

BEYOND THE HORIZON A 30-YEAR CONSERVATION PLAN



October 2018

penguins.org.au



Over the last 50,000 years, our people have adapted to a range of significant changes within their Country... the Bunurong people look forward to working with the Nature Parks to face the challenges of the future.

Womin jeka

Womin jeka (welcome) to Millowl (Phillip Island) this is Bunurong Country and part of Victoria's Kulin nation. All of our Country is highly significant, every square inch, every rock, every leaf, every dune and every artefact. Our ancestors collected an ocean of information about the Island, on every living thing, every tree, every animal and the key to the complex balance of all things, which our people had managed to evolve and sustain. People today are still learning of the complexities of our ancestors.

The coastline of Millowl contains layers and layers of burnt shell (kitchen middens). Some of these layers have gaps of over 1, 000 years between them, where our people eventually sat directly over the same place again, over 1,000 years later, to do the same thing; make fire, cook food, eat together and tell stories. The whole region is connected by thousands of generations worth of tradition, story and song.

Some of our sites were created at a time when our people could look back over Nerm (Port Phillip Bay) to see a grassy plain with the Yarra River winding its way out to sea over a beautiful waterfall.

The connection we have to this land as a result of this long history is not easy to quantify into words, which usually barely begin to scratch the surface, making all attempts to describe its significance to feel understated; this is no exception.

The Bunurong Land Council Aboriginal Corporation [BLCAC] is a large and inclusive organisation that represents Bunurong/Boon Wurrung people, their culture and heritage. We provide a unified voice for our 200 members and support our people's cultural goals and aspirations. Over 2,000 generations of our people have been here before us.

Over the last 50,000 years, our people have adapted to a range of significant changes within their Country. Our stories of the Bay flooding with water, asteroid impacts near Cranbourne, Arthurs Seat once being an Island, volcanic activity in the western suburbs, the great floods, fires and earthquakes all speak of such events. We continue to adapt today reaching high levels of corporate governance and expanding our enterprises

We work with schools, universities, government, shire councils, developers, archaeologists, friends groups, artists, filmmakers, the local community and others in a range of ways to ultimately protect and promote Bunurong/Boon Wurrung culture and heritage. We have a very special relationship with the good folks at Phillip Island Nature Parks, who have respectfully worked together with us for quite some time now. Their unrelenting support has been very humbling for our community. The BLCAC has been involved in and support the Parks 30-year Conservation Plan. We look forward to working with Phillip Island Nature Parks to achieve the positive and necessary goals within it.

Dan Turnbull CEO, Bunurong Land Council

Introduction

Phillip Island Nature Parks (the Nature Parks) is privileged to manage Crown Land that forms part of the traditional lands of the Bunurong and that the Land, Waters and Sea are of spiritual, cultural and economic importance to Aboriginal and Torres Strait Islander Peoples. The Bunurong people referred to Phillip Island as 'Millowl' and this plan refers to this traditional name throughout. Phillip Island (Millowl) is also referred to as 'the Island' which it is commonly regarded within the local community.

Previous conservation initiatives such as the restoration of the Summerland Peninsula and the protection of Little Penguins have set the foundation for ambitious wildlife management programs.

Adjoining neighbours, the local community and partner organisations of the Nature Parks have a deep affection for the many values of the Island's parks and the issues impacting them and like the Island, have their own stories to tell. As the Nature Parks develops and manages areas for flora and fauna, we will ensure that the diverse range of experiences are also upheld and reflected in our work.

Nature Parks boundary

The future in 30 years, delivered by this conservation plan

As many natural areas around the world are starting to show the impacts of climate change, places such as Phillip Island [Millowl] are being acknowledged as providing a haven for flora and fauna.

In thirty years, Phillip Island's flora and fauna will be flourishing despite the effects of climate change and the pressures of an expanding human population and the community. Under the careful stewardship of the Nature Parks, our natural environments will be demonstrating resilience.

Our active management of the natural environment will enable areas to adapt. The Island's landscapes will be drier and the lower lying parts of our coastline, including mangrove tidal shrublands, will have started to move landward as the sea level slowly rises. These marine breeding and feeding areas for numerous species of fish and birds will be accommodated in well-prepared new high tide zones. Similarly, damp melaleuca shrublands will be managed into healthy grassy woodlands.

Homes for our precious wildlife will be maintained, or new ones created.

The sounds of Short-tailed Shearwaters returning to shore will be heard along greater stretches of the Cape Woolamai coastal environment, while later in the evening on the Summerland Peninsula healthy populations of Little Penguins and Eastern Barred Bandicoots enjoy their shared moonlit space as they go about their nocturnal nesting and foraging. With the last of the Island's feral cats gone, (re)introduced threatened species such as the Bush Stone Curlew, have now re-established healthy populations and enhanced the health of our natural ecosystems. Building strong partnerships is an increasingly fundamental aspect of how the Nature Parks works into the future. In particular, close collaboration with our Traditional Owners, local community, Bass Coast Shire Council and the State Government underpins the success of the Island's land and marine conservation programs.

A strong relationship has been formed with the Traditional Owners, which has enabled the Nature Parks approach to land and marine management to be enhanced through the respectful integration of indigenous ecological knowledge.

While out in the ocean environment surrounding Phillip Island (Millowl), collaborations with key stakeholders and the Nature Parks, have led to the protection of the marine ecosystem, safeguarding economic and environmental benefits for Victorians into the future.

The year-round visitors to the Nature Parks are so inspired by the immersive experiences of the natural environments, empowering them to become strong advocates in 'acting for conservation', routinely taking marine, land and water conservation messages home and applying new ideas to their own environments.

Our purpose

To protect nature for wildlife and inspire people to act.

Our Vision

A place where conservation and ecotourism excellence inspire people to actively protect the environment. Crowing up on the Island has instilled a drive for and interest in, the protection and conservation of the natural ecology. Seeing echidnas and wallabies through areas like Oswin Roberts and Rhyll Inlet was a joy and something sorely missed moving to Melbourne. The scientific research that is taking place at the Nature Parks is fantastic and promising for a secure future for the wildlife. As a recent science graduate, it's great to see research playing a major role in the decision making going forward - not just for the environment, but for employment prospects - allowing for new discoveries and the creation of new tools for the community and world in the future. I'm looking forward to sharing the conservation outcomes of this 30 year plan with my family.

Jeremy Maddigan-Wyatt, Monash University science graduate, grew up on Phillip Island



We have developed this plan to ensure resilience and adapt to the challenges of the future

There are few places in Australia that have the unique wildlife, heritage, culture and scenic beauty of Phillip Island (Millowl). The mix of agricultural, urban, coastal, woodland, grassland and marine environments creates a rich sense of place that is loved by locals and visitors alike.

We have developed this plan to drive conservation actions that respect the character of Phillip Island (Millowl), the diversity of its environments, residents, Traditional Owners and visitor values while being adaptable to a changing climate and other pressures over the next thirty years.

Challenges - now and into the future

Since the 1970's, climate change, or the greenhouse effect as it was known, has been discussed in terms of being a future issue. The future is now and climate change is impacting many parts of the world

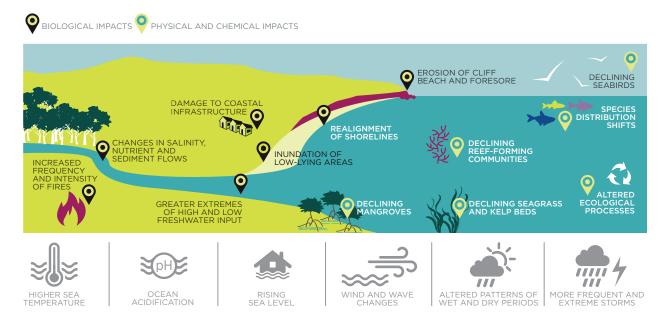
Shoreline environments will be impacted by higher inundation levels and storm surges. Climate change is forecast to have considerable impacts on the land and marine environments of Phillip Island (Millowl) with flow-on effects to our community and local economy.

On land, the slowly drying conditions and declining soil moisture will create changes in plant and wildlife compositions in the natural areas managed by the Nature Parks. Changes to species diversity may also lower the capability of vegetation and wildlife communities to bounce back from shorter-term shocks like fire, drought and floods. Climate change may also speed up or slow down the movement of invasive plants and animals leading to further impacts on our terrestrial biodiversity.

Rising sea levels are likely to cause more extensive tidal inundation of low-lying areas, while an increased reach and force of waves may accelerate cliff, beach and foreshore erosion. The individual or combined effects of higher tidal inundation and wave impact may lead to the realignment of our Island's shoreline.

Increases in ocean temperatures are likely to lead to changes in the marine food-web and in the distribution of marine species – potentially moving southward in search of more appropriate water temperatures.

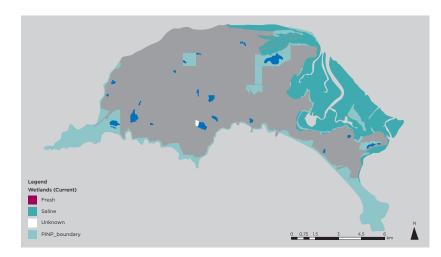
Scientific modelling indicates that over the next 30 to 50 years some of Phillip Island's (Millowl) freshwater ecosystems are likely to become saline or dry out and conditions will no longer support vegetation communities such as swamp paperbark woodlands.



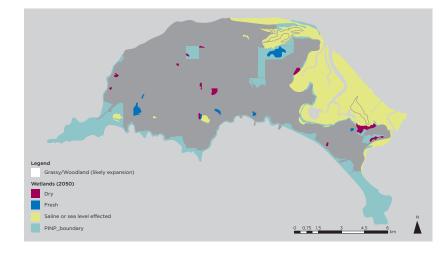
NATURE PARKS

Challenges - now and into the future

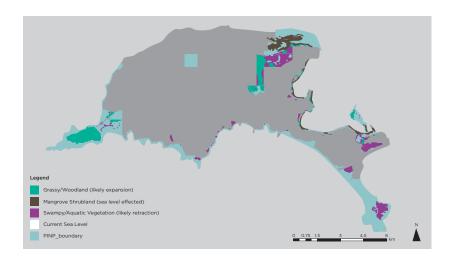
Climate-related challenges to the flora and fauna of Phillip Island (Millowl) are potentially significant. The Nature Parks, through the implementation of this strategy aims to successfully tackle changing conditions and manage our marine and land ecosystems using methods that build resilience to both short-term and the long-term climatic changes in our natural environment.











MAP 3: Predicted native vegetation change by 2050 within the Nature Parks. Grassy woodlands are expected to expand, while swampy or freshwater wetland communities are likely to contract.

Mangrove communities are likely to be affected by sea level rise and are predicted to move inland.



१९

I have lived on Phillip Island for over 60 years and in that time have observed and experienced a greater understanding and appreciation of the Island's natural assets.

As a farmer I am aware of the changing conditions that are occurring with climate change and the impact on the flora, fauna and coastline.

The Conservation Plan provides a way forward to inform about the threats to the natural environment and gives a pathway to ensure a future for the Island's precious attributes, now and into the future.

The Plan will engage with people and empower them to be able to make a difference.

ANNE DAVIE: Phillip Island farmer & conservationist



Context

Our actions over the next thirty years will be critical in preparing the Island to deal with balancing changing climatic conditions and economic growth. For example, hotter and drier weather patterns, increasing extreme weather events, rising sea levels, a growing residential population, tourist pressure, competition from exotic pest plants and animals, marine pollution, and increased fishing pressure.

To help respond to and manage these challenges and create a more resilient Island, the Nature Parks has worked with several agencies and engaged government and community groups to prepare this 30-year Conservation Plan. Success will come as our team collaborates with our Traditional Owners, other scientists, government, local community and environmental management experts to achieve the strategic goals detailed in this plan. Over the three-decade life of this plan, it is our partnership with and support from the community that is vital to full implementation and resilience of Phillip Island's (Millowl) nature and wildlife.

This plan is a strong foundation for the Nature Parks, having a single and ambitious long-term conservation focus, enabling the organisation to play a leadership role and facilitate collaboration, building on the conservation success from the past

This plan supports the Victorian Government's 'Biodiversity 2037', 'Victorian Coastal Strategy', and Victoria's Marine and Coastal Reforms Transition Plan and guides the Nature Parks conservation planning, science and actions.



Eastern Barred Bandicoot released on Summerland Peninsula

९९

Over the 50 years that I have been a member of the Phillip Island community I have witnessed many positive changes which have helped protect and enhance our natural environment.

The creation of Reserves to protect the coast line as well as our native flora and fauna have been wonderfully successful. Parts of Phillip Island are almost unrecognisable from what I remember 50 years ago.

Examples such as the creation of Summerlands Peninsula, the Penguin Parade, the Koala Conservation Centre and Phillip Island being included in the National Surfing Reserve network: along with great efforts of Landcare, numerous community groups and volunteers, have all played a significant role in conserving the Island. One highlight was the repositioning of the Woolamai Beach Road, which saved that beautiful beach from relentless erosion.

This 30-year plan will help make sure our natural environment will be in better shape for our children and grandchildren in 30 years' time than it is now and it deserves the support from us all. I support it and look forward to observing and participating in its roll out.

MATT RYAN: Owner and Co-Founder of Island Surfboards since 1969





Phillip Island's rugged coastline



The endangered Bush Stone Curlew may be re-introduced to Phillip Island

Our operating principles

The Nature Parks has identified five operating principles which underpin all the conservation work undertaken on the Island:

- 1. Developing and using the best available science and technology
- 2. Creating mutual prosperity for nature and people
- 3. Integrating traditional knowledge into the natural and cultural landscape of Phillip Island (Millowl).
- 4. Partnering with the community
- 5. Planning for the impacts of climate change

These principles will shape and guide the way the Nature Parks operates, from the organisation's day-to-day activities, through conducting scientific research, to long-term strategic planning and actions.

Our operating principles

1. Developing and using the best available science

All the Nature Parks work will be informed by the best available science. The organisation's conservation experts will undertake, develop and apply innovative research and technologies to meet the needs of nature and people in a changing world and to stay ahead of new and emerging threats that also include climate change impacts. The effectiveness of all onground work will be monitored as part of an adaptive management cycle, to ensure all the Nature Parks programs are leading to positive on-ground outcomes. The science is shared with others to promote global, evidence-based conservation practices and impacts.

2. Creating mutual prosperity for nature and people

By improving the resilience of the Island's natural environments, the local community will also benefit through increased tourism, new business opportunities and enhanced health and wellbeing of residents and visitors. Where possible, the Nature Parks will give residents, schools, businesses, clubs and other stakeholders opportunities to be involved in the development and implementation of on-ground work.

3. Integrating traditional knowledge into the natural and cultural landscape of Phillip Island (Millowl).

The Nature Parks respects the significant value of traditional knowledge and will ensure collaborative relationships integrate this expertise into applied conservation work. Together with Traditional Owners, the Nature Parks will develop a cultural ecology framework to integrate into conservation planning that, over the life of the plan, will become embedded in all operations.

4. Partnering with the community

The Nature Parks operates within and as part of the Phillip Island (Millowl) community. The organisation understands that the success and longevity of this plan also requires the community to collaborate, support and share the same conservation vision. The Nature Parks will engage with the local community, Traditional Owners, other Victorian residents, and Australian and international tourists, to contribute to planning and delivery, and to share the conservation journey together.

5. Planning for the impacts of climate change

Australia's leading science agency, the CSIRO has warned that climate change is one of the greatest threats to Australia's biodiversity. The effects of climate change on Phillip Island's (Millowl) marine and land environments are already emerging. Over the next three decades, the impacts of climate change are anticipated to drive major threats to the biodiversity of the Island by changing land and wetland habitats, increasing sea-level rise and decreasing freshwater areas.

There are many things that can be done to help nature to adapt more easily to a changing climate. Planning for resilience and responding positively to climate change can be achieved on the Island by controlling pressures from invasive animals and plants and promoting species diversity and genetic variation in native flora and fauna. The Nature Parks will use advanced science to help model the potential dispersal and persistence of biodiversity in response to climate change and identify the best techniques to monitor and measure the effectiveness of management strategies. The Nature Parks will continually adapt conservation actions to best meet the needs of the Island's environment in the future.



Threatened Hooded Plovers are being protected on Phillip Island's beaches

16 PHILLIP ISLAND NATURE PARKS

Themes

Six themes have been framed to inform the Nature Parks conservation planning and management actions over the next thirty years:

Conserving nature for wildlife 1. 2. Working together to protect our marine environments and coastal interface 3. Leading the way as a global conservation organisation Inspiring and engaging people 4. to act Rewilding our island haven 5. 6. Skilled partnerships, key alliances and sustainable funding

These themes will inform the Nature Parks action plans, on-ground work, scientific modelling, community and visitor involvement, investment attraction, budgets and engagement of state governments.

1. Conserving Nature for Wildlife

The Nature Parks will build an understanding of the marine, freshwater and terrestrial environment of all our precious biodiversity. Over the next thirty years, our team will measure and monitor our work, enabling us to learn, change and adapt our management actions, as our natural environments change over time.

The Nature Parks will collaborate with Traditional Owners and the local farming community to use the best available science to manage, improve and adapt habitats for the Island's flora and fauna. The maintenance and improvement of wetlands on Phillip Island (MillowI) is seen as critical for sustaining species in a dryer climate. The Nature Parks will focus on building the resilience of the Island's habitats to assist wildlife and plant communities at risk from climate change.

The future picture:

- Phillip Island's (Millowl) important townships have been maintained within their 2018 boundaries and are fringed by large expanses of agricultural land and nature reserves. The nature reserves are connected through a network of bio-links across public and private land. Mangroves and other coastal habitats have moved inland as the coastline receded through sea level rise and these outcomes were reached through proactive successful partnerships between the Nature Parks, Bass Coast Shire Council and other organisations.
- Woodland, coastal and wetland habitats are thriving across the Island. The thoughtful and scientifically sound manipulation of vegetation has built climate resilience for the flora and fauna that it supports.

- Phillip Island (Millowl) is feral cat free thanks to responsible domestic cat ownership supported by the Island's residents. Weed infestations continue to be diligently eradicated through the co-operation between public and private landowners.
- Our research led conservation management has helped us better understand how we support the local farmers with living with wildlife. Together we have achieved economic and environmental sustainability in the agricultural industry
- Through a strong partnership with Traditional Owners, traditional ecological management has been merged with scientific understanding to create sound and successful environmental outcomes.



Revegetation on Cape Woolamai

Phillip Island NATURE PARKS

2. Working together to protect our marine environments and coastal interface

The Island's marine and coastal environment is home to a diverse array of unique species. We will work with our partners in government to ensure their protection and management under a changing climate - from our muchloved Little Penguins and Australian Fur Seals, to the colourful reef fish, crabs and shellfish, to our plant-life like mangroves which create breeding havens for many of our fish species.

The survival of the Nature Parks key marine wildlife such as Little Penguins, Australian Fur Seals and Short-tailed Shearwaters depends on the quality of habitat and food availability in areas located outside the Nature Parks jurisdiction. To protect these species, the Nature Parks will work with partner agencies to conserve all the different environments these animals use during their lifecycles. In some instances, these environments are currently poor quality or at risk of degradation from threats such as land reclamation, pollution, coastal erosion and the impacts of climate change and ocean acidification.

The Nature Parks will protect these environments by facilitating a collaborative network of national and international managers and partners with a common goal of protecting our marine ecosystem.

The future picture:

- Our marine wildlife and environments have appropriate levels of protection, achieved through a collaborative approach between the Nature Parks working with Commonwealth and State Governments, universities and research institutions. Fishing industries were actively involved in the legislative change and are strong supporters for both environmental and economic reasons. Other negative anthropogenic influences have been reduced or eradicated.
- Reduced local sources of anthropogenic pollution through inter-agency collaboration and augmented by the Nature Parks and community marine education programs.
- Understanding the implications of natural and human induced change in the marine environment.



Using modern technology to study wildlif

BEYOND THE HORIZON: A 30-YEAR CONSERVATION PLAN

3. Leading the way as a global conservation organisation

The Nature Parks is a research led conservation organisation that is internationally recognised and our successful achievements can be shared to inspire and support conservation efforts beyond our boundaries. The work of the Nature Parks will contribute to global initiatives to protect wildlife and their habitats, particularly threatened species.

Through science, education and conservation action the Nature Parks will strengthen our global research standing and capacity to inspire people. Within the next 30 years, the Nature Parks will have invested into becoming an international leader in conservation and is renowned for the expertise and skills which can be applied internationally.

The future picture:

- Our scientists continue to attract recognition for Phillip Island (Millowl) as a global centre for conservation excellence. The Nature Parks scientific expertise is in demand for biodiversity management in a time of rapid change.
- Phillip Island (Millowl) is recognised as a worldwide, exemplary model in coastal habitat protection and renewal. Populations of key and threatened species such as Short-tailed Shearwaters, Hooded Plovers are secured. Our conservation model has been internationally recognised for the way we seamlessly integrate Traditional Owner practice, science and biodiversity management.
- The Nature Parks' internationally recognised penguin research is supporting the global protection of other penguin species. The Nature Parks is proudly partnering with the International Union of Conservation of Nature (IUCN) on an international approach for penguin conservation.



Rewilding the Summerland Peninsula with the critically endangered Eastern Barred Bandicoot





Bull seal at Seal Rocks

4. Inspiring and engaging people to act

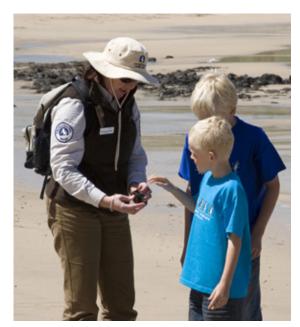
Our engagement, information and education programs on the natural environment at Phillip Island (Millowl) will increase awareness, ensuring residents and visitors are passionate and inspired about the stewardship of our beautiful Island.

The engagement of the children of Phillip Island (Millowl) will be critical to ensure the success and resilience of this plan over the next thirty years and beyond. We will create innovative opportunities for our youth to play an active part in both the development of the science and implementation of this plan.

Phillip Island's (Millowl) land and sea environments, the native wildlife, the agricultural landscapes and world-class beaches exist in harmony with the Island community. The Nature Parks visitor experiences continue to be an internationally recognised ecotourism destination that continues to attract international, interstate and local tourists visiting the Island's natural environments. This presents a unique opportunity to provide highly memorable experiences which inspire people to care and act for nature through innovative behaviour change actions. The Nature Parks is also well positioned to connect with people at a global level, extending the reach beyond the Island's visitors, and engaging with schools and the broader community to also act for conservation.

The future picture:

- Our use of innovative technologies and communication infrastructure has established new paths for virtual visitor relationships while also expanding experiences for the realtime traveller to the Nature Parks.
- The Nature Parks partnership with Traditional Owners has evolved to respectfully and demonstrably act on 'connection to land and sea' through shared roles in conservation management and ecotourism
- Our Island children are custodians of Phillip Island's (Millowl) natural environment and will continue to embed strong conservation values into the future generations.



Discovering marine treasures on Summerland Beach

5. Rewilding our island haven

Australia is experiencing the highest rate of species extinctions of any landmass during the current extinction crisis. With the eradication of pest animals from Churchill Island, the habitat reclamation and restoration of the Summerland Peninsula, and the removal of foxes from Phillip Island (Millowl), the Nature Parks has demonstrated a commitment to continual reduction of threats and the protection of the Island's flora and fauna.

This provides a significant opportunity for Phillip Island (Millowl) to play a key role in preserving the biodiversity of Victoria. One approach to increasing biodiversity is through rewilding. The success of our rewilding programs will require the Nature Parks and the community to work together, and will require maintenance of a fox free Island, the further reduction of existing threats and the ability to anticipate and respond to new emerging threats.

Over the next three decades, The Nature Parks will work with key stakeholders to develop and implement the long-term planning needed to enhance the Island for threatened species conservation. This will help to secure the longterm survival of these species while strengthening the ecological function of ecosystems on Phillip Island (MillowI) and contribute to the Victorian and Australian conservation effort.

The future picture:

- Phillip Island (Millowl is a haven for diverse native flora and fauna and the local community is embracing Living with Wildlife, proudly showcasing the recovery of threatened species to visitors. The Nature Parks has worked in partnership with key stakeholders to remove key threats and has driven the island haven vision according to the environmental, social and economic conditions of Phillip Island (Millowl).
- Through partnerships, the Nature Parks will establish a network of Victorian Island Havens to conserve biodiversity. Rewilding of threatened species on Phillip Island (Millowl) is the leading model for Victorian Island conservation.

Threatened Species Prospectus

With an opportunity to re-introduce threatened species to Phillip Island, the Nature Parks required a robust and defensible approach for determining the most appropriate species. Revolutionary in our approach, we used structured decision making (SDM) as a framework for making logical and transparent decisions. Our team worked closely with Island stakeholders and experts to prioritise a list of potential species that are threatened in our region. We are excited to begin focusing on the reintroduction of the following species.

Rewilding

The planned reintroduction of a plant or animal into a habitat from which it has disappeared to conserve biodiversity and restore the health of an ecosystem.



BUSH STONE CURLEW Regional Status: Endangered Closest found: Central Victoria Main Threats: Foxes, Feral Cats

Photograph by Ryan Francis

The Bush Stone-curlew is a large, slim, mainly nocturnal, ground-dwelling bird. Bush Stone-curlews have a remarkable courtship dance. They have a wide-ranging diet, but prefer to feed on insects, snails, small lizards, seeds and occasionally small mammals. Their well-known call, a haunting high-pitched wail, was last heard on Phillip Island in the late 1970s.



LONG-NOSED POTOROO Regional Status: Near Threatened Closest found: French Island Main Threats: Foxes, Feral Cats

Photograph by Leo Berzin

The Long-nosed Potoroo is one of the smallest members of the kangaroo family. They are mainly nocturnal, resting during the day in nests made of leaves under dense cover. Potoroos have a semi-prehensile tail that the female uses to carry nesting material. Fungi form a large part of their diet, which also includes tubers, soil arthropods, seeds, fruits and vegetation. The last wild Long-nosed Potoroo was seen on Phillip Island in 1980.



GROWLING GRASS FROG

Regional Status: Endangered Closest found: Gippsland Main Threats: Loss and fragmentation of habitat, introduced predators and disease

Photograph by Ryan Francis

The Growling Grass Frog is one of the largest frog species in Australia. The females are almost twice the size of males. They prefer to live amongst reeds, sedges and rushes growing in and along slow moving streams, ponds, lagoons, swamps, lakes and farm dams. They have a unique 'growl' when they call during the warmer breeding months and are indicators of healthy freshwater systems. The last Growling Grass Frog seen on Phillip Island was in 2008.



KING QUAIL

Regional Status: Endangered Closest found: French Island Main Threats: Feral Cats, Foxes King Quail are found in shrub-lands and grasslands, often near coastal areas. They occur in very dense ground vegetation, such as grass, shrubs, ferns, and herbs mostly in damp or swampy sites. They mainly eat grass seeds and green leaf blades but also eat adult and larval insects. They mostly feed during the day but also on moonlit nights.



SWAMP SKINK Regional Status: Vulnerable Closest found: Mornington Peninsula Main Threats: Loss and fragmentation of habitat, Feral Cats, Foxes

Photograph by Jules Farguhar

Swamp skinks, described as 'mini Godzillas', are black and gold with a blue mouth lining. Generally active during the day, they bask and forage in dense, low vegetation up to two metres above the ground. They will readily enter water if disturbed, remaining submerged for considerable periods. Aggressive and territorial, Swamp Skinks will shelter in burrows excavated in peaty soil beneath vegetation, and sometimes utilize the burrows of yabbies and crabs.



6. Skilled partnerships, key alliances and sustainable funding

The complexity of modern conservation management requires strategic partnerships between organisations to be successful. Management of Phillip Island's (Millowl) land, water and marine environments is no exception.

Strong partnerships will be essential for sustaining the future capacity of the Nature Parks and the success of visitor and conservation programs. To enable the Nature Parks to achieve the conservation aspirations set out in this 30-year vision, we will initiate and welcome long-term partnerships, diversify our opportunities to work with stakeholders and focus on sustainable models that will achieve the future picture outlined in this plan. Our capacity to continue to develop collaborative partnerships will build upon the conservation success of the Island and together will share the same conservation goals.

The future picture:

- Successful strategic partnerships have enabled the Nature Parks experts to contribute globally to conservation outcomes.
- The Nature Parks partnership with Traditional Owners has been recognised internationally and led the way for innovative conservation outcomes and authentic quality visitor experiences.
- Our integrated eco-tourism/conservation model has diversified and expanded to include a sophisticated prospectus-based investment program that aligns sustainable initiatives with the private and philanthropic sector.

Penguin release following rehabilitation in the Wildlife Clinic



Staying current for every year of the next 30 years

This plan will be supported by a five-year conservation action plan that is approved by the Board of Management and reported against annually. The vision, science and community support for this plan will be monitored and assessed by the Nature Parks through a review process every five years.

Acknowledgements

Phillip Island Nature Parks would like to thank the following key stakeholders for their participation and significant contribution to the development of this 30 year Conservation Plan.

- Department of Environment, Land, Water and Planning
- Parks Victoria
- Bunurong Land Council
- Victorian Farmers Federation
- Ventnor Coast Care Association
- Phillip Island Landcare
- Destination Phillip Island
- Friends of Scenic Estate Reserve
- Bass Coast Shire Council
- BirdLife Bass Coast
- Silverleaves Conservation Association
- Delaware North
- Phillip Island Nature Parks Staff
- Boon Wurrung
- Westernport Water
- Smiths Beachcomber Association
- Preserve Westernport Action Group
- CFA Bass Coast

30 YEAR CONSERVATION PLAN STEERING COMMITTEE

- Anne Davie Phillip Island Conservation Society
- Deirdre Griepsma Bass Coast Shire Council
- Liz Stinson Phillip Island Nature Parks Scientific Research Advisory Committee
- Robbie Gray, on behalf of Kelie Nichols Bass Coast Landcare Network
- Adam Muir Department of Environment, Land, Water and Planning
- Catherine Basterfield Phillip Island Nature Parks
- Jessica McKelson Phillip Island Nature Parks

Special thanks to our project partner Greening Australia for their invaluable assistance in the development of this 30 year Conservation Plan.

Churchill Island



Phillip Island

Victorian Government policy references

- Victorian Government, Department of Environment, Land, Water and Planning (2017), Victoria's Marine and Coastal Reforms Final Transition Plan
- Victorian Government, Department of Environment, Land, Water and Planning (2017), Victorian Coastal Strategy Implementation Plan
- Victorian Government, Department of Environment, Land, Water and Planning (2017), Protecting Victoria's Environment – Biodiversity 2037

Mapping data references:

- Map 1 Victorian Government, Department of Environment, Land, Water and Planning (2017) Victorian Inventory of Wetlands, accessed online www.data.vic.gov.au/data/dataset/ victorian-wetland-inventory-current
- Map 2 Geosciences Australia (2017) Water Observations from Space, accessed online www.ga.gov.au/scientific-topics/ hazards/flood/wofs/about-wofs
- Map 3 CSIRO and National Climate Change Adaptation Research Facility (2018), AdaptNRM accessed online adaptnrm.csiro.au/home/resources/; Victorian Government, Department of Environment, Land, Water and Planning (2018) Future Coasts Program, accessed online www.data.vic.gov.au/data/ dataset/sea-level-rise-2070-47cm

Climate change references:

- M. Dunlop et al..(2012) The Implications of Climate Change for Biodiversity Conservation and the National Reserve System: Final Synthesis. A report prepared for the Department of Sustainability, Environment, Water, Population and Communities, and the Department of Climate Change and Energy Efficiency. CSIRO Climate Adaptation Flagship, Canberra
- Marsden Jacob Associates (2008) Impacts of Climate Change on Settlements in the Western Port Region;
- P. Dann, L. Chambers (2013) Ecological effects of climate change on little penguins Eudyptula minor and the potential economic impact on tourism, Climate Research, Vol. 58: pp 67-79
- F. Ramírez, I. Afán, L. Davis, A. Chiaradia (2017) Climate impacts on global hot spots of marine biodiversity, Science Advances, downloaded http://advances. sciencemag.org, August 1, 2018
- Vic Roads (2015) Climate Change Risk Assessment
- Victorian Government, Department of Environment, Land, Water and Planning (2016) Climate change vulnerability and adaptive capacity of coastal wetlands. Decision Support Framework – Volume Two.



Mangroves at Rhyll Inlet Wetlands



Phillip Island Nature Parks

PO Box 97 Cowes, Victoria 3922 Australia Tel: +61 3 5951 2820 Fax: +61 3 5956 8394 Email: info@penguins.org.au penguins.org.au