



Long Point

Moulting Lagoon, Swansea



Reserve Management Plan

Approved April 2008

Acknowledgements

The TLC greatly appreciates the assistance of its supporters in the general public, who provided overwhelming support via donations towards the purchase of Long Point Reserve. TLC supporters continue to assist towards management of the reserve, both as volunteers and through financial donations.

The Australian Government's National Reserve System Program also provided significant financial support for the purchase of Long Point Reserve.

John and Jane Cotton, former owners of the property, deserve particular recognition for their continuing time and effort in ensuring the land became, and is managed successfully as, a dedicated conservation reserve.

This plan has been prepared by Denna Kingdom, Reserves Manager for the Tasmanian Land Conservancy. Assistance in its preparation was provided by TLC staff members Niall Doran, Nathan Males and Jim Mulcahy, and TLC Board members Wendy Potts and Peter Bosworth.

A draft of this Management Plan was available for public comment for a six week period in February and March 2008. This period was publicised in *The Mercury* and recognised stakeholder groups invited to comment, including: scientists with expertise in wetlands, geomorphology, vegetation management and threatened species; Parks and Wildlife Service; neighbouring land owners; Tasmanian Aboriginal Land and Sea Council; Glamorgan-Spring Bay Council; Birds Tasmania, Tasmanian Field and Game Association and the Australian Government's National Reserve System Program. Written submissions were received from Birds Tasmania, Stewart Blackhall (Department of Primary Industries and Water) and Sarah Lloyd. The comments made in these submissions were considered in finalising the plan.

Cover photo:

Dawn over saltmarsh of Long Point Reserve and Moulting Lagoon.

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1. Background Report

1.1. Introduction

The Long Point Reserve is freehold land purchased by the TLC in 2005, following its subdivision from the pastoral property 'The Grange' for the express purpose of perpetual nature conservation.

As a responsible land manager, the TLC has a policy of developing management plans for all the properties it acquires. This management plan has been developed to guide the TLC's stewardship over this significant area alongside the internationally important Moulting Lagoon wetlands.

The purchase was the first permanent reserve project initiated by the TLC, with funding drawn from public donations and a grant from the Commonwealth Government's National Reserve System Program (NRS). A strong level of public interest in the property remains.

Recognising this public support, the TLC included a period of public comment on a draft of the plan, allowing the community to provide input on the future management of the Reserve. As such, a draft of this Management Plan was available for public comment for a six week period in February and March 2008. This period was publicised in The Mercury and the Great Oyster Bay News, and recognised stakeholder groups invited to comment, including: scientists with expertise in wetlands, geomorphology, vegetation management and threatened species; Parks and Wildlife Service; neighbouring land owners; Tasmanian Aboriginal Land and Sea Council; Glamorgan-Spring Bay Council; Birds Tasmania, Tasmanian Field and Game Association and the Australian Government's National Reserve System Program.

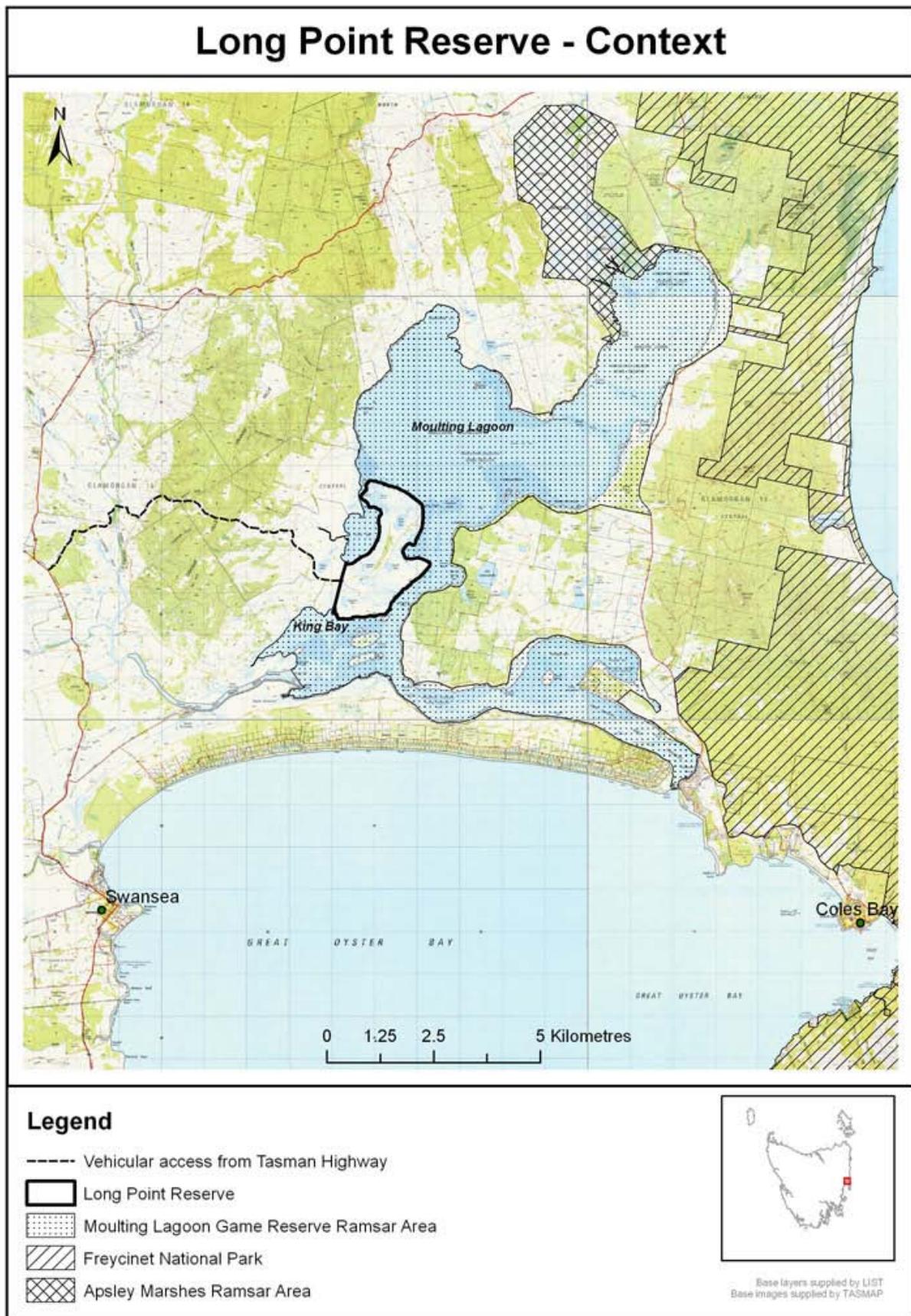
Three written submissions were received from individuals or organisations; comments made in these submissions were considered by the TLC in finalising the plan.

1.2. Location, plan area and access

The subject land (the "Reserve") is a low-lying peninsula of 386.5ha situated in the south-western corner of Moulting Lagoon on Tasmania's east coast. The Reserve is about 9km north east of Swansea and about 2km north east of the Swan River mouth, with the midpoint of the reserve lying at approximately 42°3'S 148°9E (GDA Grid Reference 0595315;5343846) (see Map 1).

The Reserve is composed of two perpendicular ridgelines, known as "The Long Point" and "Barkstand Point", however it should be noted that in this plan the entire area is referred to as "Long Point Reserve".

Map 1 – Long Point Reserve Context



The Reserve is surrounded on three sides by the Moulting Lagoon Game Reserve, which occupies 4507 ha and is managed by the Parks and Wildlife Service. Moulting Lagoon is recognised as an internationally important wetland site through the *Convention on Wetlands*, Ramsar, 1971 (also known as the Ramsar Convention) and is also recognised as a wetland of national significance¹. With 11km of frontage onto the lagoon and an extensive intertidal zone, Long Point Reserve plays an integral role in the ecological function of Moulting Lagoon.

The remaining neighbouring land comprises the pastoral property 'The Grange', from which the Reserve was subdivided for the purpose of perpetual nature conservation.

1.3. Access

1. PUBLIC ACCESS POLICY STATEMENT

As a community-based organisation, the TLC strongly supports public involvement in the management of the Reserve and will not unreasonably refuse public access in future where such access preserves or enhances the natural values of the Reserve. However, the TLC will refuse access where this may result in a detrimental impact on the values of the Reserve.

2. PHYSICAL ACCESS TO THE RESERVE

Physical access to the reserve is either by land via the 'The Grange', or by water via Moulting Lagoon.

Vehicle access to the Reserve is via a private right-of-way following the Little Bay Track across The Grange. Use of the right-of-way requires prior notification to be given to the owners of The Grange. Whilst the track is deemed an all-weather track, in practice it is only suited to dry-weather use and is generally unsuitable for most 2WD vehicles.

Within the reserve there are many existing vehicle tracks created during the previous management of the Reserve. These tracks have been rationalised by the TLC, with only two tracks being maintained for the purpose of essential management activities and emergency services only. These tracks allow management vehicles to circumnavigate Long Point and travel to the eastern end of Barkstand Point via a channel crossing.

Parts of the existing vehicle tracks pass through areas that are very sensitive to physical disturbance. As such, vehicle traffic is restricted to the summer months and will not be used following heavy rain, thereby reducing the impact of vehicles to two parallel wheel 'ruts'. Where damage occurs, the track will be closed until rehabilitation has occurred naturally.

Boat access to the Reserve is possible, although the shallow nature of Moulting Lagoon restricts the type of boat that can be used to those drawing a very shallow draught. The most suitable landing site at the reserve is from King Bay onto Barkstand Point, where water depth is relatively deep and the granite substrate minimises environmental damage associated with landings.

¹ Commonwealth Department of Environment and Heritage (2001) *Directory of Important Wetlands in Australia*

On occasion it may be necessary or desirable to have boat access to other areas of the Reserve. On the advice of the Parks and Wildlife Service, the best way to minimise environmental damage to the foreshore and surrounding seagrass beds is to avoid repetitive landings at the same site and ensure sufficient depth is allowed for both arrival and departure, with consideration to tidal flows.

1.4. Tenure and ongoing ownership

Long Point Reserve is freehold land, which the TLC intends to keep as a permanent reserve in perpetuity. The TLC has registered a conservation covenant on the Reserve, which requires the owner of the Reserve to maintain its conservation values under the *Nature Conservation Act 2002*. Safeguards also exist beyond the TLC's ownership of the Land, and the perpetual covenant on title. For example, should the TLC cease to operate or otherwise need to transfer ownership of the Land, then both the TLC's constitution and its funding agreement with the Australian Government's National Reserve System (NRS) Programme require that the Reserve be transferred to another organisation with similar objectives, as identified on the register of Environmental Organisations.

In accordance with its policy for permanent reserves the TLC will seek the proclamation of the area as a Private Sanctuary under the *Nature Conservation Act 2002* in order to ensure that the regulations under that Act can be applied to the Reserve. This will also ensure that Long Point Reserve and the Moulting Lagoon Game Reserve can be managed consistently for conservation.

1.5. Background to the Reserve

1. MANAGEMENT HISTORY

The condition of the natural values of the property has resulted from its previous uses and management.

The Reserve has traditionally been used for "bush-run grazing" and during the tenure of the previous owner was generally set-stocked at a rate of about 0.5 DSE/ha. As far as the previous owner is aware there have been no attempts to plough the Reserve and past attempts to introduce exotic pasture species to the Reserve proved unsuccessful.

The Grange was used extensively for harvesting black wattle bark for the Swansea bark mill in the late 1800s to the 1930s. Local old timer, Ted Cook, recalled that in his youth (c1920s), his family harvested hundreds of tonnes of bark each year from The Grange, while also using the property to catch rabbits and wallaby for food. It is highly probable that Barkstand Point was used for bark harvesting, given the name of land feature, its proximity to the entrance of the Swan River and the siting of a jetty near the south-western corner of Barkstand Point.

Some minor drains were dug across the salt marsh vegetation in the early years of European settlement. The intended purpose of the drains is unclear, but their alignment suggests that they may have been dug in an attempt to intercept and divert tidal flooding over the central part of the Reserve. Further drains/channels were excavated in the early 1990s as part of a failed aquaculture venture aimed at mass culture of Tasmanian whitebait. The drains were subsequently trialled as a site for Pacific oyster culture, but this venture was also unsuccessful. The drains link a series of small wetlands at the southern end of the Reserve and create an artificial tidal flow

between the main lagoon channel at Barkstand Point in the east and King Bay to the west. Many of the drains are now in poor condition and are slowly filling in naturally.

The property has also been used as a base for duck hunters, who constructed two small huts at the northern end of Long Point as well as bird hides in Gum Tree Hole and other sites in the wetlands.

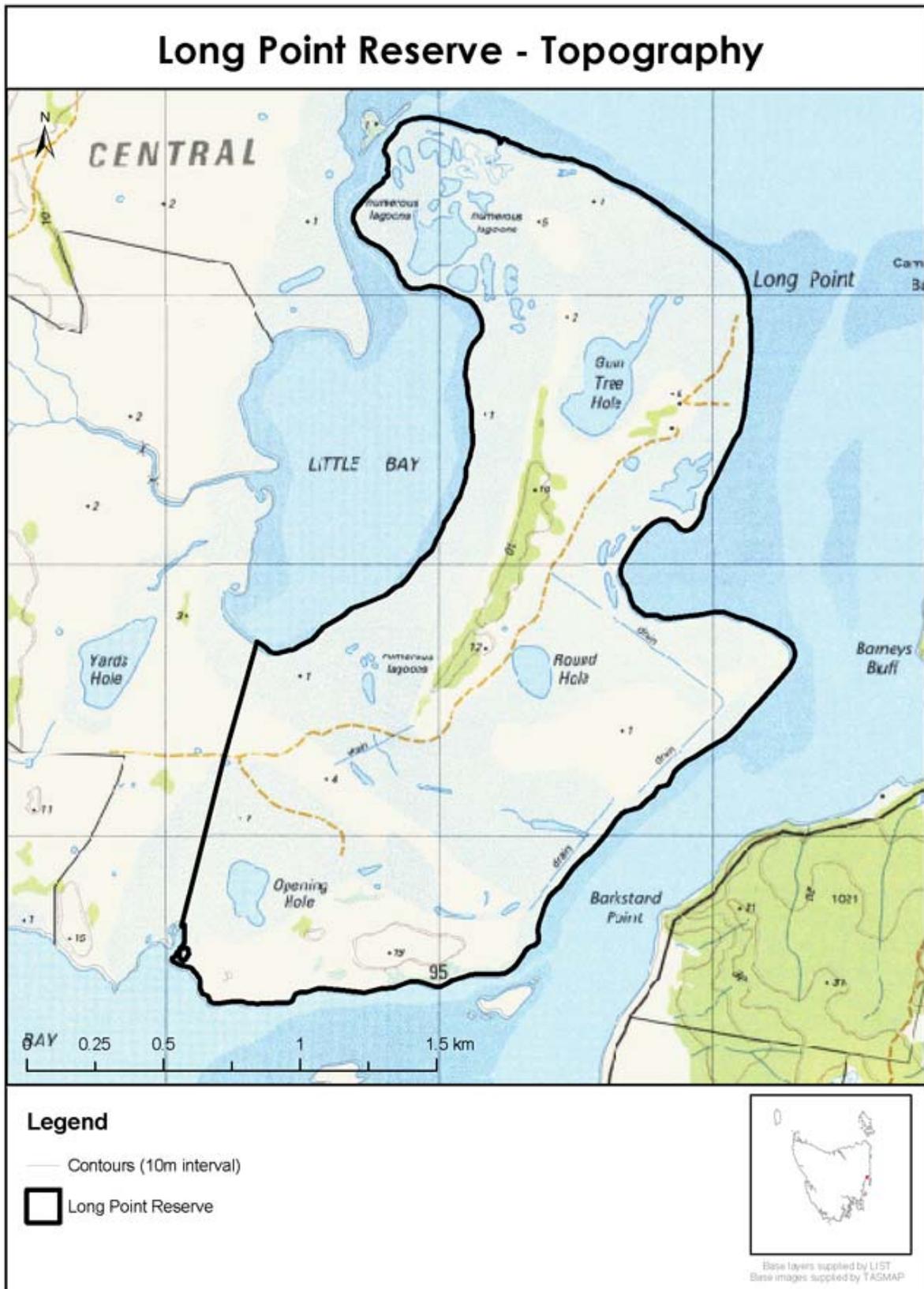
2. GEOLOGY, GEOMORPHOLOGY AND SOILS

Long Point Reserve is surrounded on three sides by Moulting Lagoon, a feature that has a strong influence on the geology, geomorphology and soils of the reserve. Most of the Reserve and surrounding area comprises low-lying sand and mudflats subject to periodic inundation during flood events and high tides. Map 2 shows the topography of the Reserve; no detailed, accurate geological maps have been developed as yet.

Two primary features dominate the Reserve: a dolerite knoll, known as “Barkstand Point” rises from the southern end of the Reserve and with a maximum height of 19m above sea level; and a sand ridge extending north-south. The sand ridge comprises two distinct lunettes, being sediments blown by the wind into crescent-shaped ridges, which were likely deposited in the Quaternary period. These sediments have been stabilised by vegetation, forming loosely consolidated sandy soils that are generally susceptible to erosion.

These lunettes have been identified as unique geomorphological features in Tasmania. In January 2007 the Reserve was nominated for inclusion on the State Geo-conservation Database (Frances Mowling, personal communication). As at December 2007 no outcome had been declared from this nomination.

Map 2 – Long Point Reserve Topography



3. CLIMATE

Long Point Reserve is located near Swansea, on the east coast of Tasmania. The area has a temperate maritime climate with a prevailing westerly wind flow, causing the area to be within a rain shadow for much of the year. Rainfall is spread evenly across the year, with slight peaks in autumn and spring due to changeable weather patterns bringing easterly winds.

The nearest full meteorological station is at Swansea, approximately 8 km southwest of the reserve. An automatic weather station recording temperature, rainfall and wind parameters is also located at Friendly Beaches, approximately 8 km northeast of the reserve. The Bureau of Meteorology climate statistics (www.bom.gov.au/climate/averages) from Swansea for the period of 1957 to 2007 show that the temperature in February, the warmest month, ranges from a mean daily maximum of 22.2°C to a mean daily minimum of 11.8°C. In July, the coldest month, temperatures range from a mean daily maximum of 13.3°C to a minimum of 3.6°C. Swansea rainfall data from 1884 to 2007 exhibit a mean annual rainfall of 596.5 mm, with an average of 70 days per year of rain ≥ 1 mm.

Climate modelling suggests that the mid-east coast area under climate change will become drier and hotter, which is evidenced by changes in annual average climate statistics over the past 50 years².

4. HYDROLOGY

Long Point Reserve falls within Moulting Lagoon, with hydrology dominated by the periodic flooding of the lagoon resulting from high tides or high rainfall. During hot and dry weather, evaporation can create salinity levels more than twice that of seawater in some areas of Moulting Lagoon³, with the water holes on the reserve (i.e. Gum Tree Hole, Round Hole and Opening Hole) likely to be hypersaline throughout the year due to the lack of water exchange between the holes and the lagoon.

5. VEGETATION

Seven vegetation communities were identified at the reserve at the time of acquisition. These are shown in Map 3, outlined in Table 1 and described in detail below.

Saline vegetation communities

Salt marsh (succulent saline herbland and saline grassland)

Salt marshes are wetland communities that are subject to periodic inundation by saline water and are most commonly found in estuarine environments. They are highly productive systems, due to the accumulation of sediments, organic matter and nutrients from both the terrestrial and marine environments. These nutrients support an abundant and diverse range of invertebrates, which in turn provides an important food source for a range of bird species, including many migratory waders (see fauna section below). Due to the very high productivity of salt marshes and the important

² Hydro Tasmania, CSIRO, University of Tasmania, TPAC (2004) *Climate Change in Tasmania*. Report for Hydro Tasmania.

³ Parks and Wildlife Service (2003) *Moulting Lagoon Game Reserve (Ramsar Site) Management Plan 2003*

role that they play in the nutrient dynamics of estuarine systems, they are recognised as having a ‘critical ecological function’.

Succulent saline herbland occupies most of the Reserve occurring in low-lying areas less than 1 m above sea level. Typically, this community is almost completely dominated by beaded glasswort (*Sarcocornia quinqueflora*), which forms an almost continuous cover 10-15 cm high. Shrubby glasswort (*Sclerostegia arbuscula*) is dominant in a narrow band along the shore of Moulting Lagoon at the northern and eastern edge of the Reserve.

Succulent salt marsh vegetation is relatively fragile and susceptible to physical damage. Widespread grazing of domestic livestock on Tasmanian salt marshes in the past has had serious impacts on the vegetation and the bare zone commonly encountered around the shoreward margins of succulent salt marshes may be due solely to the impact of stock⁴.

Saline grassland occurs in areas that are irregularly inundated but still affected by saline conditions. A large contiguous patch of saline grassland occurs in the central east of the Reserve. This vegetation community is a mosaic variously dominated by a combination of chaffy sawsedge (*Gahnia filum*) and coast sawsedge (*G. trifida*) or by coast speargrass (*Austrostipa stipoides*), with succulent salt-tolerant species occurring in the inter-tussock spaces.

Table 1: Vegetation communities, extent and priority

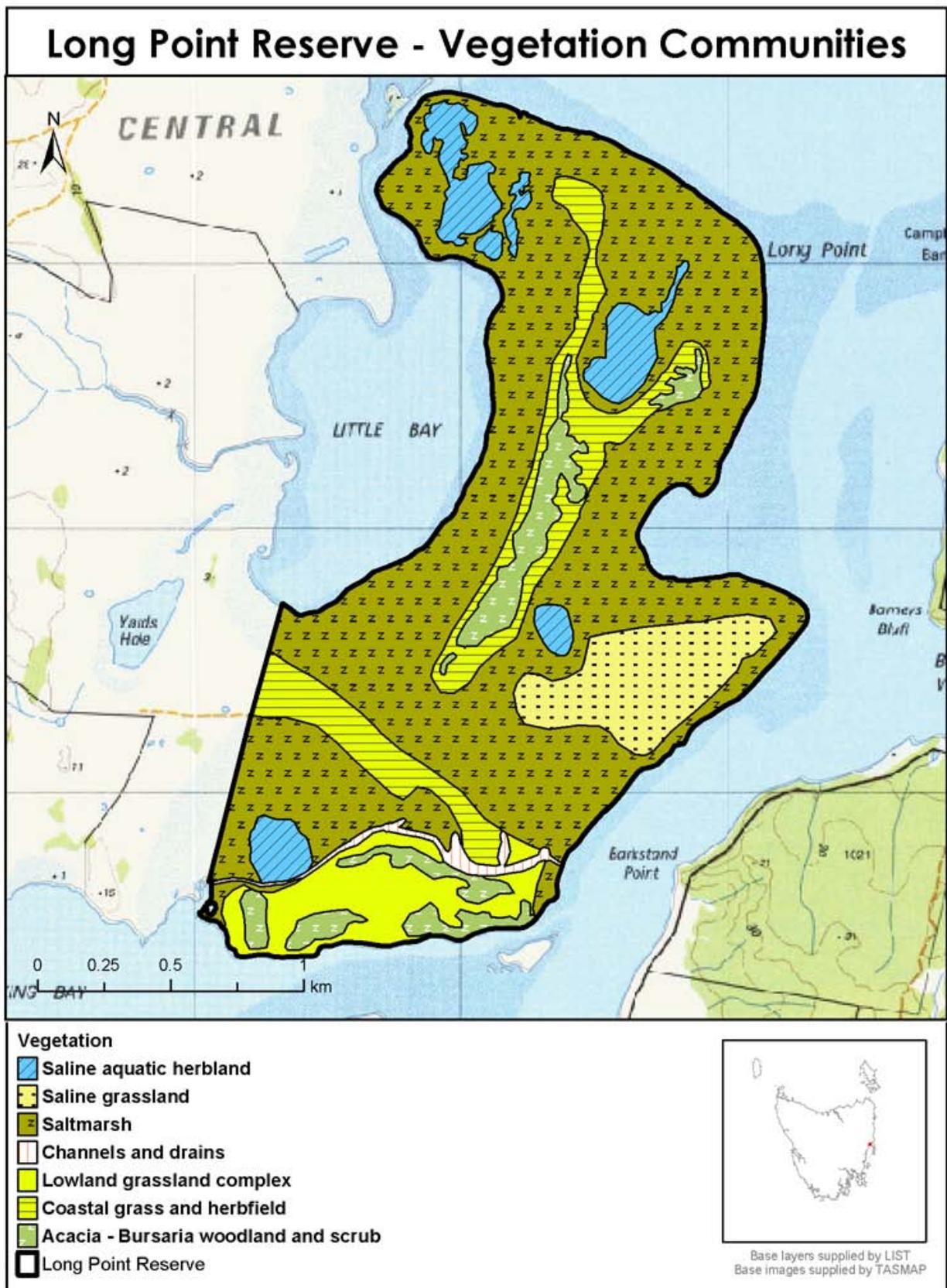
Vegetation community	TASVE G (1.0) code	Approx. area (ha)	Priority rating#	Threatened community status*
Succulent saline herbland (salt marsh)	ASS	228.3	B (CEF)	
Saline grassland (salt marsh)	ARS	28.0		
Coastal grassland	GHC	51.8	A	
Saline aquatic herbland (ephemeral wetlands)	AHS	24.7	B (CEF)	V
Bursaria - Acacia woodland (previously Eucalypt woodland)	NBA	24.6		
Lowland grassland complex (previously woodland)	GCL	24.3		
Extra-urban miscellaneous (artificial drains/channels)	FUM	4.4		

Priority rating for the South East Bioregion based on Tasmanian Nature Conservation Priorities; ‘A’ being high and ‘C’ being low; CEF = critical ecological function (Bushcare Technical Extension, 2003)

*Status of threatened communities, where E = Endangered, V = Vulnerable and R = Rare (*Nature Conservation Act 2007*)

⁴ Kirkpatrick, J.B. & Glasby, J. (1981). “Saltmarshes in Tasmania”. Occasional Paper 8, Dept of Geography and Environmental Studies, University of Tasmania.

Map 3 – Vegetation communities at Long Point Reserve



Artificial channels were excavated in saltmarsh areas at the southern end of the Reserve in the early 1990s as part of a failed aquaculture venture aimed at mass culture of Tasmanian whitebait (*Lovettia seali*). The drains link a series of small wetlands and create an artificial tidal flow between the main lagoon channel at Barkstand Point in the east and King Bay to the west. The saltmarsh vegetation surrounding the excavated channels have recolonised with salt marsh species, indicating a good recovery from this disturbance, although no studies have been done exploring the impact on species diversity or other indicators of salt marsh health.

Despite a long history of grazing and recent history of mechanical disturbance, salt marsh vegetation on the Reserve is generally in good condition, although it is also unclear whether the saltmarsh is in a 'natural' successional state, or whether its current state is the result of the previous management regime. For example, the current dominance of samphire and restricted distribution of the shrubby glasswort may be due to selective grazing effects.

The most degraded areas of salt marsh are bare patches associated with past vehicular use. Despite reductions in the frequency and extent of vehicular access, there has previously been little capacity for degraded areas to recover while still being used for grazing.

Saline aquatic herblands

Ephemeral saline wetlands are scattered throughout the low-lying parts of the Reserve. The largest and deepest of these lagoons are Gum Tree Hole, Round Hole and Opening Hole. These ephemeral wetlands are subject to enormous temporal fluctuations in water, salinity and temperature. They may be filled directly through heavy rainfall or indirectly through 'flood' conditions in Moulting Lagoon. Over the summer months the wetlands gradually dry up, leaving a deposit of salt and ultimately creating dry, barren salt pans.

No surveys have been conducted of the aquatic vegetation that occurs in these wetlands when they are full. When they are dry, vegetation is generally limited to marginal herb fields that often contain the rare silky wilsonia (*Wilsonia humilis*).

Ephemeral wetlands on the Reserve are generally in very good condition and appear to have suffered little impact from past management practices. No doubt they would have been 'camped on' by sheep when dry, but being saline they would have attracted little interest from stock when wet. The wetlands may have also been driven upon when dry, but subsequent flooding would have obliterated any resulting damage. There may have been some nutrient enrichment of wetlands from sheep faeces, but given that the wetlands occur in an environment that is naturally high in nutrients (i.e. estuarine salt marsh) this may not have had significant negative impacts.

The major disturbance to wetlands on the Reserve is the canal system linking a series of wetlands at the southern end of the Reserve (refer to previous section). These affected wetlands, including Opening Hole, are now connected to Moulting Lagoon and subject to tidal forces, fundamentally altering their previous state as ephemeral water bodies only occasionally linked to the main lagoon during flood conditions.

Coastal grassland

Coastal grassland occurs in a band between the salt marsh communities and the more elevated parts of the Reserve, generally occupying the range 1-4 m above sea level.

This community is almost completely dominated by coastal spear grass (*Austrostipa stipoides*).

The coastal grasslands on the Reserve are generally in poor condition. There are some small areas in good condition, but most of the serious gorse infestations on the Reserve are in areas that were probably previously occupied by coastal grassland. However, grassland communities are relatively resilient and with the removal of gorse they can be expected to regenerate well, although may exhibit a lower species diversity than before the gorse infestation.

Acacia/ Bursaria woodland

Acacia/ Bursaria woodland occurs on elevated sand ridges along the spine of Long Point (but not on the elevated sections of Barkstand Point). This community was once a eucalypt woodland but only a few white gums (*Eucalyptus viminalis*) remain on the reserve. Black wattle (*Acacia mearnsii*) is now the dominant tree species, along with isolated individuals and small stands of banksia (*Banksia marginata*). The shrub layer is generally sparse, with only the occasional native box (*Bursaria spinosa*). The ground cover varies considerably and may be dominated by native grasses, saggs (*Lomandra longifolia*) or sword sedge (*Lepidosperma sp.*) depending on the site.

Gorse also occurs as an occasional weed of the shrub layer.

The woodland communities provide habitat for a range of fauna species, and although no formal surveys have been undertaken, three threatened species (Tasmanian devils *Sarcophilus harrisii*, wedge-tailed eagles *Aquila audax fleayi* and white-bellied sea-eagles *Haliaeetus leucogaster*) use the woodland communities as habitat. It is possible that other species important for conservation may also be present on the Reserve, but are currently undetected.

Woodland communities on the Reserve are generally in poor condition as a result of a long history of vegetation clearance, fire and grazing by stock, rabbits and large populations of macropods. The most obvious effect of past disturbance on the Reserve has been the decline of eucalypts and banksias, but the relatively low diversity of shrub species may also be a result of past disturbance.

In addition to grazing impacts, sheep have also favoured existing areas of bare ground, both for their 'camps', and when moving around the Reserve, thereby preventing natural regeneration in these areas. Areas of bare ground can also be created or maintained by activities including inappropriate vehicle use and inappropriate levels or types of visitation.

Lowland grassland complex

Lowland grassland complex occurs on the rocky ridge associated with Barkstand Point and is composed of a mix of native and exotic grass species. This area was probably an acacia/eucalypt woodland in the past and the current vegetation is the result of the combined impacts of vegetation clearance, fire and grazing. This grassy area is heavily impacted by gorse on the lower slopes of the ridge.

6. FLORA

A detailed vegetation survey of the Reserve was conducted early in January 2005, with casual observations adding species to this list (see species list at Appendix 1). Four plant species that are listed as rare under the *Tasmanian Threatened Species Protection Act 2002* (TTSPA) occur on the reserve; these species and their habitats

are noted below. (Information on species habitats is from Threatened Flora of Tasmania (Threatened Species Unit, DPIWE, 2003).

Narrow-leaf blown-grass (*Lachnagrostis punicea filifolia*) – this species occurs in non-saline coastal environments, and is known from a single record at Long Point Reserve.

Cranbrook paperbark (*Melaleuca pustulata*) – this species occurs in a range of non-saline habitats, including dry open woodland, grassland and scrub, and stable dunes in sparse coastal shrubbery. The species occurs frequently on the sand dunes at the northern end of the Long Point.

Silky wilsonia (*Wilsonia humilis*) – this species occurs in coastal saltmarsh environments and is known from several records at Long Point Reserve.

Roundleaf wilsonia (*Wilsonia rotundifolia*) – this species occurs in coastal saltmarsh environments and is known from several records at Long Point Reserve.

7. FAUNA

The variety in density and structure of vegetation on the Reserve in combination with the estuarine environment bordering the Reserve provides suitable habitat for a range of fauna including migratory wading birds and estuarine invertebrates.

Moulting Lagoon is an extremely important area for water birds; it provides nesting and foraging habitat for a wide range of species and large numbers of birds, including about 1% of the Australian black swan (*Cygnus atratus*) population and 14 species covered by the Japan Australia Migratory Birds Agreement (JAMBA).

With the exception of bird surveys on Moulting Lagoon, there have been no fauna surveys conducted on the reserve, however casual sightings of animals and their tracks and traces have been recorded (see Appendix 2). Observations have been made of several mammals, birds, reptiles and invertebrates, including several listed threatened species that are listed below.

Tasmanian devil (*Sarcophilus harrisi*) – listed as vulnerable (TTSPA and Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBCA). Habitat occurs in woodland and grassland communities, with three active dens observed on the Reserve.

Eastern curlew (*Numenius madagascariensis*) – listed as endangered (TTSPA). This species is migratory, visiting eastern Tasmania during the summer months. Habitat on the Reserve includes inter-tidal mudflats and sandflats.

White-bellied sea-eagle (*Haliaeetus leucogaster*) – listed as vulnerable (TTSPA)
Wedge-tailed eagle (*Aquila audax fleayi*) – listed as endangered (TTSPA and EPBCA). Both species of eagle have been observed hunting in saltmarsh and grassland vegetation communities, and roosting in woodlands on the Reserve.

Tasmanian saltmarsh looper moth (*Dasybela achroa*) – listed as vulnerable (TTSPA). A single moth was observed by an invertebrate ecologist during March 2008. This is the first record of the species at a site other than a saltmarsh in Lauderdale.

It is also possible that further species of conservation significance may be present at the reserve, and that species that are not currently of conservation significance may become so in the future.

8. CULTURAL HERITAGE

Little is known about the cultural significance of the Reserve, however it has been reported that up to 10 Aboriginal bands of the Oyster Bay tribe used the lagoon on an annual basis to harvest swans and their eggs. Given the large food resources associated with Moulting Lagoon and the fact that the Reserve has over 11km of frontage onto the Lagoon, it is highly probable that the Long Point was frequented and utilised by Aboriginal people. However, there are no known records of middens, artefact scatters or other specific sites of significance on the Reserve and an Indigenous Heritage Survey conducted in July 2007 did not find any Aboriginal heritage sites or artefacts.

European settlement of The Grange occurred around 1830 and the property has been in the same family for all but 40 years since that time. The property has been used primarily for sheep grazing and fine-wool production since settlement, with some cropping on more productive land along the Swan River. The land has also been used in the past as a base by duck hunters who established two small shacks.

9. ENVIRONMENTAL DEGRADATION

Introduced species

Evidence of feral cats (a jaw bone) has been found at the Reserve, although no live cats have been seen. Feral cats have been observed throughout the Moulting Lagoon area⁵ and across The Grange. Whilst feral cats are likely to be present at times at the Reserve, the lack of fresh water may mean that they are unlikely to become a constant presence.

Several introduced plant species are present on the Reserve, however gorse is the only species present that poses a threat to the conservation values of the Reserve. Other species that are not present, but that may pose a threat, include South African boxthorn (*Lycium ferocissimum*), rice grass (*Spartina anglica*), blackberry (*Rubus fruticosus*), spanish heath (*Erica lusitanica*) and briar rose (*Rosa rubiginosa*).

Deforestation

Some level of deforestation has also occurred on the Reserve since European settlement, although the composition, extent and density of vegetation cover prior to European settlement is not known. Barkstand Point probably supported a sizable stand of black wattle that was harvested for its bark during the early 1900s.

There is also colloquial evidence of a higher density of eucalypt and banksia cover on Long Point in the past; the previous owner can certainly remember some large stumps that have disappeared during his lifetime⁶. Selective harvesting of timber from the area for provision of firewood and fence-posts has probably occurred throughout the history of settlement and this may account for the loss of eucalypts on the Reserve. However, with the exception of black wattle harvesting on Barkstand Point, there is no recorded or oral history of systematic cutting or clearance of vegetation.

⁵ Parks and Wildlife Service (2003) Moulting Lagoon Game Reserve (Ramsar Site) Management Plan

⁶ John Cotton, personal communication.

Recent vegetation clearance on the Reserve has been limited to cutting of fallen timber by duck hunters for provision of firewood and deliberate burning for control of gorse (*Ulex europaeus*).

Inappropriate fire frequency

The previous owner made regular use of fire as a simple and effective means of controlling gorse on the Reserve. Whilst being effective for limiting the spread of gorse, the intensity and frequency of these fires led to an altered vegetation structure and community present in areas affected by gorse. The past frequency of fires has also caused a reduction in the native seed bank in the soil, by stimulating seed germination then subsequent fires killing the seedlings before they have matured and produced any seed. This will have an ongoing impact on the rehabilitation of these areas.

Disease

Potential exists for the introduction of disease to the reserve, either through natural causes or through visitation and management activities. Two particular diseases have the potential to impact on the conservation values of the reserve, being the root rot fungus *Phytophthora cinnamomi* and the Devil Facial Tumour Disease.

Phytophthora cinnamomi causes dieback and/or death of a wide range of native plant species, particularly those of the Proteaceae, Epacridaceae and Myrtaceae families, including seven species present at the reserve. *P. cinnamomi* is transported via the transfer of infected soil from one place to another, which can be prevented by simply ensuring that items that may carry soil, including vehicles, boots, tents and camera tripods, be washed prior to entering the Reserve.

The Devil Facial Tumour Disease is known in Tasmanian devil populations throughout most of Tasmania. The disease is spread from contact between infected and non-infected animals, and there is no known cure for the disease. It is probable that the devil population at the Reserve have this disease.

Erosion and sedimentation

Some soil erosion is evident on the Reserve, with sheet erosion occurring along the steeper sections of the western slopes of Long Point, and a 10m² area of aeolian erosion on the northern slope of Barkstand Point. It is unknown at present whether these eroded areas are active or stable.

It is likely that existing soil erosion was caused by a combination of factors including stock grazing, vegetation clearance and disturbance and soil disturbance by burrowing animals, including rabbits, Tasmanian devils and wombats. Other sources of soil erosion include inappropriate vehicle use and inappropriate levels of visitation.

Erosion has a secondary impact on the wetlands, by causing sedimentation that may create turbidity, cause harm to benthic fauna and flora, and accelerate successional change in wetland vegetation types.

Acid sulphate drainage

Studies have indicated that the Swansea area near Moulting Lagoon may be at risk of the presence of acid sulphate soils⁷. Acid sulphate soils are pyritic sediments with the potential to generate acid when exposed to oxidizing conditions, which subsequently drains into the environment when re-flooded. Such conditions may occur naturally, such as extended periods without rainfall, or from human activities, such as disturbance of soil or drainage of wetlands. Acid sulphate drainage results in the death of most life forms within the environment surrounding the drainage site.

10. VISITATION

To date, permitted visitation to the Reserve has fallen under two categories: land management activities and donor visits. There is also the potential for visitation to include research activities, education and tourism. Unregulated visitation may also occur on occasion, although the extent of this is not known.

In accordance with the conservation covenant, human occupation of the Reserve is not permitted, except on a temporary basis for the purposes of management, research, or passive recreation. Such occupation is only allowed provided that:

the number of people accommodated on the Reserve at any point in time is limited to a maximum of twenty people for a period of up to two weeks;

- accommodation is in temporary structures;
- all energy needs associated with temporary occupation of the Reserve are met through imported fuel, solar power or wind generators;
- all communication needs associated with temporary occupation of the Reserve are met through remote means (e.g. radio, mobile phone or satellite technology);
- all rubbish generated as a result of temporary occupation is removed from the Reserve for disposal; and
- if and when sewage toilet facilities are constructed on site, solid waste from the treatment process is either removed from the Reserve for disposal or is re-used on the Reserve in a manner that does not threaten the natural values of the Reserve.

The only temporary human occupation of the Reserve permitted is very occasional overnight stays in temporary accommodation (tents) by volunteers and researchers. Such levels of occupation introduce a range of potential threats and management challenges, including fire hazard and disposal of sewage and other wastes. As such, camping on the Reserve will only be permitted as part of officially sanctioned TLC activities and only where the purpose of the activity dictates that it is necessary or desirable to camp on the Reserve.

The existing pit toilet, which was established by duck hunters under the previous owners, is able to cater for low levels of visitation and occasional overnight camping with negligible impacts on the Reserve. Minor construction around the pit toilet may be undertaken to ensure privacy, odour minimisation and hygiene. Where longer

⁷ Gurung, S. (2001) Tasmanian Acid Drainage Reconnaissance. Map 4: Distribution of acid sulphate soils in Tasmania. Mineral Resources Tasmania.

camping stays are required, the placement of temporary toilet facilities that allow for the removal of human waste will be considered.

There is no access to fresh water on the reserve and the nearest fresh water is at The Grange homestead, 5 km from the reserve. Currently drinking water is carried onto the reserve for land management and visitation activities, with extra carried for hygiene purposes (particularly when using poisons for gorse control). The construction of a water tank may be considered in the future if carrying water becomes unfeasible.

A comprehensive Visitation Management Strategy that aims to effectively manage the impacts of different types of visitation has been developed and is attached to this Plan at Appendix 4.

11. ADJACENT LAND USE

Grazing and farming

The main land use surrounding the reserve is grazing, primarily sheep. Pastures are occasionally improved by ploughing and reseeded. In the surrounding district, grazing rates have gradually decreased and landowners have begun to diversify into specialty crops, such as walnuts, olives and grapes.

There has been a varied approach to weed control between adjacent landowners, with some actively reducing the extent of weeds, as in with gorse on The Grange, and others undertaking little or no control.

Moulting Lagoon Game Reserve

The Moulting Lagoon Game Reserve is recognised as an internationally important wetland under the Ramsar convention, for a number of reasons including the fact that it supports a large number of water birds, particularly black swans and Australian shelducks (*Tadorna tadornoides*), at key stages of their lifecycles. The reserve is managed by the Parks and Wildlife Service for its outstanding natural and cultural values, and provide for recreational opportunities. Use of the reserve includes recreation and tourism activities, such as camping, boating, fishing, bird watching and duck hunting. To date there are few tourism ventures actively focused on the lagoon, with tourism in the area tending towards Freycinet National Park.

1.6. Legal Requirements for Management

1.6.1. Covenant under the *Tasmanian Nature Conservation Act 2002*. In keeping with the TLC constitution and conditions of the subdivision approval by Glamorgan-Spring Bay Council (to create a separate title from The Grange), the TLC has placed a covenant over the Reserve aimed at ensuring the protection of its conservation values. Once registered under the Act the covenant has the force of statutory document and binds the TLC to its provisions. The conditions of the covenant have been incorporated into this Plan.

1.6.2. *Tasmanian Threatened Species Protection Act 1995* provides protection to all listed threatened species of which there are eight recorded on the Reserve. It is an offence to knowingly destroy or disturb a listed species without a permit.

1.6.3. Commonwealth Environment Protection and Biodiversity Conservation Act 1999 is relevant due to the proximity of a Ramsar site and the presence of species listed under the Act. Species listed under the Act may be listed as threatened nationally, or may be the subject of an international agreement, such as the Japan-Australia Migratory Bird Agreement (JAMBA) and the China-Australia Migratory Bird Agreement (CAMBA). This Act:

- recognises that Ramsar Wetlands of International Importance and listed threatened and migratory species are matters of National Environmental Significance;
- introduces an environmental assessment and approval regime for actions that are likely to have a significant impact on Ramsar wetlands (and listed threatened and migratory species); and
- provides for improved management of Ramsar wetlands.

The implication of this listing for management is that the TLC cannot take an action that has, will have, or is likely to have, a significant impact on the values without the written approval of the Australian Government Minister for the Environment and Water Resources.

1.6.4. Tasmanian Aboriginal Relics Act 1975 seeks to protect Aboriginal relics from any kind of disturbance from anyone who reasonably knew their activity was disturbing a relic. A permit is required from the Director of the Parks and Wildlife Service to disturb a relic.

1.6.5. Tasmanian State Coastal Policy applies to the Reserve. The three main principles of the policy are:

- natural and cultural values of the coast shall be protected;
- the coast shall be used and developed in a sustainable way; and
- integrated management and protection of the coastal zone is a shared responsibility.

1.6.6. Glamorgan-Spring Bay Council Planning Scheme zones the Reserve as Rural allowing for agriculture and passive recreation, with a variety of discretionary uses including dwelling, outbuildings and tourist operation. The Reserve is further zoned as a Special Area with a 'Wetlands and Waterways' classification, which requires the wetlands be given fundamental consideration for any use or development.

1.6.7. Conditions on funding by the Australian Government's National Reserve System Program. This program provided funding for part of the purchase of the Reserve provided by the Australian Government. This funding is governed by a financial agreement imposing the following important conditions:

- i. The TLC must establish the Reserve as a Private Protected Area for Nature Conservation purposes and must not use the Reserve (or permit the Reserve to be used) for any purpose other than a Protected Area;
- ii. The TLC must enter into a Restrictive Covenant with the State Government that is attached to the Land Title and by which the organisation agrees not to use the Reserve, or allow any other person to use the Reserve, for any purpose other than a Protected Area;

- iii. Management actions must be defined by a Plan of Management that follows principles and standards established by the Commonwealth Department of Environment and Heritage;
- iv. The TLC must not transfer or agree to transfer the Reserve to any party without the agreement of the Commonwealth; and
- v. The Commonwealth will only sanction transfer of the Reserve to another party, whether private or government, under strict conditions ensuring its ongoing protection and management as a Protected Area.

1.6.8. Potential future legal requirements for management

In addition to the Conservation Covenant that has been placed on the Reserve, application will be made to the State to have the Reserve declared a Private Nature Reserve under the *Nature Conservation Act 2002*. This status does not impose any restrictions on the TLC, but imposes restrictions upon the public that are enforceable by the Parks and Wildlife Service. The objective is to ensure that the Moulting Lagoon Game Reserve and the Land can be managed in a consistent manner for conservation.

The TLC will also make an application to have the Reserve included in the Moulting Lagoon Ramsar site. Australia's legal obligations under the *Ramsar Convention* are met through the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

2. Reserve Management

2.1. Overarching Objective

The Reserve was acquired by the TLC with the intention, and with the public expectation, that it be managed in a way that ensures the protection of its natural and cultural heritage features.

Furthermore, the funding received from the Australian Government's National Reserve System to assist with the purchase of the Reserve required that it be managed in accordance with IUCN Category IV: Habitat/Species Management Area. A protected area under this category is managed mainly for conservation through management intervention so as to ensure the maintenance of habitats to meet the requirements of specific species.

The TLC will honour these expectations and, accordingly, has adopted the following overarching objective for the Reserve.

To identify, conserve, assist people to appreciate and, where necessary, restore the Reserve's natural and cultural heritage values, and to ensure these values are passed on to future generations in as good or better condition than at present.

This objective will guide all future management of the Reserve and provides a basis from which more detailed management objectives and prescriptions have been derived.

2.2. Identification, conservation and restoration of values

This section identifies how the TLC will achieve the overarching objective.

The TLC has used a conservation assessment model known as “Conservation by Design”, developed by The Nature Conservancy in the United States, to determine the priority of conservation values. This process determines which values are recognised as ‘Conservation Targets’, becoming the focal points for management of the Reserve.

The conservation assessment model assists in the identification of processes threatening the conservation of each target, and the sources of threatening processes, ranking both of these for each conservation target. The use of this model ensures that the TLC’s limited resources can be directed towards management actions that will deliver the greatest conservation outcomes.

Conservation targets are prioritised based on their regional, State or national significance, using information such as the level of threat to an identified value (at Statewide and/or national scale), habitat value and ecological function. This prioritisation allows comparison between conservation targets across reserves, enhancing the conservation outcomes of available resources. Table 2 outlines the priorities associated with each conservation value.

Table 2: Prioritisation of conservation values

<i>Value</i>	<i>Priority</i>	<i>Justification</i>
<i>Saline vegetation communities</i> (saltmarsh, incorporating succulent saline herbland and saline grassland, and saline aquatic herblands)	Highly significant	Saltmarsh communities are highly productive environments, support an abundant and diverse range of invertebrates and are recognised as having ‘critical ecological function’. These areas form the primary habitat for many species of waterbirds found on the Reserve, and act as a filter for water, sediments and other materials entering the lagoon from the surrounding land. Saline aquatic herblands are also listed as vulnerable under the <i>Nature Conservation Act 2002</i> .
<i>White gum woodland and grasslands</i>	Moderately significant	White gum woodlands and grasslands were present along Long Point and Barkstand Point before a combination of impacts including grazing, rabbits, weed invasion and an inappropriate fire regime led to their demise. These communities provide habitat for threatened species, including Tasmanian devils. This community is identified as under-reserved in the southeast bioregion of Tasmania.
<i>Acacia/Bursaria woodland</i>	Low significance	This community has replaced white gum woodland as they became degraded through previous land use.
<i>Geomorphological features</i>	Highly significant	The geomorphological features of the land are complex and have been identified by geomorphologists as unique in Tasmania. In January 2007 these features were nominated for inclusion on the State Geo-conservation Database.
<i>Threatened species</i>	Highly significant	These species include four plants listed as rare and two animals – the Tasmanian devil and white-bellied sea-eagle – listed as vulnerable, and two animals – the eastern curlew and wedge-tailed eagle – listed as

<i>Value</i>	<i>Priority</i>	<i>Justification</i>
		endangered.
<i>Cultural heritage</i>	Low significance	An Aboriginal cultural heritage survey was undertaken in 2007, which identified no aboriginal places or artefacts on the property. No development is permitted for the Reserve, resulting in a low level of threat to any unidentified cultural heritage features.

The ‘Severity of Threat Source’ rating was determined by an analysis of the likelihood of the threat occurring from a described source, and the probable consequence of that threat upon each conservation target. The matrix in Table 3 was used to prioritise the source of threats and management actions for each conservation target.

Table 3: Matrix for prioritisation of management actions

		Significance of conservation target		
		High	Moderate	Low
Severity of threat source	High	High	Moderate	Low
	Moderate	Moderate	Low	Very low
	Low	Low	Very low	None

2.2.1 SALINE VEGETATION COMMUNITIES

Conservation Significance: HIGH

Saline vegetation communities (saltmarsh, incorporating succulent saline herbland and saline grassland, and saline aquatic herblands) account for 66% of the area (or 256.3 ha) of the reserve. Saltmarsh communities are highly productive environments, support an abundant and diverse range of invertebrates and are recognised as having ‘critical ecological function’. These areas form the primary habitat for many species of waterbirds found on the Reserve, and act as a filter for water, sediments and other materials entering the lagoon from the surrounding land. Saline aquatic herblands are also listed as vulnerable under the *Nature Conservation Act 2002*.

Key threatening processes and sources of threats

Loss of natural biological diversity is the key threatening process to the saline vegetation communities. This can be caused by several sources, which are outlined below.

Trampling of vegetation by grazing stock can result in widespread physical damage to saline vegetation communities, resulting in reduced vegetation cover and the loss of less resilient species. Inappropriate frequency or extent of visitation and vehicle use can also result in physical damage, although this tends to be more localised in extent.

Weed invasion can also result in a reduction of natural biological diversity, by outcompeting native species. Fortunately, the harsh environmental conditions that prevail in salt marshes prevent most plant species from growing and as a result weeds

rarely establish. One significant exception, which is not currently present in Moulting Lagoon, is the highly invasive rice grass (*Spartina anglica*), which has the capacity to establish and completely dominate estuarine areas, including areas of succulent salt marsh.

Alteration of the natural inundation patterns of parts of the saltmarsh ecosystem occurred during previous ownership through the construction of canals and drains, which are still present at the Reserve. Acid sulphate soil drainage may also occur as a result of drying or disturbance of soils, leading to a loss of natural biological diversity. Acid sulphate soils have been detected in low-lying flats in the Swansea area⁸.

Alteration of the natural inundation patterns may also result over decadal scales from changes in climate and weather patterns. Modelling studies on Tasmania's climate have not identified likely changes that would occur on the east coast of Tasmania.

A lack of baseline data providing information about the extent and biodiversity present at the reserve may also result in negative changes to the values of the reserve, e.g. from ill-informed management actions or changes in climate.

Conservation Objective

Determine the condition, extent and biodiversity of the saline vegetation communities by 2008 and maintain or improve these into the future.

Management Actions

Threatening process	Source of threat	Management Action (priority)
Loss of natural biological diversity	Stock grazing	Maintain the grazing-free status of the reserve. (Moderate)
		Monitor the condition of the boundary fence annually, making repairs where necessary. (Moderate)
		Maintain good relationships with neighbouring landowners, to ensure fence lines are maintained in good condition. (Moderate)
	Inappropriate vehicle use	Restrict vehicle use on the Reserve to management purposes only, and only on existing tracks, unless absolutely required elsewhere for management. Maintain a record of highly sensitive sites where no vehicle access is permitted. (High)
		Install signage at the boundary gate and likely landing points informing of management restrictions. (High)
		Ensure all contractors and other visitors are aware of vehicle use restrictions. (High)
	Weed invasion	Develop and implement procedures to minimise the introduction or spread of weeds into the reserve and control weed infestations where these are identified. (High)
		Develop a weed monitoring program to assist with identification of weed establishment or spread. (High)
	Acid sulphate soil drainage	Restrict activities or development requiring soil disturbance in low-lying areas. (Moderate)

⁸ Gurung, S. (2001) Tasmanian Acid Drainage Reconnaissance 2. Distribution of acid sulphate soils in Tasmania. Tasmanian Geological Survey Record 2001/06

Threatening process	Source of threat	Management Action (priority)
	Lack of baseline data on extent, biodiversity and condition	Ensure all management staff and relevant contractors and volunteers are aware of the risk of acid sulphate soil drainage. (Moderate)
		Where soil disturbance is necessary, request that DPIW conduct acid sulphate soil tests prior to disturbing the soil. (Moderate)
		Conduct flora and fauna surveys to establish baseline data on the extent and biodiversity of vegetation communities. (Moderate)
	Inappropriate visitation	Develop and implement a Visitation Management Strategy for the reserve (refer to Appendix 4). (High)
	Alteration of natural inundation patterns	Infill the canals and drains and monitor the impacts to restore natural inundation patterns to saline wetlands. (Very low)

2.2.2. WHITE GUM (*EUCALYPTUS VIMINALIS*) WOODLAND AND COASTAL GRASSLAND COMPLEX

Conservation Significance: MEDIUM

White gum woodlands and grasslands were widely distributed along Long Point and Barkstand Point before a combination of impacts including grazing, rabbits, weed invasion and an inappropriate fire regime led to a severe reduction in their extent and condition. These communities have been replaced by Acacia/Bursaria woodland, with the previously dominant species of *Eucalyptus viminalis* and *Banksia marginata* forming only a minor component. Restoration of the woodland and grassland communities is a priority for management of the reserve.

Key threatening processes and source of threats

Loss of natural biological diversity is the primary threat to the white gum woodlands and grasslands at Long Point Reserve. In the past, this occurred due to land use practices focused on production.

Threats to the white gum woodlands and grasslands complex may occur from a variety of sources, which act in combination to reduce the condition and extent, and therefore the biodiversity of the woodlands. Sources include stock grazing, rabbit grazing and burrowing, inappropriate fire regime, weed invasion, inappropriate vehicle use, lack of baseline data indicating condition, extent and biodiversity, and inappropriate levels or frequency of visitation. Considering the proximity of pastures to the reserve, populations of native herbivores may also increase to unsustainable levels when conditions are favourable, and this may also result in a loss of biodiversity in the white gum woodlands.

Past land use practices have also led to a decline in natural biological diversity, with some previously dominant species, including the white gum *Eucalyptus viminalis* now practically lost from the Reserve.

Conservation Objective

To determine the extent and biodiversity of the white gum woodlands and grasslands by 2008 and improve these into the future, to include at least two age classes by 2012.

Management Actions

Threatening process	Source of threat	Management Action (priority)
Loss of natural biological diversity	Stock grazing	Maintain the grazing-free status of the reserve. (Low)
		Monitor the condition of the boundary fence annually, making repairs where necessary. (Low)
		Maintain good relationships with neighbouring landowners, to ensure fence lines are maintained in good condition. (Low)
	Rabbit grazing and burrowing	Monitor rabbit populations annually and implement population control actions where necessary, with advice from relevant experts. (Moderate)
	Excessive grazing by unsustainable populations of native herbivores	Monitor native herbivore populations annually and, where numbers have increased to sustainable levels, implement population control actions, with advice from relevant experts. (Low)
	Inappropriate fire regime	Develop and implement a Fire Management Strategy for the reserve. (Moderate)
	Introduced weeds	Conduct gorse control activities annually, as per the Gorse Control Strategy, with a view to eradication by 2020 (Appendix 3). (Moderate)
		Develop Reserve Hygiene Procedures to minimise the introduction or spread of disease and weeds into the reserve. (Moderate)
	Inappropriate vehicle use	Restrict vehicle use on the Reserve to management purposes only, and only on existing tracks, unless absolutely required elsewhere for management. Maintain a record of highly sensitive sites where no vehicle access is permitted. (Low)
		Install signage at the boundary gate and likely landing points informing of management restrictions. (Low)
		Ensure all contractors and other visitors are aware of vehicle use restrictions. (Low)
Lack of baseline data on extent, biodiversity and condition	Conduct flora and fauna surveys to establish baseline data on the extent and biodiversity of vegetation communities. (Moderate)	
Inappropriate visitation	Develop and implement a Visitation Management Strategy for the reserve (refer to Appendix 4). (Moderate)	
Loss of genetic diversity	Past land use practices	Rehabilitate the white gum woodlands with local provenance seed stock, maintaining species diversity where this is possible, to compensate for loss of soil seed bank and lack of natural regeneration. (Moderate)

2.2.3. GEOLOGY AND GEOMORPHOLOGY

Conservation Significance: HIGH

The lunettes at Long Point Reserve are complex and unique features in Tasmania and have been nominated for inclusion in the State Geo-conservation Database.

Key threatening processes and source of threats

Only one threatening process, soil erosion, was identified with the potential to negatively impact on the long-term protection of the unique geology and geomorphology of Long Point Reserve.

Sources of soil erosion include stock grazing, rabbit burrowing, vegetation clearance or disturbance, inappropriate vehicle use and inappropriate frequency or extent of visitation.

Conservation Objective

To conserve the geological diversity of the Reserve into the future and understand threatening processes by 2012.

Management Actions

Threatening process	Source of threat	Management Action (priority)
Soil erosion	Stock grazing	Maintain the grazing-free status of the reserve. (Moderate)
		Monitor the condition of the boundary fence annually, making repairs where necessary. (Moderate)
		Maintain good relationships with neighbouring landowners, to ensure fence lines are maintained in good condition. (Moderate)
	Rabbit burrowing	Monitor rabbit populations annually and implement population controls actions where necessary, with advice from relevant experts. (Moderate)
	Vegetation clearance or disturbance	Clearance of native vegetation will only be undertaken when necessary and essential and will be minimised to those activities permitted by the covenant. (Moderate)
	Inappropriate vehicle use	Restrict vehicle use on the Reserve to management purposes only, and only on existing tracks, unless absolutely required elsewhere for management. Maintain a record of highly sensitive sites where no vehicle access is permitted. (High)
		Install signage at boundary gate and likely landing points informing of management restrictions. (High)
		Ensure all contractors and other visitors are aware of vehicle use restrictions. (High)
	Inappropriate visitation	Develop and implement a Visitation Management Strategy for the reserve (refer to Appendix 4). (High)

2.2.4. THREATENED SPECIES

Conservation Significance: HIGH

Threatened species have been identified on the Reserve, and have particular conservation significance. These species include four plants listed as rare- *Wilsonia humilis*, *Wilsonia rotundifolia*, *Melaleuca pustulata* and *Lachnagrostis punicea filifolia*, and three animals – the Tasmanian devil, white-bellied sea-eagle and Tasmanian saltmarsh looper moth – listed as vulnerable, and two animals – the eastern curlew and wedge-tailed eagle – listed as endangered. The TLC has a legal obligation to protect these species and their habitats.

Key threatening processes and source of threats

Loss of natural biological diversity is the key threatening process to threatened species at Long Point Reserve, comprising the actual threatened species, loss of biodiversity in general and loss of habitat.

Threatened species or their habitat may be impacted by unauthorised shooting (of threatened species or their prey), introduced species—including predators (e.g. dogs, cats, foxes), weeds and diseases—and inappropriate levels of visitation. These threatening processes may be compounded by a lack of baseline data on the extent, distribution and condition of threatened species populations.

Conservation Objective

To determine the extent, distribution and condition of threatened species populations on the Reserve by 2008 and maintain these into the future.

Management Actions

Threatening process	Source of threat	Management Action (priority)
Loss of natural biological diversity	Unauthorised shooting	Erect signs at entrance points to the Reserve, including the boundary gate and sites on the foreshore known to be suitable for landing small boats, which advertise the existence of the Private Protected Area and highlight the key regulations of the reserve. (Moderate)
	Introduced species (animals, plants and diseases)	Monitor the presence or absence of introduced predators annually and implement population control actions where necessary, share knowledge with neighbours to determine the presence and abundance of introduced predators and work with neighbours to implement population controls. (Moderate)
		Monitor for the presence or absence of diseases likely to have an impact upon species present at the reserve, e.g. <i>Phytophthora cinnamomi</i> and Devil Facial Tumour Disease. (Moderate)
		Develop Reserve Hygiene Procedures to minimise the introduction or spread of disease and weeds into the reserve. (Moderate)
		Conduct gorse control activities annually, as per the Gorse Control Strategy, with a view to eradication by 2020 (Appendix 3). (Moderate)
	Inappropriate fire regime	Develop and implement a Fire Management Strategy for the reserve. (Moderate)
	Inappropriate vehicle use	Restrict vehicle use on the Reserve to management purposes only, and only on existing tracks, unless absolutely required elsewhere for management. Maintain a record of highly sensitive sites where no vehicle

Threatening process	Source of threat	Management Action (priority)
		access is permitted. (Moderate)
		Install signage at the boundary gate and likely landing points informing of management restrictions. (Moderate)
		Ensure all contractors and other visitors are aware of vehicle use restrictions. (Moderate)
	Lack of baseline data on extent, biodiversity and condition	Conduct comprehensive flora and fauna surveys to establish baseline data on the condition, distribution and extent of flora and fauna present at the Reserve, with a focus on threatened species. (High)
		Maintain records of the presence and distribution of threatened species present at the reserve, and ensure new records are passed on to the Threatened Species Section of the Department of Primary Industries and Water (or relevant State Government department). (High)
	Inappropriate visitation	Develop and implement a Visitation Management Strategy for the reserve (refer to Appendix 4). (Moderate)

2.3. Assist people to appreciate

2.3.1. EDUCATION AND INTERPRETATION

Given that access to the Reserve is limited, few people are likely to have the opportunity of visiting the Reserve directly; therefore information should be provided to the public through means that do not require visitation to the Reserve.

Conservation Objective

To encourage education and interpretation of the Reserve's natural and cultural heritage values.

Management Actions

- i. Utilise the expertise and resources of organisations such as universities, other academic bodies and community interest groups (e.g. Glamorgan-Spring Bay Historical Society or Birds Tasmania) to develop interpretation products in relation to the Reserve's natural and cultural heritage values.
- ii. Encourage interpretation of the Reserve by Aboriginal and historical groups.
- iii. Provide access to any interpretative or educational material that is developed in relation to the Reserve on the TLC website.
- iv. Develop and implement a Visitation Management Strategy for the Reserve (refer to Appendix 4).

2.3.2. RECREATION AND TOURISM

Conservation Objective

Consider limited recreational use including low-impact tourism on the reserve, subject to the outcomes of environmental assessments and risk and cost-benefit analyses that demonstrate the Reserve's conservation values will not be compromised and the TLC will not be financially disadvantaged.

Management Actions

- i. Develop and implement a Visitation Management Strategy, to assess and provide guidelines for all forms of visitation to the Reserve (including management, volunteers, research, education and commercial visitation).
- ii. The Visitation Management Strategy will include guidelines for assessing new visitation proposals, with regard to the extent and impact that the visitation may have on the conservation values of the land, the potential cost/benefit of the visitation proposal to the TLC. In doing this it will consider the:
 - provision of a small low-impact landing facility at the northern end of the reserve, to allow the safe docking of small boats (e.g. kayaks and punts) and the loading and unloading of people and materials to and from the Reserve^{9,10};
 - development of minor structures associated with tracks, to maintain the integrity and safety of those tracks, to reduce the risk of erosion or to contribute to visitor amenity (e.g. minor drains, culverts, foot bridges, duck-boarding, viewing platforms, observation 'hides' or interpretive signs);
 - development of water storage tanks to supply a maximum volume of 25,000 litres¹⁰;
 - construction of toilet facilities to cater for a maximum of twenty adults for periods of up to two weeks¹⁰; and
 - construction of additional infrastructure to support temporary human occupation of the Reserve, provided that such infrastructure does not threaten the natural values of the Reserve¹⁰.
- iii. Erect signs at entrance points to the Reserve, including the boundary gate and sites on the foreshore known to be suitable for landing small boats, which advertise the existence of the Private Protected Area and highlight the key regulations of the Reserve.
- iv. Assess proposals from the tourism sector for low-impact ventures based on and sympathetic to the Reserve's natural and cultural heritage values.
- v. Utilise any revenue generated from commercial activities on the Reserve for the ongoing management of the Reserve.

⁹ Requires consultation with Tasmanian Parks and Wildlife Service

¹⁰ Requires agreement in writing with the Minister, under the conservation covenant

2.4. Management Responsibilities

TLC staff are responsible for undertaking the management of the Reserve. This includes the co-ordination of contractors, consultants and volunteers where they are required to implement the management requirements outlined in this Management Plan. Relevant experts from the TLC Board will also be requested to assist with management wherever possible.

The TLC will endeavour to act as a good neighbour to all parties and, where possible, undertake co-operative or complementary management where both parties seek a similar outcome (e.g. weed control and fire management). Insofar as it is practical, the TLC will ensure that management of the Reserve does not have a detrimental impact on adjoining land or marine areas.

Long-term management costs will be met through an endowment fund raised at the time of purchase and augmented by ongoing fundraising or by applying for relevant grant opportunities as they become available.

2.5. Plan Review

In implementing the adaptive management process identified by the TLC's Reserve Management Policy, progress towards meeting the objectives of this plan will be reviewed at regular intervals not exceeding every two years. Such reviews may lead to minor amendments to the plan.

A full review of the plan will occur at a time no earlier than five years and no later than ten years from the date of publication of this plan. This full review will involve public input prior to the intended publication of a new management plan.

Appendix: Flora species list

Family	Scientific name	Common name	Status ¹¹
VASCULAR PLANTS			
ADIANTACEAE	<i>Cheilanthes sp.</i>	rockfern	
AIZOACEAE	<i>Carpobrotus rossii</i>	pink pigface	
AIZOACEAE	<i>Disphyma crassifolium</i>	round-leaved pigface	
ASTERACEAE	<i>Carduus tenuiflorus</i>	winged thistle	i
ASTERACEAE	<i>Cirsium arvense</i>	creeping thistle	i
ASTERACEAE	<i>Cirsium vulgare</i>	spear thistle	i
ASTERACEAE	<i>Cotula coronopifolia</i>	water buttons	i
ASTERACEAE	<i>Hypochoeris glabra</i>	smooth catsear	i
ASTERACEAE	<i>Hypochoeris radicata</i>	rough catsear	i
ASTERACEAE	<i>Leontodon taraxacoides</i>	hairy hawkbit	i
ASTERACEAE	<i>Microseris lanceolata</i>	yam daisy	
ASTERACEAE	<i>Sonchus oleraceus</i>	common sowthistle	i
ASTERACEAE	<i>Vellereophyton dealbatum</i>	white cudweed	i
BORAGINACEAE	<i>Cynoglossum suaveolens</i>	sweet hounds-tongue	
CAMPANULACEAE	<i>Pratia irrigua</i>	salt pratia	
CARYOPHYLLACEAE	<i>Polycarpon tetraphyllum</i>	fourleaf allseed	i
CARYOPHYLLACEAE	<i>Scleranthus biflorus</i>	twinflower knawel	
CASUARINACEAE	<i>Allocasuarina verticillata</i>	drooping sheoak	
CHENOPODIACEAE	<i>Einadia nutans nutans</i>	climbing saltbush	
CHENOPODIACEAE	<i>Sarcocornia blackiana</i>	thickhead glasswort	
CHENOPODIACEAE	<i>Sarcocornia quinqueflora quinqueflora</i>	beaded glasswort	
CHENOPODIACEAE	<i>Suaeda australis</i>	southern seablite	
CONVOLVULACEAE	<i>Dichondra repens</i>	kidneyweed	
CONVOLVULACEAE	<i>Wilsonia humilis</i>	silky wilsonia	r
CONVOLVULACEAE	<i>Wilsonia rotundifolia</i>	round leaf wilsonia	r
CRASSULACEAE	<i>Crassula sieberiana sieberiana</i>	Australian stonecrop	
CYPERACEAE	<i>Gahnia filum</i>	chaffy sawsedge	
CYPERACEAE	<i>Isolepis cernua</i>	nodding clubsedge	
CYPERACEAE	<i>Ficinia nodosa</i>	knobby clubsedge	
CYPERACEAE	<i>Lepidosperma concavum</i>	sand swordsedg	
CYPERACEAE	<i>Lepidosperma curtisiae</i>	little swordsedg	
CYPERACEAE	<i>Lepidosperma laterale</i>	variable swordsedg	
CYPERACEAE	<i>Schoenus apogon</i>	common bogsedge	
DENNSTAEDTIACEAE	<i>Pteridium esculentum</i>	bracken	
DILLENIACEAE	<i>Hibbertia acicularis</i>	prickly guineaflower	
DILLENIACEAE	<i>Hibbertia procumbens</i>	spreading guineaflower	
DILLENIACEAE	<i>Hibbertia prostrata</i>	prostrate guineaflower	
DILLENIACEAE	<i>Hibbertia riparia</i>	erect guineaflower	
EPACRIDACEAE	<i>Astroloma humifusum</i>	native cranberry	
EPACRIDACEAE	<i>Leucopogon parviflorus</i>	coast beardheath	
EPACRIDACEAE	<i>Lissanthe strigosa subulata</i>	peachberry heath	
EPACRIDACEAE	<i>Monotoca elliptica</i>	tree broomheath	
EUPHORBIACEAE	<i>Amperea xiphoclada</i>	broom spurge	
EUPHORBIACEAE	<i>Poranthera microphylla</i>	small poranthera	
FABACEAE	<i>Bossiaea cinerea</i>	showy bossia	

¹¹ r = rare, v = vulnerable, e = endangered – *Tasmanian Threatened Species Act 2002*; R = rare, VU = vulnerable, EN = endangered – *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*; i = introduced species. Status as of 12 April 2008.

Family	Scientific name	Common name	Status ¹¹
FABACEAE	<i>Glycine clandestina</i>	twining glycine	
FABACEAE	<i>Indigofera australis</i>	native indigo	
FABACEAE	<i>Kennedia prostrata</i>	running postman	
FABACEAE	<i>Medicago lupulina</i>	black medick	i
FABACEAE	<i>Trifolium dubium</i>	yellow suckling-clover	i
FABACEAE	<i>Ulex europaeus</i>	gorse	i
GENTIANACEAE	<i>Centaurium erythraea</i>	common centauray	i
GENTIANACEAE	<i>Sebaea albidiflora</i>	white centauray	
GENTIANACEAE	<i>Sebaea ovata</i>	yellow centauray	
GOODENIACEAE	<i>Selliera radicans</i>	shiny swampmat	
JUNCACEAE	<i>Juncus kraussii australiensis</i>	sea rush	
JUNCACEAE	<i>Juncus pallidus</i>	pale rush	
JUNCAGINACEAE	<i>Triglochin striatum</i>	streaked arrowgrass	
LILIACEAE	<i>Bulbine glauca</i>	bluish bulbine-lily	
LILIACEAE	<i>Caesia parviflora var. parviflora</i>	pale grasslily	
LILIACEAE	<i>Hypoxis hygrometrica var. hygrometrica</i>	golden weatherglass	
MALVACEAE	<i>Lawrenzia spicata</i>	salt lawrenzia	
MIMOSACEAE	<i>Acacia mearnsii</i>	black wattle	
MIMOSACEAE	<i>Acacia suaveolens</i>	sweet wattle	
MIMOSACEAE	<i>Acacia verticillata verticillata</i>	prickly moses	
MYRTACEAE	<i>Eucalyptus viminalis viminalis</i>	white gum	
MYRTACEAE	<i>Melaleuca pustulata</i>	Cranbrook paperbark	r
ORCHIDACEAE	<i>Microtis unifolia</i>	common onion-orchid	
ORCHIDACEAE	<i>Pterostylis sp.</i>	greenhood	
OXALIDACEAE	<i>Oxalis perennans</i>	grassland woodsorrel	
POACEAE	<i>Aira caryophyllea</i>	silvery hairgrass	i
POACEAE	<i>Anthoxanthum odoratum</i>	sweet vernalgrass	i
POACEAE	<i>Austrodanthonia setacea</i>	bristly wallaby-grass	
POACEAE	<i>Austrostipa flavescens</i>	yellow speargrass	
POACEAE	<i>Austrostipa stipoides</i>	coast speargrass	
POACEAE	<i>Briza minor</i>	lesser quaking-grass	i
POACEAE	<i>Bromus hordeaceus</i>	soft brome	i
POACEAE	<i>Deyeuxia quadriseta</i>	reed bentgrass	
POACEAE	<i>Dichelachne crinita</i>	longhair plumegrass	
POACEAE	<i>Dichelachne micrantha</i>	shorthair plumegrass	
POACEAE	<i>Distichlis distichophylla</i>	Australian saltgrass	
POACEAE	<i>Ehrharta distichophylla</i>	hairy ricegrass	
POACEAE	<i>Elymus scaber</i>	rough wheatgrass	
POACEAE	<i>Hemarthria uncinata</i>	hooked matgrass	
POACEAE	<i>Lachnagrostis billardierei billardierei</i>	coast blowgrass	
POACEAE	<i>Lachnagrostis punicea filifolia</i>	narrow-leaf blown-grass	r
POACEAE	<i>Parapholis incurva</i>	coast barbgrass	i
POACEAE	<i>Poa labillardierei var. labillardierei</i>	silver tussockgrass	
POACEAE	<i>Poa rodwayi</i>	velvet tussockgrass	
POACEAE	<i>Themeda triandra</i>	kangaroo grass	
POACEAE	<i>Vulpia myuros f. megalura</i>	foxtail fescue	i
POACEAE	<i>Zoysia macrantha</i>	prickly couch	
PITIOSPORACEAE	<i>Bursaria spinosa</i>	prickly box	
PLANTAGINACEAE	<i>Plantago coronopus</i>	buckshorn plantain	i
POLYGONACEAE	<i>Acetosella vulgaris</i>	sheep sorrel	i
PRIMULACEAE	<i>Samolus repens</i>	creeping brookweed	
PRIMULACEAE	<i>Solanum laciniatum</i>	kangaroo apple	
PROTEACEAE	<i>Banksia marginata</i>	silver banksia	
RESTIONACEAE	<i>Hypolaena fastigiata</i>	tassel roperush	

Family	Scientific name	Common name	Status ¹¹
RESTIONACEAE	<i>Lepyrodia muelleri</i>	erect scalerush	
RHAMNACEAE	<i>Pomaderris elliptica</i>	yellow dogwood	
ROSACEAE	<i>Acaena novae-zelandiae</i>	buzzy	
ROSACEAE	<i>Acaena ovina var. velutina</i>	australian sheeps-burr	
RUBIACEAE	<i>Galium australe</i>	tangled bedstraw	
RUBIACEAE	<i>Galium ciliare</i>	hairy bedstraw	
SANTALACEAE	<i>Exocarpos cupressiformis</i>	native cherry	
SAPINDACEAE	<i>Dodonaea viscosa spatulata</i>	broadleaf hopbush	
SCROPHULARIACEAE	<i>Verbascum thapsus</i>	great mullein	i
SCROPHULARIACEAE	<i>Veronica gracilis</i>	slender speedwell	
SOLANACEAE	<i>Lycium ferocissimum</i>	African boxthorn	i
STYLIDIACEAE	<i>Stylidium graminifolium</i>	grass triggerplant	
THYMELAEACEAE	<i>Pimelea glauca</i>	smooth riceflower	
THYMELAEACEAE	<i>Pimelea humilis</i>	dwarf riceflower	
THYMELAEACEAE	<i>Pimelea linifolia</i>	slender rice flower	
XANTHORRHOEACEAE	<i>Lomandra longifolia</i>	sagg	
NON - VASCULAR PLANTS			
AGARICACEAE	<i>Agaricus sp.</i>	tassel roperush	
CORIOLACEAE	<i>Pycnoporus coccineus</i>	scarlet bracket fungus	
GEASTRACEAE	<i>Geastrum sp.</i>	earthstar	
SCLERODERMATAACEAE	<i>Pisolithus sp.</i>	large puff ball	
XYLARIACEAE	<i>Poronia erici</i>	small dung buttons	

Appendix: Fauna species list

Taxa	Scientific name	Common name	Status ¹²
MAMMALS			
DASYURIDAE	<i>Sarcophilus harissii</i>	Tasmanian devil	v/VU
MACROPODIDAE	<i>Macropus rufogriseus</i>	Bennett's wallaby	
VOMBATIDAE	<i>Vombatus ursinus</i>	wombat	
BIRDS			
ACCIPITRIDAE	<i>Aquila audax audax</i>	Tasmanian wedge-tailed eagle	e/EN
ACCIPITRIDAE	<i>Haliaeetus leucogaster</i>	White-bellied sea eagle	v
ALAUDIDAE	<i>Alauda arvensis</i>	Common skylark	
ALCEDINIDAE	<i>Dacelo novaeguineae</i>	Laughing kookaburra	
ANATIDAE	<i>Cygnus atratus</i>	Black swan	
ANATIDAE	<i>Tadorna tadornoides</i>	Australian shelduck	
ARDEIDAE	<i>Egretta novaehollandiae</i>	White-faced heron	
ARTAMIDAE	<i>Cracticus torquatus</i>	Grey butcherbird	
ARTAMIDAE	<i>Gymnorhina tibicen</i>	Australian magpie	
CACATUIDAE	<i>Calyptorhynchus funereus</i>	Yellow-tailed black cockatoo	
CHARADRIIDAE	<i>Charadrius bicinctus</i>	Double-banded plover	^
CHARADRIIDAE	<i>Charadrius mongolus</i>	Mongolian plover	JAMBA/ CAMBA
CHARADRIIDAE	<i>Charadrius ruficapillus</i>	Red-capped plover	
CHARADRIIDAE	<i>Euseyornis melanotus</i>	Black-fronted dotterel	*
CHARADRIIDAE	<i>Pluvialis fulva</i>	Pacific golden plover	*
CHARADRIIDAE	<i>Vanellus miles</i>	Masked lapwing	
CORVIDAE	<i>Corvus tasmanicus</i>	Forest raven	
DICRURIDAE	<i>Rhipidura fuliginosa</i>	Grey fantail	
FALCONIDAE	<i>Falco berigora</i>	Brown falcon	
HAEMATOPODIDAE	<i>Haematopus fuliginosus</i>	Sooty oystercatcher	*
HAEMATOPODIDAE	<i>Haematopus longirostris</i>	Pied oystercatcher	*
LARIDAE	<i>Larus novaehollandiae</i>	Silver gull	
LARIDAE	<i>Larus pacificus</i>	Pacific gull	^
LARIDAE	<i>Sterna bergii</i>	Crested tern	
LARIDAE	<i>Sterna caspia</i>	Caspian tern	*
LARIDAE	<i>Sterna nereis</i>	Fairy tern	r
MALURIDAE	<i>Malurus cyaneus</i>	Superb fairy-wren	
MELIPHAGIDAE	<i>Anthochaera paradoxa</i>	Wattlebird	
MELIPHAGIDAE	<i>Epthinanura albifrons</i>	White-fronted chat	
MELIPHAGIDAE	<i>Epthinanura albifrons</i>	White-fronted chat	
MELIPHAGIDAE	<i>Manorina melanocephala</i>	Noisy miner	
PARDALOTIDAE	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped thornbill	
PARDALOTIDAE	<i>Acanthiza pusilla</i>	Brown Thornbill	
PELICANIDAE	<i>Pelecanus conspicillatus</i>	Australian pelican	

¹² *Tasmanian Threatened Species Act 2002* – r = rare, v = vulnerable, e = endangered; *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* – R = rare, VU = vulnerable, EN = endangered; JAMBA – Japan/Australia Migratory Bird Agreement; CAMBA – China/Australia Migratory Bird Agreement; * = Of concern ^ = Needs monitoring – Bryant (2002) Conservation assessment of beach nesting and migratory shorebirds in Tasmania; # = Near threatened – IUCN Red List.

Taxa	Scientific name	Common name	Status ¹²
MAMMALS			
PETROICIDAE	<i>Petroica phoenicea</i>	Flame robin	#
PHALACROCORACIDAE	<i>Phalacrocorax carbo</i>	Great cormorant	
PHALACROCORACIDAE	<i>Phalacrocorax melanoleucos</i>	Little pied cormorant	
SCOLOPACIDAE	<i>Calidris minutilla</i>	Long-toed stint	JAMBA/ CAMBA
SCOLOPACIDAE	<i>Calidris ruficollis</i>	Red-necked stint	JAMBA/ CAMBA/*
SCOLOPACIDAE	<i>Limosa lapponica</i>	Bar-tailed godwit	JAMBA/ CAMBA/^
SCOLOPACIDAE	<i>Numenius madagascariensis</i>	Eastern curlew	e/JAMBA/ CAMBA
SCOLOPACIDAE	<i>Numenius phaeopus</i>	Whimbrel	JAMBA/ CAMBA/*
SCOLOPACIDAE	<i>Tringa nebularia</i>	Common greenshank	JAMBA/ CAMBA/^
REPTILES			
AGAMIDAE	<i>Rankinia diemensis</i>	Mountain dragon	
SCINCIDAE	<i>Tiliqua nigrolutea</i>	Blotched blue tongue lizard	
INVERTEBRATES			
ACRIDIDAE	<i>Phaulacridium vittatum</i>	Wingless grasshopper	
ACRIDIDAE	<i>Tasmaniacris tasmaniensis</i>	Tasmanian grasshopper	
ARANEIDAE	<i>Austrocanthua sp.</i>	Christmas spider	
ARANEIDAE	<i>Eriophora transmarina</i>	Garden spider	
BOMBYLIIDAE	<i>Comptosia ocellata</i>	Bee fly	
CHIRONOMIDAE	<i>Chironomus sp.</i>	Midge	
CICADIDAE	<i>Diemeniana euronotiana</i>	Yellow spot cicada	
CRAMBIDAE	<i>Hednota relatalis</i>	Grass moth	
GEOMETRIDAE	<i>Dasybela achroa</i>	Saltmarsh looper moth	v
MANTIDAE	<i>Tenodera australasiae</i>	Purple-winged mantid	
NYMPHALIDAE	<i>Heteronumpha merope</i>	Common brown butterfly	
NYMPHALIDAE	<i>Junonia vilida</i>	Meadow argus butterfly	
POMPILIDAE	<i>Cryptocheilus sp.</i>	Spider wasp	
SCARABAEIDAE	<i>Anoplognathus suturalis</i>	Christmas beetle	
TABANIDAE		March fly	
INTRODUCED SPECIES			
	<i>Oryctolagus cuniculus</i>	European rabbit	i
	<i>Felis catus</i>	Cat	i
	<i>Mus musculus</i>	House mouse	i

Appendix: Long Point Reserve Gorse Control Strategy

2008 Review

Aim

The aim of the strategy is eradication of gorse (*Ulex europaeus*) from the Long Point Reserve.

Intermediate objectives

- First treatment of all mature gorse plants on the Reserve by September 2010.

Limitations on achieving aim and objectives

Methods used for gorse control must cause only minimal harm (if any) to the landscape, biodiversity and water quality of the Reserve and the surrounding Moulting Lagoon Game Reserve.

History of gorse management on the Reserve

Under the previous owner the principal means of gorse control on Long Point was patch burning of mature plants. This management regime was effective in reducing biomass in the short term, but not effective in preventing the spread and establishment of gorse within the Reserve.

The gorse spider mite (*Tetranychus lintearius*) was introduced in Tasmania as a biological control agent in 1998 and was established on the Reserve at the time of purchase by the TLC. The mite can reduce the vigour of affected plants and prevent seed set, but its effectiveness is highly variable depending on seasonal and other environmental factors.

Volunteers have been used to varying effect in past seasons. During 2004/2005 Conservation Volunteers Australia (CVA) conducted several gorse control trips to Long Point Reserve. The method used was cutting and painting with glyphosate and included the use of a brush-cutter for initial clearance at some sites. The areas targeted by CVA were not well documented and the outcome at known work sites has varied from about 50-100% mortality.

Other volunteer activities have included 10 continuous days of cut-and-painting by volunteer groups arranged by International Student Volunteers and single days of cut-and-painting by staff from the Vodafone call centre at Kingston. Longer volunteer trips significantly increase the amount of gorse a group can control per day, assuming that sites selected for work are appropriate for cut-and-paint. Due to the time constraints of having to travel to the Reserve and back to Hobart on the same day, very little was achieved by Vodafone teams.

The presence of a TLC staff member to direct and work alongside volunteer teams also increases the direct effort put in by volunteers, by providing context and encouragement. Future volunteer trips should be directed by a TLC staff member, with those arranged by other volunteer organizations also supplying their own team leader.

The distribution of gorse on the Reserve prior to the implementation of this strategy (Jan 2006) was approximately 49.9 ha (Figure 1).

Control methods

A range of control methods was considered in the design and planning of this strategy. Two methods were identified as the most suitable and effective for control of gorse on Long Point: 'spot spraying' with piclorum/triclopyr (eg 'Grazon') and 'cutting and painting' with glyphosate (eg 'Roundup'). While these two methods form the basis of the control strategy, the TLC may consider using other control options in future (eg on a trial basis or in unique, site-specific circumstances).

The criteria for deciding where and when spot spraying will be used are listed below. Those areas not considered suitable for spot spraying will be controlled by cutting and painting. Initially, professional contractors will conduct gorse spraying on the Reserve, but the TLC may consider the purchase of its own spray unit in future. Cutting and painting will be undertaken using teams of volunteers.

- Spraying will only be used in areas where it can be employed efficiently. This is a factor largely of the height and density of the gorse bushes and decisions about suitable areas will be made in consultation with the spraying contractor.
- Spraying will only be used where it will have minimal (if any) off-target impact on native species. The spraying contractor has the ability to spray around native shrubs provided that they are visible and are not in very close proximity to gorse plants. To limit off-target impacts, spraying will not be conducted in areas where native shrubs occur under or in close proximity to gorse bushes or in areas where the density of gorse bushes affects the ability of the contractor to identify and avoid native shrubs.
- Spraying will only be used where there is minimal (if any) risk of herbicide entering the surrounding environment. "Grazon" is a residual and relatively persistent herbicide that is specific to woody plants and is "rain fast" within an hour of application. Although there is no evidence to suggest a specific threat associated with use of Grazon at Long Point, it can be mobile in sandy soils and it is reasonable to assume that there could be a negative impact on species within the salt marsh if there is spray drift or leaching into the surrounding environment. To minimise this potential, spraying will only be undertaken within grassland and woodland areas by trained operators during dry and still conditions and will not be undertaken in proximity to any standing water.

The areas designated for control by spot spraying and cutting and painting are illustrated on the map at Figure 2. Those areas identified as requiring further assessment have not been surveyed with the spraying contractor and a decision about the best method of control in these areas will be deferred until a proper survey has been conducted.

Flexibility and review

The factors governing the suitability of spot spraying are subject to change over time and the strategy will need to be flexible in its application and subject to regular review.

The spray contractor has had clear instructions to leave any areas designated for spraying if he has any concerns about the efficiency of operation or off-target impacts. This instruction must be clearly and consistently applied into the future.

A survey will be undertaken each year prior to any further spraying to gauge any physical changes to the gorse and the extent of any natural regeneration of native shrubs in or around the gorse. These surveys will initiate an official review of this strategy each year.

Gorse control during autumn 2006-2008

SPOT SPRAYING

Spot spraying of gorse on the Reserve has been conducted during autumn of 2006 - 2008 by weed contractor Rod Bowerman using a vehicle mounted spray unit with twin, radio-controlled retractable hose reels. The amount of gorse sprayed during this period is illustrated in Figure 3 and summarized in Table 1 below.

Table 1: Spraying efficiency

Year	Area sprayed (ha)	Approx. time efficiency (ha/day)	Approx. cost to TLC	Approx. cost/ha
2006	12.5	1.25	\$11,578	\$926
2007	5.9	0.95	\$8000	\$1355
2008	4.1	0.82	\$8241	\$2010

CUT AND PAINT

Gorse control by cutting and painting was undertaken by three teams of International Student Volunteers (ISV) for 2 weeks each during winter 2006 and two teams each during winter 2007 and 2008. The amount of gorse cut and painted during this period is illustrated in Figure 3. ISV pays TLC to supply accommodation, food and transport for the team; increasing efficiency in budgeting for these groups has minimised the costs associated with gorse control. Volunteer groups arranged by TLC incur costs of around \$500 per day, whilst CVA generally charges between \$500 and \$650 per day (plus TLC staff costs of \$250/day). The amount of gorse cut-and-painted during this period is illustrated in Figure 3 and summarized in Table 2 below.

Table 2: Cut and paint teams efficiency

Year	Total # people/days	Area controlled (ha)	Approx. time efficiency (ha/person day)	Approx. cost to TLC	Approx. cost/ha
2006	305	1.41	0.0046	\$2600	\$1850
2007	90	0.43	0.0047	\$165	\$383
2008	133	0.65	0.0048	\$0	\$0

Comments

Costs of spraying have increased significantly per ha over the past three seasons, due to two unrelated factors. The easiest areas of gorse to spray were controlled in 2006, leaving progressively more difficult areas for subsequent seasons, thereby increasing the labour costs per hectare. Furthermore, herbicide costs have risen dramatically over the past three years, therefore decreasing the area able to be sprayed per hectare. This pattern fits with an industry-recognised trend that sees an increase in costs corresponding negatively with weed infestation size.

Recommendation

Be aware of the increasing costs of spraying, taking care to increase funding requests where possible to maintain a minimum sprayed area of gorse each year.

During this same period, cost to TLC of hosting cut-and-paint teams has decreased dramatically. This is due to the use of ISV teams, who compensate TLC for volunteer accommodation, transport and food costs. Increased cost efficiency has also been achieved through minor changes to accommodation and transport, and also by gaining a better understanding of the costs involved in hosting cut-and-paint teams, thereby allowing TLC to better estimate budgets and recover these costs from ISV. The low operating costs are also assisted by accommodating the volunteers in the shearer's quarters at The Grange, at minimal cost to TLC due to the Cotton family's generosity.

Recommendation:

Continue to utilize ISV teams to cut-and-paint gorse, taking care not to over-extend the use of the shearer's quarters accommodation at The Grange.

The physical effort involved in cut-and-painting the gorse infestation along the western boundary (fenceline) of the reserve are significant, due to the prevalence of multi-stemmed gorse bushes resulting from frequent fire intervals in the past.

Recommendation:

Review the need to cut-and-paint this area, which was initially proposed due to the recorded presence of a rare grass species. Other options that may be considered include spraying, or burning to reduce the mass of gorse, followed by spraying re-growth after a three-year period. This review will be conducted with relevant botanists and ecologists, where possible including those botanists that initially developed this strategy.

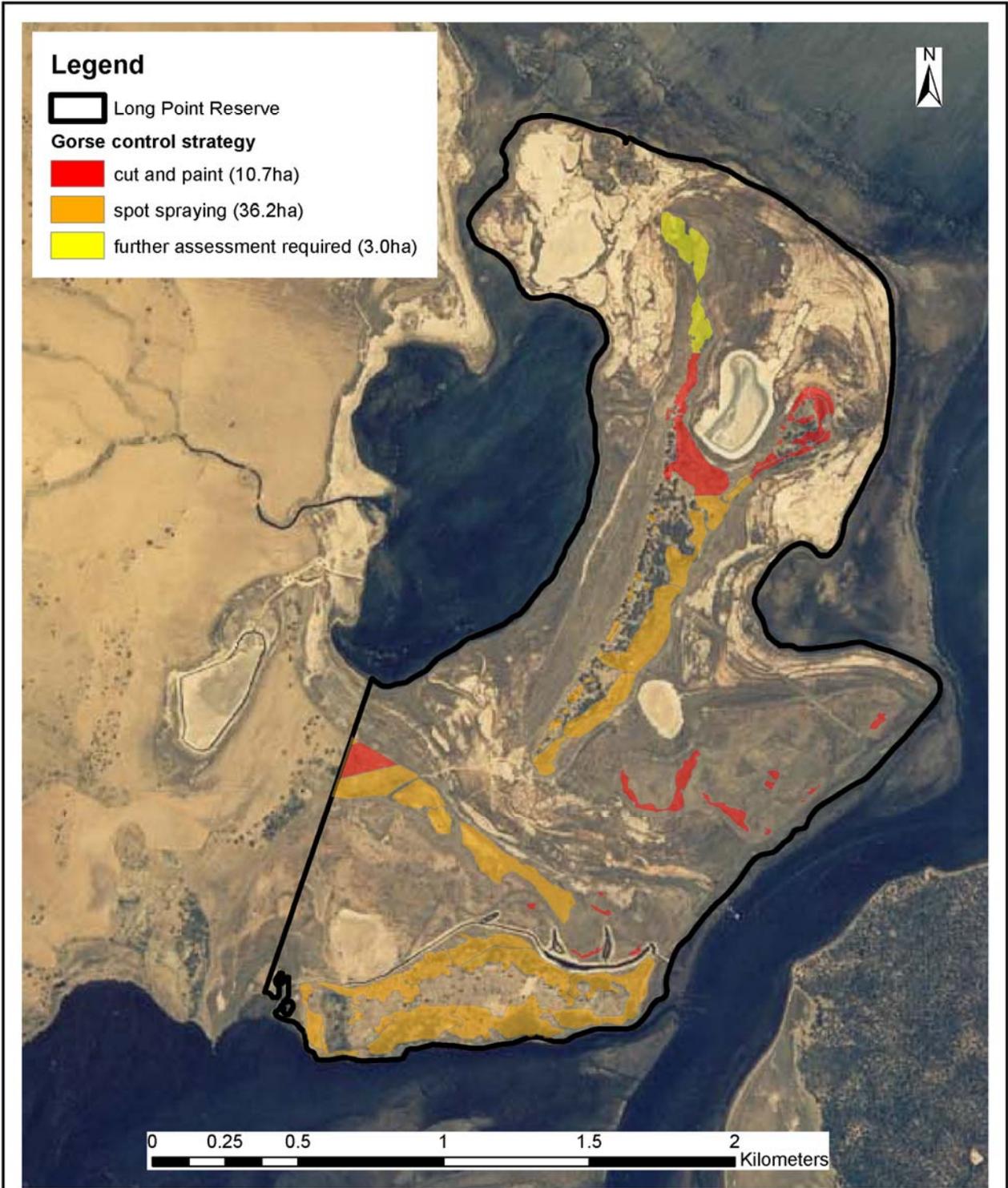


Long Point Reserve Gorse Distribution at Jan 2006

Tasmanian Land Conservancy Inc.
30 May 2006



Base layers supplied by LIST
Base images supplied by TASMAR

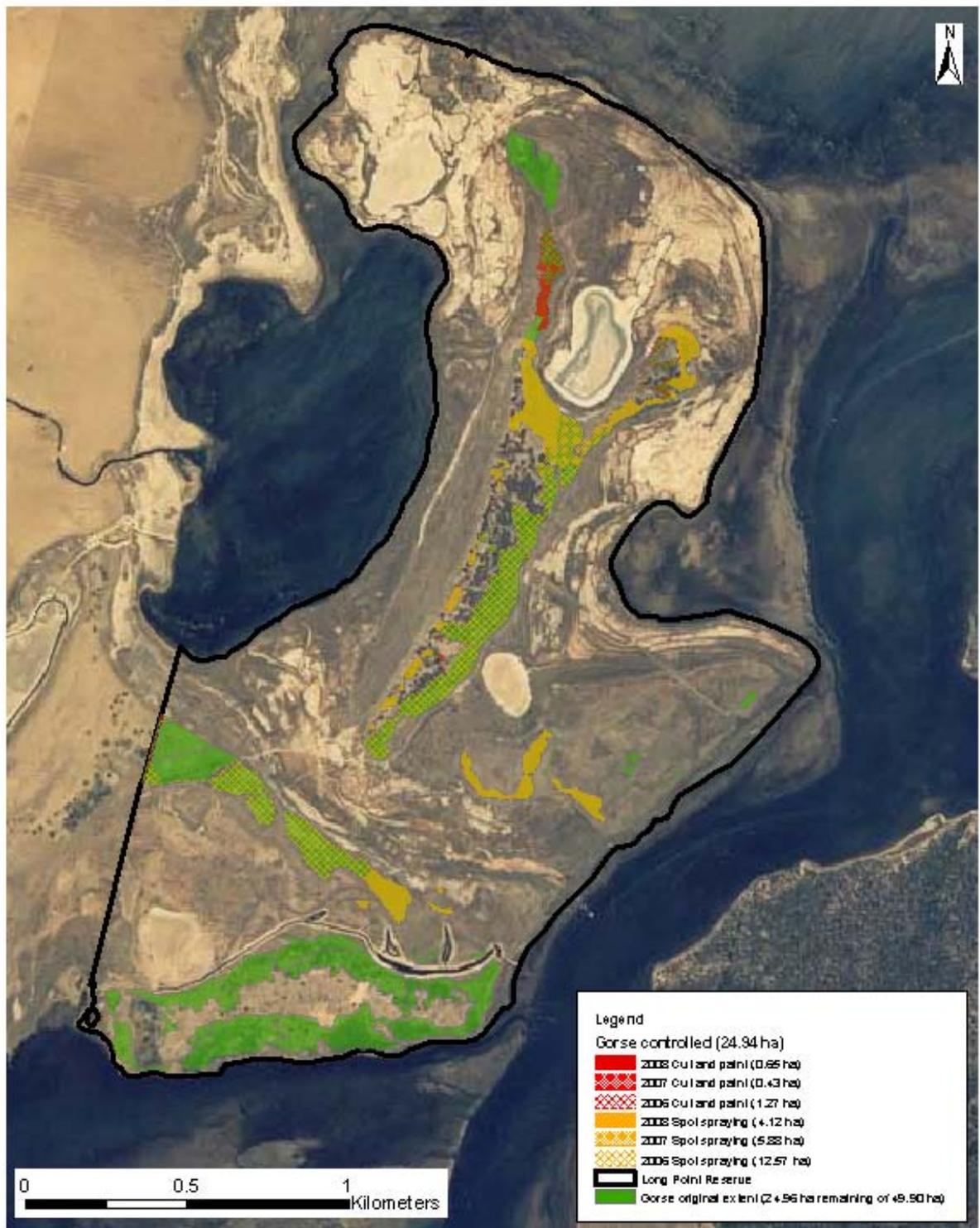


Long Point Reserve Gorse Control Strategy

Tasmanian Land Conservancy Inc.
30 May 2006

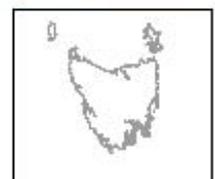


Base layers supplied by LIST
Base images supplied by TASMAR



Long Point Reserve Gorse Control Progress

Tasmanian Land Conservancy
25 August 2008



Base data supplied by LRS
Base images supplied by FASMAP

Appendix: Long Point Reserve Visitation Management Strategy

December 2007

1 Background

Visitation is required for the management of the Reserve, and may also bring associated benefits to the TLC or to visitors, e.g. an additional income stream, stronger relationships with TLC donors or by enhancing the public's appreciation and understanding of the environment. However, visitation can also pose a threat to the conservation values of Long Point Reserve. As such, visitation needs to be effectively managed to minimise this potential threat.

Long Point Reserve is relatively remote, with access either by land or water. Vehicle access is by a rough dirt track via the neighbouring farm 'The Grange' that is difficult and potentially dangerous to negotiate when wet. The TLC has agreed to provide advance notification to the owners of The Grange of our use of this track and to limit use of the track wherever possible. In addition, vehicle access on the Reserve is restricted to essential management purposes only. Boat access is via Moulting Lagoon, which is known for its shallow, tidal waters that make boating difficult.

Restrictions on activities that may be undertaken on the reserve are imposed by the conservation covenant attached to the land title, which are in place to protect the conservation values present at the Reserve. These restrictions are described in the Long Point Management Plan.

Permitted visitation to Long Point Reserve has, to date, fallen under two categories: reserve management activities and donor visits. There is also the potential for visitation to include research activities, education and tourism. Unregulated visitation may also occur on occasion, although the extent of this is not known.

2 Scope of this document

This Strategy is based on information provided in the Long Point Management Plan and the knowledge of the reserve developed by TLC staff since the property was purchased. The Strategy follows guidelines provided by the TLC Visitation and Tourism Policy (2007), which should be read in conjunction with this document.

This Strategy deals with the types of visitation that occurs, or may occur in the future, at Long Point Reserve, with reference to the Management Objectives outlined in the Long Point Management Plan. The Strategy then assesses the risks posed to the conservation values of the reserve resulting from specific activities that may be undertaken on the reserve by visitors. Guidelines are provided to manage these risks to prevent or minimise damage to the conservation values of the reserve.

Specific activities associated with visitation are considered by this document, however it should be noted that these considerations may not cover all types or levels of visitation that may be proposed in the future. Where a type or level of visitation is proposed that is not specifically covered by this document, an impact assessment should be conducted by TLC staff and/or relevant experts.

For the purpose of this strategy, visitation is defined as any individual or group of people that access the Reserve. This includes TLC staff, contractors, volunteers, TLC supporters, education and interest groups, the general public and commercial/tour groups.

3 Aim

To provide adequate guidelines for types of permitted visitation to Long Point Reserve, to ensure that such visitation causes a minimal level of damage or disturbance to the conservation values of the reserve.

4 Intermediate objectives

To determine the types of visitation that should be permitted or excluded from Long Point Reserve, and provide thresholds for the level of acceptable impacts that may result from specific types of visitation to the reserve.

5 Limitations on achieving aim and objectives

Lack of knowledge of the specific conservation values of the reserve.

Lack of knowledge on the potential impacts that visitation may have on the conservation values of the reserve.

6 Visitor Management

All visitation to Long Point Reserve must fit within the constraints and guidelines of the Management Plan and conservation covenant. Visitation should also work towards achieving the management objectives listed in the Management Plan, or otherwise provide definite and tangible benefits to the TLC.

6.1 MANAGED VISITATION

Managed visitors are those who visit reserves in an organised way and are provided information about appropriate behaviour. These visitors may be unaccompanied or accompanied as part of an organised tour run by TLC or a third party. In maintaining a good relationship with the owners of The Grange, use of the vehicle track for purposes not associated with management activities is discouraged. The most viable alternative is by water, via Moulting Lagoon, however the shallow, tidal waters of the lagoon make boating difficult and repeated landings may cause erosion and damage to the shoreline vegetation.

6.1.1 Visitation for Reserve Management

Opportunities, costs and benefits

Access to the reserve for management purposes is required to achieve the objectives of the Management Plan. Access for such purposes may be required by TLC staff, contractors or volunteers. The use of volunteers to assist in reserve management work provides opportunities for TLC supporters and the general public to become closer to the TLC through involvement in the management of the reserve.

Unaccompanied access for management purposes may result in unintentional damage to the conservation values of the reserve, personal injury or damage to equipment, due to a lack of knowledge of access requirements, appropriate behaviour and basic risks present at the reserve.

Some reserve management activities may be poorly perceived by sections of the public. Therefore, reserve management activities must be carefully managed in the public eye to ensure that management actions are well supported by scientific research and are solely undertaken to achieve the objectives of the Management Plan.

Operational prescriptions

- Visitation for reserve management is at the direction and discretion of the TLC Reserve Manager for the purpose of implementing the Management Plan.
- All visitation for reserve management purposes unaccompanied by TLC staff must have written permission from the TLC Reserve Manager.
- Maximum number of visitors to the reserve must not exceed 20 people at any one time.
- All visitors must be fully aware of the access requirements, appropriate behaviour and basic risks present at the reserve. This will be in the form of signage installed at the entrance points of the reserve, and a brief document or verbal briefing provided by the TLC Reserve Manager.

6.1.2 Research

Opportunities, costs and benefits

Research and monitoring may be required to achieve some of the objectives of the Management Plan. Access to the reserve may also be requested by those conducting scientific research that may or may not work towards achieving the objectives of the Management Plan.

Research and monitoring can be difficult and expensive for the TLC to undertake, it may also be required to achieve the objectives of the Management Plan. Allowing scientists access to the reserve for research purposes can provide an economical alternative to undertaking research and monitoring in-house, and provide improved scientific credibility for the management of TLC reserves.

Unaccompanied access for research purposes may result in unintentional damage to the conservation values of the reserve, personal injury or damage to equipment, due to a lack of knowledge of access requirements, appropriate behaviour and basic risks present at the reserve.

Operational prescriptions

- Visitation for research purposes should assist the TLC to achieve at least one management objective of the Management Plan.
- Visitation for research purposes will have minimal financial costs to the TLC, including staff time, wherever possible.
- All visitation for research purposes unaccompanied by TLC staff must have written permission from the TLC Reserve Manager.
- Maximum number of visitors to the reserve must not exceed 20 people at any one time.
- Researchers wishing to visit the reserve must allow 30 days for the TLC to decide on whether visitation will be permitted
- All visitors must be fully aware of the access requirements, appropriate behaviour and basic risks present at the reserve. This will be in the form of signage installed at the entrance points of the reserve, and a brief document or verbal briefing provided by the TLC Reserve Manager.

6.1.3 TLC donor visits

Opportunities, costs and benefits

TLC donor visits encourage education and interpretation of the Land's natural and cultural heritage values, can be considered as recreational use, and may have minor benefits in developing and maintaining cooperative relationships with neighbouring landholders.

Donor visits involve groups of around ten TLC supporters guided by TLC staff visiting a reserve for the purpose of the TLC developing relationships with individual donors. Visits to TLC reserves provide donors with a tangible connection to the work of the TLC, and provide a high level of interpretation and information on reserve management. Donor visits have in the past been infrequent however there are significant opportunities for increasing the frequency of donor visits to Long Point Reserve.

With the small group numbers and presence of TLC staff, donor visits pose little risk to the conservation values of the reserve. However, some reserve management activities may conflict with the objective of TLC donor visits. Therefore, donor visits should be co-ordinated with management activities to ensure that no conflicts arise.

Operational prescriptions

- Visitation by TLC donors must be co-ordinated with the TLC Reserve Manager to ensure that no conflicts arise between visits and reserve management activities.

- Maximum number of visitors to the reserve must not exceed 20 people at any one time.
- All visitors must be fully aware of the access requirements, appropriate behaviour and basic risks present at the reserve. This will be in the form of signage installed at the entrance points of the reserve, and a brief document or verbal briefing provided by the TLC Reserve Manager.

6.1.4 General public

Opportunities, costs and benefits

General public access has only a low capacity to meet three of the objectives of the Management Plan, and requires a high level of on-site interpretation. Such interpretation requires either accompaniment by TLC staff or the installation of infrastructure. These options result in a significant expense for the TLC, both in terms of staff costs and in the installation and maintenance of infrastructure. This type of managed visitation may provide enhanced opportunities for public relations in the east coast area, with the possibility of converting some visitors to TLC donors.

Formal unaccompanied access to the reserve may result in unintentional damage to the conservation values of the reserve and personal injury, even with background information provided to visitors about the access requirements, appropriate behaviour and basic risks present at the reserve.

Operational prescriptions

- Unaccompanied access by the general public will not be encouraged at Long Point Reserve. Any members of the general public wishing to visit the reserve will be directed to the Reserve Manager to discuss alternative options for visiting the reserve (e.g. as volunteers, or as part of donor or education group visits).

6.1.5 Educational groups (schools, universities, clubs and interest groups)

Opportunities, costs and benefits

Visitation by schools, universities, clubs and groups may indirectly meet some objectives of the Management Plan. The collective expertise of these groups may assist in developing background knowledge of the values of the reserve however in past experience this is often in an ad hoc fashion that has limited usefulness for management.

Requests have been made in the past by educational and interest groups wishing to visit the reserve. However, due to the difficulties in accessing the Reserve only one educational visit has occurred.

Operational prescriptions

- Visitation for education purposes should assist the TLC to achieve at least one management objective of the Management Plan.
- Visitation for education purposes will not be permitted vehicle access, unless undertaking activities directed by the Management Plan.
- Visitation for education purposes will have minimal financial costs to the TLC, including staff time, wherever possible.
- All visitation for education purposes unaccompanied by TLC staff must have written permission from the TLC Reserve Manager.
- Maximum number of visitors to the reserve must not exceed 20 people at any one time.
- Educational groups wishing to visit the reserve must allow 30 days for the TLC to decide on whether visitation will be permitted.
- All visitors must be fully aware of the access requirements, appropriate behaviour and basic risks present at the reserve. This will be in the form of signage installed at the

entrance points of the reserve, and a brief document or verbal briefing provided by the TLC Reserve Manager.

6.1.6 Commercial Visitation

Opportunities, costs and benefits

There is potential for commercial visitation to provide opportunities to the TLC to assist with meeting the objectives of the management plan, particularly providing education and interpretation of the reserve and increased opportunities for recreational visits to the reserve. Commercial visitation also adds potential opportunities for additional fundraising, including a regular income stream and increased exposure to a conservation-minded audience.

Commercial visitation has been proposed for Long Point Reserve, in the form of day and overnight visitors accessing the reserve via Moulting Lagoon, focusing on the water birds feeding and breeding at the Lagoon, and day visitors undertaking 'volunteer holidays' accessing the reserve via 'The Grange'.

Costs involved in commercial visitation are difficult to quantify generally, being relatively specific to the parameters proposed in each commercial project. However, costs may include: damage to conservation values of the reserve, and rehabilitation of any damage that occurs; the cost of providing, maintaining or removing facilities provided to support commercial activities; and a potential negative perception by the general public of commercial visitation at the reserve.

Operational prescriptions

- Commercial visitation proposals will be considered on a case-by-case basis by the TLC Board.
- All commercial visitation proposals will be required to undergo an assessment of its potential environmental impact and an analysis of the costs/benefits to the TLC.

6.2 Unmanaged visitation

Opportunities, costs and benefits

Unauthorised visitors access the reserve without first informing or obtaining permission from the TLC. This type of visitor may undertake activities that compromise the conservation values of the reserve either intentionally or unintentionally due to a lack of knowledge of the values, access requirements and appropriate behaviour. Unauthorised visitors may also injure themselves due to a lack of knowledge of the risks present at the reserve.

Unauthorised visitors to Long Point Reserve are unlikely to provide any opportunities or benefits to the TLC. Unauthorised visits do not assist with achieving any of the management objectives of the Management Plan and have significant potential to detrimentally impact on the conservation values of the reserve.

Most unauthorised visitors travelling by vehicle are likely to be deterred from accessing the reserve due to the long right-of-way across the neighbouring farm, The Grange. However, those with permission to access The Grange, e.g. hunters, may intentionally or unintentionally visit the reserve without authorisation from the TLC. Unauthorised visitors may also access the reserve from Moulting Lagoon by boat. The shallow waters of the Lagoon place a practical restriction on most boat activities, which likely minimises the level of water-based unauthorised access. However, unauthorised or spontaneous landing of small boats on the foreshore may occur for a wide range of reasons other than deliberate trespass, including ignorance of the fact that the area is private land; ignorance of property boundaries during high water events; emergency landings due to engine failure, capsize or other emergency circumstances; temporary shelter from extreme weather conditions; and retrieval of wounded or dead birds during duck shooting season.

This type of unauthorised or spontaneous landing of small boats on the foreshore of the Land will be permitted by the TLC provided that it is not having a negative impact on the natural values.

Operational prescriptions

- Unauthorised access will not be encouraged at Long Point Reserve.
- Clear signage should be installed at entry points to the reserve, including information on access requirements, appropriate behaviour and basic risks present at the reserve.
- Advise neighbouring land managers of this policy and develop informal arrangements to report of unauthorised access.
- Consider prosecuting trespassers on the Land where trespass is clearly deliberate and is associated with breaches of the regulations governing the Land.

7 Visitor Impact Management

7.1 GENERAL POLICY

Any decision on public access will be informed by generally by the precautionary principle and specifically by risk and cost-benefit analyses to ensure that such access will not: adversely impact on the Land's natural and cultural heritage values; subject the TLC to unmanageable public liability risk; and involve net financial costs to the TLC.

Given the TLC's limited management resources, any developments to cater for visitors will be restricted and involve only essentially required built infrastructure. Any such developments will only proceed following clearance from a comprehensive assessment of natural and cultural heritage features.

The following regulations apply to all visitors, except with written permission by the Reserve Manager for the express purpose of achieving a Management Objective:

- no camping;
- no lighting of fires;
- no firearms;
- no motorised vehicles or push bikes;
- no introduction of any exotic species, including dogs or other domestic animals;
- no deliberate interference or harm to native vegetation or wildlife.

7.2 ACCESS TO THE RESERVE

7.2.1. Water

Small vessels with shallow draughts are required to prevent damage to the lagoon bottom. Regular planned visits (e.g. by commercial operators) must incorporate solutions to ensure that no damage will occur to the conservation values present along the shoreline or disembarkation area. This may require that a landing point (e.g. pontoon or jetty) and walkway be constructed, and that vessel size and approach speed and route be prescribed to prevent erosion and damage to vegetation.

Note: Establishing a specific landing site will not prevent the occurrence of all damage as a result of landing but will localise the area in which this occurs.

7.2.2. Land

Vehicles disturb wildlife and can damage vegetation communities through repetitive trampling or soil disturbance. Vehicles also have the potential to import weed seeds and soil pathogens (e.g. *Phytophthora cinnamomi*) into the reserve. In maintaining a good relationship with the

owners of The Grange, use of the vehicle track for purposes not associated with management activities is discouraged.

No vehicles are permitted beyond the boundary of the reserve except where these are essential for undertaking management or research activities AND where the track is dry. These vehicles are restricted to existing vehicle tracks (see Map 1 attached) except where no other option is available for management purposes.

7.3 Human trampling of vegetation

Trampling of vegetation can occur where the frequency of compaction exceed the capacity of a vegetation type to be trampled. Observations from Long Point indicates that tussock grassland communities have the greatest capacity to withstand trampling, followed by other grasslands and white gum woodlands, with saltmarsh having the lowest capacity. Saltmarsh communities dominated by shrubby glasswort should be avoided at all times, due to the species' poor resilience to trampling. Furthermore, saltmarsh vegetation communities alongside vehicle tracks are often the most impacted, with the surrounding mud encouraging walkers to hop across patches of saltmarsh plants.

Walking routes should wherever possible follow existing vehicle tracks or stay within the tussock grassland vegetation communities.

Where a walking route (not following vehicle tracks or tussock grasslands) will be used frequently, actions will be required to prevent damage to the vegetation communities present along that route. Actions may include altering the walking route daily and individuals fanning out along the walking route, both of which result in only minor damage to vegetation across a broader area.

Where a general walking route is to be used frequently for more than two consecutive months, measures to ameliorate the impact on vegetation communities must be considered, which may include the construction of walking tracks or boardwalks, or alteration of the walking route proposal. Permanent walking tracks must not exceed 12km and must not threaten the natural values of the Land.

Where camping will exceed 40 people nights per year, camping platforms and other infrastructure should be constructed to prevent trampling of vegetation around the camping areas. Three camping areas have been defined at the reserve and are shown in Map 1.

7.4 INTRODUCTION OF WEEDS AND DISEASE

No diseases are known to be present on the Reserve, however weeds are present. Gorse in particular has the capacity to be spread through a lack of equipment hygiene practices. Introduction of weeds and disease is possible directly or indirectly through the transport of infected soil on equipment, such as vehicles, boots, tents, tripods, packs, along with any other equipment brought in from an infected area.

All equipment brought onto the Reserve should be clean of soil and any plant material from weed species. Equipment should also be checked for weed seeds or plant material on leaving the Reserve, to prevent the spread of weeds to other areas. Where the TLC has reason to believe that a disease or weed has been introduced to the Reserve, measures to prevent its spread will be imposed up on all visitors.

7.5 Disturbance of wildlife

All activities undertaken at the reserve should avoid disturbance of wildlife. Where wildlife viewing is the purpose of proposed or existing walking tracks, hides or similar structures will be constructed to avoid disturbance of wildlife.

Overnight activities should similarly avoid disturbance of wildlife, in particular avoiding the disturbance of animals exiting or entering dens or burrows.

7.6 Litter

Litter within the reserve not only impacts on the aesthetics of the area, consequently diminishing the enjoyment visitors derive from the reserve, but may also adversely affect wildlife within the reserve and surrounding areas.

All litter must be carried out with visitors, regardless of the purpose of the visit. Where litter is found by visitors, they should also carry this out with them, if they have the capacity to do so.

7.7 Visitor Safety and Facilities

No formal visitor facilities exist at the Reserve. TLC staff and volunteers visiting the reserve for management purposes use informal facilities, located at the northern end of The Long Point where necessary. These facilities were constructed by duck hunters under the previous owners, and comprise a pit toilet, and two small shacks. These facilities are not suitable for use by large groups or for stays longer than a few days.

Furthermore, there is no access to fresh water on the reserve and the nearest fresh water is at The Grange homestead, 5km from the reserve. Currently drinking water is carried onto the reserve for land management and visitation activities, with extra carried for hygiene purposes (particularly when using poisons for gorse control).

Where activities are proposed that increase the level of visitation, the placement or construction of temporary visitor facilities may be considered if required, including closed-cycle toilets (e.g. composting toilets), water storage tanks, camping platforms, shelters, hides and duckboards. Any placement or construction of facilities must have a demonstrated minimal impact on the conservation values of the Reserve.

8 Access Permission

Permission to access Long Point Reserve must be given in writing by the TLC Reserves Manager, or higher authority within the TLC. Requests for access will be considered in reference to the objectives of the Management Plan and may be refused.

9 Flexibility and review

This Visitation Management Strategy will be reviewed regularly and adapted to new information learned about the conservation values, or threats to these values, present at the Reserve.