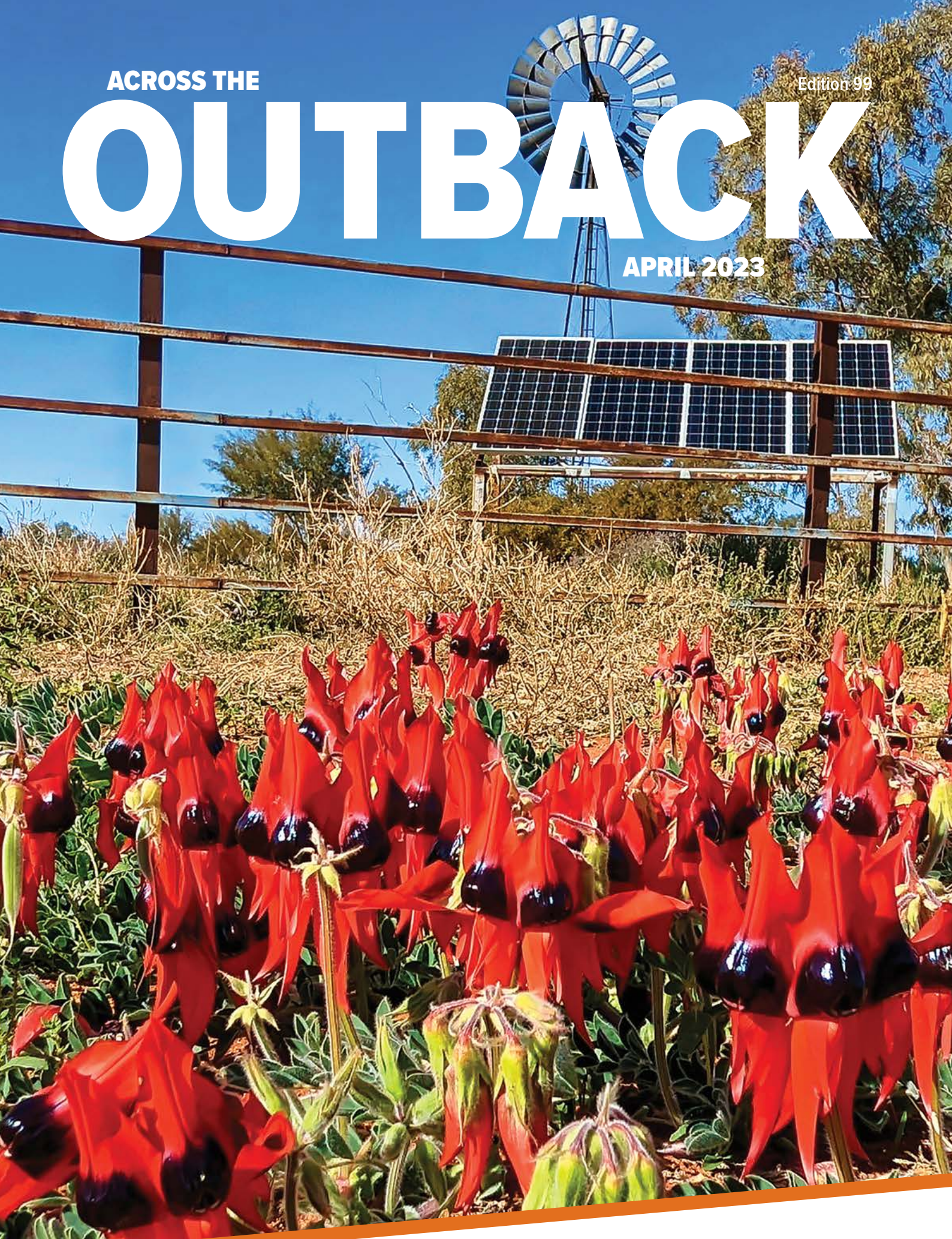


ACROSS THE

Edition 99

# OUTBACK

APRIL 2023



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COVER IMAGE: Sturt's Desert Pea (*Swainsona formosa*) thriving at Todmorden Station.  
Photo: Aaron Smith



## Presiding Member Update

Welcome to this edition of *Across the Outback*, my first as the incoming Chairperson of the SA Arid Lands Landscape Board.

As a long-term resident of the region, a pastoralist in the Marla-Oodnadatta Landscape district and a passionate advocate for the management of our unique resources in the outback, I feel very fortunate to have the opportunity to lead the board.

This edition will provide updates on many aspects of the work delivered by our board and staff across water management, sustainable agriculture, pest management, and many conservation projects.

Some of the board's decisions around the levy and project outcomes funded by our Grassroots Grants program are also great reading.

I hope you enjoy this comprehensive update and I look forward to connecting with the community throughout the year to share more about our work and speak with you about the areas we can best support you in natural resource management.

**Douglas Lillecrapp**



## General Manager Update

Greetings!

It feels like we only just published the last *Across the Outback* and here we are again with another packed edition about you, your region and how we are successfully working together in delivering our priorities that have been informed by you and our funding partners.

This edition includes some wonderful updates on projects that will soon draw to a close, and which will prepare us for a new or extended round of projects currently in design.

I am delighted to present many stories from across our business, that see our community landscape officers, biosecurity officers, ecologists, agricultural team, water management team, communications experts and business support team extra busy, year round – not to mention the many project partners and volunteers also rolling up their sleeves.

We welcome the Pastoral Board to this edition too!

Enjoy this update on how we have most recently invested your landscape and water levies across our biodiverse and productive region.

**Jodie Gregg-Smith**

*We acknowledge Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon. We pay our respects to the Elders past, present and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to country and commit to working with the First Nations People of the SA Arid Lands as we undertake our business on this shared and sacred country.*



# New funding to address biosecurity threats

**A new program that will look to manage biosecurity threats in the SA Arid Lands has received funding from the Landscape Priorities Fund.**

The project, *Resilient Rangelands – Managing biosecurity threats for climate resilient landscapes*, received \$800,000.

Climate changes and biosecurity threats, in particular feral goats, pigs and wild dogs, produce the greatest risks to resilient, healthy and productive rangeland landscapes.

SA Arid Lands (SAAL) Landscape Board General Manager Jodie Gregg-Smith said pest species directly impact biodiversity and production values, and exacerbate climate impacts by degrading land, accelerating drought conditions and inhibiting recovery.

“Urgent and direct action is required to reduce current and future environmental threats to some of the most sensitive conservation values and marginal economies in SA,” she said.

Central to the project will be a coordinated approach to education, engagement and on-ground management activities between landholders, industry and landscape boards.

The three-year project will begin in coming months.

The project brings together the Eyre Peninsula, Northern and Yorke, Murraylands and Riverland and SA Arid Lands landscape boards, peak industry bodies, environment and conservation partners, government and policy makers and land managers. Collectively they will support state-wide management of feral goats, pigs and wild dog impacts to biodiversity and production systems, including livestock and potential environmental markets and economies.

It will include coordinated feral goat and pig control and wild dog management, with aerial goat and pig surveys and control programs planned. Education and capacity building for land managers are also important to allow adoption of long term threat abatement and management strategies.

This project will deliver landscape scale outcomes with benefits to the remainder of the state by minimising feral goat, pig and wild dog incursions. Existing landholder groups will be supported to coordinate activities on feral goats, pigs and wild dogs (inside the Dog Fence), with neighbouring boards supported to implement buffer zones and plan scaled actions.

A committee supported by the four landscape boards, Pastoral Board, Goat Industry Council and Biosecurity SA are currently undertaking a review of feral goat management in the rangelands. This includes a cost benefit analysis that contemplates industry and economic outcomes alongside environmental and biodiversity impacts. It also explores the trade-offs between retaining goats as livestock in the landscape for commercial benefit and the impacts to environment alongside other industries such as natural capital gains, ecosystem services and carbon.

Further stakeholder conversations are planned relating to goat management and there are already strategies in the development stage to manage the pig incursions into SA Arid Lands and other regions that this project will build upon. The investment will expand and extend the efforts within the Biteback Program and the collective focus on wild dog management south of the fence across all regions in SA. Compliance will be a key priority in delivering this project with a senior officer to be appointed to oversee the project.

*This project is supported by the SA Arid Lands Landscape Board, with funding from the South Australian Government’s Landscape Priorities Fund.*



# Landscape Levy equalisation

**The way the Landscape Levy is charged across local government areas in the SA Arid Lands is changing – but the services you receive from your Landscape Board will continue.**

The SA Arid Lands (SAAL) Landscape Board has introduced a landscape levy equalisation process to ensure there is a consistent levy basis across council areas in the region.

The equalisation process was required due to the change from the *Natural Resources Management Act 2004* to the *Landscape South Australia Act 2019*. Landscape region boundaries were realigned as part of that process and the Port Augusta City Council and The Flinders Ranges Council areas moved into the region.

Until the transition, SAAL had two local government areas within its district – Coober Pedy and Roxby Downs. Both council areas were levied on a different basis to Port Augusta and The Flinders Ranges councils.

Currently there is a fixed charge (~\$70) per rateable property in Coober Pedy and Roxby Downs council areas, a different fixed charge (~\$40) in Port Augusta and a levy determined by capital value in The Flinders Ranges council area (average ~\$30). This sees landholders in the four council areas paying different levy amounts for the same property types.

From July 2023, the regional landscape levy will be applied as a fixed charge that depends on the land use. Land uses are primary production, commercial/industrial and residential, vacant or other. Primary production properties, who receive the greatest benefits from natural resources management and the board's programs, will pay more than other land use types.

It is proposed a base rate will be paid on residential land, vacant land and other, with commercial and industrial properties paying 2x the base rate and primary production paying 5x the base rate. This aligns with a beneficiary pays principle and reflects the way in which our community uses and benefits from the sustainable use of natural resources.

The change to the landscape levy will see a consistent levy basis applied to ratepayers across all council areas.

Feedback on the proposal was sought through public consultation during November 2023.

Approval of the board's prescribed landscape levy proposal is currently before the SA Parliament, with an outcome expected in May 2023.

Read more at [www.landscape.sa.gov.au/saal/about-us/landscape-and-water-levies/landscape-levy-equalisation](http://www.landscape.sa.gov.au/saal/about-us/landscape-and-water-levies/landscape-levy-equalisation)



## Grazing course designed for the arid lands

**A Southern Rangelands Grazing Land Management Course, tailor-made for the SA Arid Lands region, will be offered at 11 different locations across the SA Arid Lands later this year.**

Having identified a need for a regionally-delivered training program for property managers and workers, the EDGE course is being developed with Meat and Livestock Australia (MLA). It will be offered across the SA Arid Lands (SAAL) region as part of the board's *From the Ground Up* project.

The one-day EDGE course will be open to all SA Arid Lands residents with an interest in grazing land management relevant to the rangelands. It will cover grazing land ecosystems topics including:

- soils;
- land and vegetation types, climate and rangelands ecology and processes;
- livestock production with a focus on the dietary requirements of livestock relevant to the environment; and
- grazing management with a focus on land condition assessment, forage budgeting, grazing systems and total grazing pressure.

Suited to a range of literacy and numeracy skills, the course has been designed for station hands, property managers, Aboriginal Rangers, advisors, and students with a mix of classroom and practical activities.

Sessions will be offered in or on properties near Hawker, Oodnadatta, Coober Pedy, Kingoonya, Nonning, Woomera, Marree, Innaminka, Blinman, Olary and Lilydale. It is anticipated that a range of staff from pastoral properties across the region will complete the course.

Dates and locations will be advertised across the region from May, with early registrations encouraged.

The *From the Ground Up* project focuses on healthy soils and rest-based grazing systems and supports leaders in the grazing community to discuss and trial new innovative ideas and methods relating to grazing management in the pastoral country.

The project includes the establishment of demonstration trial sites that explore the use of new technologies to manage and understand livestock behaviour like geo-locator tags and forage budgeting from space, field days, a Southern Rangelands Regenerative Grazing Group and an interstate bus tour.

*From the Ground Up is a program that is part of the Building Pastoral Sustainability project. This project is supported by the SA Arid Lands Landscape Board, through funding from the Australian Government's Future Drought Fund.*

# Work underway for Springs protection

**Work is underway in a new project designed to protect the springs and riparian vegetation of the Lake Eyre Basin.**

An aerial control program undertaken in the State's far north in November 2022 removed more than 500 feral animals from five properties in the Channel Country. The control program focussed on pigs, camels, horses and donkeys and was supported by marksmen from the Department for Environment and Water.

A range of on-ground activities to reduce the impacts of pest plants and feral animals will have the added benefit of maintaining riparian habitats and also controlling erosion within selected sites.

Working alongside community, land managers, Friends of Mound Springs and Arabana and Dieri traditional owner groups, particular focus will be given to springs dependent on water from the Great Artesian Basin and protecting critical waterhole riparian areas in the Neales Catchment (Marla-Oodnadatta region).

Field trips to spring sites in the Marree Innamincka district in February 2023 helped guide plans for exclusion fencing. Landholders met with SA Arid Lands staff and Friends of Mound Springs to discuss options for different sites to ensure the best outcome for spring protection.

In March 2023, an initial site assessment was completed by Landscape Ecologist Richard Marver in the Neales Catchment, in conjunction with land managers from Williams Cattle Company, Arabana Rangers and board staff.

Drawing on information and experience from those involved in previous work in the Neales and applying some new techniques, remediation work will soon begin on gully heads and broader landscape management to slow and spread water in this area.

Richard Marver said the remediation work would involve re-contouring and reinstating stable water flow in the catchment.

Although previous works had provided some respite from the erosive forces, rain events in the past two years have undone some of that work and a different tack is needed to ensure the long term stability of the area.

*The SA Lake Eyre Basin Priority Riparian Vegetation and Great Artesian Basin Springs Project is an initiative of the Lake Eyre Basin program, funded by the Australian, South Australian, Queensland and the Northern Territory governments.*



*Daniel Hanisch, Sam Stuart and Richard Marver discuss the proposed plan for site works at the Neales catchment*



*Above left: Mopsy Daniels, Deb Scammel and Paul Reynolds test soil colour at Baldoura Gate*

*Above: Soils extension officer Geoff Kew checks soil colour at Baldoura Gate with Upalinna owners Matt and Mija Reynolds.*

*Below: Deb Scammell, left, John Pengilly, Glenys Aird and Mopsy Daniels watch Geoff Kew test soil texture*



# Scratching the Surface of soil impacts

**Soil health and increasing landholder knowledge of soils was the focus of an event in the North Flinders in March.**

*Scratching the Surface* came about in response to the North Flinders Landscape Group's District Action Plan, in which identification of soils was marked as a high priority. The plan cited a lack of knowledge and understanding of soils and its impact on land management as an issue and in response, the group was able to host the event at Upalinna Station, thanks to Matt and Mija Reynolds.

The day's program included visits to five different sites on Upalinna which offered different soil types and management issues. Soils Extension Officer Geoff Kew taught attendees how to identify and describe soil profiles and gained practical experience from trialling different soil testing methods.

The results of pasture samples collected prior to the event allowed Deb Scammel from Talking Livestock to talk about the influence soil type has on the nutrition of livestock, and how management decisions can impact soils. The impact that erosion and maintaining pasture diversity have on soil and livestock health was also discussed.

The opportunity to get their hands dirty in soil pits gave attendees the skills to identify soil types and describe a soil profile. Data from soils and pasture samples taken prior to the event demonstrated the different mineral contents of the same pasture species in different paddocks.

The key message from this was that maintaining pasture diversity was one of the keys to production.

*Scratching the Surface* was offered as part of the *From the Ground Up* project, which is supported by the SA Arid Lands Landscape Board, through funding from the Australian Government's Future Drought Fund.

## APPLY NOW TO JOIN YOUR LOCAL LANDSCAPE GROUP

Landscape Group members are people with an interest in the management of the natural resources in their district.

Their interest may stem from a First Nations, mining, pastoral, business, tourism, pest plant and animal control, conservation or community perspective.

They are the area representatives that are your link to the SA Arid Lands Landscape Board, while also being the voice of the community in developing a plan to manage the district's natural resources issues.

There are a small number of vacancies that exist in the Gawler Ranges, Marla-Oodnadatta, North East Pastoral, North Flinders and Port Augusta-Quorn groups and nominations are now open for people interested in joining these groups.

Across the region, the SA Arid Lands Landscape Board has seven groups. The remaining groups are Marree-Innamincka and Kingoonya.

The call for new members opened on 27 March 2023 and nominations will be accepted until 4pm on 2 May 2023.

To find out more about the work of the groups and what becoming a member involves, take a look at the fact sheet or speak to your district's Community Landscape Officer.

Find more information and nominate at [www.landscape.sa.gov.au/saal/about-us/our-board/Landscape-Groups](http://www.landscape.sa.gov.au/saal/about-us/our-board/Landscape-Groups)

*The former presiding member of the SA Arid Lands Landscape Board Ross Sawers was farewelled by board members earlier this year. From left, Ellen Litchfield, Sancia Treloar, current presiding member Douglas Lillecrapp, Ross Sawers, SAAL general manager Jodie Gregg-Smith, Scott Michael and Kurt Tschirner. Absent are Tim Flowers and Eric Brown*

# New presiding member for SAAL board

**There is a new face on the SA Arid Lands (SAAL) Landscape Board and a new presiding member following appointments made by Minister for Environment and Water Susan Close.**

Douglas Lillecrapp, a pastoralist from Todmorden Station in the State's Far North, was appointed as presiding member following the resignation of Ross Sawers, who was the board's inaugural presiding member.

A highly credentialed land manager with a focus on sustainable rangeland management, Mr Lillecrapp has a strong understanding of the complex and unique land systems that make up the northern part of the SAAL region.

He joined the SAAL Landscape Board at its inception, and has served on the SA Farmers Federation, was the inaugural chair of the Soil Conservation Board and is also a former chair of the Marla Oodnadatta Natural Resource Management Group.

A member on the initial steering group for the 2009 Far North Prescribed Wells Area Water Allocation Plan, Mr Lillecrapp brings invaluable knowledge of the wells area along with an historical understanding.

The board also welcomes Eric Brown who has commenced his first term. Mr Brown is the Chief Executive Officer of the Flinders Ranges Council and has a strong commitment to local communities. His work has seen the renewal of the Quorn and Hawker streetscapes and obtaining funding to improve the profile and facilities of the council area.

He brings an understanding of local government policy, experience in financial accounting, corporate governance and risk management.

The pair are joined on the board by deputy presiding member Ellen Litchfield and members Tim Flowers, Kurt Tschirner, Sanchia Treloar and Scott Michael returning as board members.

You can read more about the SAAL Board on our website at [www.landscape.sa.gov.au/saal/about-us/our-board/meet-our-members](http://www.landscape.sa.gov.au/saal/about-us/our-board/meet-our-members)



# GRASSROOTS GRANTS

## Grants to fund grassroots projects

### The fourth round of the annual statewide Grassroots Grants program is now open.

A funding pool of \$100,000 will be offered in the SA Arid Lands (SAAL) region for 2023/24.

Individual grant applications of up to \$10,000 are invited from groups and individuals from the region for projects that address at least one of the five SAAL Landscape Board priorities of climate resilience, water management, sustainable land management, protecting and enhancing biodiversity and people and partnerships.

Round four of Grassroots Grants opened on 6 March and will close on 8 May. Frequently Asked Questions (FAQ) and Grant Guidelines are available on our website and both documents are recommended reading before beginning your grant application. You will find them at [www.landscape.sa.gov.au/saal](http://www.landscape.sa.gov.au/saal). Applications are to be submitted online.

It is recommended that you contact your Community Landscape Officer on 8429 9666 to discuss your grant ideas and if you have any questions or concerns about the application process.

Work on successful grants will begin from 1 July and must be completed by 30 June 2024.

In 2022/23, an additional \$100,000 was offered in the region to address issues resulting from widespread heavy rains, including an increase in weeds, feral animals and soil erosion. Among them was a collective application from landholders in the North East Pastoral who received funding for a district wide approach to Noogoora burr control.



## Soil conservation the focus for Arid Recovery

### Training staff and neighbours in the use of earthmoving equipment became a priority for Arid Recovery in response to damage caused to the landscape by big rains in 2022.

The impact of the rain damaged the organisation's feral-proof fence, which needed to be fixed quickly to ensure it continued to protect threatened species from feral predators, and minimise the impact to its conservation programs.

Through the board's 2022/23 Grassroots Grants program, Arid Recovery's project *Soil Conservation Capacity Building for Drought Resilience and Feral-Proof Fence Protection* received \$10,000 to support training and repairs.

In collaboration with the Arabana Cultural Rangers and staff at Kokatha Pastoral, the project aims to improve soil conservation in and around the reserve to direct water flow to maximise infiltration, minimise loss and erosion and improve the drought resilience of the landscape in the long term.

It has been done through training in the use of skidsteers for land management staff, expert advice and training provided by veteran soil conservationist Col Stanton, on-ground practice and implementation, and sharing learnings through visits with land managers in the region, a workshop with the Kingoonya Landscape Group, and through communications on social channels.

Surveys following the 2022 rains identified which existing earthworks functioned well and where improvements needed to be made to protect the fence from washouts that could result in devastating feral animal incursions.

The organisation is now eagerly awaiting a good rainfall event to allow some post-rain monitoring to measure the performance of the work.

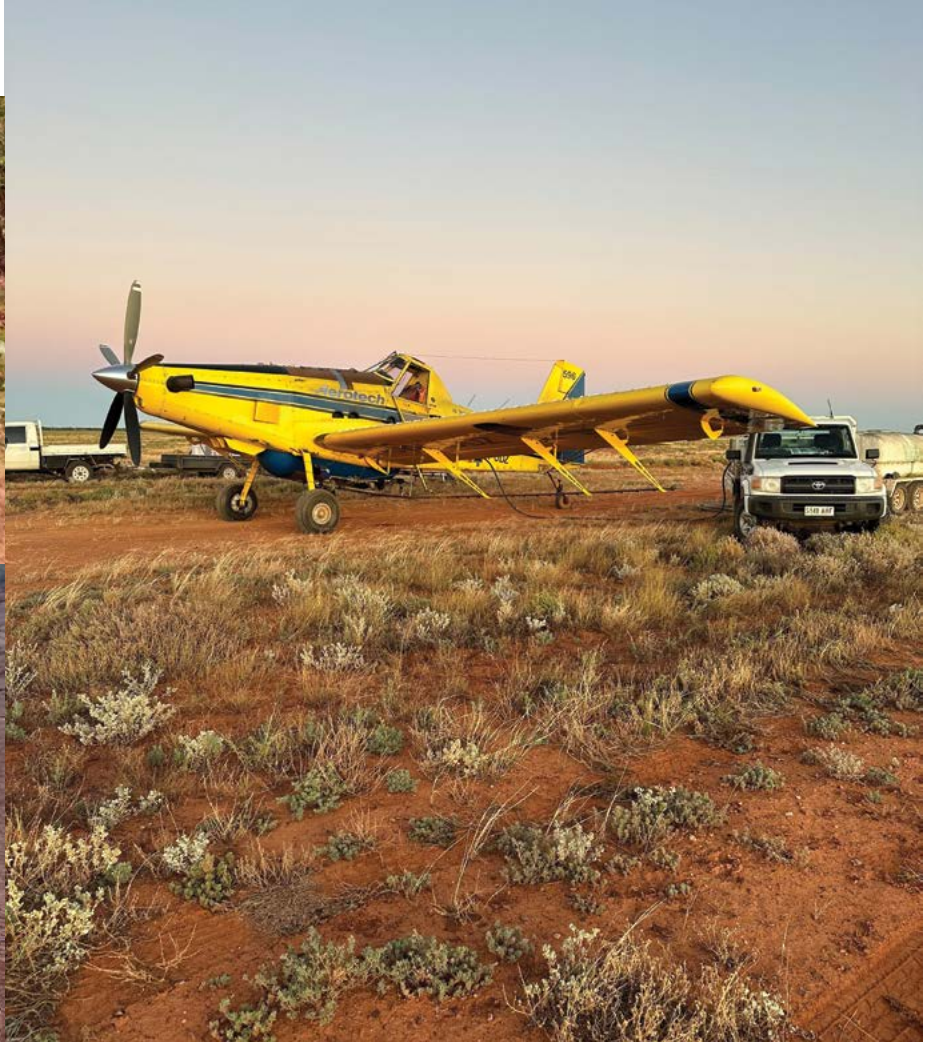
Arid Recovery is a 12,300-hectare predator-proof fenced reserve north of Roxby Downs that excludes feral cats, rabbits and foxes, and protects seven threatened species. The organisation has been running arid zone research programs for 25 years and has pioneered ecological restoration and conservation management techniques that are now used Australia-wide.



Noogoora burr before spraying



Noogoora burr after spraying



# District-scale weed control

**A collective of properties in the North East Pastoral district used Grassroots Grants funding for large scale aerial Noogoora burr control project in the 2022/23 funding round.**

The project, *Biodiversity and Weed Control Program for the North East Pastoral* collective of properties received \$37,688 which contributed towards Noogoora burr control across Weekeroo, Mooleulooloo, Yarramba, Kalkaroo, Bindarra, Pine Creek, Mutooroo, Devenborough Downs, Wadnaminga, Oulinna, Florina and Wiawera.

The group is committed to controlling the spread of the weed along creek lines and it applied for support funding following heavy rains that fell across the area in early 2022. Local land managers are concerned with the risk to local biodiversity and production if the weed is not controlled.

Project spokesperson Sarah Parker said dispersal of the weed down creek lines would likely have affected properties downstream through the district and would have a major effect on animal health and the wool prices able to be achieved for many years to come.

The aerial spraying took place over four days in early February and covered a total of 3560 hectares.

*“All of the participants were extremely happy with the results. Only minimal spot spraying was needed after the aerial application,” Sarah said.*

Emily Treloar of Strathearn Station said the project was not about an individual effort.

“It is part of a united effort by local landholders and custodians that plans a combined approach in the management of the weed and benefits an entire community to achieve land management outcomes,” she said.

The herbicide application was undertaken at a rate that kills large broad-leaf weeds but avoids any impact to native grasses. This means Bathurst burr, Thornapple, Horehound, Mexican poppy and Artichoke thistle can be controlled from the same application.

First discovered under the Wawirra Bridge about 20 years ago, Noogoora burr was believed to have been introduced to the area by graders or travelling campers. Its control has been an ongoing project in the district for many years. Work first began with the support of the Olary Weed group, which aimed to control the weed with hopes that it would lead to eradication from the district in years to come.

Individual properties have also undertaken their own control works, using both ground-based spraying by staff and contractors, and aerial spraying with additional spot spraying of missed areas.

A declared weed under the *Landscape South Australia Act 2019*, Noogoora burr (*Xanthium strumarium*) is a priority weed for the SA Arid Lands Landscape Board and is acknowledged as an issue by the local North East Pastoral Landscape Group.

*Arckaringa Daisy (Olearia arckaringensis)*



# Buffel controlled near rare daisy

**Buffel grass within the vicinity of populations of the endangered Arckaringa Daisy (*Olearia arckaringensis*) has been controlled as part of a project designed to protect the plant.**

Through the project *Implementing Short and Long-term Safeguards for Arckaringa Daisy*, buffel grass (*Cenchrus ciliaris*) was manually removed. Any remaining soil and roots were sprayed with pine oil to prevent possible future growth of the invasive weed on organic properties.

This component of the Arckaringa Daisy project has followed the placement of exclusion cages to guard known populations from livestock, large feral herbivores and an emerging threat from rabbits. Monitoring cameras have also been placed to enable further assessment of risks to the daisy and this data is expected to be known by early April.

The targeted threat mitigation and management was undertaken over an area of 50 square metres on Evelyn Downs and Arckaringa stations, in the vicinity of known populations of the daisy.

Buffel grass invades and outcompetes

native grasses and other critical natural habitats. It increases fire risk and in a pastoral setting is less nutritious and productive than native pasture species.

Found in the vicinity of known Arckaringa Daisy populations, the decision was made to remove the weed before it had the potential to spread along tracks towards the main populations.

Further follow up is planned for spring to continue to ensure the buffel grass has been controlled.

*Implementing Short and Long-term Safeguards for Arckaringa Daisy* received grant funding from the Australian Government's Environment Restoration Fund.

**Work on Buffel grass control was undertaken on Antakarintja Matu-Yankunyjatjara land.**



*Buffel grass infestation prior to treatment*



*Buffel grass was hand pulled at the site*



*The site following treatment*



Rangers from the Nantawarrina Indigenous Protected Area (IPA) Erica Wilson, Lyeishah Coulthard and Julette Johnson assisted with the trapping and monitoring program



# Trapping captures locally born idnya

**Idnya (Western quoll) numbers are increasing at the newly released sites in the Vulkathunha-Gammon Ranges National Park, in what are promising signs for the new population.**

Seven locally born idnya were among 24 recorded during December trapping programs to monitor the survival and growth of the recently established western quoll population in the park.

In the first of what will become an annual survey, the 24 recorded idnya also included six from a population translocated from the Ikara-Flinders Ranges National Park in April 2022 and a further 11 from populations sourced from West Australia and a Taronga Zoo breeding program in November 2022. One unexpected brushtail possum was also caught, with possums not recorded in the area in recent times.

Three rangers from the Nantawarrina Indigenous Protected Area (IPA), Erica Wilson, Lyeishah Coulthard and Julette Johnson, supported the reintroduction team along with staff from the SAAL Landscape Board and National Parks and Wildlife Service SA.

SAAL Senior Conservation Ecologist Rob Brandle said the numbers were great for a first trapping event and the program recorded a good dispersal across the release areas and beyond.

During 2022, 50 idnya were translocated to the area. They included 25 from the existing population in the Ikara-Flinders Ranges National Park as the only individuals released before the breeding season.

“We know that about 10 collared animals that weren’t caught during trapping are still alive, bringing the total known to be alive in the area trapped to 34,” Mr Brandle said. “It’s a good sign that indicates animals are still out there but not going into traps, probably because food remains plentiful in response to the good conditions in the area.”

IPA Rangers assisted reintroduction ecologist Tali Moyle in determining new individuals by scanning for microchips, and searching for collared individuals from either WA or Taronga. They determined sex, taking scientific measurements, scat samples and genetic samples and re-released the captured idnya.

Julette had the good fortune of naming the first new individual male Timon – with a Disney theme selected for new idnya found in 2022.

*“These early results indicate the population is going well. Radio-tracking and target trapping the November-released idnya will continue to monitor their condition, survival and hopefully catch a larger sample of the population,” Mr Brandle said.*

Once home to the idnya, the species hadn’t been seen in the northern Flinders Ranges for more than a century. Now listed as endangered and conservation dependent, the translocated idnya are thriving in their new environment on the lands of the Adnyamathanha people.

*The Bounceback and Beyond project is delivered by the SA Arid Lands Landscape Board through funding from the Australian Government’s National Landcare Program, as a key partner, along with the Foundation for Australia’s Most Endangered Species Inc (FAME), enabling National Parks and Wildlife Service SA to return quolls to the wild into areas managed for introduced pests under the Bounceback Program.*



# Hugely successful Wattleseed forum

**Wattleseed harvesting, saltbush opportunities, soil testing results, planting tech and a bush food tasting were all elements of a hugely successful Wattleseed Forum held at Cradock in February.**

Guest speakers Neville Bonney, Angus Jones, Trevor Gum, Neil Sleep, Mick Durant and Andrew Woodroffe kept the audience interested for an educational day.

More than 70 people attended the event, having travelled from Hawker, Quorn, Mid North, Eyre Peninsula, Barossa Valley, Adelaide and even New South Wales to learn more about wattleseed.

Plant enthusiast and author Neville Bonney spoke about the use of Acacia species to improve soil health and reduce erosion.

“Acacias are legumes which help add nitrogen to the soil. Really, they are a free fertiliser,” he said.

Neville highlighted the importance of planting mixed varieties to avoid a monoculture environment, saying the use of grasses and indigenous plants will offset pests.

Angus Jones from *Wattle We Eat* shared his knowledge about growing wattleseeds and its uses, and then served attendees a wattleseed frappe for tasting.



*Steve and Ellie Sanders were tasked with retrieving buried undies as part of a discussion on soil health*

Upper North farmers Trevor Gum and Neil Sleep provided an insight to saltbush production and Greening Australia’s Mick Durant and Andrew Woodroffe brought along their ‘Franken-pitter’, a device being developed for seeding to improve drought resilience in the Flinders Ranges and Mid North regions.

A visit to a nearby property allowed a practical exercise in soil health. Cotton undies that were previously buried showed that more biological activity existed under the Acacia than under Ward’s weed and open ground.

Soil temperature tests also demonstrated the benefit of groundcover, with higher temperatures recorded outside the Acacia tree than under it.

The results of soil testing at the same location showed an almost doubling of soil organic carbon around the base of Acacias.

If you want to know more about wattleseed and the future of the wild food industry in semi-arid areas, keep the dates free for the next instalment at Quorn on 21 and 22 of October 2023.

*The Wattleseed forum was held on Nukunu Country as part of the Building Pastoral Sustainability project, which is supported by the SA Arid Lands Landscape Board, through funding from the Australian Government’s National Landcare Program.*



*Above: Andrea Tschirner, Mick Durant and Angus Jones*

*Below: Speaker sessions at Cradock Hotel were well attended*

*Rhys and Amy Morgan with Kat Bevan Darren Solly, Greg Cramond and Sophia Wilton*

*Angus Jones explained the process for cleaning bulk wattleseed*



## Saltbush grazing

Trevor Gum and Neil Sleep have planted out 850,000 saltbush across their properties that are used for high protein grazing.

“Preparation is very important in this process, but there’s not much to do after sowing,” Trevor said.

When establishing the crop, Trevor planted his saltbush about 20m apart to allow him to get his machinery between the plants. Neil received advice to trial a circular planting to stop wind tunnels, but harvesting proved more difficult. Both agreed that planting with the prevailing wind across the rows was better.

The saltbush plantings took 10 months to establish. While the plants were closely watched for a couple of years, they have been left alone since that time.

## Wattleseed production

Angus Jones established his company *Wattle We Eat* in 2018 and shared historical uses, the financial benefits and nutritional value of wattleseed.

The use of Acacias dates back about 50,000 years and were traditionally used for tools/spear making, narcotics, medicines, music, adhesives and firewood. Today it is also used in baking, beverages, liqueurs, coffee, gin and pasta.

Ten species of the seed have recently passed food safety standards in Australia and New Zealand, following a push from an AgriFutures accelerated wattleseed industry project.

*Acacia victoriae*, also known as the Elegant wattle, provides the highest volume of wild harvest, with seed collection estimated to be about three tonnes annually. By comparison, the Mulga wattle (*Acacia aneura*) records more than 100kg annually, while Manna wattle (*Acacia microbotyra*) records an annual harvest of 10-100kg.

Angus planted an orchard at his property in the mid-Murray in 2019 and plants were hand watered until they were established, with the area receiving a similar rainfall to Cradock.

He said there had been a big increase in cultivated Acacias in recent times. Tubestock sells between \$1.50 and \$5 and trees from \$10-\$28, which equates to an establishment cost of between \$5,000 and \$18,000 per hectare.



*Kat Pobke and Neil Sleep*

“Once established, the harder the plants are grazed, the better they recover,” Neil said.

An added benefit had been an unexpected improvement in the claypan groundcover.

“The crops are trapping seeds and native grasses are now establishing around the bushes,” Neil said.

Currently, establishment of a saltbush crop will cost about \$1 per bush, however, once established, recruitment will follow from the deep root systems.



*Angus Jones and Lyndon Dempsey*

“It’s a much lower cost than you would have establishing a fruit orchard,” he said.

As a plant that is drought tolerant and easy to maintain, it provides the added benefits of shade and shelter, and windbreaks. Soil temperature tests recorded at midday recently were 72.8°C on open ground and 30°C under the Acacia.

The Acacia also provides good bee food and its bright yellow flowers attract birds, however the seed pods are sometimes protected by spikes and not attractive to birds for that reason.

Angus said a 10 tonne harvest equates to about 3.6 tonnes of seed, which sells at a wholesale level for about \$40/kg and retails for up to \$400/kg. Up to five kilograms of clean seed can be harvested from one *Acacia victoriae* tree.

“The process is really harvest, clean and roast. A 30 per cent clean seed return from harvest is a good result.”

## FRANKEN-PITTER

Greening Australia’s Mick Durant and Andrew Woodroffe brought along the ‘Franken-pitter’, a device being developed for seeding to improve drought resilience in the Flinders Ranges and Mid North regions.

An old Camel Pitter used for desert or dry-land revegetation, it was found at Oraparinna and brought back to life with some additional body parts and a fresh new look.

Funded through the Australian Government’s Natural Resource Management Drought Resilience Program, the project is a partnership with Nukunu Wapma Thura Aboriginal Corporation and supported by Northern and Yorke Landscape Board. Its focus is on re-establishing native perennial grasses and shrubs to create more resilient livestock pastures and restoration of native animal habitats.

Mick explained the benefit of planting perennial native pastures as the development of strong root systems, so plants can survive through droughts and grow quickly when rain comes.

“This is really useful for livestock grazing enterprises. The added benefit is that there are many local native wildlife species that will use perennial native cover and vegetation for habitat too.”

Still a work in progress, the next adjustment to the Franken-pitter will be the addition of a part to cover seed once it is dropped.



*Andrew Soodruffe and Mick Durant*

# LANDSCAPE GROUP NEWS

## KINGOONYA

The Kingoonya Landscape Group will support a number of events in the district in the coming months.

A Soils and Carbon workshop proposed for Bon Bon Station in June is aimed at people interested in knowing more about carbon farming, working towards carbon neutral status or just how to maintain or improve their soils and soil carbon.

Another supported event on the Kingoonya calendar is the DunnART Productions Roadshow which will visit Roxby Downs to present a unique and exciting show about Australian wildlife to local school children on Friday 12 May.

Following this, School of the Air students will venture to the Arid Recovery Reserve just north of Roxby Downs to discover more about some of Australia's most

endangered wildlife and efforts by Arid Recovery staff and partners to ensure their survival. There will be a scavenger hunt, animal track identification, spotlight survey and a spotlighting session to see some of these amazing nocturnal critters out and about. If the sky is clear we also hope to do some star gazing so there is going to be a bit of something for everyone.

Other priorities the group is focussing on this year are feral cats, cactus and rabbits with a community workshop planned for later in the year. Also on the agenda is an education campaign about wildlife rescue for people living in or travelling through the outback.

**Hamish Longbottom**  
**0408 807 498**

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## GAWLER RANGES

The Gawler Ranges Landscape Group is keen to provide educational opportunities for bush children and DunnART Productions has been engaged to run a community-focused theatrical roadshow in early May. A Stickybeak Day will be held at Buckleboo on 18 May and a carbon workshop will be held in June.

A successful Stickybeak Day at Secret Rocks in late 2022 was hosted by the group. Attendees visited the property's new Mallee refuge area where they learnt about native species reintroductions and its feral animal control programs. They also were able to see an active Malleefowl nest and vegetation response following a fire in 2021.

With the theme of gardening in the arid lands, the group hosted

a Garden Design in an Arid Landscape workshop with John Zwar at Iron Knob in March and a Wicking Bed workshop with David de Vries in Iron Knob. Both were well attended.

Group members worked on an action list when they met in December 2022, shaping activities for the first half of 2023. Among these were a shared group meeting with the Port Augusta-Quorn Landscape Group, which was held in February. Members discussed opportunities to work together and the future directions for both groups.

**Chris Fulton 0477 307 038**  
[Christopher.fulton@sa.gov.au](mailto:Christopher.fulton@sa.gov.au)

## PORT AUGUSTA/QUORN

Members of the Port Augusta-Quorn Landscape Group joined with members of the Gawler Ranges Landscape Group for their February meeting, which was held in Quorn.

Joining to discuss common issues and group projects, members of both groups were fortunate to be able to tour the Pithi Kawi Quorn Bush Tucker Trail, which was supported in part by an SA Arid Lands Landscape Board Grassroots Grant.

The group supported a visit by the Marine Discovery Centre to Port Augusta, which visited schools for student sessions and provided professional development training for the region's teachers. You can read more about these sessions elsewhere in this edition. Members also supported the Port Augusta Coastcare's Secrets of Port Augusta's Gulf, held in the city on Saturday 18 March.

The group is currently offering support for schools and community groups to plant out native gardens. Applications are open until the end of May.

The next meeting of the Port Augusta-Quorn Landscape Group will be held on 30 May in Port Augusta.

**Brett Devitt 0409 753 495**  
[Brett.Devitt@sa.gov.au](mailto:Brett.Devitt@sa.gov.au)

**PHOTO: Members of the Gawler Ranges and Port Augusta-Quorn Landscape Groups met in Quorn in February. Pictured were, from left, Melissa Clifton, Lesley Koch, Brenton French, Kate Greenfield, Renata Hackett, Kurt Tschirner, Scott Michael and Amanda Michael holding Phoebe.**

## NORTH EAST PASTORAL

Members of the North East Pastoral Landscape Group were updated on the Kangaroo Partnership Program at their February meeting. At the meeting, held in Yunta, members received an update from project coordinator Emily Gregg and discussed increasing kangaroo numbers with DEW Kangaroo Management Team member Christine Arnold, who shared data from recent quota reports and provided advice on the nature of the commercial harvest industry. Plans for coming events were also discussed, including the Koonamore Stickybeak Day and others part of the group's Action Plan.

Did you know the North East Pastoral Landscape Group has a spray unit available to the district's landholders? Located in the district, the unit is tray mountable, easy to access and can be booked for use by contacting Charlie.

Nominations for group membership are now open. If you are interested in joining the local landscape group, please contact Charlie or visit [landscape.sa.gov.au/saal](http://landscape.sa.gov.au/saal) and search landscape group membership.

**Charlie Eager 0437 795 792**  
**[Charlie.Eager@sa.gov.au](mailto:Charlie.Eager@sa.gov.au)**

**PHOTO: A tray-top spray unit is available for landholders in the North East Pastoral district.**

## NORTH FLINDERS

The North Flinders Landscape Group met in Cradock on 28 March where it discussed the recent soils day at Upalinna and the Sheep Expo in Hawker.

At its December meeting, discussions were varied and included updates on locusts from Adrian Harvey of Primary Industries and Resources SA, the Kangaroo Partnership Program from Emily Gregg, an update from the board's science team from Dr Kristian Bell and an update on the board's agriculture projects offered under the Building Pastoral Sustainability banner.

The group also hosted a 30 years of Bounceback celebration at Blinman in October last year, which includes the work of a number

of board projects, including the most recent one, *Bounceback and Beyond*.

The event, which was attended by 15 local landholders and National Parks and Wildlife Service staff, shared the history of Bounceback, recent activities and the reintroduction program of idnya (quolls) and virldu (possums).

**Matt Westover 0438 816 210**  
**[Matthew.westover@sa.gov.au](mailto:Matthew.westover@sa.gov.au)**

**PHOTO: North Flinders Community Landscape Officer Matt Westover gave a presentation at the 30 years of Bounceback celebration at Blinman.**



## MARREE-INNAMINCKA

Members of the Marree-Innamincka Landscape Group are working on developing a tourism App to help provide a safe and educational experience for visitors to the district.

In addition to providing a local insight, the App will support visitors to adopt a 'leave no trace' travelling principle while they move through the sensitive outback environment.

At the group's most recent meeting, members finalised plans for the Marree STEMM day, which engaged local school students in projects the board has been undertaking in the district.

The group agreed to provide free pet collars for the Marree community to identify pets from strays and feral cats to help the Outback Communities Authority with understanding feral cat numbers around the township. Community Landscape Officer

Charlie Eager is back on board after his 'rapid' trip paddling down the Murray River and available to anyone wanting to discuss their ideas for an application for Grassroots Grants.

**Charlie Eager 0437 795 792**  
**[Charlie.eager@sa.gov.au](mailto:Charlie.eager@sa.gov.au)**

**PHOTO: At the February meeting of the Marree Innamincka Landscape Group were, from left, Joshua Haynes, Lisa Edwards, Frank Warren, Charlie Eager and Lyn Litchfield.**

## MARLA OODNADATTA

The third *Cricket and Conversations* event was hosted by the Marla-Oodnadatta Landscape Group in Coober Pedy on Friday 31 March.

The event brought together a range of presenters and information relevant to people running a pastoral business in the South Australian outback. At this year's event, guest speakers presented on topics such as kangaroo management, future climate preparedness and resilience, livestock diseases and some health and community wellbeing topics. The sessions were followed by a cricket match between the town and stations teams.

A full update of the event, including the results of the cricket match, will be on the board's Facebook page and in the next edition of *Across the Outback*.

The group's priorities for the coming year focus on the impacts of tourism, advocating for landscape-scale control of large feral herbivores, promotion of FeralScan and supporting the rollout of the Grazing Land Management EDGE Course.

If you would like to join the landscape group, why not consider nominating? Find out more at [landscape.sa.gov.au/saal/about-us/our-board/landscape-groups](http://landscape.sa.gov.au/saal/about-us/our-board/landscape-groups)

**Hamish Longbottom**  
**0408 807 498**  
**[Hamish.longbottom@sa.gov.au](mailto:Hamish.longbottom@sa.gov.au)**

**PHOTO: Members of the Marla Oodnadatta Landscape Group at their February meeting were, from left, Christine Lennon, Frankie Fennel with Loretta and Jackie Williams.**



Lesley Koch of Iron Knob and Beth Stevens of Whyalla take a look at the native plants at the Garden design in an arid landscape workshop in Iron Knob

## Getting the best results in an arid garden

Keen gardeners from the Gawler Ranges gathered in Iron Knob to learn more about garden design by arid zone plant specialist John Zwar.

The *Garden design in an arid landscape* workshop provided the more than 20 attendees with an insight into arid gardens, focussing on water, the importance of mulch and planning for planting.

In an arid climate, major consideration needs to be given to water supply, its availability and its cost, Mr Zwar said.

“Water retention can be improved by adding organic matter using locally sourced mulches. These might include lawn clippings, leaf matter, gravel or even rocks,” he said.

“The advantage of rocks or gravel is that water runs through it to penetrate the soil.”

Mr Zwar said that mulches should be at least five inches thick – this will cut evaporation loss of water on exposed bare soil by as much as 70 per cent.

“It will keep the soil cool in summer, discourage weed growth, prevent erosion and encourage healthy plant development.”

He explained the importance of improving soil for healthy plants and to minimise water usage.

“Many Australian soils lack sufficient organic matter to hold water and nutrients for plants. Adding organic matter, such as compost, will bring benefits,” he said.

Mr Zwar explained how people could make their own compost for use in their gardens, using household green waste, animal manure and lawn cuttings.

Lawns should be located where they will get the most use and other plantings can be considered for surrounding areas.

“Planning before you plant is important. Look at what other people are growing in your town or area, because that will let you know what should do well in your garden,” he said.

A popular native plant that thrives in the arid regions is the eremophila (emu bush) which has 260 different varieties, from ground covers to small trees with flowers.

An environmental scientist with arid zone experience, Mr Zwar was responsible for creating the Leigh Creek and Roxby Downs streetscapes, extensive tree planting in Port Augusta, and for planning for the Australian Arid Lands Botanic Garden.

As the founding member of the Port Augusta Garden Club, he encouraged Iron Knob residents to form their own club.

The workshop was supported by the Gawler Ranges Landscape Group.



Jill Michael and John Zwar



Marree Aboriginal School students trial the virtual reality headsets as part of a STEMM day in the district

## Farming in a virtual world

Marree Aboriginal School students were treated to an afternoon of virtual reality, SAAL projects and soil health at a STEMM (Science, Technology, Engineering, Maths and Medicine) in the Rangelands day in March.

Students were taken on a virtual reality journey using special headsets, exploring a ‘Day in the life of a farm or agricultural production system’. The experience helps students to explore the process that gets food from paddock to their plates and the amount of effort and career paths that exist in multiple areas of food production.

SAAL Landscape Board field officer Alice Smith provided an insight into some of the board’s projects, showing students the fauna that has been discovered and monitored in the district by the board’s ecology team. Alice also shared the story of how she came to be in her role.

Regional Agriculture Landcare Facilitator Andrea Tschirner led a hands-on activity exploring the school’s garden beds to highlight the importance of soil to healthy, happy and productive environments.

Community Landscape Officer Charlie Eager and Andrea also visited nearby stations in the week following the event, where School of the Air children and other community members were also able to take advantage of the virtual reality experience.

The event was organised by the Marree-Innaminka Landscape Group, which received funding from Inspiring South Australia, through the South Australian Museum, SA Department of Premier and Cabinet.



*Left: Tili Krebs, Melissa Clifton and Shirley Mundy donned bags and gloves for the Camp Point clean up in Port Augusta*  
*Below: Port Augusta students were given a new insight into the marine life at the top of the gulf during school visits by the Marine Discovery Centre in March*



## Cleaning Up the coast line

Members of the Port Augusta-Quorn Landscape Group joined Port Augusta Coastcare for Clean Up Australia Day in March.

Seven volunteers cleaned the coastal area around Camp Point near Port Augusta's redbanks, picking up shoes, drink bottles, food wrappers and coffee cups in the area.

It was one of 12 registered events that happened in the SA Arid Lands region. Eight different clean up events were held in Port Augusta, two in Coober Pedy and one each in Marree and Roxby Downs.

Across the country, 3781 groups took part in Clean Up Australia Day.

Port Augusta-Quorn Community Landscape Officer Brett Devitt said the day was a reminder of why it is important to correctly dispose of rubbish.

## Marine discovery on show in Port Augusta

More than 170 students from local schools took an interactive look at the coastal environment during a visit to Port Augusta by the Marine Discovery Centre in March.

Sessions were offered at Willsden Primary School, Port Augusta Secondary School and School of the Air and were supported by the Port Augusta-Quorn Landscape Group.

The sessions encouraged positive actions for the local marine environment and promoted ecological sustainability.

The Marine Discovery Centre is based at Henley Beach in Adelaide and is the only coastal and marine educational facility in the state.

A professional development session was also held for local teachers, where they were able to see how the centre engages students in sustainability.

The sessions were well received by local teachers who provided some great feedback after the event.

"I enjoyed the information around bioregions and I will be including this in my lesson plans," one teacher said.

Another said: "I heard new information about the ocean, especially about where we live at the top of the gulf."

"I felt more connected to marine life and its importance."



*Right: Marine Discovery Centre's staff provided school incursions and personal development sessions for teachers in Port Augusta in March*

# Greening Community Gardens

A new initiative is helping to establish native gardens in the Port Augusta, Quorn and North Flinders areas to encourage butterflies and provide wildlife habitat.

Supported by the Port Augusta-Quorn and North Flinders landscape groups, funding of up to \$300 is available for small, short-term projects by local community groups, schools and kindergartens. The funds allow for the purchase of native plants.

The scheme came about at the request of group members to encourage gardening with the use of native plants in community settings.

Group members encouraged applications from their local communities. Applications closed in late March for those in the North Flinders district, and will remain open until the end of May for those in the Port Augusta-Quorn district. Planting has been suggested for April and May. This will allow for planting in warm soil and gives the plants a full winter to establish before the summer months. Advice on your project is available from your Community Landscape Officer.

More information is available at [www.landscape.sa.gov.au/saal/get-involved/grants-and-funding](http://www.landscape.sa.gov.au/saal/get-involved/grants-and-funding)



## CALENDAR OF EVENTS

### 4 APRIL

Port Augusta-Quorn Landscape Group meeting

### 12-13 APRIL

SAAL Landscape Board meeting 18

### 17-20 APRIL

Bait injection services North East Pastoral

### 19 APRIL

Port Augusta Garden Club workshop with John Zwar

### 4 MAY

North East Pastoral Landscape Group meeting

### 5 MAY

Gawler Ranges Landscape Group meeting

### 5 MAY (TBC)

Marla Oodnadatta Landscape Group meeting

### 6-13 MAY

DunnART Productions Roadshow (Quorn, Port Augusta, Leigh Creek, Oodnadatta, Roxby Downs)

### 17 MAY

Port Augusta Garden Club workshop with John Zwar

### 18 MAY

Stickybeak Day, Buckleboo Station

### 30 MAY

Port Augusta-Quorn Landscape Group meeting

### 31 MAY

Stickybeak Day, Holowilliena Station

### JUNE (DATE TBC)

Soils and Carbon workshop, Bon Bon Reserve and Nonning Station

### JUNE

Friends of Mound Springs/Arabana springs survey/maintenance trip

### 21 JUNE

Port Augusta Garden Club workshop with John Zwar

### LAST WEEK JUNE

Port Augusta Secondary School – Science excursion day with SAAL

### 28-29 JUNE

SAAL Landscape Board meeting 19

### JULY

Native plant ID workshop North East Pastoral

### 23-24 AUGUST

SAAL Landscape Board meeting 20

### AUGUST AND OCTOBER

Grazing Land Management EDGE Course, regionwide

### SEPTEMBER

Aboriginal Ranger camp at Witchelina Nature Reserve

### 25-28 SEPTEMBER

Bait injection services North Flinders

### 4-5 OCTOBER

Bait injection services Gawler Ranges (Groups 19-21)

### 9-12 OCTOBER

Bait injection services Kingoonya/Gawler Ranges (Groups 17-18)

### 16-19 OCTOBER

Bait injection services North East Pastoral

# Plant growth improved when pests controlled

**Controlled animal browse has provided evidence of improved plant recruitment through a four-year study.**

The data was collected and analysed in the Flinders Ranges footprint of the board's *Bounceback and Beyond* project.

Based on observations and data collected during browse assessment surveys, in areas where muster-only management of goats occurs there is noticeably less seedling recruitment and survivorship of highly palatable plants compared to areas in where both mustering and culls occur.

SAAL Board Community Ecologist Ben McCallum said seedling survivorship of threatened flora species such as the Slender Bellfruit (*Codonocarpus pyramidalis*) and the *Xerothamnella* inside exclosures had been very good. In comparison, the survival of these plants outside of exclosures had been extremely poor, with little or no seedlings reaching juvenile height range of greater than 50cm. A high number of goat scats were also observed where seedlings once occurred.

Mr McCallum said favourable weather conditions had resulted in a good number of new records of the threatened Slender Bellfruit at all previously known locations of the species following a review early in 2023. At other known sites within the Ikara-Flinders Ranges National Park, good recruitment was noted to have minimal browse impacts evident.

"Important cultural plants such as Iga (Native Orange) and Plumbush have also been heavily targeted in areas where heavier goat traffic was recorded," he said.

"Browse by goats is a greater risk for slower growing species such as Mulga, where plants that germinated during the La Nina years of 2010-12 are now having growth suppressed, putting them at risk of not reaching reproductive age."

Surveys also provided evidence that goats had switched their diet to target Poverty Bush, a type of emubush with very poor palatability. Another interesting observation was ring barking of Plumbush

and mintbush, caused by Yellow-footed Rock-wallabies desperate for moisture during the drought, has now ceased following the return of their fodder plants.

"A real positive at sites where culls and mustering of goats have occurred is that Narrow Leaf Emubush and Striated Mintbush, which had previously been recorded as overbrowsed, are now rating as modified to intact, which will hopefully equate to some seedling recruitment in those areas," he said.

"In management zones where both culls and mustering have occurred, there appears to have been an overall improvement with an increase in vegetation cover of perennial species and a reduction in dung counts recorded. If control continues, this will have a positive flow-on effect of reduced erosion risks."

As part of the *Bounceback and Beyond* Project, herbivore vegetation assessments have been undertaken in all focus areas over the past five years. Baseline surveys were established during the first two years with a view to revisiting in 2022 and 2023, with the latter currently being surveyed. Final analysis of all data will help to support ground observations recorded. The aim is to better understand how over abundant species, both native and introduced, can impact threatened species and ecological function and provide an understanding of where to focus management.

*Bounceback and Beyond* is delivered by the SA Arid Lands Landscape Board, through funding from the Australian Government's National Landcare Program.

***The survey work has occurred on the traditional lands of the Adnyamathanha people of the Flinders Ranges.***





## Native water rat recorded at Coongie

Two rakali, also known as native water rats, have been observed in the Malkumba-Coongie Lakes Ramsar area.

Common on the country's east coast, there are very few official records from the region. It was an observation that thrilled SA Arid Lands (SAAL) scientists on a monitoring trip to the area in February this year.

With its attractive golden belly, the rakali (*Hydromys chrysogaster*) is the largest of Australia's native rodents, weighing up to 1.3kg – as big as a medium-sized platypus.

Pig control programs in the channel country undertaken as part of the *Coongie Wetland Wonders* project also appear to have been making an impact, with few signs of pigs recorded during the visit.

About 30 pig transects and vegetation condition assessments were conducted throughout the Malkumba-Coongie Lakes and wider Ramsar area. Signs of pig activity were rare throughout most of the area. The transects are part of ongoing assessments, and these latest surveys will be compared against baseline studies to provide an indication of trends in pig populations across the monitored sites.

SAAL Senior Community Ecologist Kristian Bell said vegetation in the area was flourishing following rainfall events both in the area, and further upstream in Queensland, with water levels still on the rise at the time of the trip.

Monitoring cameras placed in the area to record signs of threatened species, as well as feral herbivores and predators, were also collected, along with song meters used to record potential Night Parrot vocalisations.

The cameras did record the presence of pigs, feral cats and wild dogs as well as pink-eared ducks and other common duck species, two rakali and two *Notomys* species of hopping mice.

"Song meters record audio each night for about three months to detect particular bird vocalisations in the area during that time," Mr Bell said.

Analysis of the song meters will occur during mid 2023 with results expected later in the year.

*The Coongie Wetland Wonders project is delivered by the SA Arid Lands Landscape Board, through funding from the Australian Government's National Landcare Program.*

**The board acknowledges the connection that Yandruwandha Yawarrawarrka people and other Aboriginal groups have to the Malkumba-Coongie Lakes.**



Displays at the event included some of the more unusual occupants of the Spencer Gulf



**Right: Members of Port Augusta Coastcare at the Secrets of Port Augusta's Gulf event were, from left, back, Melissa Clifton, Michelle Banks, John Banks, Yolande Morris, Kylie Ritter, front, Tili Krebs, Jodie Harris, Maggie McLean, Jeff Bowey, Anne Murrie, Shirley Mundy and Brett Devitt**



# Marine life the focus of Coastcare event

**The mystery of marine life in the Spencer Gulf is no longer a secret, following a popular community event run by the newly formed Port Augusta Coastcare group in March.**

Not only did *Secrets of Port Augusta's Gulf* reveal some of the unique aspects of the Upper Spencer Gulf and its versatile ecosystem, attendees were also shown the abundance of marine life that lives in its depths.

Guest speakers on the day included Matt Nelson from the Environmental Protection Agency (EPA) talking about water quality, Stefan Andrews from Great Southern Reef talking about the Spencer Gulf, Janine Baker talking about the ecology of mangroves of the Upper Spencer Gulf, Neve Pratt discussing the work of AusMAP monitoring microplastics in waters, and Jeff Bowey and his amazing local underwater photo and video collection.

Information and education stalls were provided by the Marine Discovery Centre,

Friends of the Australian Arid Lands Botanic Gardens, and the Department for Environment and Water.

Entertainment was provided on the day by Dusty Feet Mob and Desert Voices Choir. Caritas Cubs provided children's activities and Rotary, Lions, and Spear Creek Coffee were on hand to provide food and coffee.

Port Augusta Coastcare was a successful applicant in the third round of Grassroots Grants in 2022-23, and was sponsored by the Rotary Club of Port Augusta in applying for the grant. The group aimed to host a community education event to raise the profile of the Upper Spencer Gulf, so residents were aware of the gulf's marine life and how any future developments or changes to the gulf could impact it.



**Above: The Marine Biology Centre stall allowed children the opportunity to experience marine life through virtual reality headsets**

**Below: The Friends of the Australian Arid Lands Botanic Garden had native plants for sale at the event**



**Above: Members of the Dusty Feet mob invited children from the crowd to join them on stage**

**Left: The Secrets of Port Augusta's Gulf drew good crowds**

Third round participants in the Property Mapping Program (PMP) were, from left, Joe Vercoe, Mary-Lou Bishop, Nick Pritchard, Colin Zanker, Ben Carn, Stefanie Roske, David Best, Connie Carn, Paula Duncan-Tiver, Mark Duncan-Tiver, Jacob Mills, Kristina Crawford, Byron Crawford and Jeannette Long



# Popular pastoral program gets fourth round

The popular Property Management Planning (PMP) program will be funded for a fourth round, with applications due to open on 1 May 2023.

The SA Arid Lands Landscape Board continues its commitment to the successful program which has seen 18 properties across the region take part over the past three years. Many of those properties have used the PMP program as the basis for making changes to financial and management structures, grazing management and have implemented measures to improve ground cover.

The four-stage program includes:

- establishing personal business drivers;
- property mapping;
- financial analysis; and
- developing an action plan

Feedback from participants has included:

*“The way they designed the whole program was clever. It was about the long term and not a lot of projects look at it that way. We looked at financial sustainability, how to make sure we are there in 5, 10, 15 years and what things to do now that will have long term benefits both individually and as a business. We looked at where we want to be in the future.”*

*“It was useful for succession planning. We all got stuff out of it in our own personal way.”*

*“One of the best things we took away from the course was talking to other people. Talking about the business side gave us a bit of a platform to develop our business. On the accounting side it gave us another perspective and allowed us to compare our business to others and see how we are travelling. That was beneficial. We are trying to keep better lines of communications with financial advisors and accountants. It showed us the things we could improve on.”*

Details about applying will be on the Board’s website and Facebook page and PMP co-ordinator Matt Westover can be contacted on 0438 816 210 for further information.

## ABORIGINAL RANGER GATHERING

With a number of Aboriginal Ranger programs across the SA Arid Lands region working on landscape issues, the board is working with its Aboriginal Engagement Network to organise a Ranger Camp in September.

To be held at Witchelina Nature Reserve, the camp will be a chance for all of the rangers, and other Aboriginal people working on country, to get together and share ideas and learn about what is happening across the region.

The idea for the Ranger Camp came from the Aboriginal Engagement Network and it will be organised by board staff with advice and ideas from the ranger groups as to what they would like to see at the event.

The event will be supported by the Indigenous Desert Alliance (IDA), National Indigenous Australians Agency (NIAA), and Nature Foundation.

## Is dog control a priority?

**With reported wild dog activity at its lowest for several years, it is easy to prioritise other things when land managers are not seeing any impacts to their stock.**

This appears to be happening in the Biteback program at the moment, with only 40 per cent of properties ground baiting in the second half of 2022, despite the mandatory requirement to bait at one bait per kilometre of track across the property in spring, and again in autumn.

*Complacency is not just limited to parts of South Australia – it is happening everywhere.*

In an interview with Simon and Sonya Lawlor, land managers from Omeo in Victoria, about their experiences with coordinated wild dog control, they said while everyone in the area was focussed on coordinated wild dog control, things were going well. However, once wild dog numbers and stock impacts decreased, everyone forgot about wild dog control. Now they are back to square one with as many impacts from wild dogs as they had before they started controlling them.

In another example, ACT Government employee Warren Schofield spoke about a similar situation he experienced, which resulted in him having the same conversations with land managers as his father did 30 years prior, about the importance of maintaining wild dog control when impacts and wild dog numbers reduce.

“It doesn’t take long for wild dogs to breed up, especially after a few good seasons,” Warren said.

The mandatory baiting levels required by land managers living inside the dog fence in the SA Arid Lands region are a precautionary control measure. It means that baiting is mandatory, even if there are no signs of wild dog activity on the property. This is to ensure there are baits in place on the ground at key times of the year when wild dogs are more likely to be moving through the landscape.

There are also many added benefits to maintaining a consistent baiting regime on properties. For instance, many properties that have been baiting for wild dogs, no longer have issues with foxes.

One land manager from the North East Pastoral district said he used to regularly hunt foxes on his property.

“I remember my son and his school mate went shooting one night and got more than 50 foxes. Since we’ve been baiting for wild dogs, we just don’t see them anymore,” he said.

Another North Flinders manager said he hadn’t seen any foxes on his property for about 25 years and even had reports of feral cats being caught on camera digging up and eating wild dog baits when other food was scarce.

A number of bait injections services were held across the region in March. The remaining services available are in the Gawler Ranges from 4-5 April and the North East Pastoral from 17-20 April.



# Stickybeaking at Koonamore

Pastoralists from the North East had the opportunity to tour Koonamore Station and see the results of erosion control works and other landscape management activities in March.

Participants look at the soil profile with Michael Eyres and Geoff Kew in a fertile floodout

Nick and Penny Rasheed from Koonamore hosted 25 people at their property, highlighting the initiatives and works being undertaken on the property following their involvement in the SA Arid Lands Landscape Board's Pastoral Management Planning (PMP) program.

Koonamore Station was involved in the second round of the PMP program which included a report including extensive property mapping and assessment of natural resources, assets and infrastructure and identifying links between land systems and productivity, as part of the four stage program. As a result of the mapping, they adapted what they had learnt to implement a number of improvements across the property.

The Stickybeak Day included a property tour showcasing soil type properties and management implications and attendees visited five different sites on the property. Talks at the sites focussed on soil conservation methods, discussing water movement through the landscape, improving pastoral production and understanding soils in the rangelands.

Attendees saw first-hand the results of natural germination trials to stabilise soil in areas notorious for wind erosion, using a garlic mounding machine modified by Nick Rasheed to suit property conditions.

Presentations on the day came from Landscape Ecologist Richard Marver and soil consultants Geoff Kew and Michael Eyres.

Participants had hands-on practice to describe soil texture and soil colour, measure pH levels and test staking abilities of soils down the profile. The group learned about the erodibility of different soil types and the impact they can have on road design and placement.

Attendees also visited TGB Osborn Vegetation Reserve, an Adelaide University-run arid zone research site located on the property. Established in 1925, the reserve is one of the oldest and longest running research sites of its kind in the world. Manager Dr Russell Sinclair and Associate Professor José Facelli discussed the results of a century of vegetation monitoring, sharing their knowledge of arid zone plant physiology and research

findings of long lived species including Bluebush and Allocasuarina.

Board Regional Agriculture Landcare Facilitator Andrea Tschirner said the day was designed to provide landholders with an opportunity to learn from the work being undertaken on Koonamore and Osborn Reserve.

"The day provided land managers in the region with a chance to see first-hand the land management changes other pastoralists are doing, and hear from the landholder and other specialists in their fields, about the positive impact this can have on production," she said.

One attendee said: "It was a day where everyone discusses big issues and then can go home knowing they can do something about it."

*The Koonamore Stickybeak Day was offered as part of the Building Pastoral Sustainability project, which is supported by the SA Arid Lands Landscape Board, through funding from the Australian Government's Future Drought Fund.*

Attendees were able to look at the extent of long-lived plant roots in a soil profile

Measuring water infiltration

# Kangaroo Partnership projects underway

Projects focusing on improving kangaroo management by raising awareness, supporting land managers, and increasing understanding of kangaroo value are now underway.

A grant program provided through the Kangaroo Partnership Project was offered in October 2022 and awarded funds to three projects.

Through its *Kangaroo Management Awareness Raising Project* the Nature Conservation Society of South Australia (NCSSA) aims to build a thorough understanding of the levels of complexity and increase community awareness to challenge perspectives on kangaroo management.

Through active engagement, the NCSSA hopes to establish an effective campaign to raise awareness around the impacts of action versus no action when it comes to over abundant kangaroo populations.

The dedicated project team is undertaking a survey that will assess public awareness and values. The results from this survey will be used to inform the campaign strategy, while interviews with experts on kangaroo management, including ecologists and land managers, will assist in the strategy design. The campaign will be widely available to partners and stakeholders to use in their social media platforms and will be generated from a conservation perspective that focuses on the animal welfare and environmental aspects driving a need for responsible management.

The *SA Rangelands Kangaroo Management Collective Pilot*, led by Kate Greenfield of South Gap Station, has engaged committed land managers to link together with the support of the Department for Environment and Water's (DEW) Kangaroo Management team, SA Arid Lands Landscape (SAAL) Board staff, the commercial industry, and local ecologists to collaboratively manage kangaroos in the region.

The group held its first workshop in February 2023, bringing together Gawler Ranges land managers. The 2022 Kangaroo Quota report and survey findings were presented by Amanda McLean from DEW's Kangaroo Management Team. Participants used

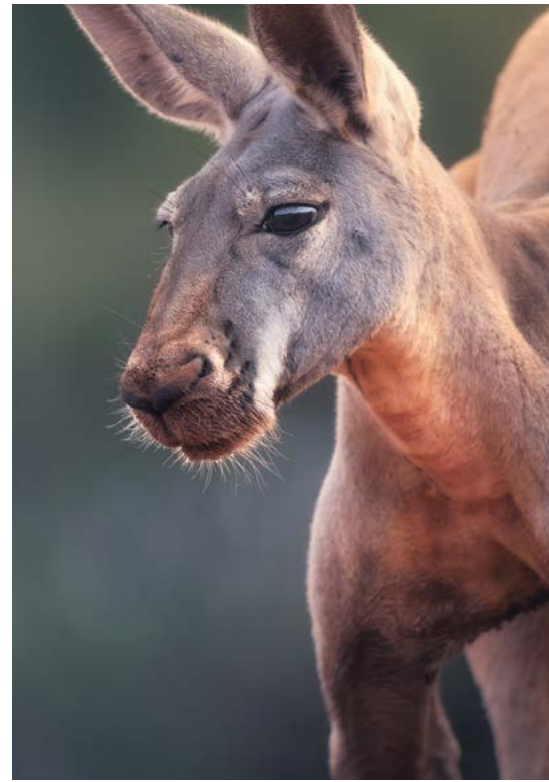
data from this report to discuss the state of play on their properties, including the total numbers and quota for each property and the annual number of kangaroos harvested from each property.

Attendees reflected on the landscape and financial challenges across the region and discussed who is harvesting kangaroos, where chillers were located and to which meat processor the kangaroos were sent. They also considered management options to support improved kangaroo management in their landscape. The project aims to address the land management needs as a driver for strategic commercial harvesting, particularly to tackle total grazing pressure and how the collaboration can generate a model of success that is aligned with property management as one of the many drivers for sustainable kangaroo management through commercial harvesting.

The Australian Wildlife Service's (AWS) project *Making greater use of overabundant kangaroos* aims to improve drought resilience through increasing kangaroo value and reducing waste. The team is currently preparing a report that identifies steps and opportunities to increase the value of kangaroos taken by commercial harvesters on pastoral properties.

AWS is also pursuing investment options to support a project to research and create stronger incentives to enable total grazing pressure goals to be met at lower cost to landholders and within agreed kangaroo quotas. If successful, AWS will be seeking engagement by kangaroo producers to emulate the innovations that have been applied to beef, lamb and goat industries.

As these projects progress project outputs will be shared and learnings with the Kangaroo Partnership Project network and broader community through on-ground stickybeak days, online webinars and newsletters.



## COMMUNITY OF PRACTICE

The Kangaroo Partnership Project has been involved in the establishment of a new national Kangaroo Management Community of Practice, in association with Natural Resource Management Regions Australia (NRMRA) and the NSW Kangaroo Management Taskforce. This community of practice is open to staff from NRM groups across Australia and aims to provide a forum to discuss kangaroo management from a land management perspective and work on a national narrative, shared learnings and a larger scale strategy across state and territory boundaries.

If you have any queries about the Kangaroo Partnership Project, please contact project coordinator Emily Gregg at [coordinator@sakangaroopartnership.com](mailto:coordinator@sakangaroopartnership.com)



**Kangaroo Partnership Project**

# PASTORAL BOARD NEWS

## First meeting of the new Pastoral Board

**The newly-appointed Pastoral Board brings a mix of experience in pastoralism, land management and conservation.**

The eight-member board met for the first time in Adelaide recently.

Presiding member Roger Wickes served on the board from 1990 until 2007 and brings a wealth of experience in agriculture, natural resources management and policy development.

He is joined by members John Read (Secret Rocks), Lisa Edwards (Muloorina Station), Andrew Smart (Wilkatana Station), Emily Jenke (democracyCo) and deputies Katherine Tuft (Arid Recovery), Ian Morris (Thurliga Station) and Fraser Vickery (Kangaroo Island Ecological Enterprises).

Collectively, the board members have a responsibility to ensure that pastoral lands are suitably managed for current and future generations and members are keen to connect with the community to prioritise actions for the years ahead.

The board will meet bi-monthly and will hold two meetings each year in pastoral areas. Among proposed meetings for 2023 are Coober Pedy in May/June and Gawler Ranges in August.

## STOCK RETURNS

Stock return forms will be posted to all lessees in early June and must be returned to the Pastoral Unit by 31 July 2023, as required by the Pastoral Act. Further details will be provided with the form.

The Pastoral Board is keen to hear from you on matters relevant to the pastoral industry and the conservation and management of pastoral lands.

You can contact the board by email at [DEW.Pastoral@sa.gov.au](mailto:DEW.Pastoral@sa.gov.au) or call (08) 8429 0333.

## Section 25 assessments and the use of new technologies

**A priority for the Pastoral Board is to undertake the third round of land condition assessments for each pastoral lease. Assessments must be completed at least once every 14 years before leases can be renewed and progress will be closely monitored. Assessments are currently underway in the Kingoonya District.**

The State Government has committed \$1 million over four years to help meet assessment timeframes. The board is exploring options to improve assessments, including the potential for lessees to voluntarily contribute more monitoring information such as photo points, and the use of remote sensing to complement on-ground assessments.

At its March meeting, the board also discussed:

- Reviewing and updating board guidelines to ensure they remain fit for purpose
- Research opportunities using the Pastoral Land Management fund
- The use of pastoral land for conservation and carbon farming
- The implications of climate change in the pastoral zone, carbon farming and the proposed Hydrogen and Renewable Energy Act
- The status of public access routes, and
- Stock maximum applications and current compliance activities.

# Cactus fight crosses board boundaries

Many landholders in the SA Arid Lands are familiar with the benefits of cochineal (*Dactylopius* spp.) to control *Opuntia* cactus species and now other areas of the State are experiencing it too.

The ability to breed the biocontrol in its Port Augusta facility means the SA Arid Lands Landscape Board is in a position to be able to support the Murraylands and Riverland and Northern and Yorke landscape boards to enjoy the same benefits.

More than 40 properties across five different districts in our region have enjoyed a great deal of success with the biocontrol, and now infestations in the Riverland and the Telowie Gorge are also under attack.

The board's Biosecurity and Compliance Officer Paul Hodges said while not a 'silver bullet', the biocontrol does have its place in many *Opuntia* control programs. He said integrating a variety of methods offers the best chance of achieving effective control.

"Most effective in a dense infestation,

Northern and Yorke Landscape Board's Wayne Gaskin places cochineal bred in the SAAL nursery on an *Opuntia* infestation in Telowie Gorge



cochineal may take a few years to reduce or eliminate cacti populations, but despite this, they can save significant time and resources. Herbicide control of outliers around dense infestations assists in preventing further spread," Mr Hodges said.

Earlier this year, infected cochineal pads were supplied to Northern and Yorke Landscape Board staff who released the biocontrol on a Wheel cactus outbreak in Telowie Gorge.

Prior to this, infected pads were sent to the Murraylands and Riverland Landscape Board to allow them to breed cochineal to fight Prickly pear (*Opuntia stricta*) in their own nursery.

The SA Arid Lands breeding nursery was established in 2021 in a partnership with the Port Augusta City Council. In it, four strains of cochineal are bred that are specific to five different cacti species found in the SA Arid Lands: Wheel cactus (*Opuntia robusta*), Engelmann's cactus (*Opuntia engelmannii*), Devil's rope cactus (*Cylindropuntia imbricata*), Coral cactus (*Cylindropuntia fulgida* var. *mamillata*) and Jumping cholla (*Cylindropuntia prolifera*). In the nursery, infected *Opuntia* pads are added to crates of fresh pads, allowing the cochineal to spread to clean material that can later be released on *Opuntia* infestations across the region.

## BRUCELLA DETECTED IN FERAL PIGS

Brucella infections have been confirmed in three of 16 feral pigs tested following an aerial control program in the Far North Channel Country in November 2022.

During the program, 493 feral pigs (*sus scrofa*) and 15 feral cats (*felis catus*) were removed from five properties in an operation lasting more than 60 hours. It was supported by skilled marksmen from the Department for Environment and Water.

The work was undertaken given feral pigs are a threat to threatened and endangered plant and animal species and pose a biosecurity risk to livestock and humans as disease carriers.

Testing of three adult male pigs confirmed positive for the bacterial disease Brucella. As both *B. abortus* and *B. melitensis* are exotic to Australia, and *B. suis* is known to be present in Australia, it is likely they were infected with *Brucella suis*.

The results confirm earlier findings from a previous cull in late 2021.

Brucellosis is a nationally notifiable disease that if spread, can impact both livestock and humans.

Please be aware of these diseases and the protective equipment needed when butchering animals.

To find out more, visit [pir.sa.gov.au/biosecurity/animal\\_health/pigs/brucella\\_suis](http://pir.sa.gov.au/biosecurity/animal_health/pigs/brucella_suis)



## ACROSS THE OUTBACK

*Across the Outback* is prepared and edited by the SA Arid Lands Landscape Board. Comments and suggestions are always welcome.

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Australian Government

National  
Landscape  
Program



Government of South Australia

South Australian Arid Lands  
Landscape Board



# GAB projects wrapping up

**Support to repair and upgrade artesian bores is in its final stages with time running out to finalise projects that received funding through the Improving Great Artesian Basin Drought Resilience (IGABDR) program.**

With the program in its final 12 months, well owners who have had projects approved are working towards completing the projects.

SA Arid Lands (SAAL) Senior Water Resource Officer Aaron Smith said more than 40 individual projects had been approved in the SA Arid Lands for 2023 and 2024, all of which will contribute to water security and drought resilience in the Great Artesian Basin.

Collectively these projects will receive more than \$5 million in co-funding and save the equivalent of five Olympic-sized swimming pools of water daily.

They include the replacement and decommissioning of ageing wells, installation of water-tight distribution systems and replacement of ageing water distribution infrastructure.

At Frome Downs Station, Willoway Farming set about on its plans for improvements and upgrades after acquiring the property lease in October 2021.

Located in the Marree-Innaminka district, on the eastern side of Lake Frome, the property carries about 7000 cattle when times are good. Improvement works included communications upgrades, the addition of new pieces of heavy machinery on the property, yard repairs and new fencing.

Water security was enhanced through the installation of poly pipes, the commissioning of new solar pumps, plus protective fencing around solar cells and pump sites. New rainwater tanks were plumbed to collect rainfall and a desalination plant installed to ensure potable water is always available.

Following discussions with the SAAL Landscape Board, Department for Environment and Water (DEW) staff inspected the station wells, evaluating the well's performance and actions required to improve them.

A number of these wells have been flowing uncontrolled for more than 100

years and Willoway was successful in being awarded funds from the IGABDR program to repair them.

Willoway Farming Project Manager Gavin Johnson said the first stage of the project was the inspection and replacement of worn out valves with new ones and the second stage will incorporate the placement of additional poly pipes and troughs to ensure closed water distribution and reduce grazing pressure around wells and ultimately improve grazing management across the property.

"We appreciate this partnership and support of the SAAL Landscape Board, DEW and the Federal Government through this program," he said.

The \$27.6 million dollar IGABDR program is a five year program that began in July 2019. It incorporates GAB projects in South Australia, New South Wales, Queensland and Northern Territory.

Projects must be finalised by the end of February 2024.

