



# Annual Report

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## Flat Rock Reserve 2018-19



[www.tasland.org.au](http://www.tasland.org.au)

## INTRODUCTION

The Tasmanian Land Conservancy (TLC) protects important natural areas as permanent reserves and aims to demonstrate excellence in reserve management for biodiversity conservation. The TLC has adopted an adaptive management framework – the Open Standards for the Practice of Conservation which comprises 6 key steps – planning, implementing, monitoring, reporting, review/adaptation and communication.

Flat Rock Reserve was acquired by the TLC in 2006 and protects 455 hectares of eucalypt woodland and rock-plate grassland in the Meehan Range, northeast of Hobart. The Reserve adjoins Chauncy Vale Wildlife Sanctuary which is one of Tasmania’s oldest reserves. The management of the Reserve is guided by the Chauncy Vale Sanctuary and Flat Rock Reserve Management Plan. The plan is implemented by TLC staff through an Annual Work Plan and Monitoring Plan. Details of ecological monitoring methods can be found in TLC’s Ecological Monitoring Procedures Manual on [www.tasland.org.au](http://www.tasland.org.au).

This report describes progress made towards delivery of the management plan in 2018-19, and is divided into three sections:

1. Reserve Scorecard – a table summarising the results of ecological monitoring to date;
2. Management Summary – providing details of the implementation of key management strategies and making recommendations for plan improvement;
3. Ecological Monitoring Summary – providing details of the status of conservation targets and trends of key ecological indicators


The recommendations made in this report are used to adapt and improve management of the Reserve, update the management plan, and revise work and monitoring plans for the coming year. Key findings of this report are communicated to TLC Board, supporters and other stakeholders.

## FLAT ROCK RESERVE SCORECARD 2018-19

Ecological Monitoring					
Target	Indicator	2014-15	2016-17	2017-18	Status 2018-19 Trend
Dry eucalypt forest and woodland	Floristic diversity	8.5 species/site	No monitoring	9.8 species/site	No monitoring
	Structural complexity	7.1 lifeforms/site	No monitoring	7.1 lifeforms/site	
	Canopy recruitment	1.7 cohorts/site	No monitoring	1.8 cohorts/site	
Terrestrial mammals	Species richness	8 native species 0 introduced species	No monitoring	8 native species 3 introduced species	No monitoring Sugar gliders detected
	Proportion native sp	1.00	No monitoring	0.73	
	Native species diversity indices	Simpsons 0.71 Shannon-Wiener 1.42	No monitoring	Simpsons 0.75 Shannon-Wiener 1.66	
Feral animals	Cat occupancy	0 (detected at 0/7 sites)	No monitoring	0.3 (detected at 3/9 sites)	No monitoring
	Cat activity	0 (0 detections from 163 trap nights)	No monitoring	0.03 (8 detections from 315 trap nights)	
Management Effectiveness					
Strategy	Indicator	Status 2014-15	Status 2016-17	Status 2017-18	Status 2018-19 Trend
Weed management	Weed extent	No monitoring	0.4 ha	<0.4	<0.4 improving
	Treatment extent (ha)	No monitoring	0.4 ha	<0.4	< 0.4 improving
Fire management	No of unplanned fires	0	0	0	0 stable
Access management	Reportings / evidence of illegal entry	Issues reported	Issues reported	Issues reported	Issues reported - ongoing


Cover image: Flat Rock Reserve all staff meeting July 2018 Photo: Phil Leroche

## MONITORING SUMMARY

<b>Dry Eucalypt Forest and Woodland</b>			<b>Status: Good</b>		
<b>Goal:</b> Floristic diversity of vegetation is maintained and structural complexity is improved			<b>Outcome: On Track</b>		
<b>Target Description:</b> Dry sclerophyll forest and woodland communities can be divided into 11 distinct vegetation communities with 4 of these being threatened in Tasmania. The dry sclerophyll forest and woodland communities provide essential habitat for many threatened plant and animal species known on the Reserves. A long history of timber harvesting has caused significant degradation to some areas of Flat Rock Reserve and a large network of tracks are causing erosion due to the steepness of the terrain. Despite these impacts, most of the Reserve is in good condition.					
NRM South Sugar glider trail at Flat Rock. Photo: CSIRO web site					
Target	Indicator	2014-15	2016-17	2017-18 Trend	2018-19
Dry eucalypt forest and woodland	Floristic diversity	8.5 species/site	No monitoring	9.8 species/site - stable	No monitoring
	Structural complexity	7.1 lifeforms/site	No monitoring	7.1 lifeforms/site - stable	No monitoring
	Canopy recruitment	1.7 cohorts/site	No monitoring	1.8 cohorts/site - increase	No monitoring
Terrestrial mammals	Species richness	8 native species 0 introduced species	No monitoring	8 native species 3 introduced species	No monitoring
	Proportion native sp	1.00	No monitoring	0.73 - reduced	No monitoring
	Native species diversity indices	Simpsons 0.71 Shannon-Wiener 1.42	No monitoring	Simpsons 0.75 Shannon-Wiener 1.66	No monitoring
Feral animals	Cat occupancy	0 (detected at 0/7 sites)	No monitoring	0.3 (detected at 3/9 sites)	No monitoring
	Cat activity	0 (0 detections 163 trap nights)	No monitoring	0.03 (8 detections 315 trap nights)	No monitoring
<b>Key findings</b>					
<ul style="list-style-type: none"> <li>• No new monitoring data collected during 2018-19. Floristic diversity of vegetation across the Reserve is highly variable.</li> <li>• The vegetation structure has been extensively modified in some areas due to past logging and firewood collecting which has reduced the density of mature trees and fallen timber. These areas are already showing signs of recovery since TLC has taken on ownership.</li> <li>• No fauna monitoring was undertaken in 2018-19. Mammals recorded in 2014-15 were: Tas devil, spotted-tail quoll, Bennetts wallaby, pademelon, brush-tail possum, echidna, dunnart (confirmed) and wombat. New species detected in 2017-18: eastern quoll, Tas bettong, swamp rat, feral cat, dog and black rat with most of the previous species recorded being re-detected.</li> <li>• NRM South trailed a new cage trap for sugar gliders to reduce their impact on Swift parrots. On 7/5/2019 M Brown reported "We have caught two gliders at TLCs Flat Rock site so far this week, one in box trap on 6/5/19 and one in a Mawbey trap today (7/5/19). These are the first two captures of the trial, after a total of 66 trapping nights. The first round of trapping was undertaken very soon after the traps were installed so it is our assumption that this precluded successful trapping due the animals either not being acclimatised to the traps or simply being unaware of the traps' presence."</li> </ul>					
<b>Recommendations</b>					
<ul style="list-style-type: none"> <li>• Prevent unauthorised access to the Reserve, which is associated with wood hooking.</li> <li>• Conduct ecological or fuel reduction burns mostly in productive grassy woodlands that have not been significantly impacted by logging and wood hooking.</li> </ul>					



## MANAGEMENT EFFECTIVENESS SUMMARY

<b>Access management</b>				
<b>Key objective(s)</b>			<b>Status 2018-19</b>	
<ul style="list-style-type: none"> <li>No unauthorised access to the Reserve by 2018</li> </ul>			<b>Minor issues</b>	
<b>Strategy description</b>		Flat Rock Reserve entry gate. Photo: C Whatley		
<p>Prior to TLC's ownership of Flat Rock Reserve, there was a long history of people accessing the property without permission and causing environmentally damaging activities including dumping rubbish, off-road vehicle use and stealing firewood. These activities have degraded the eucalypt forests and resulted in a vast network of unplanned tracks which cause erosion. The majority of these activities (with exception for trail bike riding) were successfully stopped in 2009. The main source of unauthorised access has been the northern boundary of the property, which adjoins a network of roads managed by PWS or private landholders from the Native Corners area. This area is very remote and difficult to police.</p>				
<b>Indicator</b>	<b>Status 2014-15</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Reportings / evidence of illegal entry	Issues reported	Issues reported	Issues reported	Issues reported - Issues ongoing
<b>Progress in 2018-19</b>				
<ul style="list-style-type: none"> <li>Reserve staff visited 1 Aug 2018 after reports of wood-hooking from neighbours. Gate was unlocked and open. Police called when chainsaws heard. New tenants at Hankey property were cutting wood on Flat Rock and evicted a week later. Approx. 100 tonnes firewood removed from Flat Rock. DPIPW were notified re covenant conditions being breached.</li> <li>Gates were checked weekly and locks changed after the tenants were evicted.</li> <li>Reserve staff and contractor installed new walking track signs at Flat Rock / Chauncy Vale</li> </ul>				
<b>Key recommendations for future management</b>				
<ul style="list-style-type: none"> <li>Continue to rehabilitate tracks not needed for reserve management or recreation.</li> <li>Continue to encourage visitors to be vigilant of illegal use and report observations to TLC.</li> </ul>				

**Weed management**

**Key objective(s)**

- Known infestations of weeds are eradicated from the Reserve by 2020

**Status 2018-19**  
**On-track**

**Strategy description**

Most of Flat Rock Reserve is weed free. The exception is an area near East Bagdad Road, where dumping of garden waste over many years has created a diverse infestation of weeds including broom, hemlock, mignonette and California thistle.

Weeds outcompete sensitive sporiangophores at Flat Rock. Photo C Vincent



Indicator	Status 2014-15	Status 2016-17	Status 2017-18	Status 2018-19 Trend
Weed extent	No monitoring	0.4 ha	<0.4	<0.4 - improving
Treatment extent (ha)	No monitoring	0.4 ha	<0.4 -	<0.4 - improving

**Progress in 2018-19**

- Broom near the Reserve gate that was treated in July 2016 was checked on 31/5/2018 and again during 2018-19. Broom seedlings emergent, with some up to 30cm tall that were treated in 2018 were rechecked..
- Hemlock near the Reserve gate hand-pulled and sprayed in November 2015 was re-checked.
- TLC continued to support Chauncy Vale management in bushland areas of CV

**Key recommendations for future management**

- Continue to check previous treatment areas and manage and map weed infestations.
- Weed mapping needs to be updated.

**Fire management**

**Key objective(s)**

- No unauthorised fires occur on the reserve (ongoing).

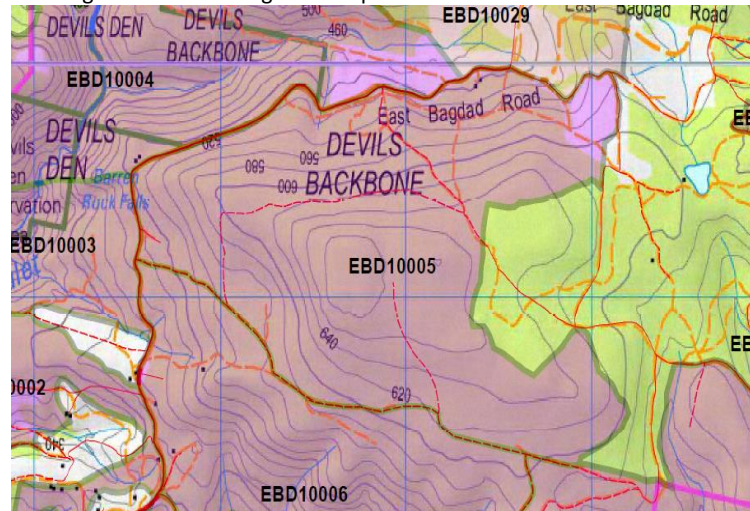
**Status 2018-19**

**On-track**

**Strategy description**

Fire is an important ecological process in dry eucalypt forest ecosystems, such as those found at Flat Rock Reserve. However, unplanned fires present a threat to both the natural values and humans. TLC aims to manage risks associated with fire strategically and through working with fire agencies, institutional partners, landholders and others stakeholders.

East Bagdad Bushfire Mitigation Map: TASFIRE



Indicator	Status 2014-15	Status 2016-17	Status 2017-18	Status 2018-19 Trend
No. of unplanned fires	0 unplanned fires	0 unplanned fires	0 unplanned fires	0 unplanned fires - Flat

**Progress in 2018-19**

- There were no unauthorised fires on the Reserve in 2018-19 despite the high fire season.
- Continued fire management: burn with TFS, mapping, discuss with S&P team re timing of burn (Spring preferred)
- A fire risk assessment was completed for all TLC reserves and a fire management policy is being implemented. A fuel stove only policy remains in place.
- TLC continued to maintain roads, gates, locks, fences, signs and all roads were checked for access and maintained in a safe condition for 4WD vehicles.
- A whole-of-TLC fire management strategy is being developed to ensure all TLC properties are effectively managed from threats relating to fire, and that fire is used appropriately as a tool to manage the values of TLC properties.

**Key recommendations for future management**

- Progress the autumn fuel reduction/ecological burn when weather and fuel conditions are suitable in cooperation with TASFIRE Service.
- Continue to implement a fuel stove only policy for the Reserve.
- Continue to implement the whole-of-TLC fire management strategy.