

**NSW National Parks and Wildlife Service** 

# Killalea Regional Park

Draft plan of management



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# **Contents**

Hav	ve yo	our say	Vİ
Ack	nov	vledgements	Vİ
Coi	ntac	t us	Vİ
Sur	nmo	ary	vii
Coi	nnec	ction to Country	Viii
Oui	r visi	on for the park	viii
1.	Intr	oduction	1
	1.1	Killalea Regional Park	1
	1.2	Why this park is important	2
	1.3	Management principles	2
2.	Mai	nagement directions	5
	2.1	Protecting Aboriginal cultural values and supporting connection	n
	to C	Country	5
	2.2	Protecting biodiversity and assisting recovery of the coastal	
	land	dscape	6
	2.3	Providing opportunities for recreation and learning	11
	2.4	Protecting historic heritage sites, places and cultural values	14
	2.5	Providing facilities for visitors	15
	2.6	Supporting park management operations	17
	2.7	Managing non-park infrastructure and services	18
3.	Sch	neme of operations	20
4.	Par	k use regulations	26
	4.1	Recreational activities	26
	4.2	Commercial and non-commercial activities requiring approva	ıl 28
App	oend	dix A: Objects of the National Parks and Wildlife Act 1974	30
App	oend	dix B: Native species scientific names	31
Apı	oena	dix C: Miaratory birds recorded in the park	32

References	33
More information	33

# **List of tables**

Table 1	The park and its regional setting	1
Table 2	Vegetation communities at Killalea Regional Park	6
Table 3	Scheme of operations	20
Table 4	Park use regulations – recreational activities	26
Table 5	Park use regulations – events, functions and commercial activities	29
Table 6	Scientific names of native species mentioned in the plan	31
Table 7	Migratory birds recorded in the park	32

# **List of figures**

Figure 1 Map of Killalea Regional Park 4

### Have your say

Submissions may be lodged via:

the online submission form at <a href="https://www.environment.nsw.gov.au/get-involved/have-your-say">www.environment.nsw.gov.au/get-involved/have-your-say</a>

email to npws.parkpl

email to <a href="mailto:npws.parkplanning@environment.nsw.gov.au">npws.parkplanning@environment.nsw.gov.au</a>

post to Manager, Planning and Assessment, National Parks and Wildlife Service, Locked Bag 5022, Parramatta NSW 2124.

#### Written submissions must be lodged by 29 January 2024.

All written submissions on this draft plan will be considered in the preparation of the final plan of management.

Your submissions will be provided to the South Coast Regional Advisory Committee which is established under the *National Parks and Wildlife Act 1974* and has a formal role in the preparation of plans of management through the provision of advice.

The Department of Planning and Environment complies with the NSW *Privacy and Personal Information Protection Act 1998*, which regulates the collection, storage, quality, use and disclosure of personal information.

Information that identifies you may be gathered when you use our website or send us an email. If you indicate in your written submission that you object to your submission being made public, we will ask you before releasing your submission in response to any access applications under the *Government Information (Public Access) Act 2009*.

### **Acknowledgements**

Killalea Regional Park is on Dharawal Country. The Wodi Wodi People are the Aboriginal custodians of the land.

This draft plan of management was prepared by the National Parks and Wildlife Service, in consultation with a community reference group. The valuable contribution of reference group members is acknowledged.

#### **Contact us**

For more information about this draft plan of management or Killalea Regional Park, contact the National Parks and Wildlife Service (NPWS) Illawarra Highlands Area via:

- email to <a href="mailto:npws.illawarrahighlands@environment.nsw.gov.au">npws.illawarrahighlands@environment.nsw.gov.au</a>
- NPWS Minnamurra Rainforest Centre at 345 Minnamurra Falls Rd, Jamberoo NSW 2533
- post to PO Box 5436, Wollongong NSW 2520
- telephone on 02 4224 4188.

### **Summary**

Killalea Regional Park is located on Dharawal Country, in the Illawarra region on the NSW South Coast, approximately 120 km south of Sydney. The park is reserved under the *National Parks and Wildlife Act 1974* and is managed to achieve the objects of this Act (see Appendix A). These objects focus on conserving the natural and cultural values of the park, as well as fostering public appreciation, understanding and enjoyment of these values.

This draft plan describes how the park will be managed to achieve the objects of the National Parks and Wildlife Act, consistent with the management principles under the Act for regional parks. This draft plan has been prepared in consultation with a community reference group and after consideration of the matters listed under section 72AA of the National Parks and Wildlife Act.

Once adopted, this plan will direct management of the park and any future additions to the park. No operations may be undertaken unless they are in accordance with the adopted plan.

Section 2 of the draft plan summarises the park's key values and management directions.

The scheme of operations (Section 3) describes the management objectives for the park's values and actions the National Parks and Wildlife Service (NPWS) propose to undertake to achieve these objectives.

The park use regulations tables (Section 4) set out the recreational and commercial activities that are permitted in the park and any requirements to undertake these activities, including if consent is required from NPWS.

The appendices include supporting information, such as scientific names of native plants and animals mentioned in the draft plan (see Appendix B).

## **Connection to Country**

Killalea Regional Park is part of an ancient cultural landscape that includes Aboriginal people. The park is Dharawal Country, and the Wodi Wodi People are the Aboriginal custodians of the land, with other families, groups and people. Aboriginal people have a deep spiritual and cultural connection to this Country. Their ancestors have lived here for thousands of years and, in doing so, form part of this living landscape.

Connections to Country and the significance of this park to Aboriginal peoples – past, present and future – are respected by NPWS and acknowledged in this draft plan. NPWS supports and acknowledges the role of Aboriginal people in identifying traditional connections and custodians for this place.

## Our vision for the park

#### Our vision for Killalea Regional Park is for a place where:

- the park is recognised and celebrated as an Aboriginal cultural landscape
- healthy resilient coastal ecosystems return, extend and flourish
- facilities support sustainable use of the park by Aboriginal people, the local community and visitors.

#### 1. Introduction

### 1.1 Killalea Regional Park

Killalea Regional Park is on Dharawal Country. It is located between Shellharbour and Kiama in the Illawarra region on the NSW South Coast. The park is adjacent to the suburb of Shell Cove and approximately 6 km south of Shellharbour City Centre. The park covers just over 260 ha and has over 7 km of coastline. On the coastline, the boundary of the park extends to the mean high water mark. The park includes a freshwater lagoon and wetlands, a small offshore island (Stack Island), a vegetated sandspit and estuary foreshore at the entrance to the Minnamurra River (see Figure 1).

Adjoining land uses include Bass Point Quarry, the suburb of Shell Cove, a golf course (The Links Shell Cove) and the Dunmore Recycling and Waste Disposal Depot. The park also connects, via a narrow coastal strip, to Bass Point Reserve, which is managed by Shellharbour City Council.

Table 1 The park and its regional setting

Features	Description
Area	260.33 ha
Reservation date	29 June 2022 reserved as a regional park
Previous tenure	Lands that now form Killalea Regional Park were initially acquired under the coastal protection lands scheme and added to the national park estate in 2 parts, in 1984 and 1986, to create Killalea State Recreation Area under the management of NPWS.
	In 1991, following a review of the National Parks and Wildlife Act reserve categories, the park was transferred from the Minister for the Environment to the Minister for Conservation and Land Management. A trust was appointed to manage the park in 1993.
	In 1997, it was dedicated for the purpose of public recreation as a state park and managed by a community board under the <i>Crown Lands Act 1989</i> on behalf of the then NSW Department of Land and Water Conservation.
	In 2016, management of the park passed to NSW Crown Holiday Parks Land Manager (Reflections Holiday Parks) (under the <i>Crown Lands Management Act 2016</i> ) on behalf of the then NSW Department of Lands (now Department of Planning and Environment – Crown Lands).
	In 2022 it was reserved as a regional park under the National Parks and Wildlife Act and management reverted to NPWS.
Biogeographic region	The park is in the Illawarra Subregion of the Sydney Basin Bioregion.
International significance	Bird species listed in international migratory bird agreements (JAMBA, CAMBA, ROKAMBA¹) have been recorded in the park.
Other reservations	In 2009, Killalea National Surfing Reserve was declared from the mean high water mark to 500 m out to sea adjacent to the park (see Figure 1).

<sup>1.</sup> CAMBA = China-Australia Migratory Bird Agreement; JAMBA = Japan-Australia Migratory Bird Agreement; ROKAMBA = Republic of Korea-Australia Migratory Bird Agreement.

#### 1.2 Why this park is important

A place of significant cultural connection for Aboriginal people. The park contains several significant Aboriginal sites, and is actively used for community connection, cultural practices and learning, as well as cultural tourism. It has the potential to realise further opportunities for the Aboriginal community and for Aboriginal businesses.

A place that is important for biodiversity and coastal ecosystems. The park protects a variety of coastal landscapes and associated coastal vegetation communities and native species, including threatened ecological communities, plants and animals. Killalea Lagoon, a natural freshwater wetland, provides habitat for a wide range of threatened birds, including migratory species. Although the park's diverse vegetation communities are currently fragmented and impacted by weeds, there is significant potential for habitat restoration to improve and better protect biodiversity values.

A place that is important for surfing and surfing culture. The beaches and surf breaks adjacent to the park have been designated as Killalea National Surfing Reserve, reflecting the longstanding history of surfing at these locations and its ongoing importance to the surfing community and surfing culture. The park provides access to, and iconic views of, this national surfing reserve.

A natural outdoor space for recreation and relaxation. Many people use the park for active and passive recreation, relaxation and social connection. Increasing urbanisation means that space for recreation and relaxation in a natural setting, like that provided by the park, is increasingly valued for its health and wellbeing benefits.

A place where European history has influenced the landscape. The extensive open grassy areas in the park, historic plantings, relics of farm buildings and dry-stone walls are all associated with the farming history of the park.

A place for teaching and learning. Significant Aboriginal cultural heritage values, a range of coastal landscapes and vegetation communities, and a freshwater lagoon make the park a valuable learning environment for all ages. Opportunities for environmental and cultural learning in a place that is easy to access and has camping facilities make the park an attractive resource for day visits and overnight camps.

A place where expansive and dramatic views can be enjoyed. The park provides visitors with stunning coastal and escarpment views with minimal intrusion from urban or industrial development. Similarly, views from the surf back to the shore from Killalea National Surfing Reserve are largely unimpacted by signs of urbanisation. This sense of space and escape are at the core of the visitor experience and are an important component of the wellbeing benefits attributed to being in nature.

A place at the heart of the community. The value of the park to the community is evidenced through the compelling and effective community advocacy that supported its most recent reservation under the NPW Act.

### 1.3 Management principles

Development of the management objectives and actions in this plan has been directed by the management principles for regional parks outlined below as contained in the National Parks and Wildlife Act.

The Act requires that a regional park be managed to:

- provide opportunities, in an outdoor setting, for recreation and enjoyment in natural or modified landscapes
- identify, interpret, manage and conserve the park so as to maintain and enhance significant landscape values

- conserve natural and cultural values
- promote public appreciation and understanding of the regional park's natural and cultural values
- provide sustainable visitor or tourist use and enjoyment that is compatible with the conservation of the regional park's natural and cultural values
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to the conservation of the regional park's natural and cultural values.



Figure 1 Map of Killalea Regional Park

# 2. Management directions

The key management directions for the park include:

- protecting Aboriginal cultural values and supporting connection to Country
- protecting biodiversity and assisting recovery of the coastal landscape
- providing opportunities for recreation and learning
- protecting historic heritage sites, places and cultural values
- providing facilities for visitors
- supporting park management operations
- managing non-park infrastructure and services.

These management directions are outlined in the following sections.

# 2.1 Protecting Aboriginal cultural values and supporting connection to Country

The Traditional Custodians of these lands are the Wodi Wodi peoples of the Dharawal language group. NPWS recognises and respects the long and continuing connection Aboriginal people have to the park and surrounding lands.

NPWS will support programs, including those of other government agencies and organisations, that involve Aboriginal people in caring for Country and undertaking park management activities. NPWS will also consult with Aboriginal people regarding incorporating Aboriginal knowledges and practices, such as traditional burning practices, into the ongoing management of the park.

NPWS will pursue opportunities to enhance the identity of the park as an Aboriginal cultural landscape and recognise Country and culture. For example, NPWS will work in partnership with the Aboriginal community to incorporate Aboriginal language into the naming of places, park features and signage; and to provide visitor information that communicates the significance of the park to Aboriginal people.

Renaming, or dual naming, of the park to reflect its significance to Aboriginal people will be investigated in consultation with Aboriginal people.

There are a number of significant Aboriginal sites in the park. NPWS will work with the Aboriginal community to ensure Aboriginal sites are documented and protected and will minimise impacts to Aboriginal sites from recreational activities, park management operations and park facilities. In 2013, a scarred tree with local Aboriginal significance was relocated to the park under the supervision of the Aboriginal community. The tree was aligned to maintain the original orientation of the scars, supported with artwork and sited in an educational setting near the park entrance.

Previously, buildings in the main visitor precinct provided space for an Aboriginal art gallery and supported the delivery of cultural tours and cultural activities in the park.

A key component of any upgrade to the park's main visitor precinct (see 'Killalea visitor precinct' in Section 2.5) will be the provision of an Aboriginal cultural precinct, or similar space. The precinct will support and activate the aspirations of the local Aboriginal community, maintain cultural connections and practices, enable caring for Country, deliver cultural experiences and tourism, and support other appropriate Aboriginal business enterprises or community needs. The design and location of buildings or structures supporting these functions will consider the presence of the scarred tree.

# 2.2 Protecting biodiversity and assisting recovery of the coastal landscape

The park is important for biodiversity and contains a range of coastal landscape features, including rocky cliffs, foreshores, a freshwater lagoon, a vegetated sandspit, gently rolling hills and a small offshore island. The park is connected by a narrow, rocky coastal strip to the prominent coastal headland of Bass Point to the east and is bounded by the Minnamurra River in the south.

The impact of previous farming practices is evident in the large, open grassy areas cleared of native vegetation, and significant weed infestation. Large fig trees are a feature of the park, occurring naturally in rainforest remnants and as historic plantings associated with the park's former use for farming.

Despite the high level of past disturbance and weed infestation, there are distinct and important pockets of native vegetation. A recent vegetation survey (Mills 2022) found a rich diversity of 14 vegetation communities, including one critically endangered and 8 endangered ecological communities listed under the *Biodiversity Conservation Act 2016* (see Table 2). The critically endangered ecological community *Melaleuca armillaris* Tall Shrubland in the Sydney Basin Bioregion is not protected in any other conservation reserve. The park also supports 3 endangered plant species: Illawarra zieria, spiked rice-flower and the white-flowered wax plant.

Management of threatened species and communities is guided by conservation strategies developed as part of the Biodiversity Conservation Program established under the Biodiversity Conservation Act. A priority management site for Illawarra zieria is located in the park.

The recent vegetation survey (Mills 2022) also found that pioneer native tree species (including coastal wattle, coast banksia and sweet pittosporum) have expanded across the park, including among the large expanses of lantana and other woody weeds. This demonstrates natural regeneration is occurring.

Table 2 Vegetation communities at Killalea Regional Park

Vegetation community	Threatened ecological community	BC Act status
Illawarra subtropical rainforest	Illawarra Subtropical Rainforest in the Sydney Basin Bioregion	Endangered
Red gum forest/Illawarra lowlands grassy woodland	Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion	Endangered
<i>Melaleuca armillaris</i> tall shrubland	<i>Melaleuca armillaris</i> Tall Shrubland in the Sydney Basin Bioregion	Critically endangered
Westringia coastal shrubland	n/a	n/a
Themeda coastal grassland	Themeda Grassland on Seacliffs and Coastal Headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions	Endangered
Littoral rainforest	Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered
Bangalay sand forest	Bangalay Sand Forest of the Sydney Basin and South East Corner Bioregions	Endangered

Vegetation community	Threatened ecological community	BC Act status
Swamp oak floodplain forest	Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered
Coast banksia tea tree forest/woodland	n/a	n/a
Mangrove forest/woodland	n/a	n/a
Coastal saltmarsh	Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered
Acacia shrubland	n/a	n/a
Spinifex grassland	n/a	n/a
Freshwater wetlands on coastal floodplains	Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered

BC Act = Biodiversity Conservation Act 2016.

n/a = not applicable, not listed.

Source: Mills (2022).

A comprehensive fauna survey (Schulz 2015) recorded 18 native mammal species, including 3 threatened bat species (grey-headed flying-fox, large bent-winged bat and southern myotis) and 25 species listed under international migratory bird agreements (see Appendix C). The survey results indicate the wide variety of habitats in the park, particularly the freshwater lagoon, support a great diversity of bird species, including the threatened Australasian bittern and the blue-billed duck. The sandspit and small offshore island provide potential habitat for nesting shorebirds such as the endangered pied oystercatcher and little tern. Other threatened or migratory birds more recently observed at the sandspit and Minnamurra River inlet include eastern osprey, hooded plover, bar-tailed godwit and Pacific golden plover.

Further surveys are expected to improve knowledge of animal species diversity and abundance in the park.

The inclusion of Stack Island in the park provides an opportunity to ensure this site continues to provide refuge for shorebird and seabird breeding and roosting. However, sea conditions and a steep rocky foreshore make the island difficult to access for survey and ecological restoration activities.

#### Connectivity

Over the long term, the biodiversity values of the park are likely to benefit from improved connectivity with surrounding natural vegetation and other protected landscapes. Estuarine wetlands on Crown land along the northern shore of Minnamurra River are considered a high priority for addition to the park, expanding protection of the threatened coastal saltmarsh vegetation community. The future addition of Bass Point Reserve to the park may also strengthen protection of the cultural, conservation and recreation values in the Shellharbour area.

#### Killalea Lagoon

The lagoon is one of only 2 undisturbed, natural freshwater lagoons in the Illawarra region. It is important for the protection of threatened and migratory bird species and provides nesting,

roosting and feeding habitat for a range of water birds and shorebirds. It also provides important feeding habitat for the threatened southern myotis bat (Australia's only fishing bat) and habitat for frogs. Other notable species recorded on and around the lagoon include eastern snake-necked turtle and black swan. Potentially suitable habitat for the endangered green and golden bell frog occurs around Killalea Lagoon. This species has not been recorded in the park since 1997, and its rediscovery here would be extremely significant due to the rarity of this species in the region (Schulz 2015).

The entrance of the lagoon to the ocean is usually blocked by a sand barrier, which holds water in the lagoon. However, the lagoon intermittently discharges water to the ocean and has also dried out completely during drought conditions, most recently in 2019.



Photo 1 Killalea Lagoon. J. Sedgewicke/DPE

Maintaining the natural hydrological processes in the park is important to ensure the lagoon ecosystem can rebound after periods of drought. The potential for Bass Point Quarry and its associated works to impact Killalea Lagoon has been recognised for some time. A lagoon management plan (Martens Consulting Engineers 2016) was prepared as part of the approval conditions for the quarry expansion to 40 m below sea level in 2014. The purpose of the plan was to limit adverse impacts on the lagoon from surface or groundwater management on the quarry site.

Experts and stakeholders, including quarry managers, other neighbouring land managers and relevant government agencies/authorities will be engaged to better understand existing and potential risks to the lagoon and take steps, where practicable, to mitigate against those risks. As part of this approach, NPWS will encourage further research and monitoring, including through partnerships with scientific research and educational organisations and citizen science programs.

The lagoon has been mapped as having a high probability of acid sulfate soils occurring at less than 1 m below the ground surface. Left undisturbed these soils are stable and of low risk to visitors or park values. However, if disturbed or exposed to air, the iron sulfides contained in the soils react with oxygen to create sulphuric acid. Acid and other contaminants can enter waterways and wetlands when soils are rewetted, posing a risk to aquatic ecosystems and human health. Exposure or disturbance of these soils can also lead to reduced pH, decreased oxygen concentration in water, and the release of heavy metals such as cadmium and lead, and metalloids such as arsenic. Preventing disturbance to soils in and around the lagoon is therefore important for the protection of wetland values in the park.

#### Weeds and habitat fragmentation

Weed infestation is the most significant threat to biodiversity values in the park. Weeds of greatest concern include woody weeds such as bitou bush, blackberry, coral trees, lantana and wild olive. Also of concern are 2 species of asparagus fern that are severely impacting ground cover in the endangered littoral rainforest community on the sandspit.

Open grassy areas in the park provide important opportunities for recreation and maintain a sense of the park's former use for farming. However, extensive areas populated by non-native grass species fragment the park's native vegetation communities and provide limited habitat for native plants and animals.

A strategic and planned approach will be taken to progressively restore native vegetation to some of these non-native open grassy areas. However, open areas will still be retained for visitor use, protection of historic heritage or other park management purposes. The restoration approach will prioritise protecting high conservation value vegetation communities and connecting areas of remnant native vegetation. There are opportunities to trial a range of restoration techniques, including ecological and cultural burning and biological control agents. Ongoing monitoring of key vegetation communities and species will determine the success of restoration activities and allow us to adapt our management approach, where necessary, to achieve the best outcomes.

A plan will be prepared to guide weed management and restoration of native vegetation. The plan will aim to return the park to a landscape of predominantly native plants and animals. It will focus on addressing weed infestations in threatened ecological communities, preventing further infestation and enhancing connectivity between patches of native vegetation.

Priorities for the development and implementation of the weed management and habitat restoration plan include:

- protecting and enhancing the extent of remnant threatened ecological communities, including the critically endangered *Melaleuca armillaris* Tall Shrubland and threatened species such as Illawarra zieria
- prioritising vulnerable landscapes such as the sandspit
- reducing mowing/slashing outside of visitor use areas
- incorporating a range of approaches including ecological burning, cultural burning and biological controls
- engaging with the Aboriginal community about opportunities for involvement in restoration programs
- providing opportunities for volunteer involvement.

#### Feral animals

Feral animals known to be present in the park include rabbits and foxes. Grazing by rabbits helps to maintain extensive open grassy areas by limiting the regeneration of native plants. Predation by foxes is widely understood to be a threat to many native animals, including shorebirds and other ground-nesting birds present in the park. NPWS will manage feral animals consistent with relevant feral animal strategies.

#### Climate change

Climate change presents a risk to the biodiversity values in the park through coastal inundation, increased flooding, dry periods and associated wildfires. These disturbances can increase the abundance of weed species.

Low-lying coastal ecosystems and fragmented ecosystems are at highest risk from the impacts of climate change. Sea level rise and coastal erosion pose risks to vegetation communities and infrastructure in low-lying areas of the park, including the sandspit and lagoon. Killalea Lagoon dries periodically and may also be at risk from increasing frequency and intensity of dry periods associated with climate change.

With climate change likely to affect the distribution of plant populations and the availability of habitats, the resilience and connectivity of the ecosystems in the park will be increasingly important for maintaining biodiversity. Restoration of native vegetation communities in the park will help build resilience to the impacts of climate change.

The Coastal Management Act 2016 establishes a framework and overarching objects for coastal management in New South Wales. The framework identifies management objectives for areas including coastal wetlands and littoral rainforest. Under the framework coastal management programs are prepared by local councils in consultation with communities and relevant public authorities. NPWS will participate in the program and contribute to the development of actions relevant to the park.

#### **Fire**

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes can lead to the loss of particular plant and animal species and communities. High-frequency fires have been listed as a key threatening process under the Biodiversity Conservation Act.

The fire history of the park is not well documented and there is no clear evidence of fire impacts in the park.

High visitor numbers and proximity to urban areas make accidental or illegal fire ignition the most significant fire risk in the park. By contrast, the long coastline and low level of connectivity with other bushland areas means there is a reasonably low risk of fire spreading into the park.

NPWS will develop a fire management strategy that defines the fire management approach. This strategy will focus on the protection of life and property (including the protection of neighbouring properties), biodiversity conservation, and protecting Aboriginal heritage and supporting cultural practice through fire management.

Wood fires are not permitted in the park, including in Killalea campground, to reduce the risk of fire ignition and impacts associated with native vegetation being used for fuel. However, wood fires may be permitted for cultural activities with consent.

#### **Contaminants**

A small area of contaminated land is located north-east of the lagoon. Information is limited, but it appears copper processing activities that occurred on the site sometime between 1961 and 1970 may be the origin of the contamination.

Further investigation is required to determine remediation or management actions required to contain and control any impacts on ecological communities and water quality in the lagoon.

The risk to visitors is considered low as the area is small and remote from visitor use areas. Despite this, exclusion fences and warning signs will be installed while any remediation actions or other management actions are determined. Fencing and signs will remain in place until the site is assessed as safe.

# 2.3 Providing opportunities for recreation and learning

The park provides visitors open spaces for recreation with largely uninterrupted views to the Tasman Sea, the coastline to the south and to the escarpment.

It is used by many people for active and passive recreation and for social connection. Visitor use is centred around surfing, walking, cycling, fishing, beach activities, and picnics, family outings and gatherings. Visitor numbers are estimated at 30,000 per year.

The park will be managed to continue to provide a range of appropriate visitor opportunities, experiences and facilities that meet the needs of visitors and have minimal impact on park values.

The beaches and surf breaks adjacent to the park have been designated a national surfing reserve, reflecting the longstanding history of surfing at these locations and its ongoing importance to the surfing community and culture.

The scenic views of the landscape, coastline and escarpment are a key attraction of the park. Scenic views from the waters of Killalea National Surfing Reserve back to the largely undisturbed landscape of the park are also important. Maintaining and enhancing these views will be an important component of managing the park for visitor amenity, including upgrades to the main visitor precinct. Strategic pruning to maintain or reinstate sightlines from lookouts and other visitor destinations may be undertaken subject to environmental assessment.

NPWS will work with neighbouring land managers, including the Bass Point Quarry operators, to identify and address potential impacts on the views in and from the park. Opportunities for complementary management on land adjoining the quarry boundary will be explored to reduce impacts of quarry operations on the scenic amenity of the park.

Some illegal and antisocial activity occurs in the park, especially associated with after-hours access, including vandalism, illegal camping, gatherings, fires, damage to native vegetation and rubbish dumping.

#### **Surfing**

Surfing at Killalea Beach (The Farm) and Minnamurra Beach (Mystics) is a major attraction for many park visitors. The designation of Killalea National Surfing Reserve over the water and beaches immediately adjacent to the park adds to the attraction for surfing and draws visitors from interstate and overseas. It is important to continue to provide and maintain appropriate facilities, including car parking and walking tracks, that enable park visitors to access the national surfing reserve.

#### Walking and cycling

Walking is a popular recreational activity in the park. Walking tracks and management trails provide for walking in a range of coastal landscapes (see Figure 1).

There are opportunities to enhance walking experiences, both by improving existing walking tracks and management trails, and developing a limited number of new walking tracks or multi-use tracks. Any upgrades or new tracks should support the overall aim to provide walking opportunities of varying lengths and for varying abilities that allow visitors to experience a range of landscapes and park values. Upgrades may be undertaken or new tracks established to provide strategic connections, facilitate loop tracks, extend existing walking or cycling experiences, or link to experiences outside of the park.

The development of any new walking or multi-use tracks will be subject to safety, environmental, heritage and sustainability assessments.

Tracks and trails that provide no strategic use for park visitors or park management will be closed and allowed to revegetate, or actively revegetated if that is considered necessary.

Improvements to visitor information and signposting are required to support and enhance walking opportunities in the park.

Disturbance by domestic dogs can pose a significant threat to nesting shorebirds and other native animals. Domestic dogs, and dog walking, will not be allowed in the park.

The gently rolling terrain and proximity to urban populations make this park suitable for family-friendly and accessible cycling opportunities. Cycling is currently limited to park roads and management trails. An opportunity exists to upgrade the existing walking track from the park entrance to Minnamurra Beach (Mystics) car park to create a shared pathway or multiuse track for cycling and walking. This would significantly enhance cycling opportunities and improve safety and accessibility for cyclists and people with disability.

#### **Recreational fishing**

Recreational fishing occurs at various locations in the park such as beaches, rock platforms and riverbanks. Fishing is prohibited in Killalea Lagoon.

Rock fishing can be a hazardous activity. Warning signs and visitor education signs will be installed at appropriate locations to encourage awareness of the risks of rock fishing and promote safety measures, including wearing a life jacket. Risk management measures within the park may be complemented by safety programs delivered by other agencies.

#### **Visitor information**

Visitor use of the park and appreciation of its natural and cultural values can be significantly enhanced through the provision of appropriate visitor information and consistent signs.

There are opportunities to improve interpretation of the natural and cultural values of the park and make this information more accessible to park visitors. Opportunities include park signage, tours and programs, and the use of digital technologies.

Over time, there has been a range of factors influencing the naming of places and tracks and trails in the park, including farming history, surf culture and previous management.

Where naming of places, features or visitor experiences is necessary, this will be informed by the NPWS *Park names policy*. The intent is to increase recognition of the park as an Aboriginal cultural landscape, in consultation with the Aboriginal community.

Surfing culture may also be recognised where appropriate in signs and visitor information.

#### Learning and educational opportunities

The park provides a range of learning and education opportunities, including the park's significant Aboriginal cultural heritage, the diversity of coastal landscapes and vegetation communities, and, more generally, health and wellbeing.

In addition to its Aboriginal and natural heritage values, the park is easy to access and has day use and camping facilities. This makes it an attractive place for day visits and overnight camps focussed on environmental and cultural learning.

Education and learning opportunities provided in the park include NPWS-led tours (e.g. Discovery tours), NSW Department of Education programs via the Illawarra Environmental Education Centre, and commercial tours.

The environmental education centre delivers educational activities to public school children from kindergarten to year 12. The centre operates under a statewide memorandum of understanding between the Department of Education and NPWS. A site-specific agreement will be established for the Illawarra Environmental Education Centre to ensure its operation is consistent with park management operations.

The centre is located in the main visitor precinct and is currently housed in a demountable building, supplied, installed and run by the Department of Education. Educational activities are undertaken across the park in a range of landscapes.

NPWS is committed to the ongoing presence of the environmental education centre in the park. The precinct planning process for the main visitor precinct will consider the requirements of the centre (see 'Killalea visitor precinct' in Section 2.5).

#### Group and commercial visitor activities

Organised group activities can provide opportunities for people to experience the park and participate in activities they would not otherwise be able to experience. The parks' open space is also a valuable resource for the surrounding densely populated communities, providing a place for gatherings, group activities and community events. Group activities and community events to date have included ParkRun, yoga groups and markets.

Group activities may be licensed commercial activities or non-commercial organised activities. The park use regulations tables in Section 4 set out the recreational and commercial activities that are permitted in the park and any requirements to undertake these activities.

There are several commercial tourism operators licensed to operate in the park, providing a range of tours, recreational and educational activities. The number of commercial licences for an activity or location may be restricted to protect park values, ensure visitor safety and a better experience for other park visitors.

A focus of this plan is to support opportunities for cultural tourism to be developed and operated by the Aboriginal community, and other Aboriginal business opportunities and aspirations (see Section 2.1).

A model aircraft club currently operates in the park. This activity is unsuitable in the park due to public safety issues and impacts to park values. The activity will cease on expiry of the current authority. The small size of the park and high visitor numbers also make the park unsuitable for the use of drones by park visitors (see Table 4, Section 4.1).

# 2.4 Protecting historic heritage sites, places and cultural values

The park is currently named after Edward Killalea (1816–1872), an Irish convict transported to Australia in 1836 who later became a lease holder in the area. Renting a farm opposite Killalea Beach, he was an active member of the local Shellharbour community and an Alderman.

Killalea was farmed by brothers, James and Daniel Buckley, from the early 1900s until 1923. Then Hector and Hilda Fraser and their family moved to Killalea and ran the dairy farm until the 1960s.

Evidence of farming history can be seen in the open grassy expanses still remaining across the park and the relics of farm buildings. Relics mainly include concrete slabs associated with house sites and farm buildings that operated between the 1920s and 1960s. Exotic plantings and remnants of dry-stone walls that enclosed some fields are also present.

These relics are at risk of progressive dilapidation and vegetation encroachment. Historic structures will be recorded and assessed to determine appropriate management actions that may include adaptive reuse or in some cases demolition and removal.

Stack Island has also been known as Rangoon Island, in reference to a sailing ship that was wrecked off the island in 1870. The shipwreck and any related articles that lie in the water are protected under the *Historic Shipwrecks Act 1976*. Regulations under the Act prohibit all kinds of activities (such as trawling or diving) that might damage an historic shipwreck or relic.

Community campaigns have played an important role in the protection of the park, spurring the initial purchase of the lands in the 1980s and the transfer to NPWS management in 2022. Protests and campaigns, including the paddle-out of around 700 surfers in May 2021 off Killalea Beach (The Farm), have become part of the cultural history and social significance of the park.

The surf break off Killalea was first surfed in the early 1960s by surfers searching for waves near Shellharbour. At that time, access to the beach was through private farmland, giving the surfing location its local name, The Farm. A second break off Minnamurra Beach carries the name Mystics, reportedly in reference to the misty conditions present when it was first surfed.



Photo 2 Killalea National Surfing Reserve plaque. Kevin Mills

The longstanding history of surfing, the nature of the waves, the natural undeveloped setting and the surfing culture that has grown around these locations are key elements in the history and community attachment to the park today.

The significance of these surfing locations was recognised in June 2009 with the declaration of the Killalea National Surfing Reserve (see Figure 1). This declaration covers The Farm and Mystics beaches and the water out to 500 m from the mean high water mark. The 2 plaques in the park that acknowledge the declaration will be maintained and the adjacent vegetation managed to maintain an appropriate setting.

There are a number of memorials in the park ranging from personal memorials to the 2 official plaques commemorating the national surfing reserve. Management of these memorials and the installation of any future memorials or plaques will be in accordance with the NPWS *Memorials in parks policy*.

#### 2.5 Providing facilities for visitors

The park has a range of infrastructure related to the provision of visitor services and park management operations. Park infrastructure and services should ensure the protection of park values while providing for visitors and enabling park management.

Existing infrastructure assets not required for park management or visitor use will be removed and disturbed sites will be restored, except where considerations (such as environmental impact) justify leaving the infrastructure in situ.

Visitor infrastructure in the park includes facilities at day use sites such as picnic tables, car parks, lookouts, toilets, a cafe and shelter, and Killalea campground. Other visitor infrastructure in the park includes park roads and walking tracks.

Assessments indicate that much of the existing visitor infrastructure is aging, in poor condition or failing. For example, the main visitor precinct and Killalea campground are currently not meeting the needs of park visitors. Major upgrades are needed at both the main visitor precinct and the Killalea campground, and these will be guided by precinct plans.

The park roads and walking tracks provide for visitor movement into and around the park (see Figure 1). The sealed park roads that provide public vehicle access and the car parks all require upgrade or repair.

The park has a single entrance and exit road for vehicles. Construction of an additional vehicle entrance or exit road may be considered if it improves traffic flow and visitor safety.

The existing network of walking tracks may be upgraded and new walking tracks and multi-use tracks established. This could provide strategic connections, facilitate loop tracks, extend existing walking or cycling experiences, or provide links to experiences or opportunities outside of the park (see also 'Walking and cycling' in Section 2.3).

#### Killalea visitor precinct

The main visitor precinct in the park is located on the ridge top and has open grassy spaces that are popular for picnics, gatherings and children's play (see Figure 1). The elevated position provides views to the lagoon, Killalea Beach and the ocean.

The buildings, walking tracks, car parks and associated facilities within the main visitor precinct no longer meet the needs of visitors and the community. They are impacting on visitor safety, environmental values and visual amenity. Consequently, a major upgrade is required. A precinct plan will be prepared to guide the design and construction of the upgrade.

Any upgrade will be designed to respect and celebrate the park's Aboriginal cultural heritage, farming history, surfing history and culture (including the presence of the national surfing reserve), and educational opportunities. It will reflect the low-key nature of the visitor facilities and visitor opportunities in the park and will ensure the design and siting of buildings minimise impacts to the natural, cultural and scenic values of the park.

Key issues the main Killalea visitor precinct plan will address include:

- safe movement of people, vehicles and bicycles within and around the precinct, and linkages with the network of tracks and trails and other visitor experiences and opportunities in the park
- improved accessibility and opportunities for people with disability
- provision of visitor facilities including toilets, picnic tables, car and bicycle parking (including overflow parking) and shelters
- provision of buildings, structures and outdoor spaces that support Aboriginal cultural
  activities and practices, cultural learning and education and caring for Country activities,
  and that may be licensed to support Aboriginal business opportunities for a range of
  purposes including provision of food and drink, retail, tourism, education, events,
  gatherings and community use
- provision of buildings, structures and outdoor spaces to support appropriate visitor services and community uses for various purposes, including licensed commercial activities, (such as tourism, recreational and educational activities; see Section 4.2), park management, community events and gatherings, and other purposes that support recreational activities in the park (e.g. surfing)
- provision of buildings, structures and outdoor spaces that support the Department of Education's Illawarra Environmental Education Centre and associated movement of traffic and students.

Facility improvements will seek to improve access for people with disability. NPWS will seek to deliver improvements in accessibility throughout the park, including during the planning and implementation of upgrades to the main visitor precinct, Killalea campground and walking tracks.

#### Killalea campground

Killalea campground (see Figure 1) provides low-key camping opportunities for park visitors, school groups and commercial tour groups. It offers a range of camping sites, including sites suitable for tents and larger sites suitable for caravans and campervans. A bunkhouse, which provides basic overnight accommodation for organised groups, is also located within the campground.

Facilities at Killalea campground are provided for use by campers and include toilets, showers and a camp kitchen. Killalea campground and associated facilities are aging. A significant upgrade is required to minimise impacts on park values and to ensure campers have a quality experience.

A precinct plan will guide the detailed design of proposed improvements to Killalea campground. Upgrades will be designed to ensure the continuing provision of low-key camping while minimising impacts on park values.

Key issues the Killalea campground visitor precinct plan will address include:

- capacity and demand
- upgrades to Killalea campground facilities, including toilets, showers, camping sites and the camp kitchen
- improvements to accessibility and traffic management

 assessing the retention of, and potential uses for, the bunkhouse and buildings previously used as Killalea campground managers residence.

The precinct plan will also consider alternative management models, including leasing or other forms of management agreement, that could improve the visitor experience and reduce antisocial behaviour.

#### 2.6 Supporting park management operations

Park management infrastructure includes a works depot with associated buildings and a range of other minor structures such as post and wire fencing and a helipad.

Management trails are also a critical component of park infrastructure. A network of management trails throughout the park supports management operations and is used by visitors for walking and cycling (see Figure 1).

The network of management trails, and the standards to which they are maintained, will be consistent with the park fire management strategy and the Illawarra Bush Fire Management Committee fire access and fire trail plan. The Fire Access and Fire Trail Program involves maintaining, renewing and upgrading fire trails and the associated fire trail infrastructure to ensure they meet the statewide fire trail standards set under the NSW *Rural Fires Act 1997*.

Fire access and fire trail plans prepared under the Rural Fires Act may also identify the need for new or realigned fire trails in the park. Construction or realignment of trails requires an appropriate level of heritage and environmental assessment and will be subject to the requirements of the National Parks and Wildlife Act.

Any existing slashed breaks or management trails no longer required for visitor use, fire management or more broadly for park management will not be maintained, and will be closed and allowed to revegetate.

A reserve access strategy will be prepared and implemented for the park. The strategy will establish the status of all existing park access points and identify options for securing access for public and management purposes where necessary.

Some park management infrastructure present when NPWS commenced management of the park, including the entry station and managers residence, were found to be unsafe and have since been removed. They will not be replaced.

Buildings and other structures at the current works depot are aging and no longer fit for purpose and require replacement. A new main depot building and any associated structures, such as garages, storage sheds and greenhouses, will be constructed at the existing works depot site.

Until recently, all wastewater in the park was managed via several separate septic systems. However, the main visitor precinct and Killalea campground have now been connected to the sewer main. A new closed system pump-out toilet has been constructed at Killalea Beach car park, where connection to the sewer main was not considered practicable. A pump-out toilet will also be installed at Minnamurra Beach car park. Pump-out toilets will require ongoing monitoring to ensure they function effectively and are not impacting on park values.

Climate change and inappropriate fire have already been identified as threats to the biodiversity of the park (see Section 2.2). They are also significant threats to the park's infrastructure and to the provision of services. For example, infrastructure such as management trails and walking tracks in low-lying areas of the park, including the sandspit and lagoon, are particularly vulnerable to sea level rise and storm surges.

#### 2.7 Managing non-park infrastructure and services

The park contains infrastructure and other assets owned and operated by other organisations or individuals that are not related to use or management of the park.

This includes electricity transmission lines, the Department of Education's Illawarra Environmental Education Centre (see 'Learning and educational opportunities' in Section 2.3), quarry monitoring equipment and a wildlife rehabilitation aviary. Other non-park related uses include commercial fishing and flying model aircraft.

Agreements such as easements, leases and licences ensure the operation and maintenance of non-park infrastructure and use of the park by third parties minimises impacts on the environment, visitors and park management operations.

NPWS will formalise agreements for non-park infrastructure where the infrastructure or use is necessary and appropriate. Except for critical services (e.g. power supply), other uses and infrastructure that have impacts on park values, visitor amenity or safety will be reviewed and may cease. For example, the use of model aircraft will not continue as it presents a risk to public safety and impacts on park values by requiring cleared areas to be maintained (see 'Group and commercial activities' in Section 2.3).

Any proposal for new non-park infrastructure will only be authorised if it meets the relevant statutory criteria for a lease, licence or easement/right of way under the National Parks and Wildlife Act and is subject to heritage and environmental impact assessment.

NPWS will seek the removal of redundant infrastructure and rehabilitation of disturbed sites that are no longer required, except where considerations such as environmental impact would justify leaving it in situ.

#### **Bass Point Quarry**

Bass Point Quarry is an active quarry that adjoins the park to the east. Bass Point Quarry Road provides access to and from the quarry, and forms part of the northern boundary of the park. The quarry commenced operations in 1968, although extractive industries have occurred on the site since 1880. An expansion to operations was approved in 2014, permitting extraction to a level of 40 m below sea level in the western and eastern pits. Operation of the Bass Point Quarry is approved until 2044.

A condition related to the quarry's expansion included monitoring for any impacts on Killalea Lagoon. Equipment to monitor water depth, temperature and quality (including a standpipe and borehole) are located in the park, and quarry staff access the park to undertake monitoring.

#### **Commercial fishing**

Several commercial fishing licences for ocean hauling and estuary hand gathering are in place for Killalea and Minnamurra beaches. These are licensed commercial activities under the *Fisheries Management Act 1994*. Vehicle access to these beaches is via management trails that are not publicly accessible. In accordance with NPWS policy, a commercial fishing vehicle access permit is required to provide commercial fishers access to locations that are not open to the public. No fishing (commercial or recreational) is permitted in Killalea Lagoon.

#### Wildlife rehabilitation

A disused aviary facility, previously used by volunteer organisations for wildlife rehabilitation, is located within the main visitor precinct. The current structure is not suitable for this use

#### Killalea Regional Park draft plan of management

and will be removed. There are several constraints to providing wildlife rehabilitation services in the park, particularly outside park opening hours. These include access and safety for volunteers, and the security of the facility and recovering wildlife. However, ongoing use of the park for wildlife rehabilitation may be allowed. Any wildlife rehabilitation facility may be considered after agreement of operating arrangements, including a site management plan and the necessary licences. Development of any new structures will be subject to safety, environmental, heritage and sustainability assessments.

# 3. Scheme of operations

The scheme of operations in Table 3 is consistent with section 72AA of the National Parks and Wildlife Act. It details the management objectives for the park's values and the actions that NPWS proposes to undertake to achieve these objectives.

A management priority has been assigned to each action to guide the allocation of resources. These priorities are based on an assessment of the risks posed by threats to the park's values, the feasibility of mitigating the impacts of these threats, or opportunities to improve the condition of park values.

- High priority activities are those imperative to achieve management objectives and must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.
- **Medium priority** activities are those that are necessary to achieve management objectives but are not urgent.
- **Low priority** activities are desirable to achieve management objectives but can wait until resources become available.

Subsidiary plans consistent with this plan of management will be developed to guide actions at an operational level. Subsidiary 'precinct plans' will be prepared to guide improvements of the main visitor precinct and Killalea campground in the park. Other subsidiary plans enable adaptive responses to new information or changed circumstances, such as for feral animals, weeds, fire and recreational activities, as required by NPWS policy. Review and assessments of performance will be used to inform adaptive management in these subsidiary plans as well as any required adjustments and improvements to future plans of management for the park.

The implementation of actions set out below may be subject to statutory responsibilities under the National Parks and Wildlife Act and other relevant state and Commonwealth legislation, including cultural and environmental impact assessments and approvals. Further community consultation on the proposed actions may be undertaken as part of these processes.

Information on popular recreational or commercial activities that are permitted in the park is provided in the park use regulations tables in Section 4. More detailed information on other activities is available on the NPWS website.

Table 3 Scheme of operations

Management objectives	Actions	Priority
Protecting Aboriginal cultur	al values and supporting connection to Co	ountry
Aboriginal heritage sites, places and cultural values are protected	<ul> <li>Work with the local Aboriginal community to ensure Aboriginal sites are appropriately recorded, managed and protected.</li> </ul>	High
2. Aboriginal people have opportunities to care for Country, to build connection to Country and to be more involved in park management	a. Support programs that involve Aboriginal people in caring for Country and park management activities, including weed and feral animal management, vegetation restoration, cultural burning and the protection of Aboriginal sites, places and values.	High

Management objectives	Actions	Priority
	<ul> <li>Support the local Aboriginal community to access Country to maintain, renew or develop cultural connection and practices.</li> </ul>	High
	<ul> <li>c. In consultation with the Aboriginal community, develop an Aboriginal cultural precinct or similar space as part of the main visitor precinct upgrade.</li> </ul>	High
	<ul> <li>d. Support progress towards Aboriginal joint management of the park in accordance with the NPWS model for Aboriginal joint management of the NSW national park estate.</li> </ul>	Medium
3. The park's identity as an Aboriginal cultural landscape is better understood by park	<ul> <li>a. Incorporate local Aboriginal language in place names and signage where appropriate and supported by the local Aboriginal community.</li> </ul>	Medium
visitors and the community	<ul> <li>In partnership with the Aboriginal community, develop and communicate information to park visitors about Aboriginal culture and heritage.</li> </ul>	High
	<ul> <li>Support the renaming or dual naming of the park, if agreed with the local Aboriginal community.</li> </ul>	Medium
Protecting biodiversity and	assisting recovery of the coastal landscap	е
Biodiversity values are maintained or improved	<ul> <li>Develop and implement a plan to guide management of weeds and restoration of native vegetation in the park.</li> </ul>	High
	<ul> <li>Work with experts and stakeholders, including quarry management, and encourage research and monitoring to better understand and mitigate risks to the lagoon.</li> </ul>	High
	c. Increase knowledge of native plants and animals in the park including by:	Medium
	<ul> <li>i. undertaking targeted native animal surveys prioritising key species or key locations to inform management actions</li> </ul>	
	<ul> <li>ii. mapping the extent of threatened native plant species and communities to monitor the impact of management regimes</li> </ul>	
	iii. encouraging and supporting	
	involvement of research and educational organisations and citizen scientist programs.	

Management objectives	Actions	Priority
	and Australian Government recovery plans for threatened species, populations and ecological communities occurring in the park.	
	<ul> <li>e. Implement conservation action plans to conserve and monitor any assets of intergenerational significance declared in the park under the National Parks and Wildlife Act.</li> </ul>	High
	<ul> <li>f. Manage feral animals consistent with relevant feral animal management strategies.</li> </ul>	High
	g. Work with park neighbours to establish complementary management along shared boundaries with a view to restoring native vegetation and protecting park values, including scenic values.	Low
	<ul> <li>Pursue acquisition of high conservation value lands adjacent to the park to improve connectivity with surrounding natural areas.</li> </ul>	Low
<ol> <li>Cultural and natural assets and infrastructure are protected from the impacts of coastal</li> </ol>	<ul> <li>Undertake an assessment to identify assets and values at risk and determine appropriate management actions.</li> </ul>	High
hazards and sea level rise associated with climate change	<ul> <li>Participate in the development of the local coastal management plan with Shellharbour Council.</li> </ul>	Low
The impact of fire on life, property and the	<ul> <li>Develop and implement a park fire management strategy.</li> </ul>	High
environment and the potential for spread of bushfires on, from, or into the park is minimised	b. Participate in strategic fire planning through the relevant bush fire management committee and emergency management committee; and maintain cooperative arrangements with local Rural Fire Service brigades, other fire authorities and surrounding landowners and land users.	High
Providing opportunities for	recreation and learning	
7. The park provides a range of appropriate visitor opportunities for	<ul> <li>a. Provide a range of visitor opportunities consistent with the park use regulations in Table 4.</li> </ul>	High
recreation and learning that are compatible with conservation of the park's values	<ul> <li>b. Enable an appropriate range of events, functions and commercial and community activities (see Table 5) subject to bookings, approvals and conditions.</li> </ul>	High
	<ul> <li>Maintain a network of tracks and trails for walking and cycling.</li> </ul>	High

Management objectives	Actions	Priority
	d. If assessed as suitable, construct a shared pathway or multi-use track from the park entrance to Minnamurra Beach (Mystics) car park to accommodate walkers and cyclists and to improve accessibility. Include new or upgraded lookouts, resting spots and other features to support improved accessibility, and interpretation as appropriate along this track.	High
	<ul> <li>e. Investigate options for improved accessibility to Killalea Beach and implement as appropriate.</li> </ul>	Medium
	f. Construct additional walking tracks and/or multi-use tracks that provide strategic connections, facilitate loop tracks, extend existing walking or cycling experiences, or link to experiences or opportunities outside of the park, subject to environmental assessment.	Medium
	g. Close tracks that are not part of the authorised track network and remove old signs and other infrastructure. Prioritise closure where unauthorised tracks encourage access to unsafe locations.	Medium
Visitors have a safe experience in the park and appreciate and understand park values	<ul> <li>a. Increase visitor awareness of safety around rock fishing by installing warning signs and providing visitor information.</li> </ul>	Medium
	<ul> <li>Review access points to cliff edges and other dangerous locations to ensure access is not encouraged and adequate hazard warnings are in place.</li> </ul>	High
	<ul> <li>Work with emergency services to facilitate appropriate emergency access that supports rapid response times to incidents.</li> </ul>	High
	<ul> <li>d. Provide visitor information about the natural and cultural values of the park and the opportunities and experiences available.</li> </ul>	Medium
	e. Review overflow parking provisions for high volume visitation to ensure visitor safety and visitor amenity. Construct additional overflow parking if required, ensuring impacts on biodiversity, heritage, visitor experience and the scenic landscape are minimised.	Medium

Management objectives	Actions	Priority
	f. Exclude public access from the small, contaminated site north-east of the lagoon and investigate requirements for remediation.	High – exclude access Low – investigate remediation
	g. Engage with quarry management and appropriate licensing agencies in relation to management of any risks to park values and park visitors from quarry operations, including emergency planning.	Medium
Protecting historic heritage	sites, places and cultural values	
<ol> <li>Historic and shared heritage sites, places and cultural values are understood, maintained and protected</li> </ol>	<ul> <li>a. Identify, assess and record the occurrence of historic heritage values in the park, including relics of farm buildings, dry-stone walls and historic plantings.</li> </ul>	Medium
	<ul> <li>Manage historic heritage consistent with its significance. If appropriate, consider options for adaptive reuse of farm building relics as part of the upgrades to visitor precincts.</li> </ul>	Medium
	<ul> <li>Investigate opportunities to interpret and promote the park's historic and shared heritage.</li> </ul>	Low
	<ul> <li>d. Investigate opportunities to reflect or interpret the surfing history and culture associated with the park, including reference to Killalea National Surfing Reserve.</li> </ul>	Medium
Providing facilities for visite	ors	
10.Facilities meet the needs of visitors and minimise impacts on	<ul> <li>Develop and implement a precinct plan to guide the upgrade of the main visitor precinct.</li> </ul>	High
park values	<ul> <li>Manage and maintain NPWS facilities to meet applicable accessibility, safety and sustainability standards, consistent with NPWS policy.</li> </ul>	High
	<ul> <li>Develop and implement a precinct plan for Killalea campground to improve its function and facilities.</li> </ul>	Medium
	<ul> <li>d. Install a closed system (pump-out) toilet at Minnamurra Beach (Mystics) car park.</li> </ul>	High
Supporting park management	nt operations	
11.Park management facilities adequately support management of the park and have	<ul> <li>Prepare and implement a reserve access strategy to secure legal park access for public use and management purposes.</li> </ul>	Medium
minimal environmental impact	<ul> <li>b. Identify and rectify park boundary errors, boundary encroachments and</li> </ul>	High

Management objectives	Actions	Priority
	proposed section 188C National Park and Wildlife Act boundary adjustments.	
	c. Remove redundant infrastructure (unless safety or environmental assessments indicate that it should remain in situ), including redundant camera mounting poles that impact on scenic amenity.	Low
	<ul> <li>d. Undertake condition assessments on buildings to inform management actions, including precinct planning and visitor facilities upgrades.</li> </ul>	High
	<ul> <li>e. Construct new depot and associated buildings at the existing depot site.</li> </ul>	High
	f. In conjunction with local councils and other relevant stakeholders, investigate options to improve the park's entrance and exit, including the potential for an additional park entrance.	Low
	g. Consider coastal hazards and sea level rise in assessments for infrastructure or facilities in locations likely to be at risk.	High
	<ul> <li>In conjunction with the bushfire management committee, review the current fire trail network to ensure it fulfills park management requirements.</li> </ul>	High
	<ul> <li>i. Establish and maintain the management trail network consistent with the relevant approved fire access and fire trail (FAFT) plan and prescribed standards under the Rural Fires Act. Where required, establish new trails consistent with the approved FAFT plan.</li> </ul>	High
Managing non-park infrastr	ucture and services	
12.Non-park uses have minimal impact on natural and cultural values and visitor experience, and are	<ul> <li>Ensure all non-park uses and occupancies of NPWS land are authorised in accordance with Part 12 of the National Parks and Wildlife Act.</li> </ul>	Medium
appropriately authorised where required	<ul> <li>Establish a site-specific agreement for the operation of the Illawarra Environmental Education Centre.</li> </ul>	Medium

# 4. Park use regulations

#### 4.1 Recreational activities

There are many recreational activities that can be undertaken in the park without consent from NPWS. Other activities can occur with consent from NPWS. All activities that occur in the park are subject to relevant policies and legislation.

Conditions may be applied to ensure an activity is undertaken safely and to minimise environmental impacts and risks to other users. Consent may be refused after consideration of the proposed activity and its likely impacts on the environment, visitor safety and park management.

Activities may be subject to operating conditions or limits from time-to-time. For example, access to parts of the park may be closed during periods of bushfire risk, bad weather, maintenance or improvement works.

Activities not shown in Table 4 may also be regulated by signage or by consent.

Information regarding activities that require consent and how to obtain consent is available on the NPWS website (see 'More Information') or by contacting the relevant NPWS office (contact details at the front of this plan).

Table 4 Park use regulations – recreational activities

	Type of activity	Allowed	Note/Exceptions
<b>*</b>	Abseiling, rock climbing and canyoning	No	Not permitted owing to the lack of suitable safe locations and risks to conservation values.
BBQ	Barbecues – portable (gas and liquid stoves)	Yes	Portable gas and liquid fuel stoves are allowed. No wood campfires, wood barbecues or solid fuel burners. No portable barbecues during total or park fire bans.
<b>A</b> .	Camping	Yes	Only allowed at Killalea campground. Bookings required. Camping and overnight stays are prohibited elsewhere in the park.
ð	Cycling	Yes	Allowed on park roads, management trails and, if constructed, on appropriately signposted tracks.  No cycling on walking tracks or off-track.  Organised group (e.g. club) events of 40 or more persons require consent (see Table 5).
M	Dog walking	No	Pets are not permitted. Dog walking is not permitted.  A person may be accompanied by their trained assistance animal provided they meet the requirements of proof and other conditions set out in the NPWS Pets in parks policy.

	Type of activity	Allowed	Note/Exceptions
181	Drones and model aircraft	No	Drones and model aircraft are not permitted.  Drones may be used for park management purposes and may be authorised as part of a commercial filming consent or for approved research.  Civil Aviation Safety Authority rules and regulations must be followed when using drones.
<b>∞</b> ••••••••••••••••••••••••••••••••••••	Public vehicle access	Yes	Registered vehicles are allowed on park roads. Public vehicles (including motor bikes) are not allowed on management trails or off-road.
<b>&gt;</b>	Fossicking	No	Not permitted.
	Group gatherings – non-commercial (e.g. family or social gatherings, interest groups)	Yes	Consent is required for groups of more than 40 people, as per the National Parks and Wildlife Regulation.  Consent is required for larger groups to ensure available space can be managed.
<b></b>	Hang-gliding	No	Not permitted due to lack of suitable safe locations and potential risks to other park users.
in	Horse riding	No	Not permitted due to lack of suitable locations.
冷意	Walking	Yes	Walkers are encouraged to use the network of walking tracks and management trails.
<u>ئ</u> د	Water-based recreation (e.g. fishing, swimming, surfing, diving and snorkelling)	Yes	Access through the park to beaches is permitted.  Water-based recreation, including swimming, recreational and commercial fishing are not permitted in Killalea Lagoon to protect conservation values.  Elsewhere, other rules and regulations may apply to water-based activities, such as NSW fishing licensing, fish catch limits and use of certain types of recreational or safety equipment.

Type of activity	Allowed	Note/Exceptions
Wood fires	No	Not permitted due to the risk of bushfires and potential for environmental impacts resulting from the illegal use of trees and fallen timber as fuel.
		Wood fires may be authorised by consent for cultural activities and events (except during total and park fire bans).

# 4.2 Commercial and non-commercial activities requiring approval

Some activities in the park require prior approval. The following table lists some common events and commercial activities that may be permitted in the park with approval from NPWS under a consent, licence or lease. It is not a definitive or exhaustive list of permitted commercial or other activities. Information on relevant policies, required approvals and fees is available on our website (see 'More Information').

NPWS may enter into commercial arrangements, including leases and licences, with third parties for the provision of services, and more broadly for the operation and management of buildings within the main visitor precinct and Killalea campground. Purposes that may be considered for such commercial arrangements include all purposes identified in section 151A of the National Parks and Wildlife Act, including educational activities, Aboriginal cultural activities, cafe or kiosk, retail and/or equipment hire (including mobile operators), tourism, community events and activities, cultural centre, gallery/exhibition/museum space, research, native animal rehabilitation and staff office space.

Existing leases and/or licences in the park may continue subject to the National Parks and Wildlife Act and will be reviewed to be consistent with NSW government policies and procedures.

Commercial opportunities for provision of visitor services on behalf of NPWS (e.g. food, retail, hire, or other selective licence opportunities) are advertised according to NSW Government procurement policy.

Approval to use ancillary equipment, such as marquees or amplified sound, will be determined on a case-by-case basis subject to an assessment of potential impacts on park values and other park users. Use of such equipment will be subject to consent conditions.

NPWS is committed to ensuring that opportunities to experience Aboriginal culture in the park are developed and delivered in a culturally appropriate manner. These experiences must respect the authenticity and integrity of local Aboriginal people and their culture, adhere to cultural protocols, and recognise that Aboriginal culture is the intellectual property of Aboriginal people. Licensing of commercial tour operators, and recreational and educational operators includes conditions on the delivery of Aboriginal cultural heritage interpretation and requirements for Aboriginal cultural awareness training.

Under NPWS policy, commercial operators may be required to support understanding of cultural heritage conservation and management and promote respect for Aboriginal culture and sites. This may include requirements to consult with Aboriginal communities to develop appropriate material and information for participants.

Table 5 Park use regulations – events, functions and commercial activities

Type of activity	Group size	Type of approval required
Commercial and charity events	All groups irrespective of size	Consent or licence
Sporting activity that is part of an organised competition or tournament	All groups irrespective of size	Consent
Commercial tours, recreational and educational activities, mobile food vendors, transport services and any other commercial services	All groups irrespective of size	Consent or licence
Private, non-commercial, organised (e.g. club-based, student) events	All groups of 40 or more	Consent
All other events and gatherings involving groups of more than 40 people	All groups of 40 or more	Consent
Filming and photography	All groups irrespective of size	Consent or licence
Research (scientific, educational, or related to conservation or park management)	All groups irrespective of size	Consent or licence
Commercial fishing	All commercial fishers	NPWS commercial fishing vehicle access permit. Relevant fisheries authority commercial fishery licence.

# Appendix A: Objects of the National Parks and Wildlife Act 1974

- 1. The objects of the NPW Act, set out in section 2A of the Act are:
  - (a) The conservation of nature, including, but not limited to, the conservation of—
    - (i) habitat, ecosystems and ecosystem processes, and
    - (ii) biological diversity at the community, species and genetic levels, and
    - (iii) landforms of significance, including geological features and processes, and
    - (iv) landscapes and natural features of significance including wilderness and wild rivers,
  - (b) the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to—
    - (i) places, objects and features of significance to Aboriginal people, and
    - (ii) places of social value to the people of New South Wales, and
    - (iii) places of historic, architectural or scientific significance,
  - (c) fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation,
  - (d) providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.
- 2. The objects of this Act are to be achieved by applying the principles of ecologically sustainable development.
- 3. In carrying out functions under this Act, the Minister, the Secretary and the Service are to give effect to the following—
  - (a) the objects of this Act,
  - (b) the public interest in the protection of the values for which land is reserved under this Act and the appropriate management of those lands.

# Appendix B: Native species scientific names

The following table shows the scientific name for those native plants and animals mentioned in this plan.

Table 6 Scientific names of native species mentioned in the plan

Common name	Scientific name
Plants	
Coast banksia	Banksia integrifolia
Coastal wattle	Acacia longifolia subsp. sophorae
Deciduous fig	Ficus henneana
Illawarra zieria <sup>E</sup>	Zieria granulata
Moreton Bay fig	Ficus macrophylla
Port Jackson fig	Ficus rubiginosa
Sandpaper fig	Ficus coronata
Small-leaved fig	Ficus obliqua
Spiked rice-flower <sup>E</sup>	Pimelea spicata
Sweet pittosporum	Pittosporum undulatum
White-flowered wax plant <sup>E</sup>	Cynanchum elegans
Animals	
Frogs	
Green and golden bell frog <sup>E</sup>	Litoria aurea
Reptiles	
Eastern snake-necked turtle	Chelodina longicollis
Birds	
Australasian bittern <sup>E</sup>	Botaurus poiciloptilus
Australian pied oystercatcher <sup>E</sup>	Haematopus longirostris
Bar-tailed Godwit	Limosa lapponica
Black swan	Cygnus atratus
Blue-billed duck <sup>V</sup>	Oxyura australis
Eastern osprey <sup>V</sup>	Pandion cristatus
Hooded plover <sup>CE</sup>	Thinornis rubricollis
Little tern <sup>E</sup>	Sternula albifrons
Pacific golden plover	Pluvialis fulva
Mammals	
Southern myotis <sup>V</sup>	Myotis macropus
Grey-headed flying-fox <sup>∨</sup>	Pteropus poliocephalus
Large bent-winged bat <sup>V</sup>	Miniopterus orianae oceanensis
E // / OE	/

E / V / CE = listed as endangered / vulnerable /critically endangered under the Biodiversity Conservation Act.

# Appendix C: Migratory birds recorded in the park

The following table shows the birds listed under international migratory bird agreements (IMBA), recorded in the park by Schulz (2015).

Table 7 Migratory birds recorded in the park

Bar-tailed godwit Limosa lapponica C, J, K Caspian tern Hydroprogne caspia C Cattle egret Ardea ibis C, J Common greenshank Tringa nebularia C, J, K Common sandpiper Actitis hypoleucos C, J, K Common tern Sterna hirundo C, J, K Crested tern Thalasseus bergii J Eastern great egret Ardea modesta C, J Eastern reef egret Egretta sacra C Fork-tailed swift Apus pacificus C, J, K Glossy ibis Plegadis falcinellus C Latham's snipe Gallinago hardwickii C, J, K Little tern Sternula albifrons C, J, K Red-necked stint Calidris ruficollis C, J, K Ruddy turnstone Arenaria interpres C, J, K Sharp-tailed sandpiper Calidris acuminata C, J, K Sharp-tailed sandpiper Calidris acuminata C, J, K
Cattle egret Ardea ibis C, J Common greenshank Tringa nebularia C, J, K Common sandpiper Actitis hypoleucos C, J, K Common tern Sterna hirundo C, J, K Crested tern Thalasseus bergii J Eastern great egret Ardea modesta C, J Eastern reef egret Egretta sacra C Fork-tailed swift Apus pacificus C, J, K Glossy ibis Plegadis falcinellus C Latham's snipe Gallinago hardwickii C, J, K Little tern Sternula albifrons C, J, K Marsh sandpiper Marsh Sandpiper C, J, K Red-necked stint Calidris ruficollis C, J, K Ruddy turnstone Arenaria interpres C, J, K Sanderling Calidris alba C, J, K
Common greenshank  Tringa nebularia  C, J, K  Common sandpiper  Actitis hypoleucos  C, J, K  Common tern  Sterna hirundo  C, J, K  Crested tern  Thalasseus bergii  J  Eastern great egret  Ardea modesta  C, J  Eastern reef egret  Egretta sacra  C  Fork-tailed swift  Apus pacificus  C, J, K  Glossy ibis  Plegadis falcinellus  C  Latham's snipe  Gallinago hardwickii  C, J, K  Little tern  Sternula albifrons  C, J, K  Marsh sandpiper  Marsh Sandpiper  C, J, K  Red-necked stint  Calidris ruficollis  C, J, K  Sanderling  Calidris alba  C, J, K
Common sandpiper Actitis hypoleucos C, J, K Common tern Sterna hirundo C, J, K Crested tern Thalasseus bergii J Eastern great egret Ardea modesta C, J Eastern reef egret Egretta sacra C Fork-tailed swift Apus pacificus C, J, K Glossy ibis Plegadis falcinellus C Latham's snipe Gallinago hardwickii C, J, K Little tern Sternula albifrons C, J, K Marsh sandpiper Marsh Sandpiper C, J, K Red-necked stint Calidris ruficollis C, J, K Ruddy turnstone Arenaria interpres C, J, K Sanderling Calidris alba C, J, K
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Crested tern Thalasseus bergii J  Eastern great egret Ardea modesta C, J  Eastern reef egret Egretta sacra C  Fork-tailed swift Apus pacificus C, J, K  Glossy ibis Plegadis falcinellus C  Latham's snipe Gallinago hardwickii C, J, K  Little tern Sternula albifrons C, J, K  Marsh sandpiper Marsh Sandpiper C, J, K  Red-necked stint Calidris ruficollis C, J, K  Ruddy turnstone Arenaria interpres C, J, K  Sanderling Calidris alba C, J, K
Eastern great egret Ardea modesta C, J  Eastern reef egret Egretta sacra C  Fork-tailed swift Apus pacificus C, J, K  Glossy ibis Plegadis falcinellus C  Latham's snipe Gallinago hardwickii C, J, K  Little tern Sternula albifrons C, J, K  Marsh sandpiper Marsh Sandpiper C, J, K  Red-necked stint Calidris ruficollis C, J, K  Ruddy turnstone Arenaria interpres C, J, K  Sanderling Calidris alba C, J, K
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Latham's snipe Gallinago hardwickii C, J, K  Little tern Sternula albifrons C, J, K  Marsh sandpiper Marsh Sandpiper C, J, K  Red-necked stint Calidris ruficollis C, J, K  Ruddy turnstone Arenaria interpres C, J, K  Sanderling Calidris alba C, J, K
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Red-necked stintCalidris ruficollisC, J, KRuddy turnstoneArenaria interpresC, J, KSanderlingCalidris albaC, J, K
Ruddy turnstoneArenaria interpresC, J, KSanderlingCalidris albaC, J, K
Sanderling Calidris alba C, J, K
3
Sharp-tailed sandpiper Calidris acuminata C, J, K
Short-tailed shearwater Ardenna tenuirostris J, K
Wedge-tailed shearwater Ardenna pacifica J
Whimbrel Numenius phaeopus C, J, K
White-bellied sea-eagle Haliaeetus leucogaster C
White-throated needletail Hirundapus caudacutus C, J, K
White-winged black tern Chlidonias leucopterus C, J, K
Wood sandpiper Tringa glareola C, J, K

<sup>1.</sup> International migratory bird agreements: C = CAMBA / China-Australia Migratory Bird Agreement (Commonwealth of Australia 1995a); J = JAMBA Japan-Australia Migratory Bird Agreement (Commonwealth of Australia 1995b); and K = ROKAMBA / Republic of Korea-Australia Migratory Bird Agreement (Commonwealth of Australia 2006).

Source: Schulz (2015).

#### References

Martens Consulting Engineers (2016) <u>Killalea Lagoon management plan: Bass Point Quarry expansion [PDF 8.4MB]</u>, prepared for Hanson Constructions Materials Pty Ltd, September 2016.

Mills K (2022) '<u>The flora of Killalea Regional Park, Shellharbour, New South Wales</u>', Illawarra Vegetation Studies paper number 109, Coachwood Publishing, Jamberoo, NSW.

Schulz M (2015) Wildlife of Killalea State Park [unpublished report prepared for Killalea State Park and Ecosystems and Threatened Species Illawarra Region, Office of Environment and Heritage].

#### **More information**

- Environment and Heritage website
- National Parks and Wildlife Service visitor website
- <u>Cycling in NSW national parks</u> NPWS webpage including links to the *Cycling policy* and *Cycling strategy* (DPE 2022)
- Killalea National Surfing Reserve National Surfing Reserves webpage
- <u>Illawarra Environmental Education Centre</u> NSW Department of Education webpage
- Illawarra zieria (Zieria granulata) Saving our Species strategy webpage
- NPWS policies
- <u>Privacy and security</u> Department of Planning and Environment webpage