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The resource is suitable to assist students studying VCE Geography - Unit 2 Tourism

In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments.

The study of tourism at local, regional and global scales emphasises the interconnection within and between places. There is an interconnection between places tourists originate from and their destinations through the development of communication and transport infrastructure, employment, together with cultural preservation and acculturation. The growth of tourism at all scales requires careful management to ensure environmentally sustainable and economically viable tourism.

Students undertake fieldwork in this unit and report on fieldwork using the structure provided.

Area of Study 1: The Characteristics of Tourism

Key knowledge:

- The characteristics of domestic and international tourism
- The changing characteristics of tourism over time
- The location and distribution of different types of tourism and tourist destinations

- Factors affecting the different types of tourism at selected locations
Including:
 - natural and human characteristics of host destinations
 - development of transport and communication technology
 - international agreements and national policies
 - changing income and lifestyles
 - investment and marketing
 - regional occurrences, for example major events, disasters, diseases, and economic and political situations
- the use of spatial technologies by the tourism industry for the identification of different types of tourism and tourist destinations and the factors affecting domestic and international tourism

Area of Study 2: The Impacts of Tourism

Key knowledge:

- The environmental and economic impacts of tourism
- Socio-cultural impacts of tourism at origin and destination
- The range of management strategies responding to environmental, economic and socio-cultural impacts, and the consequences of these responses
- The effectiveness of management strategies in response to the impacts of tourism
- The environmental sustainability, economic viability and socio-cultural value of tourism
- The role of planning for sustainable outcomes in tourism



The Nature Parks conservation programs vary with the season. We can be rescuing wildlife, weeding to remove invasive flora and fauna, seed collecting and planting.

Above - This is a ranger removing a migratory shearwater from the road. At the end of summer each year millions of Shearwaters which have been breeding on Phillip Island leave for their world spanning journey up to the Aleutian ocean around Japan. Unfortunately, some birds mistake a light shining onto a bitumen road for moonlight shining on the ocean water and think it's a safe place to land.



Above: The Nature Parks undertakes extensive revegetation projects across Phillip Island, restoring habitat with indigenous species which local wildlife rely on.

Below: Our Visitor Experience guides run educational and interpretive tours aiming to connect our visitors with nature and inspiring them to act for the environment when they return to their homes.



Notable conservation achievements include:

- Summerland housing buyback – from 1985-2007 State Gov recognizing the threat to the penguin colony from residential houses commenced a buyback scheme returning the area as habitat for Little penguins.
- Fox Free Phillip Island – declared fox free in 2017 creating an ‘island haven’ for wildlife.

Some of the details:

- Manage around 1805 Ha Crown Land on Phillip Island
- Manage three of the largest wildlife populations in the world – Little Penguins, Australian Fur Seals, Shorttail-Shearwaters.

Habitat management:

- Weeding
- Revegetation
- Bushfire planning and management.
- Wildlife Rescue and rehabilitation.
- Manage a koala population at Koala Conservation Reserve (approx. 16 koala long term residents and frequent shorter term koalas receiving care and rehabilitation).
- Shearwater patrols – 256 rescued on roads across Phillip Island and San Remo 2022 season.
- Threatened species management – Eastern Barred bandicoots, Hooded Plovers, shorebird counts, threatened flora management.
- Vertebrate pest control – fox control Anderson Peninsula, rabbit control with Landcare partnership, feral cat eradication ~132 feral cats removed from Nature Parks land.
- 100,000 plants produced by Barb Martin Bushbank, a volunteer run nursery for native flora.
- Citizen Science development – Seal Spotter – count seals from drone imagery: [SealSpotter Citizen Science Portal » Phillip Island Nature Parks \(penguins.org.au\)](https://sealspotter.penguins.org.au)
- Collaborate with other key stakeholders for research and wildlife recovery programs, behaviour change outcomes and legislation/policy and governance.
- Cultural land management with the Bunurong Land Council

All of this in close consult with our community and other stakeholders!



THREATENED SPECIES



Nature Parks plays a role in making and maintaining biodiversity on Phillip Island.

The threatened species team can begin to contribute to the breeding program for the Bush Stone Curlew and its recovery in south-east Australia, with a breeding pair making their home at the Koala Conservation Reserve. We encourage people to come visit the Koala Reserve, meet one of these cryptic birds and learn about the curlews' plight before a potential wild release to Phillip Island where the species once lived.

The Eastern Barred Bandicoot has been successfully reintroduced onto Churchill Island and on Summerland Peninsula. This vital conservation work has resulted in re-classification of the Eastern Barred Bandicoot from **Extinct in the wild to Endangered in Victoria**. If you are lucky, you may well see an Eastern Barred Bandicoot hopping around with the Penguins. Eastern Barred Bandicoot Video: [Science & Conservation Snapshot: Eastern Barred Bandicoots - YouTube](#)

We run an extensive shorebirds nest monitoring program with a focus on the Hooded Plover (Hoodies), a species listed as vulnerable in Victoria with only around 3000 breeding pairs in total in the state. 'Hoodies' forage on the sand, along the waterline and on intertidal rock platforms. Hooded plovers often like nesting with the indigenous plant hairy spinifex and can also be seen sheltering on the beach behind clumps of seaweed.

Conservation and managing tourist behaviour to support the Hooded Plover include:

- Fencing off breeding beaches and controlling behaviour of beach goers and their pet dogs
- Public Education Programs. Volunteers are involved in the 'Hooded Plover Watch' program and ranger's patrol beaches during the breeding season.
- Erecting temporary fencing and signage around vulnerable nests to create refuges and making the community aware of breeding successes.

Our achievements
Conservation excellence

The conservation status of Eastern Barred Bandicoots was Improved from Critically Endangered to Endangered.

Our team restored 13.8 hectares of habitat with 14,233 plants and 586.4 hectares of weed control.

Barb Martin Bushbank propagated 610,000 plants and propagated 13 new species.

25 Hooded Plover chicks hatched from 29 nests and 14 successfully fledged.

Two breeding pairs of Bush Stone-curlews reside at the Koala Conservation Reserve for future release back to the wild.

Little Penguins are thriving with a record 5,219 penguins crossing the beach in one night, a year-round average of 1,493 per night and 1.1 chicks produced per pair.

The first evidence of a fox on Phillip Island (Mallow) in seven years was confirmed - our team, including conservation dogs, located and removed the fox.

Phillip Island NATURE PARKS | penguins.org.au

Conservation by the numbers 2022-2023.



A camera trap in the field – used to monitor people and wildlife. Data from field cameras is used to inform conservation action.



Above: an array of camera traps monitoring the Summerland Peninsula.

To ensure the long-term rehabilitation of the Summerland estate the Nature Parks uses spatial technologies to:

- monitor feral cat movement to control them using a field camera array
- monitor and maintain sustainable habitat design / revegetation and weeding.
- surveying animal movements rabbits, feral cats and bandicoots

The use of Geography Information Systems (GIS), aerial mapping and data, to make conservation decisions, for example array of camera traps array to assist with feral cat tracking and removal.

Can you see the previous roads and house blocks of the Summerland peninsula estate?

Another management strategy is to use some of the old roads as fire breaks and access points in the event of a fire or emergency.



Vertebrate Pest Control (Foxes, feral cats)

Maintaining a fox free island is critical for local native wildlife such as the Little Penguins and Eastern Barred Bandicoots. Detection Dogs can locate foxes (or cats) or evidence of foxes and inform where to place a trap.

Detection Dogs Video: [Science & Conservation Snapshots - Fox Detection Dogs - YouTube](#)

Maintaining a fox-free Phillip Island

European red fox predation is the greatest land-based threat to the Summerland Peninsula's little penguin colony.

Over the past 25 years, nearly 3,400 little penguins have been found killed across the whole island. Foxes have the instinct to kill more than they need for food when given the opportunity, as well as burying extra food for a rainy day. This behaviour can result in 'surplus killing', which leads to large losses of native wildlife.

In 2004, a Fox Eradication Strategy was introduced with the aim of removing all foxes from Phillip Island. Intensive baiting across private and public land, as well as spotlight shooting, den fumigation and trapping led to a comprehensive knockdown of the fox population.

Since 2015, no physical evidence of fox activity has been found on the island, although trained fox detection dogs and camera traps are used to monitor potential refuges and areas of reinvasion.

2017 – incursion of one fox onto the island. Tracked and removed within a few months by the conservation team.





Cape Woolamai, Phillip Island

FIGHTING FOXES AND FERAL CATS

Two mainland fox baiting programs removed an estimated 110 foxes from the Anderson Peninsula on the mainland and surrounding areas in a collaborative program between Parks Victoria, local landholders and the Nature Parks.

This was to ensure a 'buffer-zone' is maintained to minimise the risk of foxes re-invading Phillip Island (Millowl). In early May, the first evidence of a fox on Phillip Island (Millowl) in seven years was confirmed. Ongoing surveillance and control programs located and removed the fox.

Conservation dogs Jazz, Marbee and Milly surveyed 105 kilometres across the island and 82 kilometres on the mainland for evidence of foxes. They were also deployed to locate evidence of feral cats.

The first GPS tracking study of feral cats was undertaken on Summerland Peninsula. Results will contribute to our understanding of feral cat behaviour and help evaluate our current camera monitoring programs.

A total of 76 feral cats were caught over 9,059 trap nights.



HABITAT MANAGEMENT

Weeding and planting at the Nobbies. Here the Conservation team use abseils to manage a vulnerable plant species the Crimson Berry

THREATENED FLORA

Protection works and habitat enrichment was conducted on the island's south coast for Crimson Berry. A Melbourne University master student commenced an evolutionary genetic study on Crimson Berry.

Construction of a rabbit exclusion area began to improve natural recruitment of Currant-wood and other locally rare plants in the Rhyll Wetland area.



The Nobbies Centre on Summerland Peninsula

All of our conservation efforts are funded by eco-tourism, grants, donations and philanthropy (through the penguin Foundation)

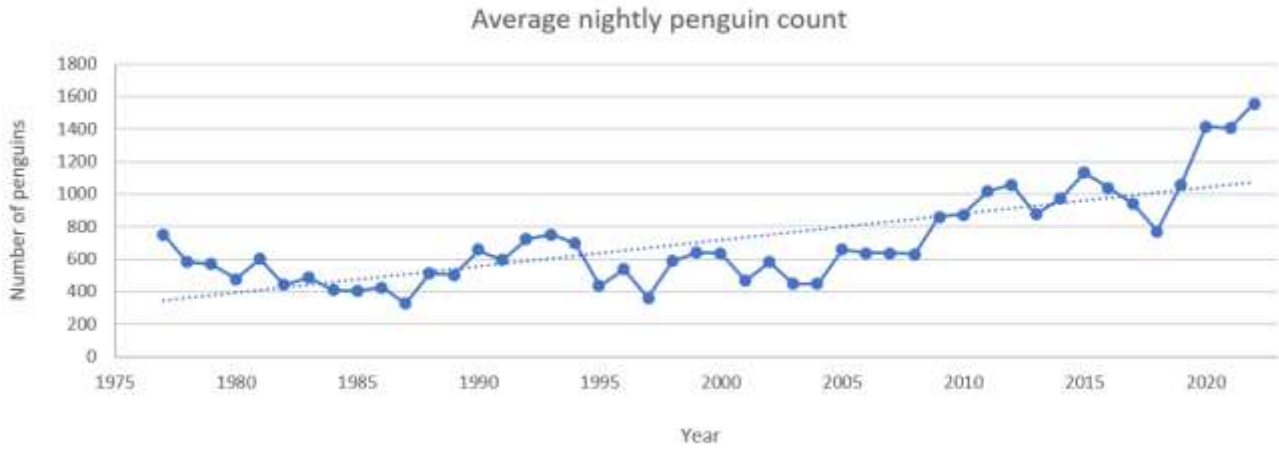
The Nature Parks attractions are run in with sustainable principles and management strategies to allow visitors from all over the world, to connect with nature with as minimal impact on that nature as possible.

You can see one key strategy here, the Boardwalks at the Nobbies Centre which enables people to explore fragile little penguin habitat and burrows without damaging the landscape. The raised boardwalks also allow for social cohesion amongst the penguins who can travel underneath the boardwalks using their traditional pathways.

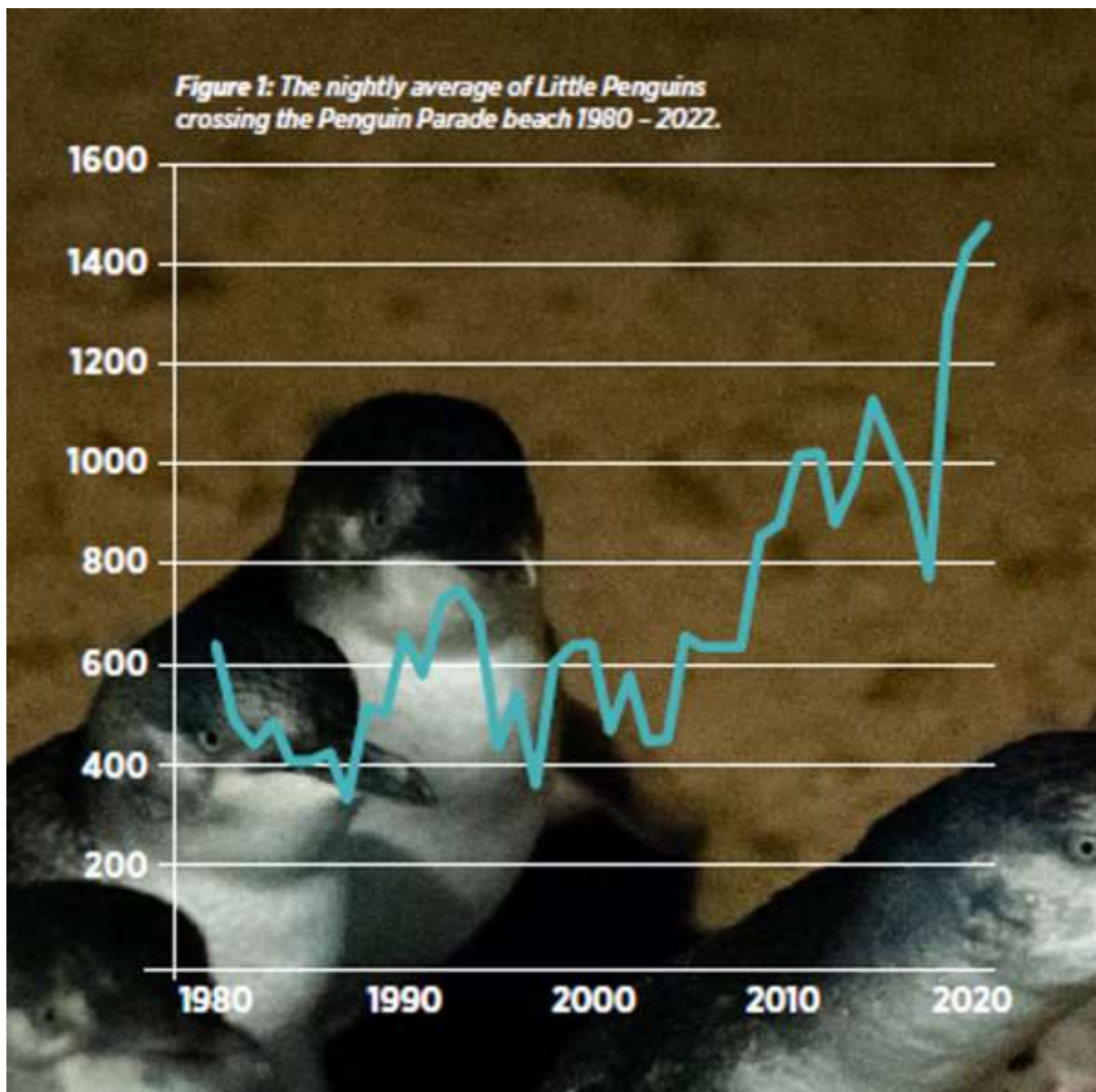
Everything about the boardwalks is a management strategy for safety and to minimise impact on the environment:

- Signage + use of imagery to connect with visitors about what they are seeing and why it's worth protecting.
- Elevated boardwalks to allow penguins and other wildlife to pass underneath.
- Toilets (human needs)
- Lighting (tungsten coloured to minimise impact on Penguins)
- Emergency exits, sprinkler and fire hose access.
- Handrails for human safety and to restrict access into the habitat.

PROTECTING LITTLE PENGUINS



Since 1985 Penguin Protection Plan was enacted to including scientific research, a management plan, fox control program and the buyback of the Summerland Peninsula, the average number of penguins crossing the beach has increased.



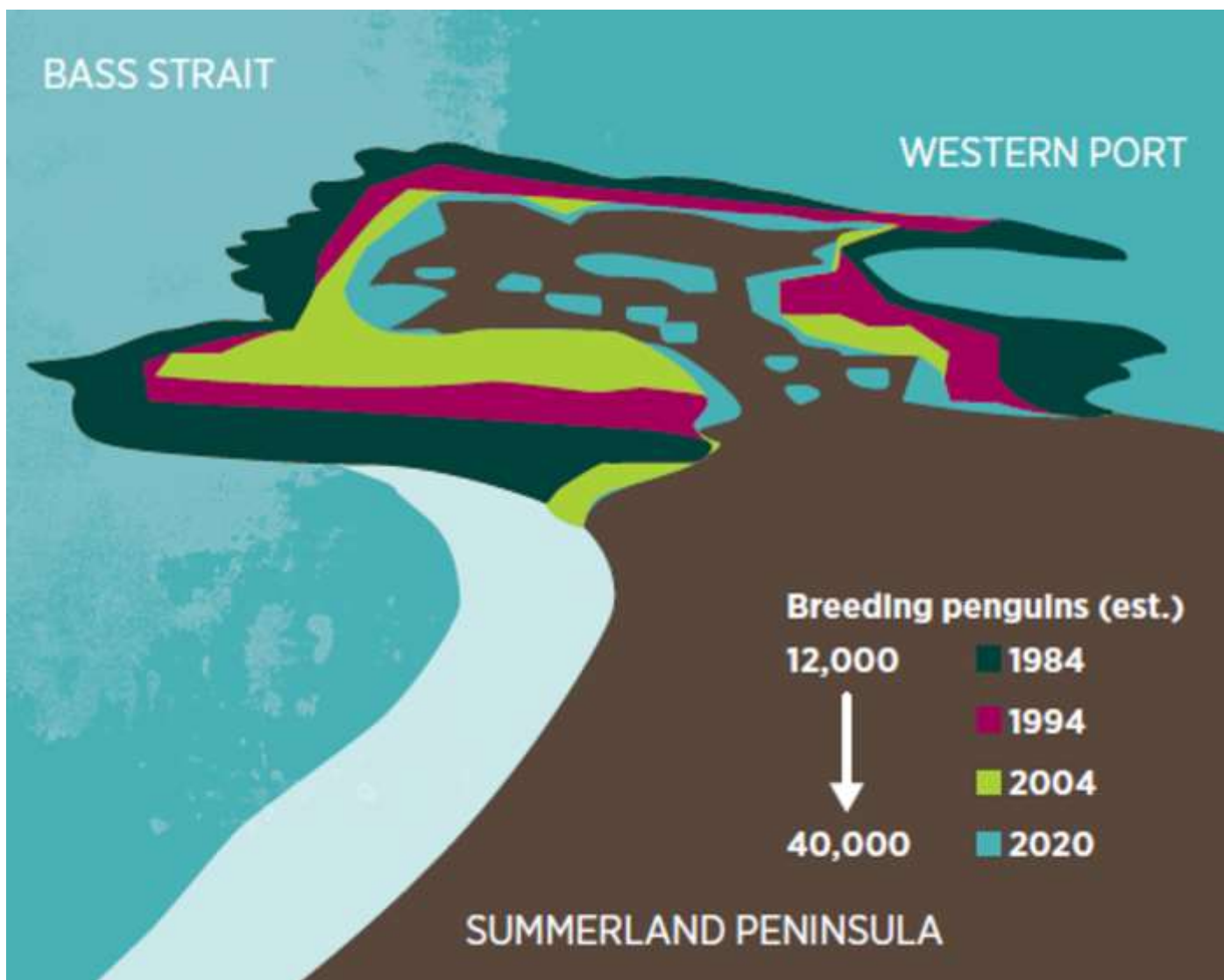
The 2021-22 penguin breeding season was longer than average – starting in September and finishing in mid-April. It was also positive with records being set and is due to the increasing penguin population, conservation efforts and the La Niña weather patterns bringing penguin food close to shore.

A nightly average of 1,493 Little Penguins crossed the beach at the Penguin Parade in 2021-22. This is a 5% increase from the previous season.

A record total of 5,219 penguins crossed the Penguin Parade beach in one evening in May 2022. This is the highest average nightly number ever recorded.

The average weights of Little Penguins crossing the weighbridge were above average for the entire 2021-22 period, suggesting the penguins were very successful in foraging and feeding.

In 2023 we estimate there are 40,000 adult penguins in the Summerland colony.



This graphic shows the growing distribution of breeding penguins on the Summerland Peninsula. Around 10% of the entire colony call the area immediately around the Penguin Parade home. As the peninsula's native vegetation is maintained, the penguins are increasing the extent of their nesting area. Some penguins nest near the beach, others waddle kilometres inland back to a burrow.

RESEARCH LED CONSERVATION - LITTLE PENGUINS POPULATION CENSUS

Since 1984 the number of breeding Little Penguins across the Summerland Peninsula colony has been monitored every three to five years. The first estimates in 1984 suggested there were about 12,000 breeding penguins. This grew to about 35,000 by the late 1990s, dropped to about 30,000 in 2010, but has risen again to an estimated 40,000 by 2020. The growth coincides with admirable conservation efforts including the removal of 176 houses and restoring habitat, which has enabled the penguins to 'reclaim' the peninsula. Furthermore, strong recruitment in the last 10-15 years has been due to increased ocean temperature and early breeding onset.

LITTLE PENGUIN TRACKING 2021–22

Tracking penguins provides crucial information on where they feed and how can we protect these areas in the future. In collaboration with the French National Research Council, we have been tracking penguins since 2010. In the 2021-22 penguin breeding season, 42 birds were deployed with data loggers throughout the three breeding stages.

Incubation and guard stage birds were sampled concurrently due to many nests hatching before deployment began. During incubation, birds travelled up to 100 kilometers from the Penguin Parade, foraging out in Bass Strait and along the southern coast as far east as Walkerville. Guard birds, travelled less than 50 kilometers from the Penguin Parade, foraging close to the southern coast of Phillip Island (Millowl), towards Cape Woolamai. During post-guard, birds travelled less than 70 kilometers from the colony, foraging in Bass Strait and along the coast near Kilcunda, Wonthaggi and Cape Patterson.

FOLLOWING PENGUINS FROM HATCHING TO DEATH

The research team completed a study on the Little Penguin colony, which was published in Ecological Monographs, a top ecological journal from the Ecological Society of America. Over two decades, the study tracked 463 Little Penguins across 19 breeding seasons and revealed that the penguins prefer to pair with partners in the same age bracket. Age is an important factor in penguins' lives. Penguins gain experience with age and improve their breeding performance from ages two to five by laying earlier and foraging better. When they reach age 16, individual performances start to decline, they lay later, bring back less food from their foraging trips and change partners and nests more often, all resulting in fewer chicks being produced.

How do we minimise the impact of our visitors on the local environment?

- Management Strategies include capping the total number of visitors per night – currently at the Penguin Parade capacity is 2.5k per night. Pre COVID this capacity was larger at 3.8k.
- Use of education and interpretation to CONNECT visitors with wildlife and inspire visitors to ACT for Nature.
- Use of infrastructure such as boardwalks to create a 'reverse zoo' situation where people can move into habitat and walk above the ground so as not to stand on or destroy penguin and shearwater burrows.
- Using conservation data to inform building design for example the site of the new visitor centre.



2023 - The current Penguin Parade Visitor Centre – note the revegetation and landscaping (white tree guards).

The new visitor centre is on land that was previously a parking lot for the old centre, in a location between the dunes, the headland and the wetlands, where penguins are unlikely to build burrows. It has a much larger capacity than the old centre, with two restaurants, event spaces and meeting rooms.

Without a healthy and wild ecosystem what would the tourists come to experience?

Without the tourists, how would the nature parks pay for our conservation programs such as fox detection dogs and the rewilding of Eastern barred bandicoots – both which contribute to creating and maintaining healthy and wild ecosystems.

With a healthy Penguin population and the continued worldwide interest from tourists to visit Phillip Island and the experience of viewing wild penguins, ecotourism continues to play an essential part of the Phillip Island and Victorian economy.

All our work at the Nature Parks strives to balance social, economic and environmental outcomes. Our tourist visitors provide income which allows us to operate and protect the wildlife and habitat, but we need to continue to balance the environmental impacts of their visit.



For information on booking an excursion for your students:

<https://www.penguins.org.au/conservation/education/>

Help us improve this resource email feedback:

<https://form.responster.com/JsZtAc>