

Mackenzie Island Conservation Park

Management Statement

2026



Queensland
Government

This management statement has not been co-designed with First Nations partners. This document has been prepared by Queensland Parks and Wildlife Service (QPWS), Department of the Environment, Tourism, Science and Innovation to provide management guidance and adaptive management until such a time as the department can engage with First Nations partners in the co-design of a management instrument.

Management statements are prepared under the *Nature Conservation Act 1992*. These documents may also include management direction for other State tenure for which QPWS has management responsibility.

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Contents

- 1. Introduction3
- 2. Park overview4
- 3. Key values5
 - 3.1 Wetland habitat..... 7
- 4. Management direction9
 - 4.1 Management directions 10
- 5. Glossary12
- Appendix 113

1. Introduction

The Queensland Parks and Wildlife Service (QPWS), within the Department of the Environment, Tourism, Science and Innovation (DETSI), applies a contemporary management process that is based on international best practice and targets management towards the most important features of each park: their 'key values'.

The Values-Based Management Framework (VBMF) is an adaptive management cycle that incorporates planning, prioritising, doing, monitoring, evaluating and reporting into all areas of our business. This enables the agency to be more flexible and proactive and to improve management effectiveness over time. A glossary of VBMF terms and concepts used within this document is provided at the end of this document (Section 5 – Glossary).

As a land manager, QPWS has a custodial obligation to ensure our estate is managed to provide appropriate and safe access, protect life and property, be a good neighbour and work cooperatively with partners across the landscape. The agency does this as part of setting the 'levels of service' for each park. Levels of service is a management standard that considers an area's values, threatening processes, custodial obligations, risks and overall management complexity.

This management statement has been prepared by QPWS to provide management guidance and adaptive management until such a time as the department can engage with First Nations partners in co-design of a management instrument.

2. Park overview

The following figure and table (Figure 1, Table 1) provide an overview of information relating to the park including locality, legislative framework and applicable plans/agreements.

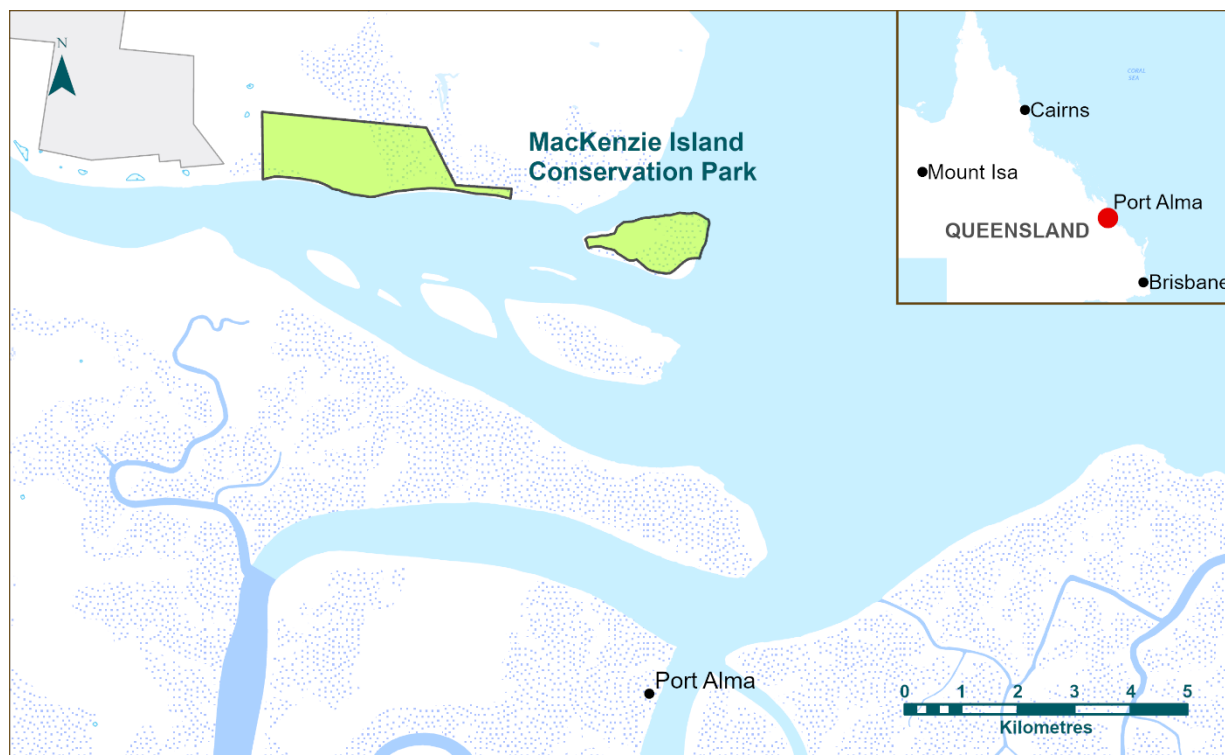


Figure 1. Locality of MacKenzie Island Conservation Park

Table 1. Overview of MacKenzie Island Conservation Park

Park size	MacKenzie Island Conservation Park	579 ha
Bioregion	Brigalow Belt North	
QPWS region	Central	
Local government area	Livingstone Shire	
State electorate	Keppel	
Relevant legislation	<i>Aboriginal Cultural Heritage Act 2003</i>	
	<i>Biosecurity Act 2014</i>	
	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)	
	<i>Native Title Act 1993</i> (Cwlth)	
	<i>Nature Conservation Act 1992</i>	
Plans and agreements	World Heritage Convention, Convention concerning the Protection of the World Cultural and Natural Heritage	
	Directory of Important Wetlands in Australia	
	Convention on the Conservation of Migratory Species of Wild Animals	
	China–Australia Migratory Bird Agreement	
	Japan Australia Migratory Bird Agreement	
	Republic of Korea–Australia Migratory Bird Agreement	

3. Key values

All parks, forests and reserves contain a range of natural, cultural, social and economic values that contribute to the state's comprehensive and representative protected area and forest estate. The VBMF provides a framework for identifying and protecting the most important of these—referred to as *key values*—which in turn guides the allocation of management resources.

The location of each key value is shown in Figure 2. An assessment of each key value—including its current and desired condition, trend, and the confidence level of the assessment—is presented in the following tables and can be interpreted using Table 2. The assessment also outlines the main threats to each key value and provides broad strategic management direction to address these threats and achieve desired outcomes over time.

Table 2. Description of condition and trend icons used in the key values assessment

Condition of key value	Good  The value is in good condition and is likely to be maintained for the foreseeable future, provided that current measures are maintained	Good with some concern  The value is likely to be maintained over the long term with minor additional conservation measures to address existing concerns	Significant concern  The value is threatened by a number of current or potential threats. Significant additional conservation measures are required to preserve the value over the medium to long term	Critical  The value is severely threatened. Urgent additional large-scale conservation measures are required or the value may be lost
Trend of key value condition	Improving 	Stable 	Deteriorating 	No consistent trend 
Assessment confidence	Inferred 	Limited 	Adequate 	

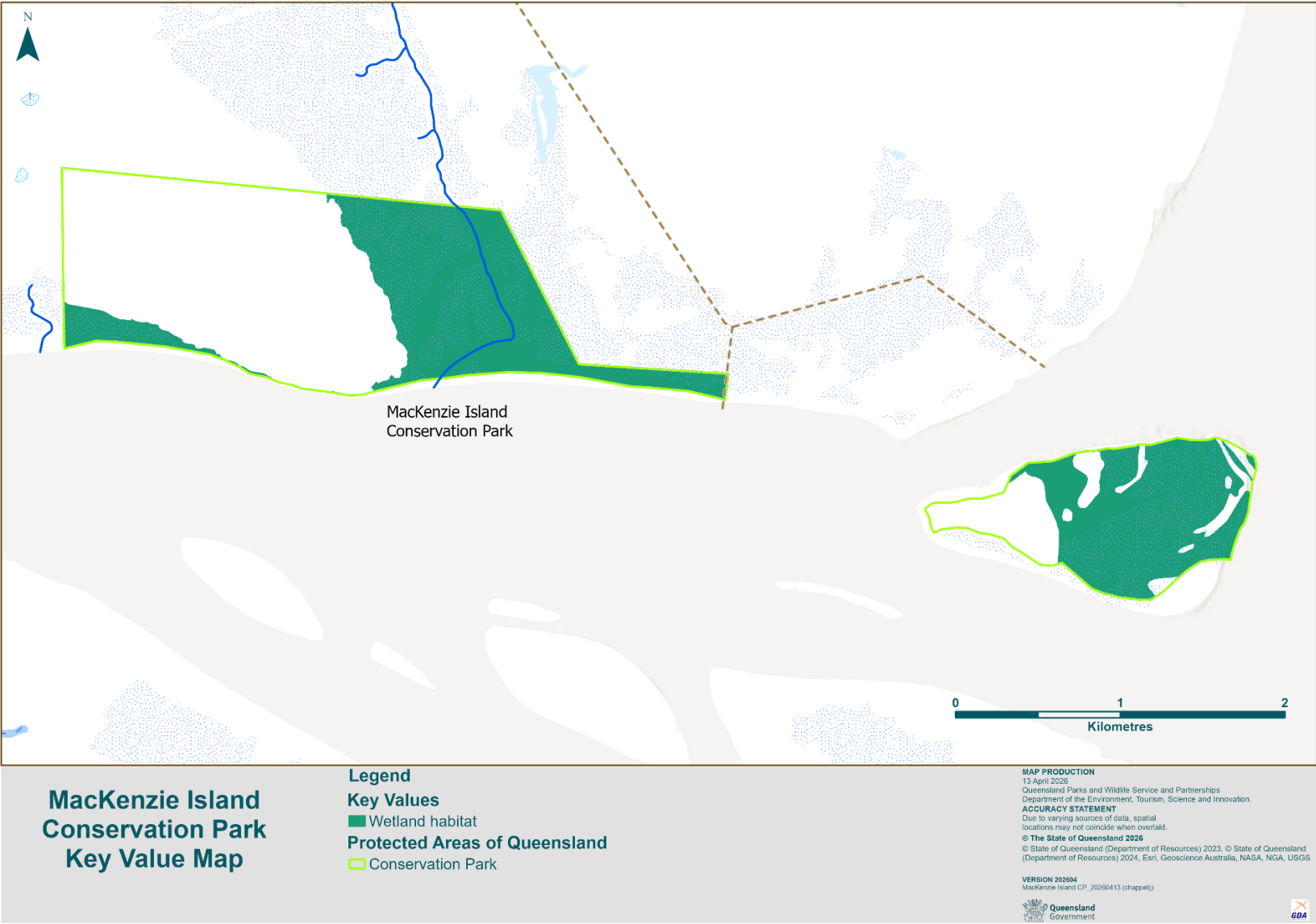


Figure 2. MacKenzie Island Conservation Park key values

3.1 Wetland habitat

Key value category	Key value description	Current condition	Assessment confidence	Current trend	Assessment confidence	Desired condition (short term)	Desired condition (long term)
Significant ecosystem	Wetland habitat extends across almost half of the park and includes coastal melaleuca swamp and intertidal saltmarsh, saltflats and mangroves. The coastal melaleuca swamp has endangered biodiversity status and of the six protected areas in Queensland where it is present, this park has the second highest representation. The wetlands provide important habitat for a variety of species, including resident and migratory shorebirds. Thirty different bird species have been recorded from the park including 11 migratory species listed on international conventions. The park's wetlands are part of the broader Fitzroy River Delta Wetland which is listed in <i>A Directory of Important Wetlands in Australia</i>. Much of the wetland habitat is also within the Fitzroy River Fish Habitat Area and the Great Barrier Reef World Heritage Area. MacKenzie Island is a significant monitoring site for the critically endangered eastern curlew <i>Numenius madagascariensis</i>, endangered lesser sand plover <i>Charadrius mongolus</i> and endangered Western Alaskan bar-tailed godwit <i>Limosa lapponica baueri</i>. There are four regional ecosystems within the wetland habitat, one has endangered biodiversity status (8.1.5) and the others have no concern at present status. Regional ecosystem 8.1.5: <i>Melaleuca</i> spp. and/or <i>Eucalyptus tereticornis</i> and/or <i>Corymbia tessellaris</i> woodland with a ground stratum of salt tolerant grasses and sedges, usually in a narrow zone adjoining tidal ecosystems covers 9.59 hectares (1.98 per cent) of the park. Regional ecosystem 11.1.2: Samphire forbland on marine clay plains covers 197.12 hectares (40.78 per cent) of the park. Regional ecosystem 11.1.4: Mangrove low open forest and/or woodland on marine clay plains covers 16.4 hectares (3.4 per cent) of the park has no concern at present biodiversity status. Regional ecosystem 11.1.1: <i>Sporobolus virginicus</i> grassland on marine clay plains covers 9.85 hectares (2.04 per cent) of the park.	Good 	Limited 	Stable 	Inferred 	Good 	Good 
Desired outcome The wetland habitat is healthy with clean water, diverse native species, natural hydrology and stable vegetation supporting thriving biodiversity, water quality, cultural and community needs.							

Threats to key value

Threat process	Threat category	Description	Threat level	Threat rating
Introduced animals	Invasive and other problematic species genes and diseases	Cattle and goats are the only pest species recorded from the park. However, there is the likelihood of other pest animals that are present in the broader landscape, such as pigs, deer, foxes and cats, being present now or in the future. These pest animals have the potential to impact the wetland habitat and threatened species such as shorebirds. A site visit to check for pests would enhance knowledge and inform management. The threat of introduced animals is higher for the mainland section of the park where pests can move more readily across the landscape; the river is a barrier to pest animals reaching the island.	Primary	Low
Introduced weeds	Invasive and other problematic species genes and diseases	There are no current pest plants recorded from the park. However, given the park's location on the Fitzroy River and the presence of pest plants in the broader catchment that are readily transported during flood events, such as rubbervine, high biomass grasses and prickly pear, it is likely that there will be future incursions. A site visit to check for pests would enhance knowledge and inform management.	Secondary	Low
Shipping lanes	Transportation and service corridors	Port Alma is just south of the park on the southern side of the Fitzroy River delta. Port Alma is a one of 21 shipping ports along the Queensland coast. The main cargo handled at the port is class 1 explosives, ammonium nitrate, bulk tallow and military equipment for military exercises held regularly at Shoalwater Bay to the north. There are established Port Procedures and Information for Shipping that must be complied with by all vessels operating within the Port of Alma Pilotage Area. Reef VTS monitors vessel traffic in the Great Barrier Reef and Torres Strait region to prevent collisions or incidents. Spills and other incidents have the potential to impact the park's wetlands and species such as shorebirds.	Other	Low
Sea-level rise	Climate change and severe weather	Intertidal wetlands are particularly vulnerable to changes in sea level. While mangroves and saltmarsh can adapt to gradual increases in sea level by trapping sediment, the higher rates of sea level rise forecast with climate change makes it harder to adapt. Seasonally inundated swamps such as the endangered melaleuca swamp are susceptible to habitat changes due to inundation with rising sea levels.	Other	Low
Flooding	Climate change and severe weather	Climate change is likely to exacerbate the frequency and severity of flood events. This could increase the threat of pest incursions and cause mangrove dieback.	Other	Low

Strategic management directions

Strategic management direction	Priority*
Reduce the impact of pest animals that threaten wetland habitats.	5
Reduce the impact of pest animals that threaten shorebirds.	5
Reduce the impact of pest plants that threaten wetland habitats.	5
Minimise impacts of shipping through incident response planning and preparedness.	5
Monitor condition and climate associated changes of wetland habitat to assess the impacts and determine future management.	5
Maintain wetland habitat by managing non-climate stressors to build resilience to climate change.	5
Maintain wetland habitats through management of known threats that will be exacerbated by climate change.	5

Key value priority: 1 – Critical, 2 – Very high, 3 – High, 4 – Moderate, 5 – Desirable (see Appendix 1)

4. Management direction

QPWS manages protected areas and forests to protect their values and deliver our custodial obligations as a land manager. A levels of service (LoS) assessment allows QPWS to consider the management of each park in a state-wide context and determine desired levels of management effort for each park in a consistent and equitable way. An LoS assessment lets QPWS staff and the public know what level of management activity to expect on each park, forest or reserve. There are six LoS ratings ranging from 'below acceptable' to 'exceptional', and an 'acceptable' rating is the minimum standard required to deliver good management and meet our legislative and custodial obligations.

This section provides a strategic management direction for each management theme, identifying its current LoS and desired LoS, which can be interpreted using Figure 3.

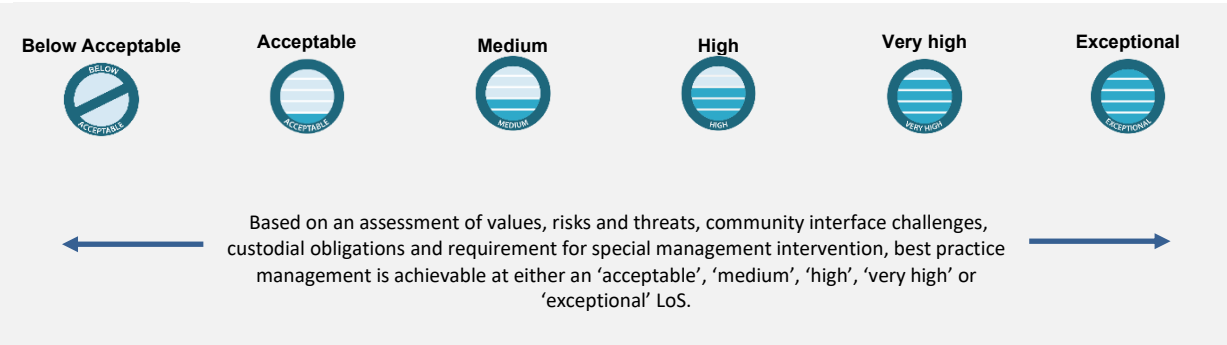


Figure 3. Description of LoS icons

4.1 Management directions

Management theme	Current	Desired	Strategic management direction	Priority (1–5) *
Fire management			Improve the current knowledge and understanding of the park's fire requirements and impacts on fire behaviour from pest plants, particularly high biomass grasses.	5
			Improve the current level of consultation and relationships with neighbours and the Bushfire Management Group to undertake planned burns.	5
			Improve fire management in the park through preparation of a fire strategy.	5
			Improve the current approach to fire management by increasing the priority to implement planned burns.	5
Pest management			Improve knowledge and understanding of current and emerging weeds and their impacts on natural values, including distribution and extent.	5
			Improve knowledge of any impacts from feral cats, pigs, deer, foxes, cattle and goats on the wetland habitat and shorebirds.	5
			Improve pest management in the park through preparation of a pest strategy.	5
Natural values management			Improve knowledge of threatened species in the park, particularly sea turtles and shorebirds.	4
			Improve knowledge of sand dunes in the park.	4
			Improve knowledge of the condition of the vegetation communities through management of the health check program.	4
			Increase the management effort, including greater planning support, to improve knowledge and manage threats to park values.	4
Post-contact cultural heritage management			Maintain a contemporary knowledge of the park's post-contact cultural heritage and management requirements.	5
Visitor management			Maintain current approach to visitor management.	5
Community, partnerships and other interests			Maintain contemporary knowledge of all stakeholders and management requirements.	5
			Enhance the relationship with Darumbal People by undertaking site visits to the park together and involving them in on ground park management as required.	4
Field management capability			Enhance field management capacity by increasing the strategic use of regional and centric teams as needed, including vessel access with Great Barrier Reef and Marine Parks Region or Threatened Species Operations.	4
			Improve current field management capability and capacity by working with other business units and Darumbal Land and Sea Rangers to prioritise work programs.	4

Management theme	Current	Desired	Strategic management direction	Priority (1–5) *
Operational planning and management support			Maintain knowledge of available operational planning and management support within the region to guide and support park management operations.	5
			Maintain relationships with regional and centric support units.	5
			Increase operational planning for management priorities including fire, pest, threatened species and cultural heritage.	5

*Level of Service priority: 1 – extremely urgent and extremely necessary, 2 – very necessary and very urgent, 3 - moderately necessary and moderately urgent, 4 – somewhat necessary and somewhat urgent, 5 – optional and not urgent (see Appendix 1)

5. Glossary

The following glossary contains VBMF terms and concepts used within this document.

Term	Description
Adaptive management	The process of adjusting and improving how we manage parks, forests and reserves after assessing the outcomes of previous strategies and on-ground actions.
Condition and trend	The condition of a key value is assessed as either good, good with some concern, significant concern or critical. Trend describes what is happening to the condition: is it improving, stable or deteriorating? A key value's current condition is determined during the planning process. A desired condition is a realistic goal for the future condition of the key value. The ongoing condition and trend of key values is assessed with regular health checks, or monitoring and scientific assessment.
Custodial obligations	The legal and policy requirements QPWS has as a land manager to ensure that parks, forests and reserves are managed properly and lawfully. This includes protecting life and property, maintaining biosecurity, building positive relationships with adjacent communities and landholders, and safeguarding the values of the land.
Desired outcome	A statement in the key value and management direction statements about moving from the current status (condition or LoS) to a desired status. The goal for management.
Health check	Basic form of monitoring that uses indicators and visual assessments to regularly evaluate the condition of key values. Regular health checks ensure QPWS can respond quickly to adverse change and redirect management priorities.
Key value	A natural, cultural, social or economic value that is most important, significant, unique or irreplaceable and helps define the essence of the area. If lost, it would diminish what makes the area distinct from others.
Level of service (LoS)	Management standards for maintaining an area based on its values, threats and the complexity of management. There are six LoS ratings ranging from 'below acceptable' to 'exceptional', noting that an 'acceptable' rating is the minimum standard required to deliver good management and meet our custodial obligations under law as a land manager. A 'current' LoS rating is the level at the time of planning, the 'desired' LoS is where we want to be.
Management direction	An assessment of the current and desired LoS for each management theme, with prioritised strategic management directions.
Management instrument	A management plan or management statement.
Management theme	Common management themes across parks, forests and reserves, including fire management; pest management; natural values management; post-contact cultural heritage management; visitor management; community, partnerships and other interests; field management capability; operational planning and management support.
Strategic management direction	A broad strategy aimed at mitigating or removing a threat to a key value and maintaining or improving the condition of a park's value; or addressing the gap between the current LoS and desired LoS for a management theme.
Threat or threatening process and threat rating	Based on IUCN's classifications, QPWS has identified threatening processes that have the potential to affect Queensland's values (e.g. natural systems modifications, invasive species). Current and potential threats to key values are identified and given a threat rating based on a combination of the extent of the impact, the severity of the impact and the urgency of action.

Appendix 1

Term	Description
Priority rating (key value SMDs)	A rating given to a strategic management direction according to the need for action to prevent further decline, stabilise current condition, or restore and enhance values, with consideration given to legislative obligations, cost, and social, economic and political factors.
	Critical (1) – Loss or very significant decline in the condition of the key value is highly likely if action is not taken OR significant improvement in the condition of the key value is highly likely if action is taken.
	Very high (2) – Significant decline in the condition of the key value is likely if action is not taken OR significant improvement in the condition of the key value is likely if action is taken.
	High (3) – Decline in the condition of the key value is likely if action is not taken OR improvement in the condition of the key value is likely if action is taken.
	Moderate (4) – Some decline in the condition of the key value is possible if action is not taken OR some improvement in the condition of the key value is possible if action is taken.
	Desirable (5) – While decline in the condition of the key value is not likely in the short term, the action, if taken, would help build long-term resilience of the key value.
Priority rating (LoS SMDs)	A rating given to an LoS or custodial obligation strategic management direction. A scale from 1 (extremely urgent) to 5 (not urgent or optional) is assigned, with consideration given to legislative obligations, cost, and social, economic and political factors.