



# Annual Report

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## Lower Liffey World Heritage 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 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](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 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

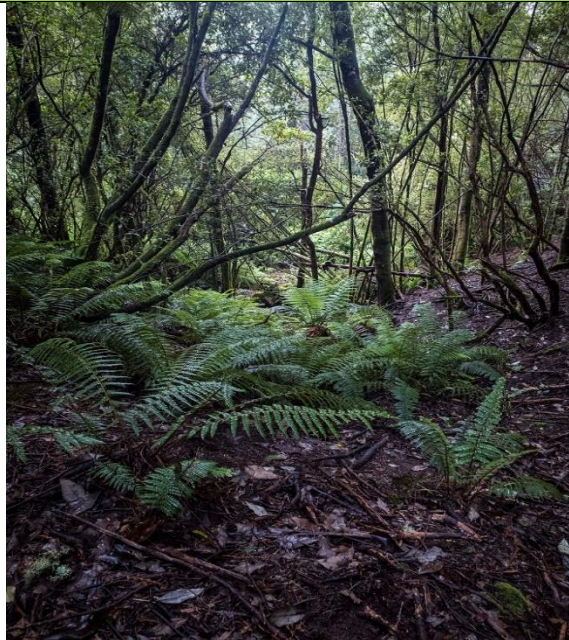
The recommendations made in this report are used to adapt and improve management of the Reserve, update the management plan, and revise work and monitoring plans for the coming year. Key findings of this report are communicated to TLC Board, supporters and other stakeholders.

## Lower Liffey World Heritage Reserve Scorecard 2018-19

<b>Monitoring</b>				
<b>Target</b>	<b>Indicator</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Wet eucalypt forest	Floristic diversity	6 species/site	Repeat due in 2020	Baseline Data
	Structural complexity	6.75 lifeforms/site	Repeat due in 2020	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	
<b>Management Effectiveness</b>				
<b>Strategy</b>	<b>Indicator</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2017-18 - trend</b>
Weed management	Weed extent (ha)	14 ha	< 14 ha	< 14 ha - reducing
	Weed density	Very low	Very low	Very low - reducing
	Volunteer activities / vol days	1 activity / 9 days	1 activity / 17 days	1 activity / 16 days - stable


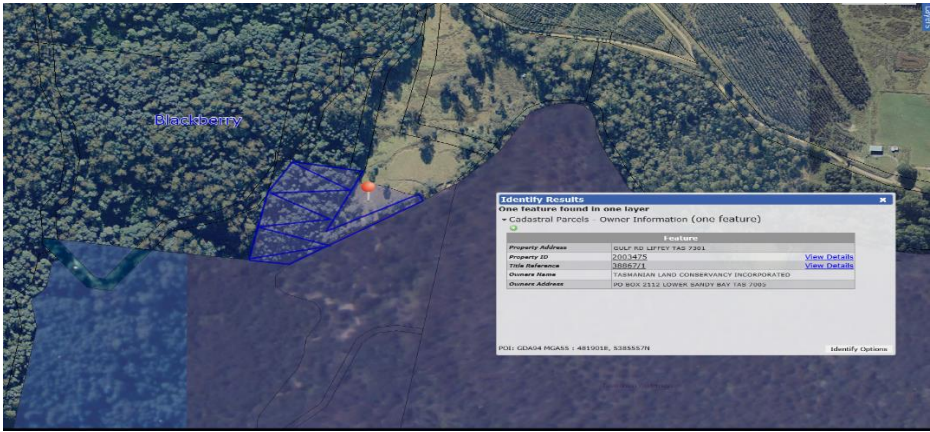
Cover image: Wet forest lichen at Lower Liffey Reserve. Photo: Phill Leroche

## Monitoring Summary

<b>Wet eucalypt forest</b>		<b>Status: Good</b>	
<b>Goal:</b> Improve the condition of wet eucalypt forest		<b>Outcome: On Track</b>	
<p><b>Description</b></p> <p>The vegetation of Lower Liffey WHA Reserve is regenerating wet eucalypt forest that is dominated by mature silver wattle (<i>Acacia dealbata</i>) over a sub-canopy of eucalypt saplings. As the forest continues to regenerate eucalypts will form the dominant strata. The understorey is dominated by broadleaved shrubs, rainforest species and ferns.</p>		 <p>Wet eucalypt forest Liffey Reserve 2018. Photo: Phill Leroche</p>	
<b>Target</b>	<b>Indicator</b>	<b>Status 2016-17</b>	<b>Status 2017-18 - trend</b>
Wet eucalypt forest	Floristic diversity	6 species/site	Repeat data due in 2020
	Structural complexity	6.75 lifeforms/site	
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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	
<p><b>Key findings 2018-19</b></p> <ul style="list-style-type: none"> <li>Ecological monitoring was established in December 2016 and due to be repeated in 2020.</li> <li>Vegetation is in fair condition. Blackberry (<i>Rubus fruticosus</i>) a declared weed, is widespread (75% of sites) but being reduced in density. Recruitment of eucalypt species is relatively low with only occasional eucalypt seedlings and saplings observed during working bees.</li> <li>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.</li> </ul>			
<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Repeat monitoring in 2020</li> <li>Continue efforts to control weeds</li> </ul>			



# Management Effectiveness Summary

Weed management			
<b>Key objective(s)</b> <ul style="list-style-type: none"> <li>Weeds are eradicated from the Reserve by 2022</li> </ul>		<b>Status 2018-19</b> <b>On Track</b>	
<b>Strategy description</b> 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 and the initial target date of 2017 has been extended to 2022.		TLC volunteer removing fox gloves at Liffey Reserve: Photo Phill Leroche 	
Indicator	Status 2016-17	Status 2017-18	Status 2017-18 - trend
Weed extent (ha)	14 ha	< 14 ha	< 14 ha - reducing
Weed density	Very low	Very low	Very low - reducing
Volunteer activities / days	1 activity / 9 vol days	1 activity / 17 vol days	1 activity / 16 vol days - stable
<b>Progress in 2018-19</b> <ul style="list-style-type: none"> <li>Weeds removed at Liffey were systematically recorded and mapped in 2018. Scattered infestations of foxglove, blackberry, elderberry, Elisia's tears and ragwort were either hand-pulled or treated during a working bee held 29-30 Nov 2018 (8 vol attended for 2 days)</li> <li>The area where blackberry was removed at the entrance to the PWS Liffey Reserve Camping Ground is shown below</li> </ul>			
			
<b>Key recommendations for future management</b> <ul style="list-style-type: none"> <li>Continue the successful weed control program using volunteers</li> </ul>			