



# Annual Report

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## Long Point Reserve 2018-19



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## 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.

Long Point Reserve was acquired by the TLC in 2005 and protects 386.5 hectares of saltmarsh, coastal grassland and woodland at Moulting Lagoon near Swansea. The Reserve adjoins a Ramsar listed wetland. The management of the Reserve is guided by the Long Point 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.

Cover image: Long Point Reserve. Photo: Heath Holden

## LONG POINT RESERVE SCORECARD 2018-19

<b>Monitoring</b>						
<b>Target</b>	<b>Indicator</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>Status 2018-19 Trend</b>
Saltmarsh	Floristic diversity	no monitoring	no monitoring	2.7 species/site	no monitoring	2.6 species/site - stable
	Structural complexity	3.3 lifeforms/site	no monitoring	2.9 lifeforms/site	no monitoring	3.3 lifeforms/site - stable
Coastal woodland	Floristic diversity	not surveyed	no monitoring	7.7 species/site	no monitoring	7.4 species/site - stable
	Structural complexity	6.1 lifeforms/site	no monitoring	6.1 lifeforms/site	no monitoring	6.0 lifeforms/site - stable
	Canopy recruitment	0.7 cohorts/site	no monitoring	0.7 cohorts/site	no monitoring	0.7 cohorts/site - stable
Coastal grassland	Floristic diversity	no monitoring	no monitoring	4.0 species/site	no monitoring	4.6 species/site - stable
	Structural complexity	4.5 lifeforms/site	no monitoring	4.5 lifeforms/site	no monitoring	4.8 lifeforms/site - stable
Terrestrial mammals	Species richness	7 native species 2 intro species	no monitoring	no monitoring	no monitoring	7 native species 2 introduced species
	Proportion native sp	0.78	no monitoring	no monitoring	no monitoring	0.78 - stable
	Native species diversity indices	Simpson 0.75	no monitoring	no monitoring	no monitoring	Simpson 0.68
		Shannon-Wiener 1.57				Shannon-Wiener 1.36
<b>Management Effectiveness</b>						
<b>Strategy</b>	<b>Indicator</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>Status 2018-19 Trend</b>
Weed management	Weed extent	50 ha	50 ha	50 ha	< 50 ha	< 50 ha Decreasing
	Treatment extent (ha)	No data	No data	10 ha	10 ha	< 10 ha Decreasing
Stock exclusion	No stock incursions	0	0	0	0	0 - Stable
Fire management	No of unplanned fires	0	1	0	0	0 - Stable
Feral animal control	Cat occupancy	0.1 (detected at 1 of 9 cameras)	no monitoring	no monitoring	no monitoring	0.1 (detected at 3 of 25 cameras) - stable
	Cat activity	0.005 (1detection 212 trap nights)	no monitoring	no monitoring	no monitoring	0.007 (4 detections 587 trap nights)-stable
	Rabbit occupancy	0.1 (detected at 1 of 9 cameras)	no monitoring	no monitoring	no monitoring	0 (detected at 0 of 25 cameras) - stable
	Rabbit activity	0.005 (1detection 212 trap nights)	no monitoring	no monitoring	no monitoring	0 (0 detections 587 trap nights) - stable
Woodland restoration	% native tree cover	no monitoring	no monitoring	Assess in 2019-20	no monitoring	Assess in 2019-20

## MONITORING SUMMARY

<b>Saltmarsh</b>		<b>Status: Very Good</b>			
<b>Goal</b> Maintain the condition of saltmarsh		<b>Outcome: On Track</b>			
<b>Description</b> Saltmarsh is the most extensive ecosystem at Long Point. A mosaic of vegetation dominated by succulent species and salt tolerant sedges occupy low lying ground around the margins of Moulting Lagoon. Extensive tidal pools provide important habitat for shore birds, including migratory species. The salt marsh vegetation is in excellent condition and is almost entirely undisturbed. A whitebait aquaculture trial site in the southern part of the reserve has been partially rehabilitated to restore natural tidal inundation patterns. The low diversity of plants and terrestrial vertebrates is to be expected given the habitat type.		<p>Long Point succulent saline herbfield. Photo: H Holden</p> 			
<b>Ecological indicator</b>	<b>Status 2014-15</b>	<b>Status 2015-16</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Floristic diversity	no surveys	No surveys	2.7 species/site	Baseline data	2.6 species/site - stable
Structural complexity	3.3 lifeforms/site	No surveys	2.9 lifeforms/site	Baseline data	3.3 lifeforms/site - stable
<b>Key findings</b>					
<ul style="list-style-type: none"> <li>• Weeds are absent from this vegetation type but an annual check is required</li> <li>• Saltmarsh is in good ecological condition, with this part of the Moulting Lagoon shoreline seldom impacted by humans</li> </ul>					
<b>Recommendations</b>					
<ul style="list-style-type: none"> <li>• Coordinate monitoring of coastal bird species esp shore-birds, waders and migratory species with PWS annual counts</li> <li>• Establish cat control program with a focus on saltmarsh, as ground nesting birds are especially susceptible to predation</li> </ul>					

<b>Coastal Woodland</b>		<b>Status: Fair</b>			
<b>Goal</b> Floristic diversity and structural complexity is improved		<b>Outcome: On Track</b>			
<b>Description</b> Coastal woodland on the Reserve is in poor condition as a result of a long history of vegetation clearance, frequent burning, gorse, and grazing by stock and rabbits. The most obvious effect of past disturbance has been the loss of canopy species such as white gum and black peppermint, and the ongoing decline of remaining trees such as black wattle. While the impact of changes to the vegetation has had a relatively minor impact on populations of larger terrestrial vertebrates such as wallabies and devils, the impact on woodland bird diversity has been significant.		Coastal woodland. Photo: H Holden. 			
<b>Ecological indicator</b>	<b>Status 2014-15</b>	<b>Status 2015-16</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Floristic diversity	no surveys	No monitoring	7.7 species/site	No monitoring	7.4 species/site - stable
Structural complexity	6.1 lifeforms/site	No monitoring	6.1 lifeforms/site	No monitoring	6.0 lifeforms/site - stable
Canopy recruitment	0.7 cohorts/site	No monitoring	0.7 cohorts/site	No monitoring	0.7 cohorts/site - stable
<b>Terrestrial Mammals (across entire reserve)</b>					
Species richness	7 native species 2 introduced species	No monitoring	No monitoring	No monitoring	7 native species 2 introduced species
Proportion native species	0.78	No monitoring	No monitoring	No monitoring	0.78 - stable
Native species diversity indices	Simpson 0.75 Shannon-Wiener 1.57	No monitoring	No monitoring	No monitoring	Simpson 0.68 Shannon-Wiener 1.36
<b>Key findings</b>					
<ul style="list-style-type: none"> <li>Floristic diversity and structural complexity of vegetation is very low. Some of the strata that would be expected in a healthy coastal woodland, such as tall shrubs or native herbs, are absent at Long Point. In its natural state, coastal woodland would be dominated by mature eucalypts. At Long Point eucalypts are almost entirely absent and there is little sign of recruitment.</li> <li>Populations of native terrestrial vertebrates seem robust and stable. 9 species recorded in 2015 were: Tas devil, spotted-tailed quoll, southern brown bandicoot, Bennetts wallaby, pademelon, wombat, brushtail possum, rabbit and feral cat. New species detected in 2018 were black rat and echidna, with rabbit and southern brown bandicoot not detected but Tas devils and spotted-tail quoll detected more frequently.</li> <li>Populations of introduced species such as rabbits, cats and rats are low but persistent.</li> <li>The diverse suite of bird species that typically occupies coastal woodland sites has been significantly impacted by changes to the vegetation. Problematic species such as noisy minors and magpies, are present in high numbers.</li> </ul>					
<b>Recommendations</b>					
<ul style="list-style-type: none"> <li>Prepare a long term restoration plan that aims to improve the floristic diversity and structural complexity of the vegetation.</li> <li>Develop a monitoring strategy for woodland birds and dovetail this with the PWS annual waterbird counts.</li> <li>Feral cat reduction is needed esp. during breeding period of shorebirds and small mammals</li> </ul>					

<b>Coastal grassland</b>		<b>Status: Fair</b>		
<b>Goal</b> Condition of coastal grasslands is improved		<b>Outcome: On Track</b>		
<p><b>Description</b></p> <p>Coastal grassland at Long Point is in variable condition. In elevated areas such as Barkstand Point, vegetation clearance and ongoing processes have resulted in degraded grassland in areas that were probably once coastal woodland. Gorse infestations are an ongoing and significant threat, despite ten years of dedicated weed control work. Of additional concern is the presence of exotic pasture grasses such as sweet vernal, which make up a significant proportion of the overall vegetation cover. Tussock grasslands occur on the margin of saltmarsh in low lying areas of the reserve. These areas are in somewhat better condition, with less extensive infestations of weeds, and a greater dominance of native species.</p>		 <p>Coastal Grassland at Long Point. Photo: H H</p>		
<b>Ecological indicator</b>	<b>Status 2015-16</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Floristic diversity	no monitoring	4.0 species/site	no monitoring	4.6 species/site - stable
Structural complexity	no monitoring	4.5 lifeforms/site	no monitoring	4.8 lifeforms/site - stable
<p><b>Key findings</b></p> <ul style="list-style-type: none"> <li>• Grassland diversity has been severely reduced by past management practices.</li> <li>• Cover of exotic pasture species is high</li> <li>• High macropod populations are over-grazing native vegetation</li> <li>• No evidence of threatened species that could be expected to occur in this habitat type, such as eastern quoll and eastern barred bandicoot.</li> <li>• A neighbour's fire accidentally spread into a 1 ha area of coastal grassland at Long Point in July 2015. Regeneration is good in the burnt area.</li> </ul>				
<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• Continue weed eradication efforts</li> <li>• Survey native annual herbs in 2019-20 and identify 'high-quality' grassland areas</li> <li>• Investigate the viability of grassland restoration with a focus on increasing floristic diversity and structural complexity.</li> <li>• Plan for a cool burn in grassland areas of Long Point for ecological purposes.</li> </ul>				

## MANAGEMENT EFFECTIVENESS SUMMARY

<b>Weed management</b>				
<b>Key objective(s)</b> All areas of gorse have received primary treatment by 2017 Gorse extent is reduced to < 5 hectares by 2020				<b>Status 2018-19</b> <b>On-track</b>
<b>Strategy description</b> Gorse is widespread at Long Point. Almost 10 years of weed control works has reduced weed density by 90%, but the long viability of seed requires ongoing weed control. Weed mapping and control is continuing.			Volunteers treating gorse on Long Point. Photo: D Kingdom 	
<b>Indicator</b>	<b>Status 2015-16</b>	<b>Status 2016-17</b>	<b>Status 2017-18</b>	<b>Status 2018-19 Trend</b>
Weed extent	>50 ha	50 ha	<50 ha	<50 ha - decreasing
Treatment extent (hectares)	>10 ha	10 ha	<10 ha	<10 ha - decreasing
<b>Progress in 2018-19</b> <ul style="list-style-type: none"> <li>• 6 days of weed spraying and control was undertaken by Sean Guinane during Feb- March 2018 across all of the Long Point and Central Long Point (low sand dune near entrance gate). Areas burnt in 2015 noted with extensive germination of gorse seedlings were treated. Follow-up work in 2018-19 will be needed to ensure that these plants do not mature and set seed.</li> <li>• Significant progress continues to be made on reducing weed extent</li> <li>• A research project investigating the impact of residual herbicide on native plant species completed by Laura Williams, which showed that the density of gorse has reduced by more than 90%, has been published: Williams and Kingdom 2018 – Residual impact of herbicide on gorse control Long Point – Roy Soc Tas, 152.</li> </ul>				
<b>Key recommendations for future management</b> <ul style="list-style-type: none"> <li>• Update weed mapping annually.</li> <li>• Continue weed control works, focussing on Barkstand Point (spraying) and isolated patches in saline grasslands to east of the Long Point.</li> </ul>				

**Stock exclusion**

**Key objective(s)**

Access by neighbouring stock is prevented (ongoing)

**Status 2018-19**

**On-track**

**Strategy description**

Prior to acquisition by TLC, sheep had been grazed on Long Point Reserve and had caused significant degradation in grassland and woodland areas. Sheep are still grazed on the neighbouring property to the west (The Grange). A fence along the western boundary prevents stock from accessing the Reserve and is maintained with cooperation of the neighbouring landholders.



Long Point gate and fence line: D Kingdom

Indicator	Status 2015-16	Status 2016-17	Status 2017-18	Status 2018-19 Trend
Instances of stock access	0 stock access	0 stock access	0 stock access	0 stock access - stable

**Progress in 2018-19**

- Boundary fences were checked and no repairs were required.
- No incursions of sheep have been detected or reported at Long Point since fences were upgraded in 2009.
- New managers at the Grange ensure stock do not wander.

**Key recommendations for future management**

- Continue to monitor fences and repair fences when necessary.

**Feral animal control**

**Key objective(s)**

- Investigate the feasibility of reducing feral animal numbers by 2016

**Status 2018-19**

**Needs Addressing**

**Strategy description**

Feral cats pose a significant threat to wildlife on the Reserve and in particular to nesting shore birds. Rabbits are in low numbers at present, but may affect the vegetation of grassland and woodland areas if numbers increase. Eradication of a feral animal species is usually impossible to achieve. However, a variety of control methods can effectively reduce populations and consequent impacts to an acceptable level. Methods available including shooting, trapping, baiting and fencing. As animals are often widespread and mobile, it is always beneficial to work with neighbours to tackle populations at a regional level.



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Feral cat at Long Point Reserve at LOPR 029 Nov 2018

Indicator	Status 2014-15	Status 2015-16	Status 2016-17	Status 2018-19 Trend
Cat occupancy	0.1 (detected at 1 of 9 cameras)	No monitoring	No monitoring	0.1 (detected at 3 of 25 cameras) - stable
Cat activity	0.005 (1 detection, 212 trap nights)	No monitoring	No monitoring	0.007 (4 detections 587 trap nights)-stable
Rabbit occupancy	0.1 (detected at 1 of 9 cameras)	No monitoring	No monitoring	0 (detected at 0 of 25 cameras) - stable
Rabbit activity	0.005 (1 detection, 212 trap nights)	No monitoring	No monitoring	0 (0 detections 587 trap nights) - stable

**Progress in 2018-19**

- Baseline data on rabbit and cat abundance has been collected. Black rats were detected during monitoring in 2018.
- Although trend stable feral animal control (especially cats) has been identified as a priority for small mammal and shorebird protection.
- TLC was approved for release of a new strain of rabbit calicivirus, through the Invasive Species CRC, however rabbit numbers were too low to proceed. TLC have been advised that release will be likely approved if rabbit numbers increase, with a threshold of 20 rabbits per 20 min spotlight count required to ensure the disease becomes established. Rabbit numbers remain low so this control measure is not likely in the near future

**Key recommendations for future management**

- Conduct feral animal management scoping paper with a focus on cat reduction.
- If rabbit numbers increase, seek out a release of rabbit calicivirus.

## Fire management

### Key objective(s)

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

Status 2018-19

On-track

### Strategy description

Under the historic management regime, fire was used as a tool to encourage the growth of spring grass and suppress gorse. This practice has had significant impacts on vegetation structure and diversity. Controlled burning is currently being trialled as a tool for gorse management in areas where gorse has formed impenetrable stands that are difficult to control by other means.

Parched Long Point reserve landscape Photo: H Holden



Indicator	2014-15	2015-16	2016-17	2017-18	Status 2018-19 Trend
No of unplanned fires	0 fire	1 fire	0 fire	0 fire	0 fire - stable

### Progress in 2018-19

- A neighbour's fire accidentally spread into a 1 ha area of coastal grassland at Long Point in July 2015. Grassland regeneration is good in the burnt area.
- There were no unplanned fires on Long Point Reserve in 2017-18.
- A fire risk assessment was completed for all TLC reserves.
- A fire management policy for all TLC Reserves is being implemented.
- A fuel stove only policy is also being implemented.
- 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

- Finalise the ecological burn plan to maintain the natural values of the Reserve especially grassland.
- Continue to implement a fuel stove only policy for the Reserve.
- Continue to develop the whole-of-TLC fire management strategy.

**Woodland restoration**

**Key objective(s)**

- Native plant species will be the dominant cover class in the revegetation zone by 2020.

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

**Strategy description**

At Long Point Reserve there has been a history of grazing, timber harvesting and frequent firing, which has resulted in degraded areas of coastal forest. Prior to European settlement, eucalypts would have formed the canopy of woodland areas. *Eucalyptus viminalis* is likely to have been the dominant species on sandy substrates such as Long Point, while *Eucalyptus amygdalina* is likely to have been dominant on dolerite substrates such as Barkstand Point. Following eradication of gorse in these areas, revegetation using local provenance tree and understorey shrub seedlings will be undertaken.



Woodlands restoration Long Point. Photo: Denna Kingdom.

Indicator	Status 2014-15	Status 2015-16	Status 2017-18	Status 2018-19
% native tree cover	Not measured	Not measured	Not measured	Assess in 2019-2020

**Progress in 2018-19**

- Tree guards have been maintained and removed wherever possible
- An experiment using large removable wire guards to allow saplings to grow beyond wallaby browsing height was established in Jan 2016, protecting predominantly *Eucalypt viminalis* saplings. By Jul 2016 the *Eucalypt* saplings that were protected by these wire guards had increased height by 20 – 40 cm. An additional 20 cm of height is required for saplings to be taller than the maximum reach of browsing wallabies. Continue to remove wire tree guards and re-used on other saplings.

**Key recommendations for future management**

- Expand use of wire tree guards, with priority on protecting canopy species first.
- Identify other methods for increasing native woodland cover.
- Measure and map woodland regeneration in 2019-20