

Port Augusta - Quorn District Plan

2024 - 2026



August 2024

Introduction

The Port Augusta – Quorn (PAQ) district was an addition to the SA Arid Lands Landscape region, as of July 2020, and includes diverse landscapes and communities. The district stretches from Cultana on the Eyre Peninsula to Port Augusta, and follows the range from Mt Brown, north, through the Arden Vale ranges.

Geographically the area of 538,000 hectares is characterised by parallel ranges and gorges, a mixture of plains and tablelands at the head of the Spencer Gulf, and 122 kilometres of coastline and coastal habitat. The diverse landscape supports productive agricultural grazing and marginal cropping, rich biodiverse habitats and towns with a total population of 15,000 residents in the district.

Linked bioregions

A bioregion is an ecologically and geographically defined area with common characteristics such as geology, landform patterns, climate, ecological features and plant and animal communities. The district falls within the boundary of two bioregions:

- **Gawler** – extensive plains overlain by dunes and interrupted by granite and rocky hills and large salt lakes.
- **Flinders Lofty Block** – mountain ranges, ridges and wide, flat plains with vegetation types related to landforms. Eucalypts on hills and ranges that receive higher rainfall, mulga in drier areas and sparse low shrubs or spinifex on stony areas.

Size: 5380km² (1% of the SAAL region).

Towns (population): Port Augusta - 13,862 and Quorn - 1,230 (approx. 60% of the SAAL region).

Aboriginal Nations: Nukunu (along the eastern coast and ranges); Barngarla (along the western coast and inland).

Land use: Grazing, marginal cropping, renewable energy, tourism, horticulture, conservation (public and private lands), recreation, service centres, towns.

Ecological communities: Seagrass beds, mangrove forests and samphire shrublands in inter-tidal areas and salt lakes, supporting diverse communities of marine invertebrates, crustaceans and fish. Open plains and dunes contains arid shrublands and open woodlands. Temperate woodlands restricted to peaks and slopes of ranges with either a densely shrubby understorey or a more open grass understorey. Mallee vegetation occurs in northern areas around Quorn, while the western side of the Upper Spencer Gulf has bluebush and saltbush shrubland and some black oak near watercourses. Major ephemeral creeks support river red gum woodlands and small tributaries and creeks are lined with mallee, native pine or gum-barked coolabah.

Climate: The climate is strongly influenced by the topography of the main ranges with annual average rainfall in high altitude areas up to 600 mm while the northern plains country receives less than 200 mm. The region is prone to periods of drought which have occurred with relative regularity since records began.

Major landforms: 1) parallel ranges and valleys with steep gorges and rocky outcrops; 2) extensive Willochra Plain with the Willochra Creek flowing north and west through to Lake Torrens; 3) coastal plains of the Upper Spencer Gulf.

Soil types: Calcareous soils (32%) predominantly on the plains, are well drained, except when overlying clayey subsoils, and can be excessive in deep soils with light textured subsoils. Hard red-brown texture contrast soils over alkaline subsoils (30%) predominantly on the plains and low hills. These soils are firm to hard loamy sands to clay loam surface soils over red or brown sandy clay loam to clay subsoils. Shallow soil on rock (24%) on and near the ranges, and generally unsuitable for cropping.

History of issues: The distribution and quality of native vegetation has been greatly impacted by cultivation and grazing, resulting in its replacement by annual and short-lived species leading to increased vulnerability to erosion. Introduced carnivores, including foxes and cats, have led to local animal extinctions including Western Quolls and Brush-tailed Bettongs, and resulted in a number of endangered species including Brushtail Possum, Yellow-footed Rock-wallaby, Carpet Python, Lace Monitor and Short-tailed Grasswren. Scalding or bare-ground is a land management issue for some areas of the district. The establishment of farm dams during the last century has also contributed to altered water flows.

Catchment and key waterways: Saltia Creek and catchment, Willochra Creek and catchment, salt lakes around Port Augusta including Bird Lake. Minor drainage into the Upper Spencer Gulf. Murray River water is the main water supply for Port Augusta, Quorn township utilises a reservoir, while some rural properties utilise groundwater from bores.

National Parks and Reserves: Upper Spencer Gulf Marine Park, Winninowie Conservation Park, Mt Brown Conservation Park, Dutchman's Stern Conservation Park, Buckaringa (Australian Wildlife Conservancy).

Key stakeholders:

- First Nations organisations, including Nukunu Wapma Thura Aboriginal Corporation, and Barnjarla Determination Aboriginal Corporation
- Port Augusta City Council and The Flinders Ranges Council
- National Parks and Wildlife Services (NPWS)
- Australian Arid Lands Botanic Garden
- Australian Defence Force at Cultana Training Area
- Town dwellers of Port Augusta and Quorn
- Seven early learning centres, six primary schools, five R-12/secondary schools
- Industry and businesses
- Conservation organisations
- Landholders including the agricultural community
- Community and volunteer groups

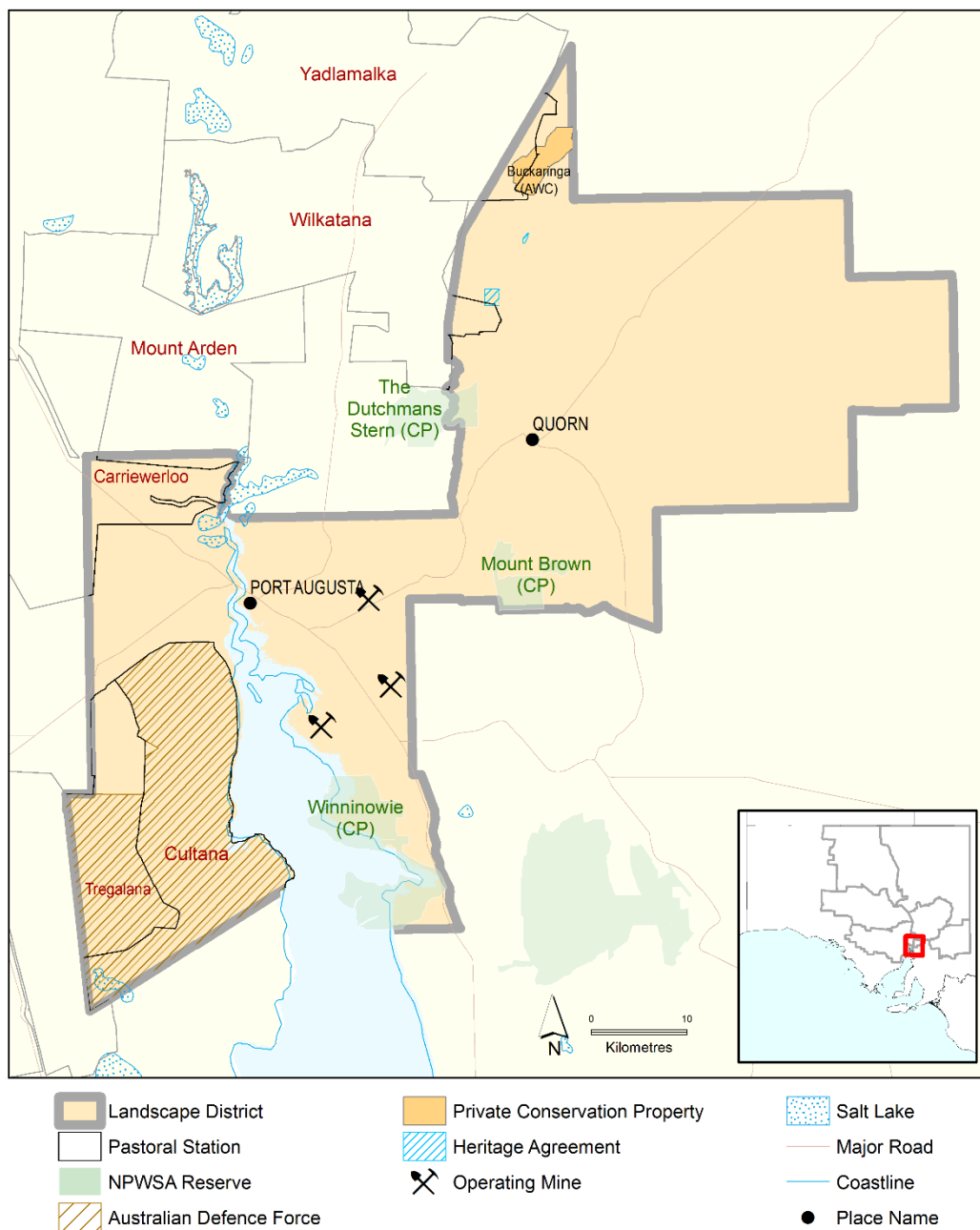


Figure 1: Map of the Port Augusta – Quorn district.

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 Port Augusta - Quorn 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 Port Augusta – Quorn 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 Port Augusta - Quorn 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



PAQ District priorities for landscape management

Priorities*	Landscape impacts	District Ranking ^	Alignment to Regional Priorities**
Total Grazing Pressure, Erosion and Landscape Rehydration	Grazing pressure from overabundant native herbivores and livestock leads to loss of biodiversity, ground cover and increased erosion. Landscape rehydration improves carbon stocks and soil biological activity for drought resilience, which benefits production, biodiversity and carbon sequestration.	High	
Weed Control	Weeds displace native vegetation with flow-on effects for native fauna and impact on stock management/pastoral production.	High	
Development Impacts	Vegetation clearance by industry and developments such as energy and infrastructure projects, decreased biodiversity and disrupted ecosystem processes. Revegetation can increase habitat, vegetation connectivity and restore ecosystem processes.	Med	
Mitigating and adapting to climate impacts	Climate predictions for the district are for lower rainfall, higher temperatures, and higher salinity (marine). Mitigation and adaptation options (including carbon offsets and diversification options) are a focus to reduce the impacts of climate on the community.	Med	
Feral Predator Control – Fox and Cats	Predation by foxes and cats results in loss of native fauna and also impacts livestock, particularly lamb mortality (foxes).	Med	
Nature and Cultural Knowledge and Awareness	Supporting greater knowledge and awareness in the community of the importance of nature education and local culture can create responsible practices. This can include sustainability.	Med	
Supporting Community Action	Builds community capacity and community-led action through grants and events.	Med	

^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.

PAQ District - Current programs and opportunities

District Priority	District Ranking	Current programs and opportunities	Status	Who	Regional Focus Area
 Climate Resilient Region					
Mitigating and adapting to climate impacts		Blue Carbon opportunities - Regeneration of seagrass, mangrove and saltmarsh habitat through tidal reconnection or other means, providing Blue Carbon credits of interest to industry groups as well as biodiversity benefits.	Ongoing	DEW, SAAL LB, PACC, NWTAC	B1
		Carbon Farming workshops	Potential	SAAL LB, PIRSA	C2/C3
		Land use/Business diversification	Potential	SAAL LB	C2/C3
		Community Impact Program – Foundation of Rural Regional Renewal – Kurti Festival	Current/Ongoing	SAAL LB	C2/C3
 Sustainable Land Management					
Overgrazing, erosion and landscape rehydration		Kangaroo Management Partnership	Current/Ongoing	SAAL LB	L2
		Property Management Case Studies – revisit past restoration works and show case	Potential	SAAL LB, PAQ LG	L3
		Agricultural Research opportunities – connect with universities to develop projects	Potential	SAAL LB, PAQ LG	L2/L3
		Regenerative Agriculture workshops	Current/Ongoing	SAAL LB	L2/L3
Weed control (agricultural)	Medium	Weed control – cactus, boxthorn and other	Current/Ongoing	SAAL LB, landholders	L1
 Protecting and Enhancing Biodiversity					
Industry development and vegetation clearance	High	Significant Environmental Benefits (SEB) offsets – promote scheme to landholders	Ongoing	SAAL LB, PAQ LG	B2
		Habitat restoration – Grassroots Grants	Potential	FRC, SAAL LB, Quorn Landcare	B2
		Threatened species monitoring (flora)	Potential	SAAL LB, TPAG, Quorn Landcare, NPWS	B2
Feral animal control	Medium	Biteback wild dog and fox control program	Current/Ongoing	SAAL LB/Biteback team, NY LB, landholders	B1
Weed control (environmental)	Medium	Weed control – cactus and boxthorn	Current/Ongoing	SAAL LB	B1
 People and Partnerships					
Nature Education and Cultural knowledge and awareness	Medium	Planning for Healthy Country – Grants	Current/Ongoing	SAAL LB	P1
		School Nature and Cultural Education Program	Current/Ongoing	SAAL LB, local schools	P1, P3
Supporting community action to achieve land, water and coastal management outcomes	Medium	Landscape Group Meetings and Activities	Current/Ongoing	PAQ LG, SAAL LB	P2
		Support community group action in land and coastal management –awareness raising	Current/Ongoing	UNFS, Quorn Community Landcare and PA Coastcare	P4
		Grassroots Grants for local projects	Ongoing	SAAL LB, FRC, UNFS, PA Coastcare	P4
		Grant Support – promote grant opportunities and provide training and support	Ongoing	SAAL LB, PAQ LG	P4

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).

PAQ Landscape Group Actions for 2024

District Priority	Opportunity	Actions	When	Collaborate	Status
Climate Resilient Region					
Mitigating and adapting to climate impacts	Carbon Opportunities	1. Continued presence at cross-agency Blue Carbon Coordination Group state meetings held by DEW, feeding back to Landscape Group on any advancements.	Quarterly meetings	1. Dept Env Water (DEW) state team	
	Quandong Festival	2. Future Quandong Festival funding opportunities and support.	Ongoing	2. Quorn Quandong Association and Quorn Community Landcare	
Sustainable Land Management					
Total grazing pressure, erosion and landscape rehydration	Property Management Case Studies	3. Hold a sticky beak day on a local Building Pastoral Sustainability (BPS) grant property, in partnership with the Regional Agricultural Landscape Facilitator and Upper North Farming Systems.	September 2024	3. CLO, Upper North Farming Systems, and BPS Landholder	
	Farming project grants	4. Promote grants and opportunities with local landholders through local networks.	Ongoing	4. RALF, CLO, Upper North Farming Systems UNFS	
	Regenerative Agricultural Workshops	5. Support regenerative agriculture (revegetation) and soils workshop in district with input from local councils. This can include sessions at the Quorn Kurti Festival.	October 2024	5. CLO, RALF, Revegetation Consultants, Kurti Festival	
Weed control (agricultural)	Weed Control – cactus, boxthorn and other	6. Promote cochineal nursery and peppertree injector to landholders through Quorn Mercury, SAAL Facebook page, cochineal education event, local markets and Quorn Show. Support landholders to control weeds.	Ongoing	6. CLO and Biosecurity Team (SAAL)	
Protecting and Enhancing Biodiversity					
Feral carnivore control	Fox control program	7. Promote fox and rabbit control initiatives in the district through advertising in the Quorn Mercury. Support local injection service.	Ongoing	7. Biteback staff SAAL, PIRSA	
	Cat control	8. Explore options for cat control and promote education of cat issues.	Ongoing	8. CLO (SAAL), Local councils	
Weed control (environmental)	Weed Control – cactus, boxthorn and other	9. Continue release of cochineal on cactus on request from local landholders. 10. Support community working bees. 11. Promote district weed guide.	Ongoing Ongoing	9. CLO (SAAL) 10. Community Groups 11. Biosecurity Team (SAAL)	
Industry development and vegetation clearance	Habitat Restoration	12. Hold restoration workshop/meeting to industry, councils, and community. 13. Promote SEB and HAs to landholders (CLO). 14. Promote awareness and protection of coastal biodiversity through Port Augusta Coastcare projects.	2024 Ongoing Ongoing	12. Revegetation partners, councils, soil scientists 13. Revitalising Private Conservation 14. PACC, PA Coastcare	
People and Partnerships					
Supporting community action to achieve land, water and coastal management outcomes	Grant Application Support	15. Promote grant opportunities through newsletter and local papers. Promote Grassroots Grants.	Ongoing	15. SAAL staff	
	Nature Education and Cultural knowledge	16. Support Planning for Healthy Country. 17. Professional development opportunities for teachers. 18. Work to offer educational opportunities aligned with significant day/week events. 19. School Holiday opportunities. 20. Encourage clean up days through community groups.	2024-2026 Ongoing Ongoing Oct 2024 March 2025	16. PBC's 17. Schools 18. Schools 19. Community Groups 20. Community Groups	
Diverse community base	Effective communication in the local district	21. Maintain effective communications for PAQ district and review regularly.	2024	21. CLO	

Prepared by the Port Augusta – Quorn Landscape Group on behalf of the SA Arid Lands Landscape Board 2021. Reviewed August 2024.

For more information, contact:

T: 0409 753 495

E: brett.devitt@sa.gov.au

SA Arid Lands Landscape Board