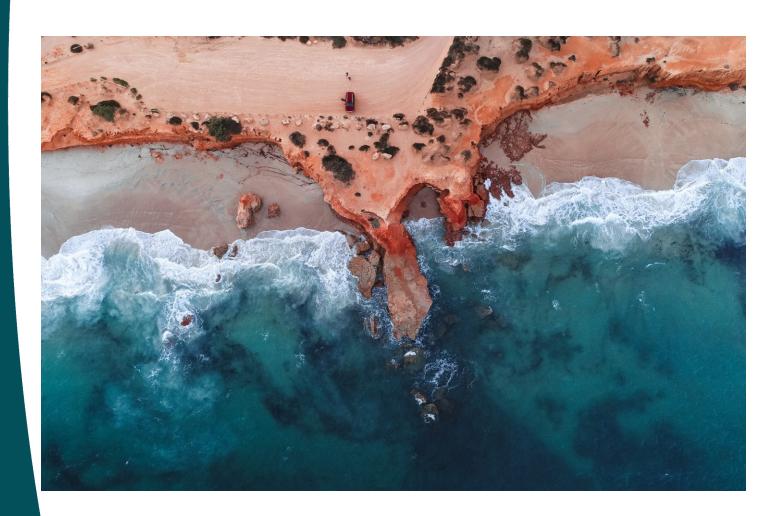


Redbanks Environmental Management Plan



10 Main Street PO Box 36 Cleve SA 5640

Telephone: 08 8628 2004 Facsimile: 08 8628 2428

council@cleve.sa.gov.au www.cleve.sa.gov.au

ABN 88 580 567 990

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Key Objectives and Deliverables

Objective 1: Enhance and Protect Environmental Values

Deliverables:

- o Completion of a Native Vegetation Survey and obtaining necessary clearance approvals.
- Control of pest plants and animals across designated areas to protect native vegetation and wildlife.
- Install access management infrastructure to minimise damage to fragile areas and native vegetation.
- Provision of information to minimise disturbance to native wildlife, particularly shorebird species.

Objective 2: Improve Campground Infrastructure and Visitor Access Deliverables:

- Definition and demarcation of campground sites to organise space and protect the environment.
- Development of defined vehicular and pedestrian access routes to minimise environmental impact.
- o Installation of physical barriers where required to prevent access to sensitive areas.
- Erection of informative, directional, and interpretative signage, including indigenous input, to enhance visitor experience and education.
- Construction of essential visitor facilities, including shelter, barbecue, seating, and toilet infrastructure.

Objective 3: Promote Sustainable Use and Management of the Area Deliverables:

- Undertaking environmental and visitor management measures to address potential impacts such as native vegetation clearance, waste dispersal, and disturbance to wildlife.
- Engagement with the EP Landscape Board to develop a Hooded Plover Program Response Plan for the Redbanks area.

Objective 4: Establish Monitoring and Evaluation Frameworks Deliverables:

- Development of performance indicators to monitor the effectiveness of management actions and infrastructure improvements.
- Regularly record incidents related to new access points, compliance with dog management policies, and impacts on adjoining properties to assess project success and areas for improvement.



Description

The District Council of Cleve (DCC) is committed to the Environmental Management Plan at Redbanks Campground, a strategic initiative designed to enhance the site's usability and ecological sustainability. This project responds to the growing demand for nature-based camping experiences, addressing environmental pressures on the coastal ecosystem through structured management, restoration, and development efforts. It aims to balance recreational use with conservation imperatives, ensuring the protection of natural and cultural values for future generations.

Background

In 2019, a Native Vegetation Survey was conducted, leading to the acquisition of Native Vegetation Clearance approval from the Native Vegetation Council for specified areas. Collaborative discussions have been held with the local Department for Environment and Water (DEW). These discussions have focused on the management of specific sections (D58391 A5, D38620 A11, D38620 A12, and D38620 A13), with DEW staff expressing support for:

- Installing further access management infrastructure to protect fragile areas and native vegetation.
- Providing information to minimise disturbances to native wildlife.
- Undertaking revegetation with local native species.
- Controlling pest plants and animals.

The plan aligns with the 'Eyes on Eyre' initiative, a collaborative effort among the Eyre Peninsula Local Government Association, Eyre Peninsula Natural Resources Management Board, and Regional Development Australia Whyalla and Eyre Peninsula. This initiative aims to improve environmental outcomes and visitor experiences across the Eyre Peninsula, with Redbanks Campground identified as a priority site for implementing defined camping sites and sensitive signage.

Commitments and Approvals

The DCC has committed to defining campground sites and access points, revegetating areas where access is restricted, installing necessary physical barriers, and erecting informative signage. Ongoing management and maintenance of the area and its infrastructure are also key components of this commitment. The project has garnered support from local DEW staff, ensuring alignment with broader conservation goals and regional development objectives.

Community Engagement and Consultation

In 2019, a landscape architect and the Eyes on Eyre project team conducted community consultation to inform the development of a concept plan for Redbanks Campground. This plan, accepted by the District Council in mid-2019 and documented in Figure 2, outlines proposed upgrades and enhancements to the campground and surrounding areas.

Parallel to this, in 2015, the Council reviewed its Animal Management Plan, focusing on 'on-leash' and 'off-leash' areas within the district. The plan mandates that dogs be restrained in all public places, with specified areas where dogs may be off-leash under voice control. The plan, set for review by 30/06/2020, indicates a shift towards designating the campground as an on-leash area.

Consultations with adjoining landholders took place in early 2020, addressing specific concerns:

- Enforcement of dog management policies to mitigate impacts on livestock and wildlife.
- Implement waste and rubbish management strategies to maintain cleanliness and environmental health.
- Measures to prevent campground patrons from trespassing on private property.
- Management strategies for sheep on adjoining lands to prevent conflicts and ensure animal safety.

Regulatory Framework and Land Management

The initiative is guided by the draft Community Land, Natural Reserves Management Plan, which provides a framework for the use and management of community land parcels. This plan assists in auditing land stocks and formalizing the use of land for sport and recreation facilities, among other purposes. The project's alignment with these plans and its incorporation into the broader 'Eyes on Eyre' concept demonstrate a comprehensive approach to land management, stakeholder engagement, and environmental stewardship.

Scope of Works

The Redbanks Campground, located north of Arno Bay, encompasses a coastal and bushland area earmarked for environmental restoration and campground development to enhance visitor experience and preserve ecological integrity. The project area is characterised by its unique geological formations, native vegetation, and habitats supporting local wildlife, including the Hooded Plover.

Detailed Scope of Works:

Infrastructure Development:

- Construct and maintain weather-resilient roads and pathways at campsites.
- Implement water flow management works including drainage and water diversion structures.
- Erect fences to delineate campground boundaries, protect sensitive areas, control access.
- Install shelters, barbeque facilities, seating areas with minimal environmental impact.
- Create environmentally friendly toilet facilities that minimize water usage.

Access Management & Amenity Enhancement:

- Install directional signage throughout campground for navigation; interpretative signage for educational purposes about local ecology geology cultural heritage etc.
- Rationalise existing tracks based on sensitivity usage patterns connectivity; upgrade selected ones with sustainable materials; rehabilitate those which are closed or rerouted.
- Develop new picnic areas viewpoints lookouts activity zones using sustainable materials offering sheltered tables seating blending into surrounding environment.

Environmental Restoration & Enhancement:

- Implement a strategy controlling African Boxthorn non-native species affecting indigenous flora fauna within campsite area.
- Monitor coastal erosion continuously manage public access to beach through designated pathways.
- Develop a program supporting conservation of vulnerable species like Hooded Plover by working with LandscapeSA in the development of a 'Hooded Plover Conservation Plan'.

Monitoring, Evaluation, and Risk Management:

- Establish a monitoring and evaluation framework to assess the effectiveness of environmental management measures, infrastructure usability, and visitor satisfaction.
- Identify potential risks associated with the project, implementing mitigation strategies to address issues related to environmental impact, public safety, and project delivery timelines.

This Scope of Works is designed to ensure the Redbanks Campground Development and Restoration Plan achieves its objectives of enhancing visitor experience, preserving and restoring natural habitats, and ensuring sustainable use of the site, all while maintaining compliance with regulatory requirements and fostering positive stakeholder relationships.

Site Description

The Redbanks Campground is located north of Arno Bay on the Eyre Peninsula, South Australia (Figure 1). The area includes a geological monument of sedimentary cliffs, a 900-meter sandy beach under 10-meter high bluffs, and a smaller beach at Red Banks, fronted by reefs and accessible via a large car park. The site features a combination of natural beachfront, rocky outcrops, and cliff vegetation, with the surrounding land largely undeveloped.

Historical Context

The Barngarla First Nations people were the original inhabitants of the area around Redbanks. They made their living from the rich marine environments along the eastern Eyre coastline, where they fished and gathered shellfish and other seafood from tidal zones. This was their lifestyle until significant changes occurred with European settlement in 1863.

European settlers arrived in 1863 and began transforming this region, causing considerable impact on both local ecosystems and land usage patterns. In 1882, a town near Redbanks was established - originally named Bligh but later known as Arno Bay - serving as a hub for agricultural and pastoral activities within this transformed landscape.

A jetty built in 1880 played an instrumental role in facilitating economic development by enabling exportation of cereal crops and importation of supplies. This marked a pivotal point in regional growth that extended beyond agriculture alone.

However, by 1963 port activities declined significantly due to increased reliance on road transport. As a result, Arno Bay transitioned its primary focus towards tourism and fishing industries instead.

Despite these regional changes over time, Redbanks remained relatively undeveloped thereby preserving much of its natural state.



Figure 1: A spatial layout of Redbanks Campground, indicating camping zones, facilities and natural features within its boundaries.

Regulatory and Compliance Framework

The management and development of Redbanks Campground and its surrounding areas are governed by a comprehensive regulatory and compliance framework designed to ensure the protection of its unique environmental and cultural values while facilitating sustainable recreational use. Key legislation and policies influencing the project include:

Local Government Act 1999 (SA): Guides the governance and management of community lands, emphasizing the development of management plans in collaboration with the community.

Development Act 1993 (SA): Regulates land use and development, ensuring that activities align with community and environmental standards.

Environmental Protection & Biodiversity Conservation Act 1999 (Federal): Protects national environmental assets, including threatened species and ecological communities, requiring assessments and approvals for actions likely to have significant impacts.

Native Vegetation Act 1991 (SA): Controls the clearance of native vegetation, necessitating approvals for activities affecting native plants.

Native Title Act 1994 (Federal) and **Aboriginal Heritage Act 1988 (SA)**: These acts protect Indigenous rights and cultural heritage, mandating consultation and consideration in land management and development practices.

Heritage Act 1993 (SA): Safeguards places of cultural and historical significance, ensuring that development respects and preserves historical values.

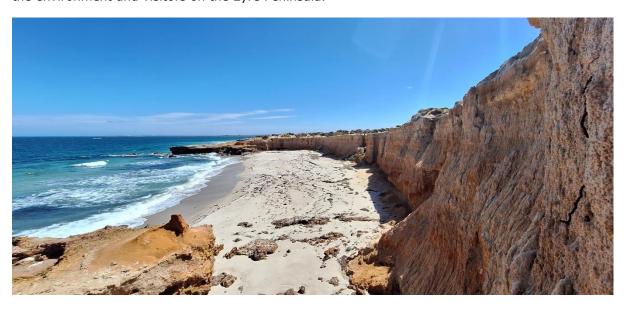
National Parks & Wildlife Act 1972 (SA): Promotes conservation and sustainable use of natural areas, including the management of wildlife and protected areas.

Coast Protection Act 1972 (SA): Ensures the protection and management of the state's coastlines, requiring specific considerations for developments and activities in coastal areas to prevent erosion, degradation, and to promote sustainable use.

Water Resources Act 1997 (SA): Governs the use and management of water resources, ensuring the protection of water quality and ecosystems in project planning and execution.

Landscape South Australia Act 2019 (SA): Focuses on an integrated approach to managing land, water, and biodiversity, and emphasizes community involvement and sustainable practices in landscape management.

In addition to adhering to these legal requirements, the project will align with the objectives and recommendations of the 'Eyes on Eyre' initiative and the District Council's Community Land, Natural Reserves Management Plan, ensuring a collaborative approach to improving outcomes for the environment and visitors on the Eyre Peninsula.



Infrastructure Development

The Environmental Management Plan prioritizes the development of essential infrastructure to enhance visitor experience while ensuring the sustainability and protection of the Redbanks Campground's natural and cultural resources. The following sections detail the approach and considerations for each critical infrastructure component within the project.

Road Base Work at Campsites

To accommodate the increased visitor traffic and prevent damage to the natural environment, the project will undertake significant road base work at the campsites. This involves the construction and maintenance of durable, weather-resistant roads and pathways that provide safe and accessible routes for both vehicles and pedestrians. The design will prioritize permeable materials where possible to reduce runoff and soil erosion, incorporating sustainable practices such as water drainage features that channel water away from sensitive areas. The roadwork will be planned to minimize disruption to the existing landscape and will follow best practices for erosion and sediment control.

Water Flow Management Works

Water flow management is crucial to protect the campground and surrounding ecosystems from erosion, flooding, and sedimentation. The project will implement a series of drainage and water diversion structures designed to control stormwater flow, protect infrastructure, and maintain the natural hydrology of the area. These works will include the installation of swales, retention basins, and culverts where necessary, all designed to blend with the natural environment and enhance the site's resilience to climate variability and extreme weather events.

Fencing for Access Control

Fencing will be strategically placed to delineate campground boundaries, protect sensitive areas, and control access to prevent unintended encroachment into protected habitats. The fencing design will be sympathetic to the natural landscape, using materials and styles that minimize visual impact while being durable and wildlife-friendly. Signage will accompany fencing to provide clear guidance on access rules, promoting awareness among visitors of the importance of staying within designated areas to reduce environmental impacts.

Shelter and Seating Installation

To enhance the visitor experience, the project includes the installation of a shelter with seating areas. These amenities will be strategically located to maximize usability and scenic views while minimizing environmental footprints. Sustainable design principles will guide the selection of materials and construction methods, ensuring durability and low maintenance. The facilities will be accessible to all visitors, including those with disabilities, and will be designed to encourage social interaction in a manner that respects the site's natural and cultural values.

Toilet Infrastructure Development

The development of toilet infrastructure is essential for visitor comfort and environmental protection. The plan includes the construction of environmentally friendly toilet facilities that minimize water usage and waste production. Where feasible, composting toilets will be installed to reduce the need for water and sewage infrastructure, with designs that blend into the surrounding landscape and are equipped with accessibility features. The location of toilet facilities will be carefully considered to ensure ease of access for visitors while safeguarding the site's environmental integrity and water quality.

Access and Amenities Enhancement

Enhancing access and amenities at Redbanks Campground is critical to the Environmental Management Plan. This effort aims to improve visitor experience, ensure safety and accessibility, and promote environmental and cultural education. Here's how these enhancements will be approached:

Directional and Interpretative Signage Installation

To facilitate navigation and enrich the educational experience of visitors, the project will install a series of directional and interpretative signage throughout the campground and surrounding areas. These signs will provide clear guidance on trails, campground amenities, and points of interest. At the same time, interpretative signage will offer insights into the local ecology, geology, and cultural heritage, including Indigenous history and contributions.

- Design and Content: Signage will be designed to be visually appealing and easily readable, with consideration for durability and environmental factors. Interpretative content will be developed with local Indigenous communities, historians, and ecologists to ensure accuracy and inclusiveness.
- Location Strategy: Signage will be strategically placed at key decision points, areas of significant interest, and trailheads to maximise visibility and utility. Care will be taken to minimise visual intrusion into the natural landscape.

Access Management and Track Rationalisation

Rationalising access tracks and pathways is essential to minimise environmental impact, reduce erosion, and enhance visitor safety. The project will assess existing tracks for environmental sensitivity, usage patterns, and connectivity to determine which paths will be formalised, rerouted, or rehabilitated.

- Track Formalization: Selected tracks will be upgraded with sustainable materials to withstand usage while allowing for natural water drainage. This may include boardwalks in particularly sensitive areas to minimise direct contact with the ground.
- Rehabilitation: Areas where tracks are closed or rerouted will undergo rehabilitation, with efforts made to restore native vegetation and mitigate any erosion or damage caused by previous access.

Recreational Amenities and Facilities

Enhancements to recreational amenities and facilities are planned to improve the quality and variety of visitor experiences, encouraging longer stays and greater engagement with the site's natural and cultural offerings.

- Picnic Areas: New picnic areas will be developed with sustainable materials, offering sheltered tables and seating that blend into the surrounding environment. Locations will be chosen for scenic views and ease of access.
- Viewpoints and Lookouts: Designated viewpoints and lookouts will be developed or enhanced to offer visitors safe and accessible spots to enjoy the area's scenic beauty. These will include interpretative signage to inform visitors about the landscape's significance.
- Activity Zones: Specific areas will be designated for various recreational activities such as bird watching, beach access points for swimming, and areas suitable for educational programs. These zones will be managed to balance recreational use with conservation goals.

Environmental Restoration and Enhancement

The environmental restoration and enhancement strategies at Redbanks Campground are integral to preserving the site's ecological integrity, biodiversity, and scenic beauty. These strategies aim to rehabilitate disturbed areas, manage invasive species, protect coastal environments, and support native wildlife, particularly vulnerable species like the Hooded Plover. Here's an outline of the approach for each key component:

African Boxthorn Control Strategy

The African Boxthorn (Lycium ferocissimum) is a non-native species that affects indigenous flora and fauna. A control strategy for this campsite will be executed to manage and eradicate its presence.

- Management Approach: The plan focuses on the campsite, utilising mechanical removal, chemical applications, or biological controls as required by specific site conditions and infestation levels.
- Post-Implementation Management: LandscapeSA holds responsibility for subsequent monitoring of control measures' effectiveness within the campsite. Their role includes early detection of new infestations and scheduling regular maintenance to prevent regrowth.

Coastal Management Practices

Preservation and improvement of the coastal environment is key in upholding the area's inherent erosion resistance, bolstering coastal biodiversity, and ensuring ongoing recreational activities.

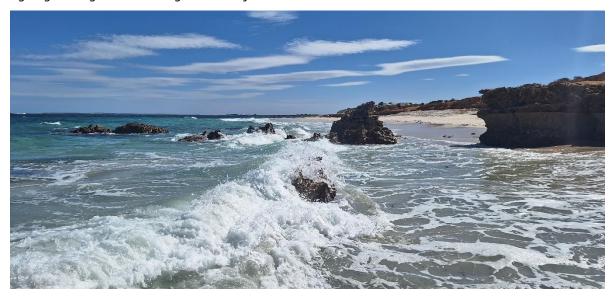
- Erosion Monitoring: Continuous observation of rock face stability will be carried out to assess any potential impact on the coastline. At present, there is no immediate need for implementing extensive control measures.
- Public Access Management: Designated pathways to the beach will be established to minimise the impact of foot traffic on vulnerable coastal habitats.

Hooded Plover Program Response Plan Development

The Hooded Plover (*Thinornis cucullatus* (Formerly *Thinornis rubicollis*) is a shorebird species vulnerable to habitat disturbance and predation. A specific program will be developed to support the conservation of this species within the campground area.

- Habitat Protection: To minimise human and pet disturbances, key nesting sites will be identified and protected through fencing and signage.
- Community Engagement and Education: Informational campaigns and on-site educational materials will be developed to raise awareness among visitors about the Hooded Plover and encourage responsible behaviour to protect these birds during their breeding season.

Monitoring and Research: Collaborating with local wildlife organisations and researchers to monitor Hooded Plover populations and the effectiveness of conservation measures. This data will inform ongoing management strategies and adjustments as needed.



Threatened Species Profile: Hooded Plover (Thinornis cucullatus)

Overview

Hooded Plovers are small wading birds, approximately 19-23 cm in length, and generally weighing between 75 to 125 grams. They exhibit sexual dimorphism, where females tend to be slightly larger than the males. Their plumage is distinctive: they sport a black or dark brown head and throat "hood", while their underparts remain white. Additionally, they have a narrow black collar in their breeding season which slightly broadens and becomes less defined outside of that time.

The Hooded Plover's bill is thin and black with a small red base underneath and has bright pinkish-red legs that contrast against its primary feather colouration. Their large dark eyes are rimmed with white, which makes them even more striking.

Species Photos



Mapped Habitat:



Status

Listed as Vulnerable under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) at the national level in Australia. The species is also deemed Threatened under various state legislations.

Habitat

The Hooded Plovers occupy coastal areas of southern mainland Australia, preferring sandy, high-energy beaches.

Breeding and Nesting

Habitually inhabiting sandy beaches and dunes around the southern coastlines of Australia, their preferred habitat extends from sheltered bays to exposed high-energy coastline beaches.

Their breeding season ranges from July to March during which they lay one to four eggs directly on sandy beaches or in sparse beach vegetation areas without making any substantial nest structure - making them quite vulnerable during this period. Both parents take turns incubating the eggs, which hatch after about 28 days. The chicks are precocial, meaning they can feed themselves almost immediately after hatching.

Behaviour & Diet

They are usually seen in pairs or small groups along the shoreline. However, outside the breeding season, it isn't uncommon to spot larger flocks, particularly at roost sites. In terms of behaviour, these birds are known for their unusual 'broken-wing' act where they pretend to have been injured as a way to lure predators away from their nests or young ones.

As for their diet, Hooded Plovers primarily forage along the waterline on seashores and prefer to feed on aquatic invertebrates. A typical diet might include insects, sand hoppers, marine worms and other small crustaceans.

Threats

Major threats include habitat loss due to coastal development, domestic dogs and cats preying on eggs and chicks, disturbance of nesting sites by beachgoers, natural predation, and mortality from human-linked activities such as vehicles driving on beaches.

Conservation Status

Due to their sensitivity to human disturbance and habitat loss, the Hooded Plover is classified as 'Vulnerable' under Australia's Environment Protection and Biodiversity Conservation Act (1999). Estimates suggest fewer than 8,000 individuals remain in the wild.

Risk Management

Risk Identification and Assessment

Risk Identification and Assessment				
			Timing of	
Risk Category	Specific Risk	Control Measure	Implementation	
Conservation and Ecological Management	Disturbance to endemic flora and fauna	Establish ecologically sensitive zones,	Before and throughout tourism seasons	
	Intrusion upon hooded plover nesting zones	Specify non-access zones during breeding times.	Prior to the onset of breeding period	
Coastal Erosion Control	Erosion due to unsupervised access points	Delineate designated pathways with clear directional signs guiding visitors away from ecologically fragile sites.	Before opening and adjusted according to monitoring feedback	
	Water runoff affecting dune integrity	Engineer drainage systems for effective runoff management preventing erosion.	During primary infrastructural development phase	
Infrastructure & Accessibility	Vehicular damage to environmentally sensitive regions	Block vehicle access on beaches, create pedestrian-only access paths	Before site opening to the public	
	Crowding issues due to limited facilities	Broadening scope of amenities for day- long use, employing visitor flow management strategies	Pre-light influx phase and throughout visitor- seasons	
	Aging effects due to off-road vehicle (ORV) tracks	Shut down and recuperate redundant ORV paths, distinctly demarcate permissible zones	Pre and throughout tourist season	
Signage & Educational Initiatives	Low awareness about environmental integrity	Install educational signage, involve local indigenous communities in curating interpretative exhibits	Prior to site opening, with regular updates as needed	
Access Control and Habitat Restoration	Erosion from informal pathways	Rationalise and formalise pathways.	Before peak tourist influx.	
Recreational Amenities & Facilities	Limited amenities availability	Develop picnic spots, lookouts integrated with activity zones equipped with interpretative signage	Prior to the onset of peak visitor influx	
	Interferences between multiple recreational activities	Constitution of clear zoning for activities such as bird watching and swimming in order to ensure compatibility reducing disturbances	Pre-high influx period	
Dog Control & Wildlife Conservation	Habitat disturbance by pets	Erect defined on-leash areas, put up clear pet-management signage educating visitors on wildlife-friendly practices	Prior to and during tourist season	

Appendices

- 1. Community Land Management Plan
- 2. Eyes On Eyre Project
- 3. Animal Management Plan

Native Vegetation Clearance Application Decision (Figure 2)
Native Vegetation Clearance Application2019/2045/921
DC of Cleve, Redbanks Campground_Eyes on Eye

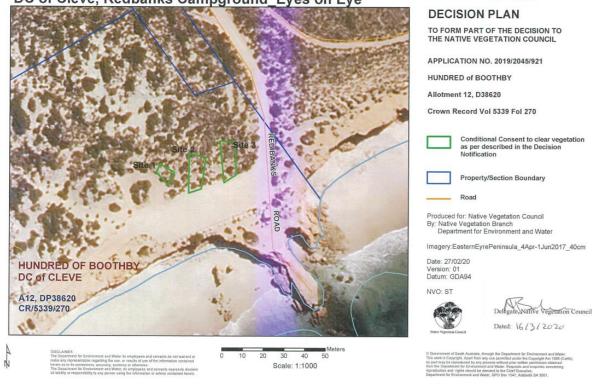


Figure 2: Highlighting areas earmarked for native vegetation clearance as part of the application process.

EYES ON EYRE



...Eyre Peninsula



Shared Path from Marina to Thredgold's Beach



Signage
Improved directional signage leading the way to camp sites from main roads. Clear camp signage including entrylexit, camp rules, bcal attractions/activities, historical interpretive or educational including Aborignal cultural content.



Toilet facilities
Fit for purpose toilet, handwashing basin, store room and rain
water tank. Site character or unique features represented through
materials and sculptural elements



Fire pits Steel fire pits with lockable removable covers









Table and chairs



Natural rockwork and fending Rockwork and fending to define camp boundaries and manage revegetation areas





ARNO BAY



Electric BBQ



Smart Infrastructure
Pay station, USB charging and facility monitoring systems to aid maintenance activities

BIRDSEYE:STUDIOS —



Waste disposal area Separate rubbish and recycling bin storage areas. Site character or unique features represented through materials and sculptural dements





