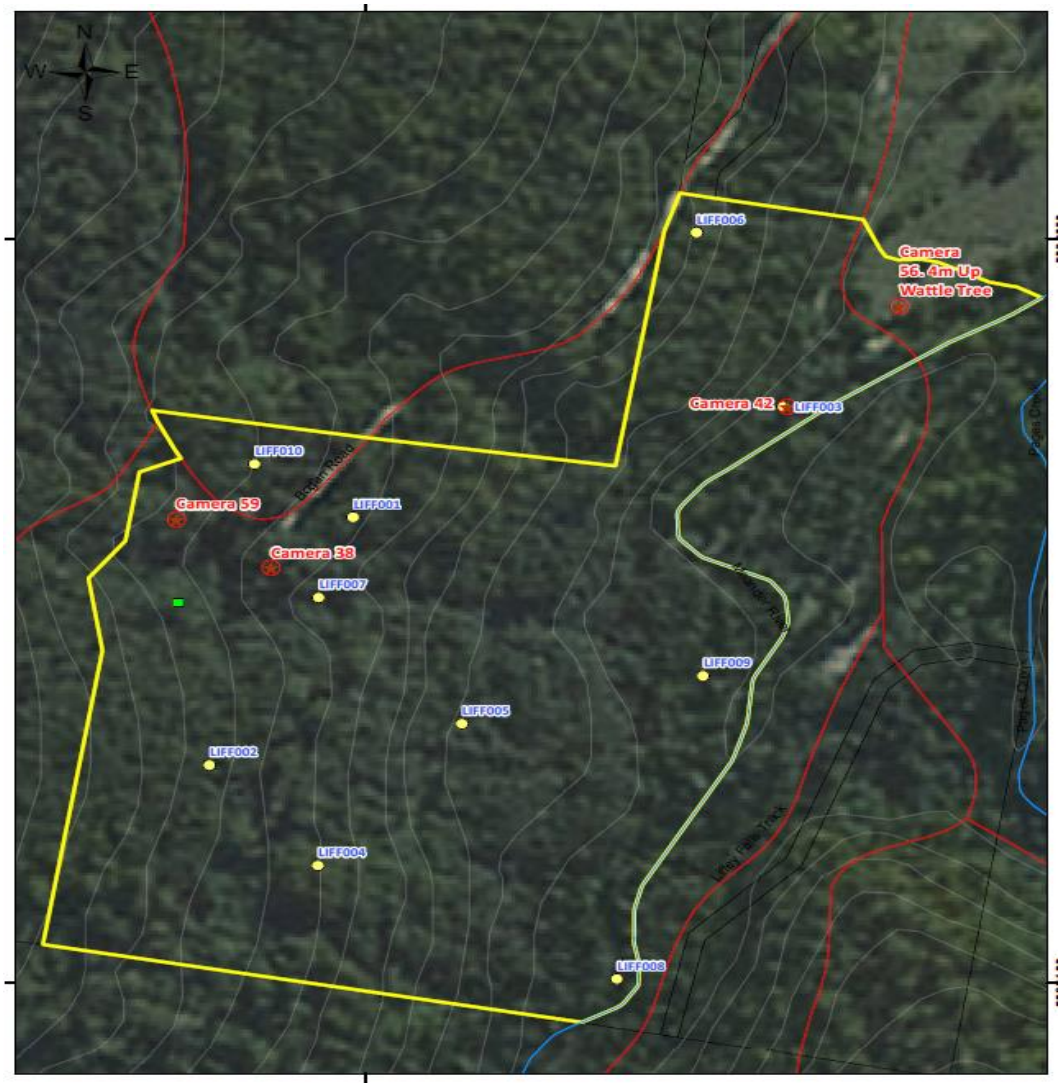
TASMANIAN
LAND
CONSERVANCY

Annual Report

Lower Liffey World Heritage Reserve 2017-18



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 5 key steps – planning, implementing, monitoring, reporting, review/adaptation and communication.

Lower Liffey Reserve was acquired by the TLC in 2010 and protects 14 hectares of wet eucalypt forest on the slopes of the Great Western Tiers in northern Tasmania. The Reserve adjoins Liffey Forest Reserve (WHA) and forms part of recent extensions to the Tasmanian Wilderness World Heritage Area. The management of the Reserve is guided by the Lower Liffey WHA 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.

This report describes progress made towards delivery of the management plan in 2017-18, and is divided into three sections:

1. Reserve Scorecard – a table summarising the results of management effectiveness and ecological monitoring to date;
2. Management Effectiveness 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.

Lower Liffey World Heritage Reserve Scorecard 2017-18

Monitoring				
Target	***Indicator***	***Status 2016-17***	***Status 2017-18***	***Trend***
Wet eucalypt forest	Floristic diversity	6 species/site	Repeat due in 2020	Baseline Data
	Structural complexity	6.75 lifeforms/site	Repeat due in 2020	
	Canopy recruitment	1 cohort per site	Repeat due in 2020	
Terrestrial mammals	Species richness	7 native species 2 introduced species	Repeat due in 2020	
	Proportion native species	0.78	Repeat due in 2020	
	Native species diversity indices	Simpsons 0.65 Shannon-Wiener 1.33	Repeat due in 2020	
Management Effectiveness				
Strategy	***Indicator***	***Status 2016-17***	***Status 2017-18***	***Trend***
Weed management	Weed extent (ha)	14 ha	< 14 ha	Reducing
	Weed density	Very low	Very low	Reducing
	Volunteer activities / days	1 activity / 9 vol days	1 activity / 17 vol days	More days

Note: Community Engagement as a Strategy has been removed and is now being reported across all TLC reserves annually.

Cover image: Liffey Reserve ecological monitoring sites. Map: TLC

Monitoring Summary

Wet eucalypt forest	**Status: Good**
Goal: Improve the condition of wet eucalypt forest	**Outcome: On Track**

Description

The vegetation of Lower Liffey WHA Reserve is regenerating wet eucalypt forest that is dominated by mature silver wattle (*Acacia dealbata*) over a sub-canopy of eucalypt saplings. As the forest continues to regenerates eucalypts will form the dominant strata. The understorey is dominated by broadleaved shrubs, rainforest species and ferns.

Wet eucalypt forest Liffey Reserve. Photo: Phil Leroche

Target	***Indicator***	***Status 2016-17***	***Status 2017-18 - trend***
Wet eucalypt forest	Floristic diversity	6 species/site	2016-17 is baseline. Repeat data due in 2020
	Structural complexity	6.75 lifeforms/site	
	Canopy recruitment	1 cohort per site	
Terrestrial mammals	Species richness	7 native species 2 introduced species	
	Proportion native species	0.78	
	Native species diversity indices	Simpsons 0.65 Shannon-Wiener 1.33	

Key findings 2017-18

- Monitoring was established in December 2016 and due to be repeated in 2020.
- Vegetation is in fair condition. Blackberry (*Rubus fructicosus)* a declared weed, is widespread (75% of sites) but in low density. Recruitment of eucalypt species is relatively low with only occasional eucalypt seedlings and saplings observed during working bees.
- In 2016, 7 native species were detected: wombat, Tas devil, spotted-tailed quoll, southern brown bandicoot, bennetts wallaby, Tas pademelon, brushtail possum and 2 feral species: dog and black rats were observed at several sites. No feral cats were detected but likely to occur.

Recommendations

- Repeat monitoring in 2020
- Continue efforts to control weeds

Management Effectiveness Summary

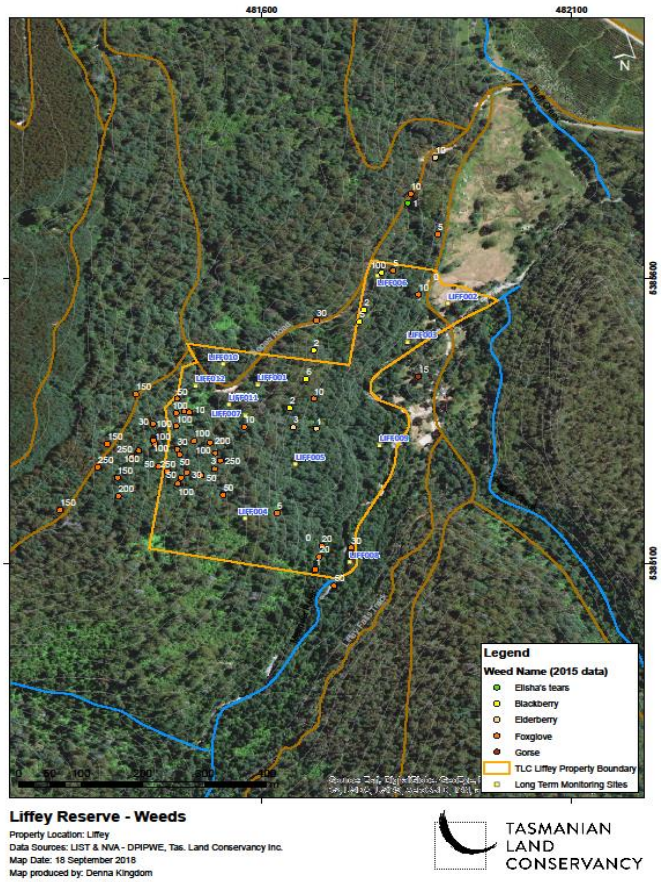
Weed management

Key objective(s)	**Status 2017-18**
• Weeds are eradicated from the Reserve by 2017	**On-track but extend timeframe**

Strategy description

The aim of this strategy is to eradicate existing infestations of weeds on the Reserve. Blackberry, foxglove and elderberry were widespread on the Reserve at the time of its acquisition, but ongoing weed control work has greatly reduced their density. Weed mapping and control is continuing.

Liffey weed map



Indicator	**Status 2016-17**	**Status 2017-18 - trend**
Weed extent (ha)	14 ha	< 14 ha - reducing
Weed density	Very low	Very low and reducing
Volunteer activities / days	1 activity / 9 vol days	1 activity / 17 vol days – more days

Progress in 2017-18

- The location, density and control method for weeds at Liffey is being systematically recorded and mapped. Scattered infestations of foxglove, blackberry, elderberry, Elisia's tears and ragwort were either hand-pulled or treated by reserve staff and volunteers during a working bee held 15-16 Dec 2017 (day 1 - 8 volunteers, day 2 - 9 volunteers)
- On 30/10/2017 an application to PWS was made to treat a small area of Blackberry at the entrance to the Liffey Reserve Camping Ground, proposing to treat the weed using a spot sprayer mounted on a ute with a long hose. The majority of the weed is growing in the native bushland on very steep ground.

Key recommendations for future management

- Continue the successful weed control program using volunteers