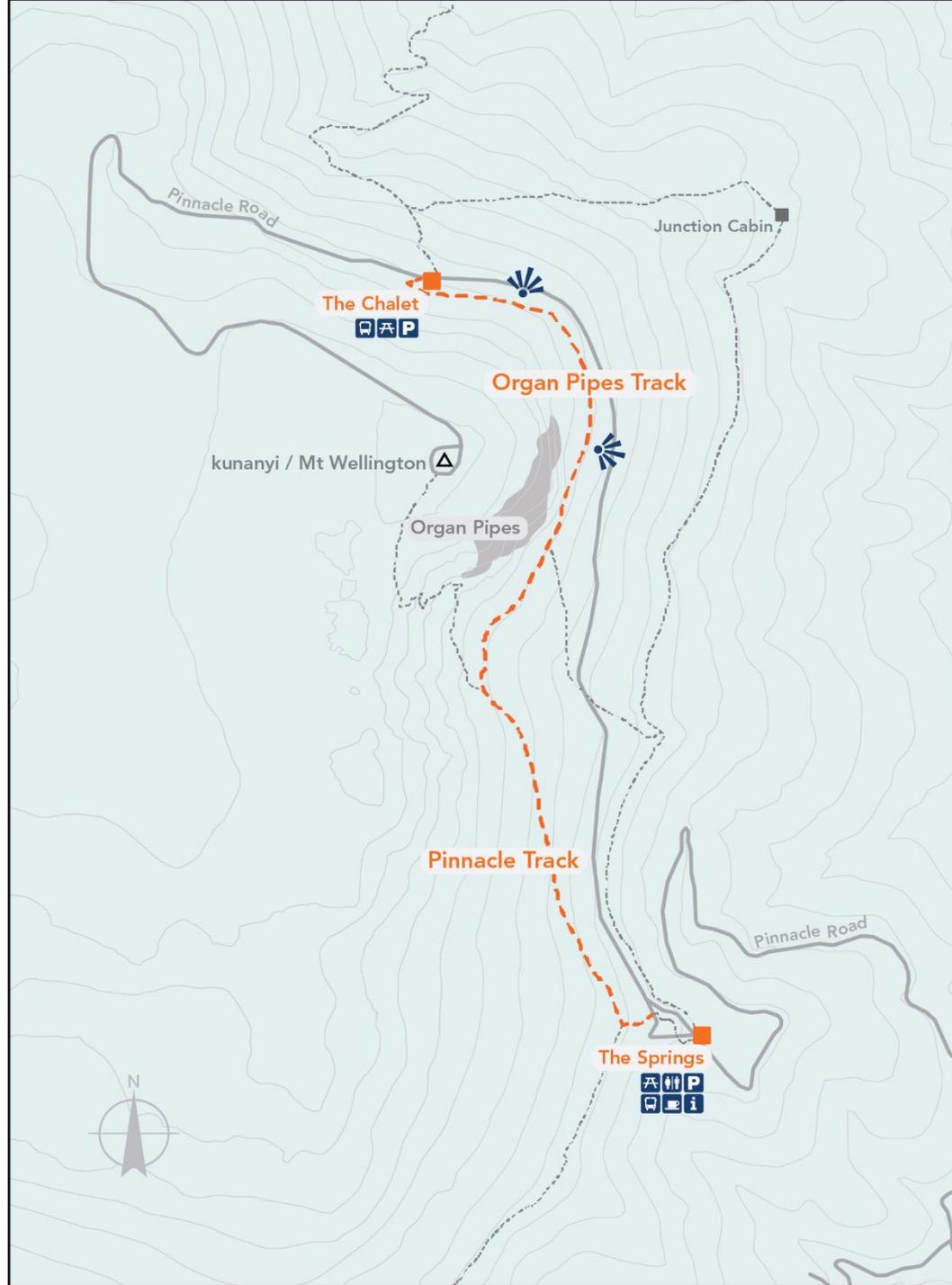


City of Hobart presents

Rejuvenating kunanyi / Mt Wellington's Great Short Walk







Pinnacle Track 1907

(photograph from
the Weekly
Courier 19 Sept
1907 page 24).



Pinnacle Track c.1920s, MC Horden



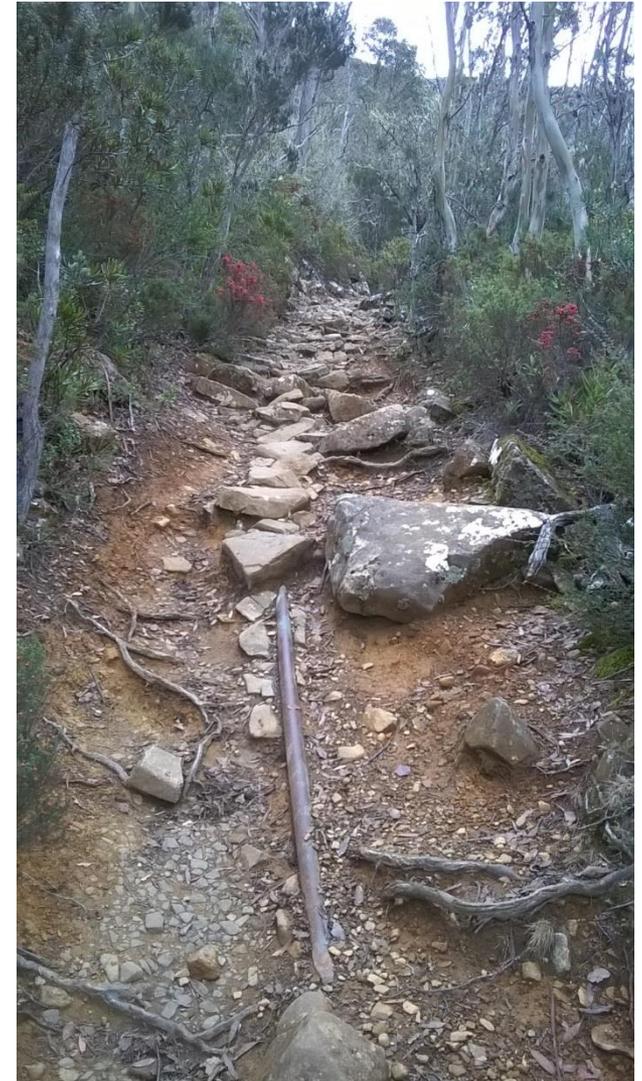
2016 condition – Organ Pipes Track

Collapsed embankments, unstable and uneven surface, poor drainage



2016 condition – PinnacleTrack

Intrusive services, massive erosion, poor drainage.



Challenges

Concept and design
The Mountain
Visitor Management

Safety
Environmental values
Heritage



Concept and vision

A 2-3 hour walk suitable for most ages with some bushwalking experience, within half an hour of Hobart

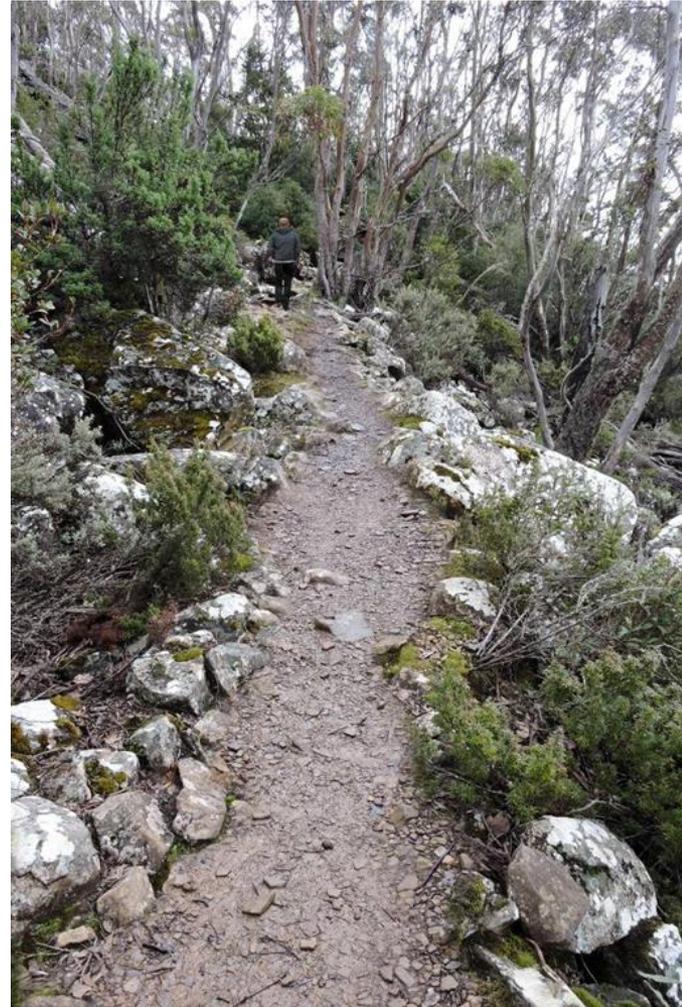


An historic track through the sub-alpine environment, with spectacular views of Hobart and the Organ Pipes. The tracks are well-maintained, but there are hills, steps and some uneven surfaces.

Conceptual design - mock-ups



Conceptual mock-up – boulder field



Detailed Design

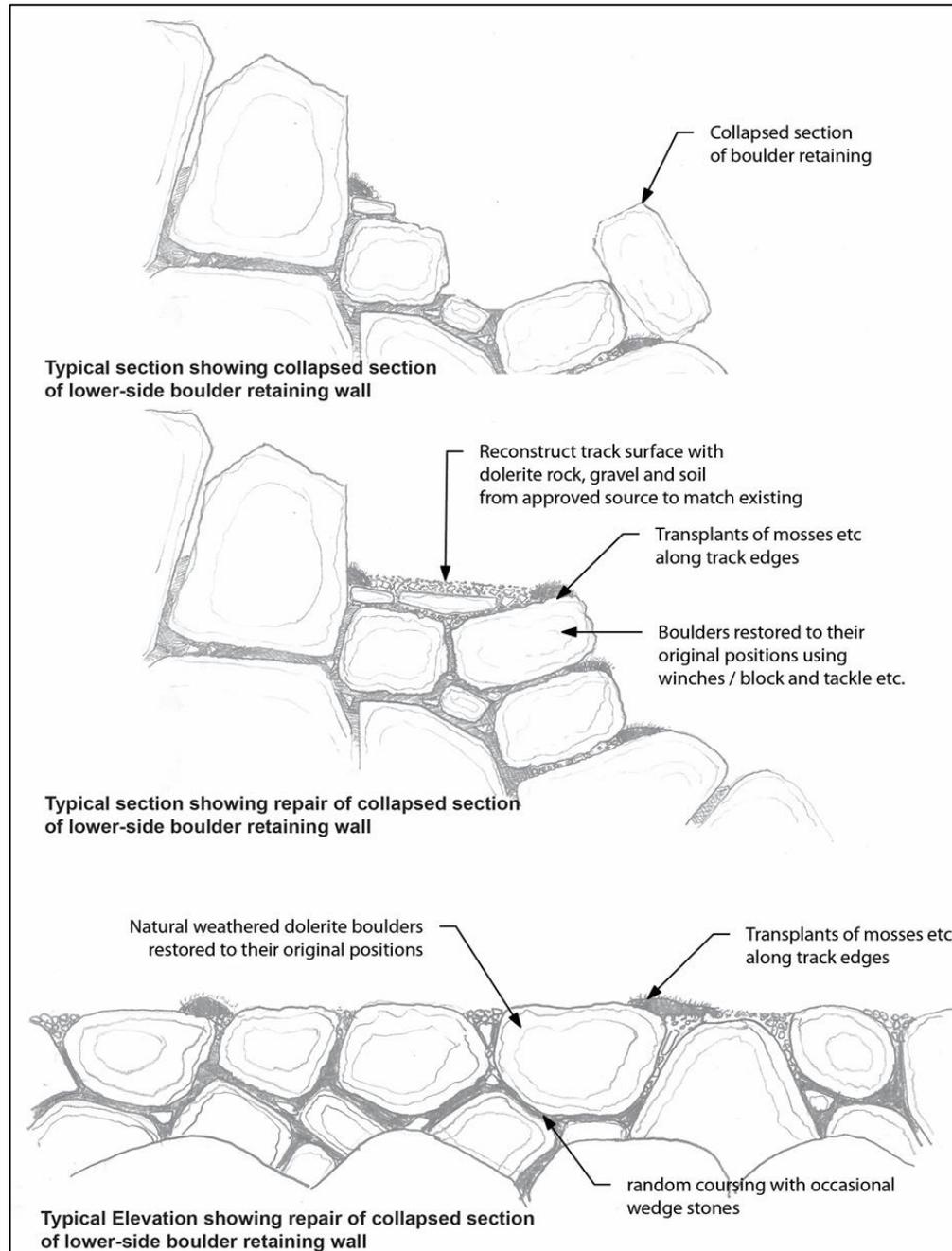


Figure 15: Mock-up of proposed track works across unstable and collapsed boulder field

 A photograph showing a narrow, rocky path through a dense field of large, grey and brown boulders. The path is uneven and appears to be made of loose stones and dirt, with significant gaps and hazards. In the background, a scenic view of a valley and a body of water is visible through the trees.	 A photograph showing the same boulder field as the 'Existing' image, but with a more defined and stable path. The path is filled with coarse gravel and smaller rocks, and the edges are reinforced with larger boulders. A person is walking away from the camera on the path, providing a sense of scale. The background view is the same as in the 'Existing' image.
<p>Existing Existing boulder field crossing in poor condition. Aggregate has washed away leaving unstable base rocks and hazardous voids. Visitors report inability to appreciate surrounds and views as attention is consumed by navigating track.</p>	<p>Proposed Fill voids with rock and coarse gravel. Restore edge retaining boulders where these have collapsed. Re-gravel with matching material from the approved source. Stable and safe rocky sections may be left uncovered.</p>

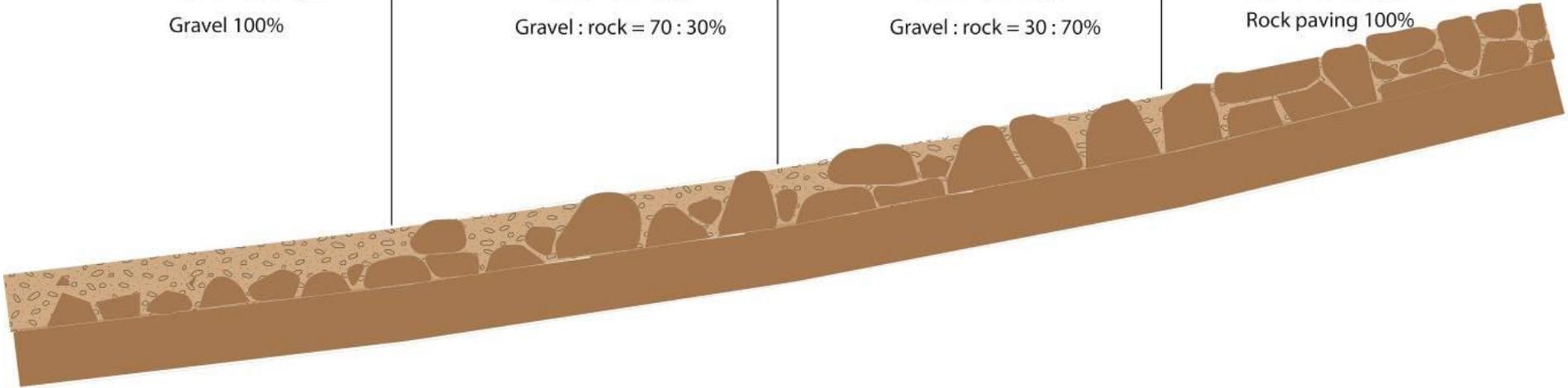
Slope and Surface Treatments

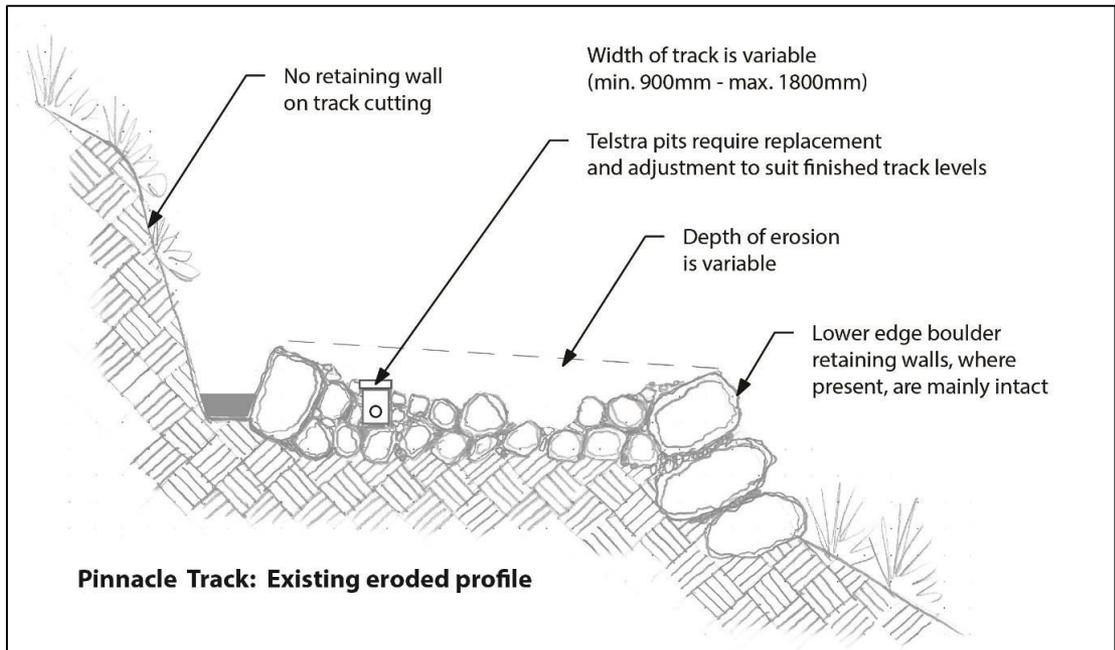
12 % or less slope
Gravel 100%

13% to 15% slope
Gravel : rock = 70 : 30%

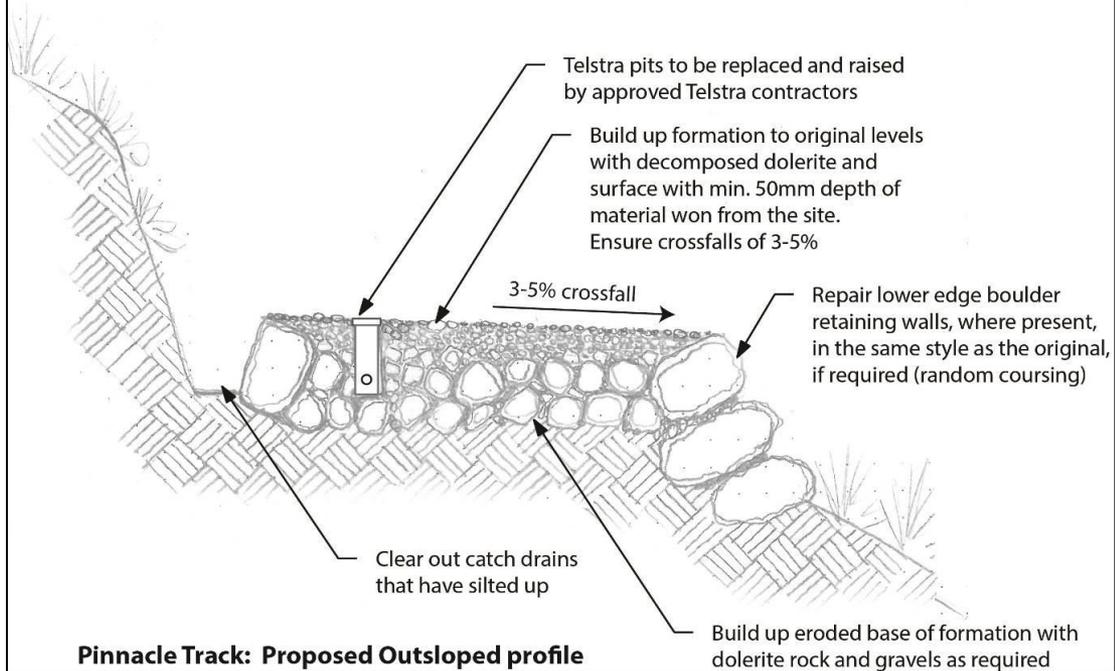
16% to 18% slope
Gravel : rock = 30 : 70%

above 18% slope
Rock paving 100%





Pinnacle Track: Existing eroded profile



Pinnacle Track: Proposed Outsloped profile

Figure 36: Mock-up of repair works along section with steep grade, water pipe and conduit



Existing: Steep, rocky section with intrusive pipe supplying water to The Springs amenities



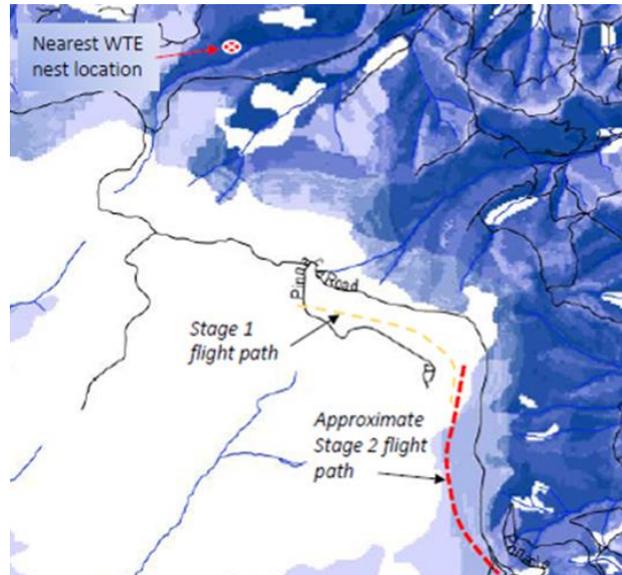
Proposed: Water pipe to be relocated away from the track. Harden steep track section with informal dolerite paving.

Environment

Tasmanian daisy tree



Avi-fauna



Silky snail



Heritage

Intact track sections

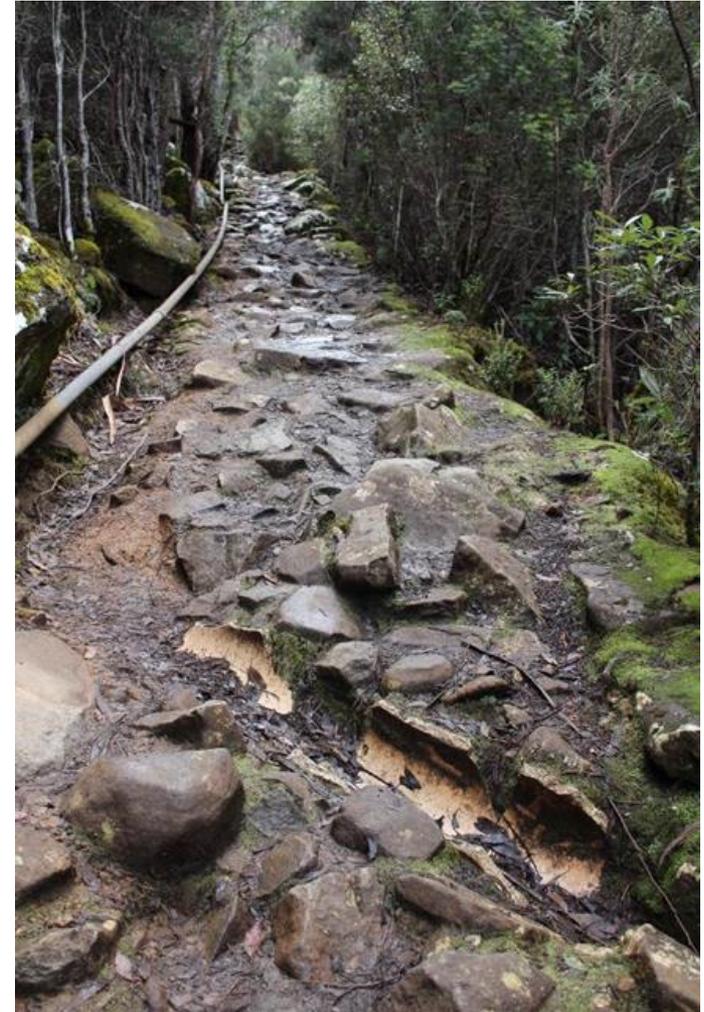


Original walling



Heritage

Original terracotta culverts



Heritage

Rebuilding and original construction on disused track sections



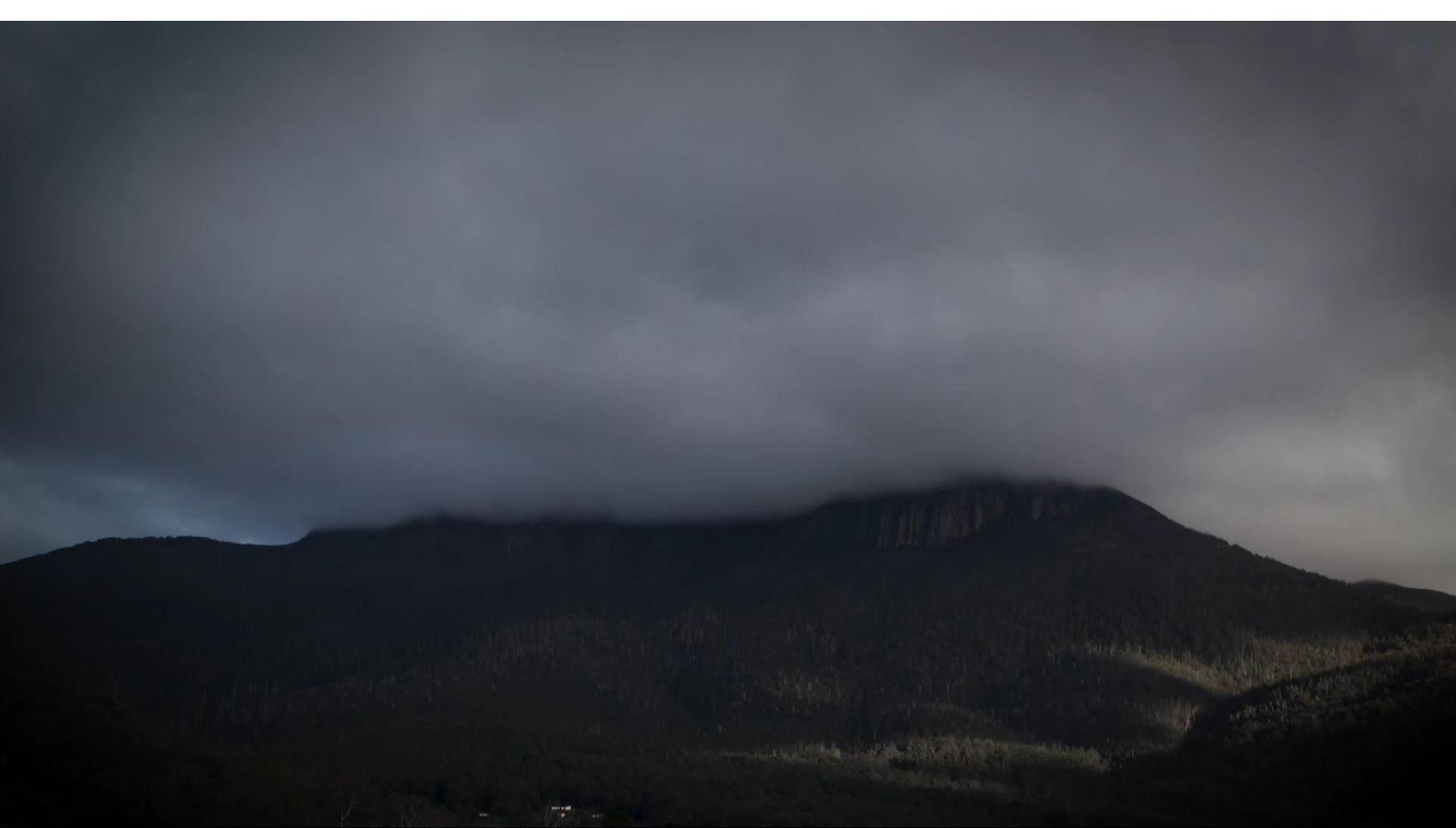
Heritage

Track side borrow pits

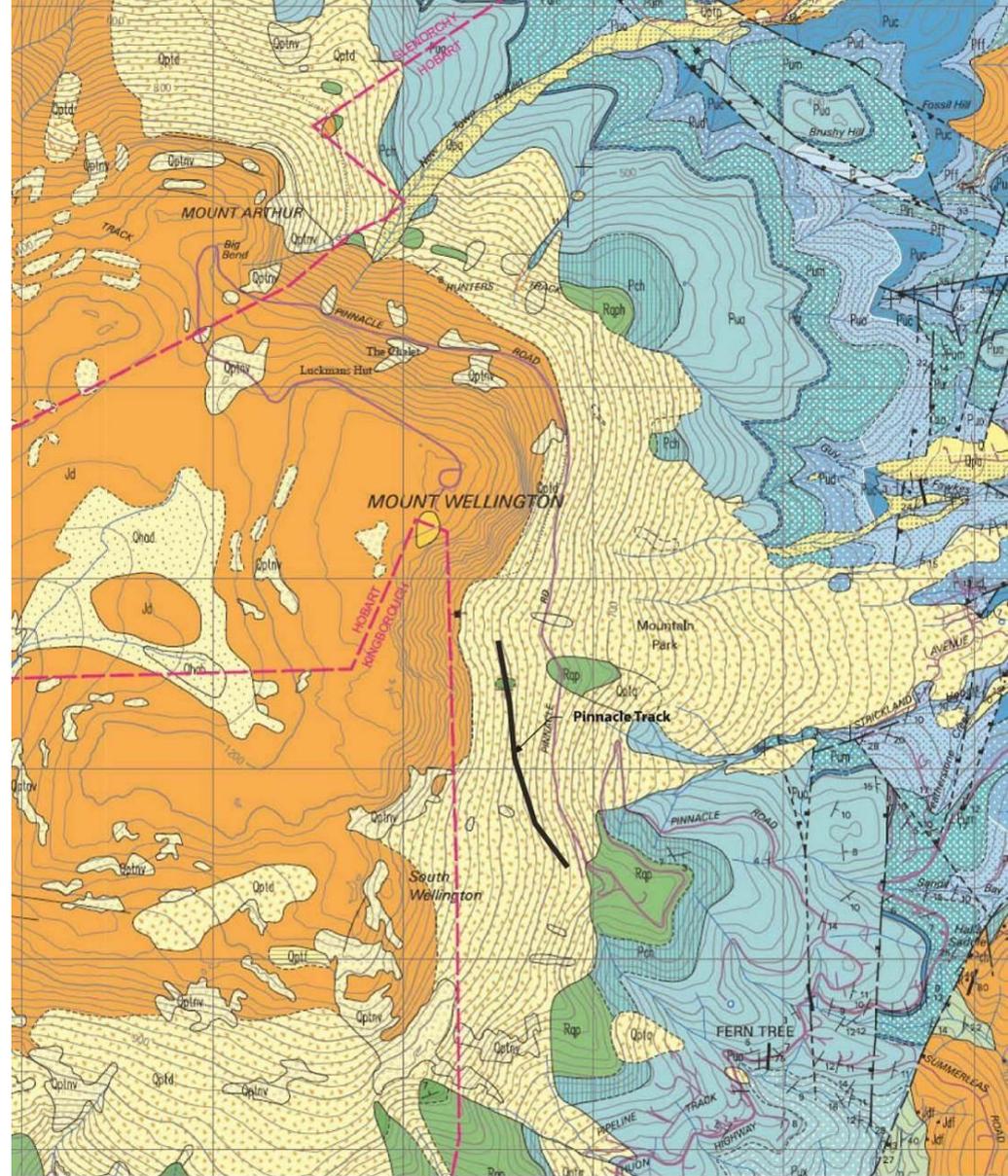
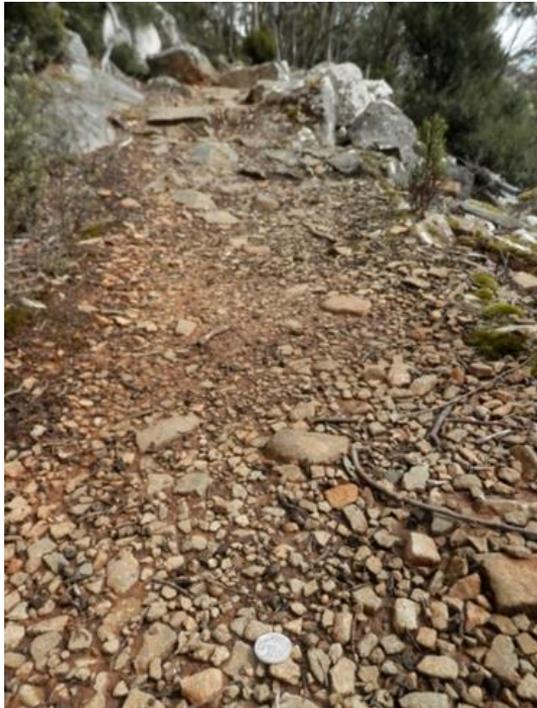
Blasting



[Heritage video](#)



Geology and soils



QUATERNARY	Qptnv	Periglacial non vegetated scree deposits (Qptnv).
	Qpt	Talus and remobilised talus deposits (Qpt), talus consisting dominantly of dolerite boulders (Qptd), talus dominantly of Lower Parmeener Supergroup rocks and Jurassic dolerite (Qptdb), talus of dolerite with notable amounts of Upper Parmeener quartzose sandstone (Qptda), talus dominantly Lower Parmeener rocks (Qptp), talus dominantly Upper Parmeener quartz sandstone (Qptq), talus consisting of dolerite and subordinate Upper Parmeener rocks (Qptup).

Borrow Pits

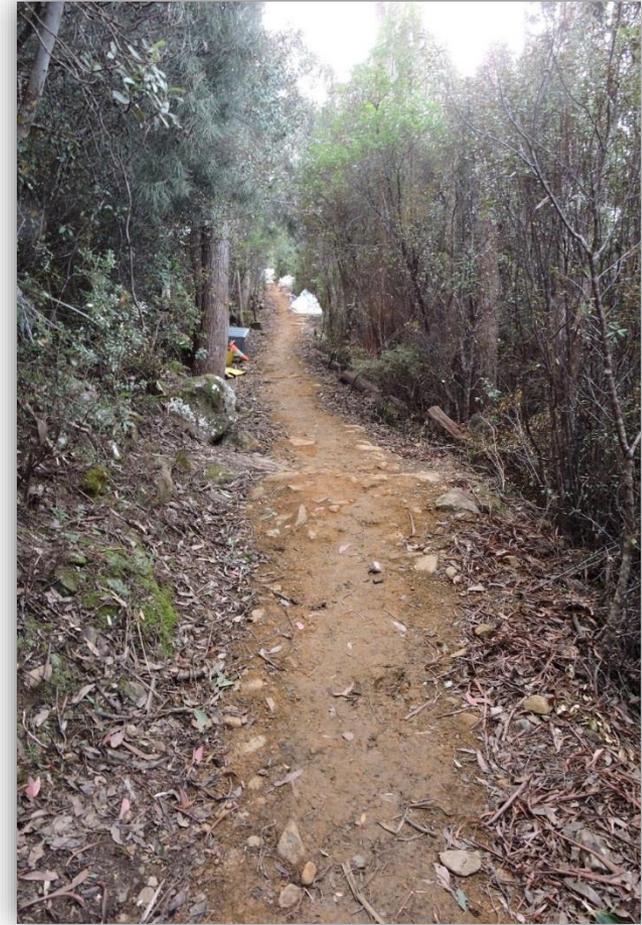
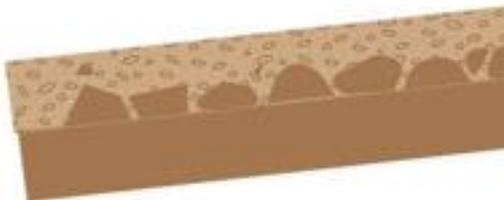
- Check for cultural heritage
- Area out of site
- Vegetation clearance
- Rehabilitation



Local Gravel

- Natural appearance
- Various fragment sizes
- Binding properties
- Thickness >2"
- Conditions when laying

12 % or less slope
Gravel 100%



Imported Materials

- **Dolerite spalls**
- **Dolerite decomposed red gravel**



The Mountain

INACCESSIBILITY

- No direct vehicle access
- Narrow & uneven original track
- No excavators allowed
- Power carriers and hand tools



The Mountain

WEATHER

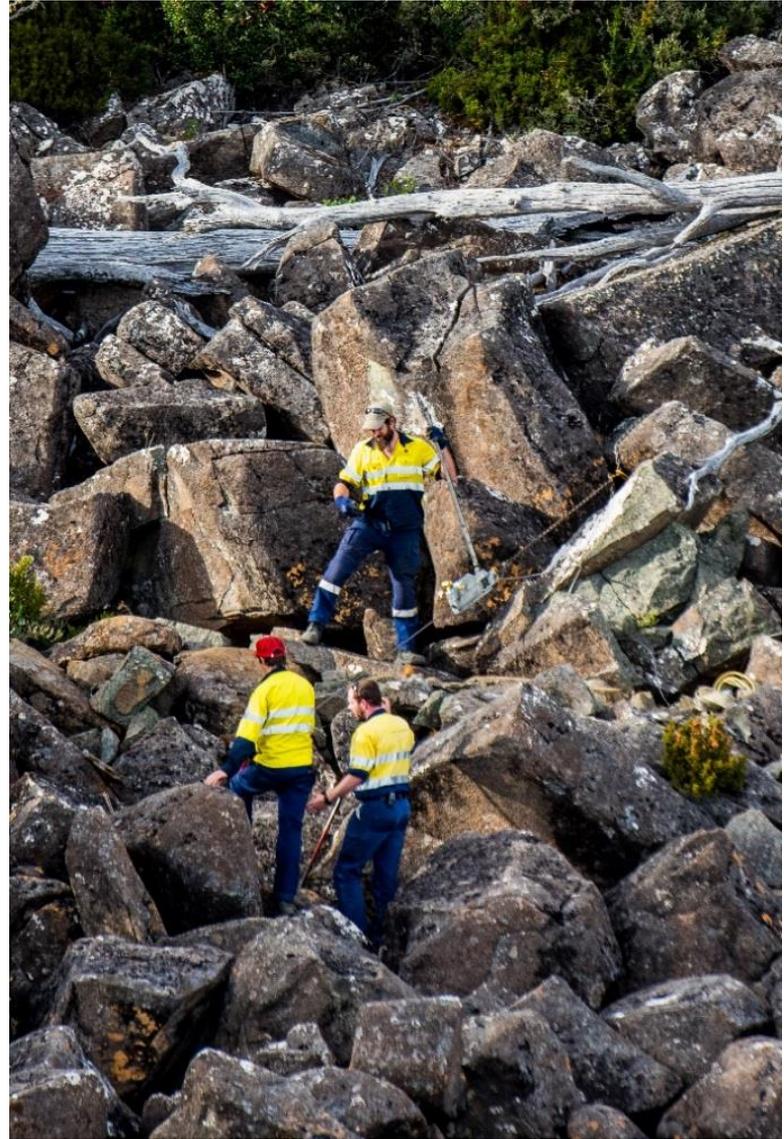
- Wind, cold, frost, snow, ice and fire
- Narrow windows for helicopter operations
- Increased operational overheads



The Mountain

BOULDER FIELDS

- Safe movement of large boulders
- Geo-technical assessments
- Guidelines for work





Hazardous Boulders

- Assessment of site
- Stabilization



Visitor Management

ACCESS AND SAFETY

- Kunanyi / Mt Wellington is heavily used by locals and tourists
- Pressure to keep open roads and tracks
- Closures were unavoidable
- Communications crucial



Visitor Management Communication

Track Closures

Pinnacle Track Construction Work

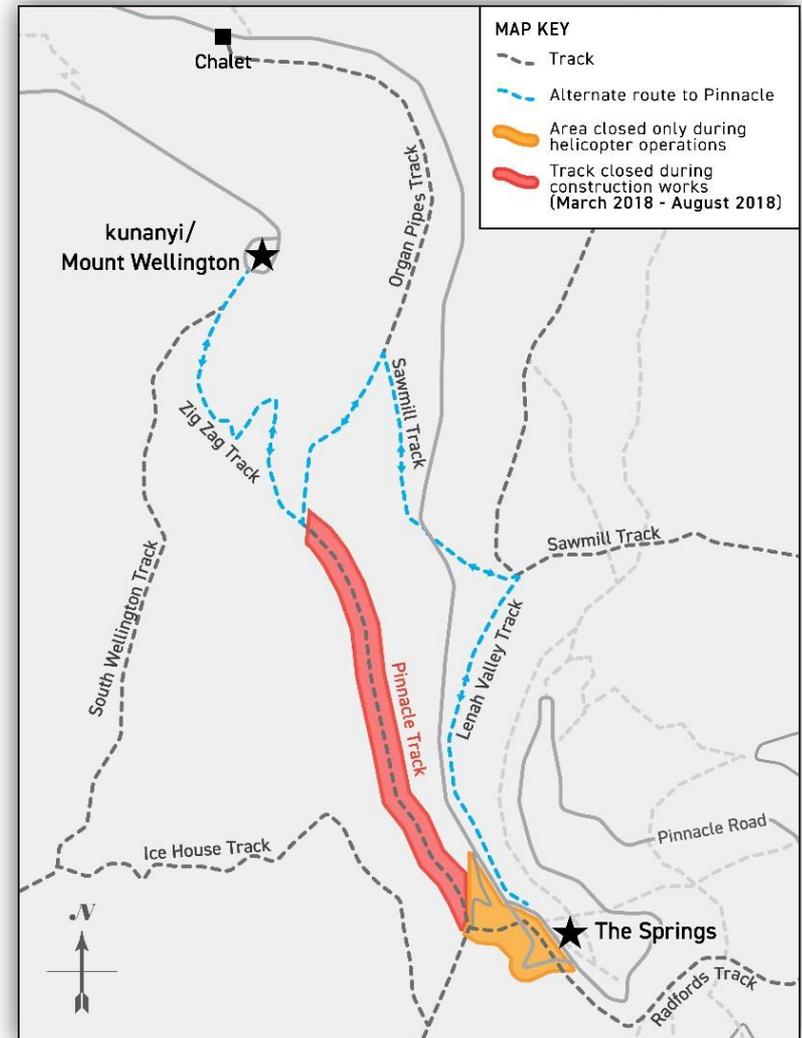
Date of notice: March 2018

Pinnacle Track works:

- Commence **March 2018**
- Due to finish **August 2018**
- Pinnacle Track **CLOSED** during works
- Walker access to the Pinnacle from The Springs is via Lenah Valley Track to Sawmill Track, then Organ Pipes Track to Zig Zag Track.

Additional short term closure of the Old Hotel site at The Springs is required during helicopter operations. Notice of helicopter operations will be placed on the City of Hobart website after 3pm, the day prior.

Further information:
City of Hobart
hobartcity.com.au/projects
Tel. 6238 2886



Safety

- Safety management Plan
- Safe work Methods Statements
- Standard Operating Procedures
- Traffic Management Plans
- Meetings and Reviews



Helicopter Operations

- 78 Flight Hours | 21 Flight Days
- Over 1100 Loads
- Total Cost : \$135,000 US
- \$121 US per Load
- 4 min per load



Summary

- **Planning & Design** **2016 - 2017**
- **Construction Time** **2017- 2019**
- **Length:** **4.15 km**
- **Cost:** **\$2.2 Million**
- **Rate:** **\$530 per 1m**
- **Track Building Labour:** **Approx. 35,000 hours**

Surface Treatments for Different Gradients

Gravel

Gravel/Rock

Rock /Gravel

Rock



12 % or less slope
Gravel 100%



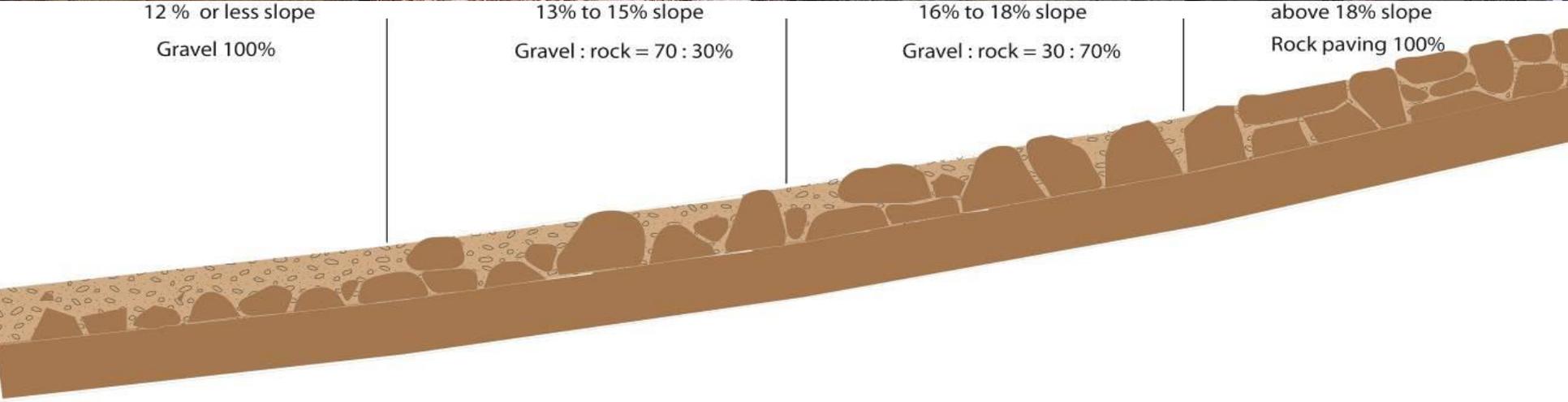
13% to 15% slope
Gravel : rock = 70 : 30%



16% to 18% slope
Gravel : rock = 30 : 70%



above 18% slope
Rock paving 100%



Rock / Gravel

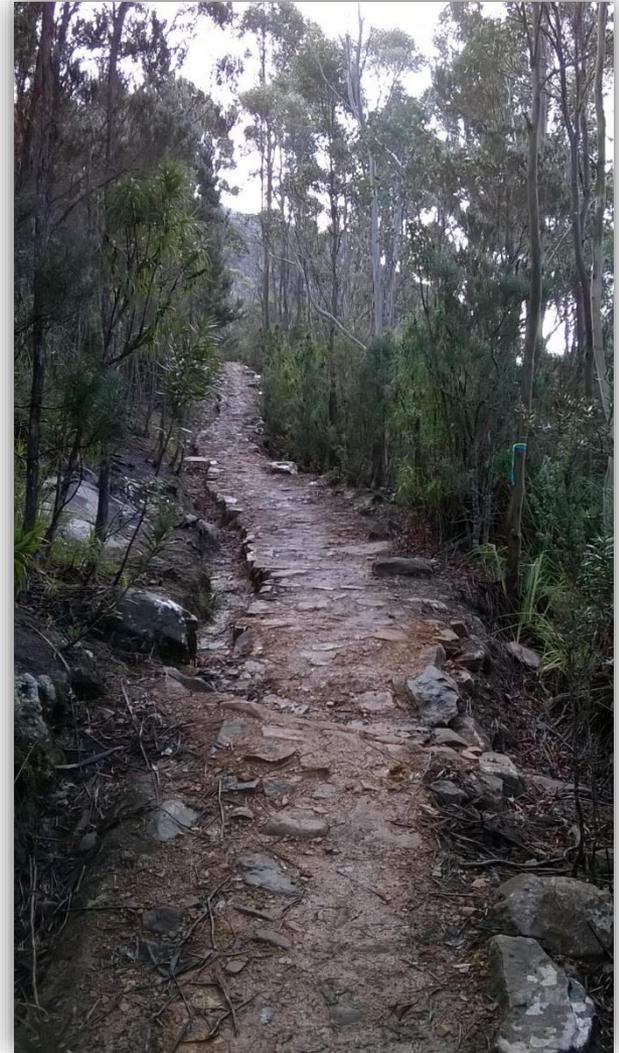
Before



During

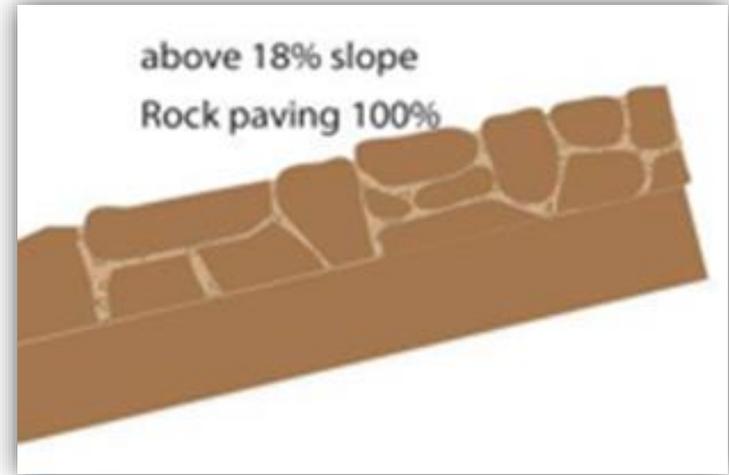


After



Paving / Pitching

- Paving <20%
- Pitching >20%



Pitching

Before



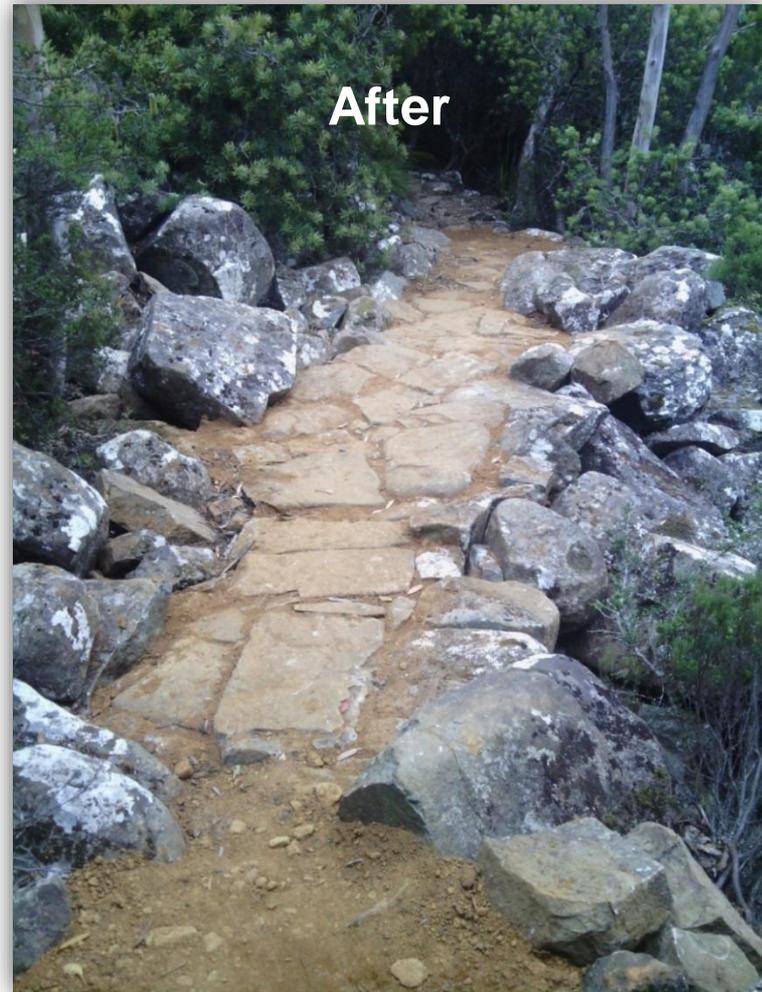
During



After



Boulders Fields



Boulder Fields- *Getting it Right*



Photo 2



Photo 1





Helicopter "Drop Sheet"

Start operation 12:02

DROP SHEET					Date:	6/4/18, 12:00	
Drop No	Time/Complete Post 12:04	Type	Tag No	Origin	Destination	Fuel/Slings	Other
1	12:09	R	1	Boulder F	#5		Post delivery
2	12:12	R		Springs			+ Emphes & wunch gear out
3	12:15	R	2	Boulder F			
4	12:17	R		Springs			
5	12:20	R	3	Boulder F	Pete		Waste out.
6	12:22	R		Boulder F			Slings returned.
7	12:25	R	4	Springs			
8	12:27	R		Boulder F			Dirt Art out.
9	12:30	R	5	Boulder F			
10	12:32	R		Boulder F	#5		Slings return
11	12:35	G	6	Springs	P6		Twist down / out
12	12:38	SP			TWS		
13	12:41	R		Boulder F			
14	12:44	R		Boulder F			Slings return.
15	12:47	SP	7	Springs		Refuel	
16	12:54	SP					
17	12:57	R		Boulder F			
18	12:59	R		Boulder F			Slings return
19	1:01	SP	8	Springs			
20	1:05	SP					
21	1:07	R		Boulder F			
22	1:09	R		Boulder F			Slings return.
23	1:12	SP	9	Springs			
24	1:15	G					
25	1:17	G	10				Slings return.
26	1:20	SP	11				
27	1:24	G	12				Add toilet slings
28	1:26	R		Boulder F			
29	1:28	R		Boulder F			Slings return
30	1:31	G	13	Springs			Toilet transfer.
31	1:34	G					
32	1:40	G	14				
33	1:43	G					
34	1:46	G	15				Refuel.
35	1:53	G					Slings return.
36	1:56	G	16				
37	2:01	G					Stee kids
38	2:05	G	17				
39	2:05	G			P7 TWS		
40	2:09	G	18		P8 Mtn TWS		
41	2:12	G			Mtn TWS		
42	2:14	G	19				
43	2:16	G					
44	2:21	G	20				
45	2:24	G					
46	2:27	SP					Slings return
47	2:29	G	21				
48	2:32	G					
49	2:36	SP					
50		G	22				

2:47 finish

