

# Phillip Island (Millowl) Wildlife Plan

Balancing the needs of wildlife  
and the community

Milowl is the Bunurong name for Phillip Island. It is part of the country recognised as being the traditional land and waters of the Bunurong People and is steeped in cultural history dating back tens of thousands of years. We acknowledge the Traditional Owners of the land on which we live, work and learn, the Bunurong People. We pay our respects to their Elders past, present and emerging.



## SUMMARY

Phillip Island lies at the entrance to the bay of Western Port, approximately 140km south east of Melbourne. It is known by its Traditional Owners, the Bunurong, as Millowl and forms part of the Kulin nation with a history dating back tens of thousands of years. Today the Island is a popular tourist destination, due to a range of nature-based experiences and attractions along with boating, fishing, sporting opportunities and national and international motor racing events.

The marine and coastal environment of Phillip Island is home to a diverse array of native species. These include high profile species, such as Little Penguins, which attract thousands of visitors to the Island annually, to the lesser known but equally important species such as Short-Tailed Shearwaters and Hooded Plovers. As a result, Phillip Island's wildlife has become an important part of the community's identity and economy with wildlife encounters contributing significantly to the Island's economy generating revenue, reputation and employment.

However, some species including Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums have increased in numbers on Phillip Island and are impacting negatively on the viability of agriculture predominantly through crop and pasture damage, native vegetation, animal welfare, public safety, buildings, infrastructure and amenity.

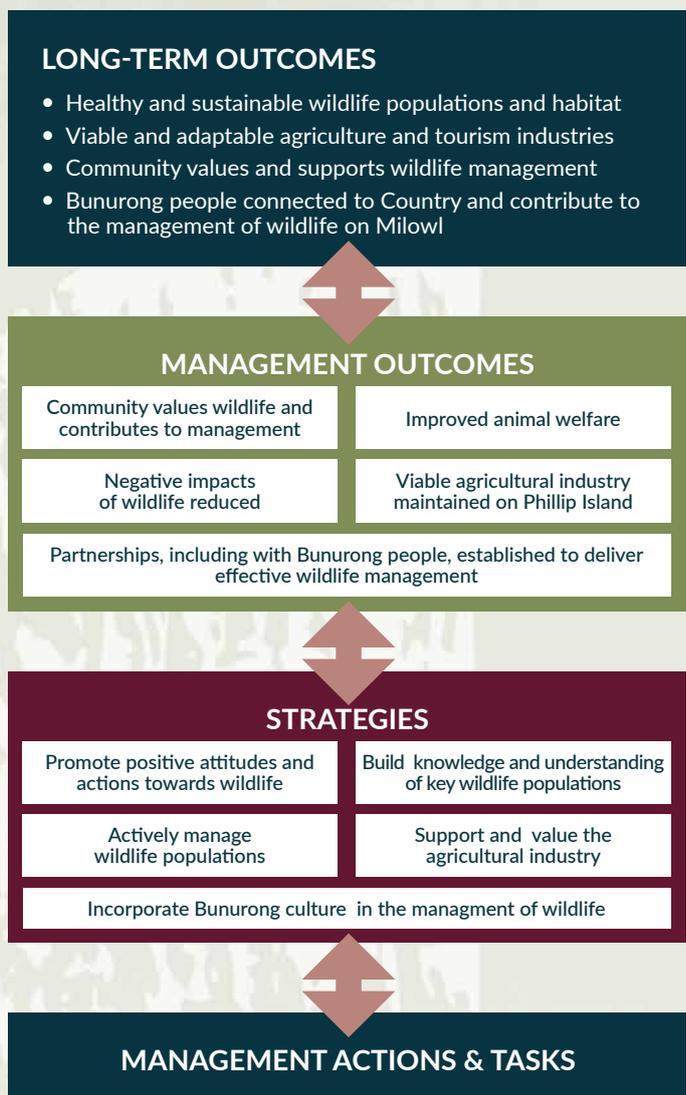
Due to the Island's environment and landscape, wildlife and its management are highly visible and interventions, such as lethal control of abundant native wildlife, can be a point of contention in the community. This plan has been developed in response to the community wanting more effective and alternative methods for managing wildlife.

It has been developed through a collaborative partnership involving Phillip Island Nature Parks (the Nature Parks), Bass Coast Shire Council (BCSC), Department of Environment, Land, Water and Planning (DELWP) and agricultural community representatives. In preparing this plan, we worked closely with the Bunurong Land Council Aboriginal Corporation (BLCAC) to ensure the views and aspirations of Bunurong People were incorporated.

This plan aims to achieve a sustainable population of native species that allows environmental, social, cultural, economic and farming activities to continue on the Island.

Long-term outcomes have been defined in the plan that will be delivered through the supporting management outcomes, strategies and actions. The plan also identifies clear accountabilities for these actions and establishes actions for effective governance, monitoring and review.

The success of the plan will be dependent on community support, participation and ownership of the challenges and solutions for wildlife management.



## DEFINITIONS

The following terms have been defined for the purposes of this plan.

<b>'Addling'</b>	refers to the act of causing fertilised eggs to become infertile without breaking the shell or other outer layer. Methods may include shaking, piercing, freezing or oiling/waxing.
<b>'Alternate control methods'</b>	refers to methods of controlling negative impacts of wildlife that aren't currently used on Phillip Island. Alternate methods will focus on non-lethal methods.
<b>'Community'</b>	is used to describe residents, visitors, groups and businesses who have an interest in Phillip Island.
<b>'Land manager'</b>	refers to someone who administers, maintains and manages a property on behalf of someone else.
<b>'Landholder'</b>	in this plan, landholder refers to someone who owns a property.
<b>'Stakeholder'</b>	those individuals and organisations who will be directly affected by the plan. Examples include interest groups, local businesses and industries (e.g. tourism, agriculture).
<b>'Wildlife management'</b>	is managing wildlife populations and their habitats for the benefit of the community and the wildlife. It can include preservation and restoration of habitat, wildlife recovery programs, fencing to protect or exclude, harvesting and control programs.

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## ACRONYMS

ATCW	Authority to Control Wildlife
BCSC	Bass Coast Shire Council
BLCAC	Bunurong Land Council Aboriginal Corporation
DELWP	Department of Environment, Land, Water and Planning
Nature Parks	Phillip Island Nature Parks

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# 1 BACKGROUND

## 1.1 THE NEED FOR A WILDLIFE PLAN

The distinctive coastal and rural landscapes of Phillip Island support an array of native wildlife and agricultural and recreational activities that are important to the Island's identity as a tourist destination and a place to live. There is conservation and economic value in maintaining the natural environment and open spaces that continue to support Victoria's biodiversity, the local economy and lifestyle. This has been recognised by the Bass Coast Distinctive Areas Landscape paper, which includes strategies that contribute to building a sustainable, year-round visitor economy that aligns with the significant landscapes, environment and cultural values.

*Unfortunately, there are current and emerging issues associated with native wildlife and other values and land uses on the Island including biodiversity conservation, agriculture, cultural values, buildings and infrastructure, amenity, public safety and animal welfare.*

### BIODIVERSITY CONSERVATION

Conservation programs on the Island are important contributors to the local economy and engage people in valuing wildlife and the importance of its management. This is shown by the more than 1.1 million people visiting the nature-based attractions offered by the Nature Parks in 2018-19.

The successful eradication of foxes has contributed to the strong recovery of several species including Little Penguins and Short-tailed Shearwaters and has allowed for the introduction of Eastern Barred Bandicoots, which no longer occur in the wild on mainland Victoria. These conservation successes demonstrate the value of Phillip Island as an island haven that can significantly contribute to maintaining Victoria's biodiversity into the future. However, more common wildlife species have also benefitted from the reduction of foxes with imbalanced populations of Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums all contributing to detrimental impacts on environmental, social and economic values.

Browsing pressure from Swamp Wallabies and Common Brushtail Possums is impacting on vegetation regeneration including the recovery of some species of plants, such as Crimson Berry, *Leptecophylla juniperina* subsp. *oxycedrus*, listed as vulnerable in Victoria.

It is likely that revegetation projects on the Island over the past 30-plus years have increased the amount of habitat and food available to support a greater number of wallabies and possums. The Nature Parks, BCSC, Phillip Island Landcare and landholders have used a variety of measures to enable regeneration of vegetation, including tree guards, fenced enclosures, banding trees and, in some situations, the issue of an Authority to Control Wildlife (ATCW). These measures have come at a substantial cost and have demonstrated limited success.

It has also been speculated that browsing by possums is contributing to tree dieback, which has flow-on impacts to other tree-dependent species. Action has been required to reduce the impact of brushtail possums browsing on eucalyptus trees at the Koala Conservation Reserve to ensure the survival of vegetation and the maintenance of the food source for the koalas living in the reserve.

### AGRICULTURAL LANDSCAPES

Further to the coastal scenery and opportunities to encounter wildlife, the agricultural landscape of Phillip Island is often promoted through tourism and visitor websites as an attraction to enjoy. The importance of farmland to conservation is evident in remnants of habitat and the wildlife it supports. Grazing species, such as Black Swans and Cape Barren Geese benefit from the presence of improved pastures. Eastern Barred Bandicoots also rely upon the presence of woodlands and grasslands for habitat and prefer an insectivorous diet, much of which are found on farmland and the reserves on Phillip Island. However, retaining the agricultural landscape relies upon farms remaining viable in their current or similar form of traditional open spaces.

In recent years, a new challenge has emerged for the



Above: Swamp Wallaby caught on camera eating the vulnerable Crimson Berry.



Left: Turnip plants grown outside the exclusion cages were heavily grazed by geese as seen in the foreground. The usual yield 47 days after sowing is shown by the height of the turnips grown inside the cage. Photo: Celeste Fraser.

agricultural community, with large numbers of Cape Barren Geese causing significant damage to pasture and crops. Recent research by Federation University estimated the cost of the impact on forage crops can be significant (See Case Study page 2).

*“We had a wonderful strike with the barley when it was about 8-10 inches, overnight the Cape Barren Geese stripped it completely....”*

David McGrath, Landholder Phillip Island

## CULTURAL VALUES

Bunurong Land Council Aboriginal Corporation (BLCAC) is the Registered Aboriginal Party for the Mornington Peninsula, Western Port (including French and Phillip Islands) and part of South-west Gippsland. The Land Council represents the Bunurong People, their culture and heritage and works towards supporting the cultural goals and aspirations of their members.

Opportunities for involvement in land management and access to, and use of, wildlife are currently limited for Bunurong People. Supporting this is an important step in maintaining connection to culture.

*“Our Ancestors understood that caring for Country allows Country to in turn care for them. We look after everything and everything looks after us.”*

Dan Turnbull, Bunurong Man BLCAC CEO

## BUILDINGS AND INFRASTRUCTURE, AMENITY AND PUBLIC SAFETY

Wildlife can have significant impacts to buildings and infrastructure, amenity and public safety.

Increasing populations of wildlife present safety risks particularly through increased collisions with vehicles.

On Phillip Island, Cape Barren Geese are increasingly impacting on public amenities (e.g. fouling public and recreational spaces). Impacts of possums in roofs, gardens and orchards are also a common concern of residents and business owners on the Island.

## Authorities to Control Wildlife

**Under the Wildlife Act 1975, it is illegal for anyone to control (take or destroy) wildlife (including eggs) without an authorisation. Authorisations to take or destroy wildlife are known as an Authority to Control Wildlife (ATCW). An ATCW allows wildlife to be controlled in certain circumstances, where the wildlife is posing a risk to human health or safety, damaging property, crops or pasture or impacting on biodiversity. All ATCWs include strict conditions to ensure that animals are controlled humanely.**

## CASE STUDY Impacts by Cape Barren Geese on agriculture

**Federation University, Phillip Island Nature Parks and the Phillip Island agricultural community partnered to investigate the impact of Cape Barren Geese on forage crops. Agriculture Victoria provided in-kind support.**

The grazing by wildlife of forage crops was measured on an operational beef and sheep farm on Phillip Island. The dry matter mass of two forage crops, oats and turnips, were monitored for >3 months over winter and spring of 2019. Exclusion cages were placed over the crops to prevent grazing. Plant mass inside the cages was compared to plant mass in areas open to grazing. Cameras captured images of animals visiting the sites. The experiment was repeated in summer 2020 during which a millet/turnip forage crop was monitored for >3 months.

The key findings were that Cape Barren Geese comprised 99% of the wildlife that visited the sites. It was found that grazing by wildlife significantly decreased the yield of the spring forage crops by 40-65% and summer forage crop by 50-100%.

(Fraser, C. unpublished data from Honours thesis Aug 2020, Federation University).

## ANIMAL WELFARE

Increasing populations of wildlife species such as Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums also increases people's likelihood of interactions with these animals. While we value the benefits of these interactions, they can also affect the welfare of wildlife through impacts such as road collisions and the increased need for active management when wildlife impacts on environmental and community assets.

Current approaches to managing wildlife is through the application by the landholder for an ATCW to scare or destroy the animals causing damage. Despite the impact of Cape Barren Geese on crops and pastures, many landholders have reported a desire to avoid the use of lethal control due to not wanting to harm the birds or impact the Island's reputation, along with safety issues associated with the use of firearms and possible repercussion from the community. There is a strong desire for more effective and sustainable control options.

## 1.2 LEGISLATION AND POLICY FRAMEWORK

This plan reflects the Victorian Government's environmental policy to care and protect our natural environment, including wildlife, which in turn will lead to greater economic stability and healthier communities. It promotes approaches that acknowledge the value of wildlife as part of our natural environment, fosters collaborative and positive attitudes towards wildlife and encourages people to understand the importance of conserving wildlife and their habitats. At the same time, the impacts of wildlife on a range of values, including economic, conservation, welfare and safety need to be addressed.

The management of wildlife and protection of habitat in Victoria is governed by a range of state and federal legislation and policies. The relevant legislation and policies are listed below and described briefly in Appendix B.

- Wildlife Act 1975
- Prevention of Cruelty to Animals Act 1986
- Flora and Fauna Guarantee Act 1988
- Planning and Environment Act 1987
- Aboriginal Heritage Act 2006
- Environment Protection and Biodiversity Conservation Act 1999
- Protecting Victoria's Environment – Biodiversity 2037
- Living with Wildlife Action Plan
- Bass Coast Distinctive Areas and Landscapes

## 1.3 RELATED PLANS AND STRATEGIES

There are a range of local plans and strategies that contribute to the management and conservation of biodiversity and wildlife on Phillip Island. The Nature Parks and BCSC lead most of these which are delivered through the support from communities, other agencies and groups. These plans and strategies include:

- Bass Coast Council Plan 2017-2021
- Bass Coast Shire Council Natural Environment Strategy 2016 to 2026
- Bass Coast Biodiversity Biolinks Plan
- Bass Coast and Phillip Island Hooded Plover Strategy 2016
- Phillip Island and San Remo Visitor Economy Strategy 2035
- Nature Parks' 5-Year Conservation Plan 2019-2023
- Nature Parks' 30 Year Conservation Vision – Beyond the Horizon
- Nature Parks' Weed Management Strategy 2018-2023
- Nature Parks' Integrated Pest Animal Strategy 2013-2018
- Port Phillip and Western Port Regional Catchment Strategy

## 2 PURPOSE AND SCOPE OF THE PLAN

The Phillip Island (Mallowl) Wildlife Plan aims to achieve a sustainable population of native wildlife that allows environmental, social, cultural, economic and farming activities to continue on the Island.

To achieve this aim, it seeks to address current and emerging issues between native wildlife and other values and land uses on the Island including for agriculture, culture, conservation, tourism, road safety and public health. The plan focuses on addressing the high priority wildlife and people interaction issues where there are significant impacts on human activities or safety, buildings and infrastructure, animal welfare and biodiversity.

The three key species; Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums are the current focus of this plan due to the increases in these wildlife populations and concerns raised by the community regarding their impacts. A detailed summary of the history and impacts of these species is outlined in Appendix A.

*This plan takes a collaborative and place-based approach to managing wildlife and recognises that community ownership of the plan and involvement in the conservation and management of wildlife will be critical to achieve its objectives.*

The plan recognises the connection of Traditional Owners to Country and acknowledges their contribution in the management of land, water and the natural landscape. It is committed to engaging with and fostering mutually beneficial and lasting relationships with all Traditional Owners. It acknowledges the importance of incorporating Aboriginal cultural use and the involvement of BLCAC. The development of this plan will support continued sharing of knowledge and involvement that will inform land and wildlife management practices and build greater cultural understanding, respect and opportunities for self-determination.

The plan complements current strategies and plans that contribute to the management and conservation of biodiversity and wildlife and fills the gaps that will contribute towards balancing the needs of wildlife and the community over the next five years.

There is already a lot of work being undertaken to support wildlife on Phillip Island and care has been taken to ensure this plan does not duplicate this effort. Existing key areas of work include:

**Habitat conservation, revegetation and establishment of wildlife corridors.** The Bass Coast Distinctive Areas and Landscapes and the Bass Coast Biodiversity Biolinks Plan are the leading processes for these outcomes and include an action plan for the implementation of revegetation across land management boundaries. This is also addressed through existing works undertaken through Nature Parks and Landcare.

**Control of non-native and pest species (e.g. rabbits and feral cats).** This work is delivered through the Nature Parks' Weed Management, Integrated Pest Animal Strategies and work undertaken through Nature Parks and Landcare.

**Reducing the impact of development and urbanisation on wildlife.** This is led through planning and approvals processes managed by BCSC and various supporting strategies and plans.

**Enforcement of wildlife protection and animal cruelty laws.** These are enforced through existing legislation and processes.

**Reducing roadkill through road/traffic management.** Includes initiatives such as trialling virtual fencing along high-risk roadsides, scientific research and developing a program to reduce traffic speed limits across Phillip Island.

**Wildlife rescue and rehabilitation.** This has an important role in wildlife welfare across Phillip Island and is supported by the Nature Parks, Wildlife Victoria volunteers and local community shelter.

### Wildlife Management is....

... managing wildlife populations and their habitats for the benefit of the community and the wildlife. It can include preservation and restoration of habitat, wildlife recovery programs, fencing to protect or exclude, harvesting and control programs.

A range of methods can be used in wildlife management including, captive breeding programs or fertility control, translocation, revegetation, feral animal and weed control, exclusion, scaring, harvesting and lethal control.

## 3 PRINCIPLES

The following principles were established in collaboration with representatives from the Nature Parks, DELWP, BCSC, Landcare, agriculture and BLCAC. They guide the strategies and actions in this plan consistent with balancing the needs of the community and wildlife across Phillip Island.

### **EVIDENCE-BASED**

The management of wildlife should not compromise the health of the population, habitat or other species. The need to manage wildlife is based on the best available information and is adaptable to change. Research is promoted and solutions to wildlife management issues are developed to benefit the environmental and social needs on Phillip Island.

### **COLLABORATIVE AND INCLUSIVE**

Wildlife management is a shared responsibility between communities, industries and government. Working together with the Phillip Island community will achieve better results for our wildlife and the environment, public health, safety, amenities and agriculture.

Wildlife is a part of the cultural heritage of Victoria's Traditional Owners. As traditional custodians of the land, the knowledge and involvement of the Bunurong community is incorporated into the management of wildlife.

### **OUTCOMES FOCUSED AND PLACE-BASED**

Strategies and actions focus on integrating conservation, public safety, social, cultural and economic values on Phillip Island. It works towards balancing the needs of the Phillip Island community with the needs of wildlife to deliver the long term and management outcomes.

### **HUMANE AND EFFECTIVE**

Where the management of wildlife is justified, it will be appropriate, humane and effective in achieving the desired result.

# 4 OUTCOMES OF THE PLAN

The outcomes of the plan are complementary and contribute to the vision of Phillip Island residents in gaining the balance between protecting the natural environment and open spaces that support native wildlife with maintaining a vibrant tourism industry, viable agriculture and small housing pockets.

## THE OUTCOMES OF THE PLAN ARE:

**Long-term outcomes** aim to be consistent with the overall vision of Phillip Island and include:

- Healthy and sustainable wildlife populations and habitat.
- Viable and adaptable agriculture and tourism industries.
- Community values and supports wildlife management.
- Bunurong people connected to Country and contribute to the management of wildlife on Millowl.

**Management outcomes** that the plan aims to achieve over the five-year lifetime through the delivery of its actions.

- Community values wildlife and contributes to management.
- Improved animal welfare.
- Negative impacts of wildlife reduced.
- Viable agricultural industry maintained on Phillip Island.
- Partnerships, including with Bunurong people, established to deliver effective wildlife management.

## 4.1 OUTCOMES FRAMEWORK

The overall framework of the plan presented in Figure 1 identifies how the outcomes will be delivered through the plans five strategies and supporting management actions. These strategies and actions are outlined in Section 6.

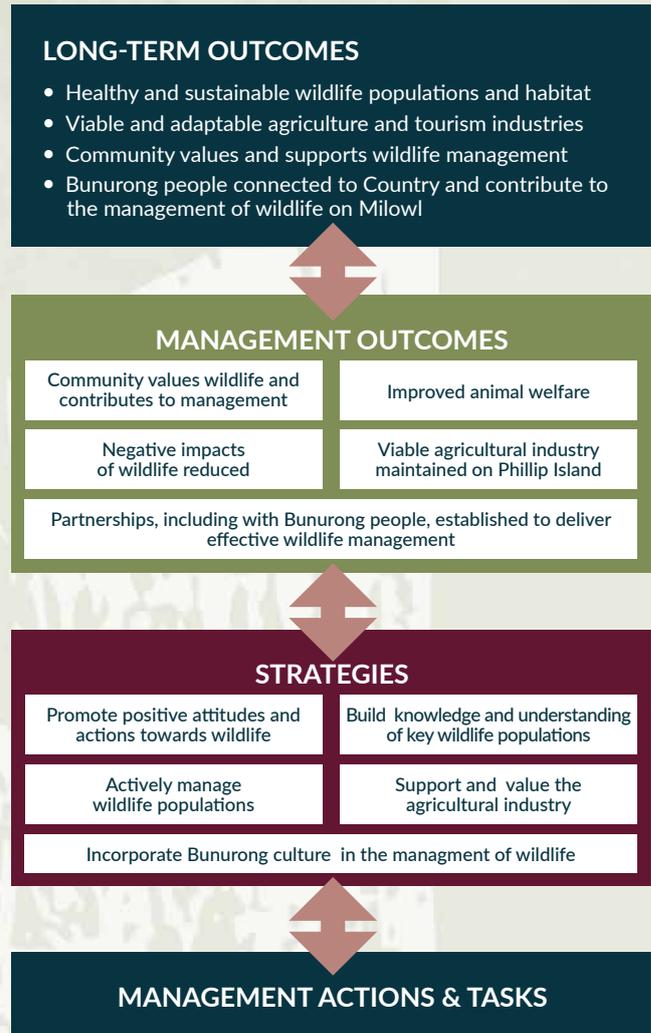


Figure 1. The outcomes framework of this plan that outlines the relationship between the outcomes, strategies and actions defined in this plan.

## 5 GOVERNANCE, IMPLEMENTATION, MONITORING AND REVIEW

A Steering Committee was established to oversee the development of this plan and included representatives from the Nature Parks, BCSC, DELWP and local landholders.

To support implementation of the plan, governance arrangements will be established within the first year of its implementation. This will also include clear roles and responsibilities for implementation, monitoring and review.

The plan identifies actions that will contribute towards balancing the needs of wildlife and the community over the next five years. It is expected that each organisation will take responsibility for the actions where they are identified as the lead. However, it is proposed that input from the community and key stakeholders will assist in determining the best approach to oversee the implementation, monitoring and review of the plan.

A monitoring, evaluation and reporting plan will be developed to support these processes. Implementation will be tracked through annual progress reports and reviews will be undertaken in the second and fourth year. The review in the fourth year will inform the approach beyond year five. These reviews will support the reporting of outcomes and provide for updates to actions and tasks where required. This will enable adaptive management and continuous improvement to ensure the plan and its delivery remains relevant and fit for purpose.

### ACTIONS

#### ACTION 1

Identify and establish governance arrangements to oversee the implementation, monitoring and review of the Phillip Island (Millowl) Wildlife Plan.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
1. Governance arrangements, roles and responsibilities for overseeing the implementation of the plan are developed.	DELWP (Nature Parks, BCSC)	Required for the implementation and monitoring of the plan	Immediate Year 1
2. Monitoring, evaluation and reporting plan developed.	DELWP (Nature Parks, BCSC)	Required for the monitoring and evaluation of the implementation of the plan  Dependent upon Task 1.	Short Term Year 1-3



## 6 STRATEGIES AND ACTIONS

The following section outlines the strategies, actions and tasks that will be delivered through this plan. It also defines the lead agencies or groups and partners for each task and when they are expected to be delivered. Measures of success for each strategy have also been defined to support monitoring and review of the plan.

### 6.1 STRATEGY 1

**Promote positive attitudes and actions towards wildlife and nature through education and providing opportunities to access and experience wildlife and nature in a sustainable and ethical way.**

Participation is an important component of learning and understanding, it is often a catalyst for further development and encourages ownership and a sense of responsibility.

This strategy focuses on promoting positive attitudes towards wildlife and nature by informing, engaging and inspiring participation from the community and stakeholders to better understand and contribute to healthy and sustainable wildlife populations on Phillip Island.

People and organisations on Phillip Island already undertake a broad range of activities that connect people to nature, so the actions in this strategy have been developed to align and strengthen these activities. The actions seek to build relationships and identify opportunities for the community to contribute to conservation and management of wildlife and to value a viable agricultural industry.



Planting day with Phillip Island Landcare.

## CASE STUDY

### Join the Green Revolution

For over 33 years, Phillip Island Landcare Group has been transforming the Island's landscape and encouraging sustainable agriculture.

Their team of volunteers has held over 100 field days and workshops to encourage sustainable agricultural land-use, business practices and lifestyles.

Volunteers have protected and enhanced 150 hectares of remnant vegetation promoting biodiversity, benefiting wildlife and educating the community.

Landcare plays an important role in connecting the community with opportunities to contribute to conservation and land management and share information on new and innovative ideas to lead us to a more sustainable future.

## ACTIONS

### ACTION 2

Develop an education/community program to support conservation and management of wildlife by the community.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
3. Develop and implement a collaborative education program for Phillip Island focused on supporting and providing information to the community and landholders on wildlife values, challenges and ways to live with and manage wildlife.	Nature Parks, BCSC, DELWP (community groups e.g. Landcare)	<ul style="list-style-type: none"> <li>30 Year Conservation Vision – Beyond the Horizon</li> <li>Tourism 2020</li> <li>Supported by Strategy 2</li> </ul>	Ongoing Year 1-5
4. Incorporate community and visitor involvement opportunities (e.g. citizen science) in wildlife research on Phillip Island.	Nature Parks (BCSC, DELWP)		Ongoing Year 1-5

### HOW WE WILL MEASURE SUCCESS:

- Community has an increased understanding of the need to manage wildlife (links to Strategy 2).
- Community has opportunities to be involved and is engaged with understanding and supporting wildlife research on Phillip Island.

## 6.2 STRATEGY 2

**Build understanding of key wildlife populations and their impacts on agriculture, public health, conservation and tourism through research to inform evidence-based decision making and wildlife management practices.**

The management of wildlife should be based on the best available information and be adaptable to change. This strategy identifies research and development needs to facilitate an improved understanding of the issues and key species. This is crucial for informed decision making about why, when and how to intervene to prevent undesirable impacts or changes. Through improving our understanding of these populations, we will be better able to manage these populations in the context of threats

such as climate change. The research and development tasks will be delivered, reviewed and communicated effectively to ensure the information is credible, reliable and transparent.

This strategy is strongly linked to the other four strategies in providing the knowledge base to inform these strategies and measure the success of actions undertaken within each strategy.

This strategy will lead to improved ways of managing wildlife and contribute to better wildlife welfare outcomes and a reduction in the negative impacts of some wildlife on environmental, public health, safety, social and economic assets and values. It will contribute to the long-term outcomes of having healthy and sustainable wildlife populations and habitat and viable agriculture and tourist industries.

### ACTIONS

#### ACTION 3

Understand populations of Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums and their negative impacts on agriculture, biodiversity and community.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
<b>Human wildlife interactions</b>			
5. Identify and establish benchmark data and monitoring requirements to evaluate the impact and effectiveness of wildlife management undertaken as part of this plan (e.g. reduction in crop loss, habitat regeneration, population numbers).	<b>Nature Parks, DELWP</b> (BCSC, Universities and Research Institutions, landholders, managers, community)	<ul style="list-style-type: none"> <li>Links to development of Monitoring, evaluation and reporting plan under Action 1.</li> </ul>	Immediate Year 1
6. Identify the key factors resulting in sick, injured and orphaned wildlife on Phillip Island.	<b>Nature Parks</b> (DELWP, BCSC, Universities and Research Institutions, wildlife groups)		Short Term Year 1-3
7. Identify emerging wildlife issues on Phillip Island to inform plan review and implementation.	<b>DELWP</b> (Nature Parks, BCSC, Universities and Research Institutions)		Ongoing Year 1-5
<b>Cape Barren Geese</b>			
8. Determine the impacts of Cape Barren Geese on agricultural production.	<b>Nature Parks, Federation University and landholders</b>	<ul style="list-style-type: none"> <li>Supports decision making in existing ATCW process</li> </ul>	Short Term Year 1-3 (In progress)
9. Understand the microbiome and internal parasite loads of Cape Barren Geese and potential impacts to agriculture.	<b>Federation University, Nature Parks and landholders</b>		Short Term Year 1-3 (In progress)
10. Annual monitoring of Cape Barren Geese on Phillip Island.	<b>Nature Parks</b> (Birdlife Bass Coast and community)	<ul style="list-style-type: none"> <li>Linked to Nature Parks 5 Year Conservation Plan 2019-2023 and 30 Year Conservation Vision – Beyond the Horizon</li> </ul>	Ongoing Year 1-5 (In progress)
11. Determine the breeding success and chick survival to determine annual recruitment (clutch size, hatching rates, and fledgling rates).	<b>Nature Parks</b> (Universities and researchers)	<ul style="list-style-type: none"> <li>Supports decision making in existing ATCW process</li> <li>Supports development of population model</li> </ul>	Short Term Year 1-3
12. Understand dispersal and movements of Cape Barren Geese (colour banding to determine composition of flocks, dispersal, including off the island, and seasonal movements).	<b>Nature Parks</b> (Universities and researchers)	<ul style="list-style-type: none"> <li>Supports decision making in existing ATCW process</li> </ul>	Short Term Year 1-3
13. Develop a population model for Cape Barren Geese to assess impacts of management options.	<b>DELWP</b> (Nature Parks)	<ul style="list-style-type: none"> <li>Supports decision making in existing ATCW process</li> <li>Dependent on information provided by tasks 9, 11 &amp; 12.</li> <li>Links to Strategy 3</li> </ul>	Short Term Year 1-3

## ACTIONS CONTINUED

### ACTION 3 Continued

#### Swamp Wallabies and Common Brushtail Possums

14. Estimate population sizes of Swamp Wallabies and monitor trends over time. (These will include considerations of habitat-specific densities, home ranges and movements).	<b>Nature Parks</b> (DELWP, Universities and researchers and community)		Short Term Year 1-3
15. Demographic modelling of wallaby and brushtail possum populations to determine the most significant factors contributing to population growth.	<b>DELWP</b> (Nature Parks)	<ul style="list-style-type: none"> <li>Supports decision making in existing ATCW process</li> </ul>	Short Term Year 1-3
16. Assess the effectiveness of a virtual fence <sup>1</sup> on reducing the number of wildlife killed on roads, particularly wallabies.	<b>BCSC</b> (Victoria University, Nature Parks, Regional Roads Victoria and community)		Short Term Year 1-3 (In progress)
17. Review deterrent/exclosure opportunities for wallaby and brushtail possum management and examine the efficacy and impact of strategies for Phillip Island.	<b>Nature Parks</b> (DELWP, Universities and researchers)	<ul style="list-style-type: none"> <li>Contributes to Strategy 3 and 1</li> </ul>	Short Term Year 1-3

#### Impacts on conservation works

18. Determine the impacts of grazing/browsing by geese, wallabies and brushtail possums on conservation works.	<b>Nature Parks, DELWP, Universities and researchers and landholders</b>		Short Term Year 1-3
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<sup>1</sup>The virtual fence is a series of devices attached to guide posts along the side of the road. When headlights from an approaching vehicle hit the device, it triggers an audible alarm and flashing lights. The combination of noise and light is aimed at deterring wildlife from the road, before the vehicle gets there.

### ACTION 4

Explore the current and potential role native predators play in the management of wildlife on Phillip Island.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
19. Explore the potential contribution of introducing/attracting native predators on Phillip Island (e.g. owls, quolls) and evaluate the associated risks of introducing new predators to non-target species.	<b>Nature Parks</b>	<ul style="list-style-type: none"> <li>Nature Parks 30 Year Conservation Vision – Beyond the Horizon</li> </ul>	Long Term

### ACTION 5

Undertake a comprehensive cost benefit analysis (cultural, economic and social) of wildlife to the Phillip Island and visitor community.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
20. Continue to build the relationship with BLCAC and better understand the views of its members regarding wildlife management on Phillip Island (Millowl).	<b>DELWP</b> (BLCAC, BCSC, Nature Parks)	<ul style="list-style-type: none"> <li>Nature Parks 30 Year Conservation Vision – Beyond the Horizon</li> </ul>	Ongoing Year 1-5
21. Understand the views of the local community and visitors about wildlife and its management on Phillip Island.	<b>DELWP</b> (BLCAC, BCSC, Nature Parks)		Ongoing Year 1-5
22. Evaluate the economic value and importance of wildlife to Phillip Island's community (social and cultural).	<b>BCSC</b> (Nature Parks)	<ul style="list-style-type: none"> <li>BCSC Tourism Strategy 2035</li> </ul>	Short Term Year 1-3

#### HOW WE WILL MEASURE SUCCESS:

- Population model for Cape Barren Geese developed and population numbers compatible with a viable agricultural industry to continue are understood.
- The potential contribution of native predators for wildlife management is understood.
- Current Traditional Owner, community and visitor views towards wildlife and its management on Phillip Island are understood.

## 6.3 STRATEGY 3

### Actively manage wildlife to balance conservation, natural and built environments, public safety, social and economic values on Phillip Island.

Some wildlife species on the Island have increased to levels that are impacting on conservation, natural and built environments, public safety and social and economic values. Current approaches to managing the impacts of these species are reactive, occurring when or after the impact has occurred and are proving to be ineffective, impractical or prohibitive (e.g. lethal control, exclusion or scaring, translocation).

This strategy focuses on using the research and information provided by research (Strategy 2), the incorporation of cultural use (Strategy 5) and education (Strategy 1) to deliver improved ways of balancing the needs of wildlife with the needs of the community. **It supports healthy and sustainable wildlife populations while maintaining viable**

**agriculture and tourism industry by reducing the negative impacts of some wildlife species on environmental, public health, safety, social and economic assets and values.**

The actions developed to deliver this strategy promote a proactive, co-ordinated and more efficient approach to the management of wildlife issues and establishes a greater level of oversight through improved planning, monitoring and reporting.

A key focus is to work with landholders to trial alternate control methods and implement improved reporting and permitting systems that will support better wildlife welfare and biodiversity outcomes.



## Managing Human-Wildlife Conflict

When a wildlife issue arises the first step is to identify the problem species and cause of the problem. If the cause is not identified properly, management methods may not work or may only work in the short term. Causes of wildlife problems can include crop being located near a roosting site, pest animals or weeds, certain plants in gardens attracting wildlife etc. The next step is to consider non-lethal control methods which can include exclusion (e.g. fencing or netting), modifying the animal's behaviour (e.g. habitat modification), modifying agricultural practices (e.g. avoiding grain spillages). Steps to identify and solve issues can be made using DELWP material or in consultation with DELWP wildlife officers.

In instances where these methods are ineffective, authorisation to control wildlife can be sought from DELWP provided wildlife is shown to be a) damaging buildings, pasture, crops or other property b) posing a risk to human health and safety, or c) damaging the environment. The most common authorisation is an Authority to Control Wildlife (ATCW).

Lethal control of wildlife should only be considered when all practical non-lethal methods have been investigated and were proven to be ineffective or impractical in managing the wildlife problem.

DELWP will only assess applications for lethal control methods when the applicant demonstrates that non-lethal management methods have been attempted to manage the wildlife problem.

## ACTIONS

### ACTION 6

Establish and implement a coordinated and collaborative approach to managing impacts of wildlife on agriculture, built assets, public safety and conservation areas on Phillip Island.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
23. ATCW conditions developed for Cape Barren Goose, Swamp Wallaby and Common Brushtail Possum control to facilitate the use of carcasses for research or Aboriginal cultural use.	DELWP	<ul style="list-style-type: none"> <li>Supported by existing legislation and ATCW system</li> <li>Contributes to Strategies 2 and 5</li> </ul>	Short Term Year 1-3
24. Establish a process for reporting the number and types of ATCW permits issued on Phillip Island.	DELWP (Landholders and land managers)	<ul style="list-style-type: none"> <li>Supports Strategy 1 through data collection.</li> <li>Supports existing ATCW process.</li> </ul>	Immediate Year 1
25. Develop an approved wildlife management plan template available for landholders and managers on Phillip Island to support wildlife management planning.	DELWP	<ul style="list-style-type: none"> <li>Strengthens existing ATCW process.</li> <li>Contributes to Strategy 4</li> </ul>	Short Term Year 1-3
26. Support coordinated ATCW applications from landholders to manage key wildlife species.	DELWP (Landholders)	<ul style="list-style-type: none"> <li>Supports existing ATCW process</li> <li>Supports strategy 4.</li> </ul>	Short Term Year 1-3
27. Investigate opportunities to issue long-term ATCWs (up to 3 years) in accordance to agreed wildlife management plans that incorporate a range of control options, including non-lethal methods.	DELWP (Landholders)	<ul style="list-style-type: none"> <li>Supported by existing provisions under Wildlife Act.</li> <li>Supports existing ATCW process</li> <li>Decision making supported by Strategy 2.</li> </ul>	Short Term Year 1-3
28. Register of landholders/managers wanting to participate in trials of alternate control methods.	DELWP (Landholders, land managers)	<ul style="list-style-type: none"> <li>Supports Strategies 2, 4 and 5</li> </ul>	Immediate Year 1
29. Provide input into the Speed Review Communications and Engagement Plan.	BCSC (Nature Parks, DELWP, Phillip Island landholders and community)	<ul style="list-style-type: none"> <li>Supports Speed Review Communications and Engagement Plan</li> </ul>	Short Term Year 1-3

## ACTIONS CONTINUED

### ACTION 7

Undertake trials of alternate control methods for mitigating damage and financial loss by wildlife and improving wildlife welfare outcomes.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
30. Trial egg removal, replacement, addling <sup>2</sup> as management options for Cape Barren Geese.	DELWP (Landholders, Nature Parks, BLCAC, universities and researchers)	<ul style="list-style-type: none"> <li>Supported by existing provisions under Wildlife Act.</li> <li>Links to Strategy 2</li> <li>Supports Strategy 4</li> </ul>	Short Term Year 1-3
31. Trial establishment of alternative fresh water sources for wildlife away from roadsides.	BCSC (Landholders, land and water managers, Nature Parks, DELWP, universities and researchers)		Long Term
32. Trial use of “decoy” crops at certain times of year to remove pressure on commercial pasture and crops in peak season.	Nature Parks (Landholders, DELWP, universities and researchers)	<ul style="list-style-type: none"> <li>Supports strategy 4</li> </ul>	Short Term Year 1-3
33. Investigate the potential use of browsing repellents (e.g. Sen-tree™) on revegetation areas.	Nature Parks (Landholders, land managers, community groups)		Short Term Year 1-3

### HOW WE WILL MEASURE SUCCESS:

- Wildlife management planning integrated into whole of farm/business plans by landholders and land managers experiencing impacts caused by wildlife.
- Landholders report a reduction in impacts caused by Cape Barren Geese and Swamp Wallabies.
- Effectiveness of alternate control methods determined.
- Alternate control methods are identified and implemented as part of ongoing wildlife management.
- Natural regeneration and restoration of habitat occurring.

<sup>2</sup>Addling refers to the act of causing fertilised eggs to become infertile without breaking the shell or other outer layer. Methods may include shaking, piercing, freezing or oiling/waxing.

## 6.4 STRATEGY 4

Support and value a viable agricultural industry on Phillip Island.

Phillip Island is recognised by BCSC as an iconic destination with significant rural and coastal landscapes, environment and heritage values. As approximately 60% of Phillip Island is agricultural land, it has a significant role in supporting wildlife. Many landholders and land managers recognise the value of sustainable wildlife populations in a healthy rural environment and support this in many ways. Retaining the agricultural landscape relies upon farms remaining viable in their current or similar form of traditional open spaces.

This strategy contributes to outcomes for a viable agricultural industry and complements the actions outlined in Strategy 3. It describes actions that support landholders in identifying and taking advantage of opportunities to adapt and diversify farming practices that contribute to their sustainability and to support wildlife conservation.

Supporting a viable agricultural industry is strongly supported by the other strategies in increasing our knowledge to develop better and proactive ways to manage wildlife that balances healthy populations and a viable agricultural industry. The strategy also works towards building the support and understanding of visitors and the community about the importance of agriculture and the need for managing wildlife on Phillip Island.

### Case Study - Our Island Farm

**Bimbadeen is one example of the many landholders on Phillip Island (Morrowl) working towards diversification and sustainability.**

Since 1955, the Davie family has operated the 340-acre property for dairying and pig production before introducing beef cattle in 1968.

The Bimbadeen story is one of diversification and it has become renowned for its award-winning, premium quality beef and innovative environmental practices. It has won awards both at State and National levels and, in recent years, the family has introduced initiatives to ensure their farm can continue to be sustainable into the future. This includes expanding to include a flock of 2,000 Isa Brown hens producing free range eggs and 500,000 bees for honey production.

More recently, the Davie family has taken another significant step towards sustainability through Carbon Sequestration and undertook their first soil carbon offset in 2019. The property offers eco-friendly, self-contained accommodation, a farm store and café that sells direct to locals and visitors and farm tours allowing people to experience a working farm and the importance of our rural landscapes.



## ACTIONS

### ACTION 8

Maintain existing agricultural land as part of Phillip Island landscape.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
34. Phillip Island's rural landscape is recognised and protected as a significant landscape in relevant strategic and planning documents.	BCSC (DELWP)	<ul style="list-style-type: none"> <li>Part of the Distinctive Areas and Landscapes, BCSC planning scheme and Visitor economy strategy</li> <li>Protecting and Supporting Melbourne's Strategic Agricultural Land Consultation Findings Report-DELWP</li> </ul>	Ongoing Year 1-5 (In progress)

### ACTION 9

Support opportunities for landholders to maintain viable farms that also support wildlife and conservation.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
35. Opportunities for alternate and diversified options and incomes for farms on Phillip Island are identified and supported.	BCSC (Landholders)	<ul style="list-style-type: none"> <li>Bass Coast Planning Scheme and State Planning Policy</li> </ul>	Ongoing Year 1-5
36. Explore opportunities to incorporate conservation into viable farming practices (e.g. wildlife corridors).	Landholders (BCSC, Nature Parks, Landcare, DELWP, Universities and Research Institutions)	<ul style="list-style-type: none"> <li>Biodiversity Biolinks Plan 2018 (BCSC)</li> <li>Supports the Phillip Island and San Remo Visitor Economy Strategy 2035</li> </ul>	Ongoing Year 1-5
37. Investigate grant opportunities for up-front cost of exclusion netting/fencing to protect crops and pasture, and to support wildlife conservation.	Landholders		Ongoing Year 1-5 (In progress)

### HOW WE WILL MEASURE SUCCESS:

- Actions of BCSC strategic documents and plans that protect the rural landscape of Phillip Island are implemented.
- Landholders adapt and diversify their farming and commercial operations to assist future sustainability.



## 6.5 STRATEGY 5

Identify and support opportunities to incorporate Bunurong culture into the management of wildlife on Phillip Island (Millowl).

For Bunurong People, involvement in land management and access and use of wildlife is an important step in maintaining connection to their culture. It has the potential to contribute to the management of abundant wildlife on Millowl.

The aim of this strategy is to facilitate involvement of BLCAC members in the management of wildlife on Country (Millowl). The actions are designed to enable access to wildlife for cultural use and identify opportunities for the incorporation of Bunurong culture into the management of wildlife.

Access to wildlife will be established through agreed conditions and will be supported through existing legislation and the ATCW system.

This strategy will help build partnerships with BLCAC that will contribute to the outcomes of this plan, through improved wildlife management. It will also work towards achieving some of the aspirations of the Bunurong community in connecting to culture.

The implementation of this strategy will involve identifying the capacity and resources needed for Traditional Owners to lead and contribute to the supporting actions.

### ACTIONS

#### ACTION 10

Bunurong People access wildlife from Phillip Island (Millowl) for cultural use.

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
38. Agreed conditions for BLCAC to access wildlife on Phillip Island (Millowl) for cultural use by its members.	BLCAC and DELWP	<ul style="list-style-type: none"> <li>Supported by existing legislation and ATCW system.</li> <li>Contributes to Strategy 3.</li> </ul>	Short Term Year 1-3

#### ACTION 11

Bunurong culture is acknowledged and incorporated into wildlife management on Phillip Island (Millowl).

Tasks	Lead (Partners)	Existing processes, links and interdependencies	Timeframe
39. Opportunities and capacity requirements for BLCAC to be involved and contribute to the management of wildlife are identified.	BLCAC (DELWP, Nature Parks, BCSC)	<ul style="list-style-type: none"> <li>Supported by existing legislation</li> <li>Supports BLCAC Rulebook</li> <li>Contributes to Strategy 3.</li> </ul>	Medium Term Year 4-5
40. Applications to access wildlife on Phillip Island (Millowl) for Aboriginal cultural use are referred to BLCAC for endorsement.	DELWP (BLCAC)	<ul style="list-style-type: none"> <li>Supported by existing legislation</li> <li>Supports administration of s28A(e) Wildlife Act 1975.</li> </ul>	Immediate Year 1
41. Feasibility study on the commercial use of wildlife by BLCAC (e.g. harvesting eggs).	BLCAC (DELWP, Landholders)	<ul style="list-style-type: none"> <li>Links to Strategies 3 and 4.</li> <li>Must include assessment of how commercial use can comply with regulations including health and safety, animal welfare etc.</li> </ul>	Medium Term Year 4-5

#### HOW WE WILL MEASURE SUCCESS:

- Bunurong Land Council Aboriginal Corporation hold authority for its members to access wildlife on Phillip Island (Millowl) for cultural use.
- Members of the Bunurong community have the opportunity to access and use wildlife for cultural purposes.
- Increased awareness and understanding of the Bunurong culture and connection to wildlife management in the community.

*“Cultural Heritage is the inherited legacy of our Ancestors, but this inheritance includes responsibilities to protect the physical aspects, the land, waters, flora and fauna.”*

Dan Turnbull, Bunurong Man and CEO of BLCAC

The Bunurong Land Council Aboriginal Corporation is the Registered Aboriginal Party for the Mornington Peninsula, Western Port (including French and Phillip Islands) and part of South-west Gippsland.

The connection of Bunurong People with Country is the result of a long history. The beliefs, laws, traditions and connection with the land and waters of the Bunurong People are the foundation of their cultural identities. There is an intrinsic understanding of the importance of caring for the land and waters as the source of living. The wildlife and plants have provided food, clothing, shelter, cultural and trade items for thousands of years and continue to be important to the material and spiritual needs of the Bunurong People today. Traditionally all parts of an animal would be used, with little or no wastage of the resource. In Bunurong culture, possum skins were tanned and sewn together using the sinew from kangaroos and wallabies to make cloaks for warmth. The meat and eggs of birds were a source of food and the feathers from birds like Cape Barren Geese were used for basket making and decorative uses.

## 7 SUMMARY OF ACTIONS AND TASKS

The following table provides a summary list of actions and tasks to be delivered through implementation of this plan including the lead, partners and timeframes for each task.

Tasks	Lead (Partners)	Timeframe
<b>ACTION 1</b>		
<b>Identify and establish governance arrangements to oversee the implementation, monitoring and review of the Phillip Island (Morrow) Wildlife Plan.</b>		
1. Governance arrangements, roles and responsibilities for overseeing the implementation of the plan are developed.	DELWP (Nature Parks, BCSC)	Immediate Year 1
2. Monitoring, evaluation and reporting plan developed.	DELWP (Nature Parks, BCSC)	Short Term Year 1-3
<b>ACTION 2</b>		
<b>Develop an education/community program to support conservation and management of wildlife by the community.</b>		
3. Develop and implement a collaborative education program for Phillip Island focused on supporting and providing information to the community and landholders on wildlife values, challenges and ways to live with and manage wildlife.	Nature Parks, BCSC, DELWP, (community groups e.g. Landcare)	Ongoing Year 1-5
4. Incorporate community and visitor involvement opportunities (e.g. citizen science) in wildlife research on Phillip Island.	Nature Parks (BCSC, DELWP)	Ongoing Year 1-5
<b>ACTION 3</b>		
<b>Understand populations of Cape Barren Geese, Swamp Wallabies and Common Brushtail Possums and their negative impacts on agriculture, biodiversity and community.</b>		
5. Identify and establish benchmark data and monitoring requirements to evaluate the impact and effectiveness of wildlife management undertaken as part of this plan (e.g. reduction in crop loss, habitat regeneration, population numbers).	Nature Parks, DELWP (BCSC, Universities and Research Institutions, landholders, managers, community)	Immediate Year 1
6. Identify the key factors resulting in sick, injured and orphaned wildlife on Phillip Island.	Nature Parks (DELWP, BCSC, Universities and Research Institutions, wildlife groups)	Short Term Year 1-3
7. Identify emerging wildlife issues on Phillip Island to inform plan review and implementation.	DELWP (Nature Parks, BCSC, Universities and Research Institutions)	Ongoing Year 1-5
8. Determine the impacts of Cape Barren Geese on agricultural production.	Nature Parks, Federation University and landholders	Short Term Year 1-3 (In progress)
9. Understand the microbiome and internal parasite loads of Cape Barren Geese and potential impacts to agriculture.	Federation University, Nature Parks and landholders	Short Term Year 1-3 (In progress)
10. Annual monitoring of Cape Barren Geese on Phillip Island.	Nature Parks (Birdlife Bass Coast and community)	Ongoing Year 1-5 (In progress)
11. Determine the breeding success and chick survival to determine annual recruitment (clutch size, hatching rates, and fledgling rates).	Nature Parks (Universities and researchers)	Short Term Year 1-3
12. Understand dispersal and movements of Cape Barren Geese (colour banding to determine composition of flocks, dispersal, including off the island, and seasonal movements).	Nature Parks (Universities and researchers)	Short Term Year 1-3
13. Develop a population model for Cape Barren Geese to assess impacts of management options.	DELWP (Nature Parks)	Short Term Year 1-3
14. Estimate population sizes of Swamp Wallabies and monitor trends over time. (These will include considerations of habitat-specific densities, home ranges and movements).	Nature Parks (DELWP, Universities and researchers and community)	Short Term Year 1-3

## 7 SUMMARY OF ACTIONS AND TASKS

Tasks	Lead (Partners)	Timeframe
15. Demographic modelling of wallaby and brushtail possum populations to determine the most significant factors contributing to population growth.	DELWP (Nature Parks)	Short Term Year 1-3
16. Assess the effectiveness of a virtual fence <sup>3</sup> on reducing the number of wildlife killed on roads, particularly wallabies.	BCSC (Victoria University, Nature Parks, Regional Roads Victoria and community)	Short Term Year 1-3 (In progress)
17. Review deterrent and enclosure opportunities for wallaby and brushtail possum management and examine the efficacy and impact of strategies for Phillip Island.	Nature Parks (DELWP, Universities and researchers)	Short Term Year 1-3
18. Determine the impacts of grazing/browsing by geese, wallabies and brushtail possums on conservation works.	Nature Parks, DELWP, Universities and researchers and landholders	Short Term Year 1-3

### ACTION 4

Explore the current and potential role native predators play in the management of wildlife on Phillip Island.

19. Explore the potential contribution of introducing/attracting native predators on Phillip Island (e.g. owls, quolls) and evaluate the associated risks of introducing new predators to non-target species.	Nature Parks	Long Term
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### ACTION 5

Undertake a comprehensive cost benefit analysis (cultural, economic and social) of wildlife to the Phillip Island and visitor community.

20. Continue to build the relationship with BLCAC and better understand the views of its members regarding wildlife management on Phillip Island (Millowl).	DELWP (BLCAC, BCSC, Nature Parks)	Ongoing Year 1-5
21. Understand the views of the local community and visitors about wildlife and its management on Phillip Island.	DELWP (BLCAC, BCSC, Nature Parks)	Ongoing Year 1-5
22. Evaluate the economic value and importance of wildlife to Phillip Island's community (social and cultural).	BCSC (Nature Parks)	Short Term Year 1-3

### ACTION 6

Establish and implement a coordinated and collaborative approach to managing impacts of wildlife on agriculture, built assets, public safety and conservation areas on Phillip Island.

23. ATCW conditions developed for Cape Barren Goose, Swamp Wallaby and Common Brushtail Possum control to facilitate the use of carcasses for research or Aboriginal cultural use.	DELWP	Short Term Year 1-3
24. Establish a process for reporting the number and types of ATCW permits issued on Phillip Island.	DELWP (Landholders and land managers)	Immediate Year 1
25. Develop an approved wildlife management plan template available for landholders and managers on Phillip Island to support wildlife management planning.	DELWP	Short Term Year 1-3
26. Support coordinated ATCW applications from landholders to manage key wildlife species.	DELWP (Landholders)	Short Term Year 1-3
27. Investigate opportunities to issue long-term ATCWs (up to 3 years) in accordance to agreed wildlife management plans that incorporate a range of control options, including non-lethal methods.	DELWP (Landholders)	Short Term Year 1-3
28. Register of landholders/managers wanting to participate in trials of alternate control methods.	DELWP (Landholders, land managers)	Immediate Year 1
29. Provide input into the Speed Review Communications and Engagement Plan.	BCSC (Nature Parks, DELWP, Phillip Island landholders and community)	Short Term Year 1-3

<sup>3</sup>The virtual fence is a series of devices attached to guide posts along the side of the road. When headlights from an approaching vehicle hit the device, it triggers an audible alarm and flashing lights. The combination of noise and light is aimed at deterring wildlife from the road, before the vehicle gets there.

## 7 SUMMARY OF ACTIONS AND TASKS

Tasks	Lead (Partners)	Timeframe
<b>ACTION 7</b>		
<b>Undertake trials of alternate control methods for mitigating damage and financial loss by wildlife and improving wildlife welfare outcomes.</b>		
30. Trial egg removal, replacement and addling <sup>4</sup> as management options for Cape Barren Geese.	DELWP (Landholders, Nature Parks, BLCAC, universities and researchers)	Short Term Year 1-3
31. Trial establishment of alternative fresh water sources for wildlife away from roadsides.	BCSC (Landholders, land and water managers, Nature Parks, DELWP, universities and researchers)	Long Term
32. Trial use of "decoy" crops at certain times of year to remove pressure on commercial pasture and crops in peak season.	Nature Parks (Landholders, DELWP, universities and researchers)	Short Term Year 1-3
33. Investigate the potential use of browsing repellents (e.g. Sen-tree™) on revegetation areas.	Nature Parks (Landholders, land managers, community groups)	Short Term Year 1-3
<b>ACTION 8</b>		
<b>Maintain existing agricultural land as part of Phillip Island landscape.</b>		
34. Phillip Island's rural landscape is recognised and protected as a significant landscape in relevant strategic and planning documents.	BCSC (DELWP)	Ongoing Year 1-5 (In progress)
<b>ACTION 9</b>		
<b>Support opportunities for landholders to maintain viable farms that also support wildlife and conservation.</b>		
35. Opportunities for alternate and diversified options and incomes for farms on Phillip Island are identified and supported.	BCSC (Landholders)	Ongoing Year 1-5
36. Explore opportunities to incorporate conservation into viable farming practices (e.g. wildlife corridors).	Landholders (BCSC, Nature Parks, Landcare, DELWP, Universities and Research Institutions)	Ongoing Year 1-5
37. Investigate grant opportunities for up-front cost of exclusion netting/fencing to protect crops and pasture, and to support wildlife conservation.	Landholders	Ongoing Year 1-5 (In progress)
<b>ACTION 10</b>		
<b>Bunorong People access wildlife from Phillip Island (Millowl) for cultural use.</b>		
38. Agreed conditions for BLCAC to access wildlife on Phillip Island (Millowl) for cultural use by its members.	BLCAC and DELWP	Short Term Year 1-3
<b>ACTION 11</b>		
<b>Bunorong culture is acknowledged and incorporated into wildlife management on Phillip Island (Millowl).</b>		
39. Opportunities and capacity requirements for BLCAC to be involved and contribute to the management of wildlife are identified.	BLCAC (DELWP, Nature Parks, BCSC)	Medium Term Year 4-5
40. Applications to access wildlife on Phillip Island (Millowl) for Aboriginal cultural use are referred to BLCAC for endorsement.	DELWP (BLCAC)	Immediate Year 1
41. Feasibility study on the commercial use of wildlife by BLCAC (e.g. harvesting eggs).	BLCAC (DELWP, Landholders)	Medium Term Year 4-5

<sup>4</sup>Addling refers to the act of causing fertilised eggs to become infertile without breaking the shell or other outer layer. Methods may include shaking, piercing, freezing or oiling/waxing.

# APPENDIX A: Key Species Background Information

## CAPE BARREN GEESE (*Cereopsis novaehollandiae*)

In south-eastern Australia, Cape Barren Geese are most commonly found on offshore islands in Bass Strait and mainland Tasmania where their population is considered secure. They are also found along the southern coast of Australia, in the south west of Western Australia, South Australia and parts of Victoria. Nationally, Cape Barren Geese are listed by the IUCN as 'least concern' (Global Status: IUCN Red List of Threatened Species: 2019.2 list).

Cape Barren Geese were hunted extensively though the first half of the 20th century throughout their range and by the 1950s they were thought to be in decline in Victoria and becoming rare. There are few records of geese on Phillip Island prior to 1970, however in the mid to late 1970's both Cape Barren Geese and Magpie Geese were released at Conservation Hill near Rhyll and eventually the Cape Barren Geese spread across the Island and today they are commonly seen grazing in paddocks around Phillip Island.

Annual counts of Cape Barren Geese have been undertaken since 1993 and numbers increased significantly in response to the successful eradication of foxes from the Island and improved agricultural practices.

Cape Barren Geese are grazing birds, eating a range of grasses, herbs and succulents, preferring the nitrogen rich crops and legumes such as barley and clover (Marchant, S. and Higgins, P.J. 1990) and have also benefitted from improved farming practices. The increase in the number of geese has resulted in increased impacts to pastures, crops as well as some sporting grounds that are regularly fertilised to maintain the playing surface. Research undertaken by Federation University and the Nature Parks in 2019 found that geese on Phillip Island were removing significant amounts of renovated pasture and fodder crops (Fraser, C. unpublished data, Federation University).



There are concerns by some community members about the spread of pathogens by the geese and this is currently being investigated by Federation University and the Nature Parks. The increase in the population of Cape Barren Geese has also led to increased risk to motorists and a potential hazard to motorcycles racing at the Phillip Island Grand Prix Circuit.

Currently the only option for controlling Cape Barren Geese on Phillip Island is through exclusion, scaring or lethal control as permitted by an Authority to Control Wildlife (ATCW). Unlike mammals, fencing is ineffective for Cape Barren Geese unless the area can also be covered to prevent the birds from flying in. Scaring has also proven to be ineffective as the birds have become habituated to humans or the deterrent devices. The number of applications for lethal control have increased in recent years, with no authorisation issued for geese prior to 2012 (DELWP unpubl. data). However, observations on Phillip Island suggest this approach has limited effectiveness in managing the impact of geese due to the localisation of the control method and the mobility of the geese in combination with the availability of suitable habitat across the island.

Cape Barren Geese Survey - Phillip Island

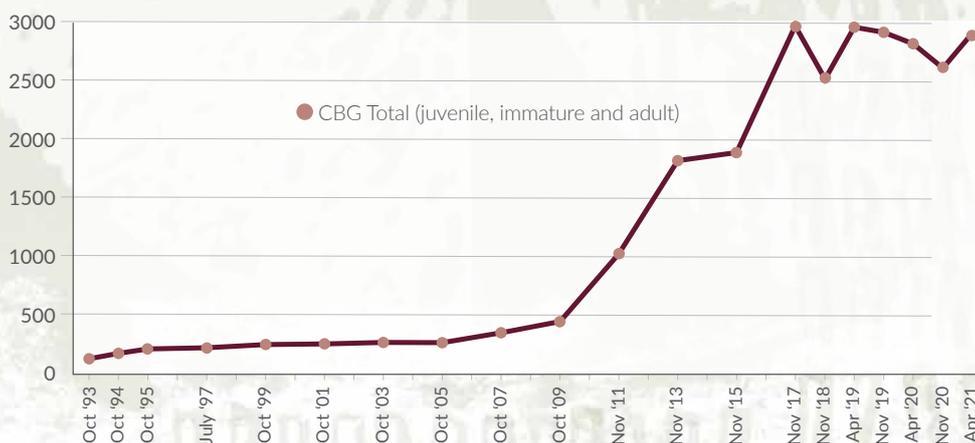


Figure 1. The number of Cape Barren Geese counted on Phillip Island since October 1993. Note that the count frequency has been increased from every two years to twice a year (Spring & Autumn)

## APPENDIX A: Key Species Background Information

### SWAMP WALLABIES (*Wallabia bicolor*)

Swamp or Black Wallabies are a browsing species that live in forest, woodland and heath in eastern and southern Australia from Cape York Peninsula to south-western Victoria and are common across much of their range. Their diet predominantly consists of shrubs, bushes and herbaceous plants.

Swamp Wallabies were recorded on Phillip Island in the 1850s to 1880s in the diaries of early pastoralists, visiting naturalists including Horace Wheelwright, and by William Blandowski, Museum Victoria's first Curator. Through the 1930s to 1950s wallabies on Phillip Island became scarce and were rarely seen through the 1960s and 1970s. Numbers increased through the 1980s, coinciding with some individuals establishing in the wild from captivity.

Phillip Island Nature Parks, together with the University of Melbourne, Deakin University and Charles Sturt University, has undertaken a series of projects to better understand the ecology of Swamp Wallabies on Phillip Island and their influence on the landscape. The abundance of wallabies in one reserve (Oswin Roberts Reserve) has been monitored from 1998 - 2018 indicating the population increased from 1998 - 2013 with no trend obvious after 2014. Wallabies may have benefited from the removal of foxes, but the increase in abundance of wallabies occurred prior to fox eradication. It is possible that revegetation projects on the island over the past 30 years have increased the amount of habitat and food available to support a greater number of wallabies on the Island.

A 2014 island-wide survey of wallabies revealed that they are spread across the Island but non-uniformly, being more abundant further from urban areas and in areas with thicker vegetation.

A study through the University of Melbourne (Fischer 2018) on the ecology of Swamp Wallabies was undertaken using custom built GPS trackers attached to 48 wallabies distributed across various habitat types across Phillip Island to follow their movements and determine their habitat preferences. The study confirmed that wallabies spend the days in denser habitats and moved out into open landscapes at night. While wallaby movements also revealed that wallabies show avoidance of crossing roads, females were more likely to cross during the day and males during the night. Water points appeared to be important in crossing roads with wallabies crossing more often in order to access water. The study also showed that wallabies appeared to be more likely to cross roads where there are higher speed limits, which are also in more rural and less densely populated areas.

The number of wallabies killed on roads was monitored by the Nature Parks and Deakin University (Webb 2014) and revealed that at least 300 wallabies are killed each year just



on the main roads of Phillip Island. Wallaby roadkills occurred more on tree-lined roads outside urban areas, near bends and patches of native trees in the landscape, and much more on road sections with faster speed limits. As found in other macropod studies, roadkills are male biased.

The influence of wallaby browsing was investigated in pastures and in bushland reserves through a study by Charles Sturt University (Jones 2020). Excluding wallabies did not have a dramatic influence on plant species composition or cover. Enclosures in pasture could only be erected for short periods (3 weeks), and in that time no influence on grass growth was detected.

In conservation reserves, enclosures were constructed to selectively exclude wallabies and rabbits, and monitored for four years to look at their influence on native and exotic vegetation diversity and cover. It found a small but detectable difference in the vegetation only after two years of wallaby or rabbit exclusion such that wallabies suppressed diversity, but only a small amount. One plausible explanation for the result was that the seed bank has become depleted so native plant diversity cannot recover easily; however, a seedbank study through Deakin University (Newling 2019) revealed numerous plant species could be germinated in the absence of any browsing. The most likely explanation is that the combined browsing of wallabies, possums and rabbits is inhibiting natural vegetation regeneration that could otherwise occur, and all would need to be excluded or sufficiently suppressed to recover vulnerable species of plants.

Property owners in some areas of Phillip Island have also noted an increase in wallaby numbers over time and report extensive impacts to revegetation. Most affected by wallaby browsing are low bushes and herbaceous ground covers such that exclusion fencing is required for all plantings and for some plants the exclusion is required permanently.

## APPENDIX A: Key Species Background Information

### COMMON BRUSHTAIL POSSUMS (*Trichosurus vulpecula*)

Once distributed across most of the Australian continent, this species has now disappeared from most of the arid zone, is rare in semiarid regions and is declining in the tropical and temperate woodlands of northern, south-western and eastern Australia. However, they are adept at living in urban environments and are often cursed for their noisy and damaging habits. They are not listed under the Victorian FFG 1988 or Federal EPBC 1999 Acts.

Anecdotal reports suggest Common Brushtail Possums established on Phillip Island in the 1920s after being introduced by local residents (Kirkwood & Johnston 2006). The species was not noted as present on Phillip Island in the diaries of early settler or by early naturalists prior to this time.

Common Brushtail Possums are now abundant on Phillip Island particularly in areas with higher vegetation density, including urban zones. No repeated systematic surveys have been conducted to describe a trend in population densities of Common Brushtail Possums on Phillip Island.

Common Brushtail Possums are generalist feeders, consuming leaves of various dicotyledonous plant species as well as fruits, flowers and some invertebrates. Possum populations will increase to the level determined by the resources in their habitat, as such urban areas have become an ideal habitat with plenty of garden plants and potential nesting sites (e.g. sheds and roofs). Their potential impacts on vegetation communities through browsing may prevent the regeneration of some plant species and possibly play a role in tree dieback, which is cause for concern among some community members.

Action has been taken to reduce the impact of brushtail possum browsing on eucalyptus trees at the Koala Conservation Reserve to ensure the survival of vegetation and the maintenance of the food source for the Koalas. Exclusion fencing, tree banding and control under ATCW's have been utilised in this area to control numbers of brushtail possums. Impacts on urban gardens and damage and disturbance caused by possums in roofs are also a common concern of residents and business owners on the Island.



Fischer, M. (2018) Swamp wallabies in a modified landscape: ecology and interactions with humans on Phillip Island. Doctor of Philosophy Ph.D., The University of Melbourne.

Jones, L. (2020) Determining the impact of Swamp wallaby, Cape Barren goose and European rabbit herbivory on agricultural pastures. Master of Applied Science Master of Applied Science, Charles Sturt University.

Kirkwood, R. & Johnston, M. (2006) Terrestrial mammals of Phillip and French Islands, Western Port, Victoria. *Victorian Naturalist*, **123**, 146-157.

Marchant, S. and Higgins, P.J. (eds.), 1990. *Handbook of Australian, New Zealand and Antarctic Birds*. Vol. 1. Part B. Oxford University Press: Melbourne. Newling, E. (2019) Woodland soil seed bank exhibiting poor vegetation regeneration following ecological burn, Phillip Island, Victoria. Deakin University.

Webb, V. (2014) They Came, They Saw, They Flattened: Factors Underlying Roadkill on an Eco-tourism Island. Honours Bachelor of Environmental Science Honours, Deakin University.

# APPENDIX B: Legislation and Policy

## LEGISLATION

### **Wildlife Act 1975**

This Act provides for the protection, conservation and management of wildlife including the sustainable use of and access to wildlife. The Act also establishes the ability to prohibit and regulate the conduct of persons engaged in activities concerning or related to wildlife.

All wildlife (and deer) are protected under the Wildlife Act 1975, however the Act allows for the Governor in Council (GIC) to declare protected wildlife to be unprotected in certain situations. These GIC orders specify the conditions, limitations and restrictions including the persons authorised and the methods that may be used to kill, take or otherwise control the taxon or kind of wildlife declared unprotected.

There are currently two GIC orders in place in Victoria for trapping Common Brushtail Possums living in buildings or to managing them in municipal parks, and for the destruction of Sulphur-crested Cockatoos, Long-billed Corellas and Galahs where they are causing serious damage to trees, vineyards, orchards, recreational reserves or commercial crops.

### **Prevention of Cruelty to Animals Act 1986**

The Prevention of Cruelty to Animals Act 1986 (POCTA Act) provides for the protection of animals (domestic, farmed and wildlife) against cruelty through the establishment of standards for animal welfare, requirements for the use of animals and where applicable exemptions to the act.

Under this Act, it is an offence to do or omits to do something, that results in the pain and suffering of any animal. However, offences under the Act (except for those in Part 3 – scientific procedures) do not apply to anything done in accordance with the Wildlife Act (refer to section 6(1B) of the POCTA Act). This exemption applies to any activities undertaken in accordance with an authorisation given under the Wildlife Act.

### **Flora and Fauna Guarantee Act 1988**

The purpose of this Act is to establish a legal and administrative framework to enable and promote the conservation of Victoria's native flora and fauna. It provides for the conservation and management of flora and fauna as well as the management of potentially threatening processes.

The Act places importance on prevention to ensure that more species do not become threatened in the future and emphasises the importance of cooperative approaches to biodiversity conservation. It recognises that all government agencies and the community need to participate in conservation.

### **Planning and Environment Act 1987**

The purpose of this Act is to establish a framework for planning the use, development and protection of land in Victoria.

The Act sets out procedures for preparing and amending the Victoria Planning Provisions and planning schemes. It also sets out the process for obtaining permits under schemes, settling disputes, enforcing compliance with planning schemes and permits, and other administrative procedures.

The main functions of the Act are to set the broad objectives for planning in Victoria, set rules and principles for how planning system works in Victoria, established the legal instruments and defines the roles and responsibilities of the Minister, councils, government departments, the community and other stakeholders in the planning system.

### **Aboriginal Heritage Act 2006**

The purpose of this Act is primarily to provide for the protection of Aboriginal cultural heritage in Victoria. It establishes Registered Aboriginal Parties (RAP) as the primary guardians, keepers and knowledge holders of Aboriginal Cultural Heritage. RAPs are the primary source of advice and knowledge on matters relating to Aboriginal places or Aboriginal objects in their region.

### **Environment Protection and Biodiversity Conservation Act 1999**

This Act is the Australian Government's key piece of environmental legislation. The Act aims to balance the protection and management of nationally and internationally important flora, fauna, ecological communities with society's economic and social needs by creating a legal framework and decision-making process based on the guiding principles of ecologically sustainable development.

# APPENDIX B: Legislation and Policy

## POLICY AND PLANNING

### Living with Wildlife Action Plan

The Victorian Government's Living with Wildlife Action Plan outlines a vision, outcomes and principles which guide the development of policy and procedures for the conservation and management of wildlife in Victoria. It also sets out a number of actions which focus on addressing key issues in four areas, or themes: encouraging positive attitudes towards wildlife, effective wildlife management, improving knowledge and streamlining assistance to sick, injured and orphaned wildlife.

### Protecting Victoria's Environment – Biodiversity 2037

Protecting Victoria's Environment - Biodiversity 2037 is a long-term plan to stop the decline in Victoria's biodiversity and improving the natural environment so it is healthy, valued and actively cared for. It focuses on linking our society and economy to the environment, working with traditional owners, adapting to climate change, working together to protect the environment and connecting Victorians to nature. This plan provides the broad policy context for the development of this plan.

### Bass Coast Distinctive Areas and Landscapes

Under the Planning and Environment Amendment (Distinctive Areas and Landscapes) Act 2018, an area in Victoria can be declared a 'distinctive area and landscape' (DAL) if it meets certain attributes and if its social, cultural, environmental and economic values could be lost or irreversibly damaged by the impacts of urban encroachment, climate change, or by other impacts.

The Bass Coast DAL was declared in October 2019. The declaration applies to the whole Bass Coast Shire including Phillip Island and extends 600 metres seaward of the low-water mark. The declaration triggers the development of a draft Statement of Planning Policy (SPP) by DELWP in partnership with the Bass Coast Shire Council and the Bunurong Land Council Aboriginal Corporation (BLCAC). The SPP will create a framework for the future use and development of land in the DAL, to ensure its attributes are protected.





# Phillip Island (Morrow) Wildlife Plan

Balancing the needs of wildlife and the community

This report is available at  
[www.delwp.vic.gov.au](http://www.delwp.vic.gov.au)  
[www.penguins.org.au](http://www.penguins.org.au)  
[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)



Environment,  
Land, Water  
and Planning