

Marree-Innaminka District Plan

2024 – 2026



Introduction

The Marree Innamincka district lies in the far northeast corner of South Australia.

Landscape Features

The district is comprised of 3 major bioregions:

- Channel Country
- Simpson-Strzelecki Dune fields
- Gibber or Stony Plains

Both bioregions share similar climates, being very hot arid regions; having hot summers and short typically dry winters. Average temperature ranges between 8-41 degrees Celsius. The region is characterised by having highly variable and unpredictable rainfall, but generally summer dominant with a recorded average of 120-175mm per year across the region.

The most important water source for the District is the main aquifer of the Great Artesian Basin (GAB), with the region covering a major component of the Lake Eyre and Great Artesian Basins. Unique for being the largest internal draining water system in Australia and one of the largest and last remaining unmodified water systems in the world.

Groundwater is discharged from the GAB by mound springs, bores and diffuse upward leakage through the Bulldog Shale. Cooper Basin petroleum wells and the Roxby Downs Township also rely on GAB water.

Gibber or Stony plains are usually made up of gypcrete with entrenched drainage, low escarpments and tablelands. Dunes, occasional lakes and floodplains can be found throughout the stony ranges and tablelands, with the vulnerable gibber layer playing an essential role in soil and vegetation stabilisation.

The channel country features extensive drainage systems, braided channels, vast flood plains and terminal lakes, with highly variable flow patterns, inundation frequency, and salinity and vegetation communities.

Simpson-Strzelecki Dune fields feature a complex of relatively high, parallel sand dunes, interspersed with salt lakes, salt pans and plains. This system responds prolifically to rain, which collect in highly productive swale swamps and is a key factor in determining which plants and animals are present.

The district is unique for the size and diversity of unmodified natural vegetation systems that provide habitat for a number of specialised native flora and fauna species. Native local flora provides the main feed source for pastoral livestock, with many native flora and fauna populations fluctuating between boom and bust cycles.

Size: 203,174km² (39% of the SAAL region)

Towns (population): 213 (according to the 2016 census)

Innamincka - 44

Marree - 101

Lyndhurst - 24

Moomba - no permanent residents (fly-in, fly-out only)

Aboriginal Nations: Wangkangurru / Yarluyandi (northern), Yandruwandha / Yawarrawarrka (northeast), Arabana (south-west), Dieri (east), Adnyamathanha (south)

Land use: Aboriginal land, pastoralism (predominantly organic certified cattle), mining, tourism, conservation (public and private lands), energy exploration, service centres, towns, recreation

Catchment and key waterways: Lake Eyre Basin (LEB). Cooper, Kallakoopah, Strzelecki and Warburton Creeks, Georgina and Diamantina Rivers

National Parks and Reserves: Innamincka Regional Reserve, Malkumba-Coongie Lakes National Park, Strzelecki Regional Reserve Munga-Thirri Simpson Desert National Park; Kati Thanda-Lake Eyre National Park; Lake Torrens National Park; Elliot Price Conservation Park -Arabana Parks Advisory Committee

Key stakeholders:

- Traditional owners
- Pastoral land managers and community
- Petroleum & gas (SANTOS, Beach Energy, BHP) and other mining sector industries
- Township communities and service providers
- Outback Communities Authority (OCA)
- Tourism companies that travel through the region
- Transport and logistic industries

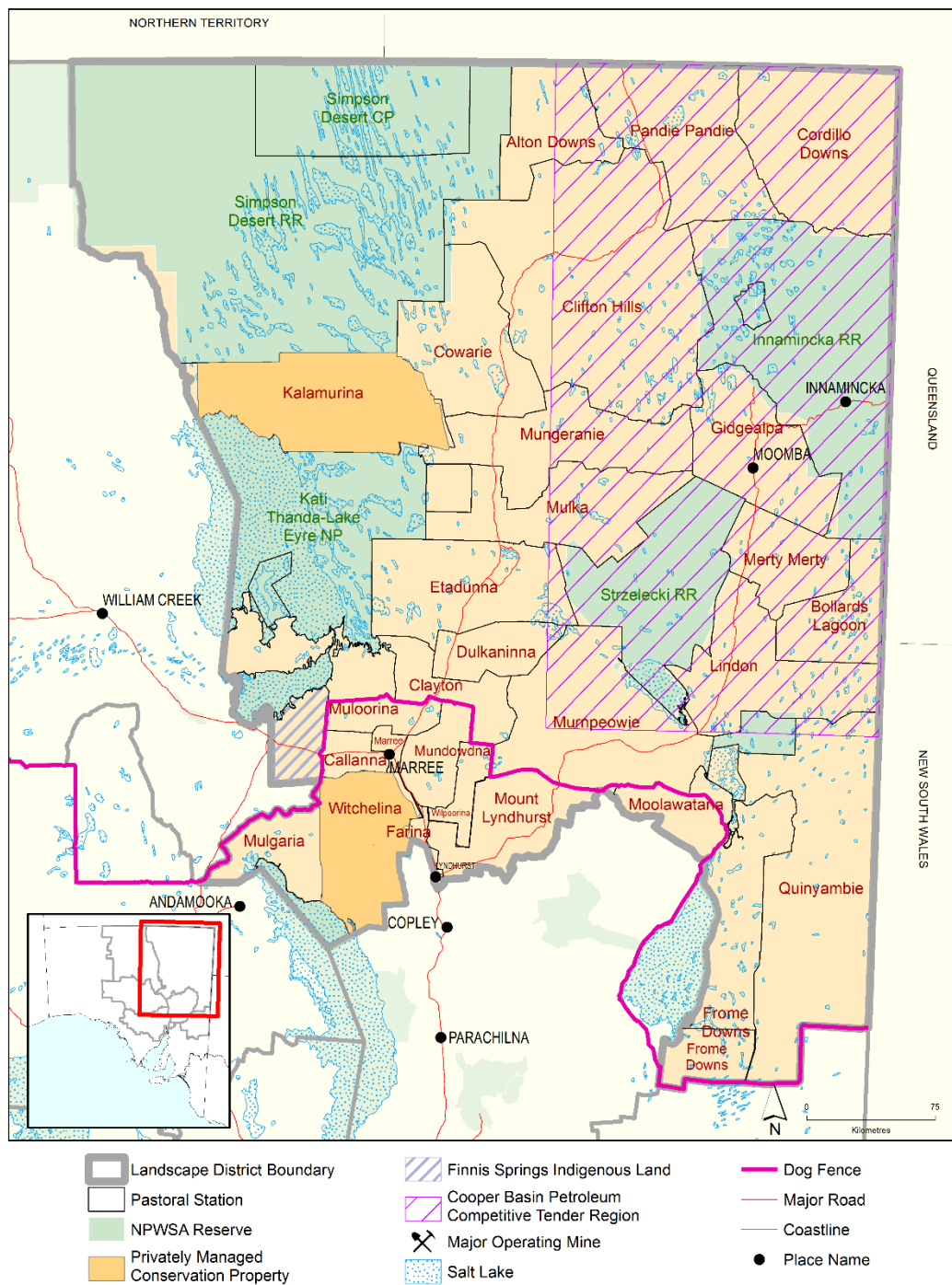


Figure 1: Map of the Marree-Innamincka SAAL Landscape Board's District

Role of the Board

Under the Landscape South Australia (LSA) Act 2019, the Board's role is to undertake, promote and integrate the management of natural resources. Particular reference is given to land management, water resource management and pest animal and plant control. The Board operates as the relevant authority for a range of water, land protection and animal and plant control activities and works with the community in delivering its responsibilities under the LSA Act. Its roles include education and awareness raising aimed at practice change and adoption, encouraging and supporting legislative compliance, and enforcement when needed.

Role of the Maree-Innaminka Landscape Group

Landscape Groups are an important conduit for community input to landscape planning and design of the Board's programs. Groups work with local communities, to support the implementation of the Regional Landscape Plan and increase community awareness of Board programs within a Group's area.

Landscape Planning Framework



How this plan was developed

This plan was developed through a series of planning sessions with the Marree-Innaminka Landscape Group in 2021. Information was drawn from past planning documents, current projects and stakeholder knowledge.

Monitoring and Evaluation

This district plan will be reviewed each year with the Marree-Innaminka Landscape Group to evaluate progress against priorities and plan for the next year of activities.

VISION

Leading the way to biodiverse and productive landscapes in a changing climate

SA Arid Lands regional priorities

Priorities

Focus areas



CLIMATE RESILIENT REGION

Resilient landscapes, communities and enterprises are mitigating and adapting to climate change

- C1** Ensuring climate risk is embedded in all Board business
- C2** Providing land managers with the knowledge and skills they need to mitigate and adapt to climate change
- C3** Exploring adaptation pathways to ensure communities are climate resilient



WATER MANAGEMENT

The region's water resources are managed judiciously

- W1** Planning, research & leveraging infrastructure investment to support the judicious use of groundwater
- W2** Maintaining hydrogeology to protect Great Artesian Basin springs and groundwater-dependent ecosystems
- W3** Understanding and managing surface water systems including the Lake Eyre Basin



SUSTAINABLE LAND MANAGEMENT

Land management practices protect soil, vegetation and biodiversity

- L1** Effective pest plant and animal control protecting production systems
- L2** Addressing the threat of excessive total grazing pressure
- L3** Building land managers' capacity in adaptive agriculture, best practice land management and rehabilitation



PROTECTING AND ENHANCING BIODIVERSITY

Intrinsic biodiversity values are protected and enhanced

- B1** Managing key threats to protect natural values
- B2** Taking action for threatened species and ecosystem recovery
- B3** Maintaining and improving the condition of Great Artesian Basin springs and water-dependent ecosystems












PEOPLE AND PARTNERSHIPS

People and community are central to looking after our landscapes.



- P1** First Nations partnerships supporting cross-cultural knowledge sharing and landscape management outcomes
- P2** Supporting Landscape Groups to lead community action and education
- P3** Raising awareness of the region's natural values and connecting people to nature
- P4** Supporting community action to achieve land, water and coastal management outcomes



Marree-Innaminka District Landscape Management Priorities


Priorities*	Landscape impacts	District Ranking ^	Alignment to Regional Priorities**
Water Management	Over extraction or diversion of ground and surface water requires management of water affecting activities and accountability for different users. Draw down of water table. Importance of Mound Springs, Cultural Access, Fracking and water flow.	High	
Tourism	Increasing numbers of tourists visiting and not following appropriate behaviour regarding rubbish pollution, illegal firewood collection, trespassing and impact on cultural sites. Resulting in declining biodiversity and a fragmented/degraded landscapes	High	
Feral Animals	Feral animals including cats, camels, pigs, rabbits, goats, exotic fish and invertebrates, cane toads and feral cattle. Competing with native animals and livestock for habitat and resources. Negative impact on threatened and unique species from predation on native animals as well as potentially acting as vectors for infectious diseases.	High	
Road Maintenance	Inappropriate road design and lack of road maintenance can lead to undesirable water movement in surrounding areas leading to erosion/landscape dehydration. Off road damage where vehicles don't stay on main tracks, decrease in business and community productivity when transport routes are disrupted.	High	
Weeds	Non-native weeds displace native vegetation with flow-on effects for native fauna and impact on stock management and pastoral production.	Med	
Climate Change	Decrease in productivity and adapting to unknown changes in pasture type and growth patterns. Due to changing climate with unpredictable and variable rainfall and temperatures.	Med	
Wild Dog Management	Wild dog impacts on the pastoral industry particularly along the dog fence where control is required. Stock losses. Understanding and implementing suitable control alternatives for organic businesses.	Low	
Land Degradation	Levels of total grazing pressure including livestock, overabundant native herbivores and introduced herbivores leading to loss of biodiversity and ground cover, leading to increased erosion and degrading ecosystem resilience. N.B. <i>Group decided this was being done well in the region, therefore it wasn't as high a priority.</i>	Low	
Mining and Exploration	Impacts of mining on biodiversity through habitat clearance, pollution, water extraction, if industry does not follow regulations and restoration requirements.	Low	

^Priority ranking considers the **magnitude** of the threat or opportunity (how **severe/influential** and how **widespread/ relevant**) it is, as well as the **reversibility** of its impacts** Some district priorities may not be regional priorities for the Board.

Marree - Innamincka District - Current programs and opportunities (this will regularly be reviewed, change and be updated)



District Priority	District Ranking	Current programs and opportunities	Status	Who	Regional Focus Area
 Climate Resilient Region					
Climate change impacts	Med	Carbon Information/Farming Workshops	Ongoing	SAAL LB	C2
		Agricultural resilience/climate smart Workshops	Ongoing	SAAL	C2
		Carbon Neutral Business Support		SAAL LB, PIRSA, MLA	C2
		Recording Changes in the Landscape - Weather stations -PixStix photo monitoring?	Current/Ongoing Potential	Landholders, SAAL LB	C2
		<i>Community Impact Program</i> – Foundation of Rural Regional Renewal	Current/Ongoing	SAAL LB	C2/C3
 Water Management					
Over extraction of ground water resources	High	Water Management Program, water accounting trials and continued evaluation of WAP	Current/Ongoing	SAAL LB, DEW	W1, W2, W3
Springs	High	Lake Eyre Basin Riparian Springs Project	Current/Ongoing	SAAL	W2, B2, B3, P1



District Priority	District Ranking	Current programs and opportunities	Status	Who	Regional Focus Area
	High	Springs monitoring of fenced and unfenced springs	Ongoing	SAAL, FOMS, Arabana Rangers	W2
 Sustainable Land Management					
		Deliver Education Activities	Ongoing	SAAL LB, landholders	L1
		Support & link Volunteers to Weed Control Activities	Potential	SAAL LB and landholders	L1
Wild dog management	Low	Biteback Program	Ongoing	SAAL LB, landholders	L1
		Control Alternatives for Organic Businesses	Potential	SAAL LB, landholders, PIRSA, Organic Accreditation bodies	L1
 Protecting and Enhancing Biodiversity					
Feral animals - cats, camels, pigs, rabbits, goats, exotic fish and invertebrates, cane toads and feral cattle	High	Wetland Wonders Project	Current/2024-2028	SAAL LB, NPWS	B1, B2
		Pest Fish Species in Springs	Ongoing	SAAL, FOMS, PIRSA	B1, B2
		Feral Cats Around Townships Marree & Innamincka	Ongoing	SAAL, OCA, Uni SA, NPWS	B1, B2
		Feral Pigs Impacts on Springs	Ongoing	SAAL, Landholders, FOMS	B1, B2
		Across Border Partnerships – pest plants and animals	Ongoing	SAAL LB, interstate NRM boards and biosecurity	B1

District Priority	District Ranking	Current programs and opportunities	Status	Who	Regional Focus Area
 People and Partnerships					
Tourism impacts – rubbish, firewood collection and trespassing cultural sites	High	Improve Awareness and Surveillance of Tourism Impacts <i>Greater Tracks App promotion</i>	Started-due by end of 2024	SAAL LB, OCA, SA Tourism	P3
		Support and provide feedback on the Aussie Travel Code	Ongoing	OCA, SAAL LB, FROSAT, RDA	P3
Road design and maintenance	High	Communication and Education Program	Ongoing	SAAL LB, DIT, DEW, SANTOS, OCA? FROSAT?	P3
Mining and exploration	Low	Open Communication and Education Water Affecting Activities Referrals for mining and exploration activities	Ongoing	SAAL LB	P3


Marree – Innamincka Landscape Group actions

Marree-Innamincka Actions list 2024

District Priority	Opportunity	Actions	When	Collaborate	Status
 Climate Resilient Region					
Climate change impacts	<i>Carbon Farming</i>	SAAL workshops in the region 2025	TBC	TBC	Not started
	<i>Recording Changes in the Landscape</i>	To be decided by the group at a later date	TBC	Universities, CSIRO, SAAL LB	Not started
 Water Management					
Over extraction of ground water resources	<i>Water Management Program and WAP</i>	Support SAAL water team with water affecting activities in the region.		SAAL, Landholders	Ongoing
Springs	<i>Springs Monitoring</i>	Support Photo monitoring and Camera traps to detect feral species and Springs health.	Mid-late 2024?	SAAL, Landholders, FOMS, Arabana, Dieri	Ongoing

District Priority	Opportunity	Actions	When	Collaborate	Status
 Sustainable Land Management					
Wild dog management	<i>Control Alternatives for Organic Businesses</i>	Engage with industry to support applications for grants to conduct trials	Ongoing	Bite back, PIRSA,	
Land degradation	<i>Sustainable Grazing Practices - Education</i>	<ol style="list-style-type: none"> 1. Group Speaker workshops in district to educate landholders on sustainable grazing techniques – use peer to peer learning 2. Opportunities to utilize locals for road maintenance 		SAF MLA, CLO, DIT	
 Protecting and Enhancing Biodiversity					
Feral animals - cats, camels, pigs, rabbits, goats, exotic fish and invertebrates, cane toads	<i>Wetland Wonders Project – Feral animal control</i>	<ol style="list-style-type: none"> 1. Continue discussions with SAAL science team on how community and traditional owners can be further involved in 	ongoing	DEW, SARDI, Landholders, MI Group, SAAL science team	Ongoing <ol style="list-style-type: none"> 3. Ongoing. 2 x Feral Cat trapping events held at Marree with 46 Feral cats removed. Future support for NPWS to action at Innamincka by end Nov 2024.

District Priority	Opportunity	Actions	When	Collaborate	Status
and feral cattle		<ul style="list-style-type: none"> planning, carrying out and receiving results of works. 2. Support landholders to report and monitor feral species numbers 3. Support OCA & NPWS with Feral Cat management around Townships 4. Support landholders, FOMS, PIRSA with pest Fish Species in Springs 5. Support the VET Trial for cats 6. Support Pig Baiting trials in the region 7. Support Rabbit control efforts 8. Support Buffel control and other district weed priorities. 9. Protect RAMSAR Site 10. Work with FOIR for surveys 			

District Priority	Opportunity	Actions	When	Collaborate	Status
		11. Roadside weed mapping			
 People and Partnerships					
Tourism impacts – rubbish, firewood collection and trespassing cultural sites	<i>Improve Awareness and Surveillance of Tourism Impacts</i>	<ol style="list-style-type: none"> 1. Tourism app promotion through social media, website and caravan and camping show 2. Acquire Biosecurity signs from livestock SA and distribute/make available to district properties 	Ongoing	Other LGs OCA, RDA, SA Tourism, FRO	<ol style="list-style-type: none"> 1. Tourism Posters and soft launch actioned by end September 2024. Hard launch by end of 2024. 2. Waiting on signs to distribute during landholder visits by Mid 2025
Road design and maintenance	<i>Communication and Education Program</i>	<ol style="list-style-type: none"> 1. Have Guest speaker from DIT at Meeting annually 2. Update on Strzelecki infrastructure including toilets Information on Road closures. 3. Group to contact OCA and investigate new Technology to 	Ongoing	SAAL LB, DEW, DIT	<ol style="list-style-type: none"> 1. Juanita Chester Manager Regional North & Outback Road Maintenance attended after meeting #83 to provide update. 2. Interactive map of grading schedule acquired: https://www.dit.sa.gov.au/infrastructure/road_projects/statewide-road-improvement-and-renewal-works/outback-unsealed-roads-grading-program

District Priority	Opportunity	Actions	When	Collaborate	Status
		deploy to monitor			
Mining and exploration	<i>Open Communication and Education</i>	Invite mining representatives to provide updates when appropriate at group meetings and request correspondence from the SAAL Board	Ongoing	SAAL LB, SANTOS, BHP	
Community Wellbeing	<i>Community Wellbeing and Connection</i>	<ol style="list-style-type: none"> 1. Support FRRR Family Fun day at Aroona in September. 2. Support educational programs for SOTA and Marree School 3. Support Community Led Action 4. Support rural women in isolation 		SANTOS, PIRSA, MI Group	1. Actioned 27 th September 2024

SAAL LB SA Arid Lands Landscape Board, **DEW** Department for Environment and Water, **PACC** Port Augusta City Council, **NWTAC** Nukunu Wapma Thura Aboriginal Corporation, **PIRSA** Department of Primary Industries and Regions, **PAQ LG** Port Augusta – Quorn Landscape Group, **FRC** The Flinders Ranges Council, **TPAG** Threatened Plant Action Group, **NPWS** National Parks and Wildlife Service South Australia (DEW).

PIRSA

DIT

Achievements

- Greater Tracks App Soft Launch 2024
- Cat management Marree May and Aug 2024
- FRRR family fun day Aroona dam Sep 2024
- Supported Kid on Country and other school events with Radio tracking science equipment for environmental career pathways etc

Prepared by the Marree-Innaminka Landscape Group on behalf of the SA Arid Lands Landscape Board 2022. Reviewed 2024

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SA Arid Lands Landscape Board