



## Introduction

Daisy Dell was purchased by the Tasmanian Land Conservancy (TLC) in 2017 as 105 ha of highland forest and grassland situated near the iconic Cradle Mountain National Park and the TLC's Vale of Belvoir Reserve. Daisy Dell adjoins the *Iris Farm Private Nature Reserve* (287 ha) and forms part of an ancient Aboriginal highway linking the open grasslands of Daisy Dell, Middlesex, the Vale of Belvoir and the Surrey Hills area. Habitats on the Reserve range from closed rainforest, through wet forest to open woodland in the south and areas of highland *Poa* grasslands and wetlands. The Reserve's management is guided by the *Daisy Dell Reserve Management Plan 2018-2022* which is implemented by TLC staff through an Annual Work Plan and Monitoring Plan. Details of TLC's ecological monitoring can be found on [www.tasland.org.au](http://www.tasland.org.au).

The TLC strives for excellence in reserve management and has adopted the Open Standards for the Practice of Conservation - which is an adaptive management framework comprising 5 key steps – planning, implementing, monitoring, reporting, review/adaptation and communication. This report describes progress made towards delivery of the management plan in 2017-18, and comprises a:

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 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 improve management of the Reserve, update the management plan, and revise work and monitoring plans for the coming year. This report is available on [www.tasland.org.au](http://www.tasland.org.au) and its findings are communicated to TLC Board, supporters and other stakeholders more widely.

## Daisy Dell Reserve Scorecard 2018-19

<b>Ecological Monitoring</b>			
<b>Target</b>	<b>Indicator</b>	<b>Status 2017-18</b>	<b>Trend</b>
Highland Grassland and Open Woodland	Floristic diversity	14 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021
	Structural complexity	6.8 strata / site	
	Canopy recruitment	1 cohorts / site	
Grassy Wetlands	Floristic diversity	12 species / site	
	Structural complexity	4.5 strata / site	
Sub-alpine Forest	Floristic diversity	7.5 species / site	
	Structural complexity	7.8 strata / site	
	Canopy recruitment	1.25 cohorts / site	
Terrestrial Mammals	Species richness	8 species (6 native, 2 introduced)	
	Proportion of native species	0.75	
	Native species diversity indices	Simpson 0.58, Shannon-Wiener 1.21	
<b>Management Effectiveness</b>			
<b>Strategy</b>	<b>Indicator</b>	<b>Status 2018-19</b>	<b>Trend</b>
Access Management	Fences and gates prevent unauthorised access	Security intact	Stable
Fire Management	Fire as a tool to maintain highland grassland and woodlands is known	Yet to be determined	Unknown
	A local fire response plan is in place	Yet to be developed	Unknown
Community Relationships	# events at the Reserve	2 events / 97 attendees	Increase
	# of volunteer activities	2 activities/ 18 vol days	Stable

Cover image: Daisy Dell Reserve Supporter Sign 2019. Photo Credit: Eddie Safarik

## Ecological Monitoring Summary

<b>Highland Grassland and Open Woodland</b>		<b>Status: Very Good</b>
<b>Goals:</b> The condition of the highland grasslands and open woodland in 2017 is maintained or improved.		<b>Outcome: On Track</b>
<p><b>Target description:</b> Highland Poa grassland occupies a small area of Daisy Dell but adds to the larger context of the surrounds. A number of iconic highland grassland species e.g. <i>Rhodanthe anthemoides</i> and <i>Leucochrysum albicans</i> var. <i>tricolor</i> occur in quite high densities. The Reserve's open woodland is dominated by <i>E. dalrympleana</i> and grades into a more closed forest structure, becoming richer in <i>E. delegatensis</i> to the northeast. Historically some areas have been heavily cut over for firewood and sawlog supply. The grasslands may require active management (possibly by fire) or they may disappear under shrub, tree or sedge encroachment. Surveillance for weeds is also needed.</p>		
Daisy Dell woodland. Photo: C Crerar		
<b>Ecological indicator</b>	<b>Status 2017-18</b>	<b>Trend</b>
Floristic diversity	14 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021
Structural complexity	6.8 strata / site	
Canopy recruitment	1 cohorts / site	
<p><b>Progress in 2018-19</b></p> <ul style="list-style-type: none"> <li>• No additional ecological data was collected on this target during the year, monitoring is rescheduled for 2021.</li> <li>• No additional threatened flora species information was collected.</li> <li>• Visits to the reserve did not detect any on-ground threats or obvious changes in woodland extent or condition</li> <li>• Active management of this community will be needed to prevent future species encroachment</li> </ul>		
<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• Repeat monitoring survey in 2021</li> <li>• Management of the grassland could be coordinated with the neighbouring eastern property where this grassland community appears to be more extensive.</li> <li>• Follow-up botanical surveys for threatened species are required in spring</li> </ul>		

<b>Grassy Wetlands</b>		<b>Status: Good</b>	
<b>Goals:</b> The condition of the wetland ecosystem in 2017 is maintained or improved.		<b>Outcome: On Track</b>	
<p><b>Target description:</b> The wetland area in the mid-north of Daisy Dell Reserve acts like a sponge by capturing water during the wetter times of year and releasing it slowly - giving a longer base flow to the creeks draining out of it. Unusually for a basalt soil, it retains the water and prevents tree and shrub establishment – presumably due to very high levels of organic matter, including slowly decomposing sphagnum. Originally mapped as Highland grassy sedgeland (MGH), this community is often referred as an ephemeral wetland. It has some characteristics of a marsupial lawn, as the vegetation is very closely cropped by the resident macropods.</p>		 <p>Grassy wetland ecosystem on Daisy Dell Reserve. Photo S Bryant</p>	
<b>Ecological indicator</b>	<b>Status 2017-18</b>	<b>Trend</b>	
Floristic diversity	12 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021	
Structural complexity	4.5 strata / site		
<b>Progress in 2018-19</b>			
<ul style="list-style-type: none"> <li>• No additional ecological data was collected on this target during the year, monitoring is rescheduled for 2021.</li> <li>• No additional threatened flora species information was collected.</li> <li>• Visits to the reserve did not detect any on-ground threats or obvious changes in wetland extent or condition and previous damage due to vehicle activity is regenerating well.</li> <li>• Assessment of the data suggests the wetlands are in good condition.</li> <li>• Few weed issues have been identified in this community.</li> <li>• It is possible that as climate change reduces the periods of waterlogging, that tree invasions will start to occur. If so then TLC will decide on whether or not to manage this change.</li> </ul>			
<b>Recommendations</b>			
<ul style="list-style-type: none"> <li>• Repeat monitoring survey in 2021</li> <li>• Undertake detailed mapping of wetland extent using remote sensing (possibly LIDAR)</li> </ul>			

<b>Sub-Alpine Forest</b>		<b>Status: Good</b>	
<b>Goals:</b> The 2017 condition of the sub-alpine forest is maintained or improved.		<b>Outcome: On Track</b>	
<p><b>Target description:</b> The subalpine forests on Daisy Dell comprise <i>Eucalyptus delegatensis</i> forest and a range of rainforest communities. These communities have been selectively logged, removing the characteristic tall straight trees that would once have featured as part of their structure. The rainforest in the northwest of the Reserve retains some large eucalypt overstorey trees, but is now dominated by myrtle beech <i>Nothofagus cunninghamii</i> and a wide range of other wet/rain forest species including Cider gums <i>E. gunnii</i> and swamp peppermint <i>E. rodwayi</i>, which are more tolerant of frost and waterlogging than the other eucalypts present. This target is highly fire sensitive. Wildfire would cause a shift from wet to dry sclerophyll characters within <i>E. delegatensis</i> forest, and is not compatible with the maintenance of its current condition. Rainforest species have little fire tolerance and would shift to a sclerophyllous vegetation community if burnt. The sub-alpine forest is categorised as very good condition at present. Little to no management intervention is required to maintain its present condition.</p>		 <p>Showcasing sub-alpine Forest Daisy Dell Reserve. Photo: Eddie Safarik</p>	
<b>Ecological indicator</b>	<b>Status 2017-18</b>	<b>Trend</b>	
Floristic diversity	7.5 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021	
Structural complexity	7.8 strata / site		
Canopy recruitment	1.25 cohorts / site		
<b>Progress in 2018-19</b>			
<ul style="list-style-type: none"> <li>• No additional ecological data was collected on this target during the year, monitoring is rescheduled for 2021.</li> <li>• No additional threatened flora species information was collected.</li> <li>• Visits to the reserve did not detect any on-ground threats or obvious changes in sub-alpine forest extent or condition</li> <li>• The prevention of wildfire in this area remains a priority and an assessment of reserve fuel loads is required.</li> <li>• Few weed issues occur in this community.</li> </ul>			
<b>Recommendations</b>			
<ul style="list-style-type: none"> <li>• Repeat monitoring survey in 2021 and consider expanding sites across neighbouring properties</li> <li>• Undertake an assessment of fuel loads in this community</li> </ul>			

<b>Terrestrial mammals</b>		<b>Status: Good</b>	
<b>Goals:</b> Ensure fauna richness and abundance is maintained or improved.		<b>Outcome: On Track</b>	
<b>Target description:</b> Camera trapping identified 11 species of mammals, including the threatened carnivorous spotted-tailed quoll and Tasmanian devil as well as Bennett's wallabies, Tasmanian pademelons, wombats, echidnas and brush-tailed possums. Daisy Dell is likely to provide habitat for a range of smaller mammals not detected by the cameras, such as the swamp rat and dusky antechinus as well as insectivorous micro-bats.		 <p>'Tracking' mammal demonstration April 2019. Photo Eddie Safarik</p>	
<b>Ecological indicator</b>	<b>Status 2017-18</b>	<b>Trend</b>	
Species richness	8 species (6 native, 2 introduced)	Baseline data collected in 2017/8 and repeat data scheduled for 2021	
Proportion of native species	0.75		
Native species diversity indices	Simpson 0.58 Shannon-Wiener 1.21		
<b>Progress in 2018-19</b>			
<ul style="list-style-type: none"> <li>• No additional ecological data was collected on mammals during the year, and monitoring is rescheduled for 2021.</li> <li>• Visits to the reserve did not detect any additional threats to mammals here or from the nearby Vale of Belvoir camera trapping results</li> <li>• There were no critical weight range species (eg bandicoot, bettong, potoroo, native rodents etc) detected at Daisy Dell during this period.</li> </ul>			
<b>Recommendations</b>			
<ul style="list-style-type: none"> <li>• Repeat monitoring survey in 2021. Specifically target spotted-tail quoll, eastern quoll and critical weight-range mammals, all of which may have low detection probability</li> <li>• Install acoustic monitoring to establish baselines for birds, bats and frog species</li> </ul>			

## Management Effectiveness Summary

<b>Access management</b>		
<b>Key objective(s)</b> Access to the property supports the values of the Reserve		<b>Status 2018-19</b> On-track
<b>Strategy description</b> This strategy will see appropriate, authorised access that supports the values of the Reserve. Fencing and locked gates were installed in 2018 to prevent unauthorised access, and a system established with neighbours to allow access along rights-of-way. In the past there has been evidence of firewood collecting and vehicle intrusion onto the grassy wetlands, causing ruts and other associated damage. Managing access should reduce known threats including recreational vehicle use, unauthorised hunting, wood-cutting, vegetation harvesting and weeds.		
Maintaining access reduces the fire risk. Pic: P Simms		
<b>Indicator</b>	<b>Status 2018-19</b>	<b>Trend</b>
Fences and gates prevent unauthorised access	Security intact	Stable. No breaches detected
<b>Progress in 2018-19</b>		
<ul style="list-style-type: none"> <li>• Access gates are being regularly checked by Iris Farm reserve neighbours, with no breaches detected.</li> <li>• Visits to the reserve did not detect any signs of illegal activity.</li> <li>• The property entry gate is heavy duty iron and remains securely locked at all times.</li> <li>• TLC signage is in place indicating the area is a private conservation reserve.</li> <li>• Progress made on registering the covenant on title with final submission to DPIPWE</li> </ul>		
<b>Recommendations</b>		
<ul style="list-style-type: none"> <li>• Ensure boundary fencing and access gates are checked regularly and any breaches repaired quickly.</li> <li>• The eastern access track may need slashing as shrub growth along the middle of the dirt track is already difficult for 2wd access.</li> </ul>		

<b>Fire Management</b>		
<b>Key objective(s)</b> Manage fire to maximise the condition of the conservation targets and safety of people and assets		<b>Status 2018-19</b> <b>Not Commenced</b>
<b>Strategy description</b> The aim of this strategy, in line with TLC's Fire Management Policy, is to protect human life and property from fire, and to maintain or enhance the natural diversity of species and vegetation communities through appropriate fire regimes. At Daisy Dell Reserve, the use of fire as a tool to reduce shrub invasion and maintenance of the diverse herb layer will be explored only for the grassland/woodland target, otherwise, the rainforest and wet forest vegetation is fire sensitive and not fire-prone, due to the typically wet understorey in rainforest. The potential for a fire to spread into rainforest or wet forest in very dry conditions is a concern as climate change increases the length, severity and frequency of the fire season.		 Fire sensitive vegetation at Daisy Dell. Pic: H Holden
<b>Indicator</b>	<b>Status 2018-19</b>	<b>Trend</b>
Fire as a tool to maintain highland grassland and woodlands is known	No progress, yet to be determined	Unknown
A local fire response plan is in place	No progress, yet to be developed	Unknown
<b>Progress in 2018-19</b>		
<ul style="list-style-type: none"> <li>• No progress in this area as yet.</li> <li>• Key actions will include working with neighbours, other stakeholders and fire agencies to develop a wildfire response plan to protect the natural values in the Daisy Dell region from wildfire.</li> <li>• Assess the need and likely outcomes of planned burns within the highland grasslands</li> <li>• Work with neighbours to manage the local threat of wildfires.</li> </ul>		
<b>Recommendations</b>		
<ul style="list-style-type: none"> <li>• Include an assessment of fire risk and fuel loads into the annual reserve inspection duties.</li> </ul>		

**Community Relationships**

**Key objective(s)**  
 Maintain good community relationships to expand reserve knowledge and help manage mutual issues.

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

**Strategy description**

The creation of Daisy Dell Reserve was possible due to the generous support from adjacent landholders and their partnerships remains integral to reserve integrity and management. The TLC will continue to provide opportunities for people to experience Daisy Dell while remaining respectful of neighbour needs. Wherever possible issues shared across Daisy Dell and the Vale of Belvoir Reserves should be identified and dealt with simultaneously. Maintaining regular contact with neighbours and the wider community will also foster knowledge and learning about the special values of this area and identify shared issues of management concern.



James Hattam, Gary Clarke, John Wilson and Jessie, Peter Simms in front of Tiger Hut, Discovery Day April 2019. Photo E Sarifik

Indicator	Status 2018-19	Trend
# events at the Reserve	2 events / 97 attendees	Increase
# of volunteer activities at the Reserve	2 activities/ 18 vol days	Stable

**Progress in 2018-19**

- TLC’s Daisy Dell Reserve Discovery Day in April 2019 was successfully attended by 85 TLC supporters, neighbours, staff and volunteers (TLC Newsletter NL 58 Winter 2019).
- Specialist presenters included entomologist Dr Peter McQuillan, bryophyte expert Dr Paddy Dalton and wildlife photographer Heath Holden, joined by adjoining neighbours Gary Clark, Dr Peter Simms and Dr John Wilson
- Successful acoustic weekend held in March 2019 with USA critically acclaimed sound designer and composer Dr Douglas Quin and UTAS Cons of Music lecturer Carolyn Philpott, and 12 workshop participants.

**Recommendations**

- Continue to provide opportunities for events and people to experience Daisy Dell.
- Ensure good relationships with adjacent neighbours and assist with issue of mutual concern
- Ensure communication with PWS staff on management continues for Daisy Dell and the Vale of Belvoir