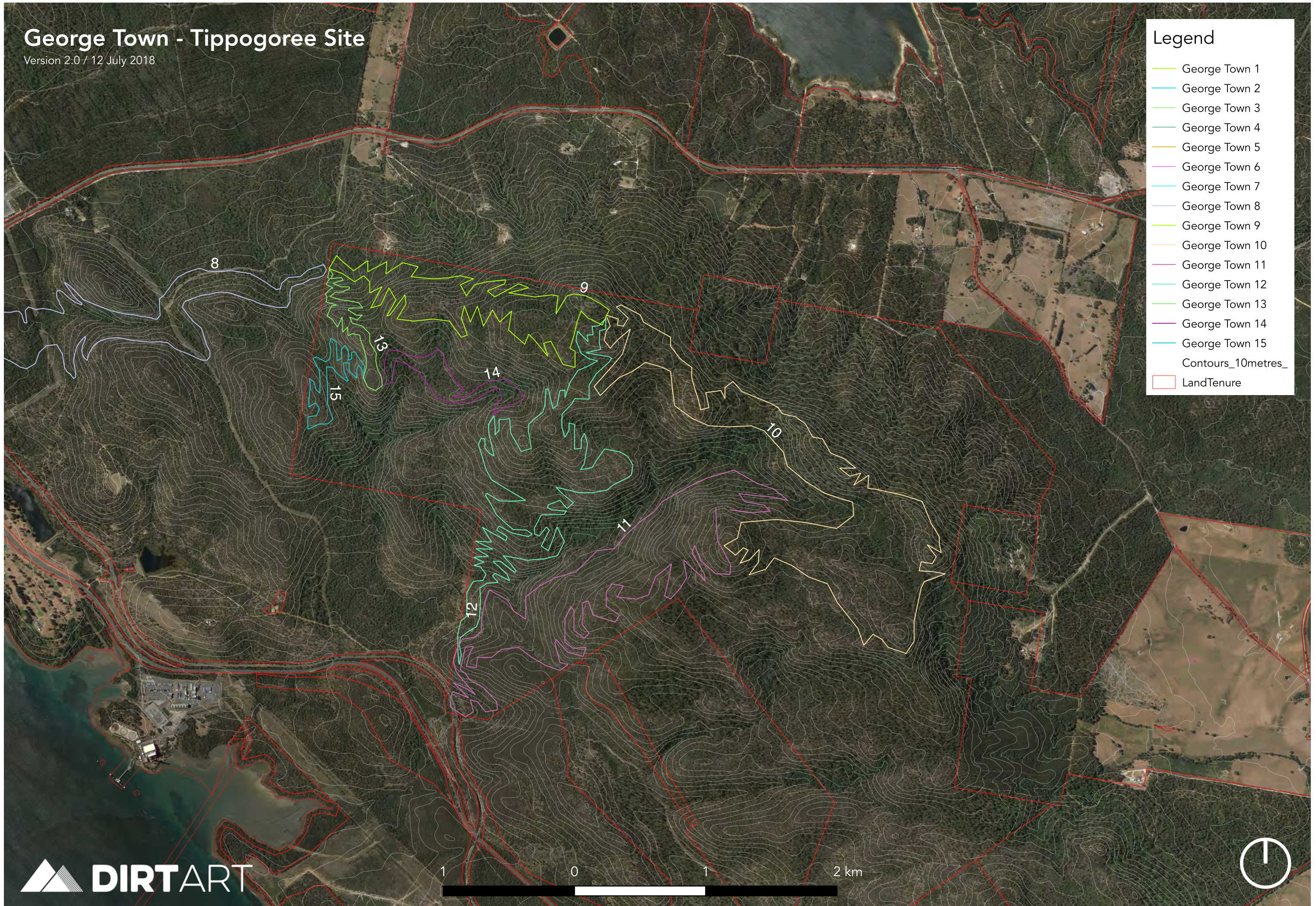
The Tipogoree Conservation Area (TCA) has been selected as the primary trail area. The area features favourable land tenure, and good elevation opportunities.

# George Town - Tippogoree Site

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### 8.11.3 Trail Nine

LENGTH	9.7 KM
TDRS	Blue Square
TRAIL STYLE	Flow
FORMAT	Single direction loop
DESCRIPTION	Trail Nine is a loop format trail that features a sustained climb and descent in the foot hills of the area. The trail is proposed as an easier blue square trail, aimed as a gentle progression from the green circle trails in the area.
PROPOSED USES	Mountain biking
TENURE	Crown- Parks
CONSTRUCTION	Excavator



#### 8.11.4 Trail 10

<b>LENGTH</b>	14.6 KM
<b>TDRS</b>	Black Diamond
<b>TRAIL STYLE</b>	Flow/Technical
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail Ten is a loop format trail that will be one of the more iconic trails in the network. The trail climbs to the higher peaks of the area, before contouring around multiple peaks, before gradually descending. The trail has numerous view points and features a more backcountry style of trail experience.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

### 8.11.5 Trail 11

<b>LENGTH</b>	13.9 KM
<b>TDRS</b>	Black Diamond
<b>TRAIL STYLE</b>	Flow/Technical
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail Eleven is one of the more iconic trails in the network, featuring the largest elevation fall and gain of all the trails. The total elevation lost/gained of ~300m will make for a unique and exciting trail experience. The trail could also be constructed to a blue square difficulty level.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

### 8.11.6 Trail 12

<b>LENGTH</b>	<b>15.3 KM</b>
<b>TDRS</b>	Blue Square
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail Eleven is one of the more iconic trails in the network, featuring the second largest elevation fall and gain of all the trails. The trail is designed as a more approachable than neighbouring Trail 11.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

### 8.11.7 Trail 13

<b>LENGTH</b>	<b>3.7 KM</b>
<b>TDRS</b>	Green Circle
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail 13 is designed as an extension of Trail Eight, providing a broader, beginner friendly trail experience in the trail zone.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

### 8.11.8 Trail 14

<b>LENGTH</b>	13.9 KM
<b>TDRS</b>	Blue Square
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail 14 is a shorter linking trail, which provides opportunities to ride the trail area in a variety of different loop formats.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

### 8.11.9 Trail 15

<b>LENGTH</b>	<b>3.7 KM</b>
<b>TDRS</b>	Green Circle
<b>TRAIL STYLE</b>	Flow
<b>FORMAT</b>	Single direction loop
<b>DESCRIPTION</b>	Trail 15 is designed as an extension of Trail 13, providing a broader, beginner friendly trail experience in the trail zone.
<b>PROPOSED USES</b>	Mountain biking
<b>TENURE</b>	Crown- Parks
<b>CONSTRUCTION</b>	Excavator

## 8.12 FUTURE DEVELOPMENT POTENTIAL

Significant potential exists in the area for additional trail development beyond that proposed in this concept plan. *Dirt Art* suggests that future trail development potential exists on both the private land parcel (Comalco) and in the Tipogoree Hills Conservation Area, with the latter possessing the primary potential for future development.

Given the size and scope of the development area, an additional 100+km of trails could be accommodated within the site.





## 9 IMPLEMENTATION PLAN

### 9.1 OVERVIEW

The proposed implementation plan provides a suggested approach for delivering the various aspects of the trail development proposed in this Mountain Bike Feasibility Study. While not intended to be prescriptive in its nature, the prioritised order provided has been carefully developed to allow for optimal progression through the development process in a logical, cost-effective fashion.

*Dirt Art* suggests a larger stage one development phase. It is suggested that George Town will require a larger initial volume of trail to ensure it attracts attention amongst other strong trail destination opportunities in Tasmania.

### 9.2 APPROVALS COST ESTIMATES

Cost of approvals can vary significantly from project to project, though *Dirt Art* typically recommends a budget of approximately 5% of construction capital expenditure, though notably this figure does not include internal or external project management time required to prepare and administer the approvals process.

The cost for sourcing approvals includes satisfying council approval process, as well as approvals from other relevant agencies. The budgeted costs are inclusive of external consultancy around areas such as environmental and cultural assessments.

### 9.3 TRAIL DESIGN AND CONSTRUCTION COST ESTIMATES

The cost estimates provided represent current upper-end market rates for all services, materials and equipment listed. The information contained in this section of the report has been based around *Dirt Art's* experience in development and operational plans for a range of large-scale mountain bike facilities around Australia. The information should not be considered financial advice, and is provided for indicative purposes only. Exact planning and development costs can only be ascertained through a formal quotation process with relevant providers. The rates for trail construction provided represent upper-end market rates and do not necessarily represent the rates that may be provided through a formal construction quotation from *Dirt Art*.

### 9.4 STAGE ONE

#### 9.4.1 Design and approvals

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Trail Design	Design	NA	66.4 km	\$1.00	\$66,400.00
Approvals (5% D&C cost)	Approvals	NA	NA	NA	\$122,750.00
				<b>Total</b>	\$189,150.00

## 9.4.2 Trail construction and upgrades

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Trail One	New Trail	Green Circle	4.6	\$50.00	\$230,000.00
Trail Two	New Trail	Green Circle	3.5	\$35.00	\$122,500.00
Trail Three	New Trail	Green Circle	3.5	\$35.00	\$122,500.00
Trail Four	New Trail	Blue Square	2.2	\$30.00	\$66,000.00
Trail Five	New Trail	Black Diamond	2.2	\$35.00	\$77,000.00
Trail Six	New Trail	Blue Square	11.6	\$30.00	\$348,000.00
Trail Seven	New Trail	Blue Square	4.1	\$30.00	\$123,000.00
Trail Eight	New Trail	Green Circle	9.7	\$35.00	\$339,500.00
Trail Nine	New Trail	Blue Square	9.7	\$30.00	\$291,000.00
Trail Twelve	New Trail	Blue Square	15.3	\$35.00	\$535,500.00
Pump Track	New Trail	NA	NA	NA	\$150,000.00
Skills Park	New Trail	NA	NA	NA	\$50,000.00
				<b>Total</b>	<b>\$2,455,000.00</b>

### 9.4.3 Total ancillaries

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Signage (2.5% construction)	Ancillaries	NA	NA	NA	\$61,375.00
Marketing (2.5% construction)	Ancillaries	NA	NA	NA	\$61,375.00
Tipogoree Hills Car Park & road crossing	Car Park	NA	NA	NA	\$100,000.00
				<b>Total</b>	<b>\$222,750.00</b>

### 9.4.4 Total stage one development cost

Total Stage One Budget	
Total design and approvals	\$189,150.00
Total construction	\$2,455,000.00
Total ancillaries	\$222,750.00
<b>TOTAL STAGE ONE DEVELOPMENT COST</b>	<b>\$2,866,900.00 (+GST)</b>

## 9.5 STAGE TWO

### 9.5.1 Design and approvals

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Trail Design	Design	NA	0 km	\$1.00	\$39,400.00
Approvals (5% construction)	Approvals	NA	NA	NA	\$68,000.00
				<b>Total</b>	<b>\$107,400.00</b>

## 9.5.2 Construction

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Trail 10	New Trail	Black Diamond	14.6km	\$35.00	\$511,000.00
Trail 11	New Trail	Black Diamond	13.9km	\$35.00	\$486,500.00
Trail 13	New Trail	Green Circle	3.7km	\$35.00	\$129,500.00
Trail 14	New Trail	Blue Square	3.8km	\$30.00	\$114,000.00
Trail 15	New Trail	Green Circle	3.4km	\$35.00	\$119,000.00
				<b>Total</b>	<b>\$1,360,000.00</b>

### 9.5.3 Total ancillaries

DEVELOPMENT	TYPE	TDRS	DISTANCE	LIN. M COST	TOTAL COST
Signage (2.5% construction)	Ancillaries	NA	NA	NA	\$34,000.00
Marketing (2.5% construction)	Ancillaries	NA	NA	NA	\$34,000.00
				<b>Total</b>	\$68,000.00

### 9.5.4 Total stage two budget

Total Stage Two Budget	
Total design and approvals	\$107,400.00
Total construction	\$1,360,000.00
Total ancillaries	\$68,000.00
<b>TOTAL STAGE TWO DEVELOPMENT COST</b>	<b>\$1,535,400.00</b>

### 9.5.5 Total project cost

Total Project Budget	
Stage One	\$2,866,900.00
Stage Two	\$1,535,400.00
<b>Total</b>	<b>\$4,402,300.00 (ex GST)</b>



 **DIRTART**

ECONOMIC DEVELOPMENT



# 10 ECONOMIC DEVELOPMENT

## 10.1 OVERVIEW

Mountain biking has a demonstrated capacity to deliver significant economic benefits, particularly to regional communities. Mountain bike tourism is a steadily growing market, and a continued undersupply of high quality trails and destinations results in a key market opportunity. While mountain bike-focused holiday destinations continue to be developed across Australia, very few have captured all the key elements required for success.

The success of Tasmanian facilities such as Blue Derby and Maydena Bike park, have the market opportunity for mountain bike destination tourism.

When riders are in a decision-making phase planning their next mountain bike holiday, a number of key factors will influence their decision when choosing a destination. These factors are summarised below in a generalised priority order;

- High quality trails: High quality trails are the primary motivator for the destination mountain bike rider.
- High quality environment: Natural values, forest types, views and point-of-interest
- Accommodation, food and beverage options: a variety of offerings
- Non-riding activities- access to a good supply of formal and/or informal alternative activities

## 10.2 KEY MARKET EXAMPLES

### 10.2.1 Blue Derby- Tasmania

LOCATION	NORTH EAST TASMANIA
TENURE	Public
TRAIL VOLUME	80+km
TRAIL STYLES	Cross country, all mountain
VISITATION	~30k p.a. (estimated)

Arguably the most recognised mountain bike destination in Australia, Blue Derby has captured the heart and minds of the mountain bike community, through its key strengths of; high-quality trails, and stunning wilderness. The trails saw an explosion in popularity upon the introduction of two longer duration, descending wilderness trails; Atlas and the Bluer Tier Trails.

A successful ongoing marketing campaign across digital and traditional media has been very effective in attracting strong interest and visitation from interstate and international markets. Key to this has been destination marketing through a range of influencers and key riders.

Since completed, the trail project has seen local property prices increased significantly. Where previously most houses in the town were sold for <\$100k, current sales averages are \$200-300k.

#### 10.2.1.1 Key strengths

Key strengths of the destination are;

- Stunning natural environment

- High quality trails
- Longer duration, descending wilderness trails
- Growing availability of F&B and accommodation options
- Council commitment of a full-time maintenance team (1.5-2 FTE staff)

### 10.2.1.2 Key weaknesses

Key weaknesses of the destination are;

- Limited availability of quality beginner-friendly trails (currently being addressed)
- Broader industry has been slow to respond to needs of the market in terms of food, beverage, and accommodation
- Limited availability of non-riding activities

### 10.2.2 Thredbo Resort

LOCATION	THREDBO, NEW SOUTH WALES
TENURE	Public/Private
TRAIL VOLUME	30+km on resort, 70km+ off resort
TRAIL STYLES	Cross country, all mountain, downhill
VISITATION	~50k p.a. (estimated)

Thredbo is as popular mountain bike destination with many riders, particularly for those living between Canberra and Sydney. The resort has a key focus on downhill and all-mountain-focused riding, and is regarded by many as Australia's leading gravity-based mountain bike destination.

Beyond the resort bounds are a number of other public trails, including the iconic Thredbo Valley Track. The Thredbo Valley Track will eventually link Thredbo with Jindabyne, with Australia's longest purpose-built singletrack experience.

#### **10.2.2.1 Key strengths**

Key strengths of the destination are;

- Stunning alpine environment
- Over 620m of available elevation
- Australia's largest network of gravity based trails
- Excellent servicing of food, beverage and accommodation
- Wide range of complementary activities

#### **10.2.2.2 Key weaknesses**

Key weaknesses of the destination are;

- Seasonal operation
- Limited cross-country trails

### 10.2.3 Mount Buller

LOCATION	MOUNT BULLER, VICTORIA
TENURE	Public/private
TRAIL VOLUME	~60km
TRAIL STYLES	Cross country, all mountain, downhill
VISITATION	~30k p.a. (estimated)

#### 10.2.3.1 Key strengths

Key strengths of the destination are;

- Appealing sub-alpine environment
- High quality trails
- Large volume of trails

Key weaknesses of the destination are;

- Limited availability of beginner friendly trails
- Limited food, beverage and accommodation offerings
- Significant volumes of climbing in all cross-country trails
- Comparatively low-quality gravity trail offerings

## 10.2.4 Maydena Bike Park

<b>LOCATION</b>	<b>MAYDEN, TASMANIA</b>
<b>TENURE</b>	Private
<b>TRAIL VOLUME</b>	120km gravity/120km cross country (proposed)
<b>TRAIL STYLES</b>	Cross country, all mountain, downhill
<b>VISITATION</b>	Pre-opening

Maydena Bike Park is a gravity-focused bike park in Tasmania's Derwent Valley. The project capitalises on over 800m of uninterrupted vertical elevation, and a stunning Tasmanian wilderness environment. While still under development, the project has already had a profound impact on the local region, with house prices in the town doubling, and over 12 houses sold in three months (previous average time to sell a house 900 days).

The project team is working with a number of prospective accommodation, food and beverage and tour operators to develop business around the project. The commercial component of the project expects to employ 30 staff, with 12 businesses expected to be created around the operation in the first two years of operation.

Early memberships to the park sold out in three days, with ticket sales due to launch in September also expected to sell out for key dates.

Despite construction only just commencing, the trail project has already resulted in local property prices increasing significantly. Where previously most houses in the town were sold for <\$100k, current sales averages are \$150-200k and continuing to climb.

#### **10.2.4.1 Key strengths**

Key strengths of the destination are;

- Stunning wilderness
- Unrivalled elevation
- Diversity of high quality trails (under development)
- Strong media and marketing

#### **10.2.4.2 Weaknesses**

Key weaknesses of the destination are;

- Potential for reduced visitation due to pay for use model
- Reliance on broader market to invest in complementary businesses in the township

## 10.3 KEY LESSONS LEARNT

The above and other destinations across Australia and around the world have demonstrated a number of key lessons learnt in developing a successful mountain bike destination. These lessons are;

- High quality trails are essential to success
- High quality environments are an important component of success
- Accommodation, food and beverage are critical to success
- Iconic, longer duration trail experiences are strong motivators for the market
- Gravity-focused all mountain/enduro trails are strong motivators for the market

## 10.4 ESTIMATED VISITATION- GEORGE TOWN

### 10.4.1 Overview

Mountain bike riding, and more specifically mountain bike tourism are rapidly growing markets, both in Australia and overseas. Mountain bike tourists are a valuable tourism sector who are generally considered to spend more and stay longer than general tourists.

Key peri-urban mountain bike destinations in Australia are seeing a large and continually growing visitation, with Melbourne's most popular trail networks The You Yangs and Lysterfield both seeing visitation top 150-200k p.a.



*Dirt Art* suggests that with high-quality trail development and appropriate marketing and promotion, the George Town project has potential to deliver the following visitation volumes post each stage of project construction. *Dirt Art* has made the following assumptions in preparing these estimates;

- The project would not be open prior to 2020, meaning Tasmania’s mountain bike industry will have matured significantly, and general mountain bike visitation to the state will be much higher than in 2018
- The project would be developed as per (or similar to) the concept plans provided
- Visitation behaviors would be similar to those seen at other similar mountain bike facilities

#### 10.4.2 Estimated visitation numbers

PROJECT STAGE	NEW TRAIL VOLUME (KM)	ESTIMATED VISITATION (P.A.)
ONE	69.5	20,000
TWO	39.4	40,000

*Dirt Art* suggest that visitors will likely be broken down into the following categories;

PROJECT STAGE	DAY VISITS	SINGLE NIGHT VISITS	3 NIGHT VISITS	TOTAL VISITORS
ONE	12,500	5,000	2,500	20,000
TWO	20,000	15,000	5,000	40,000

### 10.4.3 Estimated economic outcomes

#### 10.4.3.1 Overview

The projected direct economic impact of the above visitation has been calculated using the following assumptions;

- Overnight visitation spend has been estimated at \$200.00/night. This figure has been estimated based on Tourism Australia data and peer reports on mountain bike tourism potential
- Day visitation has been set at \$25/day. This has been based on peer research and reports into mountain bike destination economic impacts
- An average multi-day visit has been conservatively set at three nights

#### 10.4.3.2 Direct economic impact

Dirt Art estimate that the direct economic benefit of the project will be as follows;

PROJECT STAGE	DAY VISITS	SINGLE NIGHT VISITS	3 NIGHT VISITS	TOTAL
ONE	\$312,000.00	\$1,000,00.00	\$1,500,000.00	\$2,812,000.00
TWO	\$400,000.00	\$3,000,000.00	\$3,000,000.00	\$6,400,000.00

### 10.4.3.3 Indirect economic impact

Dirt Art has used a standard economic impact multiplier for tourism-related development (1.9x). Dirt Art estimate that the indirect economic benefit of the project will be as follows;

PROJECT STAGE	DAY VISITS	SINGLE NIGHT VISITS	3 NIGHT VISITS	TOTAL
ONE	\$592,000.00	\$1,900,000.00	\$2,850,000.00	\$5,342,000.00
TWO	\$760,000.00	\$5,700,000.00	\$5,700,000.00	\$12,160,000.00

## 10.4.4 Business development opportunities

### 10.4.4.1 Overview

The proposed trail development offers a wide range of business development opportunities, for both existing and new businesses. The mountain bike market is a diverse cross section of demographics and as such has wide ranging wants and needs when travelling. Generally speaking mountain bike riders represent a middle-upper end income earning market, who typically seek middle-upper range accommodation, and food and beverage offerings<sup>11</sup>.

There are a number of existing businesses in the Illawarra area that would benefit from the proposed development, across a range of areas, including; food and beverage, accommodation and retail areas.

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<sup>11</sup> Mountain Bike Market Profile- Dirt Art 2014

#### **10.4.4.2 Existing businesses**

Existing businesses in the area will have a significant opportunity to capitalise on the influx of mountain bike tourists. Businesses such as accommodation providers will benefit from minor retro fitting, which may include the addition of bike storage areas and a bike wash/workshop area. Food and beverage providers would benefit by making adjustments to their offerings to include healthy food options suitable for a day of moderate-intensive exercise.

#### **10.4.4.3 New business opportunities**

*Dirt Art* suggests that opportunities existing in the following areas;

- Additional bicycle retail and repair
- Bicycle hire
- Bicycle tours
- Shuttle uplift operator/s
- Events



 **DIRTART**

CONCEPT TO CONSTRUCTION

# 11 MOVING FROM CONCEPT TO CONSTRUCTION

## 11.1 OVERVIEW

*Dirt Art* suggest that all trail and facility elements described in this plan be constructed by a professional mountain bike trail company with significant experience in these specialised areas of development. Professional construction ensures all elements of the facility should meet relevant safety and sustainability standards, and that the trails will ultimately 'flow' well and will be enjoyable for users. While the designs provided for trail corridors in the plan provide the suggested optimum corridors for development, the final 'character' of the trail will be dictated by the construction team undertaking the trail build.

## 11.2 FINAL DESIGN

The new trail concepts provided in this strategic plan constitute a broader high-level vision for the proposed development rather than detailed trail designs. These concept corridors have been established through limited on-ground exploration and desktop research. The proposed corridors have not been completely ground-truthed and as such a final design phase will be required prior to any trail development.

Cost estimates for final trail design have been included in the implementation plan section of this report.

## 11.3 MANAGEMENT STRUCTURE

Given the mixed tenure of the site, and the fact that the majority of land is managed by the NPWS, *Dirt Art* suggests that a single management body should take on the management of the trails. In most cases this would be the local councils, potentially with a commercial provider managing some areas of the trail network.

If a single body management approach is enacted, *Dirt Art* suggests that Wollongong City Council consider management of the asset. In most cases this would involve a lease agreement taken over the trail corridors themselves, rather than the entire development area. This particular model has been used across Australia at a number of similar developments such as arguably Australia's current market-leading mountain bike destination, Blue Derby,

## 11.4 PLANNING APPROVALS AND ASSESSMENTS

### 11.4.1 Overview

The planning and approvals process for this type of process is multi-faceted, and if not undertaken by those with significant relevant experience may be lengthy and costly. *Dirt Art* suggests that public and stakeholder consultation is a key component in the process, and will often result in a more streamlined approvals process.

The below approvals do allow for some parallel processes, which can reduce the total approvals timeframe significantly. *Dirt Art* suggest that the likely approvals timeframe will be approximately 12+ months, with a shorter timeframe possible with streamlined processes and parallel works through the approvals process.

## 11.4.2 Required and potential approvals

The approval process for proposed trails will be dependent on their tenure. The following key processes will likely form components of the required approvals and assessments required prior to construction commencing;

- Parks and Wildlife Service Reserve Activity Assessment (RAA)
- Forest Practice Plan (FPP)
- Council development application (DA)

*Dirt Art* suggests that an EPBC federal referral is unlikely to be required, though this should be confirmed by a suitably qualified consultant.

## 11.5 TIMEFRAMES

### 11.5.1 Detailed trail design/construction plan development

Detailed design of the entire network would require approximately 20 days (4 weeks).

Compilation of a construction plan could be completed in approximately 2 weeks.

**TOTAL TIME REQUIRED- 6 weeks**

### 11.5.2 Natural values assessment (NVA)

This stage in the process will vary greatly depending on the requirements for field time.



Desktop assessment should be completed in 1 week, and may require revisions to trail designs.

A window of 8 weeks should be allowed for field assessments and report preparation.

**TOTAL TIME REQUIRED- 16 Weeks**

### 11.5.3 EPBC referral (if required)

*Dirt Art* suggest that an EPBC referral should not be required for this project, though independent specialist advice should be sought for confirmation.

If required, an EPBC assessment process would vary depending on the nature of the referral (statutory maximum timeframes are not always relevant). *Dirt Art* estimates that if a referral is required, a resolution time of 20 weeks should be expected.

**TOTAL TIME REQUIRED- 20 Weeks**

### 11.5.4 Forest Practices Plan

Given the proposed development does not reside on land managed by Sustainable Timber Tasmania, a Forest Practices Plan is unlikely to be required. Notably, this decision will be dependent on discussion with the Forest Practices Authority (FPA) during the development application process. If an FPP is required, the timeframe for resolution below should be expected.

**TOTAL TIME REQUIRED- 16 Weeks**

### 11.5.5 PWS Reserve Activity Assessment (RAA)

Given areas of PWS land are utilised by the project, a PWS Reserve Activity Assessment (RAA) will be required. Given the land classification of the Tipogoree Conservation Area, and the nature of the activity, it is likely that a low level (level 2-3) RAA will be required. Independent advice should be sought from PWS regarding the RAA assessment process. The RAA process does not have statutory time limitations, though a standard assessment and resolution time is indicated below.

**TOTAL TIME REQUIRED- 16 Weeks**

### 11.5.6 Council Development Application

Given the complexity of the project, *Dirt Art* suggest a development application (DA) approval window greater than the statutory approvals timeframe. This extended timeframe allows for delays due to request for information (RFI) requests, and responses to negative representations.

Notably, the project is likely to receive a number of negative representations through the development application phase. There is potential that these representations may lead to an appeal in the event of an approved DA. In the event of a DA appeal, the timeframes suggested would no longer apply.

**TOTAL TIME REQUIRED- 16 Weeks**

### 11.5.7 Summary of timeframes

Task/approval	Time required
Detailed trail design	6 weeks
Natural values assessment	8 weeks
EPBC referral	NA
PWS approvals	16 weeks
Forest Practices Plan	NA
Council DA	16 weeks
<b>Total</b>	<b>46 weeks</b>

*Dirt Art* suggests that with parallel works, the above could be completed within 6 months, potentially less with streamlined processes.

### 11.6 ENGAGING A SUITABLE CONSTRUCTION PROVIDER

Unlike a commercial or residential construction project, there is only so much design detail that can be given in a trail design process. The natural environment poses many unique challenges that will often dictate a change in trail alignment that could never have been anticipated during the design process. Buried bedrock, animal habitats and underground springs are all examples of factors that will force a change in trail alignment should they appear during construction. Additionally, the 'flow' of a trail that is critical to user enjoyment, and the trail drainage measures that are critical to sustainability typically require many adjustments during construction. For these reasons, it is essential that mountain bike trails and facilities are built by highly experienced, specialist construction companies, with significant experience building mountain bike trails.

The final character and style of a trail is entirely dictated by the construction team and particularly the machine operator involved in the construction process. A mountain bike trail has an absolute reliance on developing a riding 'flow', where braking is minimised and the trail carries a rider along in a smooth, undulating fashion. Unlike a walking trail, which typically relies on a flat, even surface, a mountain bike trail is about creating a landscape. This again is an essential reason for engaging a suitable construction company to complete the project.

A suitable construction company will also hold appropriate public liability and professional indemnity insurance and have extensive experience in trail design and construction; important considerations in managing risk and liability. Unless a provider has mountain bike trail design and construction specifically noted in their insurance terms, there is a very high likelihood that their cover will be forfeited should an incident proceed to legal action.

A number of avenues are available for involving trainees, volunteers and/or retrained workers, but this should be as part of a professionally managed trail team.

## 11.7 CONSTRUCTION METHODS- PROFESSIONAL

Currently the majority of professionally built mountain bike trails are completed utilising machinery, in most cases a small excavator. A mini-excavator, if professionally driven is a fast, economical and ultimately optimal method of building most mountain bike trails. These machines allow for simple construction of a variety of trail features, rock walls, TTF's, rolling terrain, drainage, bermed corners and jumps, all features that consume significant time if hand built. Ultimately in most cases machinery allows for construction of a much more exciting, engaging and sustainable trail experience.

All excavation work should be followed with extensive hand finishing. *Dirt Art* typically compose project teams in the following make up;

**Management Team-**

Project Manager X 1

Office Support/logistics Team

**Construction Team**

Machine operator X 1

Trail Crew/Finishing Team X 2

Typically, projects are conducted with more than one machine operator, in most cases utilising two finishing/trail crew members behind each piece of machinery.

## 11.8 CONSTRUCTION METHODS- VOLUNTEER

### 11.8.1 Overview

Given the large-scale destination focus of the project, *Dirt Art* suggests that the bulk of construction work is undertaken professionally. Given the long history of volunteer trail construction in the area, opportunities should be created for volunteers to continue involvement in aspects of the project, particularly in areas where larger volumes of informal trail already exist.

### 11.8.2 Recommendations for managing volunteers during trail construction

It is suggested that the current volunteer trail construction activity in the Illawarra area would benefit from a focus on approved construction projects.

*Dirt Art* suggests that the following management principles are enacted;

- All volunteers to undergo a formal trail construction training program
- All volunteers to agree to follow a basic set of workplace health and safety (WHS) guidelines, and to operate under an agreed safe work method statement/s (SWMS) for all construction activity in the area
- Volunteers to work on agreed, professionally designed projects only
- Trail construction to follow agreed standards, based upon the IMBA trail construction guidelines
- All volunteer projects to be regularly assessed during construction to ensure compliance (assessment by third party and/or land management agencies)
- All completed volunteer projects to be formally assessed and signed off prior to opening for public use (assessment by third party and/or land management agencies).

While the above management principles may represent a culture change in current practices, they ensure that ultimately the area will benefit from safe, well-organised and sustainable trail network. There remains significant scope within this management model for individuals and groups to develop their own 'style' of trail and to work independently while doing so.

The notion of a diverse style of volunteer developed trails is very valuable, but it must occur in an organised and sustainable fashion to ensure user safety and ongoing trail sustainability.

### 11.8.3 Seasonal construction considerations

*Dirt Art* suggest that sustainable trail construction should be possible in the area year-round, with optimal construction seasons being spring and autumn.



## 12 OPERATIONAL CONSIDERATIONS

### 12.1 RISK MANAGEMENT

#### 12.1.1 Overview

***Disclaimer- the following report section does not constitute legal advice, and is provided as a summary of general risk management principals used by Dirt Art in previous projects. Dirt Art recommend independent legal advice is sought to determine the best risk and liability management strategy for the proposed development.***

A common misconception is that of mountain biking being an 'extreme' sport, dominated by youths racing down hills at break neck speeds, when in reality the sport provides a safe and inclusive adventure activity for a broad range of users. Modern trail design and improvements in bike and equipment technology, have made the sport more accessible and safer than ever before.

While inevitably as with any outdoor activity accidents can and will occur, their incidence and severity can be very effectively managed. When operated on high-quality, purpose-built trails and with sound operational and risk management systems the incidence of injury at the majority of mountain bike destinations is very low. Incidence of severe injury and/or permanent disability, and/or death is extremely low.

Effective risk management relies upon recognising risk, where possible removing the risk, or where removal is not possible, managing the risk effectively. *Dirt Art* employ a number of design and construction considerations to reduce risk to users, and to advise users of the potential risks of engaging in particular aspects of the sport.

Incidents are generally categorised into three areas of failure; people, equipment and environment. *Dirt Art* utilise and recommend a range of strategies to effectively manage these three key risk areas, which will be detailed over the page.



The trail network proposed for this project has been specifically developed to minimise risk and consequence to users. This has been achieved using predominantly contouring trails, featuring gradually ascending/descending sections where required.

### 12.1.2 Risk management controls- people

The following risk management controls are recommended;

- a) **Restrict participant access:** Those participants with a severe lack of fitness and/or high-risk medical conditions should be restricted from engaging in the activity. This can be achieved through the use of an effective waiver form.
- b) **Utilise a warm-up loop to assess participant's fitness and ability:** The use of a short, simple warm-up loop is an effective way to assess participants' fitness and ability, before they embark on the trail network proper.
- c) **Utilise guides and leaders:** The forced or encouraged use of guides and leaders for less experienced riders is an effective method for managing participants who may overestimate their abilities or fitness, or lack an understanding of the challenges the trail network may involve.

### 12.1.3 Risk management controls- environment

The following risk management controls are recommended;

- a) **All trails to be professionally designed and constructed:** All trails should be professionally designed and constructed to provide a type and style of trail experience that minimises the incidence and severity of crashes.
- b) **Trail design and construction to avoid high risk/high consequence features/sections:** Trails should be designed and constructed to avoid high risk/high consequence section. This can be achieved by avoiding trail verge dangers (steep drops/ledges etc.), and through developing trails on gentle gradients.

- c) **All trails to be provided with an IMBA difficulty grading:** Provision of an accurate difficulty rating allows users to make an informed decision regarding which trails are best suited to their fitness and ability.
- d) **Signage to be installed at the main trail head:** Signage should be installed at the main trail head providing a clear trail map and a summary of trail difficulty information. Signage should also include any appropriate safety and emergency information.
- e) **Signage to be installed at individual trail heads and any point where required to assist navigation:** Signage should be installed at each trail head notifying users of the difficulty and distance of the trail. Directional/navigational signage should also be installed throughout the network to ensure users can navigate through the trails.
- f) **Emergency points to be clearly indicated throughout the trail network:** A number of appropriate emergency access/help points should be noted throughout the trail network. These points provide a location reference in an emergency. The points should be clearly marked, and offer functional access by an emergency vehicle and/or team.
- g) **Trails to provide gradual difficulty progression and avenues for safe skill progression:** Trails should be designed and constructed to facilitate a structured increase in difficulty as users move further into the trail network. Easier, shorter trails should be placed near the main trail head to allow for users to have a gentle introduction. Trail features should be designed to be low consequence and in keeping with the trails difficulty grading. Features should offer a structured increase in difficulty, promoting safe skill progression.
- h) **All trails to be managed in a single direction fashion:** Trail networks should be managed in a single direction fashion to reduce the likelihood of collisions. In some cases, dual-direction use is acceptable, typically on wider, flatter trails with good sight lines.
- i) **All trails to be single use unless shared use managed effectively:** Single use (mountain bike only) is the preferred management approach, though shared use can be managed effectively and safely on trails with a wider corridor, more gradual gradient and good sight lines.
- j) **All trails to be regularly audited/inspected:** All trails should be regularly audited/inspected to assess for any changes in trail condition and hazards such as fallen trees.

## 12.2 ONGOING MAINTENANCE

### 12.2.1 Overview

A professionally designed and constructed mountain bike facility will require very minimal ongoing maintenance. Despite this it is strongly recommended that a formal maintenance program be initiated prior to facility completion, as a structured program will typically result in significant cost savings over an approach whereby maintenance is only undertaken when major issues arise.

### 12.2.2 Suggested maintenance budget

The general market rate for trail maintenance in Australia is averaged at 2-5% of capital investment/value per annum. This figure is affected by a range of factors including; quality of trail construction, soil and geology type and local topography and terrain.

### 12.2.3 Maintenance funding options

A number of opportunities exist to fund trail maintenance programs, these include;

- User pays: This is a relatively untested model in Australia, and does pose some challenges for a public mountain bike trail network. There is some precedent for this in Australia now, with venues like Hiddenvale Adventure Park (QLD) now charging a nominal (~\$10/day) gate fee for trail access. If the quality of trail was high enough to justify a gate fee, this is a model that could be explored further.
- Internally funded: The majority of public trail networks have maintenance programs that are at least in part funded by government operational budgets. These maintenance budgets are typically supplemented with additional revenue streams generated by the trails.
- Commercial operator fees: The majority of public trail networks charge some level of fee for commercial operators using the trails. These operators would include; event promoters, uplift operators, skills coaches and other related entities.

Should a gondola project be pursued on Mount Keira, an opportunity would exist for the operator to contribute a towards trail maintenance for trails directly utilised by their mountain bike ticket sale customers.

- Commercial sponsorships: Some public trail networks in Australia have pursued commercial sponsorships, which typically involve a provider sponsoring a trail/s for an annual fee. These arrangements will not typically generate enough revenue to wholly fund required maintenance, but they can be a useful way to offset maintenance costs.
- Donation boxes: User donation boxes have been implemented at a number of public trail venues across Australia, with varying success. These boxes will only generally generate sundry revenue, as a small component of offsetting maintenance costs.
- Accommodation/dining levy: This model has yet to be used in Australia, but it has been a success for some destinations in North America. The model involves a small levy (typically a small percentage of revenue) placed on all local providers who would directly benefit from the development.

### 12.3 ONGOING AUDITING

*Dirt Art* recommend a formal auditing program be developed prior to completion of any new trail construction. An ongoing commitment to auditing provides optimal user safety, while also assisting with risk management compliance.

*Dirt Art* recommend a professionally developed and site-specific template is utilised for all facility auditing. It is suggested that facilities of this type are audited every 1-2 months, with an external audit to be professionally completed at least one per annum.

Auditing is a task that may be completed by in-house land manager staff, or by local volunteers, providing appropriate education and templates are provided. If this method of auditing is utilised, *Dirt Art* strongly suggest that an external audit is completed at least once per annum.

## 12.4 SHARED USE

The trails proposed have been designed for mountain bike use only, though climbing trails would be compatible with walking.

*Dirt Art* suggest that all descending trails are managed as mountain bike-only. Descending trails are incompatible with walking and other uses due primarily to increased rider speeds, which increase the likelihood and severity of rider/walker collision. It is internationally accepted best practice for mountain bike descending trails to not be managed in a shared-use capacity.

## 12.5 CAPITAL RENEWAL

Given the size and scope of the proposed facility it is suggested that capital renewal will not be required in the mid to long term. If professionally constructed, the trail and facilities at the Illawarra facility will offer significant diversity in experience, even for frequent users. The suggested maintenance structure has allowed for ongoing capital improvements as required.

## 12.6 BRANDING

Around the world, many commercial bike parks have seen great success in developing a separate brand for their mountain bike activities. *Dirt Art* suggests that a specific brand and identity is developed for the mountain bike activity.

This branding can be targeted to the mountain bike market, which will improve the effectiveness of advertising, brand recognition and would allow for a range of merchandising opportunities.

Branding and the establishment of a mountain bike-specific identity also allows for the implementation of a range of other supporting programs such as app development. An app specific to the trail network would be a significant value-add to the mountain bike program.

## 12.7 SIGNAGE

### 12.7.1 Overview

***Dirt Art*** typically suggest a signage budget of approximately 2.5% of trail construction capital expenditure.

An effective signage system is a vital component of any mountain bike facility. Signage provides users with a clear overview of the facility at the trail head, and provides valuable navigational assistance throughout the trail network. Signage also plays a valuable role in risk management compliance and greatly reduces the risk of injury caused due to riders using facilities beyond their skill level.

The design and planned implementation of a signage system should form an integrated component of any facility design.

## 12.7.2 SIGNAGE TYPES

### 12.7.2.1 *Information and entry signage*

Information and entry signage welcomes users to the facility, while also providing a clear and concise overview of the facility type and trail difficulty ratings. Entry signage should be placed in a prominent location either at the trail head itself or in a main car park area. At a minimum this signage should house the following information;

- a) Trail and facility map
- b) Trail distances
- c) User safety information
- d) Emergency contact numbers
- e) Any site-specific warning information

*Dirt Art* suggest using a sign with a Perspex cover so trail maps may be easily updated, and any relevant news and information can easily be advertised. Alternatively, a metal sign may be utilised, with an adhesive map to allow for any trail additions or alterations.

Consideration should be given to numbering trails to allow for simpler user navigation.

### 12.7.2.2 *Trail head signage*

Each trail head should have an entry sign detailing the trail name, length and difficulty rating. This sign may be mounted to a range of post sizes, though it is suggested that a 200mm width post and sign is optimal.

Consideration should be given to numbering trails to allow for simpler user navigation.

### 12.7.2.3 *Way marker signage*

Way marker signage should be utilised at any ambiguous trail areas or at any intersection throughout the trail network. These signs are typically much smaller and thus cheaper to produce. *Dirt Art* suggest a 90mm post and sign is optimal.

### 12.7.3 SIGNAGE EXAMPLES

Please see the following pages for signage samples.



# 12.7.3.1 Entry point signage

### Trail Information

**Trail difficulty rating system**

- Green Circle**- These trails have a wider tread, a generally uniform surface and more moderate gradients.
- Blue Square**- These trails have changing surfaces, moderately difficult trail features, small drops and jumps, and feature steeper gradients.
- Black Diamond**- These trails are suitable only for advanced riders, and feature steep gradients, challenging trail features and larger drops and jumps.
- Double Black Diamond**- These trails are highly variable, featuring large jumps and drops and very steep trail sections. These trails are only suitable for highly experienced riders.
- Pro Line**- These trails feature large gaps and drops, extremely steep terrain and highly variable surfaces. These trails are only suitable for professional-level riders.

**Trail types**

- Flow**- These trails are machine built and offer a wider trail tread, smoother surface, and generally feature larger bermed corners and flowing terrain.
- Technical**- These trails are technical in nature and offer a generally narrower, more irregular trail surface. These trails may feature tight corners, rocks and other trail features.
- Freeride**- These trails are machine built and offer a wider trail tread, though offer a range of jumps and similar trail features. Jumping experience is required.

**Safety Equipment**

All park users must wear an Australian Standards approved helmet.

Maydena Bike Park strongly suggests park users wear a full-face helmet, gloves, eye protection, knee and elbow protectors, all at a minimum.

### Safety Information

**IN AN EMERGENCY WITHIN THE PARK CALL- 1300 399 664**

**RIDER RESPONSIBILITY CODE- MUST READ!**

*All users of the Maydena Bike Park are bound by the park's rider responsibility code. Any user not complying with the code will have their access revoked, and may face legal action from the park.*

- Stay in control- you are responsible for avoiding others and people.
- Know your limits- Ride within your ability. When learning new skills or features, start small and work your way up.
- Protect yourself- Use appropriate bike and protective equipment.
- Don't ride under the influence of drugs or alcohol- it is your responsibility to ensure you are not riding whilst the influence of drugs and/or alcohol.
- Inspect and maintain your equipment- ensure your bike is in good, functional condition.
- Inspect trails and features- conditions change regularly.
- Obey signs and warnings- stay on marked trails only. Keep off closed trails. Ride only in the designated direction of the trail.
- Be visible- do not stop in unsafe areas, and look out for others.
- Cooperate with park management of incidents and/or accidents.
- Respect our trails and the environment- do not disturb flora or fauna.
- Do not bring weeds and pathogens into our park- all bikes must be washed prior to entering the park.
- Do not pollute our environment or risk starting a fire- smoking is strictly prohibited throughout the park. Smoking is only allowed in the designated area at our base building.
- Obey the directions of park staff at all times.
- Lack of compliance with any of the above conditions may lead to cancellation of your lift pass without refund.

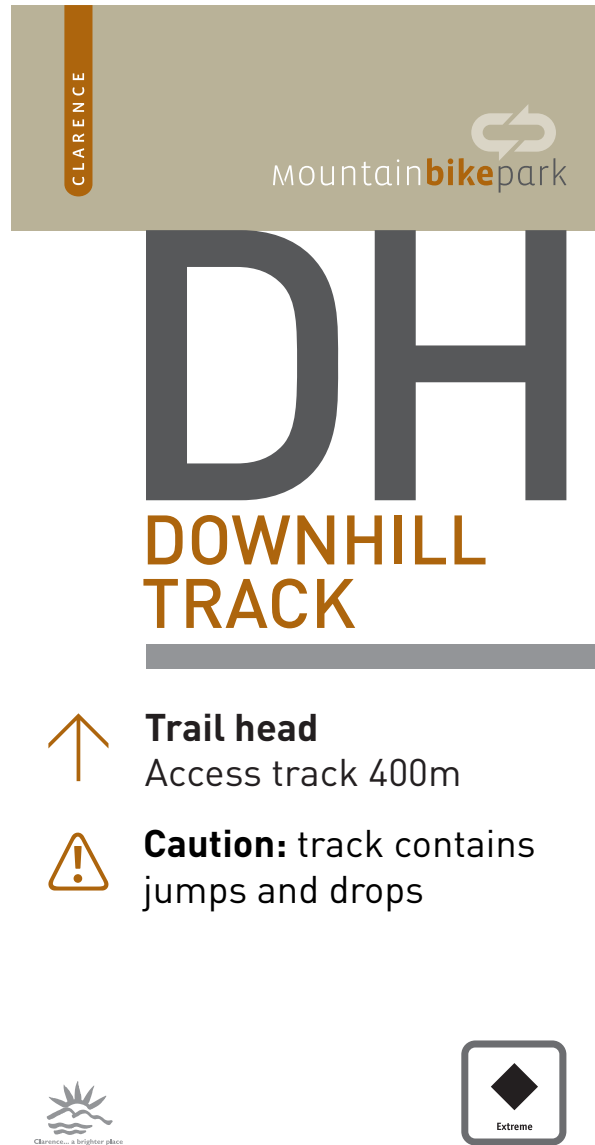
**SUMMIT BUILDING**  
SULLIVAN ROAD, MAYDENA

**BASE BUILDING**  
SULLIVAN ROAD, MAYDENA

TRAIL NAME	DIFFICULTY
HOMeward	Flow
MIDLINE	Flow
CLIFFTOP	Flow
SCANDINAVIA	Flow
TYENNA	Flow
SKYLINE	Flow
MARRIOTT'S	Flow
PANDANI	Flow
TEA TREES	Flow
DIAL IT DOWN	Flow
COLOUR BLIND	Freeride
SOUTH CRESCENT	Freeride
HANDI SCANDI	Technical
EASTSIDE	Technical
WEDGETAIL	Technical
ROGGGY	Technical
BLOW IN	Technical
OLD MATE COBBA	Technical
THE LOCAL	Freeride
WICKED STYX	Technical
FUNKY COLD MAYDENA	Technical
KING BROWN	Technical
PAMELA	Technical
TINDER	Technical
NATURES HECTAR	Technical
SUPERCROSS	Freeride
THE NUNNERY	Technical
OTT	Technical
INFERNO	Technical
THRASH HORSE	Technical
ZEN GARDEN	Technical
MAXED OUT	Technical
MAYDENA HITS	Freeride
BIG HIPS	Freeride

**EASIEST** (top) / **HARDEST** (bottom)

### 12.7.3.2 Trail Head Signage



12.7.3.3 Way marker signage



one way  
**only**

## 12.7.4 Marketing

**Dirt Art suggest a marketing budget of 2.5% of construction capital expenditure in year one, and an annual expenditure of 0.5% of capital expenditure every year for a minimum of five years thereafter.**

Effective marketing is absolutely critical to the success of any mountain bike destination. While word-of-mouth has traditionally been the most commonly utilised approach for promoting trails, this approach in isolation is no longer adequate for promoting nationally significant destinations. *Dirt Art* suggest a multi-faceted marketing approach, which includes;

- Destination digital media marketing: Utilisation of providers such as Flow Mountain Bike to undertake digital destination marketing. The creation of high-quality content during these visits can be recycled throughout ongoing marketing campaigns.
- Social media: Social media is an excellent platform for targeting the broadest section of the mountain bike market. Key platforms are Facebook and Instagram, followed by Snapchat and Twitter. *Dirt Art* suggest creating and utilising platforms during the construction process, which allows for a greater potential to build an audience, while also bringing followers 'along for the ride' during construction. A focus should be made on delivering high-quality, regular content, and where possible frequently engaging with the audience.
- Merchandise: Quality merchandise is an excellent way for visitors to contribute revenue back to the trails, but more importantly act as advocates for the destination upon their departure.
- Events: Events are a powerful marketing tool, which can have a profound impact on elevating the profile of a destination.

*Dirt Art* recommend developing a formal marketing plan for the project, ensuring that the project will be at the centre of riders' decision making when they plan their next holiday.



## 13 CONCLUSION

The George Town Mountain Bike Project offers strong potential to add to Tasmania's growing suite of world-class mountain bike experiences, providing a new and exciting trail destination that would provide profound economic benefits for the region.

Mountain biking is one of the world's fastest growing adventure sport activities, and encompasses users across all ages and social demographics. Mountain bike riders are typically mid to high income earners and have a propensity to travel regularly to ride. With an average holiday of 7 days, and an average spend higher than that of the average tourist<sup>12</sup>, mountain bike riders are an excellent tourist market to target.

The George Town Bike Project proposes development of 105.8km of world-class trails, which capitalise on the natural assets of the site to create one of Australia's leading mountain bike destinations. This feasibility study has provided a clear pathway towards development of a mountain bike destination that would;

- Create 10 FTE jobs during trail construction
- Deliver 40,000+ annual trail visits
- Deliver \$6,400,000 per annum direct economic impact
- Deliver \$12,160,000 per annum direct + indirect economic impact
- Create opportunity for 3+ new businesses direct result of the project
- Create 10+ new FTE jobs created as a direct result of the project

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<sup>12</sup> 2016 Mountain Bike Market Profile, Dirt Art Pty Ltd

For a relatively modest capital expenditure, and minimal ongoing operational expenditure, the George Town Mountain Bike Project has potential to deliver profound, economic, social and environmental results. This report has provided a development and management pathway, which would undoubtedly establish the Illawarra Escarpment as a nationally-significant mountain bike trail destination.



 **DIRTART**

RECOMMENDATIONS



## 14 RECOMMENDATIONS

*Dirt Art* make the following key recommendations;

1. The project offers significant social, economic and environmental benefits, and thus should be pursued
2. Permanent and future production forest areas should be avoided in favour of pursuing trail development in the Tipogoree Hills Conservation Area
3. A minimum first stage of 66.4km should be pursued to ensure that the facility makes a profound impact upon opening
4. Public and stakeholder consultation should be continued throughout the project, to both build social license, and reduce the likelihood of complaints through the approval process
5. The next stage of trail design should be undertaken by a professional mountain bike trail company
6. Where possible, final trail alignments should sustainably and sensitively
7. Where possible, consultants engaged to work through approvals should have significant experience working specifically with mountain bike trail projects
8. The IMBA trail difficulty grading system should be used for all trails
9. The trails should be built by a professional trail company, with extensive experience with mountain bike trail development
10. Management of the trails should be undertaken by a single authority
11. A powerful brand and identity should be professionally developed for the destination
12. Signage should be considered a critical component of the project
13. A comprehensive marketing plan should be developed and enacted for the project

# 15 APPENDIX TWO- MOUNTAIN BIKING MARKET SEGMENTS AND RIDING STYLES

## 15.1 OVERVIEW

The mountain bike market is divided into various groups of riding activity, with bicycles themselves developed to meet the needs of these market sectors. While the below outlines the main categories of mountain bike activity, it must be acknowledged that this is by no means an exhaustive list. In recent years, there has also been significant advancements in bicycle technology, which is resulting in many riders choosing one bicycle to engage in multiple styles of riding. This market sector is broadly referred to as all mountain riding, and typically involved a dual suspension bicycle with 5-7 inches of front and rear suspension travel.

## 15.2 ENDURO AND ALL MOUNTAIN

Enduro and all mountain is the largest and fastest growing category of riders in the industry, making up approximately 60% of all riders. This style of riding typically involves longer travel dual suspension bikes, which have a gravity focus, but are also capable climbers. Generally speaking this style of riding involves less focus on climbing, and more focus on descending. Riders will either climb to the top of a trail, or use a chairlift or vehicle uplift.

## 15.3 CROSS COUNTRY AND TRAIL RIDING

Cross country and is the second largest sector of the mountain bike market, and is the mountain bike discipline included in the Olympic Games. This style of riding typically involves front suspension bikes or shorter travel dual suspension bikes. Cross

country riding involves an equal focus on climbing and descending, with riders climbing to the top of any descents they encounter.

## **15.4 DOWNHILL**

Downhill mountain biking typically refers to purely descending riding, where riders utilise a course of between 2-5 minutes in length. This market segment typically involves more robust bicycles with greater suspension travel (8-10 inches front and rear). Downhill riders typically utilise a chairlift or vehicle shuttle to deliver them to the trail head, as downhill-specific bicycles are not designed for uphill riding.

Downhill mountain biking typically involves more challenging riding terrain and steeper trail gradients, though the emergence of all mountain riding has brought more downhill trail elements into every-day mountain biking.

## **15.5 DIRT JUMPING**

Dirt jumping is widely considered as a market segment only populated by younger riders, and while these users may make up the dominant demographic in this style of riding there is a broad cross section of riders who engage in dirt jump riding.

Dirt jumping involved a point-to-point or loop course typically populated by a variety of jumps, rollers and bermed corners. Users aim to gain maximum airtime while riding as smoothly as possible. More advanced dirt jump riders complete many different aerial manoeuvres including 360's, back flips and front flips.

Dirt jumping has a direct crossover with BMX riding, with both user groups utilising the same facility type.

## 15.6 PUMP TRACKS

Pump track riding is a relatively new though fast-growing style of mountain biking, which involves a small, low lying track populated with a variety of rollers and bermed corners. The aim is to 'pump' the bike through the track, gaining momentum without the need for pedalling. These simple, low maintenance facilities have a small footprint and relatively low development costs, and are thus perfect for an urban and peri-urban facility setting.

## 15.7 HEAD-TO-HEAD

Head-to-head mountain biking is predominantly racing-focused discipline, which has seen a variety of different formats over the past ten years. The discipline began with a dual slalom format, whereby two riders raced each other down separate, parallel courses. This format was changed to four cross in 2004, which involved four riders racing down a single, wide course populated by a variety of natural terrain features, jumps and corners.

In 2012 the UCI (Union Cycliste Internationale)<sup>13</sup> removed four cross from its World Cup racing calendar, which resulted in many national federations removing the discipline from their race schedules. A decision has not yet been published regarding four cross racing either in Australia or on the world stage.

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<sup>13</sup> The UCI is the international governing body responsible for all cycling disciplines

## 15.8 MOUNTAIN BIKE RACING FORMATS<sup>14</sup>

### 15.9 CROSS COUNTRY OLYMPIC (XCO)

XCO is the mountain bike discipline included in the Olympic Games, and provides a diverse riding experience including climbing and descending. An XCO course must be between 4km and 6km in length, preferably using the venue in the form of a cloverleaf to provide optimum course contact with the race village. No more than 15% of the course may be on paved or sealed road.

### 15.10 CROSS COUNTRY ENDURO/TIMED FORMAT (XCEN)

A multi-lap cross country event based on a set time format of 1-24 hours in duration. Riders are judged on the number of laps they complete in the given time frame. Course length should be at least 5km, with a longer course required for larger competitor numbers.

### 15.11 CROSS COUNTRY POINT-TO-POINT (XCP)

A cross country format event utilising a point-to-point course of between 20-60km in length. Variations to course length may be allowed at the discretion of the Technical Delegate.

### 15.12 CROSS COUNTRY MARATHON (XCM)

XCM utilises a course of between 60km and 120km. The event can be run in the following formats; single loop, point-to-point, or over a maximum of three laps. In the event of a single lap format no part of the course may be covered twice. In the event of a multi-lap event short cuts for some classes are not permitted.

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<sup>14</sup> Information from Mountain Bike Australia (MTBA) 2011 Technical Regulations. [www.mtba.asn.au](http://www.mtba.asn.au)

### **15.13 CROSS COUNTRY SHORT COURSE (XCC)**

XCC utilises a course of up to 800 metres in length, which should allow for passing opportunities throughout the entire course length. The course may have artificial features if they are safe and easily passable by the majority of riders.

### **15.14 CROSS COUNTRY ELIMINATOR (XCE)**

XCE is a short course cross country racing format where riders contest a course up to 1km in length. Riders race in groups of four and are eliminated in a format similar to four cross racing. The course may include a range of natural and artificial obstacles. Qualification rounds will take place in a similar format to a 4X event.

### **15.15 SUPER D (SD)**

A point-to-point event involving a predominantly descending course contested in a mass start, eliminator or time trial format. A Super D requires a course of at least 2.5km in length with multiple passing opportunities. The course length will often dictate the racing format utilised, with longer courses being more suitable for mass start racing.

### **15.16 GRAVITY ENDURO**

Gravity enduro is the newest and fastest growing mountain bike event format, which is exponential growth across the world. The format involves a range of transition stages, with riders racing the descending section of trails. While descending in focus, race stages may include flat sections and short climbs. The format combines the fun and action of downhill with a reduced risk of crash/injury, and the fun of cross-country racing without the strenuous climbing.

### **15.17 DOWNHILL (DHI)**

DHI is a point-to-point format race involving a course of between 1.5km and 3.5 km. Total race time should be between two and five minutes. The course must contain a maximum of 3% paved roads and will consist of a variety of different terrain types. There should be an emphasis on technical skills rather than pedalling.

### **15.18 FOUR CROSS (4X)**

4X involves a descending course of between 30 and 60 seconds in length. The course should involve a variety of terrain including; jumps, banked turns, flat turns and natural terrain features. 4X is a competition that consists of qualifying round/s or timed qualifying, followed by a series of races (motos) where four riders share the one course. The first and second placed riders in each moto advance to the next round.