



Annual Reserve Report

Daisy Dell Reserve 2017-18



www.tasland.org.au

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.

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 and its findings are communicated to TLC Board, supporters and other stakeholders more widely.

Daisy Dell Reserve Scorecard 2017-18

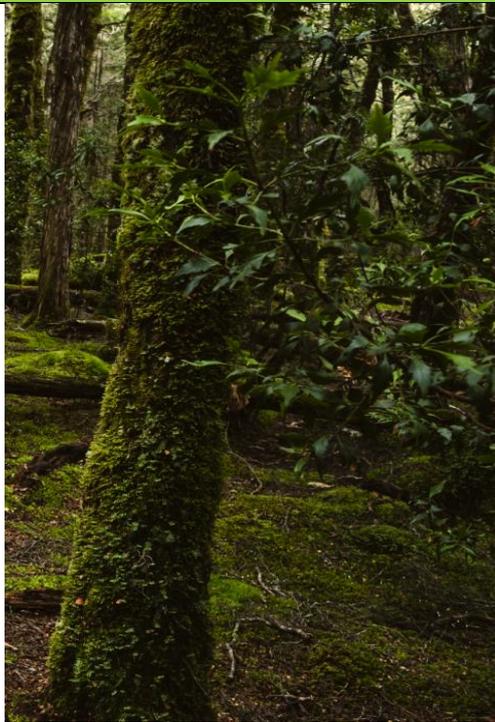
Ecological Monitoring			
Target	Indicator	Status 2017-18	Trend
Highland Grassland and Open Woodland	Floristic diversity	14 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021
	Structural complexity	6.8 strata / site	
	Canopy recruitment	1 cohorts / site	
Grassy Wetlands	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	
Management Effectiveness			
Strategy	Indicator	Status 2017-18	Trend
Access Management	Fences and gates prevent unauthorised access	Security intact	Unknown
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	1 event / 80 attendees	Unknown
	# of volunteer activities	4 activities/ 20 vol days	Unknown

Cover image: Daisy Dell Reserve. Photo Credit: Heath Holden

Ecological Monitoring Summary

Highland Grassland and Open Woodland		Status: Very Good
Goals: The condition of the highland grasslands and open woodland in 2017 is maintained or improved.		Outcome: On Track
<p>Target description: 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>		 <p>Daisy Dell Grassland and Woodland. Photo: TLC</p>
Ecological indicator	Status 2017-18	Trend
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>Progress in 2017-18</p> <ul style="list-style-type: none"> • A survey by John Davies in June 2017 recorded a total of 120 flora species (108 natives, 12 introduced) (see Background Report). Two threatened plants were recorded: <i>Hovea montana</i> (mountain purplepea) and <i>Rhodanthe anthemoides</i> (chamomile sunray) - both presently listed as "rare". Six vegetation types were identified and mapped: Nothofagus –Atherosperma Rainforest (RMT), Freshwater Aquatic Herbland(AHF), Permanent Easement (FPE) and Highland Poa grassland (GPH), Eucalyptus delegatensis dry Forest and Woodland(DDE) and Wet Eucalyptus delegatensis forest over <i>Leptospermum</i> (WDL). Two of these, Highland Poa Grassland and (Freshwater Aquatic Herb-land) are listed as threatened vegetation types in Tasmania. • Active management of this community will be needed to prevent species encroachment 		
<p>Recommendations</p> <ul style="list-style-type: none"> • Repeat monitoring survey in 2021 • Management of the grassland could be coordinated with the neighbouring eastern property where this grassland community appears to be more extensive. • Follow-up botanical surveys for threatened species are required in spring 		

Grassy Wetlands		Status: Good
Goals: The condition of the wetland ecosystem in 2017 is maintained or improved.		Outcome: On Track
<p>Target description: 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>Wetland ecosystem on Daisy Dell Reserve. Photo P Simms</p>
Ecological indicator	Status 2017-18	Trend
Floristic diversity	12 species / site	Baseline data collected in 2017/8 and repeat data scheduled for 2021
Structural complexity	4.5 strata / site	
<p>Progress in 2017-18</p> <ul style="list-style-type: none"> • Twelve vegetation monitoring sites were established in January 2018 and baseline data obtained for this target. • Evidence of previous damage due to vehicle activity appears to be regenerating well. • Assessment of the data suggests the wetlands are in good condition. • Few weed issues have been identified in this community. • 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. 		
<p>Recommendations</p> <ul style="list-style-type: none"> • Repeat monitoring survey in 2021 • Undertake detailed mapping of wetland extent using remote sensing (possibly LIDAR) 		

Sub-Alpine Forest		Status: Good
Goals: The 2017 condition of the sub-alpine forest is maintained or improved.		Outcome: On Track
<p>Target description: 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>Sub-Alpine Forest Daisy Dell Reserve. Photo: Heath Holden</p>
Ecological indicator	Status 2017-18	Trend
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	
<p>Progress in 2017-18</p> <ul style="list-style-type: none"> • Twelve vegetation monitoring sites were installed in January 2018. • The sub-alpine forest is categorised as very good condition at present. Little to no management intervention is required to maintain the target in its present condition, or to improve it. • Prevention of wildfire in this area is a priority so regular assessment of reserve fuel loads is required. • Few weed issues occur in this community. 		
<p>Recommendations</p> <ul style="list-style-type: none"> • Repeat monitoring survey in 2021 and consider expanding sites across neighbouring properties 		

Terrestrial mammals		Status: Good
Goals: Ensure fauna richness and abundance is maintained or improved.		Outcome: On Track
Target description: 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>ScoutGuard 01.12.2018 02:56:07 Tasmanian devil captured at DADE001. Photo TLC</p>
Ecological indicator	Status 2017-18	Trend
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	
Progress in 2017-18		
<ul style="list-style-type: none"> • Five camera sites for terrestrial mammal monitoring were installed in January 2018. A comparison of three camera types was made at this time. • Eight mammal species in total were recorded: Bennetts wallaby, Tasmanian pademelon, brushtail possum, wombat, echidna, Tasmanian devil, feral cat and dog. The dog was later identified as belonging to someone in the area and therefore not feral. • Past trapping on the Reserve have also identified fallow deer prints and scats, scats from European rabbit and spotted-tail quoll (previously been captured by wildlife photographer Heath Holden). • There were no critical weight range species (eg bandicoot, bettong, potoroo, native rodents etc) detected at Daisy Dell during this period. 		
Recommendations		
<ul style="list-style-type: none"> • 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 • Install acoustic monitoring so we can establish baselines for birds, bats and frog species 		

Management Effectiveness Summary

Access management		
Key objective(s) Access to the property supports the values of the Reserve		Status 2017-18 On-track
Strategy description 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.		 <p>Volunteers erecting boundary fences. Pic: P Roach TLC</p>
Indicator	Status 2017-18	Trend
Fences and gates prevent unauthorised access	Security intact	Unknown. No breaches detected
Progress in 2017-18		
<ul style="list-style-type: none"> • Four volunteers spent two days in April 2018 establishing a new section of boundary fence and undertaking fence repairs especially along the Cradle Mt Highway boundary. • Access is also managed by the neighbouring landholders especially those on Iris Farm Reserve. • The property entry gate is heavy duty iron and will remain securely locked at all times. • TLC signage is in place indicating the area is a private conservation reserve. 		
Recommendations		
<ul style="list-style-type: none"> • Ensure boundary fencing and access gates are checked regularly and any breaches repaired quickly. • The eastern access track may need slashing as shrub growth along the middle of the dirt track is already difficult for 2wd access. 		

Fire Management		
Key objective(s) Manage fire to maximise the condition of the conservation targets and safety of people and assets		Status 2017-18 Not Commenced
Strategy description 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 on Daisy Dell Reserve. Pic: H Holden		
Indicator	Status 2017-18	Trend
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
Progress in 2017-18		
<ul style="list-style-type: none"> No progress in this area as yet. 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. Assess the need and likely outcomes of planned burns within the highland grasslands Work with neighbours to manage the local threat of wildfires. 		
Recommendations		
<ul style="list-style-type: none"> Include an assessment of fire risk and fuel loads into the annual reserve inspection duties. 		

Community Relationships

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

Status 2017-18
 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.



Peter Simms, John Wilson and Jessie from Iris Farm Reserve. Photo H Holden

Indicator	Status 2017-18	Trend
# events at the Reserve	1 event	Unknown
# of volunteer activities at the Reserve	4 activities/ 20 vol days	Unknown

Progress in 2017-18

- TLC hosted wildlife photographer Heath Holden to obtain imagery for the Reserve
- TLC hosted a Daisy Dell Reserve Discovery Day in Feb 2017 successfully attended by 80 TLC supporters, neighbours, staff and volunteers (TLC Newsletter NL 50 Autumn 2017).
- Ecological monitoring was supported by two volunteers.
- Boundary fencing was erected with the assistance of 3 volunteers

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