

NANNUP TANK 7&8 MOUNTAIN BIKE TRAIL NETWORK CONCEPT PLAN

March 2019



NANNUP TANK 7&8 MTB TRAIL NETWORK CONCEPT PLAN

Prepared by Common Ground Trails Pty Ltd for the Shire of Nannup

ACKNOWLEDGEMENTS

The authors of this Nannup Tank 7&8 Mountain Bike Trail Network Concept Plan respectfully acknowledge that this land on which we live and work is Noongar country, and that the Noongar people are the traditional custodians who have a rich social, spiritual and historical connection to this country, which is as strong today, as it was in the past.

Common Ground Trails wishes to acknowledge the significant contribution of the project steering committee as well as the valuable input from, stakeholders, organisation representatives, users and individuals.

DISCLAIMER

Common Ground Trails Pty Ltd, its employees, directors and associated entities shall not be liable for any loss, damage, claim, costs, demands and expenses for any damage or injury of any kind whatsoever and howsoever arriving in connection with the use of this Plan or in connection with activities undertaken in mountain biking generally.

While all due care and consideration has been undertaken in the preparation of this report, Common Ground Trails Pty Ltd advise that all recommendations, actions and information provided in this document is based upon research as referenced in this document.

Common Ground Trails Pty Ltd and its employees are not qualified to provide legal, medical or financial advice. Accordingly, detailed information in this regard will require additional professional consultation in order to adequately manage and maintain the facilities and reduce risk.



Department of Biodiversity,
Conservation and Attractions



Department of
Local Government, Sport
and Cultural Industries





CONTENTS

OVERVIEW	4
PROJECT OVERVIEW	4
PROJECT METHODOLOGY	7
ENGAGEMENT AND CONSULTATION	7
LOCATION AND ACCESS	8
SCALE STUDY	9
SITE ASSESSMENT	10
DEVELOPMENT ZONES	11
BROAD CONCEPT	11
TRAIL SYSTEM	12
NETWORK DETAIL	15
TRAIL STYLE OVERVIEW	15
INFRASTRUCTURE	16
INDIVIDUAL TRAIL SUMMARIES	17
BROAD COST ESTIMATE	57

OVERVIEW



PROJECT OVERVIEW

The South West Mountain Bike Master Plan (SWMP) identified Nannup as having potential to become a regionally significant mountain biking destination. The SWMP recommended development of Nannup as a Trails Hub with the Tank 7&8 site one of five identified priority sites containing mountain biking opportunities.

Nannup is well regarded within the mountain bike community and has the opportunity to provide a trail product unique to the region, attracting riders from as far away as Perth.

The project area provides a unique opportunity for MTB trails set within a timber reserve which allows for a more intensive level of development than that available on conservation estate. The project area will be designed as a self-contained trail network making the most of the features found within the landscape. A variety of trail styles are proposed with difficulties ranging from beginner (Green Circle) to advanced (Black Diamond) and extreme (Double Black Diamond) in a 'stacked loop' design to maximise user configurability; riders are able to shorten or lengthen their rides by choosing different trails.

SITE DESCRIPTION AND LOCATION

The proposed project area is approx. 177ha, located in the area commonly referred to as Tank 7&8, 2kms east of the townsite of Nannup. The project area is accessed via Brockman Highway and will soon be accessible from town via a shared use path alongside the HWY.

The site is Crown Freehold (Section 34, sanctioned for purposes of timber production Folly Plantation) and contains an active plantation managed by the Forest Products Commission. There is a waste treatment facility that dissects the project site, managed by the Water Corporation. To the West of the site is future residential development the north and east boundaries are adjacent farming property.

MOUNTAIN BIKE PLANNING CONTEXT

In accordance with the Western Australian Mountain Bike Management Guidelines (2019, Parks and Wildlife), (WAMTBMG), a Framework was developed to define project objectives, target market and user types. Terminology and definitions are provided in the guidelines.

PROJECT OBJECTIVES

The Objectives of this project, as defined in the framework, were to:

- Create a regionally significant MTB trail network which forms part of the regionally significant Nannup location outlined in the SWMP and is detailed in the Nannup Cycle Masterplan;
- Create a trail network that capitalises on the scenic quality, feeling of remoteness and extensive vistas created by the unique topography;
- Does not enter the Water Corporation reticulation area;
- The MTB trail network is designed in alignment with principles of whole of life cycle low maintenance and sustainability;
- Develop a high quality, sustainable and accessible single-track trail network suitable for a diverse range of users;
- The planning acknowledges timber production as the primary land use;
- The trail network should be developed in a manner that can operate in conjunction with timber harvesting operations and is sympathetic to effective dual use. The perpetuity of the trail network is to be considered in the design and construction phase to reduce re-construction costs into the future,
- Provide the ability for the network to host XC events where appropriate;
- Identify and protect conservation, environmental and cultural heritage values;
- Maintain and protect the diversity of flora and restricted vegetation complexes, granite outcrops, areas identified as protectable from Phytophthora (dieback) and species of significance;
- Ensure trail development fits within the natural environment and is not visually obtrusive or negatively impacts other established activities by implementing best practice planning, design and construction standards;

Trail planning and development will adhere to the Trail Development Process within the WA MTB Management Guidelines.

TRAIL SYSTEM

The Tank 7&8 trails will be developed in a Trail Network Model with the trail system to incorporate the following design principles:

- Stacked loop trail network
- 100% single MTB use
- 80% single direction, 20% dual direction
- Multiple trail opportunities allowing different riding lengths and difficulty.
- Trails to fit within landscape and focus on natural features. Steel/ timber features would only be considered if required to protect specific environmental values.
- Consider alternate lines and optional technical features to increase difficulty of trails.
- Continuous, non-compounding trail alignments to maximise event opportunities.
- Trail design to feature and interpret the natural landscape.

SCOPE AND SCALE

The Tank 7&8 MTB trails will be a regionally significant trail network that forms part of the regionally significant Nannup location outlined in the SWMP. 30km of trail is proposed within the project area.

The proposed area contains topography and landscape features that are desirable for MTB trail development. Ideally located only 2km from the town of Nannup, the site is already popular within the mountain bike community with numerous unsanctioned trails traversing the area.

The primary focus is the provision of trails for recreational riding, however the trail design also considers potential gravity enduro and cross country event use and opportunities for concurrent recreation use while events are taking place.

TARGET MARKET AND USER TYPES

The primary target market of the network includes the leisure and enthusiast cohorts (Refer definitions within the WAMTBMG). The sport and gravity cohorts are considered a secondary target market. The elevation range and rocky terrain available is a rarity in the current WA mountain bike trail offer, and as such it is proposed that a focus of the development at Tank 7&8 be on creation of intermediate, advanced and extreme trails that make to most of this terrain and enable opportunity for rider progression.

STYLE

The trails will comprise primarily cross country (XC) and all mountain (AM) trail styles with a combination of flow (70%) and technical (30%).

The trails will cater for a wide range of ability levels and will include easy, moderate and advanced classifications. The following breakdown was specified in the project brief:

- Green (easy) 35%
- Blue (moderate) 50%
- Black (difficult) 15%

However following stakeholder and community consultation and discussion within the steering committee it was determined the breakdown should be as follows:

- Green (easy) 25%
- Blue (moderate) 50%
- Black (difficult) 20%
- Double Black (extreme) 5%

TANK 7&8 MOUNTAIN BIKE TRAIL NETWORK CONCEPT PLAN

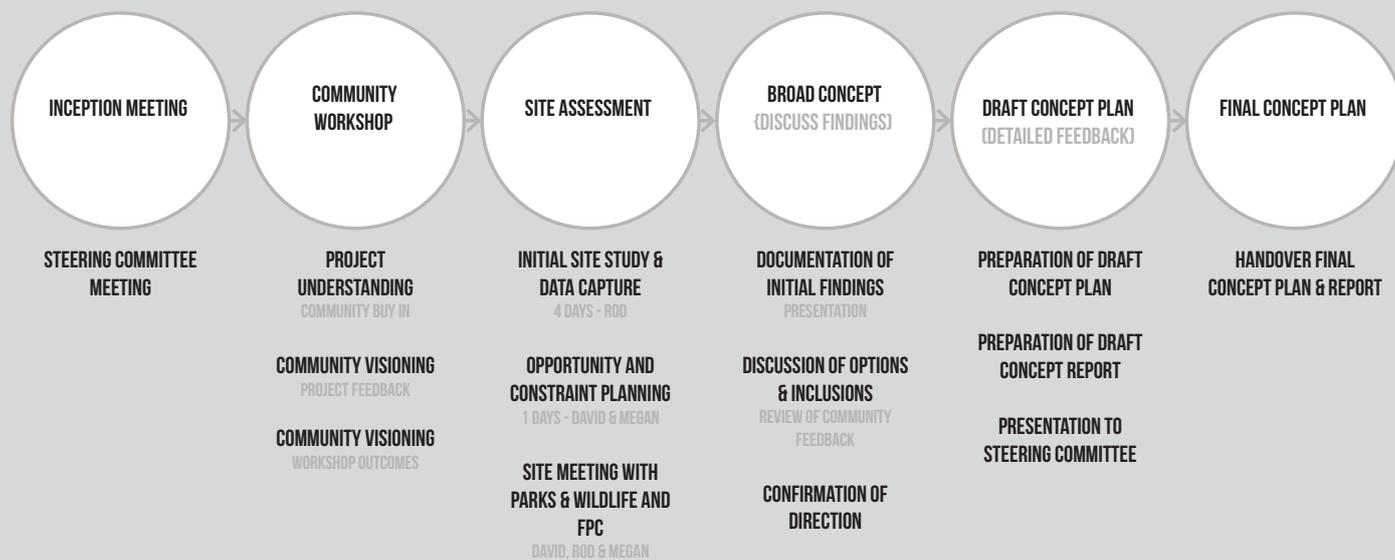


Figure 1: Project methodology

PROJECT METHODOLOGY

To fulfil the project brief and objectives identified by the steering committee, the following stages were undertaken:

INCEPTION

In consultation with the steering committee, the project framework, objectives and staging were reviewed and confirmed. Details including project area, key stakeholders, user groups and community groups were confirmed.

COMMUNITY WORKSHOP

A community workshop was held to determine the desires of the local and broader mountain bike community for the site. Results informed the development of the concept plan.

SITE ASSESSMENT

Site meetings were held with Parks & Wildlife and FPC. An audit of the existing conditions was undertaken to gain a detailed understanding of the landscape, topography, soil types, vegetation and ground conditions. The site study identified areas where trail development is and is not appropriate.

BROAD CONCEPT

A broad concept was developed outlining initial findings. The Broad Concept was presented to the steering committee and options and inclusions discussed enabling conformation of concept direction.

DRAFT CONCEPT PLAN

A draft concept plan and report were then prepared and presented for feedback. The draft plan illustrated the trail system concept plans and mapping, trail system configuration and description, individual trail summaries and potential event usage. The draft also included recommended construction staging and cost estimates.

HANDOVER OF FINAL CONCEPT PLAN

The concept plan will be finalised following wider stakeholder consultation.

ENGAGEMENT AND CONSULTATION

STEERING GROUP

The Project Steering Group comprised representatives from the Shire of Nannup, the Department of Biodiversity Conservation & Attractions Parks and Wildlife Service (DBCA), Forrest Products Commission (FPC), Water Corporation and Nannup Mountain Bike Club.

MOUNTAIN BIKE COMMUNITY

A workshop was held to involve the mountain bike community in the development of the new concept. Fifteen plus attendees including representatives from the community and Nannup MTB Club. Discussion focussed on the type and style of trails that should be provided in the concept, and more importantly the intent of what Tank 7&8 could be utilised for in comparison to other networks in the state. A focus of the workshop was that Tank 7&8 should focus on descending trails which maximise the elevation range available and make full use of natural landforms and features on site.

LOCATION AND ACCESS

The Tank 7&8 site is located in the Shire of Nannup, approx. 2km east of Nannup. The project area is approximately 177ha located in the Folly Plantation. The project area can be accessed by vehicle via Brockman Hwy. The Shire of Nannup have plans for construction of a shared use path from the townsite out to the site adjacent the Brockman HWY. There is a

network of forestry roads traversing the project area which are available for public use outside of forestry operation times, however, are in varying condition and severely deteriorate in winter months. The grades of some roads also need considering when determining potential shuttle routes as the roads were not designed for 2WD vehicles or towing trailers.

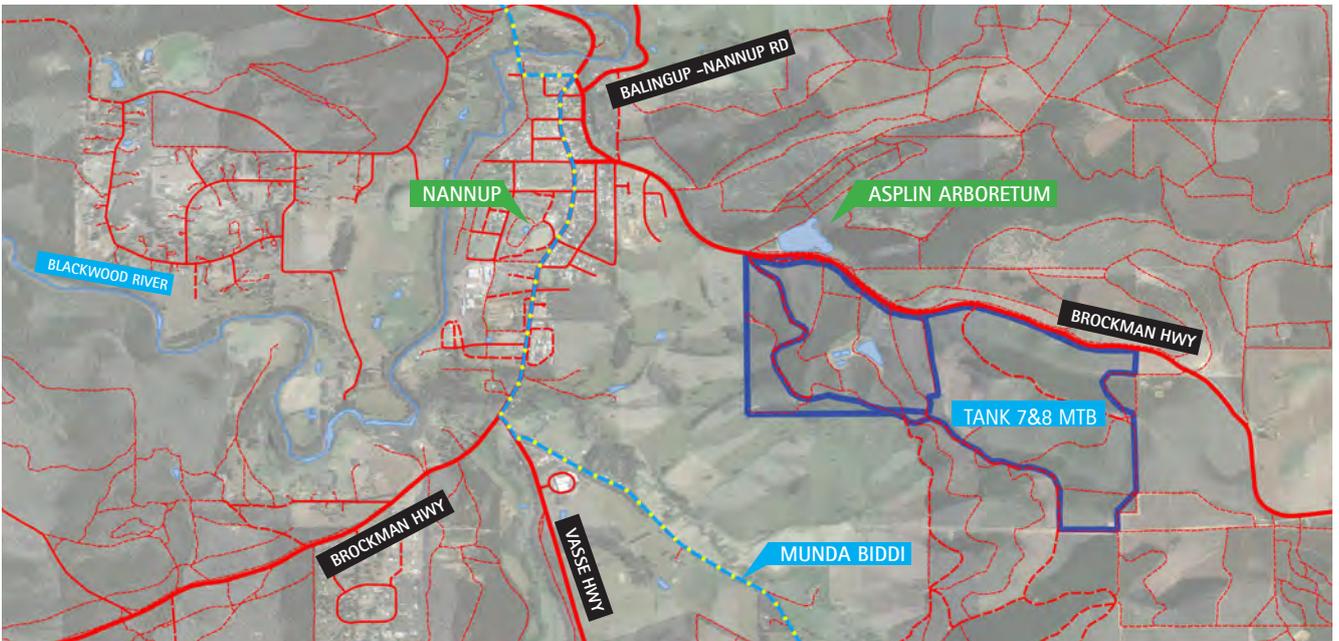


Figure 1: Project Location Plan

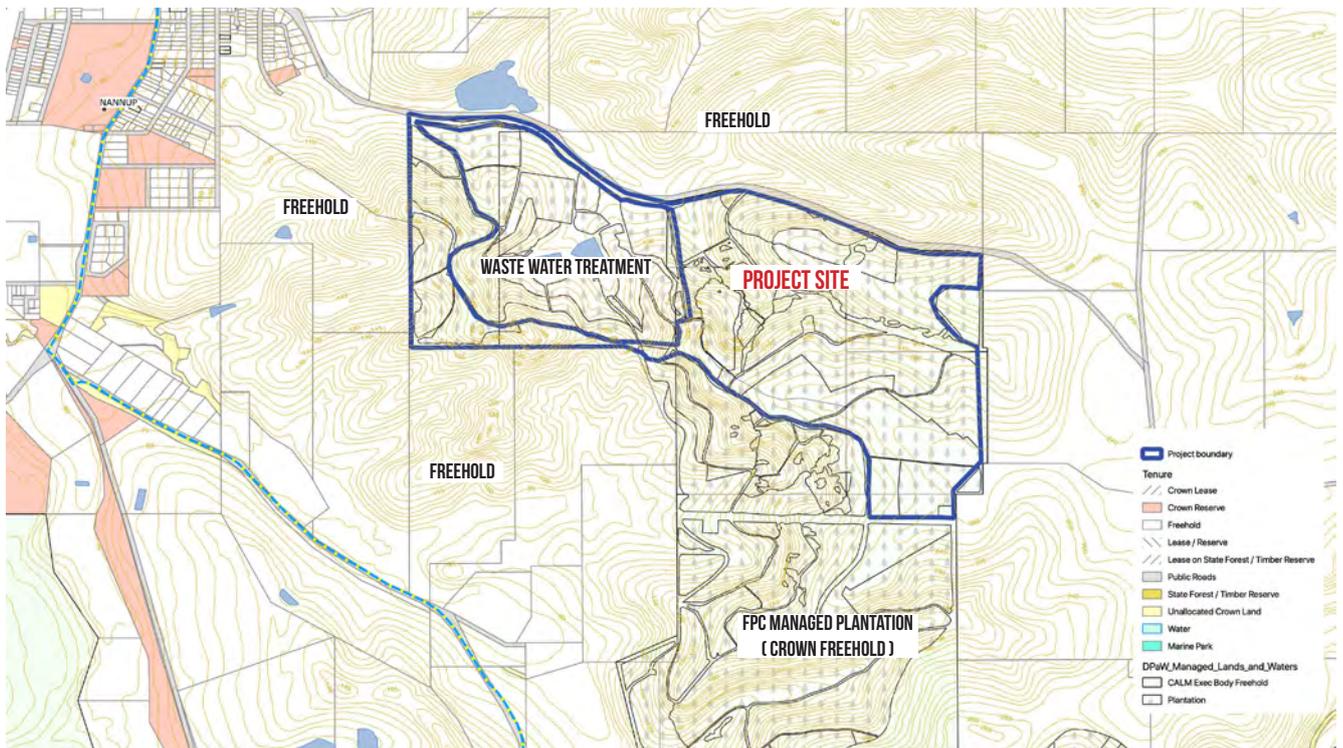


Figure 2: Project Area tenure

TANK 7&8

MOUNTAIN BIKE TRAIL NETWORK

CONCEPT PLAN

SITE ASSESSMENT

The following is an overview of the desktop analyses performed. Further ground truthing on site resulted in a broad concept which then informed the development of the draft concept. Site assessment considered the inherent qualities of the landscape, plantation harvesting schedules, overall trail network and configuration, and reviewed car parking and access requirements.

TENURE

The site is located on Crown Freehold (refer to figure 2), Section 34, sanctioned for purposes of timber production and managed by FPC. Adjacent tenure includes additional Crown Freehold and Freehold. Proximity of existing and future residential property has been taken into consideration in alignment of trails and locating trailheads and shuttle roads.

TOPOGRAPHY, SLOPE AND ASPECT ANALYSIS

There is significant elevation change with up to 140m of drop from the highest point down into the predominate valley (refer to figure 3). Average gradient varies from 12% to 24%, providing good opportunity for a range of trail classifications. Two prominent east-west ridgelines create north and south facing slopes. Roughness analysis shows the area with the most variation in surface is contained within the predominate valley, which was confirmed with site visits and recording of dominant site features.

EXISTING TRAILS

There is a small network of existing unsanctioned trails on site, approximately 7.2km in length (refer to figure 5). These existing alignments have been taken into consideration in development of the concept and where feasible sections of existing track will be incorporated into the network. Where existing trails are incorporated into the network modifications will be made to ensure they are in line with classification standards. Where existing trails are not included into the network they will be closed and appropriate rehabilitation undertaken.

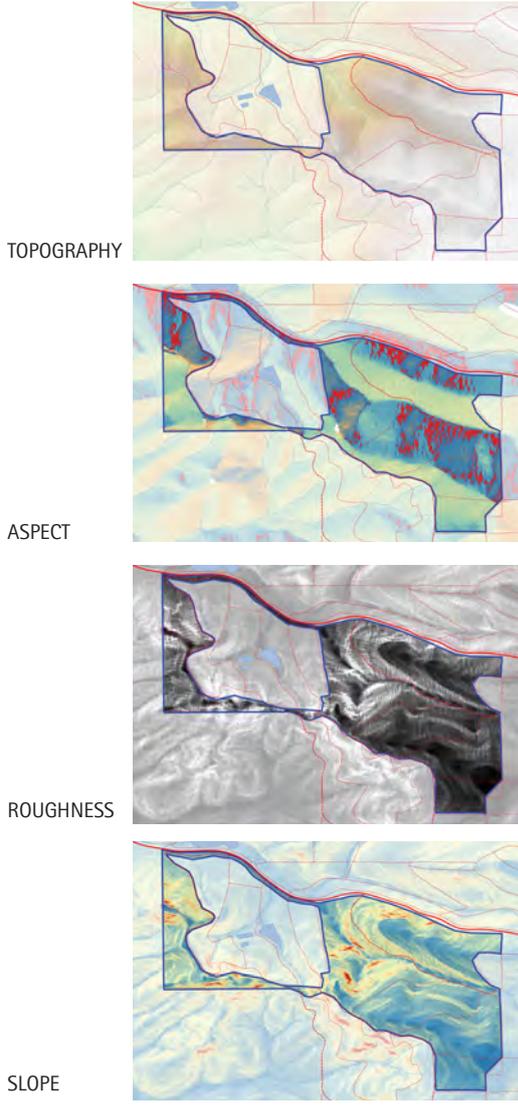


Figure 3: Desktop analysis

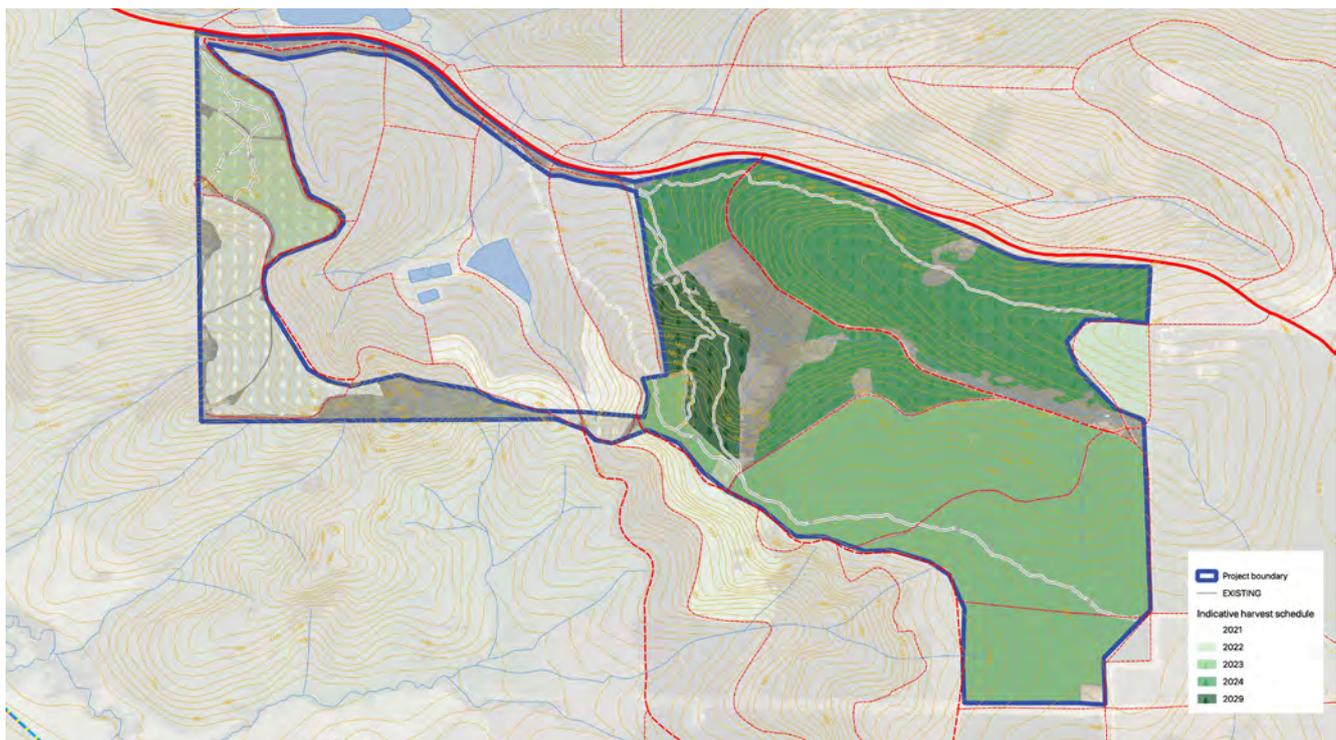


Figure 4: Indicative plantation harvest schedule

PROJECT AREA CONSTRAINTS

The major constraint within the project area is the nature of it being an active plantation. As outlined in figure 4, the plantation is divided onto pockets each with different harvesting schedule. FPC requested that these pockets be taken into consideration in determining trail network function so that sections of the trail network could be closed (for example during harvesting) without impacting on the remainder of the network. Another constraint is the waste water treatment area which will need to have consideration of restricting access to site. Pockets of granite outcrops and remnant vegetation are scattered throughout the site. These pockets have some value which has been considered in determining trail alignment. Creek lines and waterfalls also dissect the site which present constraints in terms of crossing.

PROJECT AREA OPPORTUNITIES

There are a number of opportunities presented in the inherent qualities of the project site, namely the elevation range and rocky terrain. These qualities will enable trail alignment suited to more advanced gravity focussed trails which Nannup has a reputation for. There are also several high points offering views which provide opportunity for destinations within the network. The creekline and waterfalls while a constraint in terms of crossing also offer potential for unique trail features enhancing the trail experience.

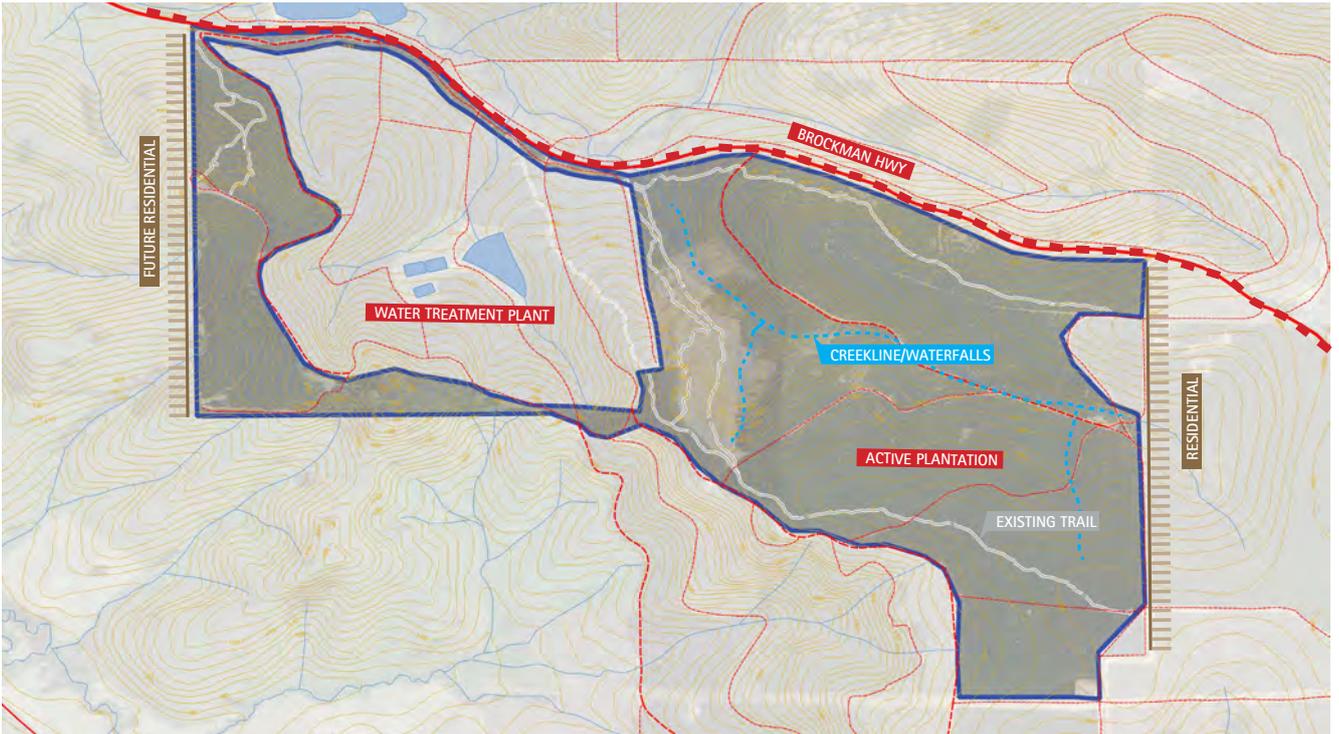


Figure 5: Project Area Constraints

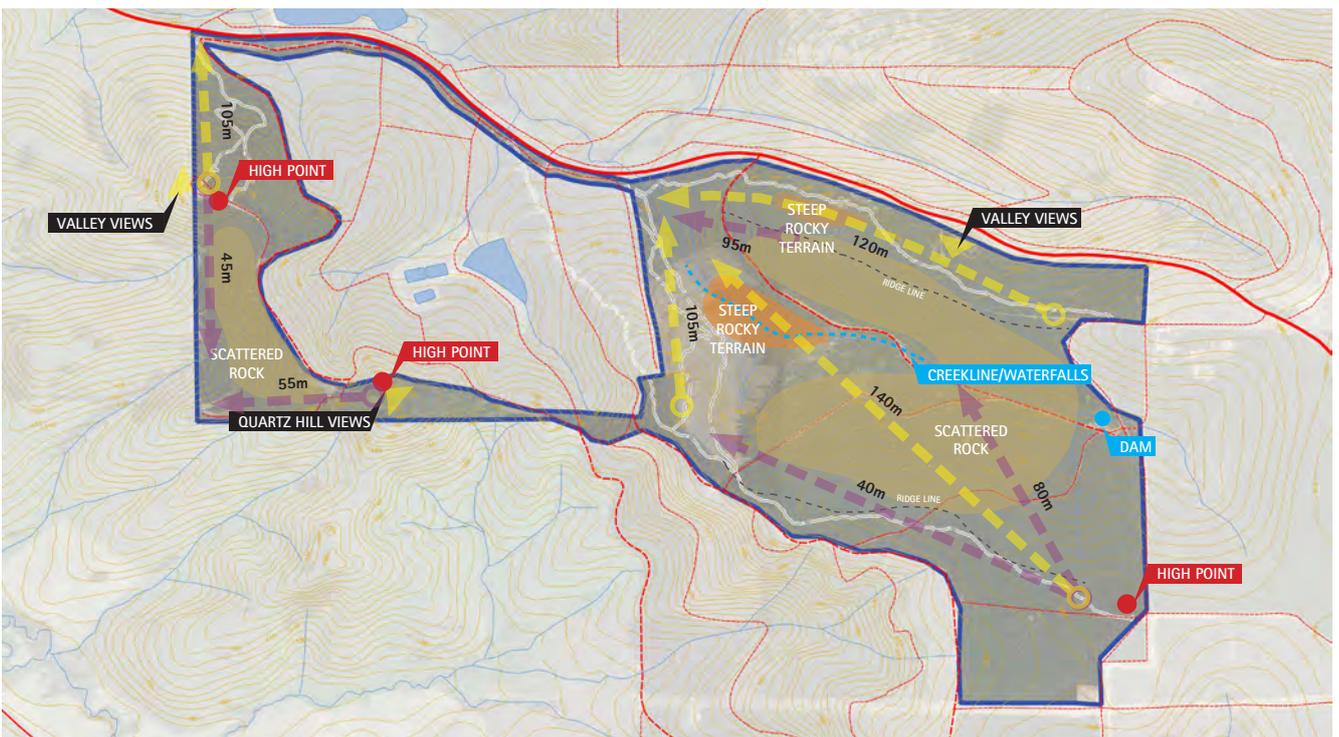


Figure 6: Project Area Opportunities

TANK 7&8

MOUNTAIN BIKE TRAIL NETWORK

CONCEPT PLAN

CHARACTERISTIC ZONES

The result of the desktop analyses and on site ground truthing was the categorisation of Development Zones, which are colour coded in Figure xx, and provide guidance for concept planning. The areas highlighted green in Figure xx indicate highly desirable areas for mountain bike trails, the yellow areas moderately desirable and the red areas constrained areas. Each of the zones are:

Rugged and Featured Valley / Steep Face

These areas present the steepest terrain with rock features scattered throughout, ideal for more advanced trails.

Northern Face / Connection Ridge

These areas contain varied elevation range and scattered rock features.

Central Valley

Featuring a south and north face this central valley presents opportunity for XC trails featuring a variety of experiences.

Southern Face

This area has limited opportunity for engaging trail.

STYLE ZONES

Five style zones have been identified based on the site analysis and development zones – gravity, freeride, adventure cross country, flow cross country and spine.

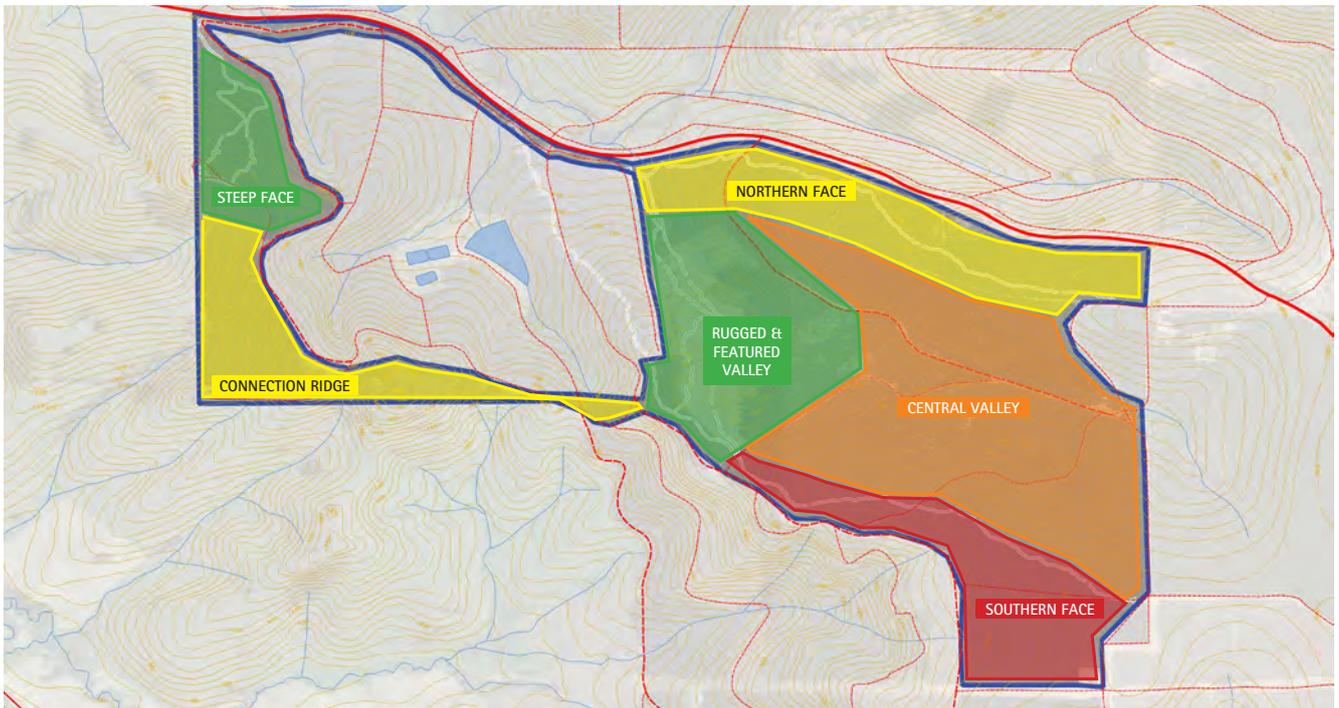


Figure 7: Characteristic Zones

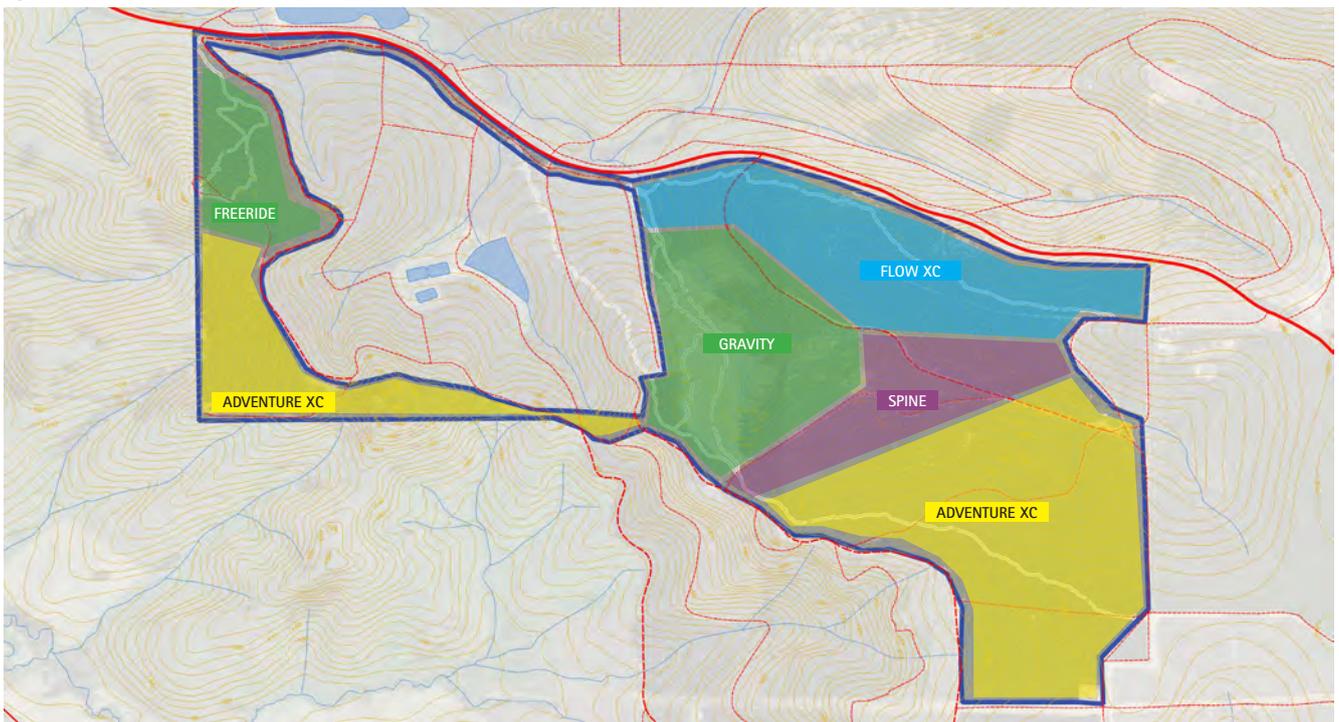


Figure 8: Style Zones

BROAD CONCEPT

Taking into account the opportunities and constraints within the project area, figure 9 outlines the broad concept for the Tank 7&8 MTB network and figure 10 shows development of the broad concept. The primary function of the broad concept is a clockwise stacked loop system that connects the primary trail head to the secondary trail heads via each of the style zones.

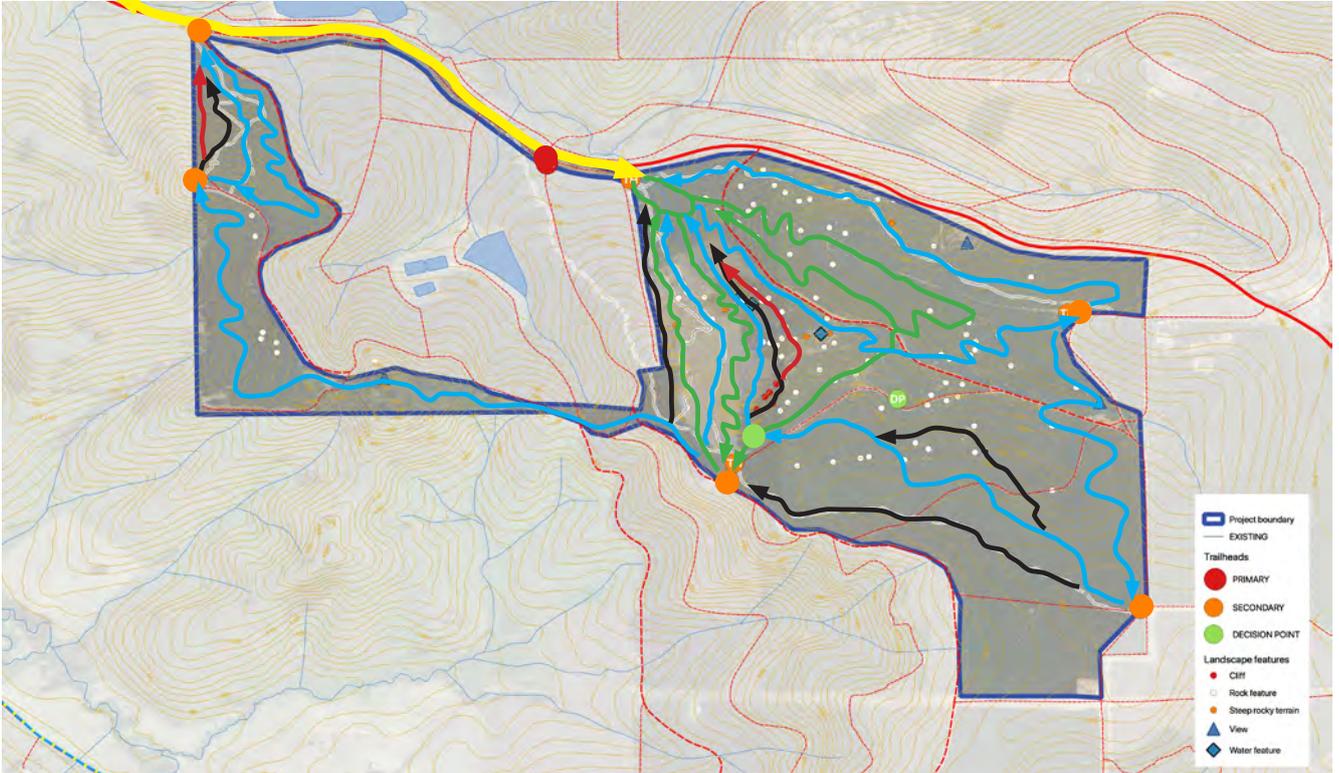


Figure 9: Broad Concept

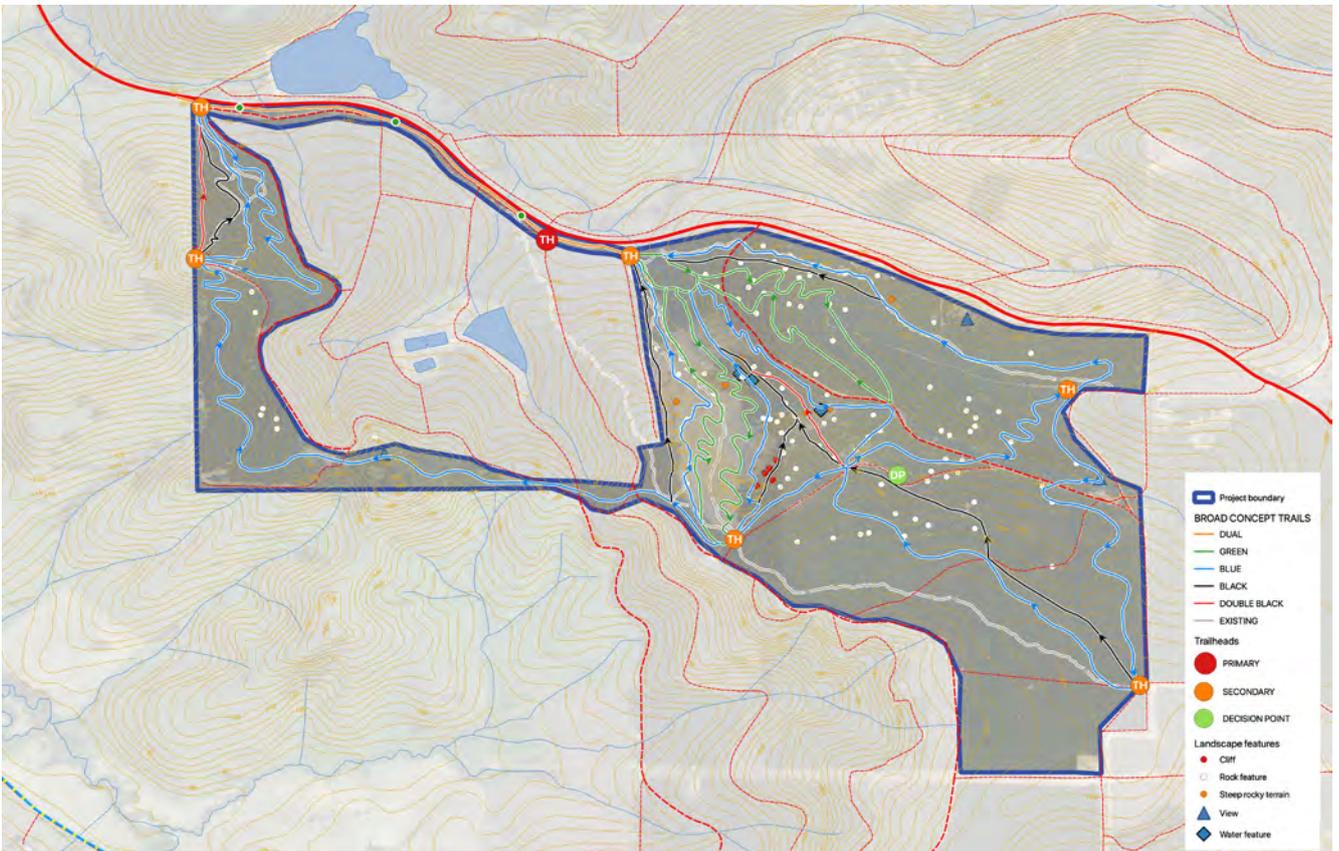


Figure 10: Broad Concept development

TRAIL SYSTEM

TRAIL SYSTEM

The proposed Tank 7&8 network features a range of Cross Country (XC), All Mountain (AM) and Gravity (GR) trails. It is based on a stacked loop design, which includes a series of clockwise loop trails radiating from the primary trail head and a series of secondary trail heads providing users with a range of short, medium and long loop options. The shuttle trail heads provide options to session sections of the network. Accounting for the indicative harvest schedule the network has been designed to allow for sections to be closed during harvest operations without adversely impacting on the remainder of the network. The Tank 7&8 network prescribes to the following best practice principles;

- The network avoids areas of environmental significance, problematic landforms, and is generally sympathetic to the landscape and viewsheds
- Where possible the Tank 7&8 network connects users with the natural environment and it's features within the project boundary
- Trail alignments are purposeful and provide direct movement through the landscape
- A range of trail difficulties have been provided allowing for progression in the network
- The network caters for a wide variety of riding styles and abilities and fills the gap of trail styles which are not available in the region in particular the double black classified trails
- The stacked / linked loop trail system places the easiest trails closest to the trail head and more difficult trails are progressively reached
- All trails are designed to be bike optimised and single direction, allowing purposeful descents and climbs
- The overall system is accessible, intuitive and easy to navigate with simple loops and trails following an overall clockwise direction
- The majority of the Tank 7&8 trail system is able to be ridden in a continuous lap without backtracking, repeating or crossing over other trails, allowing for cross country marathon racing and longer uninterrupted rides
- Provides a range of trail options suitable for hand cycle and other mobility equipment use

The Key features and design principles of the trail network are:

- 30km Stacked loop trail network including Cross Country (XC), All Mountain (AM) and Gravity (GR) trails
- Range of classifications for the trail network which generally meet the brief;
 - Green (easy) 25%
 - Blue (moderate) 50%
 - Black (advanced) 20%
 - Double Black (extreme) 5%

STYLES

The Tank 7&8 trail system comprises a range of individual style networks to cater for the diverse range of landscapes and riding opportunities in the project area. The network provides cross country, all mountain and gravity based style networks which can operate independently of each other to separate user types and to allow for harvesting operations.

Each style network provides flexibility allowing users to create their own adventure through the trail system, consistent with condensed bike park facilities worldwide. This flexible trail system will maximise opportunities and minimise user and event created connections and links. Refer to figure 12 for trail style breakdown.

CROSS COUNTRY NETWORK

The cross country trails emanates from the primary trailhead with 2 stacked loops that form a part of the core trail network. A blue and black XC descent start from shuttle trailhead 3 and a blue xc climb provides a ride option to shuttle trailhead 1 servicing the gravity network. The main green cross country loop has two converging points where the loop can be shortened or other sections of the network can be accessed.

The majority of the cross country trails are located on the northern ridge line, making use of the moderate rocky slopes. The blue ridge connection xc trail provides a link between the gravity zones, traversing the hill via several high points.

A dual use dual direction XC trail links the Primary trailhead to each of the style zones.

ALL MOUNTIAN NETWORK

The all mountain network consists of the main blue loop which emanates from the lower green XC loop (trail 2) and two black descent focussed trails that feature some short and sharp climbing intermittently. The all mountain trails take riders out to shuttle trailhead 1 and 2 and traverse the central valley and southern ridge.

GRAVITY NETWORK

In line with the style of existing trails on site, the available terrain and the gap in current trail offer within the region the network has been designed to allow for a total of 8 descending trails which make maximum use of the available elevation range.

The Tank 7 area contains a blue climb and 3 descents, blue, black and double black. This zone is accessed from the Primary trailhead via the dual direction town connection trail (trail 1) or via the blue ridge connection (trail 5), the Tank 7 top trail head is also accessible by vehicle via the shuttle road. This area is proposed to contain freeride style trails featuring minimal construction techniques and more natural style trail which changes through use over time.

The other gravity zone is contained within the rugged and featured valley and is sessionable via shuttle trail head 1. Containing the full range of trail classifications, riders can ride to the top via a green or blue climb or vehicle shuttle via the shuttle road and then descend via green, blue, black or double black descents.

EVENT USE

The overall network has been designed with strong consideration of events. The sessionable descent zones and the green and blue loops create the opportunity for gravity enduro racing. The majority of trails in the greater trail system have been designed for use in marathon cross country racing. To cater for this style of racing the majority of network is able to be ridden

without crossing points. While a specific Cross Country Olympic course has not been designed trails can be linked to create 5-6km loops. The primary trailhead has been located to allow for events with ample space available for event infrastructure and carparking.

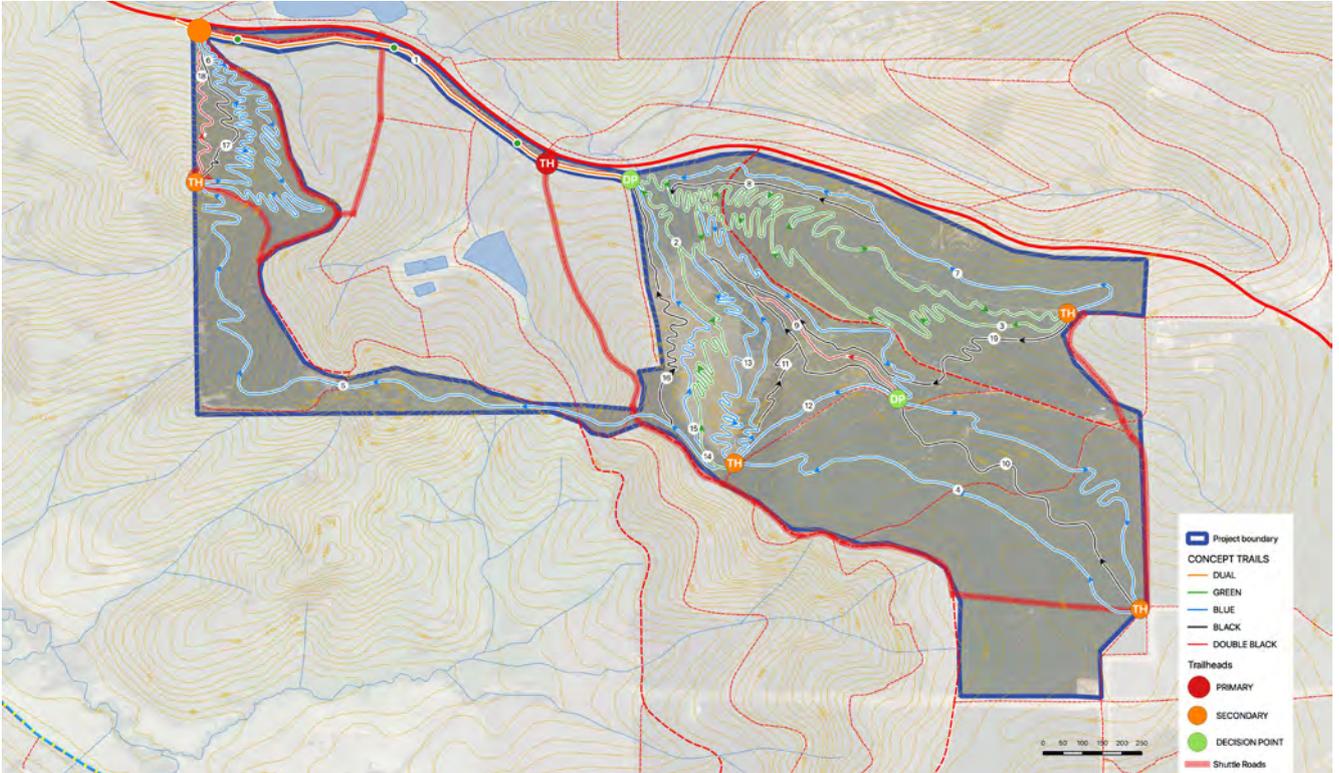


Figure 11: Tank 7&8 MTB Network - Overall Concept

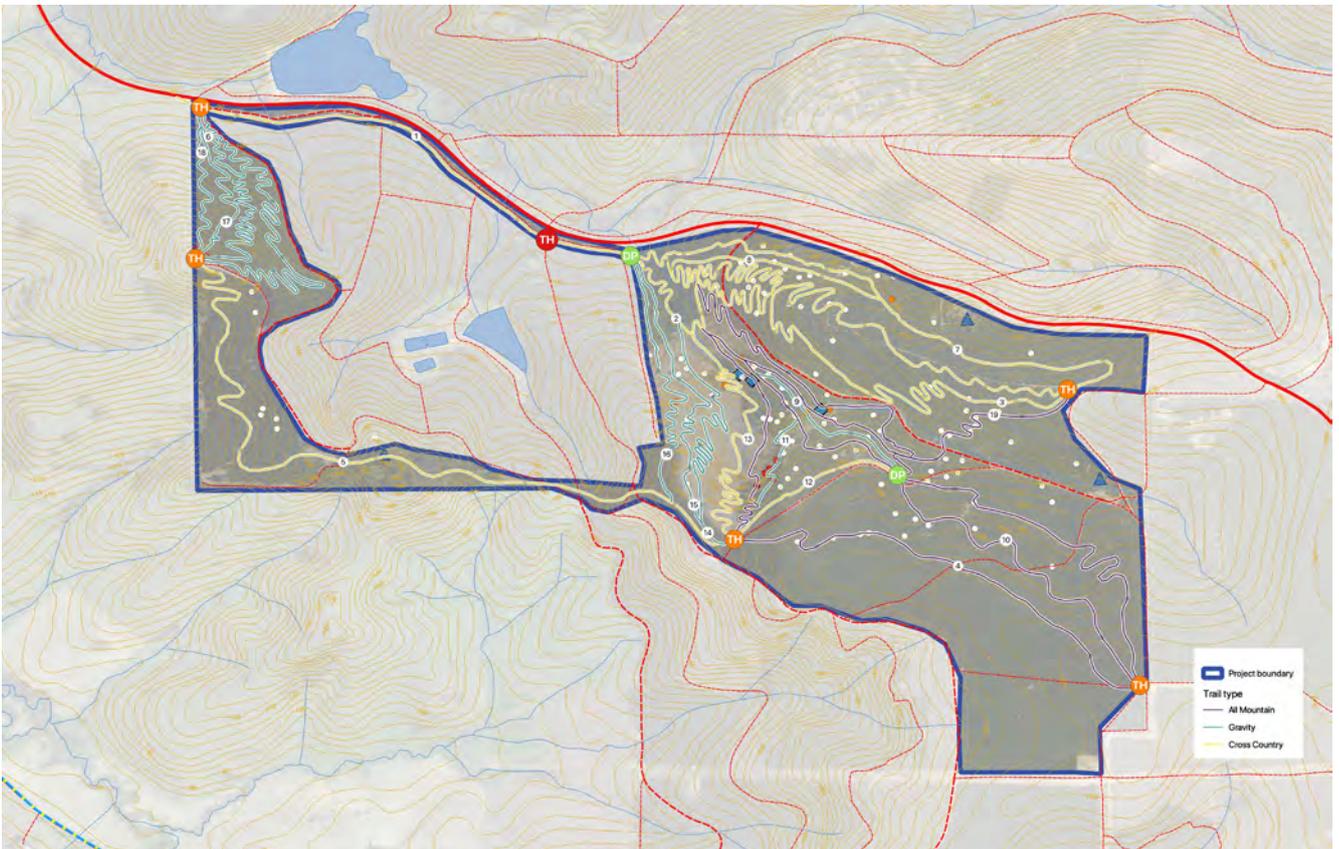


Figure 12: Tank 7&8 MTB Network - Trail styles

NETWORK DETAIL

NETWORK COMPOSITION

Table 1, figures 13 and 14 provide a breakdown of the network to illustrate quantities of different classifications and styles of trail.

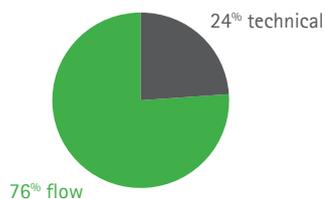


Figure 13: Tank 7&8 MTB Network – trail style breakdown

Table 2: Network Composition

ID	PROVISIONAL NAME	STRATEGIC VALUE	TYPE	STYLE	VERTICAL CHANGE (M)	AVERAGE GRADIENT %	CLASSIFICATION	LENGTH (M)
GREEN TRAILS								
1	TOWN CONNECTION	Low	XC	Open	17	1%	Dual Dual	1310
2	GREEN LOOP	High	XC	Flowing	40	3%	Green Circle	1150
3	GREEN XC LOOP	High	XC	Flowing	270	6%	Green Circle	4460
14	GREEN FLOW DESCENT	Moderate	GR	Flow Trail	105	8%	Green Circle	1370
TOTAL GREEN TRAIL								8290
BLUE TRAILS								
4	BLUE ALL MOUNTAIN LOOP	High	AM	Tech-flowing	300	6%	Blue Square	4840
5	BLUE RIDGE CONNECTION	Moderate	XC	Natural-flowing	110	5%	Blue Square	2360
6	BLUE FREERIDE LOOP	High	GR	Freeride	210	7%	Blue Square	3090
7	BLUE DOWNCOUNTRY DESCENT	Moderate	DC	Natural-flowing	125	8%	Blue Square	1480
12	BLUE CONNECTION	Low	XC	Open	5	1%	Blue Square	510
13	BLUE XC CLIMB	Moderate	XC	Flowing	105	8%	Blue Square	1350
15	BLUE FLOW DESCENT	Moderate	GR	Flow Trail	105	10%	Blue Square	1030
TOTAL BLUE TRAIL								14,660
BLACK TRAILS								
8	BLACK DOWNCOUNTRY DESCENT	Low	XC	Natural-flowing	85	14%	Black Diamond	590
10	BLACK TECH DESCENT	Moderate	AM	Natural - flowing	85	5%	Black Diamond	1770
11	BLACK NATURAL DESCENT	High	GR	Technical - Natural	40	11%	Black Diamond	380
16	BLACK FLOW DESCENT	Moderate	GR	Flow Trail	95	10%	Black Diamond	980
17	BLACK FREERIDE DESCENT	Moderate	GR	Freeride	105	16%	Black Diamond	650
19	BLACK ALL MOUNTAIN DESCENT	Moderate	AM	Natural - flowing	90	8%	Black Diamond	1190
TOTAL BLACK TRAIL								5560
DOUBLE BLACK TRAILS								
9	DOUBLE BLACK TECH DECENT	High	GR	Technical - natural	65	13%		490
18	DOUBLE BLACK FREERIDE DECENT	Moderate	GR	Freeride	105	20%		520
TOTAL DOUBLE BLACK TRAIL								1010
GRAND TOTAL ALL TRAILS								29,520



8.3km
25% (brief 25%)



MODERATE

14.6km
52% (brief 50%)



DIFFICULT

5.5km
19% (brief 20%)



EXTREME

1km
4% (brief 5%)

Figure 14: Tank 7&8 MTB Network – classification breakdown

INFRASTRUCTURE

A range of infrastructure is required to ensure the proposed trails are accessible, safe and enjoyable.

TRAIL HEADS AND SHUTTLE ROAD

Most important is the trail head which fulfils a number of important functions:

- Is visible and a safe place to leave a vehicle.
- Provides needs of trail users – water, toilets, bins, information and car parking
- Bike Maintenance facilities
- Encourages social interaction as the primary meeting place and finishing point for users.
- Promotes positive use of the site through additional infrastructure such as seating, shelters, landscaping
- Is easily accessible and promoted to suit visitors of all mobility
- Provides all of the necessary trail information to plan a ride through good signage and also considers inclusion of interpretation signage.

The network has been designed around an accessible primary trail head with a series of secondary trailheads providing shuttle access. Due to limited sightlines and traffic speed on Brockman Highway, access to the site is proposed to be restricted to two points. The primary trail head is located just off Brockman Highway and links directly to the proposed shared use path from Nannup townsite. The second access point provides shuttle access to the Tank 7 secondary trailheads. From the primary trailhead a second shuttle access route connects the outer loop of secondary trailheads, with a turn around to bring drivers back to the primary trailhead. It is recommended that all other roads on the site be gated for management access only, to improve rider safety where trails cross roads and to make navigation of shuttle roads simple.

The Table below provides a summary of the proposed Trail Heads, as well as the existing and proposed amenities and facilities. Multiple mountain bike trail loops of varying length and classifications can be accessed from each trail heads creating large diversity in the overall network.

Table 1: Trail Heads, Amenities & Facilities

TRAIL HEAD	EXISTING FACILITIES	PROPOSED FACILITIES
Primary Trailhead	None	Pump Track, jump lines, carpark, signage, seating, picnic tables, shelter, water, BBQ, toilets.
Secondary Trailhead - Tank 7 Top	Picnic Table	Carpark, signage
Shuttle trailheads	None	Signage, vehicle turnaround

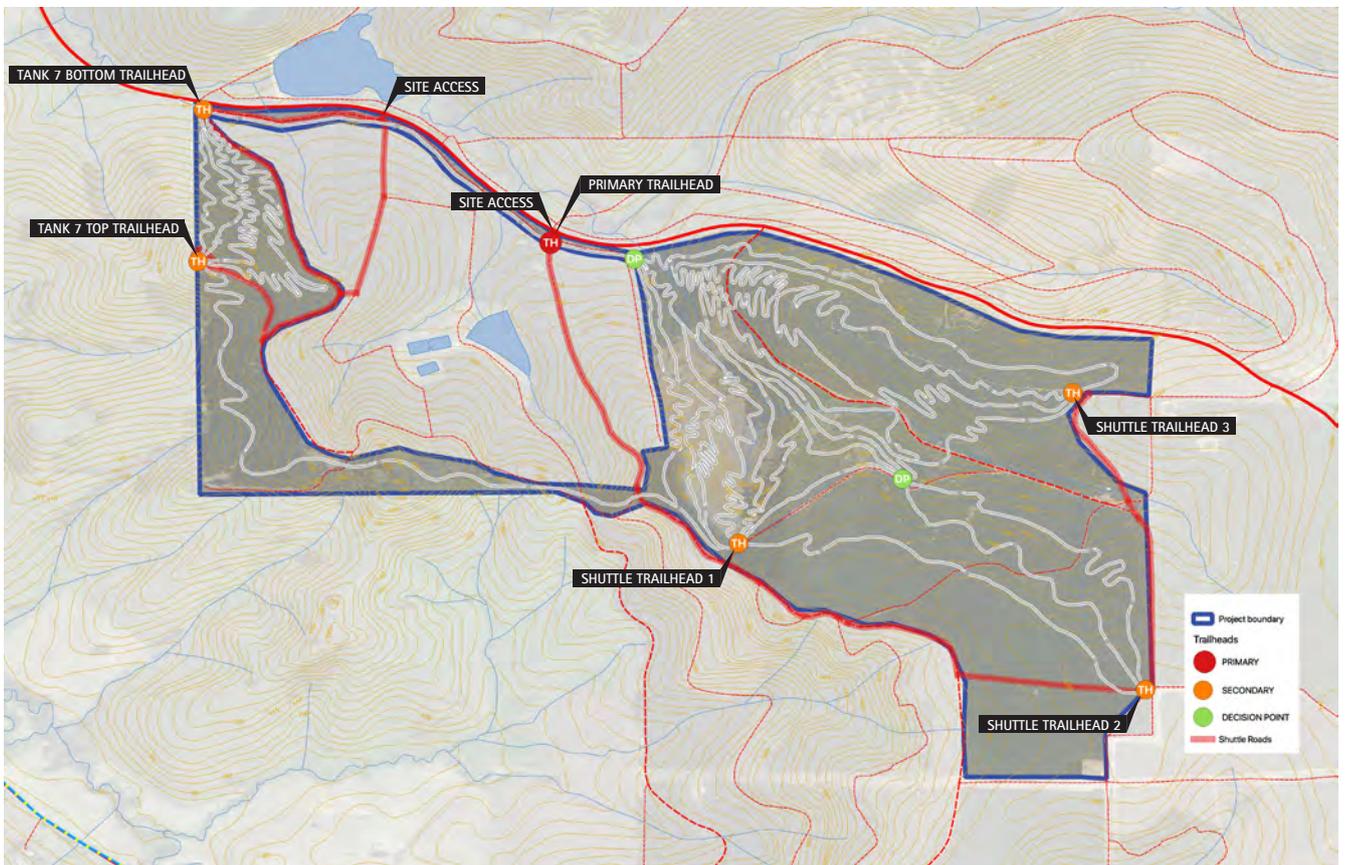


Figure 15: Tank 7&8 MTB Network - trailheads and shuttle roads

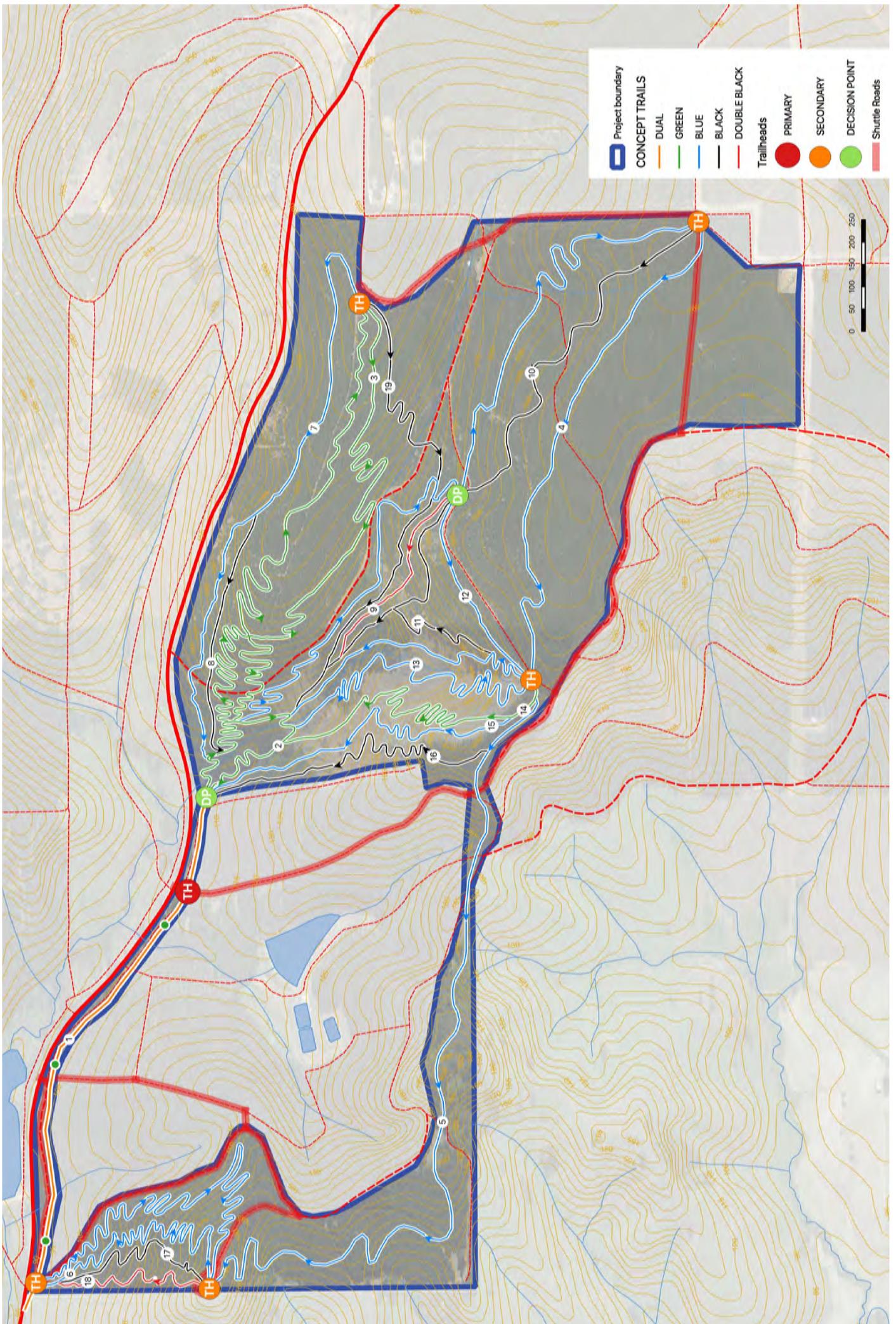


Figure 16: Tank 7&8 MTB Network – Overall Concept



TANK 7&8 MOUNTAIN BIKE TRAIL NETWORK CONCEPT PLAN

FEEDBACK ON DRAFT CONCEPT

The Draft concept alignments and report were submitted to the Steering Committee in late November 2019. Following feedback and completion of fauna, flora and dieback assessments by DBCA, the concept alignments and report have been finalised.

In their assessments DBCA noted areas of remnant vegetation that while degraded from forestry harvesting operations presented some significant value. These areas have been highlighted in figure 17 and are associated with granite outcrops. DBCA noted that granite outcrops are well documented centres of speciation, the micro-climates they create have allowed species to persist well outside of their currently known ranges as the climate has changed over thousands of years and with isolation comes speciation. As per recommendations Trail 10 and Trail 12 have been realigned to avoid the smaller identified area. All trails that traverse the larger identified area are to have their alignments refined in detailed design on the ground ensuring that they avoid granite outcrops and known species of significance.

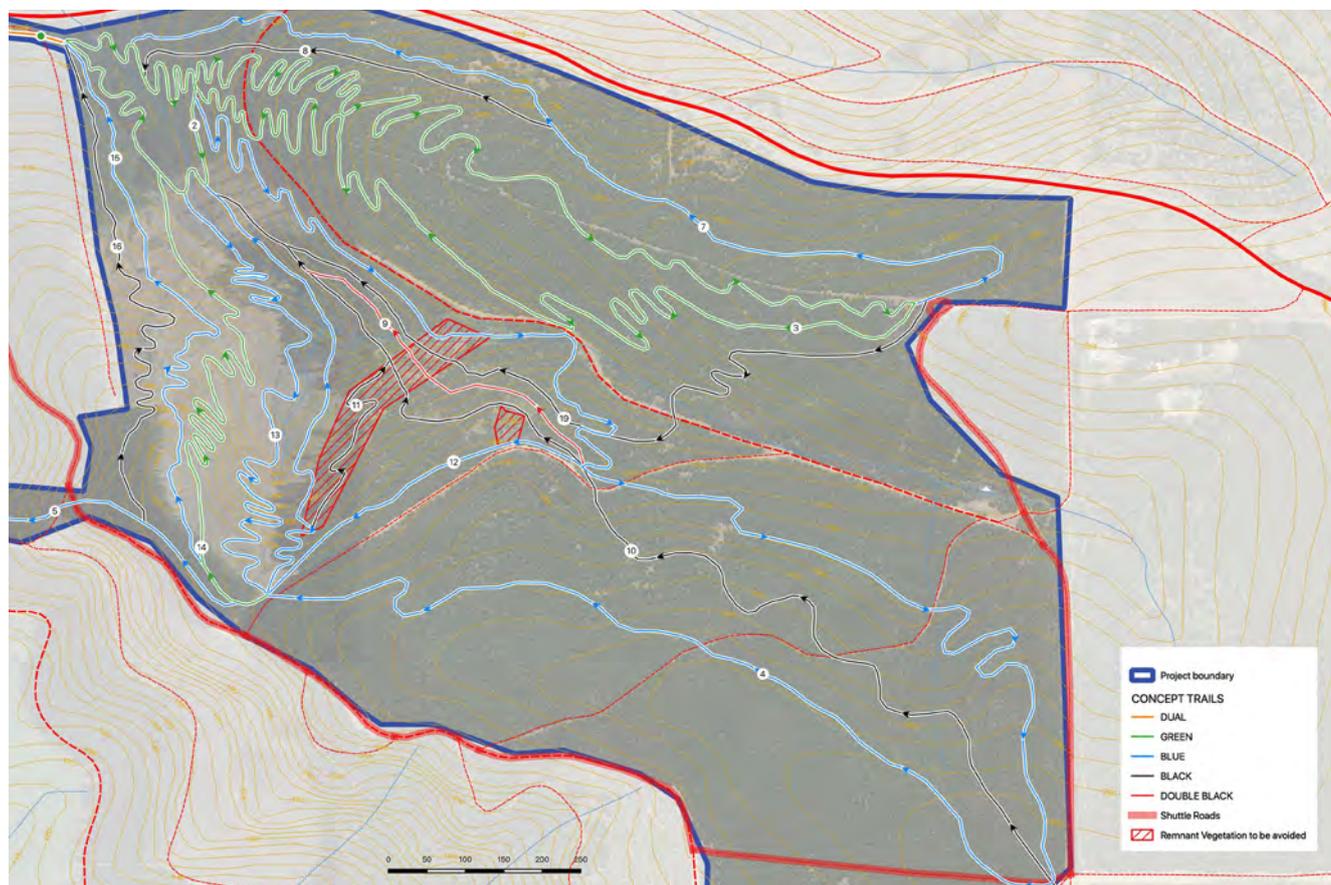


Figure 17: Tank 7&8 MTB Network - Areas of remnant vegetation to be avoided.

INDIVIDUAL TRAIL SUMMARIES



TOWN CONNECTION

Trail ID **1**



TRAIL TYPE
XC CROSS COUNTRY
OPEN

TRAIL LENGTH
1310M DUAL DIRECTION

AVERAGE GRADIENT
1% 17M VARIATION

TRAIL WIDTH
1.8M GROOMED
CONSTRUCTED

TRAIL 1 OVERVIEW

Trail 1 is a 1.3km easy, dual direction shared use trail offering a cross country experience focused on open trail over predictable smooth terrain. It forms part of the outer network of trails but is of low strategic value to the overall networks functionality. Located in generally flat side slopes, the trail traverses along the contours of the hill connecting the primary trail head to the network and to the proposed connection trail from Nannup townsite. It features continuous rolling grade reversals and a groomed surface with typical finished width of 1.8m. Located on the edge of the plantation vegetation varies with scattered natives.

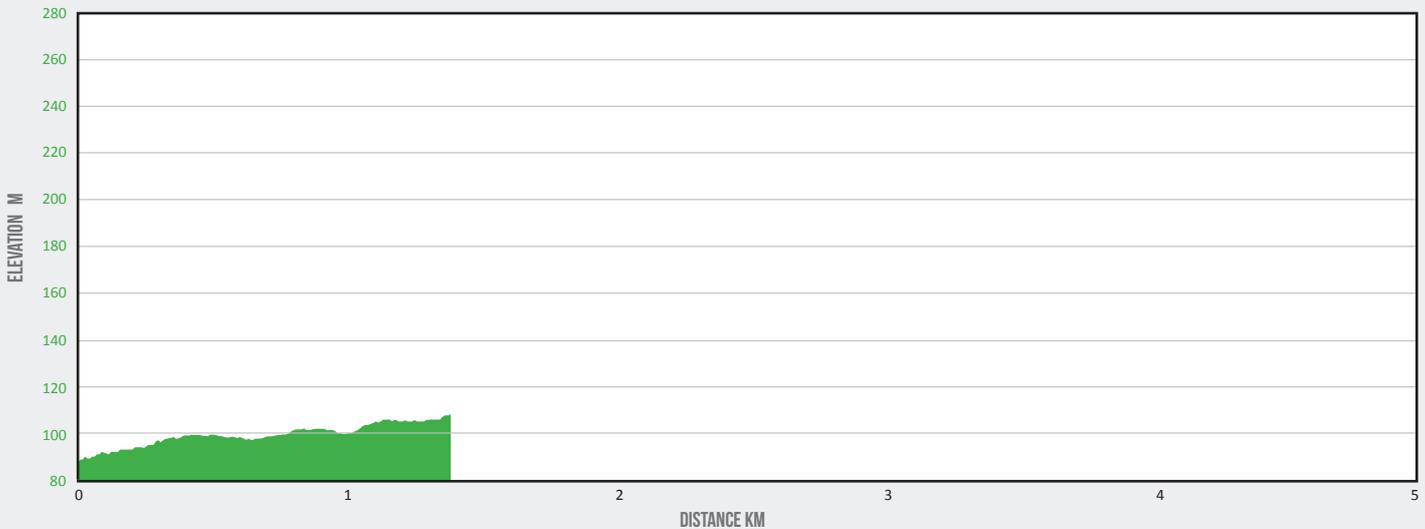
TRAIL 1 DETAILS

Trail ID	1
Provisional Name	Town Connection
Classification	Beginner - Green Circle
Strategic Value	Low
Trail Type	Cross Country
Trail Style	Open
Tread Width	1.8m
Use	Shared Use - Bike Et Hand Cycle Optimised
Direction	Dual Direction
Ascent / Descent	Undulating
Options	Nil
Corridor Width	100m
Trail Length	1310m
Vertical Range	17m
Elevation Variation	17m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	1%
Maximum Trail Gradient	15% up to 20m
Minimum Line of Sight	Minimum 10m
Qualifier / Filter	None

ANTICIPATED TECHNICAL TRAIL FEATURES

TURNS	VERTICAL CHANGE	OBSTACLES
Nil	Grade Reversal	Nil

TRAIL 1 - ELEVATION PROFILE



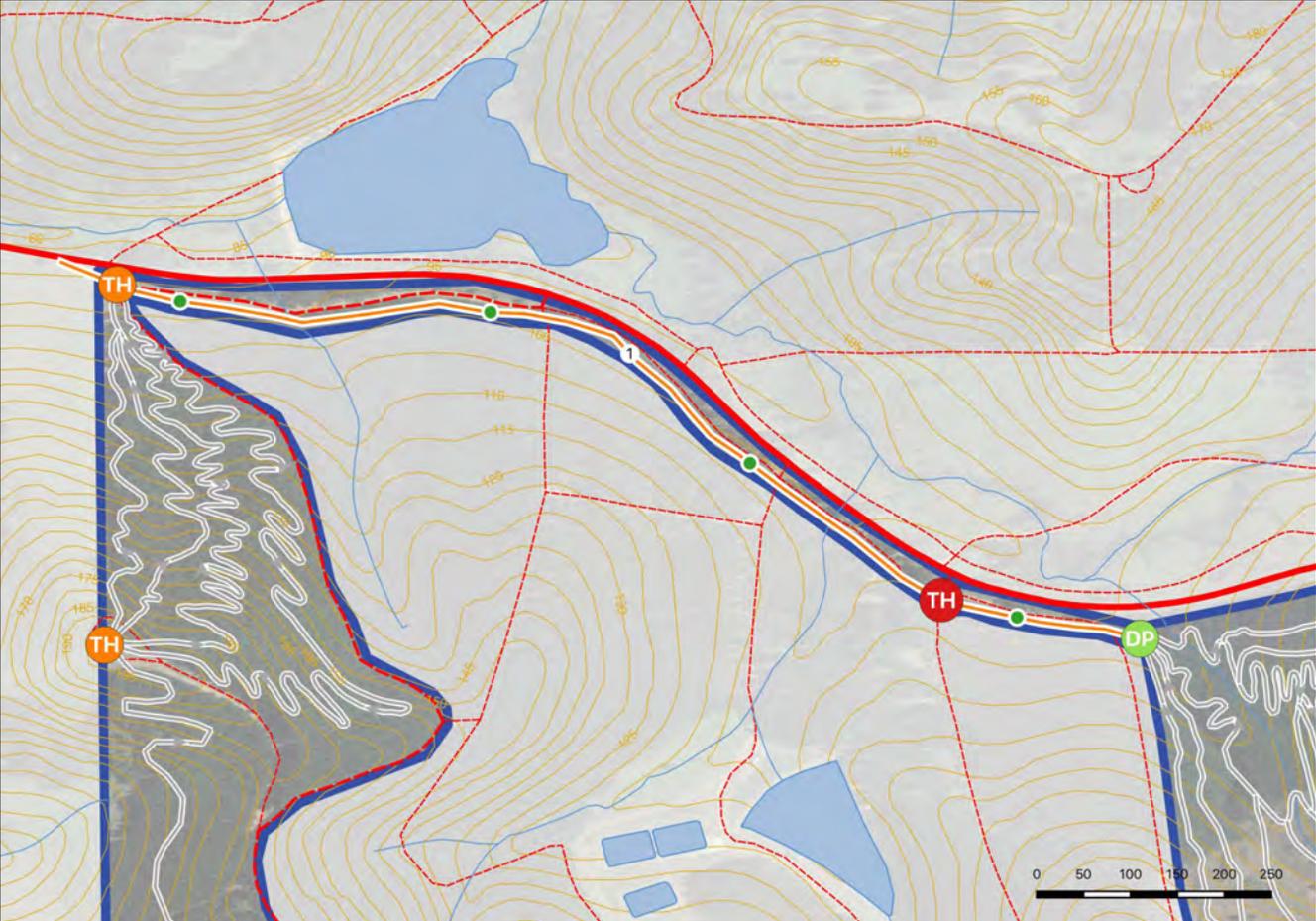
TRAIL 1 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT		WINDING	FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE		VERY WIDE
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED		IMPORTED MMTTF	
FEATURE FREQUENCY	NONE		VERY LONG	LONG	MODERATE	SHORT
FEATURE MAGNITUDE	NONE		SMALL	MEDIUM	LARGE	VERY LARGE
EXPOSURE	VERY LOW		LOW	MEDIUM	HIGH	VERY HIGH

TRAIL 1 BENCHMARK & PRECEDENT IMAGERY



TRAIL 1 ALIGNMENT



CLASSIFICATION  BEGINNER GREEN CIRCLE	TRAIL TYPE XC CROSS COUNTRY FLOWING	TRAIL LENGTH 1150M ASCENDING SINGLE DIRECTION	AVERAGE GRADIENT 3% 20M VERTICAL 40M VARIATION	TRAIL WIDTH 1.0M GROOMED CONSTRUCTED
--------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------	-------------------------------------------------------------------	--------------------------------------------------------------------	----------------------------------------------------------

TRAIL 2 OVERVIEW

Trail 2 is a 1.1km easy single direction bike optimized looped trail offering a cross country experience focused on flowing trail over predictable smooth terrain. It forms part of the core network of trails and is of high strategic value to the overall networks functionality. Located in moderate side slopes, the trail switches back and forth on the hill, and is the first loop in the stacked loop network. It features continuous rolling grade reversals and technical trail features with groomed surface and a typical finished width of 1.0m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Berm
 Inspired Turn
 Rising Catch Turn

VERTICAL CHANGE

Roller
 Grade Reversal

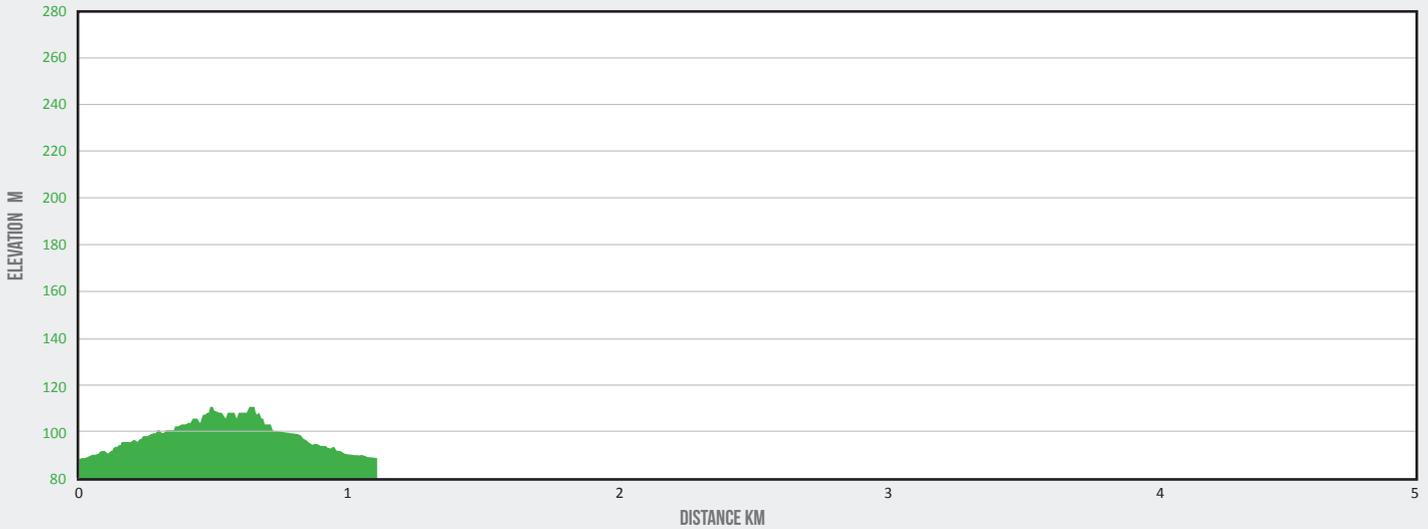
OBSTACLES

Nil

TRAIL 2 DETAILS

Trail ID	2
Provisional Name	Green Loop
Classification	Beginner - Green Circle
Strategic Value	High
Trail Type	Cross Country
Trail Style	Flowing
Tread Width	1.0m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Ascent/Descent
Options	Nil
Corridor Width	100m
Trail Length	1150m
Vertical Range	20m
Elevation Variation	40m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	3%
Maximum Trail Gradient	15% up to 20m
Minimum Line of Sight	Minimum 10m
Qualifier / Filter	None

TRAIL 2 - ELEVATION PROFILE



TRAIL 2 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING		FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED		IMPORTED MMTTF	
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 2 BENCHMARK & PRECEDENT IMAGERY



TRAIL 2 ALIGNMENT



CLASSIFICATION  BEGINNER GREEN CIRCLE	TRAIL TYPE XC CROSS COUNTRY FLOWING	TRAIL LENGTH 4460M DESCENDING SINGLE DIRECTION	AVERAGE GRADIENT 6% 155M VERTICAL 270M VARIATION	TRAIL WIDTH 1.0M SMOOTH CONSTRUCTED
--------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------	--------------------------------------------------------------------	----------------------------------------------------------------------	---------------------------------------------------------

TRAIL 3 OVERVIEW

Trail 3 is a 4.4km easy single direction looped trail offering a cross country experience focused on flowing trail over predictable natural terrain. It forms part of the core network of trails and is of high strategic value to the overall networks functionality. Located in generally moderate side slopes, shallow gradient trail switches back and forth on the hill. It features continuous rolling grade reversals, climbing and descending switchback corners with flowy trail features and an open feel with smooth surface with typical finished width of 1.0m. The climb and descent sections of the trail merge along the trail to form short and long loop options. The trail is located within plantation.

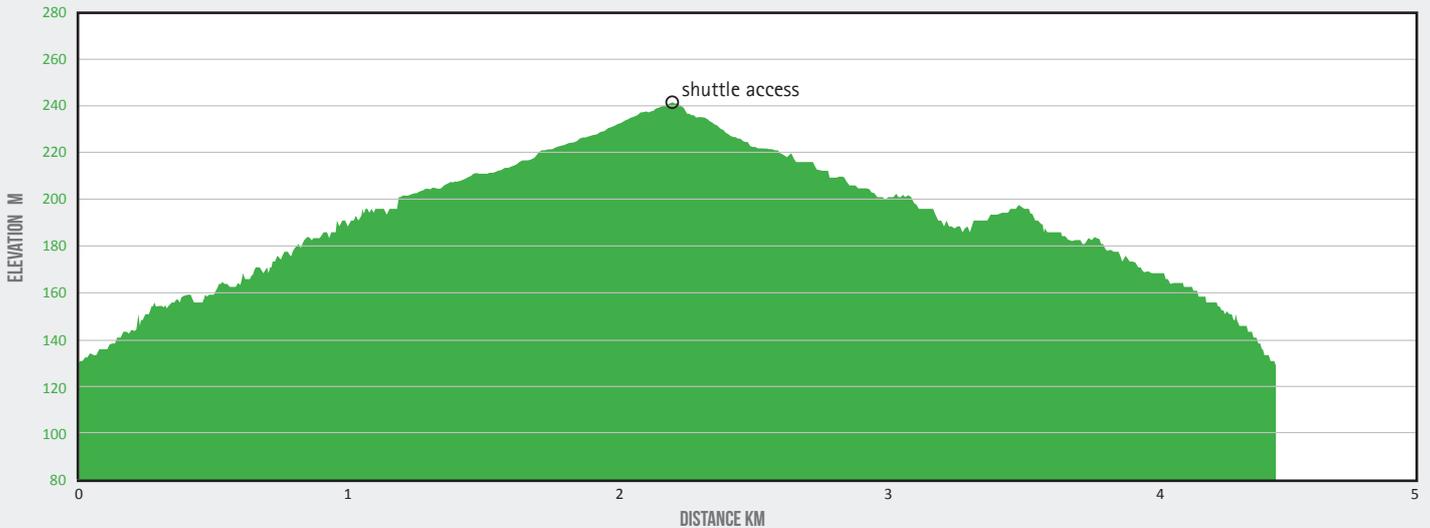
TRAIL 3 DETAILS

Trail ID	3
Provisional Name	Green XC Loop
Classification	Beginner - Green Circle
Strategic Value	High
Trail Type	Cross Country
Trail Style	Flowing/Natural
Tread Width	1.0m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Ascent/Descent
Options	Optional technical lines and features
Corridor Width	100m
Trail Length	4460m
Vertical Range	155m
Elevation Variation	270m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	6%
Maximum Trail Gradient	15% up to 20m
Minimum Line of Sight	Minimum 10m
Qualifier / Filter	None

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS	VERTICAL CHANGE	OBSTACLES
Berm	Grade Reversal	Armored Crossing
Descending Switchback	Obstacle Drop Off	Chicane
Insloped Descending Turn	Roll In	Rock Garden
Insloped Turn	Rollers	Stabilised Root
Rising Catch Turn		

TRAIL 3 - ELEVATION PROFILE



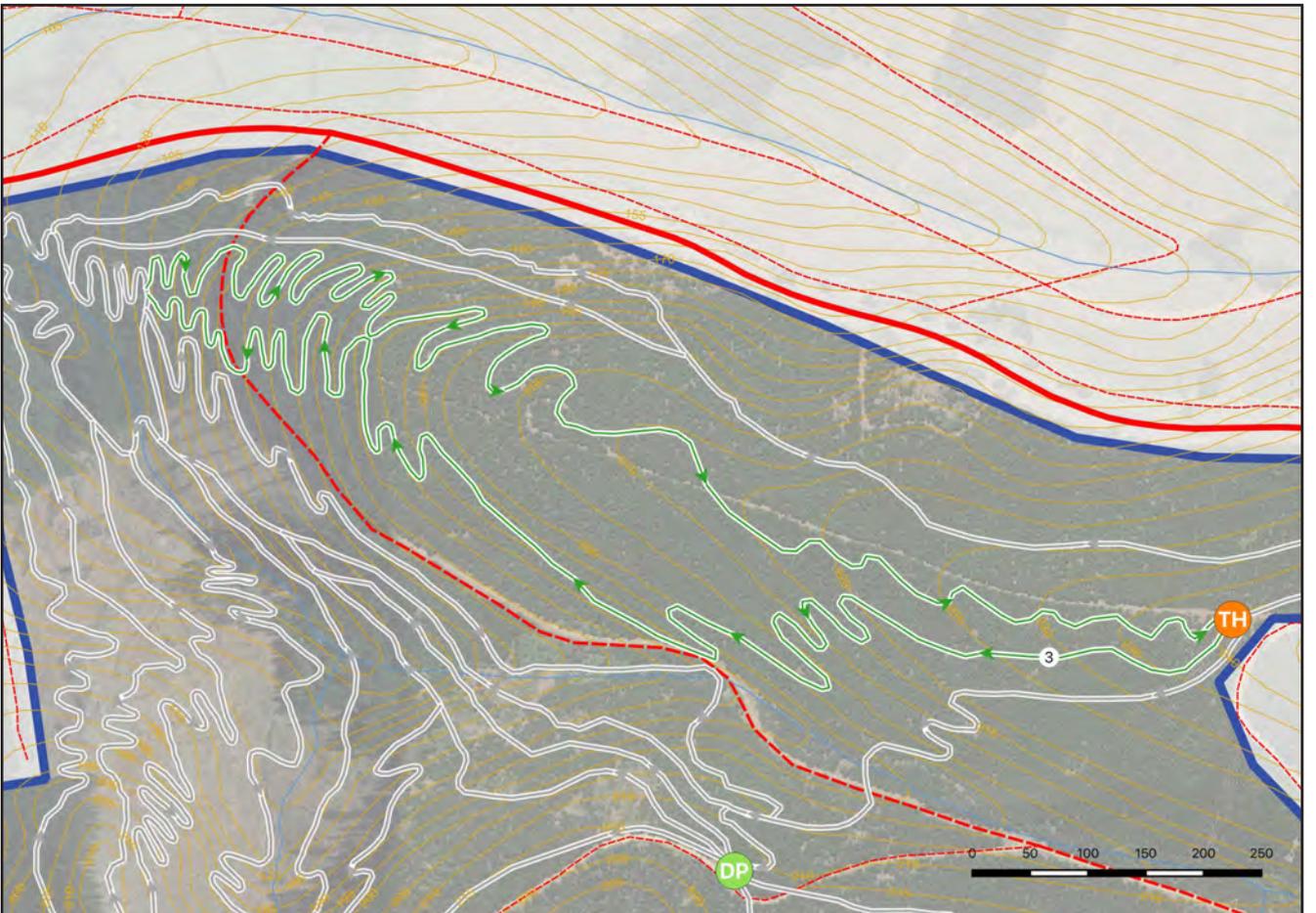
TRAIL 3 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 3 BENCHMARK & PRECEDENT IMAGERY



TRAIL 3 ALIGNMENT



BLUE ALL MOUNTAIN LOOP

Trail ID **4**



TRAIL TYPE
AM ALL MOUNTAIN
TECH - FLOWING

TRAIL LENGTH
4840M DESCENDING
SINGLE DIRECTION

AVERAGE GRADIENT
6% 150M VERTICAL
300M VARIATION

TRAIL WIDTH
0.8M ROUGH
ENHANCED

TRAIL 4 OVERVIEW

Trail 4 is a 4.8km moderate single direction looped trail offering a all mountain experience focused on natural, open and flowing trail over a range of predictable but rough terrain. It forms part of the core network of trails and is of high strategic value to the overall networks functionality. Located in moderate to steep side slopes, the flat moderate gradient trail switches back and forth on the hill looping back to Trail 2. It features climbing descending switchback corners with flowy technical trail features and an open feel with a rough surface with typical finished width of 0.8m. The trail is located within plantation.

Note as per DBCA recommendations detailed design for this trail will need to ensure trail alignment avoids granite outcrops and associated remnant vegetation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Berm
Descending Switchback
Insloped Descending Turn
Insloped Turn
Rising Catch Turn

VERTICAL CHANGE

Grade Reversal
Kicker Jump
Obstacle Drop Off
Roll In
Rollers
Jump

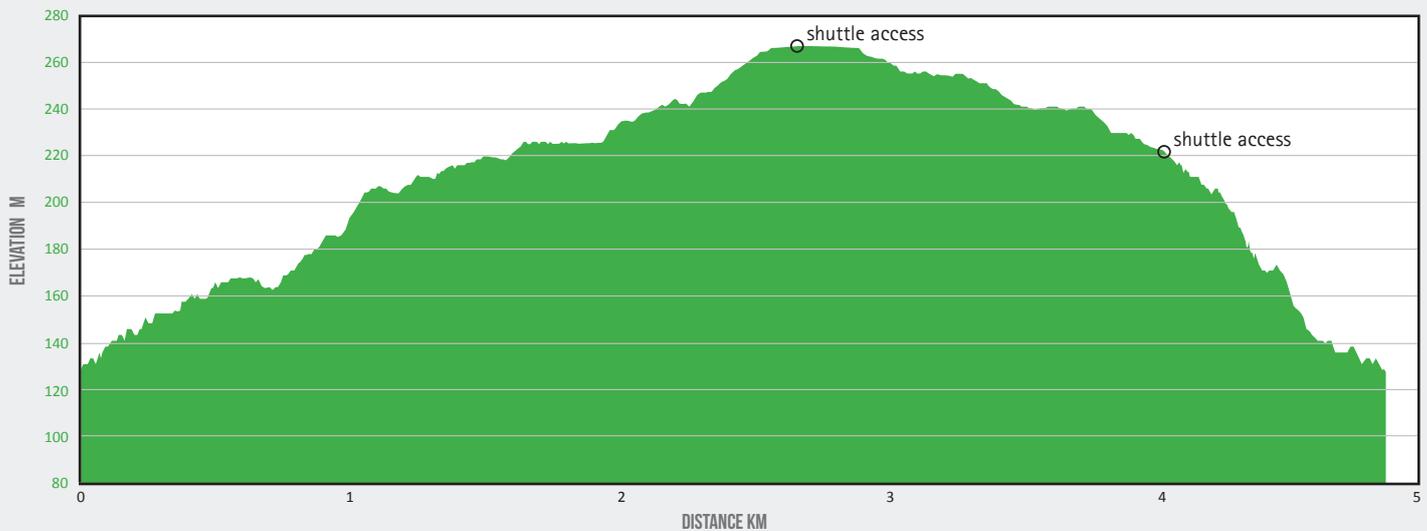
OBSTACLES

Armored Crossing
Chicane
Choke
Rock Garden
Stabilised Root

TRAIL 4 DETAILS

Trail ID	4
Provisional Name	Blue All Mountain Loop
Classification	Moderate - Blue Square
Strategic Value	High
Trail Type	All Mountain
Trail Style	Technical/Natural
Tread Width	0.8m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Ascent/Descent
Options	Black Optional Features
Corridor Width	100m
Trail Length	4840m
Vertical Range	150m
Elevation Variation	300m
Prevailing Cross Slopes	Moderate to steep
Average Trail Gradient	6%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 4 - ELEVATION PROFILE



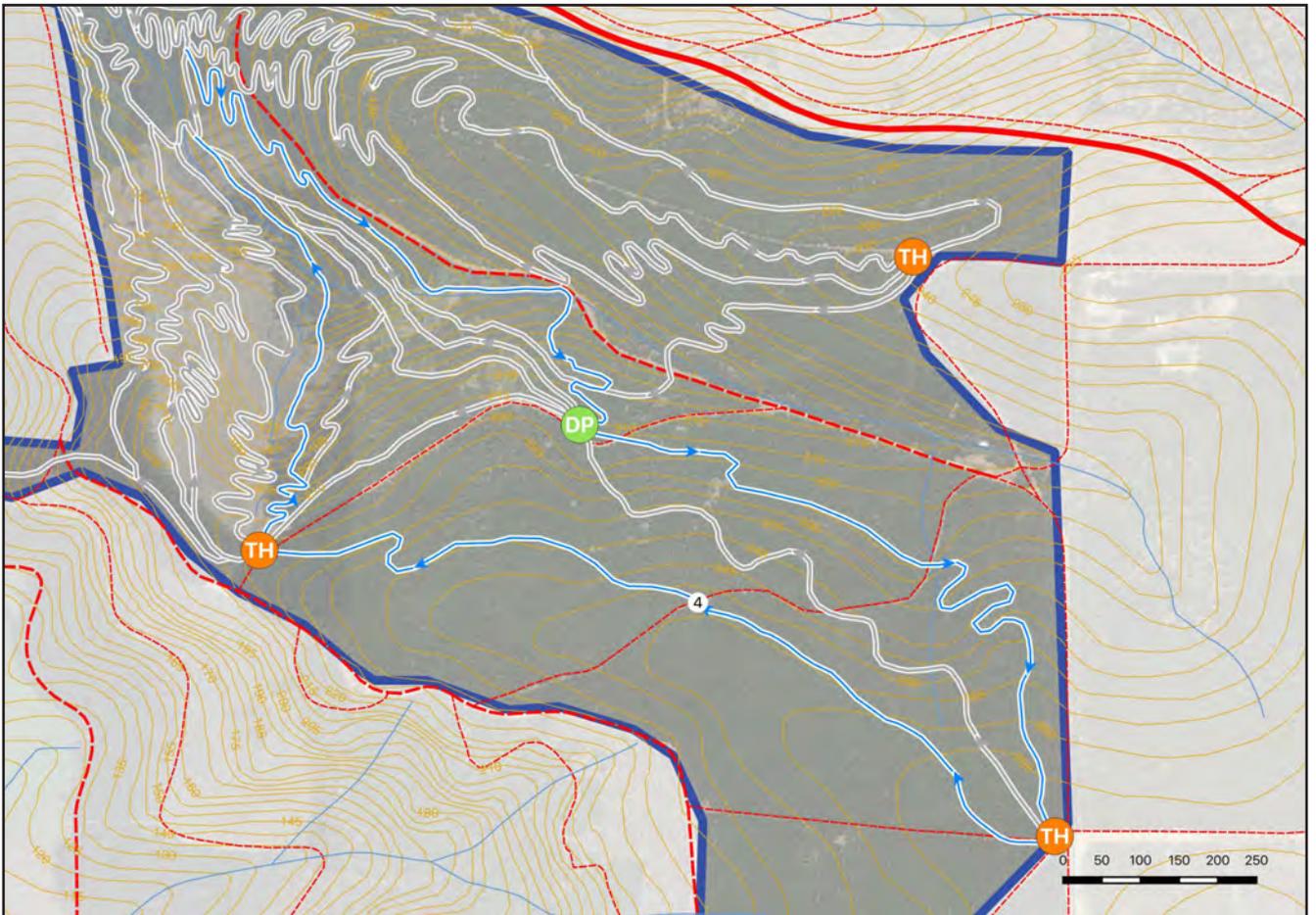
TRAIL 4 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING		FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH		GROOMED	
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED		IMPORTED MMTTF	
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE		SHORT
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 4 BENCHMARK & PRECEDENT IMAGERY



TRAIL 4 ALIGNMENT





TRAIL TYPE **XC** CROSS COUNTRY NATURAL - FLOWING
 TRAIL LENGTH **2360M** DESCENDING SINGLE DIRECTION

AVERAGE GRADIENT **5%** 55M VERTICAL 110M VARIATION
 TRAIL WIDTH **0.8M** ROUGH ENHANCED

TRAIL 5 OVERVIEW

Trail 5 is a 2.3km moderate single direction undulating trail offering a cross country experience focused on natural, open and flowing trail. It forms part of the core outer network linking the West and East areas of the network and is of medium strategic value to the overall networks functionality. Located in moderate to steep side slopes, the moderate gradient trail traverses along the contours of the hill. It features continuous rolling grade reversals with flowy technical trail features and an open feel with a smooth surface with typical finished width of 0.8m. The trail is located within sections of plantation and remant bushland.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Climbing Turn
- Insloped Climbing Turn
- Insloped Turn
- Outsloped Turn
- Technical Climbing Turn
- Technical Inside Line

VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump

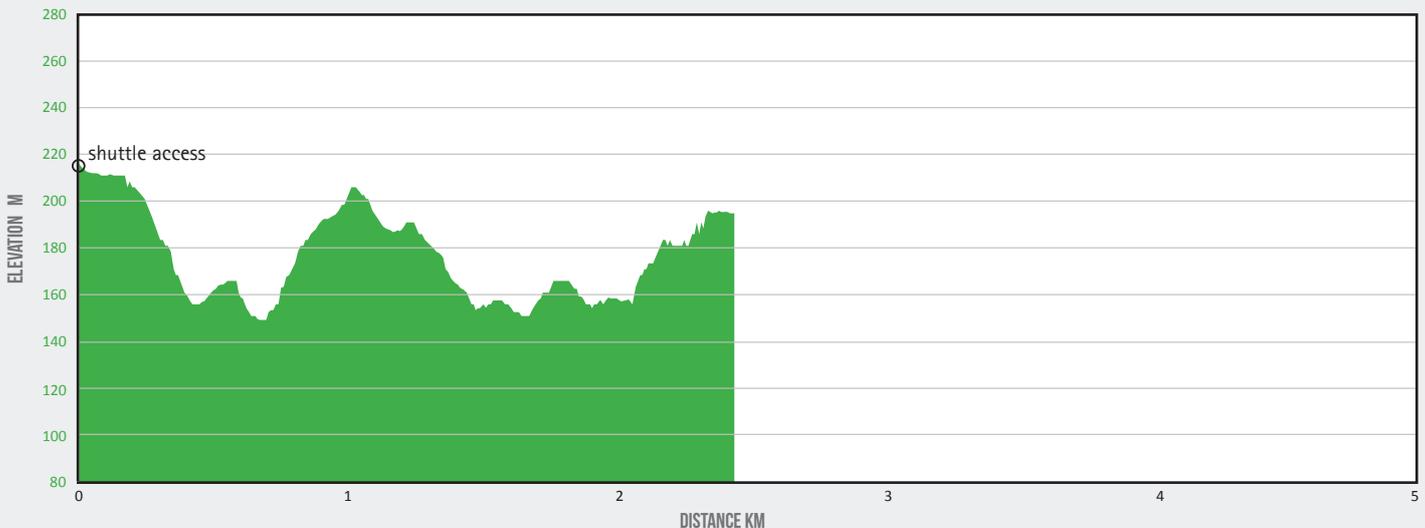
OBSTACLES

- Armored Crossing
- Chicane
- Choke
- Rock Garden
- Stabilised Root

TRAIL 5 DETAILS

Trail ID	5
Provisional Name	Blue Ridge Connection
Classification	Moderate - Blue Square
Strategic Value	Medium
Trail Type	Cross Country
Trail Style	Natural - flowing
Tread Width	0.8m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Undulating
Options	Optional Black features
Corridor Width	100m
Trail Length	2360m
Vertical Range	55m
Elevation Variation	110m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	5%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 5 - ELEVATION PROFILE



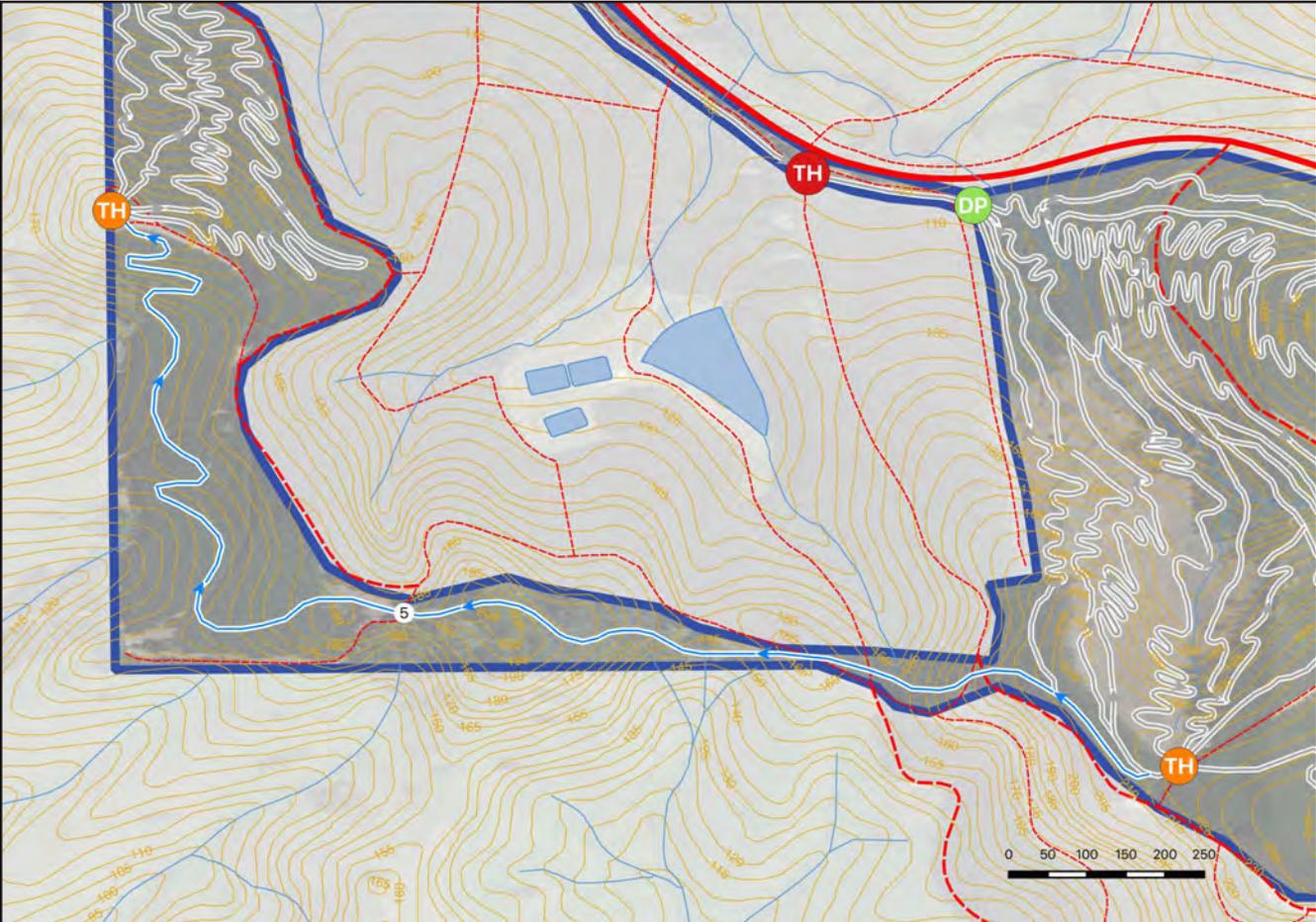
TRAIL 5 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING		FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH		GROOMED	
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED		IMPORTED MMTTF	
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE		SHORT
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 5 BENCHMARK & PRECEDENT IMAGERY



TRAIL 5 ALIGNMENT



BLUE FREERIDE LOOP

Trail ID **6**

CLASSIFICATION



TRAIL TYPE

GR GRAVITY FREERIDE

TRAIL LENGTH

3090M VARIES SINGLE DIRECTION

AVERAGE GRADIENT

10% 105M VERTICAL 210M VARIATION

TRAIL WIDTH

2.0M GROOMED CONSTRUCTED

TRAIL 6 OVERVIEW

Trail 6 is a 3km moderate single direction looped trail offering a gravity experience focused on freeride trail over natural terrain. It forms part of the core network and is of high strategic value to the overall networks functionality. Located in generally steep side slopes, the steeper gradient trail switches back and forth up the hill before looping around to descend back down. The trail can also be ridden as up or down only linking directly to the Tank 7 secondary trailhead. It features large jumps and switchback corners with constructed technical trail features with a groomed surface with typical finished width of 2.0m. The trail is located within plantation.

TRAIL 6 DETAIL

Trail ID	6
Provisional Name	Blue Freeride Loop
Classification	Moderate - Blue Square
Strategic Value	High
Trail Type	Gravity
Trail Style	Freeride
Tread Width	1.5-2.0m
Use	Single Use - Bike and Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Ascent/Descent
Options	Black Optional Features
Corridor Width	100m
Trail Length	3090m
Vertical Range	105m
Elevation Variation	210m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	10%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

ANTICIPATED TECHNICAL TRAIL FEATURES

TURNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Climbing Turn
- Insloped Climbing Turn
- Insloped Turn
- Outsloped Turn
- Technical Climbing Turn
- Technical Inside Line

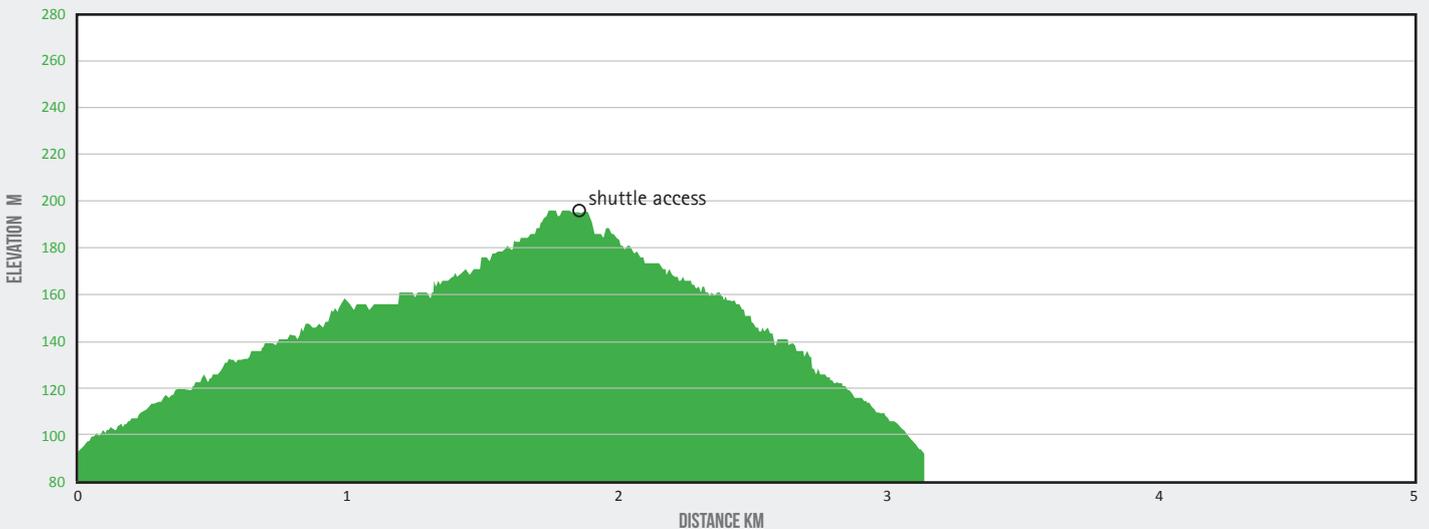
VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump
- Tabletop
- Obstacle Drop Off
- Step Down Jump
- Step Up Jump

OBSTACLES

- Armored Crossing

TRAIL 6 - ELEVATION PROFILE



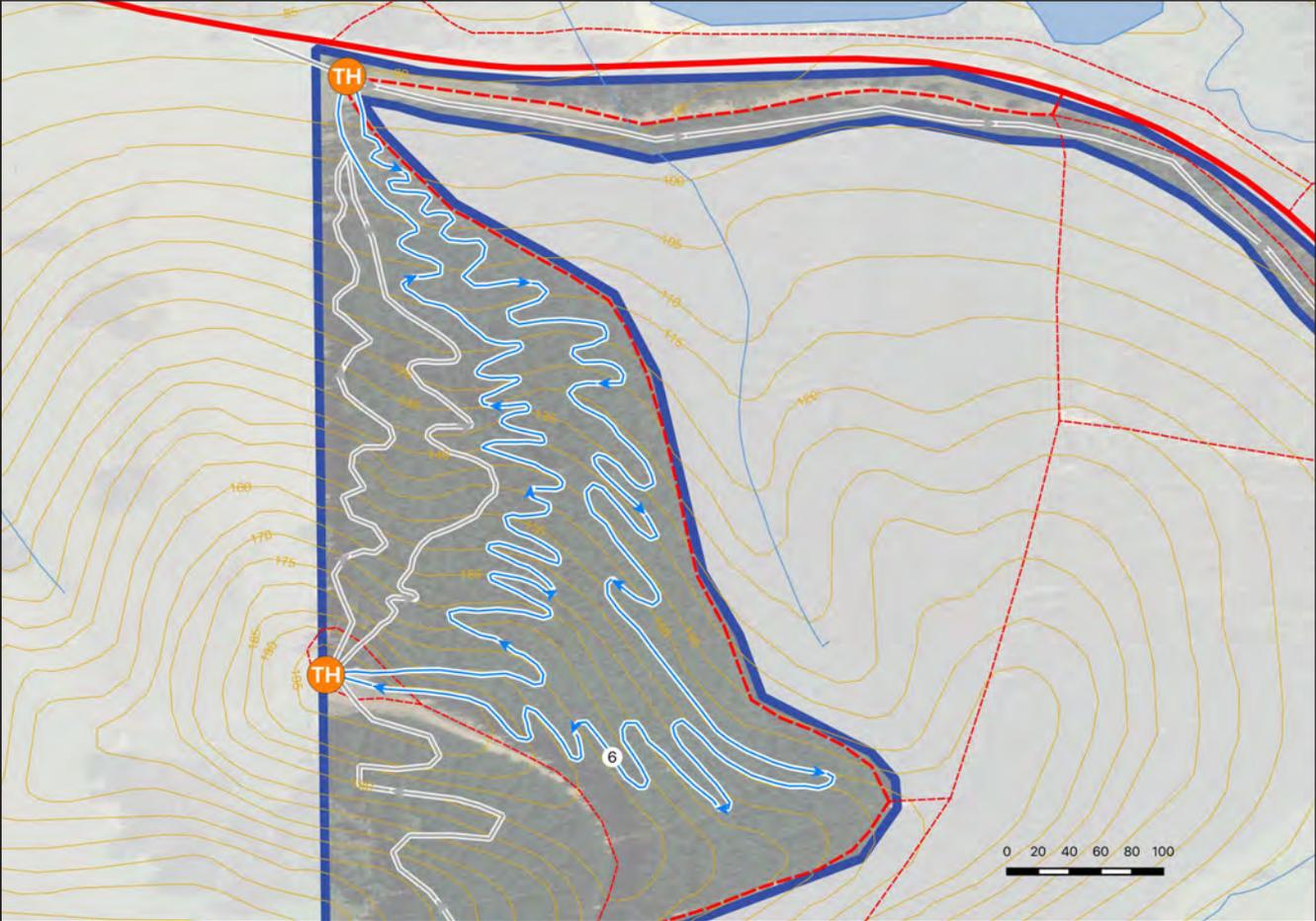
TRAIL 6 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 6 BENCHMARK & PRECEDENT IMAGERY



TRAIL 6 ALIGNMENT



BLUE DOWN COUNTRY DESCENT

Trail ID **7**



TRAIL TYPE
DC DOWN COUNTRY
NATURAL - FLOWING

TRAIL LENGTH
1480M DESCENT
SINGLE DIRECTION

AVERAGE GRADIENT
8% 125M VERTICAL
125M VARIATION

TRAIL WIDTH
0.8M ROUGH
ENHANCED

TRAIL 7 OVERVIEW

Trail 7 is a 1.4km moderate single direction descending trail offering a down country experience focused on natural, open and flowing trail over natural terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally moderate side slopes, the moderate gradient trail descends from the outer secondary trailhead back towards the primary trailhead. It features continuous rolling grade reversals with flowy and technical trail features and a rougher surface with typical finished width of 0.8m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump

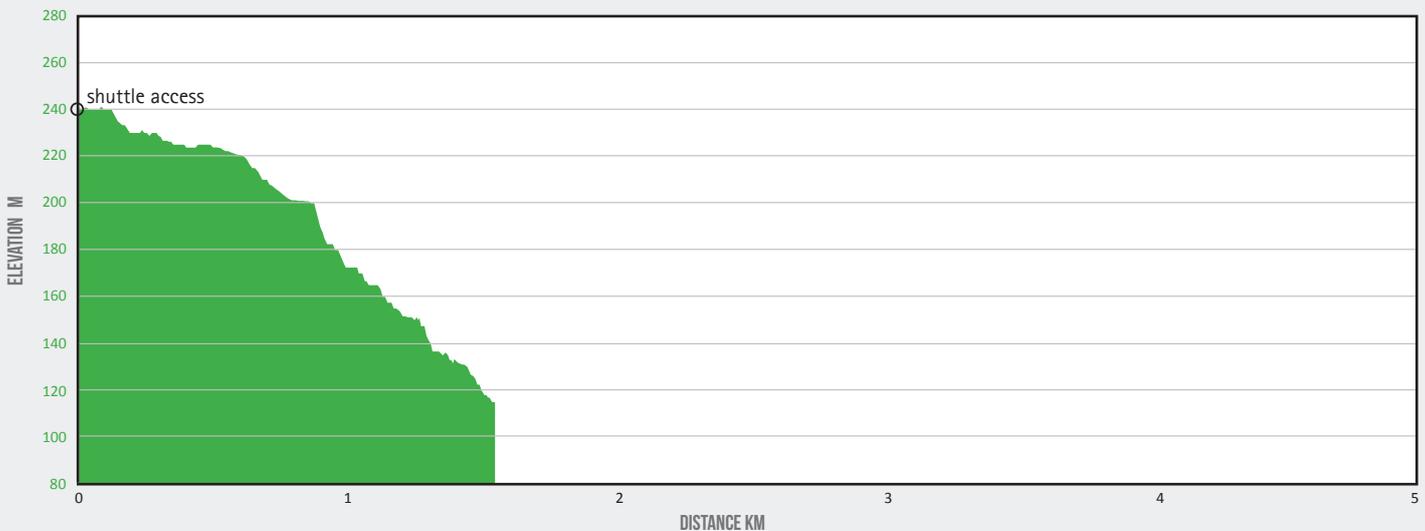
OBSTACLES

- Armored Crossing
- Chicane
- Choke
- Rock Garden
- Stabilised Root

TRAIL 7 DETAILS

Trail ID	7
Provisional Name	Blue Down Country Descent
Classification	Moderate - Blue Square
Strategic Value	Medium
Trail Type	Down Country
Trail Style	Natural - flowing
Tread Width	0.8m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Black Optional Features
Corridor Width	100m
Trail Length	1480m
Vertical Range	125m
Elevation Variation	125m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	8%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 7 - ELEVATION PROFILE



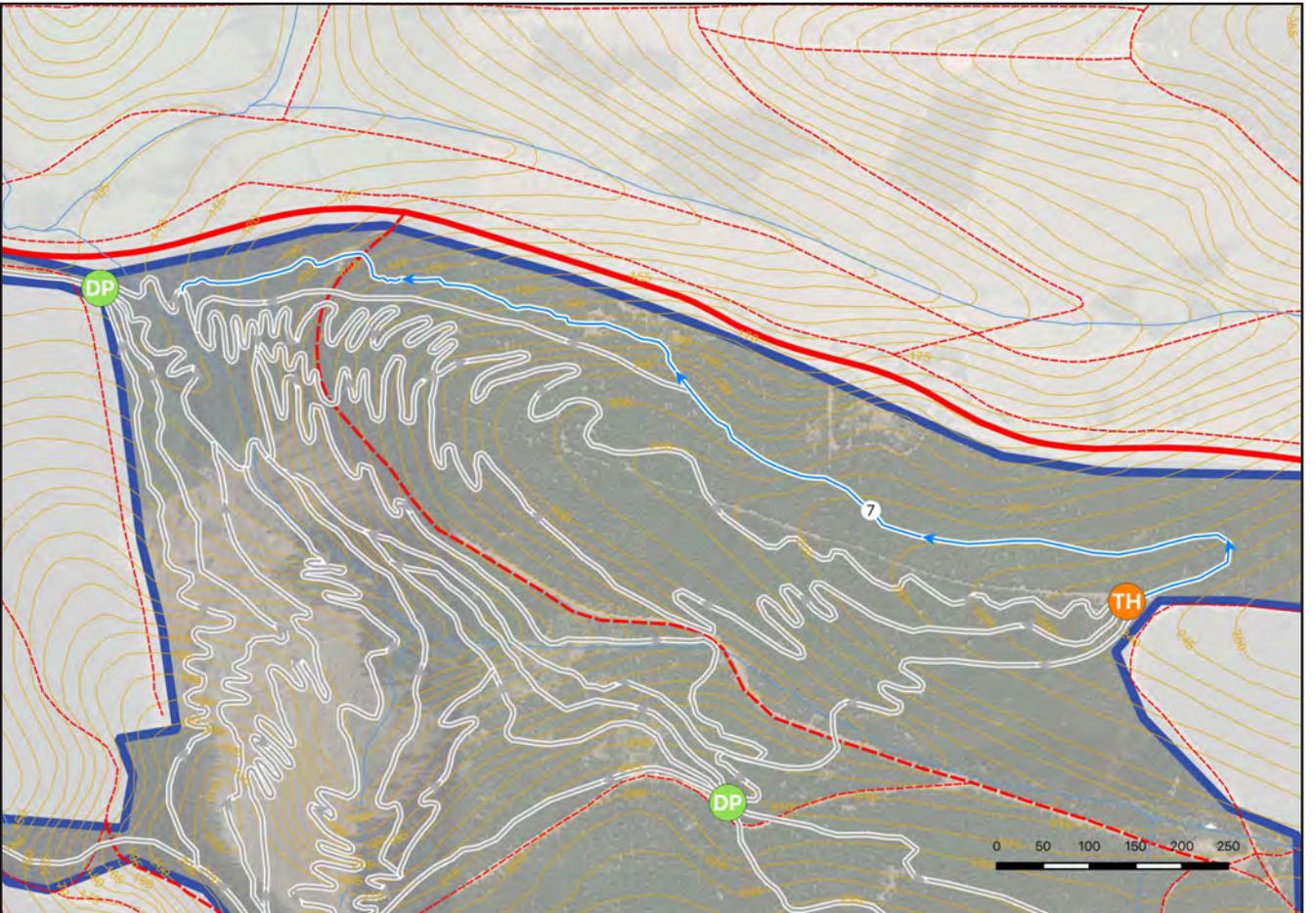
TRAIL 7 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 7 BENCHMARK & PRECEDENT IMAGERY



TRAIL 7 ALIGNMENT



BLACK DOWN COUNTRY DESCENT

Trail ID **8**

CLASSIFICATION



**DIFFICULT
BLACK DIAMOND**

TRAIL TYPE

**DC DOWN COUNTRY
NATURAL - FLOWING**

TRAIL LENGTH

**590M CONTOURING
SINGLE DIRECTION**

AVERAGE GRADIENT

**14% 85M VERTICAL
85M VARIATION**

TRAIL WIDTH

**0.5M ROUGH
ENHANCED**

TRAIL 8 OVERVIEW

Trail 8 is a 590m difficult single direction descending trail offering a down country experience focused on natural, open and flowing trail over rocky natural terrain. It forms part of the optional network of trails and is of low strategic value to the overall networks functionality. Located in generally steep side slopes, the steep gradient trail descends from Trail 7 back to Trail 2. It features natural flowy trail features and a narrow rougher surface with typical finished width of 0.5m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump

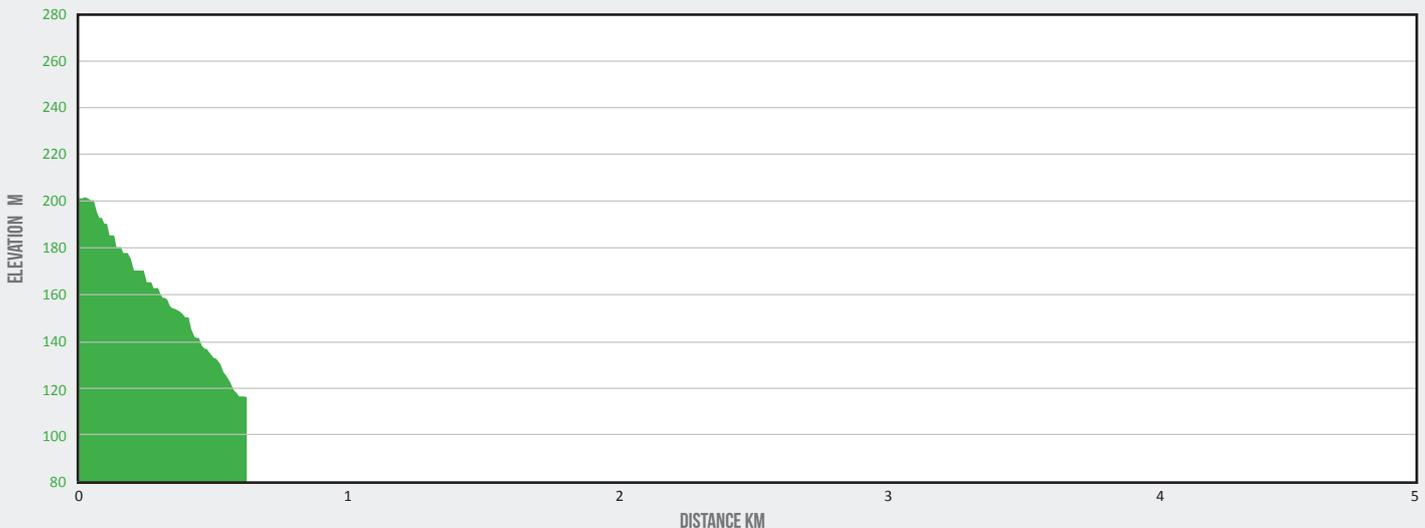
OBSTACLES

- Armored Crossing
- Chicane
- Choke
- Rock Garden
- Stabilised Root

TRAIL 8 DETAILS

Trail ID	8
Provisional Name	Black Down Country Descent
Classification	Difficult - Black Diamond
Strategic Value	Low
Trail Type	Down Country
Trail Style	Natural - flowing
Tread Width	0.5m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	None
Corridor Width	100m
Trail Length	590m
Vertical Range	85m
Elevation Variation	85m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	14%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

TRAIL 8 - ELEVATION PROFILE



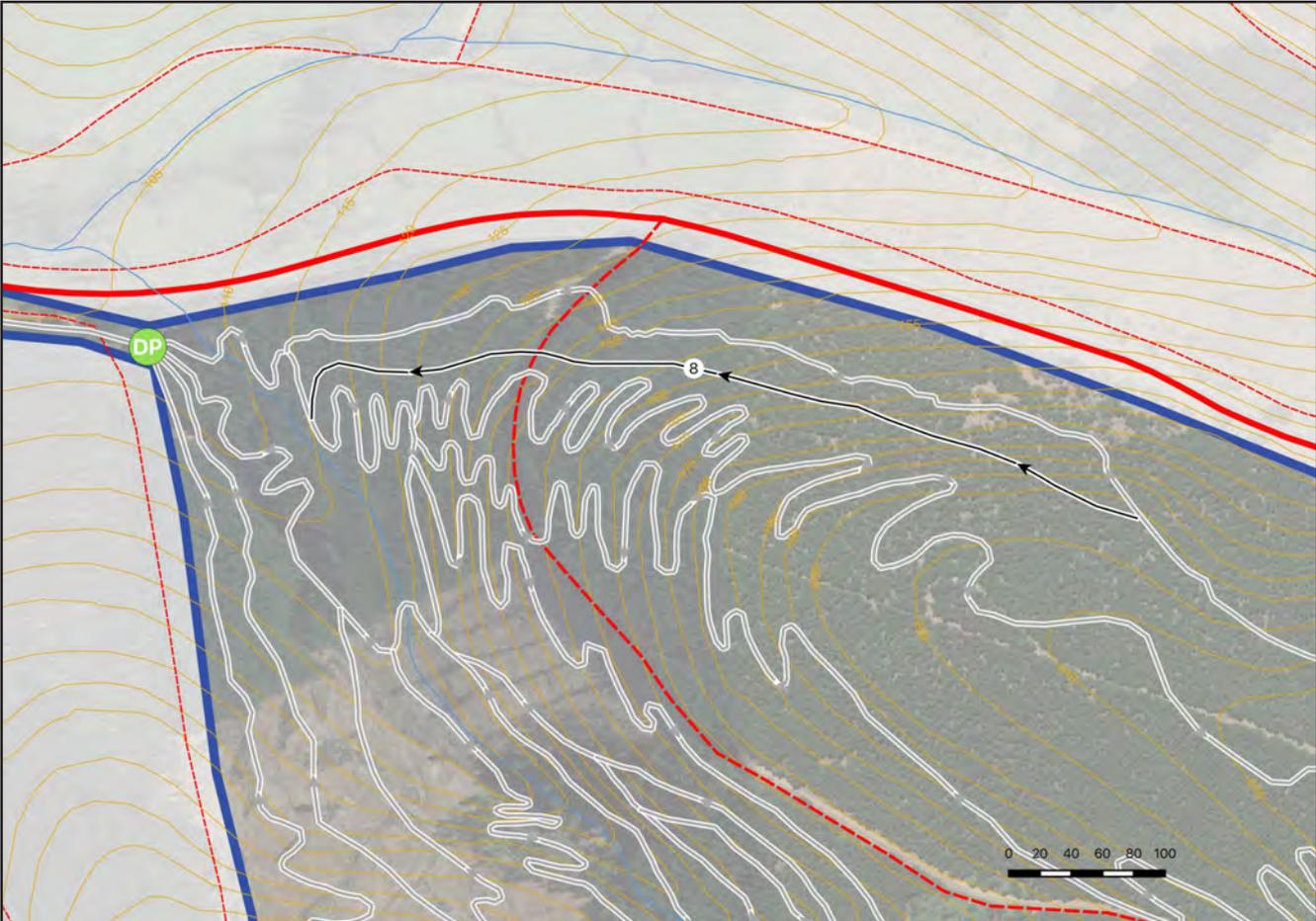
TRAIL 8 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING		FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH		GROOMED	
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED		IMPORTED MMTTF	
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE		SHORT
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE		VERY LARGE
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH		VERY HIGH

TRAIL 8 BENCHMARK & PRECEDENT IMAGERY



TRAIL 8 ALIGNMENT



DOUBLE BLACK TECH DESCENT

Trail ID **9**

CLASSIFICATION  EXTREME DOUBLE BLACK	TRAIL TYPE GR GRAVITY TECHNICAL	TRAIL LENGTH 490M DESCENDING SINGLE DIRECTION	AVERAGE GRADIENT 13% 65M VERTICAL 65M VARIATION	TRAIL WIDTH 1.0M VERY ROUGH NATURAL
---------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------	----------------------------------------------------------------	------------------------------------------------------------------	------------------------------------------------------

TRAIL 9 OVERVIEW

Trail 9 is a 490m extreme single direction descending trail offering a gravity experience focused on technical, natural trail rocky terrain. It forms part of the optional network of trails and is of high strategic value to the overall network due to the lack of extreme trails in the area and in WA. Located in steep side slopes, the steep gradient trail descends from the decision point down to Trail 10. It features rocky technical trail features with a narrow very rough surface with a typical finished width of 1.0m. The trail is located within plantation.

Note as per DBCA recommendations detailed design for this trail will need to ensure trail alignment avoids granite outcrops and associated remnant vegetation.

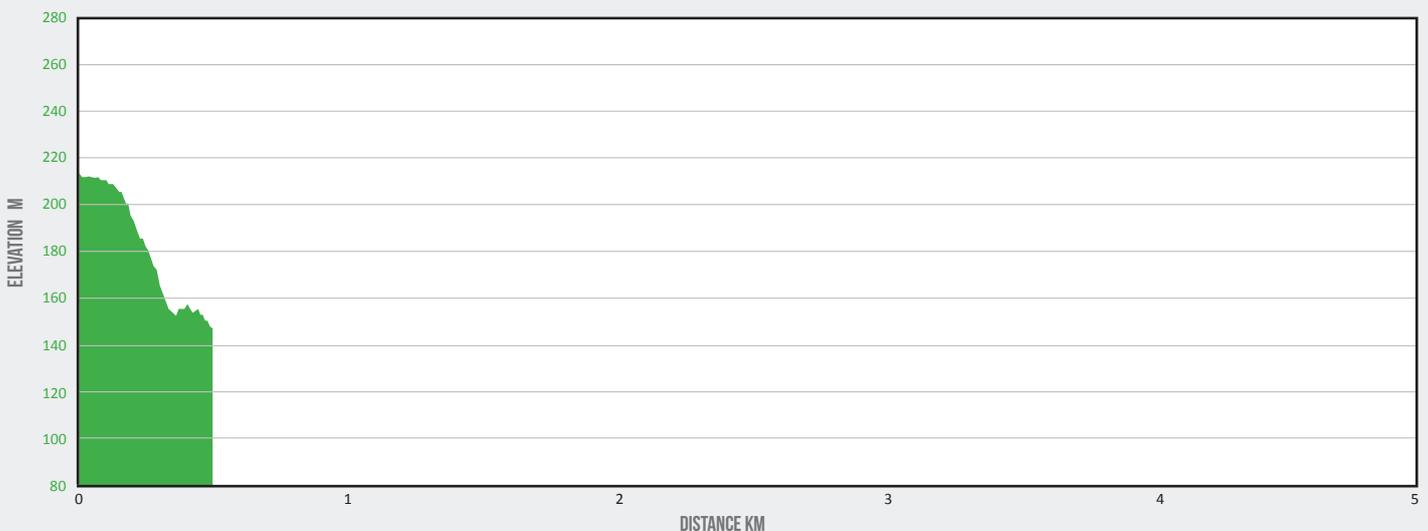
ANTICIPATED TECHNICAL TRAIL FEATURES

URNS	VERTICAL CHANGE	OBSTACLES
Berm	Grade Reversal	Armored Crossing
Descending Switchback	Kicker Jump	Chicane
Insloped Descending Turn	Roll In	Choke
Insloped Turn	Rollers	Rock Garden
Rising Catch Turn	Jump	Stabilised Root
Insloped Turn	Obstacle Drop Off	Rock Drop
Outsloped Turn	Step Down Jump	

TRAIL 9 DETAILS

Trail ID	9
Provisional Name	Double Black Tech Descent
Classification	Difficult - Black Diamond
Strategic Value	High
Trail Type	Gravity
Trail Style	Technical - Natural
Tread Width	1.0m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	None
Corridor Width	100m
Trail Length	490m
Vertical Range	65m
Elevation Variation	65m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	13%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

TRAIL 9 - ELEVATION PROFILE



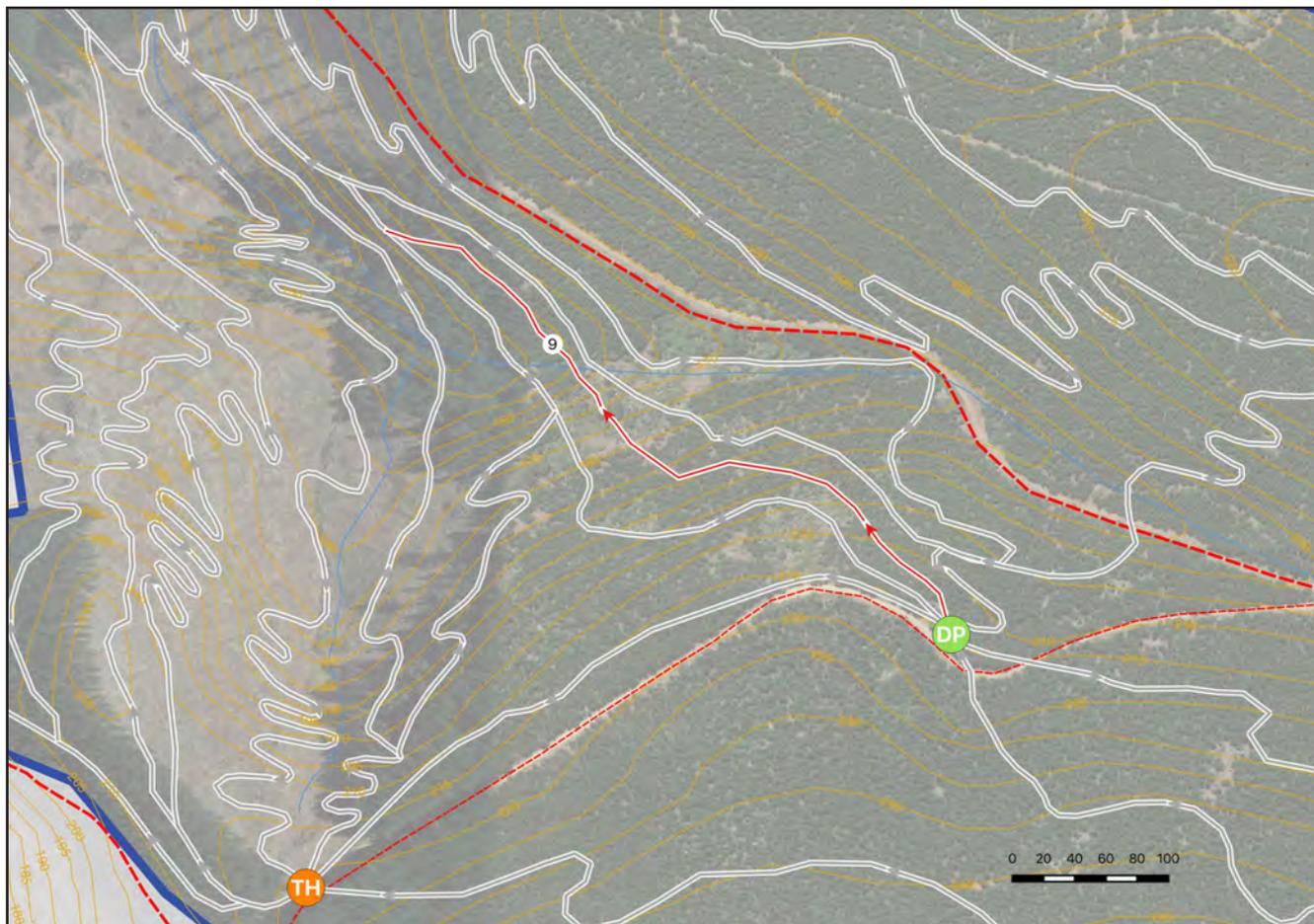
TRAIL 9 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 9 BENCHMARK & PRECEDENT IMAGERY



TRAIL 9 ALIGNMENT



BLACK TECH DESCENT

Trail ID **10**

CLASSIFICATION



DIFFICULT
BLACK DIAMOND

TRAIL TYPE

AM

ALL MOUNTAIN
NATURAL - FLOWING

TRAIL LENGTH

1770M

DESCENDING
SINGLE DIRECTION

AVERAGE GRADIENT

5%

85M VERTICAL
85M VARIATION

TRAIL WIDTH

0.5M

ROUGH
ENHANCED

TRAIL 10 OVERVIEW

Trail 10 is a 1.7km difficult single direction descending trail offering an all mountain experience focused on natural, open, flowing trail over rocky and rough terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally steep side slopes, the steep gradient trail descends from the decision point connecting to Trail 19. It features natural to flowing trail features with a narrow and rough surface with typical finished width of 0.5m. The trail is located within plantation.

Note as per DBCA recommendations detailed design for this trail will need to ensure trail alignment avoids granite outcrops and associated remnant vegetation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Berm
Descending Switchback
Insloped Descending Turn
Insloped Turn
Rising Catch Turn
Insloped Turn
Outsloped Turn

VERTICAL CHANGE

Grade Reversal
Kicker Jump
Obstacle Drop Off
Roll In
Rollers
Jump
Step Down Jump
Step Up Jump

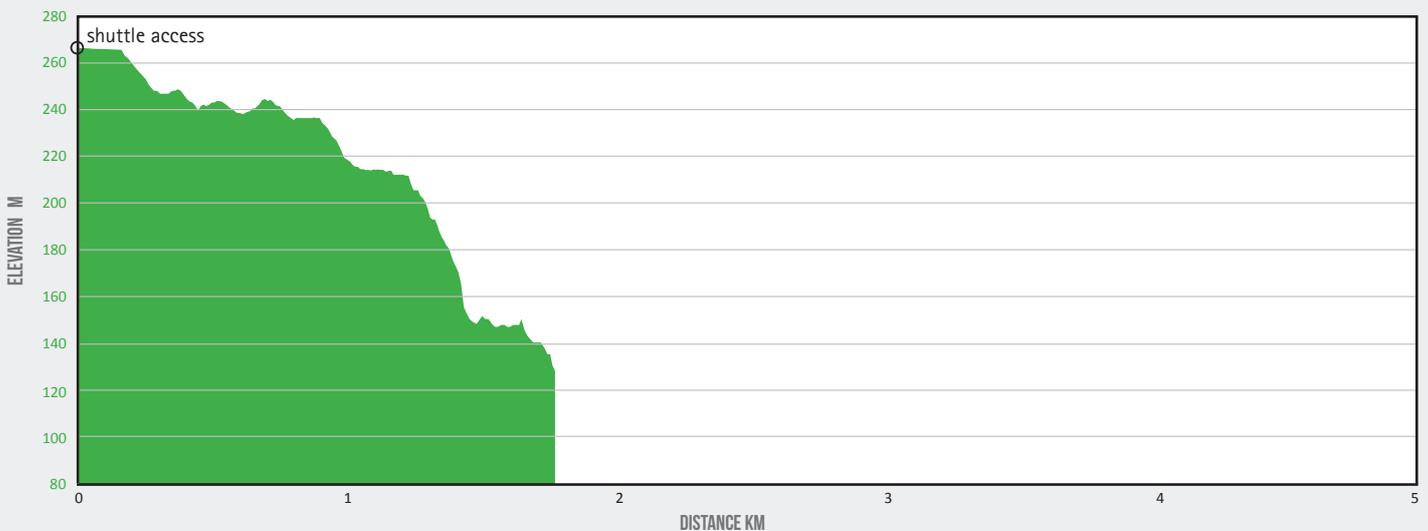
OBSTACLES

Armored Crossing
Chicane
Choke
Rock Garden
Stabilised Root
Rock Drop

TRAIL 10 DETAILS

Trail ID	10
Provisional Name	Black Tech Descent
Classification	Difficult - Black Diamond
Strategic Value	Medium
Trail Type	All mountain
Trail Style	Natural - flowing
Tread Width	0.5m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Optional Double Black features
Corridor Width	100m
Trail Length	1620m
Vertical Range	85m
Elevation Variation	85m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	5%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

TRAIL 10 - ELEVATION PROFILE



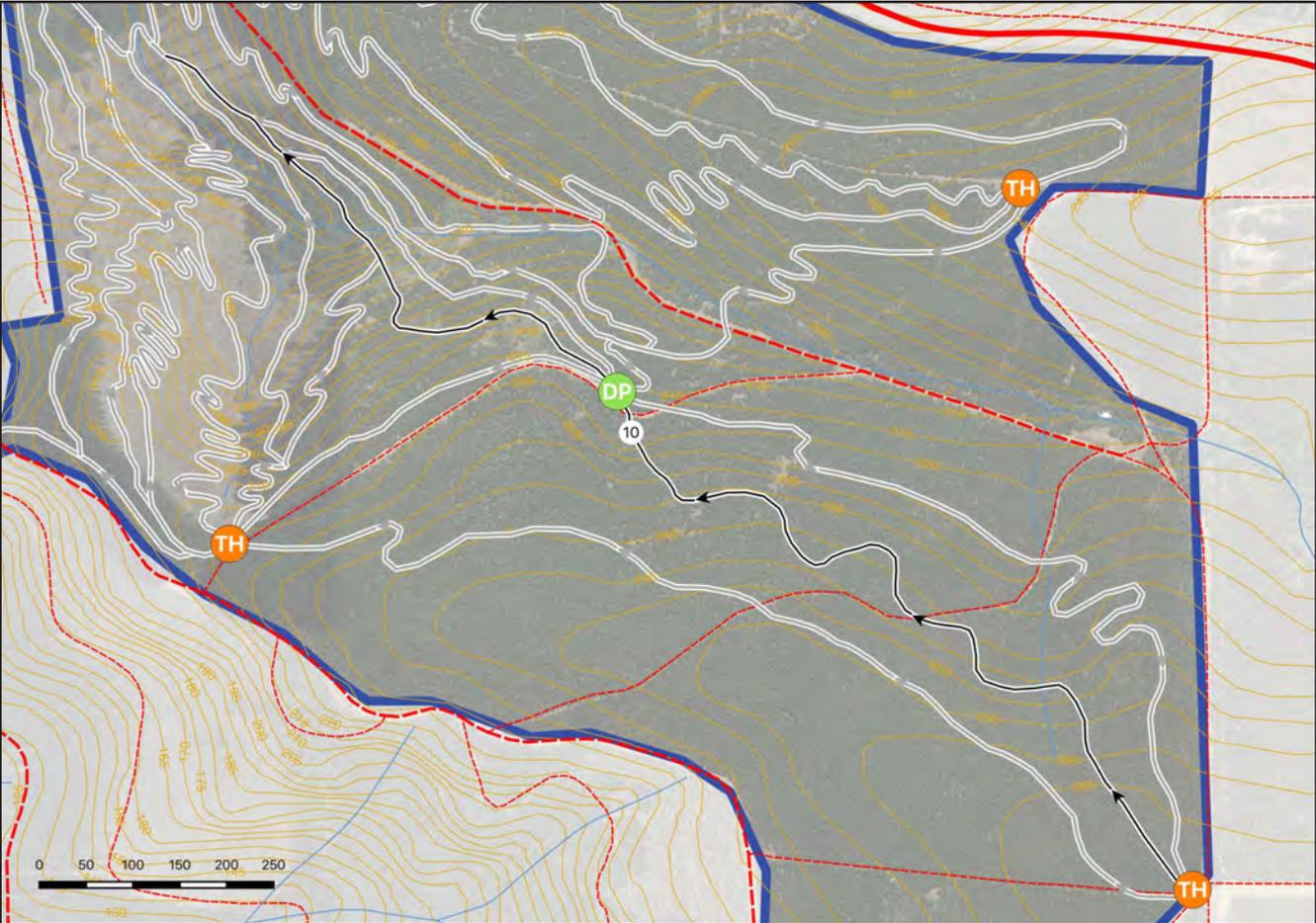
TRAIL 10 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 10 BENCHMARK & PRECEDENT IMAGERY



TRAIL 10 ALIGNMENT



BLACK NATURAL DESCENT

Trail ID **11**

CLASSIFICATION  DIFFICULT BLACK DIAMOND	TRAIL TYPE GR	GRAVITY TECHNICAL - NATURAL	TRAIL LENGTH 380M	DESCENDING SINGLE DIRECTION	AVERAGE GRADIENT 11%	40M VERTICAL 40M VARIATION	TRAIL WIDTH 1.0M	VERY ROUGH NATURAL
-----------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------	----------------------------------------------	------------------------------------	----------------------------------------------	---------------------------------------	---------------------------------------------	-----------------------------------	-------------------------------------

TRAIL 11 OVERVIEW

Trail 11 is a 380m difficult single direction descending trail offering a gravity experience focused on technical natural trail over very rough terrain. It forms part of the optional network of trails and is of high strategic value to the overall networks functionality. Located in steep side slopes, the steep gradient trail descends from Trail 4 to Trail 10. It features technical trail features with a varying width very rough surface with typical finished width of 0.3m-1.0m. The trail is located within plantation.

Note as per DBCA recommendations detailed design for this trail will need to ensure trail alignment avoids granite outcrops and associated remnant vegetation.

TRAIL 11 DETAILS

Trail ID	11
Provisional Name	Black Natural Descent
Classification	Difficult - Black Diamond
Strategic Value	High
Trail Type	Gravity
Trail Style	Technical/Natural
Tread Width	0.3m - 1.0m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	None
Corridor Width	100m
Trail Length	380m
Vertical Range	40m
Elevation Variation	40m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	11%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

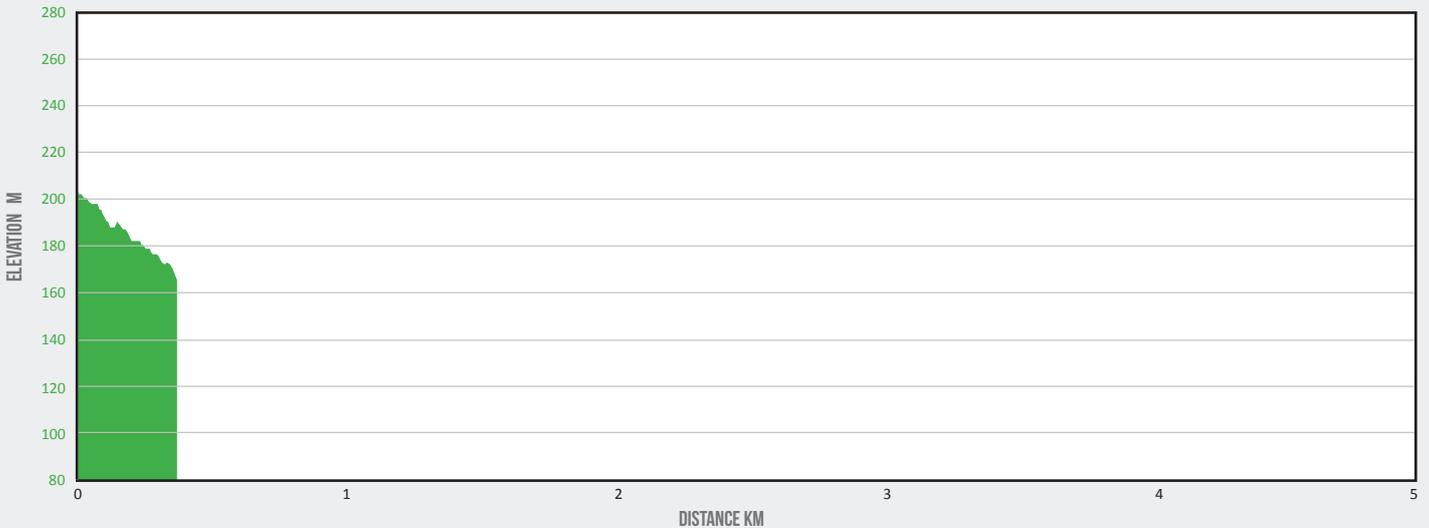
VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Roll In
- Rollers
- Obstacle Drop Off
- Step Down

OBSTACLES

- Armored Crossing
- Chicane
- Choke
- Rock Garden
- Stabilised Root
- Rock Drop

TRAIL 11 - ELEVATION PROFILE



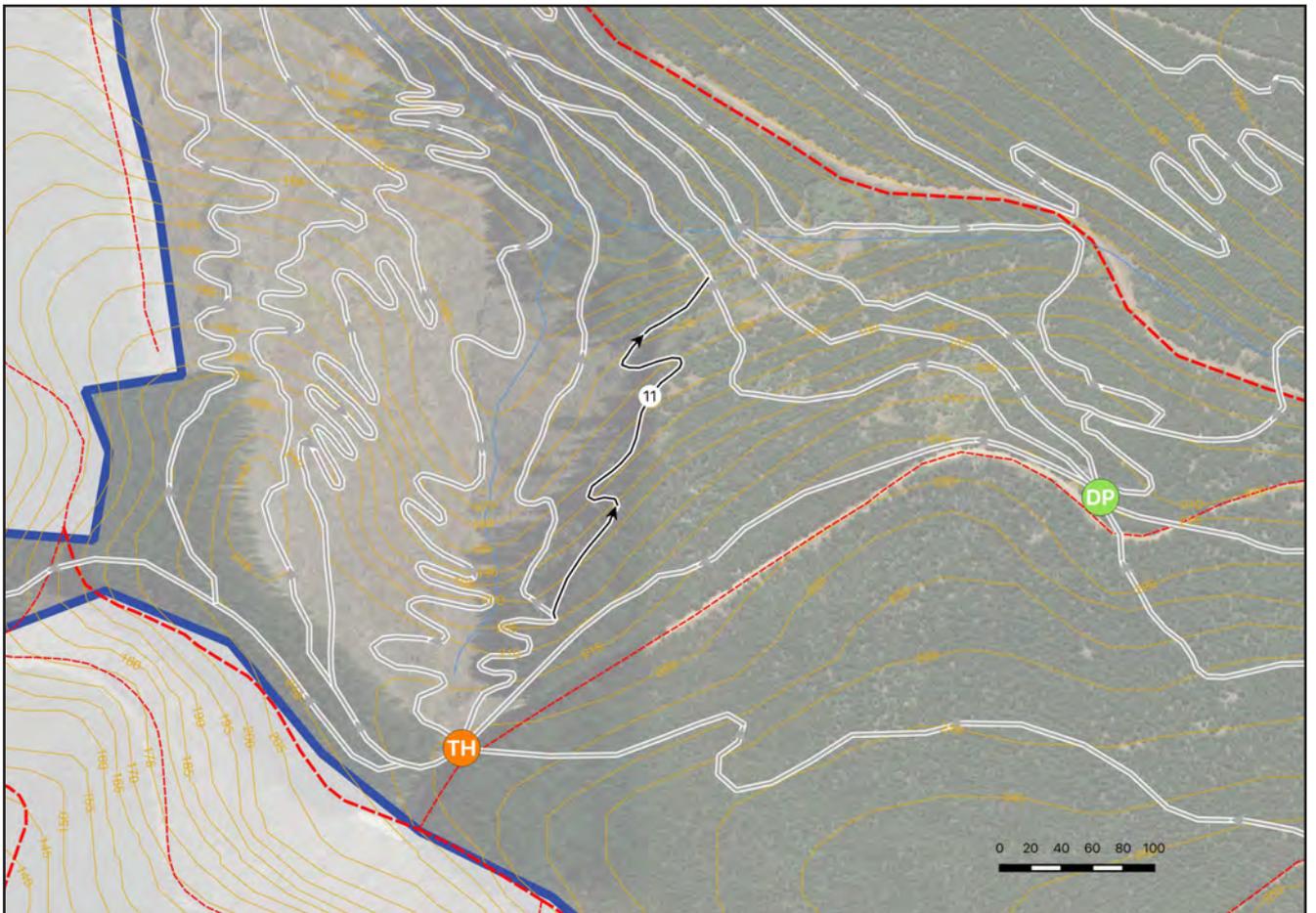
TRAIL 11 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 11 BENCHMARK & PRECEDENT IMAGERY



TRAIL 11 ALIGNMENT



CLASSIFICATION  MODERATE BLUE SQUARE	TRAIL TYPE XC CROSS COUNTRY OPEN	TRAIL LENGTH 510M CONTOURING SINGLE DIRECTION	AVERAGE GRADIENT 1% 5M VERTICAL 5M VARIATION	TRAIL WIDTH 0.8M SMOOTH CONSTRUCTED
-------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------	-------------------------------------------------------------------	------------------------------------------------------------------	---------------------------------------------------------

TRAIL 12 OVERVIEW

Trail 12 is a 510m moderate single direction undulating trail offering a cross country experience focused on open trail over predictable terrain. It forms part of the optional network of trails and is of low strategic value to the overall networks functionality. Located in generally shallow side slopes, the shallow gradient trail traverses along the contours of the hill connecting the decision point to shuttle trail head 1. It features continuous rolling grade reversals and a smooth surface with typical finished width of 0.8m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Insploped Descending Turn
Insploped Turn
Rising Catch Turn

VERTICAL CHANGE

Grade Reversal
Rollers

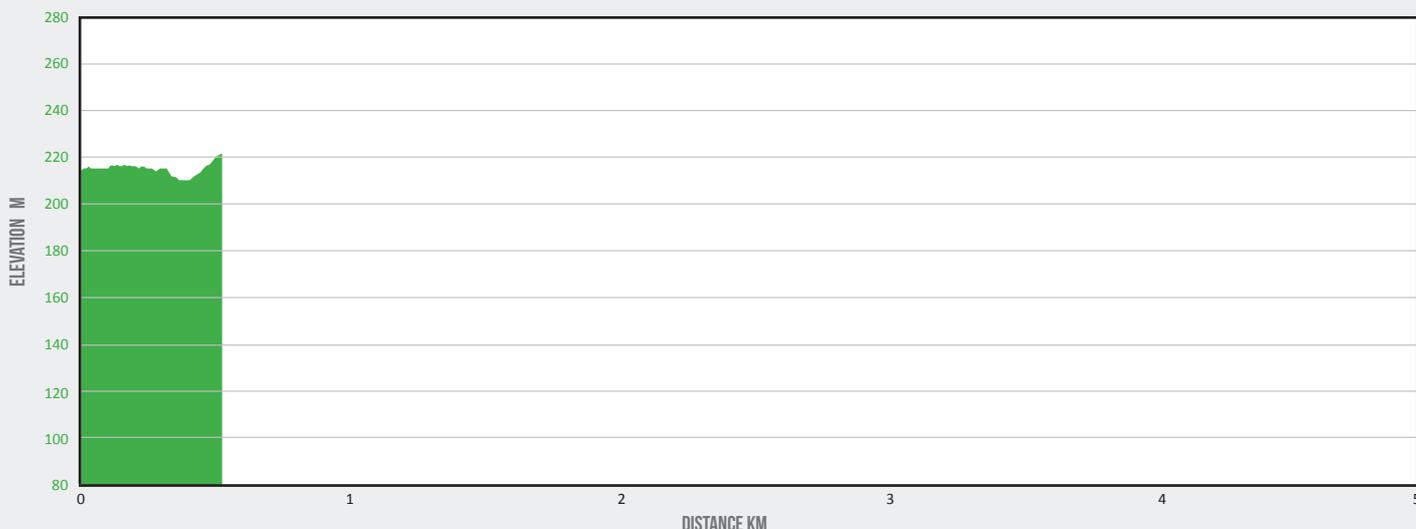
OBSTACLES

Rock Garden
Stabilised Root

TRAIL 12 DETAILS

Trail ID	12
Provisional Name	Blue Connection
Classification	Moderate - Blue Square
Strategic Value	Low
Trail Type	Cross Country
Trail Style	Open
Tread Width	0.8m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Contouring
Options	None
Corridor Width	100m
Trail Length	510m
Vertical Range	5m
Elevation Variation	5m
Prevailing Cross Slopes	Shallow
Average Trail Gradient	1%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 12 - ELEVATION PROFILE



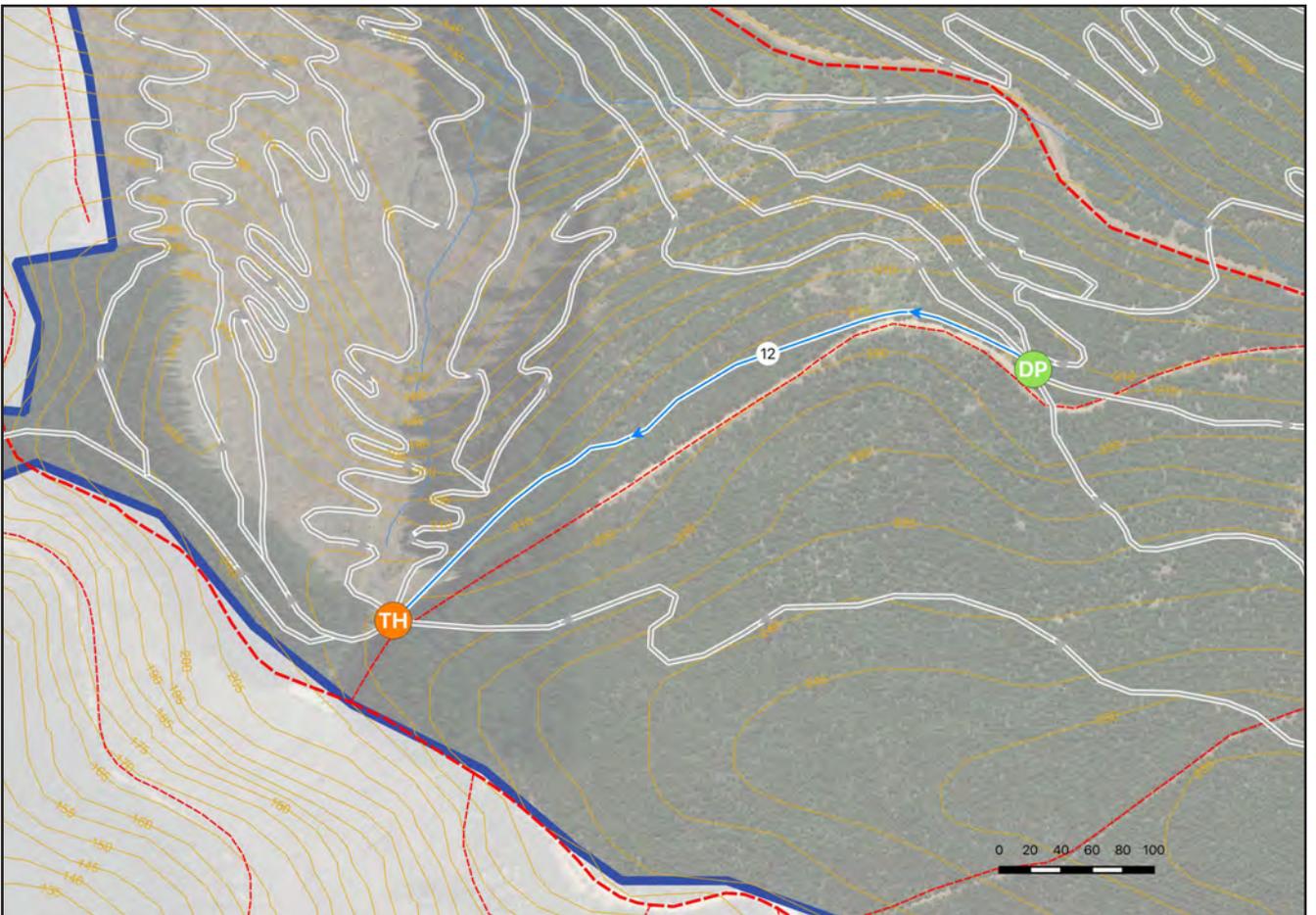
TRAIL 12 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 12 BENCHMARK & PRECEDENT IMAGERY



TRAIL 12 ALIGNMENT



BLUE XC CLIMB

Trail ID **13**

CLASSIFICATION



TRAIL TYPE

XC CROSS COUNTRY FLOWING

TRAIL LENGTH

1350M ASCENDING SINGLE DIRECTION

AVERAGE GRADIENT

8% 105M VERTICAL 105M VARIATION

TRAIL WIDTH

0.8M SMOOTH ENHANCED

TRAIL 13 OVERVIEW

Trail 13 is a 1.3km moderate single direction ascending trail offering a cross country experience focused on flowing trail over natural terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally steep side slopes, the moderate gradient trail climbs from Trail 2 to shuttle trailhead. It features climbing switchback corners with technical trail features rough surface with typical finished width of 0.8m. The trail is located within plantation.

TRAIL 13 DETAILS

Trail ID	13
Provisional Name	Blue XC Climb
Classification	Moderate - Blue Square
Strategic Value	Medium
Trail Type	Cross Country
Trail Style	Flowing
Tread Width	0.8m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Ascending
Options	Black Optional Features
Corridor Width	100m
Trail Length	1350m
Vertical Range	105m
Elevation Variation	105m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	8%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

ANTICIPATED TECHNICAL TRAIL FEATURES

TURNS

- Berm
- Ascending Switchback
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

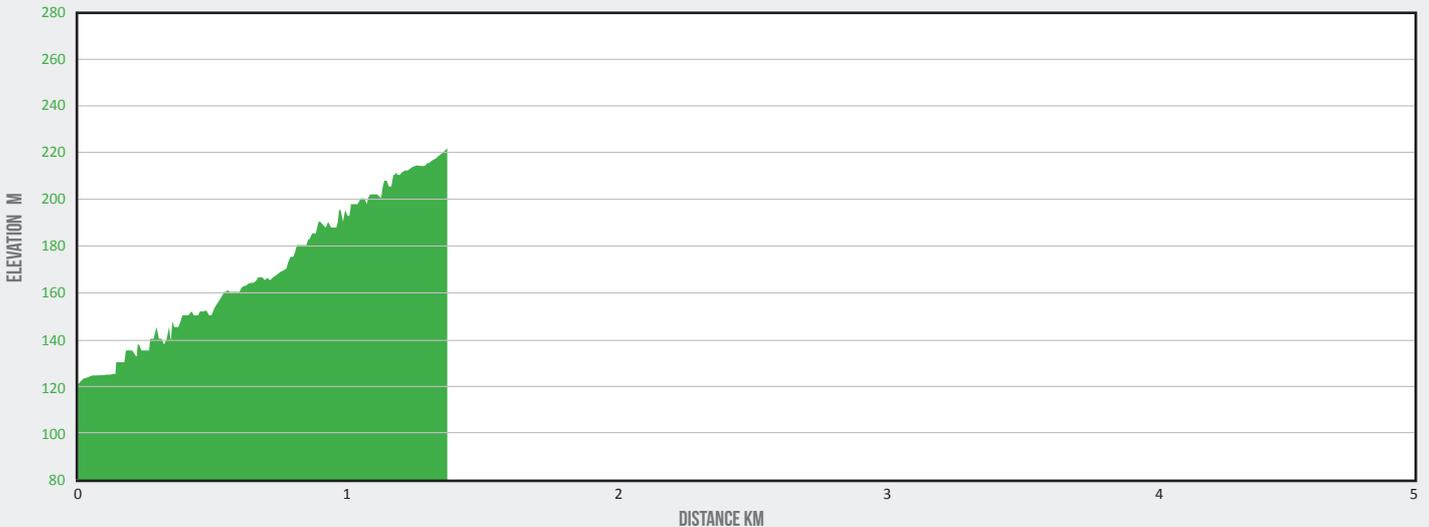
VERTICAL CHANGE

- Grade Reversal
- Roll In
- Rollers

OBSTACLES

- Chicane
- Rock Garden
- Stabilised Root

TRAIL 13 - ELEVATION PROFILE



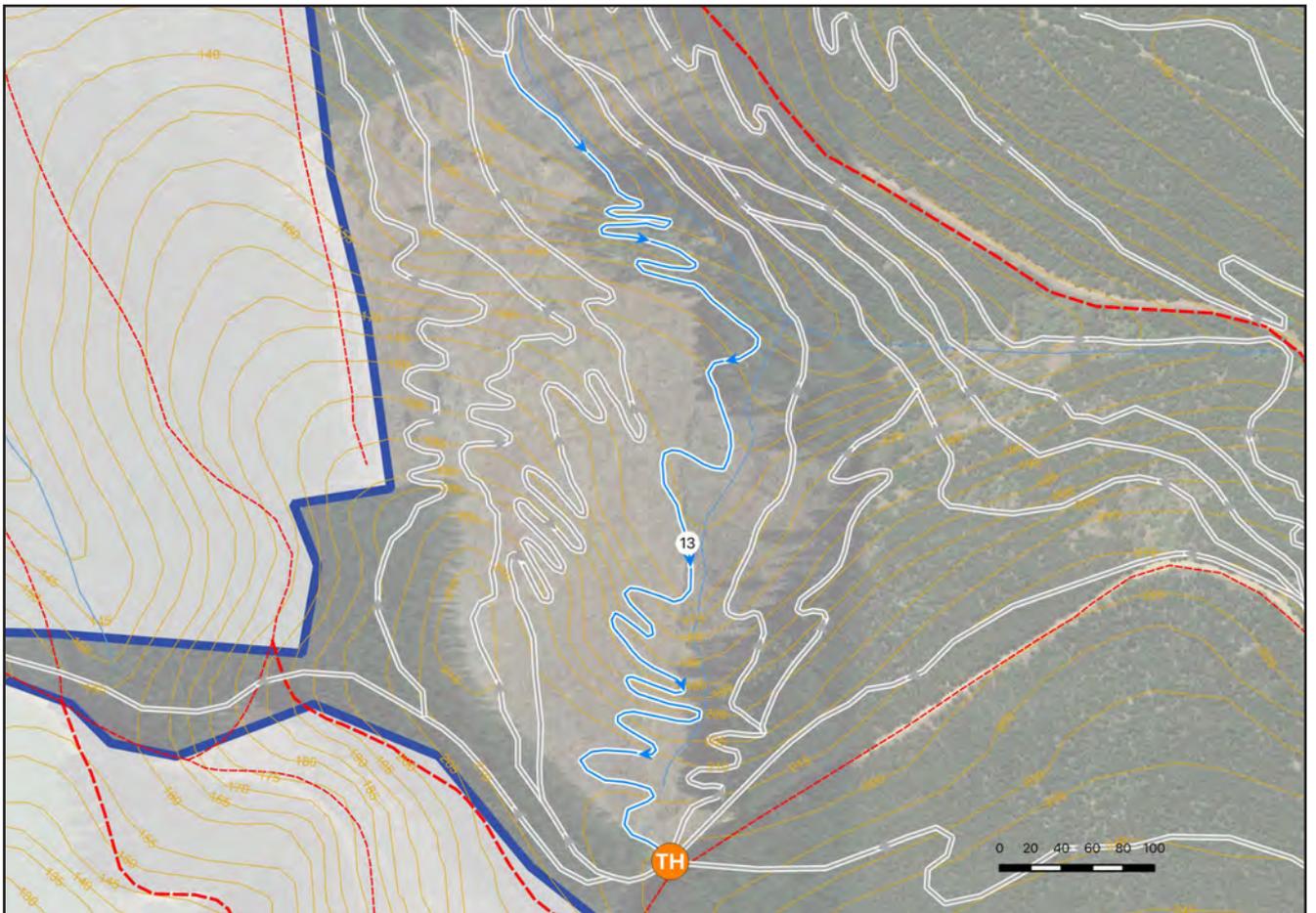
TRAIL 13 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING		FLOWING	
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH		GROOMED	
TECHNICAL TRAIL FEATURES	NATURAL		ENHANCED	CONSTRUCTED	IMPORTED MMTTF	
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 13 BENCHMARK & PRECEDENT IMAGERY



TRAIL 13 ALIGNMENT



GREEN FLOW DESCENT

Trail ID **14**

CLASSIFICATION
 **EASY**
 GREEN CIRCLE

TRAIL TYPE
GR GRAVITY
 FLOW TRAIL

TRAIL LENGTH
1370M DESCENDING
 SINGLE DIRECTION

AVERAGE GRADIENT
7% 105M VERTICAL
 105M VARIATION

TRAIL WIDTH
1.4M SMOOTH
 CONSTRUCTED

TRAIL 14 OVERVIEW

Trail 14 is a 1.3km easy single direction descending trail offering a gravity experience focused on a flow trail style over smooth terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally steep side slopes, the shallow gradient trail switches back and forth on the hill descending from shuttle trailhead 1 to Trail 2. It features continuous rolling grade reversals with technical trail features with a wide smooth surface with typical finished width of 1.4m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Berm
 Descending Switchback
 Insloped Descending Turn
 Insloped Turn
 Rising Catch Turn
 Insloped Turn
 Outsloped Turn

VERTICAL CHANGE

Grade Reversal
 Kicker Jump
 Roll In
 Rollers
 Jump
 Tabletop

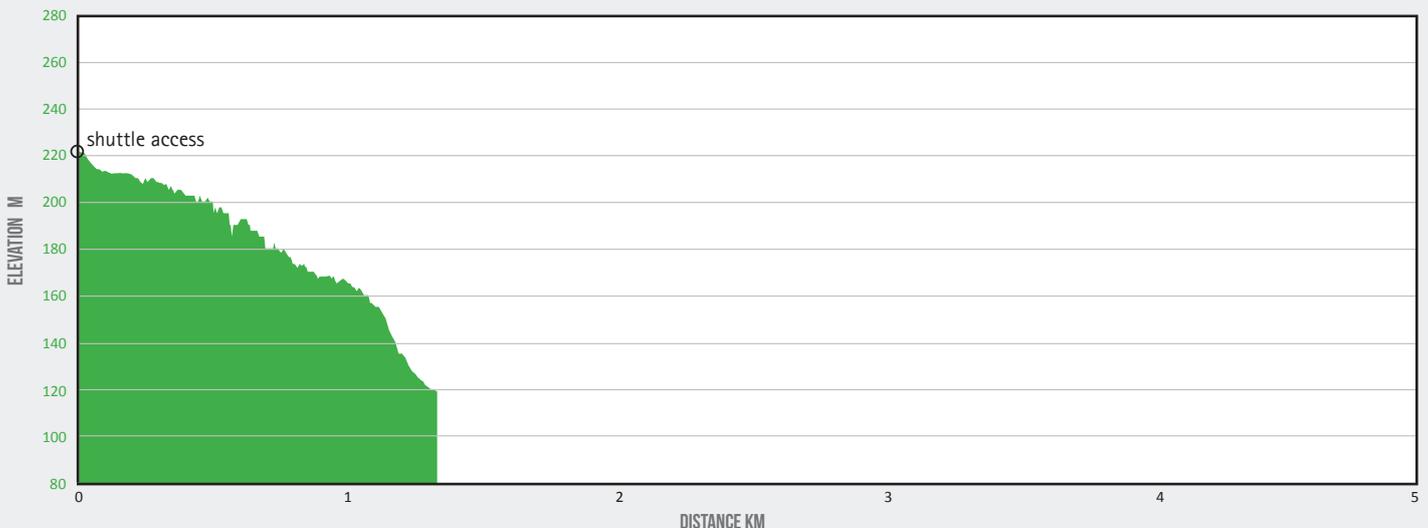
OBSTACLES

Armored Crossing
 Chicane
 Choke

TRAIL 14 DETAILS

Trail ID	14
Provisional Name	Green Flow Descent
Classification	Easy - Green Circle
Strategic Value	Moderate
Trail Type	Gravity
Trail Style	Flow Trail
Tread Width	1.4m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Optional Blue features
Corridor Width	100m
Trail Length	1370m
Vertical Range	105m
Elevation Variation	105m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	7%
Maximum Trail Gradient	15% up to 20m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 14 - ELEVATION PROFILE



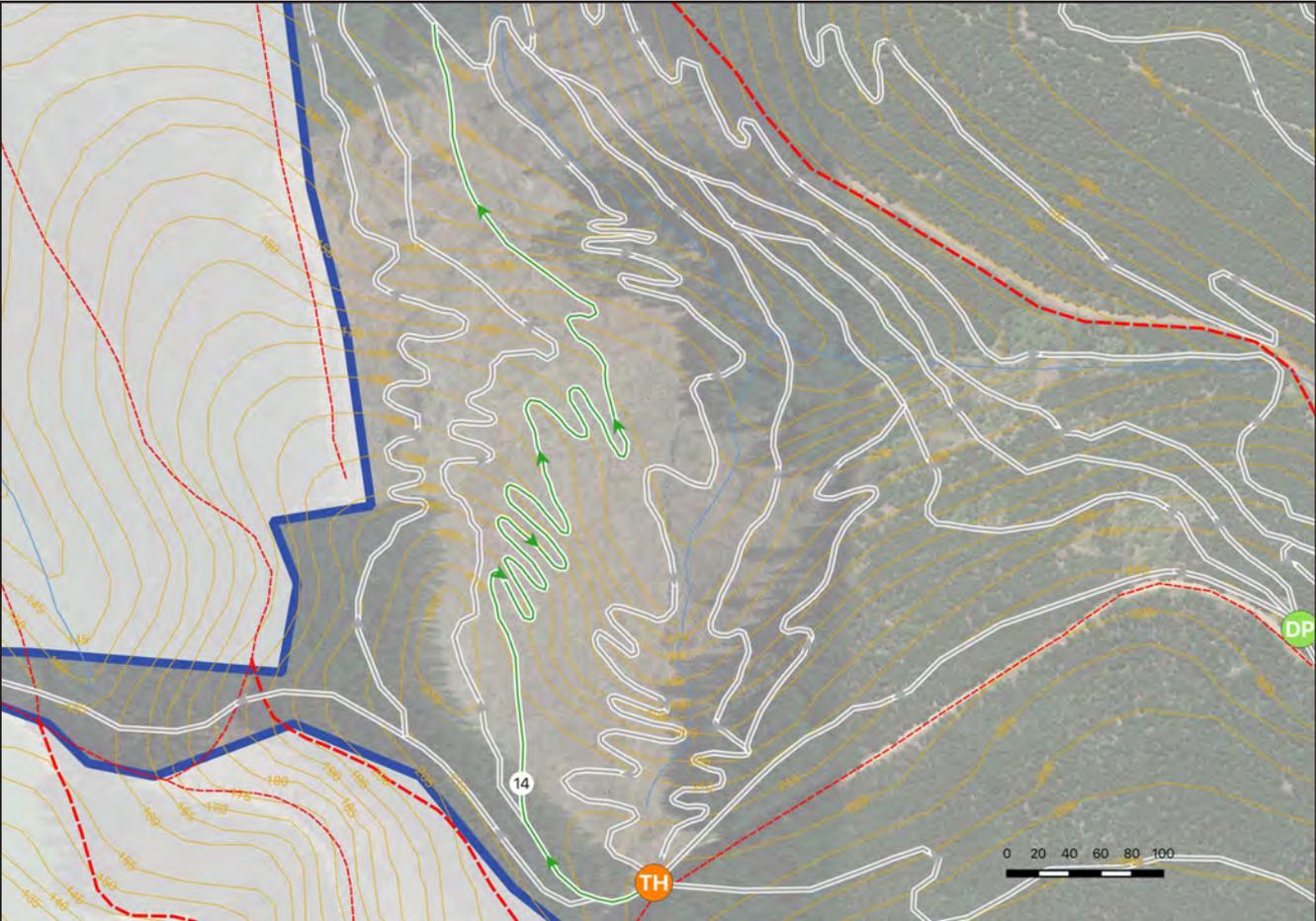
TRAIL 14 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 14 BENCHMARK & PRECEDENT IMAGERY



TRAIL 14 ALIGNMENT



BLUE FLOW DESCENT

Trail ID **15**

CLASSIFICATION



TRAIL TYPE

GR GRAVITY FLOW TRAIL

TRAIL LENGTH

1030M DESCENDING SINGLE DIRECTION

AVERAGE GRADIENT

10% 95M VERTICAL 95M VARIATION

TRAIL WIDTH

1.5M SMOOTH CONSTRUCTED

TRAIL 15 OVERVIEW

Trail 15 is a 1km moderate single direction descending looped trail offering a gravity experience focused on flow trail style over smooth terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally steep side slopes, the moderate gradient trail descends from shuttle trailhead 1 to lower trailhead. It features descending switchback corners with flow trail features and a wide smooth surface with typical finished width of 1.5m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump
- Tabletop
- Step Down Jump
- Step Up Jump

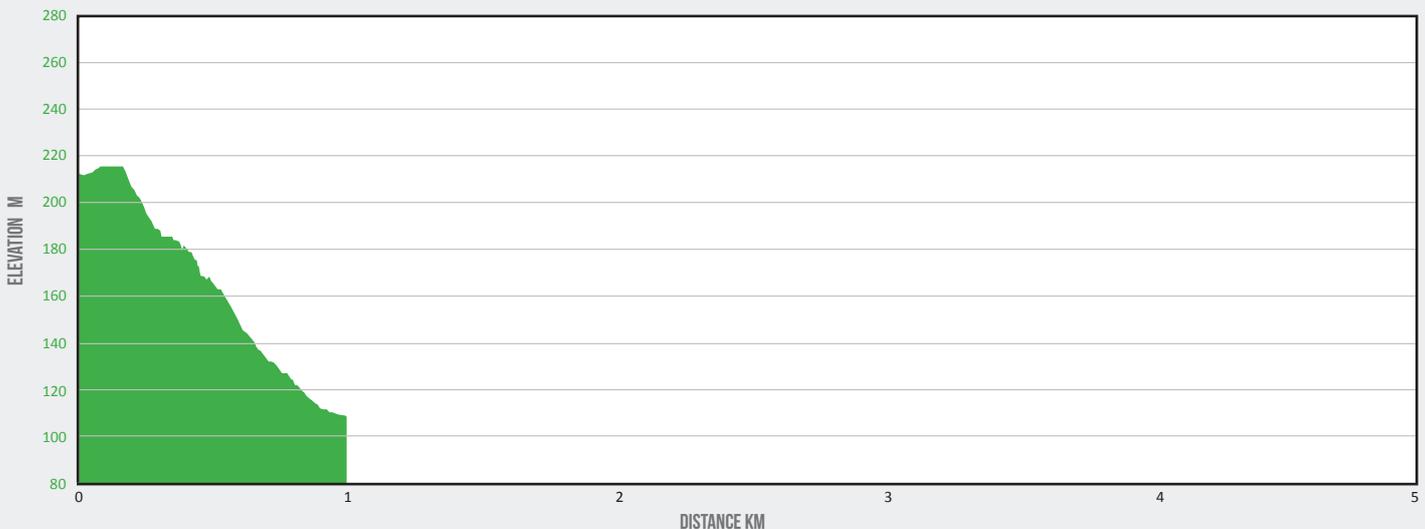
OBSTACLES

- Armored Crossing
- Rock Garden
- Rock Outcrop
- Stabilised Root

TRAIL 15 DETAILS

Trail ID	15
Provisional Name	Blue Flow Descent
Classification	Moderate - Blue Square
Strategic Value	Medium
Trail Type	Gravity
Trail Style	Flow Trail
Tread Width	1.0-1.5m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Black Optional Features
Corridor Width	100m
Trail Length	1030m
Vertical Range	95m
Elevation Variation	95m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	10%
Maximum Trail Gradient	20% up to 50m
Minimum Line of Sight	Minimum 7.5m
Qualifier / Filter	Technical Trail Filter

TRAIL 15 - ELEVATION PROFILE



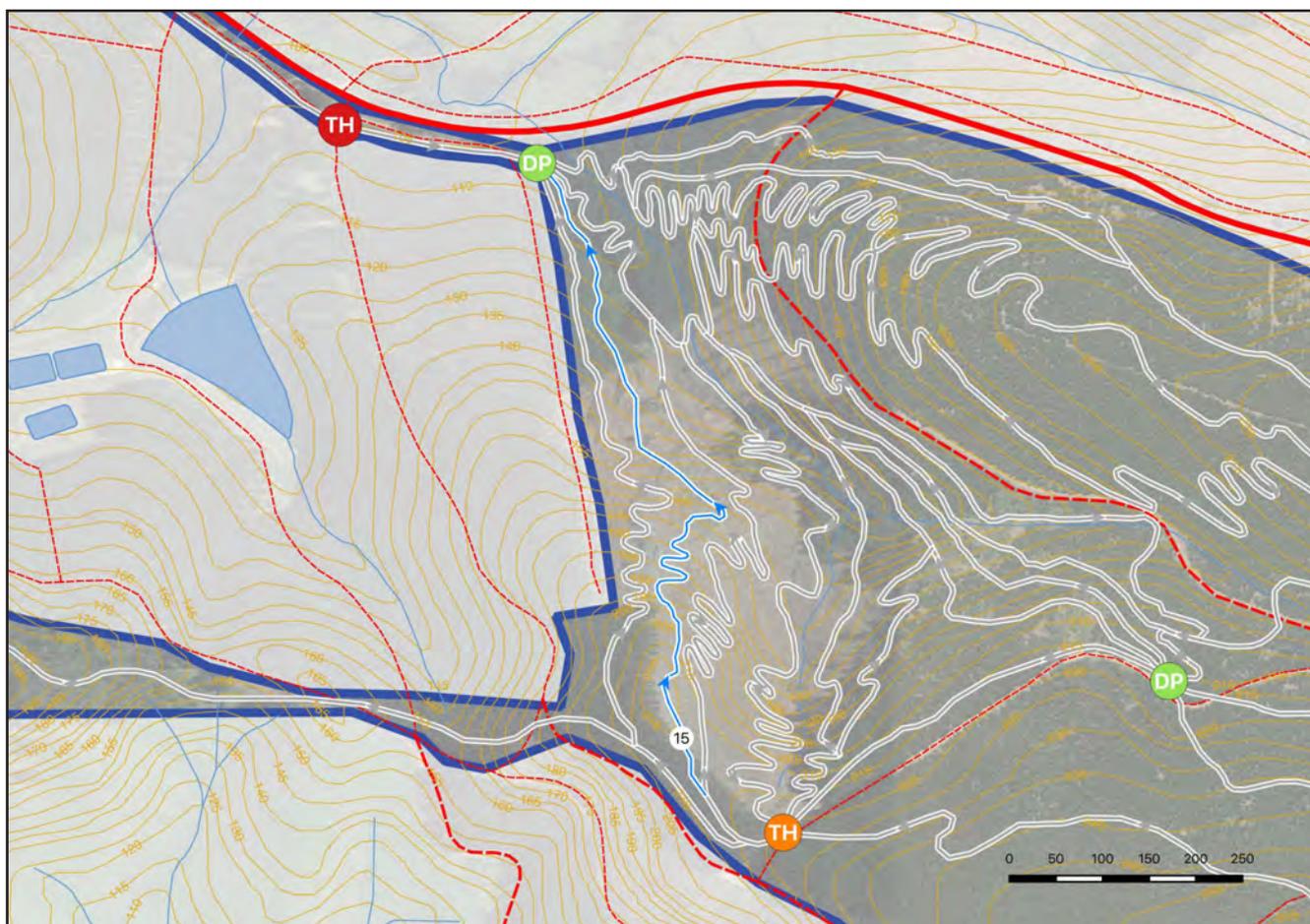
TRAIL 15 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 15 BENCHMARK & PRECEDENT IMAGERY



TRAIL 15 ALIGNMENT



BLACK FLOW DESCENT

Trail ID **16**

CLASSIFICATION  DIFFICULT BLACK DIAMOND	TRAIL TYPE GR GRAVITY FLOW TRAIL	TRAIL LENGTH 980M DESCENDING SINGLE DIRECTION	AVERAGE GRADIENT 10% 95M VERTICAL 95M VARIATION	TRAIL WIDTH 1.5M SMOOTH CONSTRUCTED
-------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------	----------------------------------------------------------------	------------------------------------------------------------------	------------------------------------------------------

TRAIL 16 OVERVIEW

Trail 16 is a 980m difficult single direction descending trail offering a gravity experience focused on flow trail style over smooth terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally steep side slopes, the steep gradient trail descends from shuttle trailhead 1 to lower trailhead. It features descending switchback corners with trail features and a wide smooth surface with typical finished width of 1.5m. The trail is located within plantation.

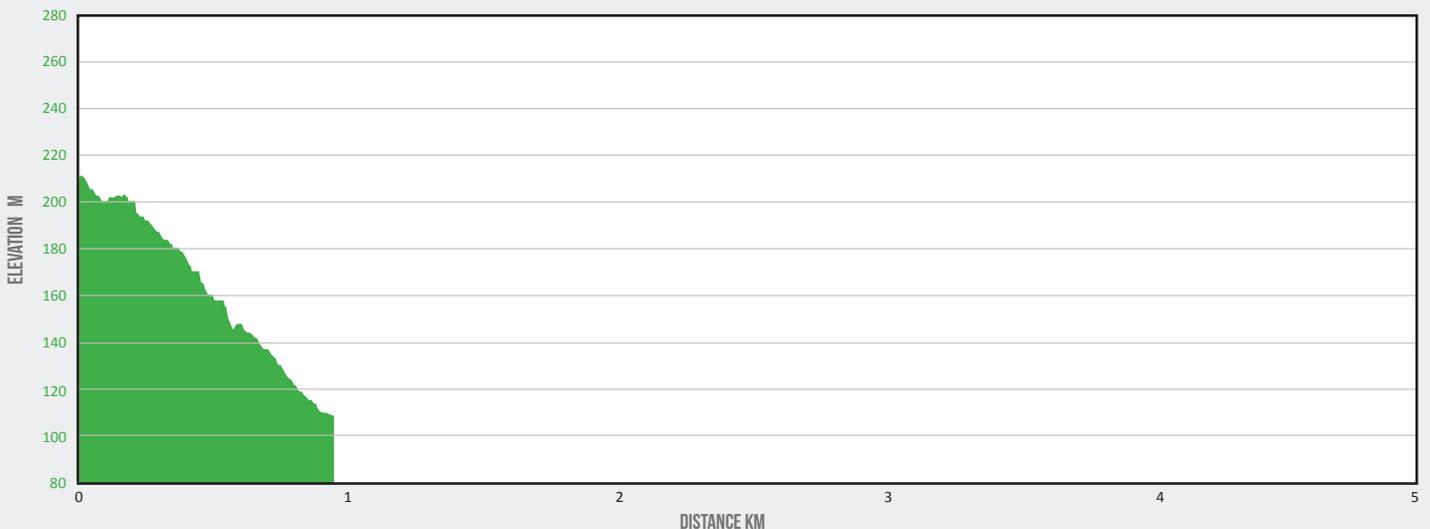
TRAIL 16 DETAILS

Trail ID	16
Provisional Name	Black Flow Descent
Classification	Difficult - Black Diamond
Strategic Value	Medium
Trail Type	Gravity
Trail Style	Flow Trail
Tread Width	1.0-1.5m
Use	Single Use - Bike & Hand Cycle Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Optional Double Black features
Corridor Width	100m
Trail Length	980m
Vertical Range	95m
Elevation Variation	95m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	10%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

ANTICIPATED TECHNICAL TRAIL FEATURES

TURNS	VERTICAL CHANGE	OBSTACLES
Berm	Grade Reversal	Armored Crossing
Descending Switchback	Kicker Jump	Chicane
Insloped Descending Turn	Obstacle Drop Off	Choke
Insloped Turn	Roll In	Rock Garden
Rising Catch Turn	Rollers	Roch Outcrop
Insloped Turn	Jump	Stabilised Root
Outsloped Turn	Tabletop	
	Step Down Jump	
	Step Up Jump	

TRAIL 16 - ELEVATION PROFILE



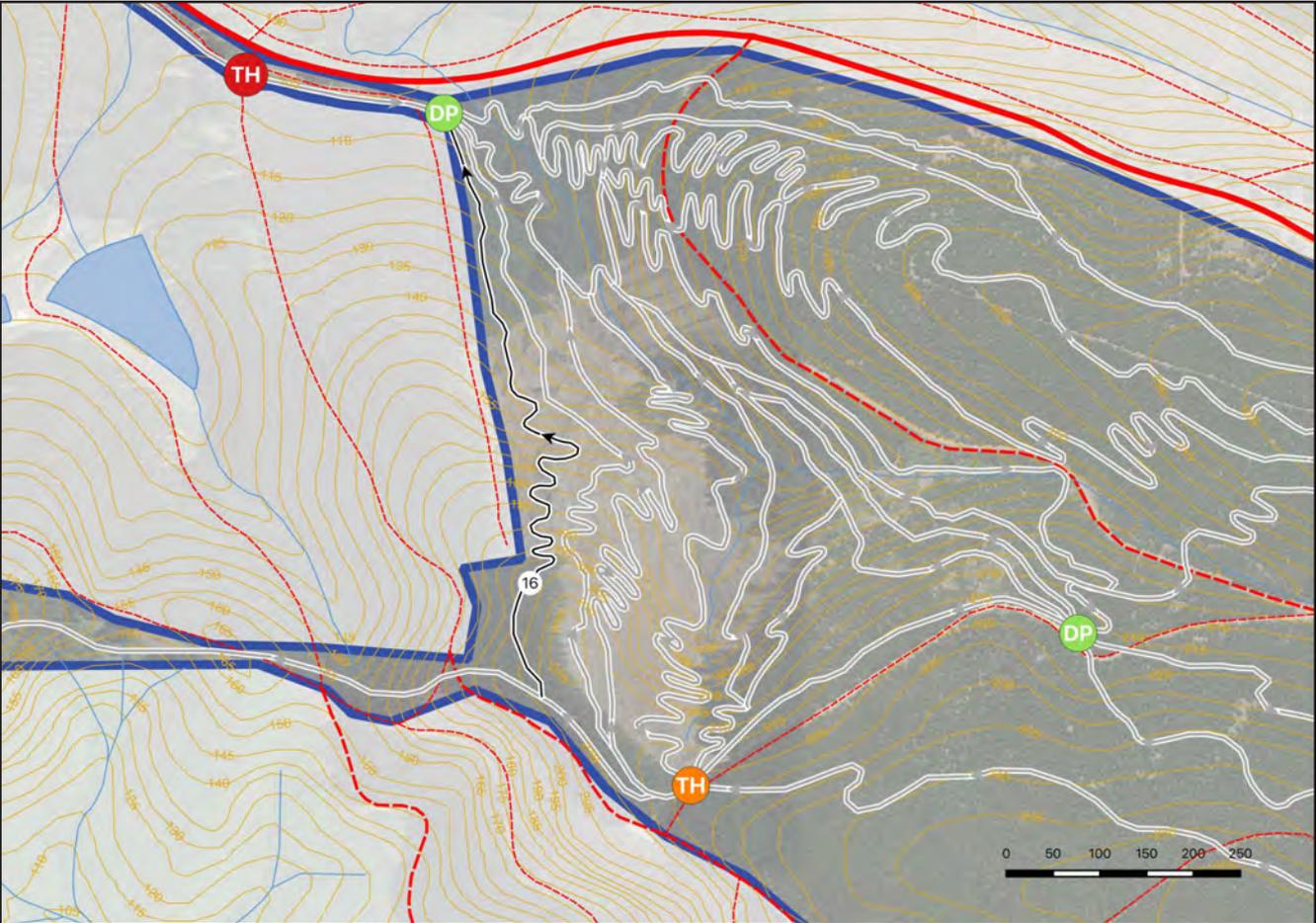
TRAIL 16 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 16 BENCHMARK & PRECEDENT IMAGERY



TRAIL 16 ALIGNMENT



BLACK FREERIDE DESCENT

Trail ID **17**

CLASSIFICATION  DIFFICULT BLACK DIAMOND	TRAIL TYPE GR GRAVITY FREERIDE	TRAIL LENGTH 650M DESCENDING SINGLE DIRECTION	AVERAGE GRADIENT 16% 105M VERTICAL 105M VARIATION	TRAIL WIDTH 2.5M GROOMED CONSTRUCTED
-----------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------	---------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	------------------------------------------------------------------------

TRAIL 17 OVERVIEW

Trail 17 is a 650m difficult single direction descending trail offering a gravity experience focused on freeride trail over groomed terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in steep side slopes, the steep gradient trail descends from tank 7 top trailhead to tank 7 bottom trailhead. It features descending switchback corners with large trail features and a wide groomed surface with typical finished width of 2.5m. The trail is located within plantation.

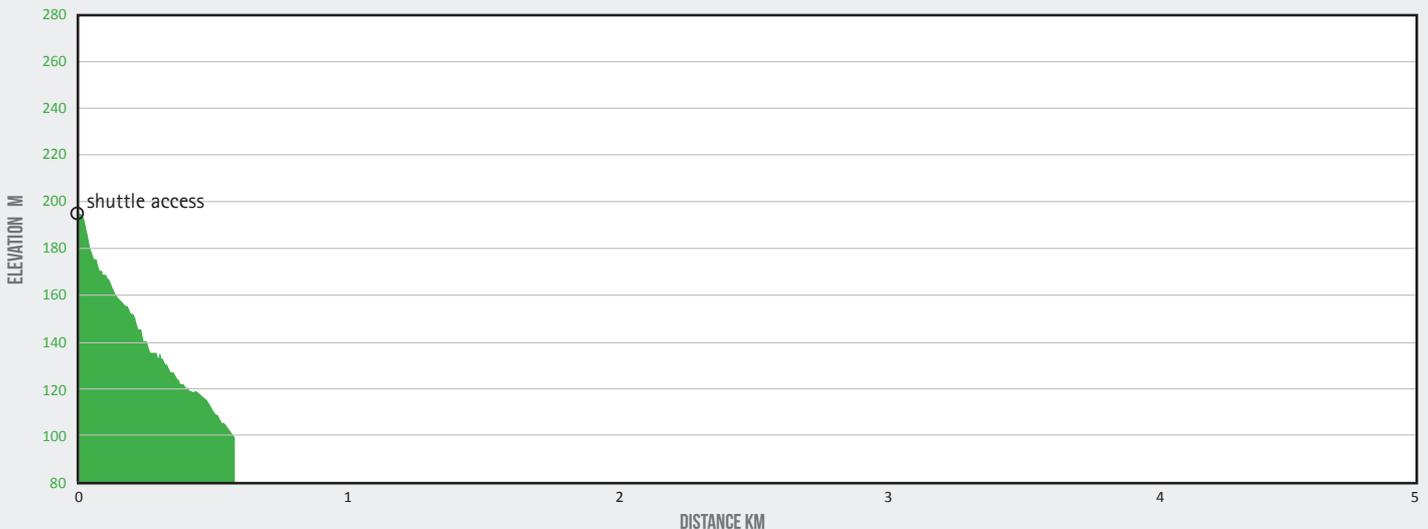
TRAIL 17 DETAILS

Trail ID	17
Provisional Name	Black Descent 5
Classification	Difficult - Black Diamond
Strategic Value	Medium
Trail Type	Gravity
Trail Style	Freeride
Tread Width	1.5-2.5m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Optional Double Black features
Corridor Width	100m
Trail Length	650m
Vertical Range	105m
Elevation Variation	105m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	16%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

ANTICIPATED TECHNICAL TRAIL FEATURES

TURNS	VERTICAL CHANGE	OBSTACLES
Berm	Grade Reversal	Armored Crossing
Descending Switchback	Kicker Jump	
Insloped Descending Turn	Roll In	
Insloped Turn	Rollers	
Rising Catch Turn	Jump	
Insloped Turn	Tabletop	
Outsloped Turn	Obstacle Drop Off	
	Step Down Jump	
	Step Up Jump	

TRAIL 17 - ELEVATION PROFILE



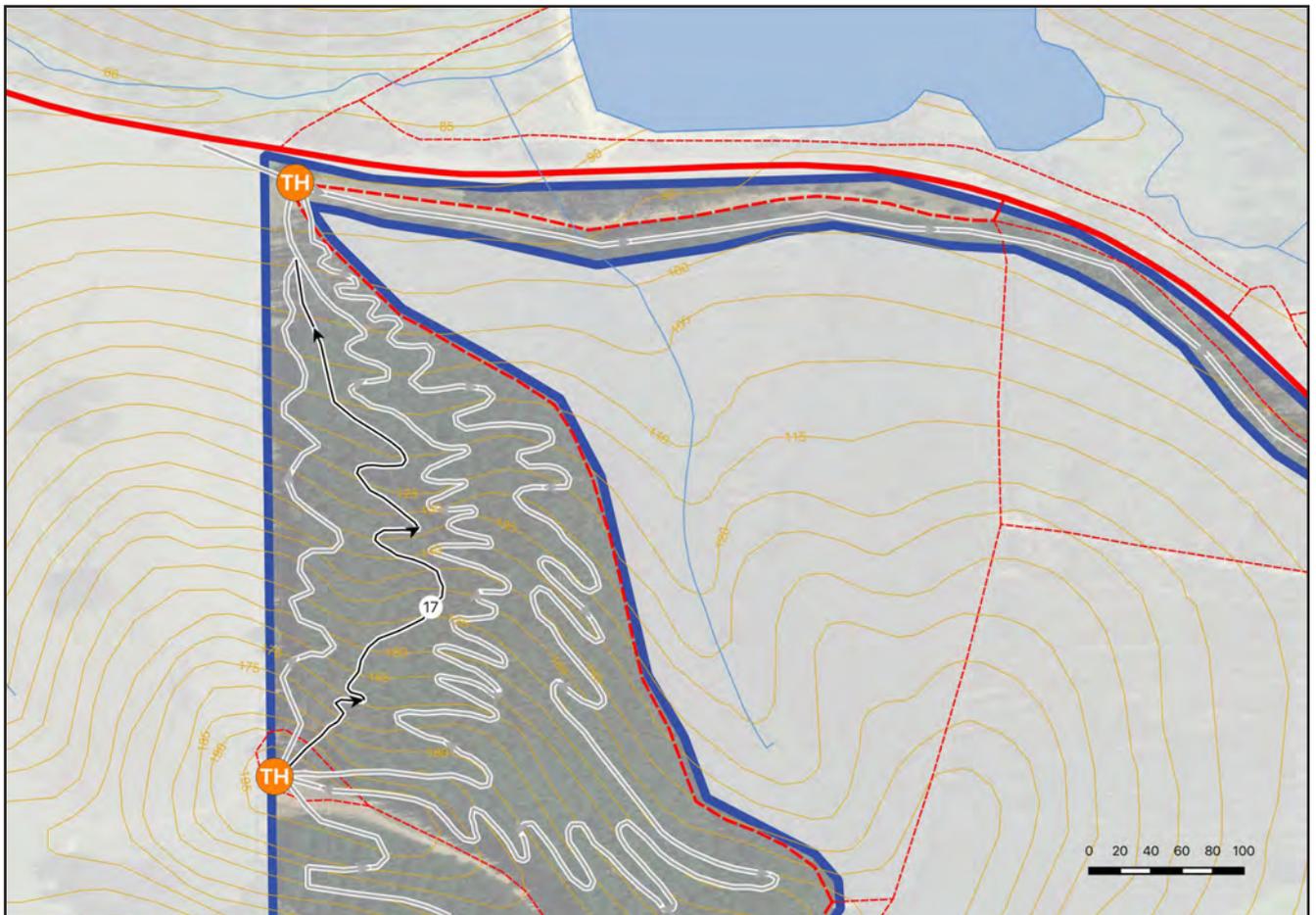
TRAIL 17 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 17 BENCHMARK & PRECEDENT IMAGERY



TRAIL 17 ALIGNMENT



DOUBLE BLACK FREERIDE DESCENT

Trail ID **18**

CLASSIFICATION
 **EXTREME DOUBLE BLACK**

TRAIL TYPE
GR GRAVITY FREERIDE

TRAIL LENGTH
520M DESCENDING SINGLE DIRECTION

AVERAGE GRADIENT
20% 105M VERTICAL 105M VARIATION

TRAIL WIDTH
2.5M GROOMED CONSTRUCTED

TRAIL 18 OVERVIEW

Trail 18 is a 520m extreme single direction descending trail offering gravity experience focused on freeride trail over groomed terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in steep side slopes, the steep gradient trail descends from tank 7 top trailhead to tank 7 bottom trailhead. It features descending switchback corners with very large trail features and a very wide groomed surface with typical finished width of 2.5m. The trail is located within plantation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

Berm
 Descending Switchback
 Insloped Descending Turn
 Insloped Turn
 Rising Catch Turn
 Insloped Turn
 Outsloped Turn

VERTICAL CHANGE

Grade Reversal
 Kicker Jump
 Roll In
 Rollers
 Jump
 Tabletop
 Obstacle Drop Off
 Step Down Jump
 Step Up Jump

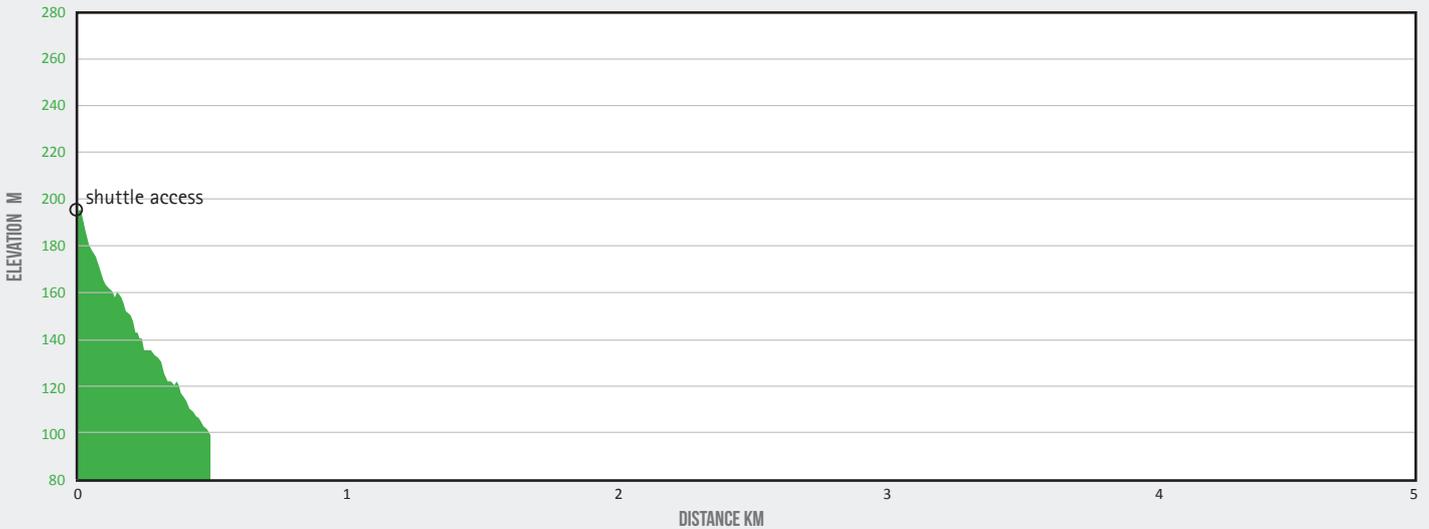
OBSTACLES

Armored Crossing
 Chicane

TRAIL 18 DETAILS

Trail ID	18
Provisional Name	Double Black Descent 2
Classification	Extreme - Double Black Diamond
Strategic Value	Moderate
Trail Type	Gravity
Trail Style	Freeride
Tread Width	1.5-2.5m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	None
Corridor Width	100m
Trail Length	520m
Vertical Range	90m
Elevation Variation	90m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	20%
Maximum Trail Gradient	70% up to 20m
Minimum Line of Sight	Average 10m
Qualifier / Filter	Technical Trail Filter

TRAIL 18 - ELEVATION PROFILE



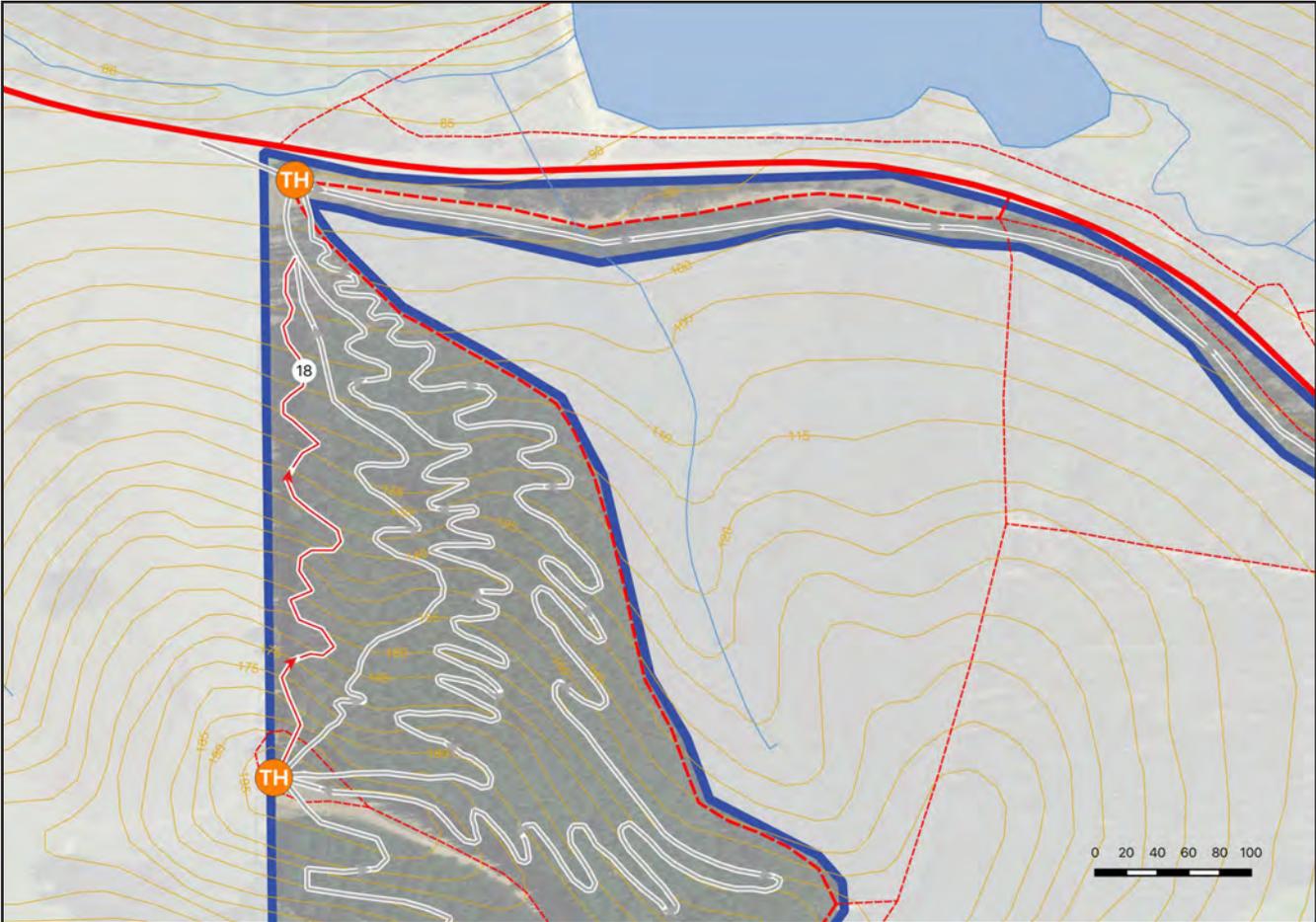
TRAIL 18 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 18 BENCHMARK & PRECEDENT IMAGERY



TRAIL 18 ALIGNMENT



BLACK ALL MOUNTAIN DESCENT

Trail ID **19**

CLASSIFICATION



DIFFICULT
BLACK DIAMOND

TRAIL TYPE

AM ALL MOUNTAIN
NATURAL - FLOWING

TRAIL LENGTH

1190M DESCENDING
SINGLE DIRECTION

AVERAGE GRADIENT

8% 90M VERTICAL
90M VARIATION

TRAIL WIDTH

0.5M ROUGH
ENHANCED

TRAIL 19 OVERVIEW

Trail 19 is a 1.2km difficult single dual direction multi bike optimized single use predominantly descending trail offering an all mountain experience focused on natural, open, flowing trail over rocky natural terrain. It forms part of the optional network of trails and is of medium strategic value to the overall networks functionality. Located in generally moderate side slopes, the steep gradient trail connects shuttle trailhead 3 to Trail 10. The trail is located within plantation.

Note as per DBCA recommendations detailed design for this trail will need to ensure trail alignment avoids granite outcrops and associated remnant vegetation.

ANTICIPATED TECHNICAL TRAIL FEATURES

URNS

- Berm
- Descending Switchback
- Insloped Descending Turn
- Insloped Turn
- Rising Catch Turn
- Insloped Turn
- Outsloped Turn

VERTICAL CHANGE

- Grade Reversal
- Kicker Jump
- Obstacle Drop Off
- Roll In
- Rollers
- Jump
- Tabletop
- Obstacle Drop Off
- Step Down Jump
- Step Up Jump

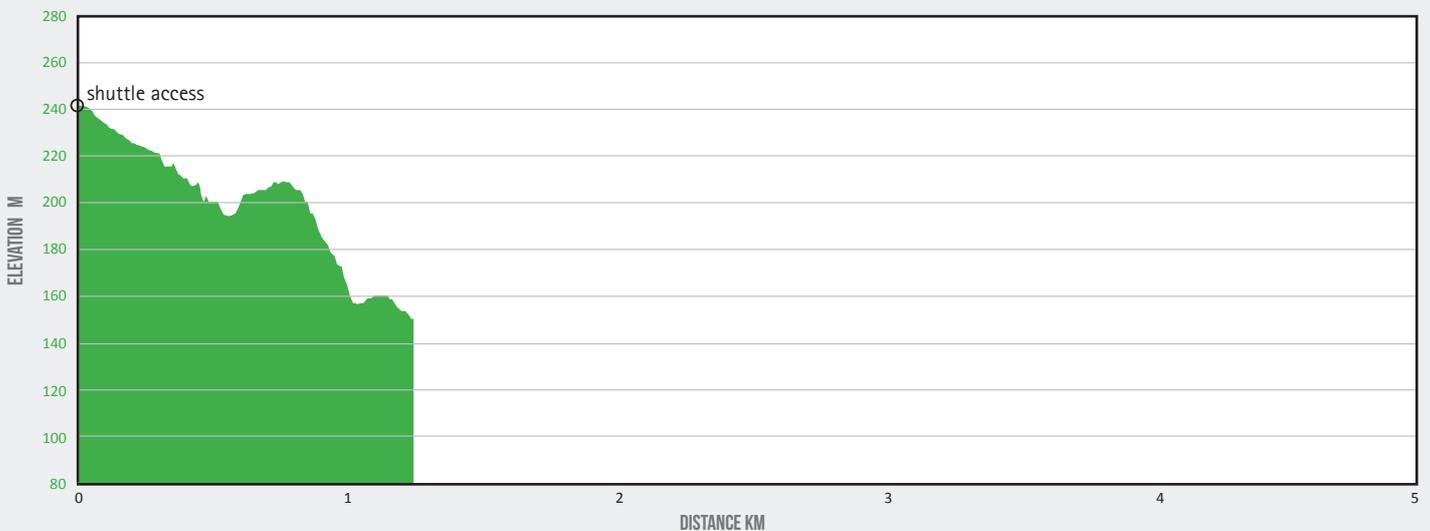
OBSTACLES

- Armored Crossing
- Chicane
- Choke
- Rock Garden
- Stabilised Root

TRAIL 19 DETAILS

Trail ID	19
Provisional Name	Black All Mountain Descent
Classification	Difficult - Black Diamond
Strategic Value	Medium
Trail Type	All Mountain
Trail Style	Natural - Flowing
Tread Width	0.5m
Use	Single Use - Bike Optimised
Direction	Single Direction
Ascent / Descent	Descending
Options	Optional Double Black features
Corridor Width	100m
Trail Length	1190m
Vertical Range	90m
Elevation Variation	90m
Prevailing Cross Slopes	Moderate
Average Trail Gradient	8%
Maximum Trail Gradient	50% up to 10m
Minimum Line of Sight	Average 15m
Qualifier / Filter	Technical Trail Filter

TRAIL 19 - ELEVATION PROFILE



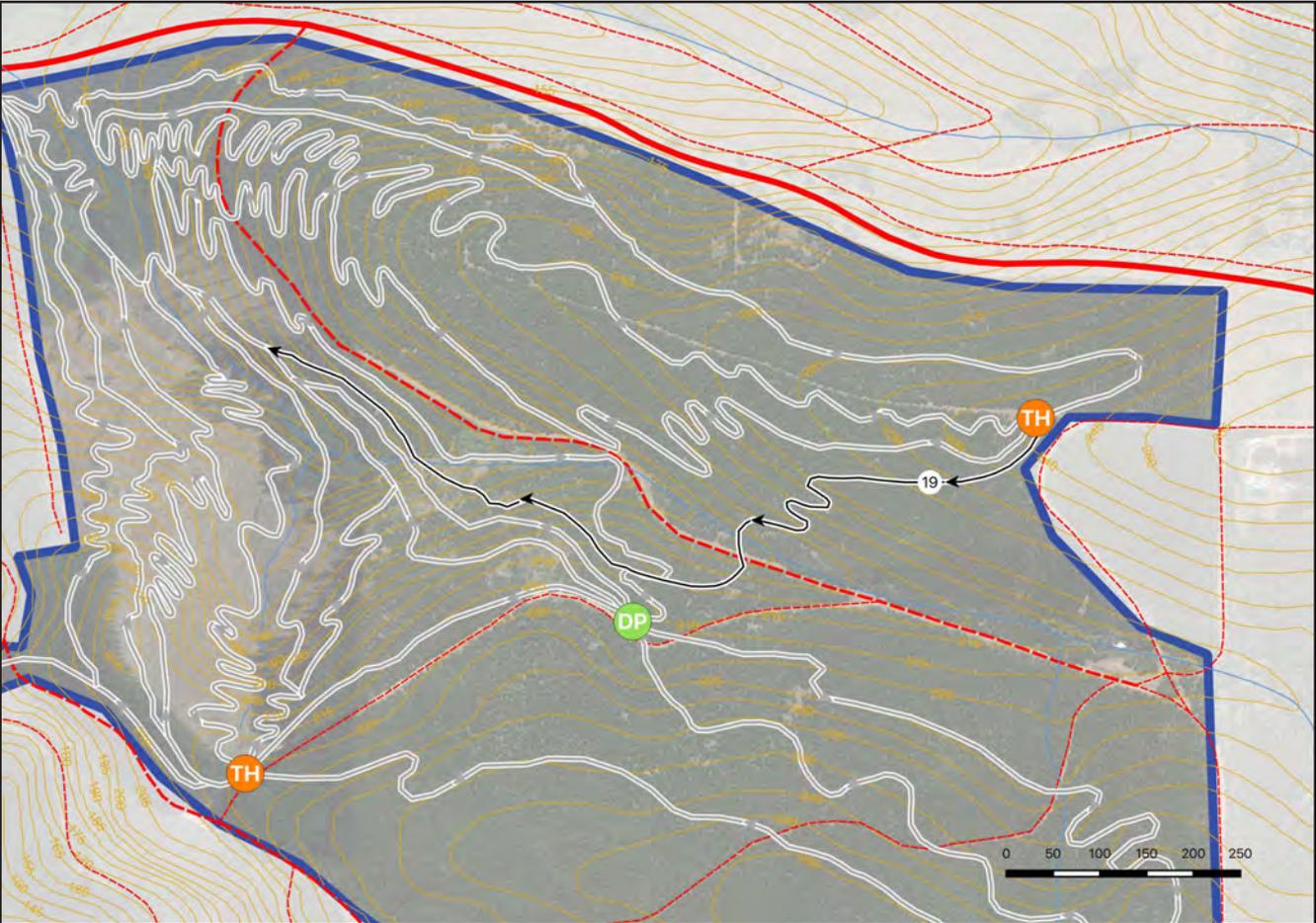
TRAIL 19 CHARACTERISTICS

SETTING	WILDERNESS	NATURAL LANDSCAPE	PLANTATION	RURAL	URBAN FRINGE	URBAN
VEGETATION QUALITY	EXCELLENT	VERY GOOD	GOOD	DEGRADED		
TRAIL TYPE	TOURING	CROSS COUNTRY	DOWN COUNTRY	ALL MOUNTAIN	GRAVITY	PARK
TRAIL STYLE	TECHNICAL	NATURAL	OPEN	FLOWING	FLOW TRAIL	FREERIDE
ORIENTATION	ASCENT ONLY	UNDULATING ASCENT	CONTOURING	UNDULATING DESCENT	DESCENT ONLY	
FLOW / SINUOSITY	IRREGULAR	STRAIGHT	WINDING	FLOWING		
SCALE	VERY NARROW	NARROW	OPEN	WIDE	VERY WIDE	
ROUGHNESS	VERY ROUGH	ROUGH	SMOOTH	GROOMED		
TECHNICAL TRAIL FEATURES	NATURAL	ENHANCED	CONSTRUCTED	IMPORTED MMTTF		
FEATURE FREQUENCY	NONE	VERY LONG	LONG	MODERATE	SHORT	
FEATURE MAGNITUDE	NONE	SMALL	MEDIUM	LARGE	VERY LARGE	
EXPOSURE	VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH	

TRAIL 19 BENCHMARK & PRECEDENT IMAGERY



TRAIL 19 ALIGNMENT



BROAD COST ESTIMATE

Broad cost estimates for design and construction are provided in the below table. The following assumptions have been made in developing the cost estimates:

- Supporting facilities and infrastructure such as car parks, road closures, bridges, toilets and trailhead structures have not been costed.
- Detailed Design cost allows for the requirements as outlined in the Western Australian Mountain Bike Management Guidelines
- Allowance of average industry rates based on trail complexity and status plus 10% contingency for increased trail lengths during detailed design.

A construction complexity rating has been determined for each trail, taking into account the above factors. The complexity rating is applied to the base cost per linear metre rate, to provide an opinion of probable costs for trail construction at the concept planning stage.

Factors that may increase the complexity of construction include trail orientation, style, cross slope gradients, level of vegetation, ground conditions, construction technique, technical trail features and the level of naturalisation and finish to be applied.

The following table outlines the cost for design and construction of the trail network;

Table 3: Cost Estimate

ID	PROVISIONAL NAME	CLASSIFICATION	STAGE	STRATEGIC VALUE	TRAIL STYLE	LENGTH (M)	DESIGN \$/M	CONSTRUCTION \$30-\$55/M	TOTAL
1	TOWN CONNECTION	DUAL	2	Low	Cross Country	1310	\$3,930.00	\$52,400.00	\$56,330.00
2	GREEN LOOP	GREEN	1	High	Cross Country	1150	\$3,450.00	\$40,250.00	\$43,700.00
3	GREEN XC LOOP	GREEN	1	High	Cross Country	4460	\$13,380.00	\$156,100.00	\$169,480.00
4	BLUE ALL MOUNTAIN LOOP	BLUE	1	High	All Mountain	4840	\$14,520.00	\$145,200.00	\$159,720.00
5	BLUE RIDGE CONNECTION	BLUE	2	Moderate	Cross Country	2360	\$7,080.00	\$70,800.00	\$77,880.00
6	BLUE FREERIDE LOOP	BLUE	2	High	Gravity	3090	\$9,270.00	\$139,050.00	\$148,320.00
7	BLUE DOWNCOUNTRY DESCENT	BLUE	2	Moderate	Cross Country	1480	\$4,440.00	\$44,400.00	\$48,840.00
8	BLACK DOWNCOUNTRY DESCENT	BLACK	1	Low	Cross Country	590	\$1,770.00	\$17,700.00	\$19,470.00
9	DOUBLE BLACK TECH DESCENT	DOUBLE BLACK	1	High	Gravity	490	\$1,470.00	\$17,150.00	\$18,620.00
10	BLACK TECH DESCENT	BLACK	1	Moderate	All Mountain	1770	\$5,310.00	\$53,100.00	\$58,410.00
11	BLACK NATURAL DESCENT	BLACK	1	High	Gravity	380	\$1,140.00	\$13,300.00	\$14,440.00
12	BLUE CONNECTION	BLUE	2	Low	Cross Country	510	\$1,530.00	\$15,300.00	\$16,830.00
13	BLUE XC CLIMB	BLUE	2	Moderate	Cross Country	1350	\$4,050.00	\$40,500.00	\$44,550.00
14	GREEN FLOW DESCENT	GREEN	1	Moderate	Gravity	1370	\$4,110.00	\$54,800.00	\$58,910.00
15	BLUE FLOW DESCENT	BLUE	1	Moderate	Gravity	1030	\$3,090.00	\$41,200.00	\$44,290.00
16	BLACK FLOW DESCENT	BLACK	1	Moderate	Gravity	980	\$2,940.00	\$39,200.00	\$42,140.00
17	BLACK FREERIDE DESCENT	BLACK	2	Moderate	Gravity	650	\$1,950.00	\$35,750.00	\$37,700.00
18	DOUBLE BLACK FREERIDE DESCENT	DOUBLE BLACK	2	Moderate	Gravity	520	\$1,560.00	\$28,600.00	\$30,160.00
19	BLACK ALL MOUNTAIN DESCENT	BLACK	2	Moderate	All mountain	1190	\$3,570.00	\$35,700.00	\$39,270.00
GRAND TOTAL TRAILS						28,810	\$88,560.00	\$1,040,500.00	\$1,129,060.00

TANK 7&8 MOUNTAIN BIKE TRAIL NETWORK CONCEPT PLAN

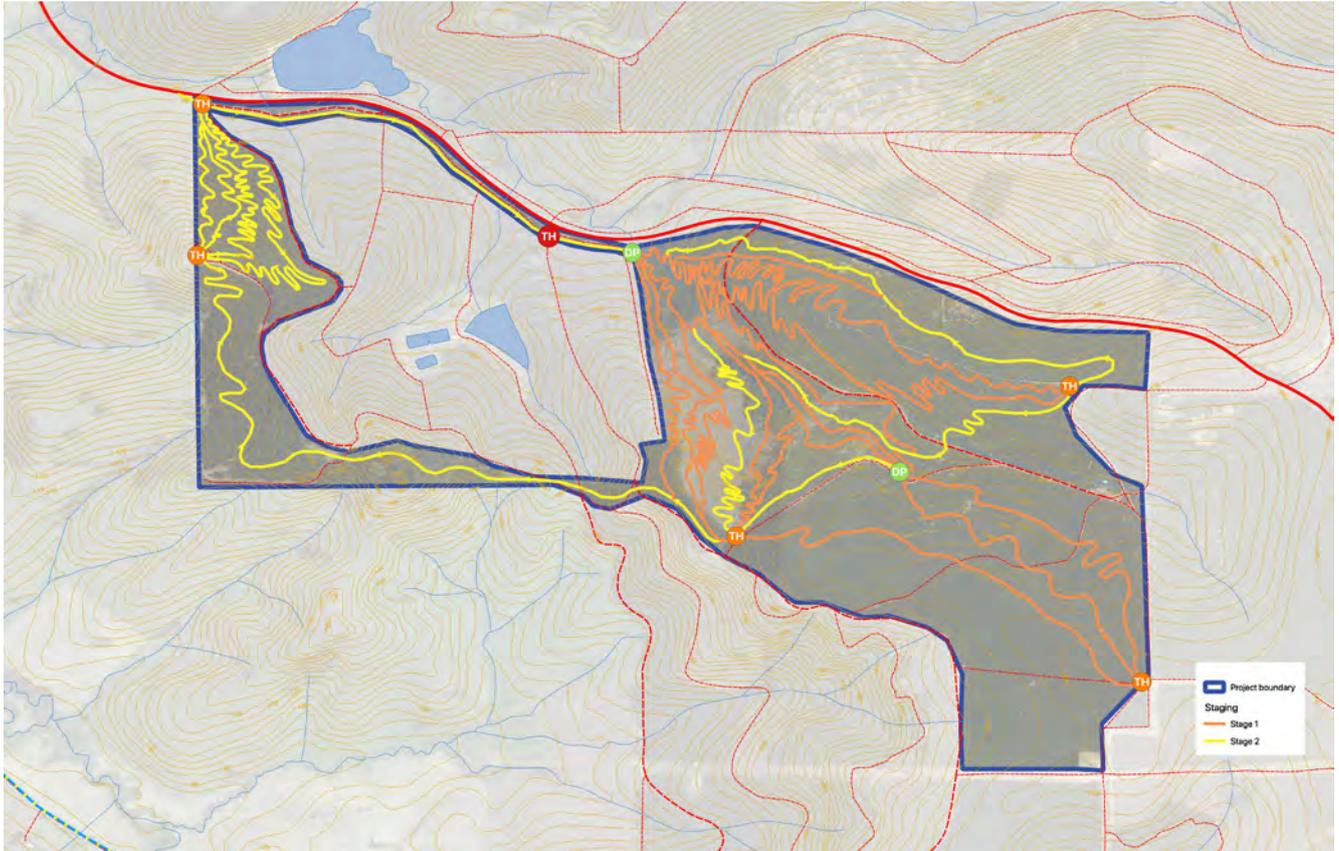


Figure 18: Tank 7&8 MTB Network - Staging

