

Crater Lakes Park – Trails Sign Plan

CITY OF MOUNT GAMBIER





City of
Mount Gambier



OPEN TRAILS
AUSTRALIA

Status	Changes	Author	Reviewer	Date
Draft V1	Footings details	K Gardner	E Solly	Sept 2023
Final	Council feedback	K Gardner	E Solly	Nov 2023

This report was prepared by Open Trails Australia Pty Ltd for the City of Mount Gambier in relation to the Crater Lakes Trails network.

Disclaimer

Any representation, statement, opinion or advice, expressed or implied in this document is made in good faith but on the basis that Open Trails Australia, directors, employees and associated entities are not liable for any damage or loss whatsoever which has occurred or may occur in relation to taking or not taking action in respect of any representation, statement or advice referred to in this document.

Acknowledgement

We acknowledge the Indigenous peoples of the lands, waters and communities we work together with. We pay our respect to their cultures; and to their Elders – past, present and emerging.

Contents

Introduction	4
The sign planning process	4
The current sign system	5
City of Mount Gambier - Brand Guidelines.....	5
Cost estimates.....	6
Potential saving opportunities.....	7
Trailhead signs	7
Feature signs	7
Major trailhead sign	8
Sign Locations Map	18
Similar sign style examples	19
Crater Lakes trailhead sign colour mock ups	22
Trail marker examples.....	24
Installation and footing details	25
Trailhead signs	25
Totem style signs	26
General trail marker.....	27
General post treatment and footings	28
Trail marker content	29

Introduction

The Crater Lakes Park Trails Sign Plan is an integral component of the larger Crater Lakes Trail planning initiative. The requirement for an updated and compliant signage system emerged as a top-priority recommendation following the Crater Lakes Trails Audit in February 2023. This audit pinpointed insufficient or inadequate signage as the primary factor contributing to conflicts among trail users, potential hazards to their safety, and a heightened exposure of the City of Mount Gambier to public liability risks.

Through the strategic planning and execution of an upgraded, compliant, and modernised trail signage system, we aim to significantly elevate the visitor opportunities and experiences within Crater Lakes.

The sign planning process

The proceeding sign plan is the first step of a staged planning process.

The intention is to discuss sign content and to seek approval to commence the design process.

The Crater Lakes Park Trails Sign Plan is the preliminary planning document to inform the sign design process and final sign plan document.

It is informed by the previously completed Crater Lakes Trails Audit Report. Much of the justification and background can be found in that report.

The intention of this sign plan is to confirm:

- General content of trailhead and feature sign panels
- Size of sign panels and structures
- Materials for signs and sign structures
- Location of trailhead signs
- Size, type, colour and location of trail marker signs
- Potential content for web page
- Cost estimates for the design, fabrication and installation

Detailed examples and mock ups will be the next step of the process after agreement on some of the underpinning elements (text, colour) have been discussed and approved.

There are unknown and incomplete parts of this draft that will be populated during the process based on feedback from City of Mount Gambier.

The current sign system

Trail signage plays a crucial role in managing trails effectively and providing valuable information to trail users. With the changes in Australian Standards 2156.1 and the evolving needs of users, it is important to update the signage to ensure it meets the current requirements and effectively communicates with a broader range of trail users.

The introduction of shared-use and Mountain Bike only trails brings additional complexities, as signage needs to inform users about specific rules or classifications for each user type. However, if the signage is lacking in the required information or poorly positioned, it can lead to user confusion and instances of conflict. This highlights the need for proper signage design, placement, and content to effectively guide users and minimise risks.

Signage serves as a critical communication tool for trail users, helping them make informed decisions about which trails are suitable for their needs. By accurately grading or classifying trails and promoting these classifications through well-placed, clear, and concise signage, land managers can provide users with essential information while also managing public liability risks.

It's important to note that while signage is a crucial aspect of trail management, it is not a complete solution by itself. Regular trail audits and maintenance are still necessary to ensure that trails meet their assigned classifications and are safe for users. Signage should be seen as part of a comprehensive approach to trail management, working in conjunction with other measures such as trail inspections, maintenance, and user education.

Given the significant changes in standards and user needs over the years, it is necessary to assess and update the trail signage to align with current requirements.

City of Mount Gambier - Brand Guidelines

The City of Mount Gambier supplied the Brand Guidelines from 2015 to assist in the future design process. Although the sign design is not part of this brief, OTA believes it is important to consider potential colors and contrasts at this stage of the process. OTA has supplied 2 x colour mockups based on the permitted colours. We believe that the trail network signage should have a point of difference from the rest of the crater Lakes signage.

Please see the Crater Lakes trailhead sign colour mock-ups at the end of the document. Note the mock ups are to demonstrate background colours only, the text, maps, images are unrelated.

Cost estimates

The cost estimates are based on designing, fabricating, and installing the sign system in accordance with the plan. The costings are accurate in relation to similar works carried out by OTA in the past 2 years, with local South Australian companies providing the timber, frames and sign packages.

The total costs as anticipated is **\$90,950 ex GST**. This is based on a double 1200x900mm trailhead sign at the 10 identified locations.

ITEM NO.	DESCRIPTION	QTY	RATE	AMOUNT	TOTAL/s
1	SIGN PLANNING & DESIGN				
1.1	Basic Sign Plan. (content, consultation, detail)	1	0	0	
1.2	Crater Lakes Trails - Design development	1	1200	1200	
1.3	Sign layout, design, images, print files	1	7000	7000	
	Item total estimate				\$8,200
2	SIGN PRINTING & FABRICATION				
2.1	Trailhead information sign panels (Dibond panel)	20	400	8000	
2.2	Trailhead information sign frames (Powder Coat alloy)	20	415	8300	
2.3	Trailhead information sign posts (timber) 2.4m	30	100	3000	
2.4	Feature Sign panels (Dibond panel)	4	350	1400	
2.5	Feature Sign frames (Powder Coat alloy)	4	450	1800	
2.6	Feature Sign posts (timber) 1.8m	8	65	520	
2.7	Directional Trail Marker sticker package	350	1	350	
2.8	Directional Trail Marker sign panels (Dibond panel)	75	20	1500	
2.9	Directional Trail Marker posts (timber) 1.8m	40	65	2600	
2.1	Totem sign panels (Dibond panel)	175	110	19250	
2.11	Totem posts (timber) 200mm wide 1.8m	64	75	4800	
	Item total estimate				\$51,520
3	SIGN INSTALLATION				
3.1	Preliminaries, fixings, materials, mobilisation, accom. etc.	1	2650	2650	
3.2	Trailhead information sign 3 x posts 2x panels	10	510	5100	
3.3	Feature sign 2 x post 1 x panel	4	400	1600	
3.4	Trail Marker and Totem Installation	104	170	17680	
3.5	Directional Trail Marker Modify Existing	0	35	0	
3.6	Demolition of and disposal of existing signs	1	2400	2400	
3.7	Asset capture report -inc. spatial data and images	1	1800	1800	
	Item total estimate				\$31,230
	Sign System Total Cost Estimate ex GST				\$90,950
	GST				9095
	Sign System Total Cost Estimate including GST				\$100,045

Potential saving opportunities.

Trailhead signs

The current plan allows for the double 1200x900mm trailhead sign at the 10 identified locations. If text was kept to a minimum and the size of the map was slightly decreased we could fit the required sign content on to a single 1200x900 sign face. This reduces the amount of timber posts, frames, signs and installation costs resulting in a **\$10,600** saving, bringing total cost to **\$80,350 ex GST**.

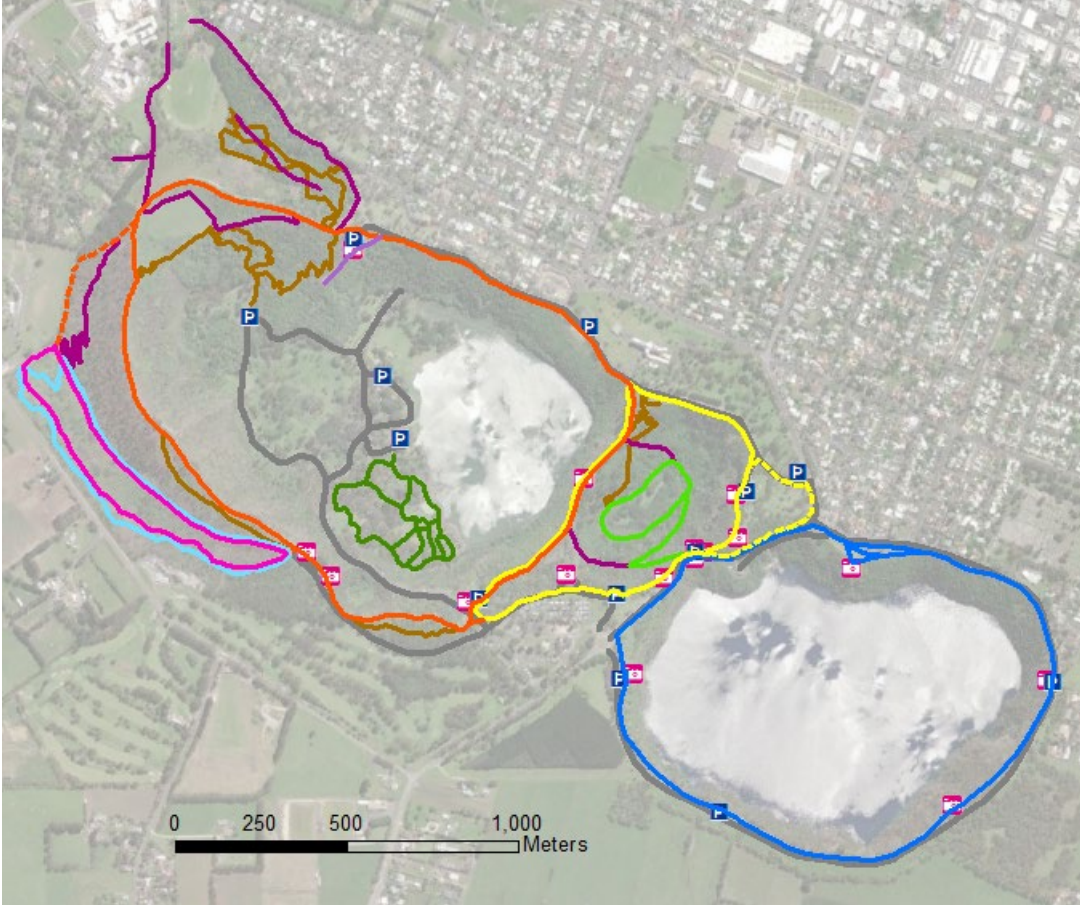
Feature signs











The current plan allows for 4 feature signs that were intended to be at the top of the 4 x downhill mountain bike trails. The intention is to include additional safety information that would not fit on the Totem posts. If CMG just used the Totem markers with all the standard warning symbols and included the additional safety text on the trailhead sign, we could remove these from the plan. This reduces the amount of timber posts, frames, signs and installation resulting in a **\$5320** saving, bringing total cost to **\$75,030 ex GST**. costs (assuming this is in addition to the trailhead sign savings being adopted)










Major trailhead sign

Sign size	2 x 1200 x 900 mm sign panels in portrait orientation. It may be possible to condense the trailhead signs into a single 1200x900 sign if text is minimised.
Sign quantity	10 Trailhead signs locations have been identified.
Sign style	Posts: 100 x 100 White Cypress Pine timber. Frames: Powder coated aluminium Signs: Dibond panel with folded sides See examples at end of document.









Sign content	<p><u>Crater Lakes Park Trails</u> (sign heading)</p> <p>The Mount Gambier Crater Lakes area is made up of three main craters containing several lakes including Browne Lake/Kroweratwari, Valley Lake/Ketla Malpi, Leg of Mutton Lake/Yatton Loo and the world famous Blue Lake/Warwar.</p> <p>The local phenomenon is the Blue Lake/Warwar. It is approximately 75 metres deep and is the only lake with the inexplicable ability to change colour, as it does from November each year, reaching an intense turquoise blue until March, when it starts to return to a dark blue.</p> <p>Enjoy the Valley Lake/Ketla Malpi crater, with its conservation park, adventure playground, barbecues, picnic grounds, disc golf and shelters.</p> <p>The area is serviced by a maze of roads, walking and cycling trails, all of which lead to lookouts, providing excellent viewing and photographic opportunities as well as the chance to enjoy the local flora and fauna. Select a trail that suits your interest and abilities and enjoy the amazing Crater Lakes!</p> <p>The traditional custodians of this area are the Bungandit people, we acknowledge and respect their ongoing links to country.</p>
--------------	--

<p>Map</p>	<p>The map will be further developed when colours and additional contents is agreed on.</p> 
<p>Trail specific information table</p>	<p>See proceeding table.</p>



Trail name	Trail grade		Distance/time	Description
Valley Lake Conservation Park 	 Grade 2		1.2km 45 mins	If you're into wildlife, this is the walk you! Once you enter the Conservation Park, you can follow the trails to explore the park and the native flora and fauna. Birdlife can be seen from the raised boardwalk and bird hides, providing a closer look at the bushland canopy and views over the park. Keep an eye out for other animals, including Koalas, Kangaroos, and Echidnas. Don't forget your camera on this walk! <ul style="list-style-type: none"> Dogs are not allowed in the Conservation Park.
Blue Lake/Warwar Circuit 	 Grade 2	Riders give way to pedestrians	3.5km 1 hr	You can start the walk at any location around the Blue Lake/Warwar, but we recommend starting at the Visitor Centre/Pioneer Memorial. Make your way around the rim and don't forget to take the time to stop and enjoy the views of the Lake. The Centenary Tower, the Pumping Station and Mount Schank can be viewed from the Rotary Lookout. Other points of interest include the Apex Lookout, Blue Lake Lookout and Cactus Garden Lookouts. <ul style="list-style-type: none"> Some narrow section. Please be considerate of other users when passing.
Leg of Mutton/Yatton Loo Loop 	 Grade 3	Riders give way to pedestrians	1.2km 45 mins	Start this walk at the carpark near the Adam Lindsay Gordon Lookout. Make your way down the access road and follow the loop trail around the now dry lake bed. Take your time to enjoy the deep lush green surroundings. Take your camera and capture the natural beauty of the region. <ul style="list-style-type: none"> Some steep loose surfaces and exposed tree roots to negotiate.
Pepperpot Trail 	 Grade 3		2.4km 1 hr	The Pepperpot Trail provides breath-taking views over the Valley Lake/Ketia Malpi and Blue Lake/Warwar over a shorter distance. The walk begins at the same location as the Leg of Mutton walk. Follow the trail up to the stone 'rest house' then continue up the stairs, making your way to the Surge Tank and Hoo Hoo Lookout. Other points of interest include the Adam Lindsay Gordon Monument, Leg of Mutton Lake Lookout, Marks Lookout, and Stephen Henty Lookout. <ul style="list-style-type: none"> Extended lengths of steps with alternative routes. Some steep loose surfaces and exposed tree roots to negotiate.






Trail name	Trail grade		Distance/time	Description
RSL Trail 	 Grade 4		400m return 20 mins	The RSL Trail features an historic stone hut with views of the Browne/Krowertwari Lake and Valley/Ketia Malpi Lake. History??? <ul style="list-style-type: none">The trail is a long-extended set of timber steps with no handrails. This short trail may be too minor to include?
Mountain Trail 	 Grade 4	Some sections are shared with bicycles	4.4km 1.5 hr	The Mountain Trail (also known as the Crater Lakes Trail) provides magnificent views over this unique landscape. It visits a range of lookouts and points of interest around the crater rim including a short optional walk to the RSL Lookout. Other points of interest include the Rotary Clubs Lookout, Marks Lookout, Lions Lookout, Devils Punch Bowl, and Centenary Tower. <ul style="list-style-type: none">Extended lengths of steps with an alternative route along Blue Gum Loop Walk.Some steep loose surfaces and exposed tree roots to negotiate.
Blue Gums Loop Walk 	 Grade 2	Some sections are shared with bicycles	2.2 km 1 hr	The Blue Gums Loop Walk is an easy walk through the Blue Gum plantation. The walk starts and ends at the Lions Lookout are at the end of Elliot Drive. The trail offers alternative views to the broader Crater Lakes trails including the Blue Lake Golf Course and Carinya Gardner Cemetery. Walkers share the return leg along the Fire Track with cyclists.
Blue Gums Loop Ride 	Some sections are shared with walkers		2.3 km	The Blue Gums Loop Ride includes a fun descent through the Blue Gums plantation. The descending trail is separated from the Walking Trail. A great alternative to the more challenging Mountain Bike Trails. Riders share the return leg along the Fire Track with walkers. Riders give way to pedestrians.



















Crater Lakes Park – Trails Sign Plan

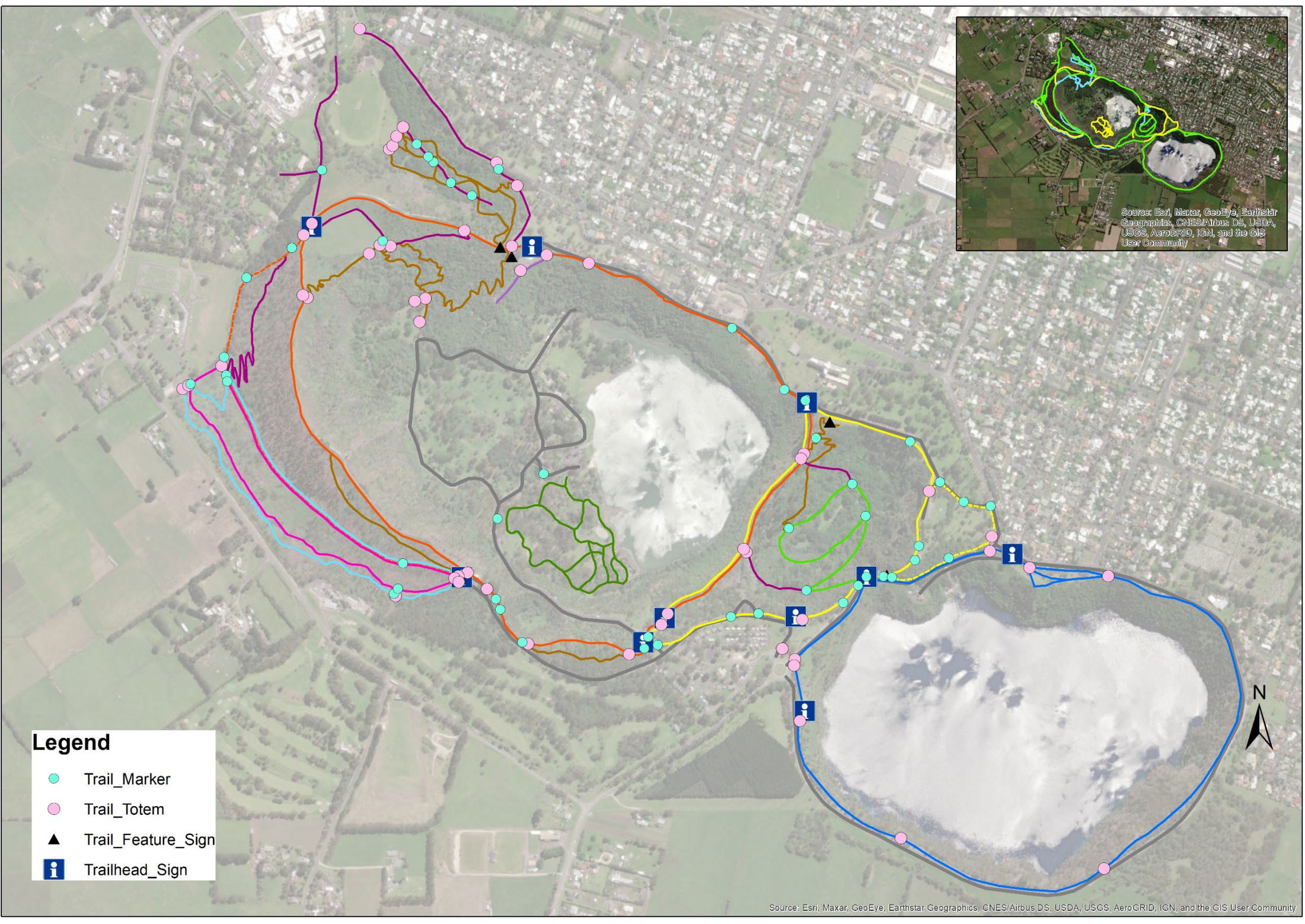
Trail name	Trail grade		Distance/time	Description
Link Trails 	 Grade 3		Various	Throughout the broader Crater Lakes Trail network there are a range of linking trails that offer short-cuts and other loop options for walkers and riders. Some are shared use and others are single use. These are clearly signposted at intersections with further details provided at each location.
Mountain Bike Trails 		  	Various	The Crater Lakes Park provides a range of challenging Mountain Bike (MTB) Trails to suit riders of varying skill levels. The MTB trails are popular with locals and visitors seeking fun and challenges. Each trail is different in what it provides but riders can expect jumps, berms, drops and more! Trail grades and additional information is provided at the start of each trail. <ul style="list-style-type: none"> • Always wear a helmet and protective gear • Ride within your ability and check the trail before you ride • Riding involves risks and should be undertaken with care and regard for conditions at all times

Safety message	<p>Safety – it's your responsibility</p> <ul style="list-style-type: none"> • Bushwalking and bike riding involves risks and should be always undertaken with care and regard for the conditions. • Trails are subject to natural forces and vary over time. This may make trail use more challenging. • Watch out for uneven surfaces and tripping hazards. • Trails, paths and rocks can be slippery when wet. • The surrounding hillsides are steep; always stay on the designated trails. • Please take care when crossing roads. • During the fire season, do not smoke in reserves and do not light fires at any time of year. • When the fire danger rating is catastrophic? The Crater Lakes Precinct is closed to the public. • Some trails are single use and others shared-use. Be aware of other users and the Trail Users Code of Practice
Be prepared message	<p>Be prepared</p> <ul style="list-style-type: none"> • Wear sturdy shoes, hat, insect repellent, and sunscreen. • Keep to defined tracks and trails. • Carry sufficient food and drinking water. • Inform a responsible person of your proposed route and expected time of return. • If you find yourself close to a snake, stand still and wait for it to move away from you, or slowly move away from the snake. • Do not park in front of gates – these need to be accessible at all times.
Additional Text	<p>Code of Practice for Trail Users</p> <p>To protect the surrounding environment and to ensure the safety of all trail users, please be aware of the International Trail Users Code of Practice when using shared trails. Important points to remember include:</p> <ul style="list-style-type: none"> - Comply with all signs and trail designations. - Do not take short cuts or form new trails. - Avoid using trails in wet, muddy conditions. - Tread or ride lightly and leave no trace or rubbish. - Control your bike and walk, run or ride within your limits. - Respect the rights of others.

Additional Text	 <p>Why does your dog need to be on a lead?</p> <ul style="list-style-type: none">• Protect our wildlife<ul style="list-style-type: none">○ Dogs can kill, injure and disturb wildlife.• Keep it fun for everyone<ul style="list-style-type: none">○ Not all visitors like or are comfortable with dogs.• Be a responsible dog owner<ul style="list-style-type: none">○ Take dog waste home or put it in a bin○ Train your dog to walk safely and happily on a lead• Keep your dog safe<ul style="list-style-type: none">○ Poisons, other dogs and wildlife can cause injury or disease.
Additional Text	<p>Reporting Hazards/Incidents and Emergency Responses</p> <p>In the event of a Serious Emergency please call 000 or 112</p> <p>In the event of an emergency or serious hazard please call the City of Mount Gambier on 8721 2555</p> <p>To report a trail hazard please call 8721 2555 or email city@mountgambier.sa.gov.au</p> <p>Park information including events, works programs, closures and Conditions of Entry are available online via this QR Code. (A Trails page on the CMG website is required and existing inaccurate information requires updating)</p> 

Trail Grade tables	Australian walking trail grading system	
		<p>Grade 1</p> <p>No bushwalking experience required. Flat even surface with no steps or steep sections. Suitable for wheelchair users who have someone to assist them.</p>
		<p>Grade 2</p> <p>Suitable for families with young children. No bushwalking experience required. The track is a hardened or compacted surface and may have a gentle hill section or sections and occasional steps.</p>
		<p>Grade 3</p> <p>Suitable for most ages and fitness levels. Some bushwalking experience recommended. Tracks may have short steep hill sections a rough surface and many steps.</p>
		<p>Grade 4</p> <p>Bushwalking experience recommended. Tracks may be long, rough and very steep. May include includes arduous climbs and trail obstacles. Directional signage may be limited.</p>
		<p>Grade 5</p> <p>Very experienced bushwalkers with specialised skills, including navigation and emergency first aid. Tracks are likely to be very rough, very steep and unmarked.</p>

Trail Grade tables	<p>Australian mountain bike grading system</p> <table border="1"> <tr> <td></td><td> <p>Easy trails</p> <p>Wide trail with a gentle gradient smooth surface. Some obstacles such as roots, logs and rocks. Suitable for beginner cyclists with basic mountain bike skills, and off-road bikes.</p> </td></tr> <tr> <td></td><td> <p>Easy with intermediate sections</p> <p>Likely to be single track with a moderate gradient, variable surface and some obstacles. Some obstacles such as roots, logs and rocks. Suitable for mountain bikers with mountain bikes.</p> </td></tr> <tr> <td></td><td> <p>Intermediate</p> <p>Single trail with moderate gradients, variable surface and obstacles. May include steep sections. Suitable for skilled mountain bikers with mountain bikes.</p> </td></tr> <tr> <td></td><td> <p>Intermediate with difficult sections</p> <p>For competent mountain bikers. Large, unavoidable obstacles and features. Some steep climbs or descents and loose surfaces.</p> </td></tr> <tr> <td></td><td> <p>Difficult trails</p> <p>Suitable for experienced mountain bikers. Expect large, dangerous and unavoidable obstacles and features. Challenging and variable with steep climbs or descents and loose surfaces.</p> </td></tr> <tr> <td></td><td> <p>Extreme trails</p> <p>Suitable for highly experienced mountain bikers. Severe constructed trails and/ or natural features, most sections are challenging. Includes extreme levels of exposure and / or risk. Expect large and unavoidable jumps, obstacles and features.</p> </td></tr> </table>		<p>Easy trails</p> <p>Wide trail with a gentle gradient smooth surface. Some obstacles such as roots, logs and rocks. Suitable for beginner cyclists with basic mountain bike skills, and off-road bikes.</p>		<p>Easy with intermediate sections</p> <p>Likely to be single track with a moderate gradient, variable surface and some obstacles. Some obstacles such as roots, logs and rocks. Suitable for mountain bikers with mountain bikes.</p>		<p>Intermediate</p> <p>Single trail with moderate gradients, variable surface and obstacles. May include steep sections. Suitable for skilled mountain bikers with mountain bikes.</p>		<p>Intermediate with difficult sections</p> <p>For competent mountain bikers. Large, unavoidable obstacles and features. Some steep climbs or descents and loose surfaces.</p>		<p>Difficult trails</p> <p>Suitable for experienced mountain bikers. Expect large, dangerous and unavoidable obstacles and features. Challenging and variable with steep climbs or descents and loose surfaces.</p>		<p>Extreme trails</p> <p>Suitable for highly experienced mountain bikers. Severe constructed trails and/ or natural features, most sections are challenging. Includes extreme levels of exposure and / or risk. Expect large and unavoidable jumps, obstacles and features.</p>
	<p>Easy trails</p> <p>Wide trail with a gentle gradient smooth surface. Some obstacles such as roots, logs and rocks. Suitable for beginner cyclists with basic mountain bike skills, and off-road bikes.</p>												
	<p>Easy with intermediate sections</p> <p>Likely to be single track with a moderate gradient, variable surface and some obstacles. Some obstacles such as roots, logs and rocks. Suitable for mountain bikers with mountain bikes.</p>												
	<p>Intermediate</p> <p>Single trail with moderate gradients, variable surface and obstacles. May include steep sections. Suitable for skilled mountain bikers with mountain bikes.</p>												
	<p>Intermediate with difficult sections</p> <p>For competent mountain bikers. Large, unavoidable obstacles and features. Some steep climbs or descents and loose surfaces.</p>												
	<p>Difficult trails</p> <p>Suitable for experienced mountain bikers. Expect large, dangerous and unavoidable obstacles and features. Challenging and variable with steep climbs or descents and loose surfaces.</p>												
	<p>Extreme trails</p> <p>Suitable for highly experienced mountain bikers. Severe constructed trails and/ or natural features, most sections are challenging. Includes extreme levels of exposure and / or risk. Expect large and unavoidable jumps, obstacles and features.</p>												



Legend

- Trail_Marker
- Trail_Totem
- Trail_Feature_Sign
- Trailhead_Sign



Sources: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA,
USGS, AeroGRID, IGN, and the GIS
User Community

Similar sign style examples



Willowie Forest – Mount Remarkable National Park



Deep Creek Conservation Park

Crater Lakes Park – Trails Sign Plan

I share my trail

Shared trails throughout Wirrabara Forest allow walkers, trail runners, and mountain bikers to connect with nature and experience the natural beauty of the area.

✓ Ride slow

✓ Keep left

✓ Say g'day

Arrive Clean

Please clean your walking shoes and/or bicycle. Don't spread weeds or diseases.

We all know that keeping your bike and drivetrain clean will make it run more smoothly and reduce wear but there is a bigger picture.

Mud can carry a whole bunch of nasties including weed seeds, plant diseases and fungi that have the potential to devastate our bushland.

For example *Phytophthora* is a fungus transmitted in mud/slime which kills the roots of plants. Remember, once a disease is introduced, it is there forever.

If you only ride in one area, the risk of spreading disease and pests is minimal, but if you ride across a number of parks or travel between regions, the risk is increased.

Places where particles can build up include:

For more information please visit parks.sa.gov.au

The National Parks Code

- Take your rubbish with you.
- No fires are permitted in the park.
- On days of Catastrophic Fire Danger the park will be closed to all visitors. Fires may be closed on days of Extreme Fire Danger or during serious storms.
- Keep our wildlife wild. Do not feed or disturb animals, or remove native plants.
- Motorcycles are not permitted on tracks and trails.
- Use of drones is not permitted. For more information visit www.parks.sa.gov.au

Code of practice for trail users

To protect the surrounding environment and to ensure the safety of all trail users, please be aware of the trail users Code of practice when using shared trails. Important points to remember include:

- Plan your ride or walk.
- Comply with all signs.
- Ride and walk only on formed trails.
- Show the trail - stay close to the edge.
- Do not take short cuts or leave new trails.
- Avoid using trails in wet, muddy conditions.
- Ride lightly and leave no trace or rubbish.
- Control your line within your limits.
- Clear your path to avoid the spread of weeds or plant diseases.
- Carry sufficient food and drinking water.
- Respect the rights of others.
- Tell others about the code.

Maps on your mobile

Download the free Arctos Maps App to your phone and have the Wirrabara park map on hand when you're out there. The app gives you the best view of the park and shows your location in the park.

For more information please visit parks.sa.gov.au

Wirrabara Forest Trails

Welcome to Wirrabara Forest Trails, these trails have been developed for use by mountain bikers, runners, and walkers.

The trails are identified and described in the table below. Observing the trail classification system will help you to select trails suited to your ability.

Please obey signs, including sections where riding is not permitted. Please respect local wildlife and leave no trace.

Australian walking track grading system

- Grade 1:** No bushwalking experience is required. Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Grade 2:** No bushwalking experience is required. Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Grade 3:** Suitable for most ages and abilities. Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Grade 4:** Bushwalking experience recommended. Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Grade 5:** Recommended for very experienced bushwalkers or all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.

Mountain bike trail difficulty rating system

- Easy Trails:** Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Easy with Intermediate Sections:** Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Intermediate Trails:** Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Intermediate with Difficult Sections:** Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.
- Difficult:** Suitable for all ages and abilities. Suitable for all types of terrain and weather. Suitable for all types of terrain and weather.

Trail name	Difficulty	Distance	Trail description
Wirrabara Forest Trail	Grade 3 Walk	2.2 km	The Wirrabara Forest Trail is a perfect opportunity to discover a variety of landscapes that make Wirrabara Forest a special place to visit. The trail begins near the park entrance and ends near the park entrance. The trail is a mix of dirt and gravel. The trail is a mix of dirt and gravel. The trail is a mix of dirt and gravel.

For more information please visit parks.sa.gov.au

Wirrabara Forest – Southern Flinders Ranges

Crater Lakes Park – Trails Sign Plan

CRATER LAKES TRAIL - SIGN CONCEPT MOCKUP

MAJOR TRAILHEAD - TIMBER POST (100mm Square)

SIGN TYPE / CODE : TH-01

SIGN FACE SIZE : 1200H x 900W x 50D

SCALE : 1-10 @A3

Pantone® 2955 C
Pantone® 2955 U
C=100 M=55 Y=10 K=48
R=0 G=60 B=105
HTML 003C69



Crater Lakes Park – Trails Sign Plan

CRATER LAKES TRAIL - SIGN CONCEPT MOCKUP

MAJOR TRAILHEAD - TIMBER POST (100mm Square)

SIGN TYPE / CODE : TH-01

SIGN FACE SIZE : 1200H x 900W x 50D

SCALE : 1:10 @A3

Pantone® Cool Gray 9 C
Pantone® Cool Gray 9 U
C=29 M=23 Y=16 K=51
R=116 G=118 B=120
HTML 747678



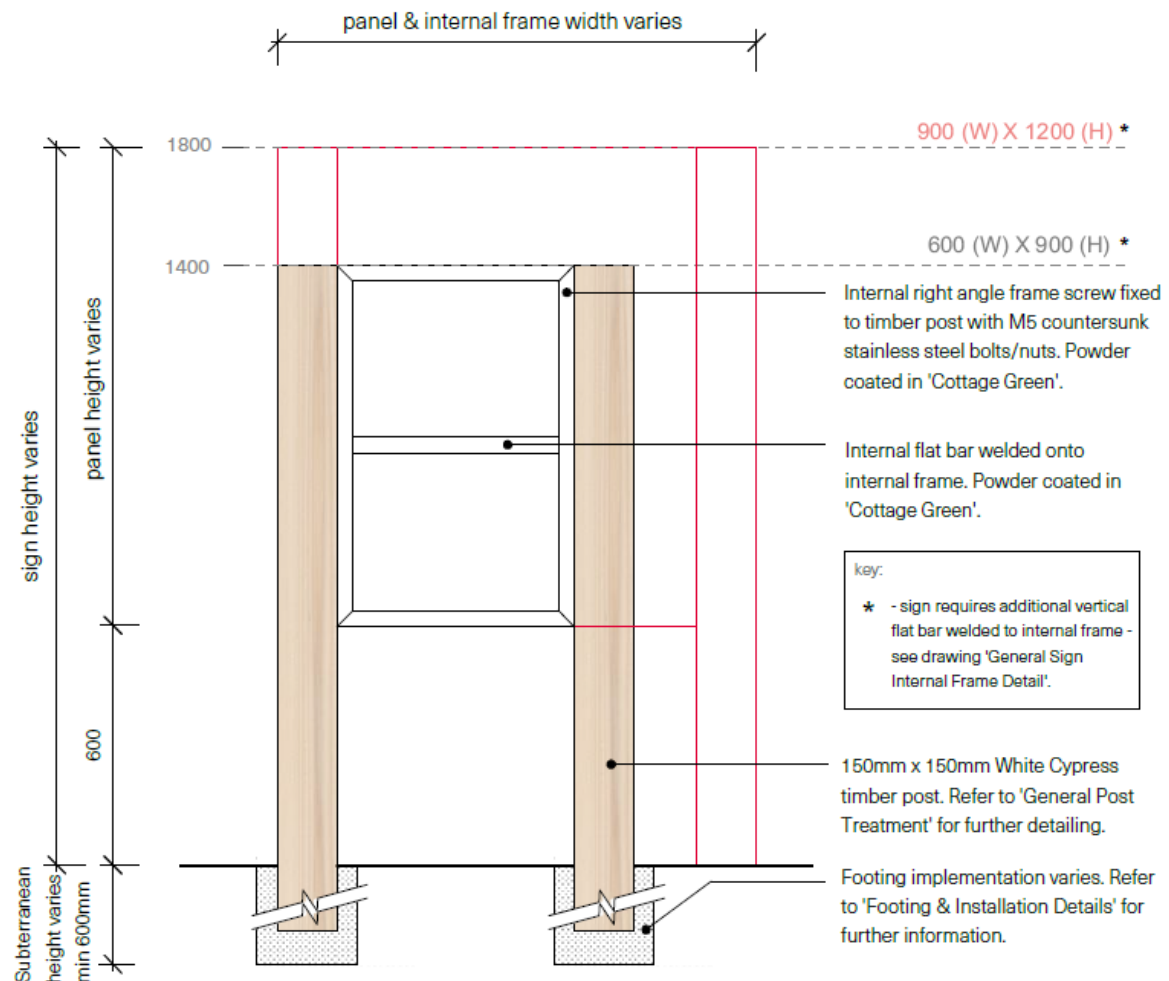
Trail marker examples



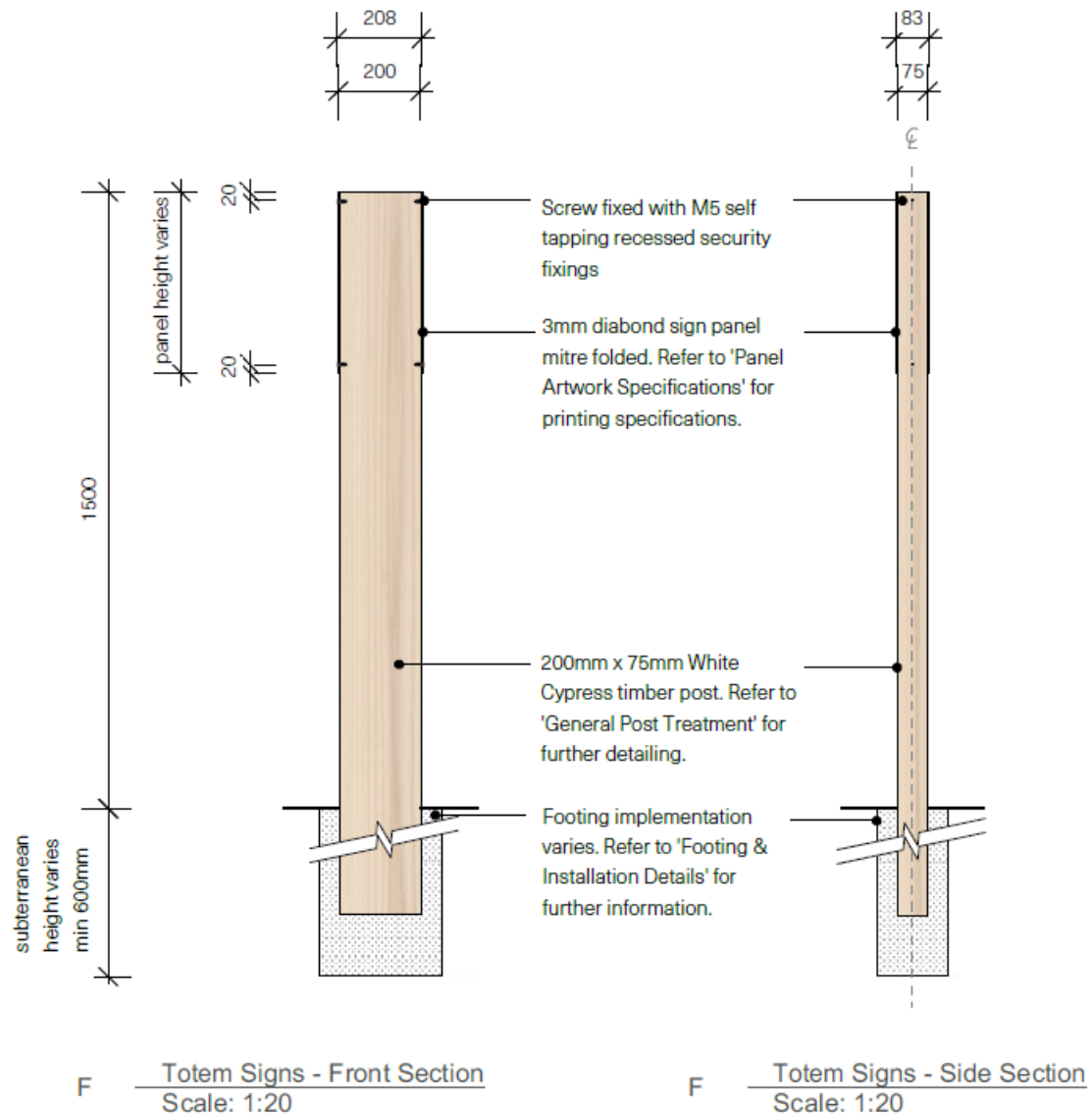
Examples of similar style/size trail markers from South Australian National Parks

Installation and footing details

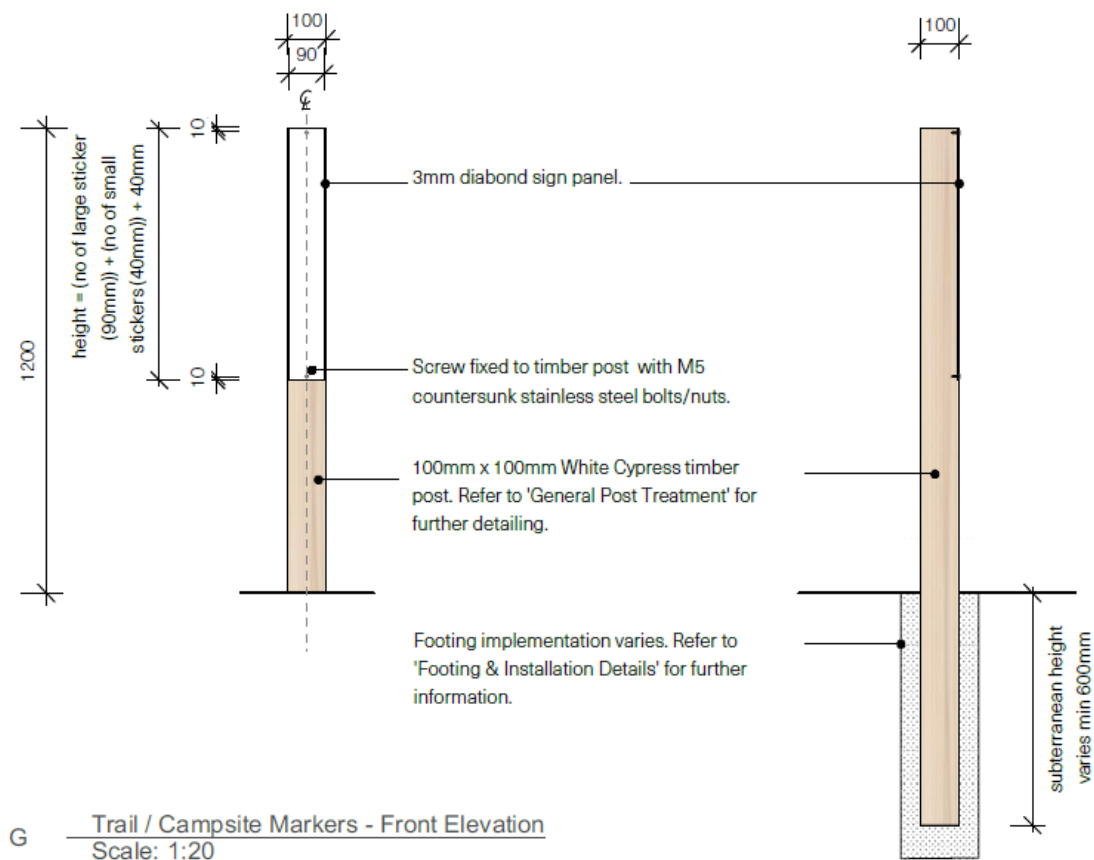
Trailhead signs



Totem style signs



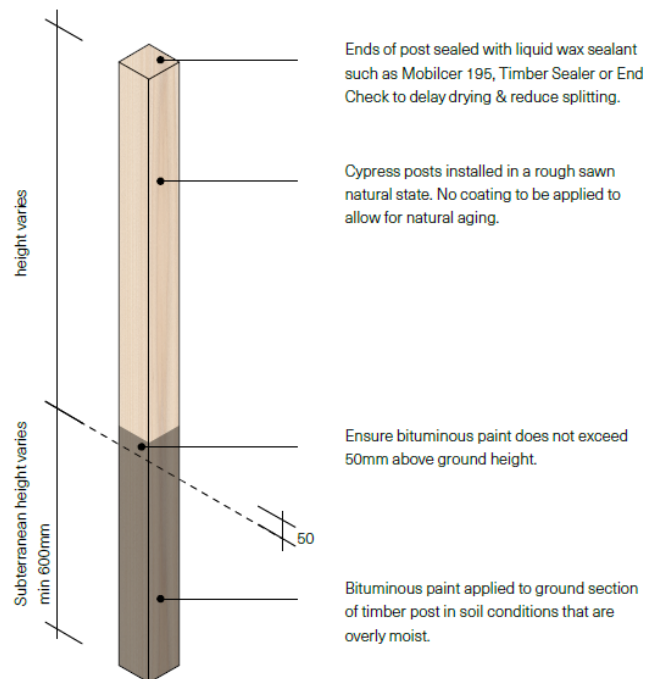
General trail marker



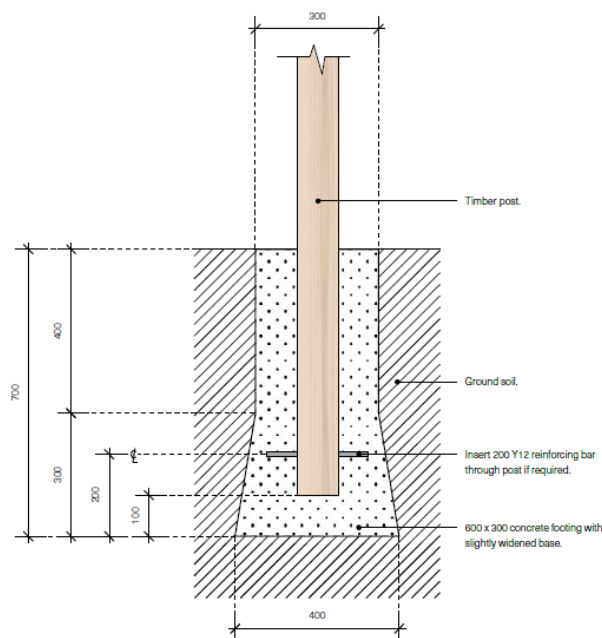
G Trail / Campsite Markers - Front Elevation
Scale: 1:20

G Trail / Campsite Markers - Side Section
Scale: 1:20

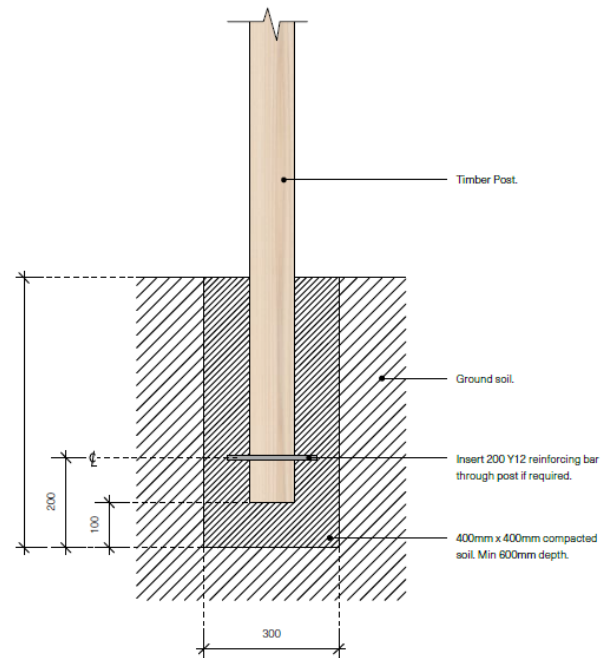
General post treatment and footings



A General Post Treatment - Isometric
Scale: NTS






































A Footing & Installation Details:
Typical Concrete Footing - Front Section
Scale: NTS











































C Footing & Installation Details:
Direct Embedment System - Front Section
Scale: NTS
























Trail marker content










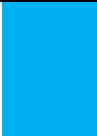












Location	Trailhead Sign	Trail Marker			Trail totem		Trail totem split face			
		side 1	side 2	side 3	Side 1	Side 2	Left side 1	Right side 1	Left side 2	Right side 2
2					 Crater Lakes Walking and Cycling Trails					10 Trailhead signs
4										30 Trail markers
5					 Pepper Pot Loop 					64 Totem Signs
6		 Pepper Pot Loop	 Pepper Pot Loop							4 Feature Signs
7		 Pepper Pot Loop	 Pepper Pot Loop							
8					 Leg of Mutton / Yatton Loo Loop.  Riders give way to pedestrians					
11		 Pepper Pot Loop	 Pepper Pot Loop							
12		 Pepper Pot Loop	 Pepper Pot Loop							
					 Pepper Pot Loop. - Surge Tank -Steep with steps. 					





















13				Pepper Pot Loop easier alternative. - connects to Blue Lake / Warwar Circuit.			
17	 Pepper Pot Loop	 Pepper Pot Loop					
18			 Pepper Pot Loop.  Blue Lake / Warwar Circuit. - Visitor Centre				
19	 Pepper Pot Loop	 Pepper Pot Loop					
21	 Pepper Pot Loop	 Pepper Pot Loop					
22	 Pepper Pot Loop						
23				 Pepper Pot Loop. -Surge Tank - Hoo Hoo Lookout. -Stephen Henty Lookout.			
26	 Pepper Pot Loop 	 Pepper Pot Loop					
28	 Pepper Pot Loop	 Pepper Pot Loop					
29	 Pepper Pot Loop	 Pepper Pot Loop					
			 Nurses Curses				


















30		<div><div>INTERMEDIATE</div><div></div><div>Right Leg Down</div><div><div>INTERMEDIATE + DIFFICULT</div><div></div><div></div></div></div>				
31		<div><div></div><div>Pepper Pot Loop</div><div></div><div>Mountain Trail Loop</div></div> <div><div></div><div>Pepper Pot Loop. Mountain Trail Loop.</div><div></div><div>Pepper Pot Loop.</div></div>				
32			<div><div></div><div>Pepper Pot Loop. Mountain Trail Loop.</div></div> <div><div></div><div></div><div>No Entry</div></div>	<div><div></div><div>Pepper Pot Loop. Mountain Trail Loop.</div></div>		
33		<div><div></div><div></div><div>Leg of Mutton / Yatton Loo Loop. Link Trail. Steep access.</div></div>				
34		<div><div></div><div>Right Leg Down</div><div><div>INTERMEDIATE + DIFFICULT</div><div></div><div>Nurses Curses</div><div><div>INTERMEDIATE</div><div></div></div></div></div>				
36 a		<div><div></div><div>No Entry One way mountain bike trail.</div></div>	<div><div></div><div>Look out for pedestrians</div></div>	<div><div></div><div>NO ENTRY</div></div>		






















36 b		 Look out for bicycles			
36 c		  Leg of Mutton / Yatton Loo Loop. Link Trail. Steep access.	 Right Leg Down   		
36 d bottom of link		  Leg of Mutton / Yatton Loo Loop. Link Trail. Steep access. 			
36 e asphalt circuit inter		 Leg of Mutton / Yatton Loo Link Link Trail. 	Riders give way to pedestrians		
36 f bottom of RLD		 No Entry One way mountain bike trail.	 Look out for pedestrians		
36 g bottom of 39 Link		  Pepperpot and Mountain Trail Link. Riders give way to pedestrians	  Leg of Mutton / Yatton Loo Loop. Riders give way to pedestrians		
		 Pepper Pot Loop. Mountain Trail Loop.	 Pepper Pot Loop. Mountain Trail Loop.		























39 a		 Leg of Mutton / Yatton Loo Link Link Trail.	 Leg of Mutton / Yatton Loo Link Link Trail.		
39 b		  Leg of Mutton / Yatton Loo Loop. Riders give way to pedestrians			
40		 Pepper Pot Loop. Mountain Trail Loop.  Riders give way to pedestrians	 Pepper Pot Loop. Mountain Trail Loop.  Riders give way to pedestrians		
41		 Pepper Pot Loop. Mountain Trail Loop.	 Pepper Pot Loop. Mountain Trail Loop.		
44	 Mountain Trail Loop.  Pepper Pot Loop.	 Mountain Trail Loop.  Pepper Pot Loop.			
45	 Pepper Pot Loop.	 Mountain Trail Loop.  Pepper Pot Loop.			
46		 Moutain Trail Loop.  Caravan Park. Pepper Pot Loop.	 Mountain Trail Loop.  Riders give way to pedestrians		
47		 Mountain Trail Loop.	 Mountain Trail Loop.		

















48	 Pepper Pot Loop.  Lookout	 Pepper Pot Loop.				
50	 Pepper Pot Loop.  Lookout	 Pepper Pot Loop.				
58			 No Entry One way mountain bike trail.			
59			 No Entry One way mountain bike trail.			
60			 Mountain bike trail. Please do not play on the jumps.			
68			 Blue Lake / Warwar Circuit  Riders give way to pedestrians	 Blue Lake / Warwar Circuit  Riders give way to pedestrians		
72			 Blue Lake / Warwar Circuit  Riders give way to pedestrians	 Blue Lake / Warwar Circuit  Riders give way to pedestrians		
73			 Blue Lake / Warwar Circuit  Riders give way to pedestrians	 Blue Lake / Warwar Circuit  Riders give way to pedestrians		



























78		<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>	<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>		
83		<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>	<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>		
84		<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>	<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>		
86 a		<div><p>Blue Lake / Warwar Circuit - Apex Lookout</p><p>Blue Lake / Warwar Circuit - No Steps</p><p>Riders give way to pedestrians</p></div>			
86 b		<div><p>Blue Lake / Warwar Circuit - Apex Lookout</p><p>Blue Lake / Warwar Circuit - No Steps</p><p>Riders give way to pedestrians</p></div>	<div><p>Blue Lake / Warwar Circuit</p><p>Riders give way to pedestrians</p></div>		




















88		<div><div></div><div>Mountain Trail Loop - Centenary Tower - Steep with Steps</div></div> <div><div></div><div>Mountain Trail Loop - Easier alternative</div></div> <div><div></div><div>Riders give way to pedestrians</div></div>	<div><div></div><div>Mountain Trail Loop - Devils Punchbowl</div></div> <div><div></div><div>Riders give way to pedestrians</div></div>		
89			<div><div></div><div></div><div>Mountain Trail Loop - Easier Alternative</div></div> <div><div></div><div>Blue Gums Walk</div></div> <div><div></div><div>Blue Gums Ride</div></div> <div><div></div></div>		
90					
91		<div><div></div><div>Blue Gums Ride</div></div> <div><div></div></div> <div><div></div></div> <div><div></div></div>			
92		<div><div></div><div>Blue Gums Walk</div></div> <div><div></div></div>			
		<div><div></div><div>Blue Gums Walk</div></div>			





















93						
				 Blue Gums Ride 		
94						
95				 No Entry One way mountain bike trail.		
96	 Blue Gums Walk Blue Gums Ride	 Mountain Trail Loop alternative				
97				 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop - Devils Punchbowl  Riders give way to pedestrians	
100				 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians	
101	 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians				
	 Mountain Trail Loop	 Mountain Trail Loop				



















102	 Riders give way to pedestrians	 Riders give way to pedestrians				
103					 Tower Up	 Mountain Trail Loop
					 INTERMEDIATE	
						
104					 Mountain Trail Loop	 Tower Up
						 INTERMEDIATE
						
105						
106			 No Entry One way mountain bike trail.	 Blue Gums Ride		
				 Riders give way to pedestrians		
107			 Blue Gums Walk	 Blue Gums Walk		
						
108	 Blue Gums Ride					
	 Riders give way to pedestrians					
	 Blue Gums Ride	 Blue Gums Ride				























109	 Riders give way to pedestrians	 Riders give way to pedestrians				
110			 Blue Gums Walk Blue Gums Ride  Mountain Trail Loop  Riders give way to pedestrians			
111	 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians				
112	 JJs Trail 					
113	 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians				
			 Wheel Nuts DH Trail			








114			    	<div> <div> <h2>Wheel Nuts DH Trail</h2> <p>These trails are suitable for advanced riders only.</p> <p>This trail features very large jumps and drops with unavoidable gaps and no B-lines. This trail has been designed for downhill bikes with full suspension and powerful brakes. It contains very steep sections, loose trail surfaces and numerous obstacles including large gap jumps and drop offs.</p> <ul style="list-style-type: none"> • Always wear a helmet and protective gear. • Ride within your ability and check the trail before you ride. • Riding involves risks and should be undertaken with care and regard for conditions at all times. </div> <div>      </div> </div> <div> <p>Crater Lakes Reserve Trails</p>  <p>Government of South Australia Office for Recreation, Sport and Racing</p> </div>	
115	 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians			
118	 Mountain Trail Loop  Riders give way to pedestrians	 Mountain Trail Loop  Riders give way to pedestrians			
119		 Mountain Trail Loop  Riders give way to pedestrians			
120		 Mountain Trail Loop  RSL Hike	 Mountain Trail Loop 		
121					
		 RSL Hike - Lots of steps - Slippery when wet			

123					
125		<div><p>Mazdos DH Trail</p><p>DIFFICULT</p><p>CAUTION</p><p>CAUTION MANDATORY DROP ↓ ↓ ↓</p><p>GAP JUMP</p></div>			
126		<div><p>Mountain Trail Loop Marist DH Trail</p><p>Mazdos DH Trail</p><p>Grassy Hill Trail</p><p>Riders give way to pedestrians</p></div>	<div><p>Mountain Trail Loop</p><p>Grassy Hill Trail</p></div>		
127		<div><p>Marist DH Trails</p><p>DIFFICULT</p><p>CAUTION</p><p>CAUTION MANDATORY DROP ↓ ↓ ↓</p><p>GAP JUMP</p></div>			

128		<div><div><p>Mountain Trail Loop</p></div><div><p>Tombstone Link</p></div><div><p>Riders give way to pedestrians</p></div></div>	<div><div><p>Mountain Trail Loop</p><p>Tombstone Link</p></div><div><p>Riders give way to pedestrians</p></div></div>			
129		<div><div><p>Wheel Nuts DH Trail</p><p>CAUTION</p><p>CAUTION MANDATORY DROP</p><p>GAP JUMP</p></div></div>	<div><div><p>Tombstone Link - Potters Point</p></div><div><p>Riders give way to pedestrians</p></div></div>			
130	<div><div><p>Tombstone Link - Potters Point</p></div><div><p>Riders give way to pedestrians</p></div></div>					
		<div><div><p>Wheel Nuts DH Trail</p></div></div>				

131		<div><p>DIFFICULT</p><p>CAUTION</p><p>CAUTION MANDATORY DROP</p><p>GAP JUMP</p></div>			
132		<div><p>No Entry One way mountain bike trail.</p></div>			
133					
134		<div><p>Mountain Trail Loop</p><p></p><p>Marist Park</p><p></p><p>Riders give way to pedestrians</p></div>	<div><p>Mountain Trail Loop</p><p></p><p>Riders give way to pedestrians</p></div>		
135		<div><p>Mountain Trail Loop - Centenary Tower</p></div>	<div><p>Mountain Trail Loop - Easier alternative</p></div>		
136		<div><p>Mountain Trail Loop</p></div>	<div><p>Mountain Trail Loop - Centenary Tower</p></div>		

137						
	Mountain Trail Loop					
						
	JJ's Trail					
138						
						
	Riders give way to pedestrians					
139 140 141 142						
	Tenison Drive		Marist Park		Tenison Drive	
						
	Marist Park		Crater Lakes Trails		Crater Lakes Trails	
144 145 146 147 148						
	No Entry		No Entry		Look out for pedestrians	
	One way mountain bike trail.		One way mountain bike trail.			
150						
	Grassy Hill Trail - Marist Park		Grassy Hill Trail - Potters Point			
						
	Riders give way to pedestrians		Riders give way to pedestrians			
151						
	Grassy Hill Trail - Marist Park		Grassy Hill Trail - Potters Point			
						
	Riders give way to pedestrians		Riders give way to pedestrians			
						
	Snake DH Trail					

151 B		<div>    </div>			
152		<div> Grassy Hill Trail - Potters Point  Riders give way to pedestrians</div>			