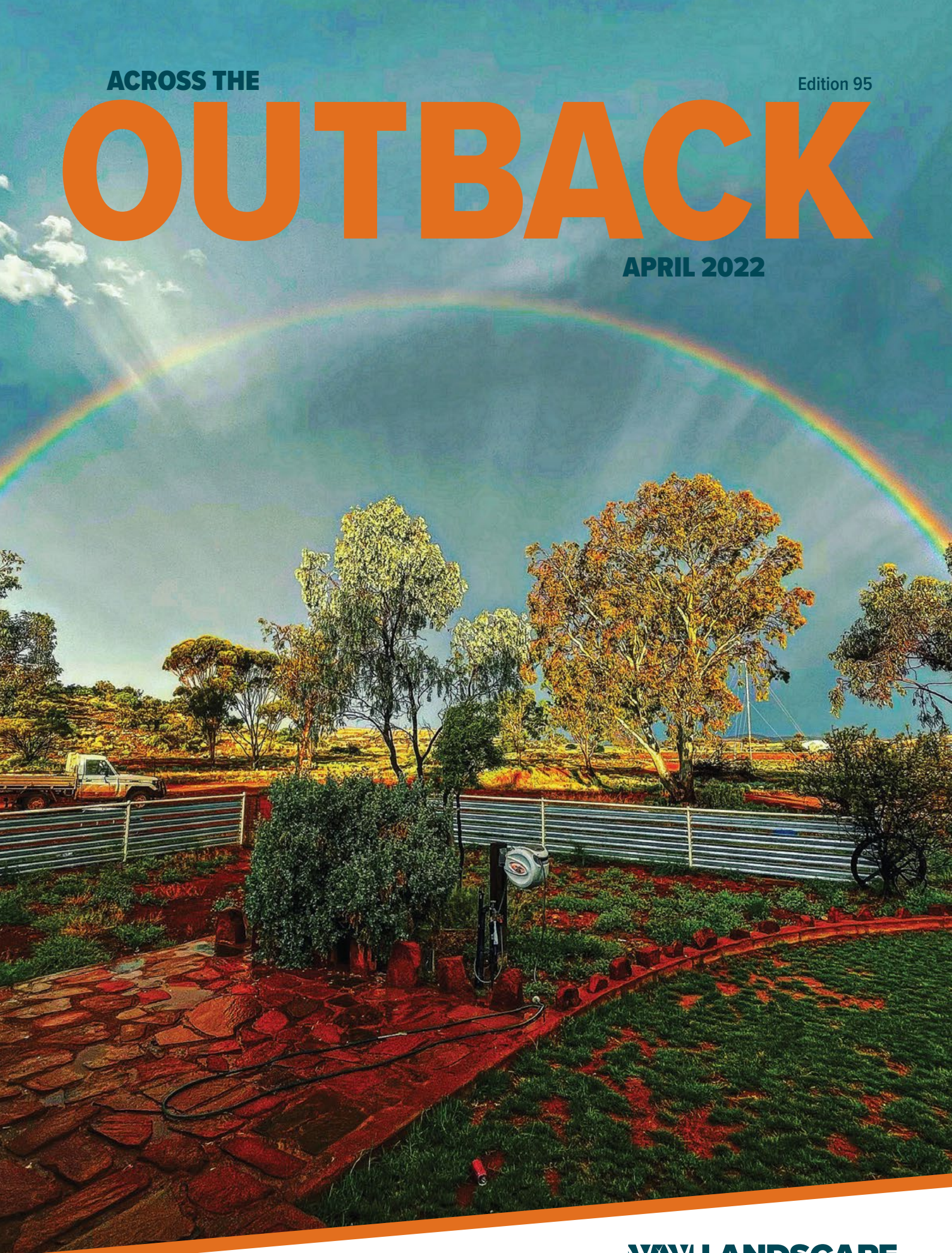


ACROSS THE

Edition 95

# OUTBACK

APRIL 2022



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.

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COVER IMAGE: After the rain – Katrina Morris captured a stunning rainbow after heavy rain fell at Thurlga in the Gawler Ranges



## Presiding Member Update

I don't remember a time when the region was so buoyed. The rain over recent weeks and months is certainly enough to wash off the dust and create a new optimism about the next few years in the SA Arid Lands. The pictures from many properties you'll see in this edition are truly remarkable.

At our February board meeting we committed to doubling our next round of Grassroots Grants to \$200,000 to be able to provide some support to those properties affected by heavy rain. This will support the anticipated pest plant and animal control issues, soil erosion and on ground activities to ensure you can get on with things sooner. This extra funding for the 2022/23 financial year will cater to the projects you might have ready to go and align with the priorities in our strategic plan or your district Landscape Action Plans. It may be a landscape scale approach across properties to deal with the abundance of pest weeds and feral animals as a result of the extra water in our systems. Read more about it in this edition.

Enjoy this edition of Across the Outback, there's plenty to appreciate about the recent work of our board.

**Ross Sawers**



## General Manager Update

This edition of *Across The Outback* is full of wonderful stories of rain across the region with some incredible images. The long term impact and benefits of this quantity of rain will certainly see the board and staff very busy for the foreseeable future with improved outcomes for our environment and the industries dependent on it, and the new management issues we need to stay ahead of in terms of pests of all types.

We have been finalising our next business plan, delivering epic field day events (in case you missed it), moving offices, and celebrating some of the wonderful stories and achievements of environmental stewards in our region with an award or two, and planning around pigs, goats and kangaroos.

It's hard to believe we have been operating in a COVID scenario when we reflect on the many board achievements captured in this edition. The board has many exciting initiatives and plans for the coming year.

The district Landscape Groups are about to launch their local action plans, each sitting neatly under the board's five-year strategic plan. Catch a bit more about that and see how you can be involved in their delivery through grants, the group membership model or attending the many events we have planned.

Enjoy the read as you gaze over a greener horizon with a good cup of something.

**Jodie Gregg-Smith**



At the official opening of the SA Arid Lands Landscape Board office were, from left, Jodie Gregg Smith, David Speirs, Lindsay Thomas, Dan van Holst Pellekaan and Ross Sawers



# Historic new home

**The new home of the SA Arid Lands Landscape Board was officially opened in February, marking a new lease of life to the once derelict 138-year old building in the heart of Port Augusta.**

It was opened by former Minister for Environment and Water David Speirs and former Deputy Premier Dan van Holst Pellekaan.

Prior to the official reopening, Nukunu elder Lindsay Thomas conducted a smoking ceremony in the building. Previously a place of bad feeling for many Aboriginal people, the ceremony cleansed the site.

The building, unused for 15 years, was ambitiously restored throughout 2021. Previously it served for more than 120 years as the Port Augusta Courthouse and modifications were made in accordance with heritage values to transform it to a modern office setting.

Significant works were required and included levelling the courtroom floor from multiple different levels to one large single-level floor space.

The dock has been retained, as have multiple fireplaces, architraves and the heritage colours. The cells have been retained and transformed into offices.

Board General Manager Jodie Gregg Smith said the building had been in a very poor state of repair; used by squatters and was home to pigeons and swallows.

“The building has been transformed into a place that can be associated with caring for Country, working with the community and supporting community pride and value in the building and the services to the region delivered from it,” she said.

“It was an amazing effort by the private owner and builders to restore this building, which now gives the board a prominent and visible profile.”

## **BUILDING'S HISTORY**

The Port Augusta Courthouse was built in 1884 of pure Saltia stone with cement dressing, at a cost of almost 5150 pounds. The architect was E. J. Woods who designed a number of significant buildings in the state including the Kent Town Methodist Church (1864), part of St Francis Xavier's Cathedral (1889) and the western portion of Parliament House (1884).

Heritage notes for the site listed the central, main courthouse room at 50 feet long, 33 feet wide, and 21 feet high and two cells for prisoners paved with Kapunda marble. The larger cell was for men and the smaller one provided for women.

It said stoves were recessed into the

walls of all rooms in the building, with the exception of the cells. These were later replaced with fireplaces. While the building's exterior has changed very little, there were a number of internal renovations including the installation of electric lights in 1925, and a significant internal upgrade in the 1960s.

The building was the town's third court house. The first was a weatherboard building at the southern end of Mildred Point that was known as Customs House. It was replaced in 1867 by a new courthouse on the corner of the present Jervis Street and Commercial Roads.

A short video showing the building's transformation is on our website at [www.landscape.sa.gov.au/saal/news-resources/podcasts-and-videos](http://www.landscape.sa.gov.au/saal/news-resources/podcasts-and-videos)

***The office for the SAAL Board is located on Barngarla country. The board also acknowledges the close connection Nukunu and other Aboriginal groups have to Port Augusta as a traditional meeting place.***

## **GRANTS FOR GRASSROOTS PROJECTS DOUBLED**

**The third round of the annual Grassroots Grants program is now open and the funding pool has doubled.**

The SA Arid Lands Landscape Board is offering \$200,000 through the program, doubling its normal annual offer of \$100,000.

This is to assist property managers across the region address issues resulting from widespread heavy rains, including an increase in weeds, feral animals and soil erosion works

Grant applications for up to \$10,000 are sought for projects addressing at least

one of the five Landscape SA priorities of Climate resilient region; Water management; Sustainable land management; Protecting and enhancing biodiversity; and People and partnerships.

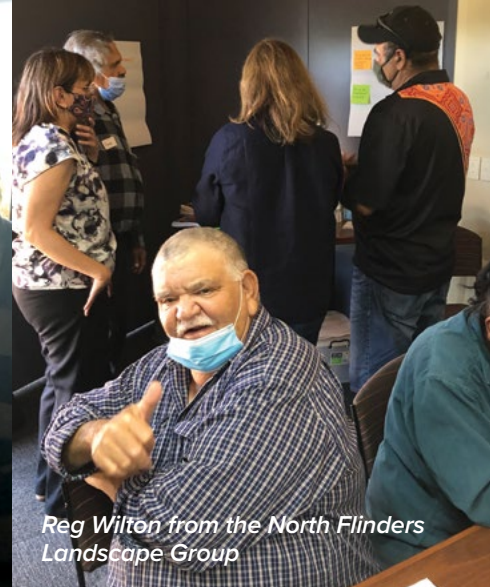
Round 3 opened on 16 March and will close on 9 May. Work on successful grants will begin from 1 July. Frequently Asked Questions (FAQ) and Grant Guidelines are available on our website and applications

are done online through SmartyGrants at [landscape.sa.gov.au/saal/get-involved/grants-and-funding](http://landscape.sa.gov.au/saal/get-involved/grants-and-funding).

Please contact your Community Landscape Officer on 86485307 to discuss your grant ideas or if you have any questions or concerns about the application process. The Grant Guidelines and FAQs are recommended reading before beginning your grant application.



Gregory Warren, Cherie Gerlach, Debbie Warren and Frank Warren



Reg Wilton from the North Flinders Landscape Group

# Aboriginal Engagement Workshop

**Across the region, SA Arid Lands Landscape Board staff work with Traditional Owners on a range of projects covering biodiversity, community capacity building, land management and pest and weed control.**

However the board recognises there is still more to be done to strengthen the way it works in partnership with Traditional Owners across the SA Arid Lands region.

To help the board shape its future direction, it held its first workshop inviting traditional owner representatives from across its seven Landscape Groups, Working on Country Rangers and team members, and National Parks and Wildlife Service cultural representatives.

An aim of the day was for the group to consider how the board can implement the 12 Principles of the Statement of Commitment adopted by all Landscape Boards across South Australia.

Among the 15 participants on the day, the clear messages were

- The next generation is the focus through Kids on Country programs, learning, accreditation pathways, and experience;
- The need to engage with the next generation on Country;
- The importance of language;
- Knowing what the SAAL Landscape Board does and doing it well; and
- Value of face-to-face conversations.

The conversations captured on the day will be reported to the board at its April meeting and will include the next steps for bringing the group back together.

*The meeting was held at the Australian Arid Lands Botanic Garden, which is located on Barngarla Country.*

*Jonas Dare from Barngarla welcomed the group to the Country.*

## DROUGHT HUB BOOSTS JOBS AND INVESTMENT IN REGIONAL SA

**The appointment of Node Coordinators and the establishment of Node offices by the South Australian Drought Resilience Adoption and Innovation Hub will bolster investment in regional South Australia. Four node coordinators have been appointed to lead SA Drought Hub efforts from offices in Port Augusta, Orroroo, Loxton and Minnipa.**

Melissa Horgan has been appointed Port Augusta node coordinator (covering the pastoral region), having worked in natural resource management for more than 20 years, particularly within the pastoral and low rainfall zones. She is based at the Node office within the Uni Hub building at Port Augusta. Melissa's role with the Drought Hub is part time, and she will continue to work with the SA Arid Lands Landscape Board two days a week as Water Project Officer.

The Orroroo node coordinator (low rainfall) is Joanne Ridsdale who was born and bred on a pastoral property in the Northern Flinders Ranges and has a background working in the arid pastoral environment. She is based in

the Node office at 5431 Collective in Orroroo.

SA Drought Hub Director Dr Stephen Lee says the appointments represent an important step forward in the Hub's development.

"The node coordinators are responsible for working closely with the Hub's partners and key stakeholders to deliver demand-driven activities that focus on innovation and adoption to build drought resilience among farmers and regional communities.

"The Drought Hub is seeking submissions for the delivery of projects and activities in 2022, and Node Coordinators will play a leading role in developing those initiatives."

Led by the University of Adelaide and in partnership with PIRSA, the SA Drought Hub is one of eight established nationally through the Australian Government's Future Drought Fund. The regional Node offices provide a 'shopfront' for farmers, pastoralists and community members to discuss ideas and to access information on enhancing drought resilience.

The Node coordinators can be contacted at: Port Augusta: Melissa Horgan melissa.horgan2@sa.gov.au 0447 046 786

Orroroo: Joanne Ridsdale joanne.ridsdale@sa.gov.au 0447 132 268

More information about the SA Drought Hub is available at [sadroughthub.com.au](http://sadroughthub.com.au)



Setting a Fyke net in a creek at Coongie Lakes

# Fish in a flap at Coongie

**Dry river and creek beds that occasionally fill with water in the far northern reaches of South Australia are teeming with life.**

There is so much life, that in a single night's trap effort, the SAAL Landscape Board Ecology team caught 699 individual fish from a creek at Coongie Lake – and this doesn't include the myriad of other animals such as turtles, yabbies and shrimp.

The most common fish species caught was the tiny Australian smelt (*Retropinna semoni*), averaging just 23mm in length. Carp gudgeon (*Hypseleotris spp.*) were also numerous, as were the invasive mosquito fish (*Gambusia holbrooki*) and the beautiful desert rainbow fish (*Melanotaenia splendida*).

In all, 12 different fish species were captured through the use of passive Fyke nets deployed for just one night.

Surveys at the Coongie Lakes RAMSAR site occur annually as part of the Coongie Wetland Wonders project – a five-year commitment to improve the health and ecological function of this wetland of international importance.

While fishing may be forbidden for humans within the RAMSAR site, birds and other animals can gorge themselves on the

freshwater banquet, with fish representing an important component of the food chain in this system.

This season's rains may provide ideal conditions for fish to breed and further enhance the reputation of this special corner of inland South Australia as an aquatic oasis – not a bad accolade for lakes that sit within what is usually among the driest parts of the country.

Threats to the ecological integrity of the system that supports the species of conservation significance include invasive species such as feral pigs, large feral herbivores, livestock and weeds. All have the capacity to alter the structure and function of wetland communities.

*The Coongie Wetland Wonders Project is supported 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 Coongie Lakes.**



Desert rainbowfish



Yabbie



Emmott's short-necked turtle



Hyrtl's Tandan



Bony herring



Carp gudgeon



*Barnjarla woman Linda Dare provided the Welcome to Country*



# Field day leads to new projects

**The very successful Pastoral Field Day held in December is now leading to new projects, events and workshops across the region.**

The event attracted 273 attendees from all districts of the SA Arid Lands across the two days to hear from 17 speakers, visit 52 stalls and catch up with friends that had been missed over two years of cancelled events.

Feedback collected from attendees was strongly positive with the event rated an 8.5 out of 10.

Event attendees identified a number of key land management priorities which included regenerative agriculture, rangeland soil health, telemetry and agtech, rotational grazing, ecological assessments and measuring your carbon footprint. Other areas of interest were feed budgeting, livestock nutrition, succession planning, managing cashflow, managing threatened species, grassland ecology, business planning and communication, and tourism.

In response to the priorities board staff have progressed with providing more

information, support and workshops. This includes working with PIRSA on a measuring carbon footprint workshop for 10 properties in March, partnering with Northern and Yorke Landscape Board to apply for and win funding for a soils extension officer, and applying for a federal government grant around grazing management techniques, agtech and education. Landscape groups are also considering the key themes so they can feature relevant presenters at upcoming workshops.

## **EVENT WRAP-UP**

A future regional field day in Port Augusta was the overwhelming message from event attendees. Most people also found the speaker sessions valuable, and said their knowledge and awareness of topic areas had increased and that they planned to apply the knowledge in decision making.

Presentations included: Holistic Management in the Rangelands, Mary O'Brien's Are you bogged mate?, the value of providing minerals in livestock water supplies, Ecological Assessment and Mapping in your pastoral business, Containment Feeding and Animal Nutrition, Succession and Transition Planning, Understanding cattle and sheep diseases and the Importance of Rangeland Soils

A presentation by a four member panel and Q&A session also drew good audiences. Panel members were Kurt Tschirner representing the SA Arid Lands Landscape Board, Mark Fennell representing the Pastoral Board; Geoff Power from the Dog Fence Board and Joe Keynes representing Livestock SA.

The panel spoke about issues relating to their area of expertise and questions from the audience were raised using the online Slido platform – an innovative way



*Kath Tuft from Arid Recovery enlightened the children*





## PIG OF A PROBLEM

**The importance of monitoring for feral pigs is more important than ever following heavy summer rains and flooding.**

Implementation of early control programs will help to prevent populations spreading in the arid lands, particularly in the North East Pastoral and North Flinders.

A record number of feral pigs were culled in the Far North Channel Country late in 2021, through an aerial operation.

The SA Arid Lands Landscape Board is working with landholders along the Diamantina and Cooper catchments in the Marree-Innamincka district and are talking with landholders in the North East Pastoral and Flinders Ranges districts about sightings and control options.

Methods of control include trapping, shooting and baiting and must comply with the *Animal Welfare Act 1985*. Trapping can be effective where many pigs are present. Baiting with 1080 baits and Hoggone (sodium nitrite) is subject to appropriate approvals and use. Ground shooting is generally effective only where there are lone pigs as mobs of pigs can disperse rapidly, however aerial shooting programs can be effective over large areas.

Under the *Landscape SA Act 2019*, feral pigs are a declared pest animal and cannot be moved, sold or released. Landholders have a legal obligation to destroy feral pigs on their property.

Feral pigs cost the agricultural industry more than \$100 million annually, primarily due to predation on lambs, competition with livestock and damage to infrastructure and crops. They are a biosecurity risk as transmitters of a range of diseases affecting livestock and humans, including leptospirosis, Q fever, brucellosis and melioidosis.

Landholder reports of feral pigs are encouraged by board staff who can provide information on control, as well as access to 1080 baits. The Feral Pig Scan app is also an effective tool for recording feral pig activity and control, and can be downloaded on the app store and google play.

The information entered will help guide control programs in the future.

to record opinions and questions from the audience in real time. They included questions about lease assessments, water levies, and updates and progress on the dog fence rebuild.

On Day 2 presentations covered: Communication and how to run a successful business, Carbon neutral industry 2030, Telemetry and Connectivity, Rangeland Revegetation, Tourism diversification and the Station Stays experience, sharing the Property Management Planning Experience; Matching Stocking rate to Carrying Capacity and Satellite Assisted Forage Budgeting.

Children were not forgotten and sessions by Arid Recovery, Julian Craig, Animals Anonymous and Bugs and Slugs were offered on day one. The Remote and Isolated Children's Exercise (RICE) ran a crèche service over the two days.

The event was organised by the SA Arid Lands Landscape Board, which conservatively contributed more than 1300 hours to plan and deliver the event.

It was supported by funding from The National Landcare Program, the National Drought and Flood Agency, Meat and Livestock Australia, PIRSA Red Meat and Wool Program and Oz Minerals.

The event was followed by the Annual School of the Air wool show, held at the Souths clubrooms. A fundraising auction raised about \$20,000 for the Royal Flying Doctor Service and School of the Air. Winning fleeces were showcased in the lobby at the field day and attendees were encouraged to vote on entries for the poetry and photography competition displayed over the two days.

*A range of programs kept the children entertained*



# GRASSROOTS GRANTS



Graeme Finlayson takes a close look at a *Maireana pyramidata* (Black bluebush)

## Tool to help with plant identification

**Bush Heritage Australia, Barrier Field Naturalists and an extensive network of volunteers are working in the North East Pastoral region to develop a new tool that will make it easier for residents to identify plants in their own back yard.**

Bush Heritage Rangelands Ecologist Graeme Finlayson said the project will collate information on 1000 different species that can be found in the Broken Hill Complex Bioregion.

It will include key features that make it easier for people to identify plant species and information on palatability and cultural significance, such as bush foods or medicinal plants.

It is hoped that this tool will increase community awareness around plant diversity and assist with various aspects of vegetation management in the region such as weed management, biodiversity protection, sharing of traditional knowledge and planning rehabilitation works on properties and mine sites.

"A lot of plants are likely to be threatened under future climatic predictions, so we're

making something that will hopefully make it easier for local people to understand what's in their paddock and protect what's out here and improve the resilience of our landscapes," Graeme said.

"Field guides can often be difficult to use without a good understanding of plant biology, so we're trying to develop something that's easier."

The first stage of this project will be completed by the end of June this year and it is hoped that this will provide the basis to continue the development of an app for species beyond the Broken Hill Complex bioregion.

Bush Heritage received a \$10,000 grant from the SA Arid Lands Landscape Board to develop this tool as part of the 2021 Grassroots Grants program.

## FRIENDS PROMOTE AWARENESS OF MOUND SPRINGS

**The Mound Springs of SA received almost \$1260 for its project Promoting Community Awareness in the 21/22 Grassroots Grant round.**

Funds were used to reproduce three mound springs brochures. As part of the project 2500 Strangways brochures, 3000 general Mound Springs brochures and 1500 brochures specific to the Peake Overland Telegraph and Freeling Springs.

All three brochures will be installed at on-site brochure dispensers at Strangways and the Peake Overland Telegraph and at other strategic locations, including the SA Arid Lands Landscape Board office in Port Augusta.

FOMS secretary Simon Lewis said the project benefit would be measured by the uptake of brochures and by the level of enquiries and other feedback received by FOMS as a result of the distribution of the brochures.



APPLY NOW

**GRASSROOTS GRANTS – closing 9 May**  
visit [landscape.sa.gov.au/saal/get-involved/grants-and-funding](https://landscape.sa.gov.au/saal/get-involved/grants-and-funding)

**ONLINE GRANTS TRAINING – 4 April**  
Register at [www.trybooking.com/BXZXL](https://www.trybooking.com/BXZXL)

APPLY NOW



# Landscape groups set district priorities

Members of the seven Landscape Groups across the SA Arid Lands region have been developing action plans for their districts over the past six months – aligning key tasks with the five priorities of the SA Arid Lands Landscape Board.

The priorities – climate resilient region; water management; sustainable land management; protecting and enhancing biodiversity; and people and partnerships – form the basis of all activities by the board for the next four years.

Former NRM Group plans and other historical documents were used as the basis for the new action plans. The groups considered previous district issues that were a priority and worked through what was still relevant and needed action. There were also a few new issues that emerged across the region.

Given groups are small with limited funds, each group worked out the issues of highest importance and what they can influence, and developed actions to work with the community to address them.

Action plans will be updated at group meetings to ensure they remain relevant to the groups and all documents will be reviewed annually, revisiting key priorities to ensure they remain relevant.

Groups will also be reviewing the district weed strategies for each region in upcoming meetings.

## SA ARID LANDS LANDSCAPE BOARD KEY PRIORITIES



**CLIMATE RESILIENT REGION**



**WATER MANAGEMENT**



**SUSTAINABLE LAND MANAGEMENT**



**PROTECTING AND ENHANCING BIODIVERSITY**



**PEOPLE AND PARTNERSHIPS**

### THE PRIORITIES FOR EACH GROUP ARE:

#### GAWLER RANGES

- Adapting to a changing climate – Diversification of income streams
- Land degradation – excessive total grazing pressure, especially from goats and new livestock breeds
- Soil health – understanding and supporting water and nutrient cycles
- Nature and cultural knowledge and awareness

#### KINGOONYA

- Adapting to a changing climate – Diversification of land use
- Overabundant kangaroos/ excessive total grazing pressure
- Feral cats

#### MARLA OODNADATTA

- Managing tourism impacts
- Restoring landscape function; reversing historical landscape degradation
- Management of large feral herbivores (e.g. camels, donkeys, horses)
- Managing water resources; reducing wastage from free flowing bores; managing extraction of groundwater

#### MARREE INNAMINCKA

- Climate Change leading to a decrease in productivity and adapting to unknown changes in pasture type and growth patterns.
- Over extraction or diversion of ground and surface water requiring management and accountability.

- Tourism impacts – rubbish, safety, landscape and cultural site damage.
- Control of feral animals eg. cats, camels, pigs, rabbits, goats, exotic fish and invertebrates, cane toads and feral cattle.
- Inappropriate road design leading to undesirable water movement in surrounding areas

#### NORTH EAST PASTORAL

- Grazing pressure from kangaroos, rabbits and goats
- Weed control
- Education
- Soil Erosion
- Supporting Community Action

#### NORTH FLINDERS

- Wild Dogs – Impacts on livestock production
- Grazing pressure – Goats, Rabbits and Kangaroos
- Tourism impacts – rubbish, safety and landscape damage
- Weeds, including cactus, existing weeds and new and emerging
- Cultural access to water – Ensuring we maintain access to water for cultural purposes
- Soils – build on ground knowledge and understanding of soils

#### PORT AUGUSTA QUORN

- Industry Development Impacts
- Total grazing pressure, erosion and landscape rehydration

## BOARD SETTING ITS BUSINESS PLAN

Preparation of the SA Arid Lands Landscape Board's Annual Business Plan for 2022/23 is currently underway.

The Business Plan sets out how the board plans to invest its funds and deliver on regional priorities identified in the SA Arid Lands Regional Landscape Plan. Landscape Groups play an important role in identifying local priorities that inform the board's investment and this has happened as part of the District Action Planning process.

Multi-year major projects and programs

are anticipated to continue in 22/23. New investment proposed in 22/23 includes rainfall recovery grants, optimising kangaroo management, goat management policy review and springs restoration.

To get involved and have a say in shaping the board's work in your district, please contact your Community Landscape Officer, or one of your local group members.

# LANDSCAPE GROUP NEWS

## KINGOONYA

Members of Kingoonya Landscape Group discussed the impact of rain across the district at its February meeting held in Woomera.

Up to 300mm fell in some parts of the district, with most areas receiving good welcome rain that is bringing new colour to the landscape.

Following the development of the District Action Plan, this year the group will support a series of workshops that will look at flora and fauna identification (May), carbon and regenerative grazing (June-July) as well as supporting a number of community events such as Arid Recovery's Open Day and the Glendambo Gymkhana.

The group is again planning a joint meeting with the Gawler Ranges Landscape Group to discuss

shared issues and collaborate on projects. It will be held at Hiltaba in the Gawler Ranges in June and members of both groups are crossing their fingers that on the third attempt it will go ahead. The first two have been cancelled due to rain. The visit to Hiltaba will include a property tour and discussion of the pastoral history and transition to a Nature Reserve. Group members will also learn about native plants and conservation efforts through management by the Nature Foundation.

**Hamish Longbottom**  
0408 807 498  
Hamish.longbottom@sa.gov.au

**PHOTO: A previous Arid Recovery open day**



## GAWLER RANGES

A lot of damage was caused from the heavy rain and flooding that occurred throughout the district in January. At the group's most recent meeting, the Department of Infrastructure and Transport discussed the status of the roads in the Gawler Ranges and how they are to be remediated. Pest plant and animal control issues were also discussed, as were the Grassroots Grant and Building Pastoral Sustainability Grant programs.

Members received an update about GFG Alliance mining operations around Iron Knob and activities on the defence site at Cultana at the February meeting.

A Neville Bonney workshop hosted by the Gawler Ranges Landscape Group in Port Augusta late last year was a huge success, with both sessions fully booked. It was this success that has promoted a roadshow that will deliver sessions throughout the Arid Lands in April and May. Neville will offer an online session with School of the Air students on 11 April and will return to the Gawler Ranges for a session at Iron Knob on 7 May.

Group members have spent time putting together a District Action Plan, which will help to guide activities in 2022. Activities being considered include a carbon and soil health workshop and a Sticky Beak Day visit to Secret Rocks.

Another Sticky Beak Day is planned for Buckleboo Station on 12 May. This visit will showcase the initiatives and works undertaken on the property following its involvement in the Pastoral Management Planning program.

Members are planning for their shared meeting with the Kingoonya Landscape Group at Hiltaba in June.

**Chris Fulton 0477 307 038**  
Christopher.fulton@sa.gov.au

**PHOTO: The success of Neville Bonney's Port Augusta workshop last year has resulted in the planning of a roadshow across the region in April and May**

## MARREE-INNAMINCKA

The Marree Innamincka Landscape Group met late in 2021 to discuss its District Action Plan, aligning local priorities and group objectives to the SA Arid Lands Landscape Board's five-year plan.

The group has identified high priority issues which will shape the group's activities and actions over the next 12 months.

At its February meeting, the group discussed the impact of January's highly-appreciated, record-breaking rain. The majority of properties in the region were drenched, with some receiving falls of more than 200mm. While it brings a good start to the year's feed growth, the group recognises the impact that local flooding has also caused to regional and local road networks, the challenges this brings to living in remote areas and the additional workload it created for some land managers.

Following community feedback at last year's Pastoral Bootcamp, the group has encouraged all community members to take advantage of workshops planned for Marree. Arid gardening

specialist David DeVries will present a hands-on veggie garden workshop on 7 April, followed by a presentation from renowned native plant and bush food expert Neville Bonney; where a range of topics focusing on planting and managing native plants will be discussed.

The Marree-Innamincka group, in conjunction with other landscape groups will support a two-day in-depth and unique personal development training opportunity with Jill Rigney on 18-19 May. The heavily subsidised Performance is Personal workshop will be held in Port Augusta and for bookings, contact Charlie. Places are limited.

**Charlie Eager 0437 795 792**  
Charlie.eager@sa.gov.au

**PHOTO: Marree Innamincka Group members Josh Haynes, Lyn Litchfield, Frank Warren and Craig Oldfield with Community Landscape Officer Charlie Eager**

## MARLA OODNADATTA

The Marla-Oodnadatta Landscape Group is looking at new learning opportunities and projects following the development of its District Action Plan.

In line with the priorities of the SA Arid Lands Landscape Board, the group will support pastoralists in a variety of projects leading on from feedback from the successful Cricket & Conversations event in October 2021. Projects will include soil conservation, pest management and the use of Estimated Breeding Values in bull breeding.

A focus will be promoting the use of Feral Scan in the district to gather data on pest species and targeting large feral herbivores which contribute heavily to total grazing pressure.

The group will also support local Landcare projects which help to revegetate areas around townships, manage water resources and tourism impacts.

A Sticky Beak Day will be held at Wintinna in June, with land managers sharing their learnings on innovative agricultural practices. More information will be shared soon.

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

**PHOTO: Managing camels is one of the focus areas for the Marla-Oodnadatta Landscape Group**

## NORTH FLINDERS

Members of the North Flinders Landscape Group heard about planned Western Quoll release at Vulkathunha Gammon Ranges National Park at their meeting in February.

Flood damage to the dog fence and World Heritage were also discussed and members finalised the group's district plan, which has identified project ideas around water, soils, weeds and tourism impacts.

A discussion about the recent rains determined that landholders in the district were very happy with the falls received. While there was damage to fences and roads to report, most people said the damage wasn't too bad given the volume of rain received.

The group will run Neville Bonney workshops at Copley and Hawker in April. The Copley workshop will coincide with the grant opening of a community nursery funded through a Foundation for Rural and Regional Renewal Grant.

The group's next meeting will be held at Blinman on 11 May.

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

**PHOTO: Members of the North Flinders Landscape Group are working on finalising the District Action Plan**



## NORTH EAST PASTORAL

North East Pastoral Landscape Group members are hearing that Noogoora Burr outbreaks are a big issue in the district at the moment. Landholders are encouraged to treat the weed before it flowers to prevent seeds retained for future germination.

Community Landscape Officer Di Makotter is working with landholders to distribute cochineal biocontrol to fight cactus infestations.

She is also contacting landholders to speak about potential pig issues so board staff can assess pig impacts and numbers across the region.

The group held a ladies day at Mannahill in March is now looking towards the Neville Bonney workshop to be held in Yunta on 10 April, looking at Australian bush food information and uses.

Wild dog baiting days will be offered from 5-8 April and expressions of interest are being

sought for a Chemcert refresher course.

The group's next meeting will be held at Cockburn on 21 April when the group will discuss the finalised District Action Plan. To attend this meeting, contact Di Makotter.

**Di Makotter 0408 944 751**  
[Dianna.makotter@sa.gov.au](mailto:Dianna.makotter@sa.gov.au)

**PHOTO: Group and community members at the North East Pastoral District planning day late last year were, from left, Tim Zwiersen, Pete Watkins, Mick Goldsworthy and Tim Taplin**

## PORT AUGUSTA/QUORN

The Port Augusta – Quorn Landscape Group met in Quorn on 9 February for its fourth meeting.

Group chair Renata Hackett was joined by members Steve Marafiote, Melissa Clifton, Richie Paynter, Kym Thomas and Francene O'Connor, as well as board representative Kurt Tschirner to continue discussions on the district plan, this time focused on the priority action list. Ensuring coverage of the diverse range of interests in the district is a careful process.

The meeting concluded with a tour of the Bush Tucker Garden in Quorn, to hear about and see the great work the community has been doing in creating this inspirational garden.

The Landscape Group has supported the establishment of the Port Augusta Coastcare group, which recently won the 2022 Port Augusta Australia Day Award for Environmental Sustainability.

The group promotes coastal awareness, microplastics monitoring and rubbish removal, and community and environmental support.

Coastcare and Quorn Community Landcare Group were among many involved in Clean Up Australia Day in March.

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

**PHOTO: Members of the Port Augusta Quorn Landscape Group toured the Bush Foods Garden in Quorn at their February meeting. Pictured are, from left, Kim Thomas, Francene O'Connor, Board representative Kurt Tschirner, Community Landscape Officer Brett Devitt, Richie Paynter and group chair Renata Hackett**



# Kangaroo Partnership Project – a collaborative effort for long-term improvement

**It has been a productive first three months for the *Optimising Kangaroo Management in South Australia* project, as key representatives come together to establish a partnership approach to improving landscape and economic resilience.**

The Kangaroo Partnership Project Steering Committee has met a handful of times and is coordinating an online workshop to develop key priorities and project outcomes informed by all stakeholder groups. It will take place in April and will be led by independent facilitation specialists *Collabforge*. Participants will include agricultural and pastoral representatives, cultural representatives, the kangaroo harvesting and processing industry, scientists, economic experts, animal welfare peak bodies, conservation land managers and government representatives.

Significant work has been done to foster interest and support from a broad stakeholder network to work together to tackle the issues and opportunities related to an overabundance of kangaroos. The aim is to work collaboratively to ensure inclusive, long-term outcomes are achieved along with opportunities

to manage kangaroos sustainably and ethically.

The inclusion of cultural voices to guide and inform cultural engagement, enterprise and learning from traditional ecological knowledge is an important part of the project. Additionally, technical expertise is being sought from some of the nation's leading scientific experts in the field.

Independent Kangaroo Partnership Coordinator Georgina Shirley says the road is being paved for effective long-term management of the issues.

“Through collaboration, this project focuses on finding the common ground across all interest groups, calling on experts in each relevant field, Ms Shirley said.

“The project is connecting with other initiatives such as the PIRSA Agriculture Kangaroo Taskforce and industry and scientific networks.”

Ms Shirley said one of the aims is growing a broader community understanding and acceptance of kangaroo management and the need to have a sustainable industry, which results in better environmental outcomes.

“It has been really positive to have the experience and knowledge within the group and wider partnership working together for a common outcome,” she said.

Project funding will be made available from recommendations at the workshop, for on-ground projects to demonstrate or trial effective management at a land-based scale.

This will result in shared learning to develop a set of decision-making tools that can be applied by land managers to aid business and conservation decisions on their properties relating to the impact or presence of kangaroos.

Project Steering Committee member and Kokatha Pastoral Manager Tony Freshwater is hopeful that effective decision making tools will be achieved.

“It would be great if, as a result of this project, land managers are provided with effective and efficient kangaroo management decision making tools that are proven and backed up with well researched data relevant to the region,” Mr Freshwater said.

The *Optimising Kangaroo Management in South Australia* project is working with the State Government's Agriculture Kangaroo Taskforce, led by the Department of Primary Industries and Regions, to investigate the viability of the current harvesting, processing and marketing sectors of the kangaroo industry and the other economic benefits that arise through responsible management of kangaroos in the landscape.

This collaboration, also engaging with kangaroo industry and Department for Environment and Water's (DEW) Kangaroo Management Reference Group and Kangaroo Management Program, will minimise overlap of effort and support shared skills, knowledge and data to support broad kangaroo management outcomes.

Regular updates will be available on progress of the Kangaroo Project and ways for partnering in and supporting the project goals.

This initiative is possible as a result of funding from the *SA Landscape Priorities Fund*.



Jess Bell

# Rain puts the SA Arid Lands in the spotlight

It was an extreme weather event that put the eyes of the country on the SA Arid Lands.

Damaged rail and road routes delayed freight and supplies for rural communities and interstate organisations at a time when delivery by any other means was difficult due to widespread rainfall.

Thirteen flights from the Royal Australian Air Force delivered 36.56 tonnes of food and supplies to remote communities, community meetings were held in Coober Pedy and a number of rescues were carried out.

The east west and north-south rail route was cut at Tarcoola after the line

and underlying support ground was significantly damaged and underwent 24 days of repairs before it could reopen.

The Stuart Highway was cut near Glendambo, halting freight and travellers for two weeks before it reopened with restrictions as repairs continued.

Tourism operators are preparing for what is expected to be a boom season as the outback turns green and water is abundant in some places.



## RECORD RAIN FOR DULKANINNA

Dulkaninna recorded 303mm in January – a record for the property in the 85 years that rainfall records have been kept.

Jess Bell from the property said they were lucky to have received the huge volume of rain over a 12 day period, when it fell in one to two inch falls.

“It was good, steady, soaking rain,” she said.

“It rained on seven of the 12 days and those days when it didn’t were cloudy, misty or foggy. It was quite unique for us.”

She said the smaller falls over a longer period meant the property escaped major damage.

“We have a little bit of damage to fences. In terms of the land, the creeks are running big, and the swamps are all full, but it didn’t scar the country,” she said.

“It’s looking pretty good.”

Jess said the only rainfall event to rival this one from their records was January 1974. Back then, rain was measured in points and 1193 points were recorded – equivalent to 298.5 in today’s terms.

“That rain fell all in one go and caused a lot of damage,” she said.

## WARNING FOR MOSQUITO-BORNE DISEASES

**SA Health has warned that the risk of mosquito borne disease transmission is currently high in South Australia.**

It comes after viruses that can cause serious diseases like encephalitis, which may be fatal or cause long term neurological damage, have been detected. There has also been a spike in Ross River virus cases.

Find out more at: [www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/healthy+living/protecting+your+health/yourself/fight+the+bite](http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/healthy+living/protecting+your+health/yourself/fight+the+bite)

Known symptoms include fever, drowsiness, confusion, headache, neck stiffness, nausea and vomiting, tremors, seizures.

You can protect yourself and your family by covering up with long, loose clothing, using insect repellent and eliminating water that mosquitoes breed in.



Jess Bell

Jess Bell



Tamara Nutt

# Heavy falls call for boat rescue

**Support, mateship and the preparedness to always help out a neighbour are qualities embedded in residents of the SA Arid Lands.**

When Tamara Nutt was stranded and surrounded by flood water on Coondambo Station, it was her neighbours that came to the rescue.

When unpredicted heavy rain fell for the second time in a weekend, Mat Kerin from nearby North Well Station took a flight to determine the extent of the water and it was Rob Davidson from Wirraminna who arrived with his tinny to get Tamara off the property.

While the total rainfall at Coondambo homestead will never be known because the property's main rain gauge was washed away, a separate gauge at the nearby header tank showed 210.4mm four weeks after the event.

"We estimate up to 300mm of rain fell on both Coondambo and Oakden Hills – which lead to road and rail damage that was widely telecast."

Tamara said the property had 102.8mm on Friday 21 January when her family asked if she wanted to get out. She thought she would stay and wait it out, with smaller falls of 5-10mm predicted to follow.

At that point Tamara thought she could get off the property by "maybe Wednesday".

She started to worry when the thunder rolled in late on the Sunday night. A check of the weather radar showed a weather cell developing directly over Coondambo.

By 2.30am Tamara sent messages to her brother Dan at Oakden Hills and sister Christie at Pandurra. Numerous messages followed throughout the early hours.

"By 4.50am I called Mum and Dad who were at Curnamona to tell them the water was about to come in the house and I had done everything I could to protect it," she said.

"Ten minutes later I was calling back to get them to ring someone to get me out, because the water had come in too quickly and high and I was wading through thigh-high water in the house. I knew I would most likely lose power and phone signal."

As it happened, Glendambo received 149mm, and the houses, sheds and cars at Coondambo were under water.

"If anyone knew what was coming, they would have left," she said.

"I still can't believe it happened. It was horrendous."

*Tamara said she could hear the pressure on the door that sounded like a big wind, except this time it was water.*

"It was so quick. I went from thinking it was going to lap at the steps to realise in less than 10 minutes it was nearly at the window, and I knew I had to leave."

By 5am, Tamara had moved to the safety of the above-ground pool deck to wait for a rescue. At that time the water was four feet deep around the house and three feet deep inside.

Tamara had been on the pool deck for an hour when she heard thunder and it started spitting again.

"I needed to consider what options I had left – I thought if the water got any higher, I would be able to hang on to the poles of the old shade sail," she said.

Given Oakden Hills had similar falls to Coondambo, Dan was unable to get there, and her brother-in-law Jason was called at Pandurra to help. Jason called Rob Davidson at Wirraminna at 5.30am asking if he had a boat.

By good fortune, he called the right neighbour. Rob and wife Stacey have a boat they use occasionally when the swamps fill up with water and Rob had been watching the radar and knew Glendambo and Coondambo would have been getting "a hammering".

Rob Davidson arrived at about 7am and after an initial hiccup when the fuel line unclipped, the boat was able to get Tamara back to solid ground.

*The Duthy girls – Ava, Stella and Ruby – of Tiverton in the North East Pastoral district are lucky to be able to enjoy a play in the creek near their house more often than when it rains there. Their mother, Melanie Lewis, says the creek is fed by four big creeks near Yunta and the hills around Mannahill and flows when rain falls there. “The girls love it”, she said*



“I didn’t think I’d ever be using it for something like that,” he said.

“Lucky it’s a reliable old thing, because it hadn’t been started for more than two years,” he said.

“Until that point, I think a lot of people thought I was being dramatic,” Tamara said. She said it was a relief to see Rob drive up with the boat because it meant someone was here to help.

Police arrived just as we were heading back to the vehicles in the boat. By then a swift-water rescue was on the way from Port Pirie and a helicopter was on standby.

Damage to the property is extensive. It includes three houses, cars, workshop, sheds, machinery, a well that collapsed near the Kingoonya Road and pipelines that were washed away.

“There was damage to most roads on the property and most of the generators around the property had water through them,” she said.

“The water got so high at the homestead, any spare generators we have will have water damage as well – no doubt we’ll continue to find more as the water settles.”

Tamara said she doesn’t believe any of their dorper stock were lost to the rain but won’t know for sure until they muster.

An earlier rainfall of 80mm in November had filled the aquifers and the swamps were already holding water before this event.

By late February, Tamara had been back to the property, but was still unable to get to the homestead.

“We went for a drive around and came across a rain gauge at Cooks Well, which is halfway between Glendambo and Kingoonya. There was 211mm in that one, a month after the event so we know we had at least that much.

“You certainly don’t expect more than 200mm in a weekend – at least not in this part of South Australia.”

*Tamara said most of her neighbours had been in contact and she thanked them for the offers of help and support.*

Three weeks after the event, the catchment was still overflowing and she didn’t expect to be able to enter the house for at least three months.

“It presents new challenges for property management, but thankfully our use of technology allows a fluent transition to the new management requirements,” she said.

“We know the advantages of this rain will far outweigh the temporary disadvantages.”

## JANUARY RAINFALL TOTALS

(Recorded in mm)

Dulkaninna	303.0
Mount Ive	189.2
Allendale	180.0
Witchelina	176.2
Moolawatana	166.6
Callanna	149.0
Beltana	130.8
Yudnapinna	130.6
Wilporinna	130.0
Moomba	129.2
Farina	128.0
Arkaroola	127.1
Mt Barry	127.1
Muloorina	125.4
Yardea	125.0
Blinman	117.8
Nonning	112.6
Boolcoomatta	108.0
Woomera Aerodrome	105.8
Commonwealth Hill	105.7
Lindon	101.4
Tieyon	95.6
Todmorden	87.7
Curnamona	84.0
Stirling North	78.4
Mulgathing	68.4



Phil Lord

## Roads impassable near Kolendo

**At Kolendo in the Gawler Ranges, Phil and Michelle Lord feared their homestead would flood in the January downpours.**

They moved valuables up high and took refuge in the woolshed quarters in preparation. Fortunately previous work to improve the creek banks meant they held out and the homestead stayed dry.

The remainder of the property was not so lucky with extensive damage to roads and fences, not unlike many neighbouring properties.

Phil said most of the damage was caused by 110mm that fell in a very short time. The property received 200mm over three days and the couple was stuck in the homestead for a week.

“Every night we had another thunderstorm. The creek usually runs once every three or four years and it ran three times in four days,” he said.

“Anything across the creeks was wiped out for 200m in each direction. The creeks gouged out the road, so nothing happened until we could get machinery back to the homestead.

“I’ve been here all my life and I’ve never come across anything like this.”

He said he had spent three weeks desilting the area around the homestead and was just starting to tackle the roads on the property.

Fortunately the Department for Infrastructure and Transport made the main road passable, meaning supplies could be brought in.

“I can remember the ’74 floods, and in 2008 we had 120mm that did a lot of damage and was perhaps more devastating than this one.”

He said January’s rainfall was just two inches off the property’s annual total.

“The country has responded and it’s looking magnificent.

“It was certainly an interesting event, and the good will outweigh the bad.”

## DOWNPOUR DAMAGES DOG FENCE

**More than 250 kilometres of the Dog Fence between Coober Pedy and the Flinders Ranges sustained damage in January’s heavy rainfall.**

An estimated 40 storm-damage breaches were expected to be confirmed once roads and tracks reopened.

While the floods washed away parts of the old Dog Fence and eroded tracks alongside it, the new fence had largely withstood the flood waters, suffering only minimal damage.

In response, PIRSA has dropped 2000 extra aerial baits to protect livestock in the areas affected by the breaches and trappers will be deployed to fix the fence when access is restored.

It is hoped the barrier of baits will stop wild dogs slipping through.

The extra baiting will help protect livestock from wild dogs while the repair work is undertaken.

Wild dogs rip nearly \$89 million from the Australian economy each year, with South Australian producers losing more than 20,000 sheep to wild dogs in 2018 alone.

## NEED A PERMIT FOR ONGROUND WATER MANAGEMENT WORKS?

**Has the recent rain made you think about modifying a dam or watercourse on your property? Or do you need to reinstate or change existing water infrastructure, like crossings or diversion banks?**

These activities are considered to be water affecting activities, along with activities such as draining or discharging water or excavating material from a watercourse or lake.

Any work that could impact a watercourse, lake or floodplain of a watercourse can have adverse impacts on the health and condition of water resources and the ecosystems that depend on them; as well as on other water users.

Water affecting activities need to be managed carefully and a Water Affecting Activity permit needs to be sought – in some instances the work comes under an exemption for emergency repairs for crossing and dams.

The SAAL webpage [www.landscape.sa.gov.au/saal/water/water-affecting-activities](http://www.landscape.sa.gov.au/saal/water/water-affecting-activities) is a good source of information or speak to the board’s Water Project Officer on 0409 896 402 for advice.



# Excellence award for Quorn Landcare project

**A new bush food garden that brought the Quorn community together has received a state award.**

A Quorn Community Landcare project that brought together a number of partners to share knowledge with the community and develop innovative ideas to achieve on-ground biodiversity outcomes received the inaugural Landscape SA Excellence Award in late 2021

The project, Reviving Biodiversity in the Ranges, established a Bush Food Garden and Thutha Native Grass Patch in Quorn, re-vegetated Yellow-footed Rock-wallaby habitat at Warrens Gorge and undertook cactus control with the biocontrol cochineal on a number of properties in the area.

Involved in the partnership with Quorn Community Landcare Group were the Flinders Ranges Council, Nukunu Wapma Thura Aboriginal Corporation, Upper North Farming Systems Group, the SA Arid Lands Landscape Board and local landholders. The Bush Food Garden involved the Nukunu people in the designing, planting and signage and is now a source of cultural knowledge and an opportunity to experience local bush foods, tools and medicines for both the Nukunu people and the general public.

The Thutha Native Grass patch acts as a seed bank of eight local native

perennial grass species, significant in an Aboriginal, pastoral and ecological context. It was designed so seeds can be easily harvested for trails and restoration activities on local properties.

The project provided four community planting days, six seed collection events and two native grass workshops on identification and grassland restoration. Regular newsletters and increasing awareness of the importance of native and endemic plant species through social media platforms created much interest and led to the development of several successful on-ground projects.

The Quorn Community Landcare Group has 25 members, engaged more than 50 participants, including those interested from a pastoral, cultural and ecological perspective and contributed more than 280 volunteer hours.

“We have had a great few years – breeding cochineal for Engelmanns Cactus, Clean Up Australia days, weed ID for farmers, seed collections, tree planting, bus tour, erosion control, working bees, information barbecues and slightly crazy Christmas pageant floats,” secretary Andrea Tschirner said.



*At the award presentation were, from left, Landcare Association of SA Executive Officer Eleanor Pratt, board member Tim Flowers, Tim Connell and Andrea Tschirner from Quorn Community Landcare Group, and board members Kurt Tschirner, Sanchia Treloar and Scott Michael*

“Congratulations and thanks go to all our Landcare volunteers. This award certainly puts a spring in the step and we’re looking forward to some great activities for 2022.”

SA Arid Lands Landscape Board member Sanchia Treloar presented the award to Quorn Community Landcare Group president Tim Connell and secretary Andrea Tschirner on behalf of the then-Minister for Environment and Water David Speirs. It included \$5000 that will be invested back into the work of the Quorn Community Landscape Group.

The Landscape SA Excellence Award award seeks to recognise individuals, community groups and projects that achieve whole of landscape outcomes, emphasise and exemplify the importance of partnerships to deliver great results for our landscapes and communities. To be considered, the project also needed to demonstrate partnerships and collaborations across multiple sectors, industry or community leadership or innovation and adaptation.

## CALENDAR OF EVENTS

### 29 MAR-1 APR

North Flinders/Marree injection services

### 30 MARCH

Ladies Day, Mannahill

### APRIL-JUNE

Aerial baiting services

### 2 APRIL

Quoll (Indya) release Vulkathunha Gammon Ranges NP.

### 4 APRIL

Online Grant Workshop

### 5-8 APRIL

Bait injection services, North East Pastoral

### 7 APRIL

Gardening in the SA Arid Lands Workshop and Neville Bonney Workshop, Marree

### 8 APRIL

Neville Bonney Workshop, Copley

### 9 APRIL

Neville Bonney Workshop, Hawker

### 10 APRIL

Neville Bonney workshop, Yunta

### 13 APRIL

Port Augusta Quorn Landscape Group meeting, Port Augusta

### 21 APRIL

North East Pastoral Landscape Group meeting, Cockburn

### 27-28 APRIL

SAAL Landscape Board Meeting

### 3 MAY

Marree-Innaminka Landscape Group meeting, Port Augusta

### 4 MAY

Neville Bonney workshop, Oodnadatta

### 5 MAY

Neville Bonney workshop, Coober Pedy

### 6 MAY

Neville Bonney workshop, Andamooka

### 7 MAY

Neville Bonney workshop, Iron Knob

### 11 MAY

North Flinders Landscape Group Meeting, Blinman

### 12 MAY

Stickybeak Day, Buckleboo Station

### 17 MAY

Flora and Fauna ID workshop, Roxby Downs

### 18-19 MAY

Jill Rigney workshop, Performance is Personal, Port Augusta

### 1 JUNE

Stickybeak Day at Wirrealpa

### JUNE, DATE TBA

Stickybeak Day at Wintinna

### 17-18 JUNE

Combined group meeting, Kingoonya and Gawler Ranges landscape groups, Hiltaba

## GRANT DATES

### GRASSROOTS GRANTS

16 March open  
4 May close

### BUILDING PASTORAL SUSTAINABILITY GRANTS

2 May open  
20 June close

### PROPERTY MANAGEMENT PLANNING PROGRAM ROUND 3

2 May open  
20 June close

**Full details on events and to book a place go to [www.landscape.sa.gov.au/SAAL](http://www.landscape.sa.gov.au/SAAL)**



Small fry, left and adult fish, above

One of the translocated gudgeon



# Small fry is big news

**The translocated Flinders Ranges Purple-spotted Gudgeons (*Mogurnda clivicola*) are well on the way to establishing populations in their new homes.**

Known as Wirta Udla Yarri to the Adnyamathanha people, 600 endangered Wirta Udla Yarri (purple-spotted gudgeons) were helicoptered from their home in the Vulkathunha-Gammon Ranges National Park and the adjacent Moolawatana Pastoral Lease in May last year. Of these, 300 were placed in permanent springs in Ikara-Flinders Ranges National Park (IFRNP) and 300 in the Yappala Indigenous Protected Area, north-west of Hawker.

After passing their first test with ‘flying’ colours, the second was to survive the winter and produce young fish (fry), which they appear to have done at both locations.

In November 2021, Yappala Rangers with staff from the SA Arid Lands Landscape Board and Ecolknowledge located several fish at a few locations and filmed very small fry, less than 1cm long, amongst the reeds using a small electric yellow submarine.

A visit to IFRNP turned up eight adult fish, however no young were observed or captured on film.

Senior Conservation Ecologist Rob Brandle said at the time, there was some fear that large floods which altered the size and depth of many pools along the

spring, had washed away the fish.

“They were impossible to find between June and November,” he said.

A revisit to this site in February found the pools teeming with small 2cm long fish plus mid-sized (5-7cm) and larger fish exceeding 10cm.

“To discover some of the older fish, along with the new recruits to the population was a relief,” Mr Brandle said.

“It was met with delight from the translocation team and shows that it should be possible for these new populations to not just survive, but to thrive into the future.”

The translocations double the number of known populations and represent an important milestone for the board’s Bounceback and Beyond project.

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

***The work to increase the populations of Wirta Udla Yarri has taken place on Adnyamathanha country in the Flinders Ranges.***



Moving the gudgeon in May last year



Volunteer Jake Barker was involved in the December trapping

# Idnya population sets a new record

**A record number of Idnya (Western quolls) captured in the Ikara-Flinders Ranges National Park late last year suggests the population will continue to grow, after faring extremely well through some of the driest conditions ever experienced in the region.**

Recent rains are expected to help population growth to numbers even higher than an already record number in December.

The five night trapping event captured 105 individual Idnya – a large increase on the previous record of 91 individuals, recorded in December 2020. The figure is almost three times the number captured in March 2017.

The captured animals were in good condition which, given the extension of their range, is great news.

Twice as many female adult Idnya were trapped than male, and more than half the number were juveniles, which suggests a successful breeding event for 2021. Of the individuals captured, 63 were new records, while 42 had been captured in previous trapping exercises.

In addition to the record number of Idnya, 23 Virda (Brush-tailed Possum) were caught. The number comprised of 14 males and nine females. Twelve were new individuals and 11 had been recorded previously.

*In promising signs, six of the nine females were carrying pouch young.*

Idnya and Virda were reintroduced to the the Ikara-Flinders Ranges National Park in 2014 as part of a partnership between the Department for Environment and Water (DEW) and the Foundation for Australia's Most Endangered Species Ltd (FAME).

The species originally existed in this area, but had become locally extinct due to a range of threats such as predation by feral cats and foxes. More than 20 years of fox control by the Department for Environment and Water's Bounceback program has allowed these threatened species to be reintroduced.

Ongoing monitoring of the reintroduced populations is being undertaken as part of the Bounceback and Beyond program, which is supported by the South Australian Arid Lands Landscape Board, through funding from the Australian Government's National Landcare Program.

The cage trapping was undertaken by a team led by DEW Reintroduction Ecologist Tali Moyle with SAAL Ecologists, National Parks staff and volunteers.

The team set cage traps at 192 sites across the National Park over five consecutive nights.

The results of this trapping event highlights the success of the reintroduction program and is an example of the positive conservation outcomes for threatened species that can be achieved through the types of partnerships forged as part of this project.

***Idnya and Virda are the Adnyamathanha names for the Western quoll and Brush-tailed possum. The reintroduction of both species has taken place on Adnyamathanha Country in the Flinders Ranges.***

Frankie Fennell takes a close look at plant growth in the Wintinna swamp



## Fencing aids grass recovery at Wintinna

The addition of fencing has helped the regeneration of Wintinna Swamp to begin and allowed for the introduction of a time-controlled grazing program.

Jake and Francesca (Frankie) Fennell, owners of Wintinna Station near Coober Pedy, identified the project and added it to their to-do list for on-ground activities soon after moving to the property six years ago. Involvement in the SA Arid Lands Landscape Board's Building Pastoral Sustainability Project and the first round of its Property Mapping Program (PMP) saw it move from the to-do list into the property's environmental management plan. Clearly identifying the work they needed to do and why in the property plan, helped them be successful in their application for one of the board's Pastoral Sustainability Grants. The grants support on-ground work and trials.

Titled 'Wintinna Swamp regeneration through use of time-controlled cattle grazing', the project involved the installation of eight square kilometres of fencing to allow the recovery of a 200-square-kilometre paddock.

Frankie said while the addition of the fencing would have long term benefits, the improvement in grasses was already visible. The 104mm that fell at Wintinna Swamp in January allowed the area to get off to a good start.

"We are seeing an improvement in the grasses, helped by the seasonal conditions – and the first rain event since being excluded," she said.

"We've never seen plants of this size and density in the swamp in the six years we've been here."

Frankie said the couple planned to exclude cattle for two growing periods – and after that the area would only be grazed for short periods. It is the start of a time-controlled grazing rotation.

Photo points and vegetation will be monitored regularly to track changes in the swamp.

Time controlled grazing practices are used across Wintinna, but with results that are already evident with the fencing, the couple plan to invest heavily in infrastructure to extend these to other areas on the property.

"Rest after rain is essential for grasses to grow to full potential and drop their seed before being grazed again," Frankie said.

"Even with the spelling of the country we have ended up with more stock days for each paddock."

## FEED YARD DESIGNED TO IMPROVE LAND CONDITION

The Clarke family manages grazing country at Pine Grove, just out of Craddock in the Flinders Ranges.

In 2021 the family was awarded a Building Pastoral Sustainability Grant to trial a solar power, automated containment feeding area to reduce the impact of drought on quality breeding stock. The feeder has allowed the Clarks to better manage land condition by being able to remove animals from the paddock, reducing the risk of overgrazing in dry times.

Pine Grove is made up of several original 'settler blocks' cleared for cropping in the late 1800s. Originally open Bluebush country, many of the grazing paddocks found on the plains are now largely dominated by annual grasses and susceptible to baring-out in dry conditions.

By allowing the country to rest after breaking rains, while also maintaining core breeders in the flock, this project will allow the family to improve land condition and build business resilience in dry times.

Animal nutrition experts were consulted in planning and refining the feed mix for the containment feeding area, as well as the quantity needed to meet the nutritional needs of sheep during the early phases of development.

Their location, within a reasonable distance to cropping country, allows the Clarks access to feed from a variety of sources.

*The Building Pastoral Sustainability project is designed to build on the capacity and resilience of pastoral businesses in the SA Arid Lands to adapt to future climate and market variability. It supports the pastoral industry to adapt to varying climates, innovate using technology and new management practices and consider options for business diversification.*



The Shepherd Autofeeder features automated and solar powered technology, being used to control the nutrition of confined stock.

## YEDNALUE REGENERATION

**This picture of the Yednalue landscape tells a thousand words!**

It illustrates the effective regeneration of bush and spear grass in a previously eroded area following the construction of water holding banks.

Earthworks were identified as a priority during a property mapping session with landscape ecologist Richard Marver. Located north of Craddock, the property is owned by the Solly family who took part in round one of the Property Management Planning program through the board's Building Pastoral Sustainability project. They were then awarded funds for on-ground works to implement this land management project through the program's grant round.



# Applications open soon for Building Pastoral Sustainability programs

**The Property Management Planning and Pastoral Sustainability Grants will return for a third year, with applications opening in May.**

## PROPERTY MANAGEMENT PROGRAM

The third round of Property Management Planning will offer six pastoral businesses an opportunity to be involved in a four-stage program that will develop a comprehensive environmental mapping plan, identify personal motivations and business drivers and develop a financial business analysis report.

The program helps landholders ensure their business is sustainably managed for future generations. Participants will explore ways to adapt and innovate, build their capacity and diversify their business to remain competitive and understand more about their business in a holistic manner.

Successful participants will finish the program with an action plan to decide future actions and the best way to achieve them.

Applications for the third and final round of the Property Management Planning Program will open on 2 May and close 20 June.

For further information contact Matthew Westover, [matthew.westover@sa.gov.au](mailto:matthew.westover@sa.gov.au); 0438 816 210.

*Both programs are offered through 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.*

## PASTORAL SUSTAINABILITY GRANTS

The funding pool for the third round of Sustainability Grants has been doubled in 2022/23, offering \$180,000 for grant applications up to \$30,000.

The grants allow pastoral businesses to trial management practices and technologies to better adapt to varying climates and markets and improve the sustainability of their business.

Five grants were awarded in the last financial year for projects that included: A Sustainable Grazing Adaptation Project; Wintinna Swamp Regeneration using time-controlled grazing; Automatic solar powered containment feeding, Adaptation of technology enabling geolocation of animals for mutual benefit; and Erosion control to improve rangeland condition.

Applications for the third round of Sustainability Grants will open on 2 May and close 20 June.

For more information about the grants contact Andrea Tschirner, [andrea.tschirner@sa.gov.au](mailto:andrea.tschirner@sa.gov.au); 0438 720 469.



## STICKYBEAK DAYS ACROSS THE REGION

**The community is invited to see the result of BPS projects across the region at a number of stickybeak days in May and June.**

On 12 May, Buckleboo Station in the Gawler Ranges will host a day, hearing from the property owners and guest speakers about results from new rotational grazing practices and technology trials. This will also include a site tour.

Wirrealpa in the Flinders Ranges will open

its doors on 1 June to share its decade-long journey on landscape restoration. Attendees will see first-hand the result of staged landscape rehydration programs across the property.

Wintinna in the Marla-Oodnadatta district is also planning a stickybeak day in mid to late

June and will focus on work it has done in time-controlled grazing, along with a range of guest speakers.

See our website for bookings and more details. Contact Regional Agricultural Landscape Facilitator Andrea Tschirner on 0438 720 469 or [andrea.tschirner@sa.gov.au](mailto:andrea.tschirner@sa.gov.au)



# BITEBACK NEWS

## Trapper training workshops

Five free wild dog trapper training workshops were held in February and March. Three workshops – at Nonning, Hawker and Nepabunna were funded by the SA Arid Lands Landscape Board and the Sheep Industry Fund through the Biteback Program. A further two workshops, held at Mt Eba and Mannahill were funded by PIRSA.

Trainer Paul Billsborough travelled from Queensland for the workshops. He worked alongside two professional trappers from South Australia to teach landholders about trapping wild dogs.

The program involved a theory component that detailed what to look for, dog behaviour and how to look after traps.

This was followed by practical experience learning to set and clean traps effectively, with the day finishing off with traps set on a nearby property for the night. At night the attendees learnt how to use Wild Dog Scan for their benefit to record wild dog activity and impacts. The following morning the traps were checked and pulled up.

Some of the attendee feedback from workshops included:

*“I attended to improve my dog trapping skills and learn of any new developments in the area.”*

*“Please continue funding for workshops – baiting and trappers.”*

*“The most useful thing I learnt was the way dogs react and the best way to lure dogs”*

*“A great beginners workshop with a range of skill sets from instructors – really enjoyable.”*



Attendees at the Trapper Training Workshop held at Nepabunna were, from left, Sophia Wilton (Nantawarrina IPA Ranger), Damien Lynch (Professional Trapper), Juliette Johnson (Nantawarrina IPA Ranger), Lyeishah Coulthard (Nantawarrina IPA Ranger), Phillippia Johnson (Nantawarrina IPA Ranger), Bruce Wilton (Nantawarrina IPA Ranger), Tom Finlay (Professional Trapper), David May (Depot Springs Station), Lindsay Mengersen (Balcanoona), Paul Billsborough (Professional Trapper Trainer), Anna Rogers (SAAL Landscape Board Wild Dog Project Officer)

## WILD DOG ACTIVITY AND IMPACTS

The Biteback team is currently looking at impacts recorded in the Spring 2021 period. Landholders using the wild dog activity maps are asked to please return them. Those using Wild Dog Scan, please ensure your reports have been entered. Blank maps stating no wild dog activity is still information that is useful to the Biteback program.

The information is used to inform landholders, state government, funding bodies and national stakeholders about wild dog activity in SA; gauges your involvement in the Biteback program; governs where aerial baiting occurs; and supports applications for additional funding and training.

## WEBINAR

A second Biteback webinar was held on 17 February. It included a presentation on the NSW wild dog fence extension project and information about the new mandatory baiting guidelines.

If you couldn't attend the webinar, a recording can be found on the the board's website [www.landscape.sa.gov.au/SAAL](http://www.landscape.sa.gov.au/SAAL) under the News and Resources tab. If watching the webinar leaves you with questions, please contact the Biteback officers Anna 0447 134 951 or [anna.rogers@sa.gov.au](mailto:anna.rogers@sa.gov.au), or Chris 0458 566 536 or [Christopher.havelberg@sa.gov.au](mailto:Christopher.havelberg@sa.gov.au).

If you would like a particular topic for future webinars, please let the officers know. The next webinar will happen in July.

## INJECTION SERVICES

The autumn 2022 injection services were held in March and April.

The injection services are a great way to receive information about the latest dog numbers, what is new, what events are coming up and are an opportunity to catch up with your neighbours.

Following heavy rains and flooding, Biteback officers are expecting an increase in dog numbers inside the fence in coming months, as prey animal numbers increase. Being prepared and staying on top of the dog numbers leading up to this period is very important, as you can reduce the number of dogs before bringing stock back or reduce the impact the dogs have on your property.

## AERIAL BAITING

An aerial baiting service was held during March and focussed on areas near the dog fence that were affected by recent flooding.

## LANDSCAPE SA REGULATIONS FOR BAITING WILD DOGS

On 8 August 2021 the new Landscape Act regulations on mandatory baiting for wild dogs came into effect.

Requirements differ between the zones, which are:

- The Pastoral zone inside the dog fence
- The buffer zone – 35km north of the dog fence
- The Flinders Ranges Council zone.

The requirements for each zone are available from the Biteback team.

The State Wild Dog policy and the new regulations that outline what you are required to do, can be found on the PIRSA Biosecurity SA website or by contacting the SAAL Landscape Office.

If you are located outside the dog fence and beyond the 35km buffer zone, your wild dog control requirements have not changed.



## Farina restoration news

**While stonework will again be a feature as the Farina Restoration Group starts planning for 2022, it is the expected arrival of an NSU62 rail engine that will form the biggest part of this year's program.**

Chairman Bill Brock said the railway precinct would be a hive of activity as rails are laid to house the engine, which the group has access to under an agreement with Peterborough Steam Town.

Finances permitting, the engine will be transported to its new home later in the program, along with a one-man rail trolley that has been restored by the Barmera Men's Shed.

Mr Brock said the old buildings required constant repointing and stabilisation and would continue to be part of the works program.

Also expected this year are the installation of new history boards. Volunteer facilities will be improved with the addition of a new shower and toilet block in the volunteer campground.

The bakery and museum will operate for the eight week program; with the cricket match and Bell Memorial to be held on the weekend of 18-19 June.

### 2021 PROJECTS AND EVENTS

Despite restrictions in place due to COVID, the 2021 restoration work was considered successful.

The new bakery outlet and museum was officially opened, with a commemorative plaque unveiled by Dick Smith. The annual cricket match resulted in a win for Farina, captained by Kevin Dawes and the annual John Napier Bell memorial service was conducted by Rev Trevor Briggs.

Projects carried out during the work season included the installation of public toilets at Patterson's House; stonework on the Moffatt house and rebuilding the underground rainwater tank at the rear of the Trans Continental Hotel.

Patterson's house received a final coat of paint and had balustrading installed prior to the opening day. The bakery outlet, now housed in the building with the interpretive museum, received many positive comments.

The wooden crosses in the cemetery were painted white, curved rooves were erected on the story board gazebos, a gabion wall was erected around the main generator, and areas of Tom's shed were concreted.



## New Coastcare group recognised

**Port Augusta Coastcare Group has been recognised for Environmental Sustainability in the city's Australia Day awards after just one year of operation.**

The group, which was established in December 2020, works to raise awareness in the community of the protection of coastal biodiversity.

With 30 regular members, the group promotes coastal awareness, micoplastics monitoring and rubbish removal – and draws community support and involvement in the work that it does.

Melissa Clifton approached the SA Arid Lands Landscape Board in 2019 with a goal of establishing a micoplastics monitoring program. It was a discussion that led to the forming of the Port Augusta Coastcare Group – of which she is a founding member. She said the group has a number of big projects in the pipeline.

By the end of 2022, the group hopes to source stormwater nets, which will allow them to trap macro and micro plastics in stormwater runoff. It follows AUSMAP training which gave members the skills to test Port Augusta's coastline for microplastic pollution.

The group also hopes to undertake storm water monitoring for things like salinity, nitrogen and nutrients near Hospital Creek. It is hoped this project will allow group members to work with schools, educating and involving students in these types of projects.

Ms Clifton said other members were working towards rehabilitation of the sea grass – Posidonia – at Winninowie Conservation Park. The plant recorded poor condition leading to a reduced number of plants when testing was done in 2018. The next test is not due until 2022.

Mangrove boardwalks, signage, and partnering with other schools and community groups are also being discussed.

"Everyone in the group has lots of energy and passion for protecting, preserving and promoting our coast region," Melissa said.

"We are lucky everyone has different areas of expertise – we have people interested in the arts, diving and recycling and others with promotion or community connections.

"They are all enthusiastic and they really want to get things done."

Port Augusta Coastcare Group meets every six weeks in Port Augusta. To get involved, contact Melissa on 0400 023 487 or Tili on 0491 0283 705.

# A lifetime caring for country

Having spent most of her 88 years on Bullyaninnie, near Oodla Wirra on the Barrier Highway, Joy Betty has seen first hand nearly a century of landscape changes. She's hard pressed to remember a time that station work wasn't closely related to improving environmental outcomes. Her earliest memories are of time spent with her father, Harry Jones. The pair shared a love of being outdoors and working together in the paddocks of the North East Pastoral property.



Top: Joy, centre, with her mother, right, and her mother's friend

Left: A photo of the Jones family. Joy aged about five  
Right: Joy horseriding with her brother and his friends, about 1940s

They collected and pressed plants, Harry labelling them with the names that he knew. Joy said the exercise book they used was given to the Nackara School to educate younger children and she believes it has since been added to a State Library Collection.

She recalls her father working on Boxthorn and Bathurst Burr control when she was young.

"He used to dig them out with a large hoe," she said.

"My father was a conservative pastoralist. He fenced off areas in the back country years ago to allow it to regenerate after being heavily grazed.

"That back country is my favourite part of the property – Mallee and saltbush country."

Harry passed away when Joy was just 14 – but in that short time, she learned a lot from him about how to care for the property.

The youngest of three children, Joy was born in the Terowie Hospital and grew up on the property. When she was aged just four-and-a-half she was sent away to boarding school in Terowie, so her sister, then in year seven, could help "break her in".

When Joy left school, she returned to Bullyaninnie to help her mother, although to this day she thinks her mother wanted her to move away to gain work and experiences elsewhere.

The property has been in Joy's family for three generations. Her paternal grandfather William Jones arranged for the building of the homestead that Joy lives in today.

Joy said her family had always been looking at ways to better manage the country.

"They were actively involved in rabbit warren ripping and saw the best response in the 1950s after the droughts of the forties had broken. It was a time when Myxo was really taking hold around the country," she said.

"Those years also had the most wildflowers I have ever seen. There was lots of regeneration of trees because there were fewer rabbits to stop establishment. That's the time when the sugarwood (*Myoporum platycarpum*) growing near the Three Sisters Hills all generated."

Testament to her father's hard work, Joy said it had been a long time since she had seen any recruitment of Bullock Bush (*Alectryon oleifolius* ssp. *canescens*).

"In the past Bullyaninnie would spend thousands of pounds a year controlling Boxthorn," she said.

Cactus, however, is an ongoing concern.

She said cactus had been around in the flood outs for a long time. As a young woman she would carry buckets of cochineal around with her on the handlebars of her motorbikes, ready to place where they were needed. This cochineal control is continuing today.

For Joy, the climate is not so much changing as it is repeating itself.

"The forties were hard drought years and really windy. It would pick up the country and blow it away," she said.

"Some mornings you would wake up and see the silhouette of your head in the pillow, it was that dusty."

While the recent years have been dry and windy, Joy has destocked a lot of her country and can see that the soil hasn't lifted like it has in other parts of the district.

Joy married Ron Betty on 25 October 1955. His father bred marino rams at Oodla Wirra 25 miles away and the newlyweds bought stock from him.



Ron joined Joy in improving the property.

“Ron built a big bank across the homestead floodout in the sixties to stop the erosion gully from continuing into the catchment. At around the same time, Joy dug up little gum trees from Panaramattee and planted them along the banks to stabilise it. They were watered until they became established.

“These trees are now seeding and germinating themselves and keeping the watercourse intact,” she said.

“In the seventies we had 25 inches of rain in one year. You had to leave your motorbikes on one side of the watercourse and walk across the country. There were ducks everywhere.

“The Cyclone Yasi rains in 2011 caused soil erosion in the back paddock. I spent \$40,000 on machine work to fix that.

“We haven’t had a decent flood for at least 10 years. As a child, I remember hearing the roar of water when I laid in my bed at night.”

Joy smiles as she recalls wild peaching in the Whealmottley Hills. The trees were raised by Joy and her husband, who brought them from the North West.

“The quandongs up there are just beautiful. We knew it then and we bought the seeds with us to plant out here.”

For Joy, the biggest change on the property came with the arrival of electricity in the 1980s.

“It was a game changer living out here,” she said.

“We got an airconditioner and that helped in the summers and new refrigerators, but they don’t keep the icecream like the old ones,” she said.

“I think the best one we have is in the shearer’s quarters. It’s probably 70 years old and even though I have probably only drunk four beers in my life, everyone knows it’s the best one to keep the beer cold.”

“Electricity just made life easier and I know I was lucky to be able to have those things.

“I never complain about the terrible lot of money it costs to run these things, because I know how costly it was before electricity.

“We needed to run an engine to get enough power to keep the battery charged. You would need fuel for the engine and you would have to replace the batteries. Without them though, it was pretty rugged out here.”

Ron passed away 20 years ago and since that time, Joy gets a helping hand from locals to do the work she now finds difficult.

Phil Mercer helps with the livestock side of the business, Emma Sharkie with paperwork, Frank Benhardt with chemical cactus control and Reg Hams does all of Joy’s track maintenance, soil conservation and weed control work.

She still produces wild peach pies that are legendary around the North East, using the “best wild peaches sweetened with honey – but not too much”.

With a lifetime spent caring for country on Bullyaninnie, Joy is very clear about what she wants her legacy to be.

*“I just hope that I will leave a better place than when we took over,” she said.*



*The Bullyaninnie homestead*



*Joy sets out for a day's work*



*The Three Sisters Hills*



*Cochineal at work*



*Community Landscape Officer Di Makotter and Joy spread cochineal at the property*



# Monitoring and maintaining your well

**Installing a groundwater well and water distribution infrastructure is expensive, so routine maintenance is important to ensure it operates effectively. Checking for signs of deterioration in well, pump or surface infrastructure can prolong the life of the well and reduce water point failure.**

Well casing and screens typically last from less than 20 years to more than 50 years depending on casing type, water temperature and quality. Well screens, where installed, can also clog and fail over time reducing the performance of the well and result in infiltration of sands and silts. The geological formation and aquifers the well intersected can also influence its life span.

## MONITORING WELL CAPACITY

Well capacity tests are a reliable method of testing well performance. If the test is carried out regularly it is possible to see if the well is deteriorating and liable to fail.

The test consists of measuring the drop in water level (referred to as drawdown) in a well for a given pumping rate and time. In an artesian well this can be measured as a drop in well head pressure. The well capacity is then calculated by flow rate (in litres/second or gallons/hour) divided by a change in pressure (well drawdown or pressure at well head).

A decrease in well capacity over time is a flag for further investigation as it may indicate a blockage in the screen or partially collapsed open hole or casing. In an artesian well water can be lost to a shallow permeable formation through failed casing.

## MONITORING WATER QUALITY

One of the easiest ways of monitoring for changes is by tracking water quality.

Groundwater quality is usually expressed as Total Dissolved Solids in units of milligrams per litre (mg/L). This value can be obtained by measuring the electrical conductivity of a sample in EC units and then converting to mg/L using the table below.

## TOTAL DISSOLVED SOLIDS CONVERSION TABLE

mg/L	EC unity at 25°C
250	455
500	910
750	1,360
1,000	1,810
1,500	2,710
2,000	3,600
2,500	4,480
3,000	5,300
4,000	7,100
5,000	8,800
10,000	17,000
15,000	25,000

**Formulas for quick approximate conversion:**  
 EC units x 0.6 = mg/L  
 mg/L x 1.8 = EC units

The salinity of groundwater sourced from a well can change over time and while there are a number of factors that cause salinity to increase, it could be a sign of well failure as a result of corrosion of steel casing, collapse or separation of PVC or fiberglass casing, or failure of grout of

pressure cemented wells. If not addressed the leakage can lead to saline water from a shallow aquifer entering the well and possibly contaminating the usable aquifer.

If there is a change in well capacity or water quality, engaging a licenced driller is typically required to investigate and diagnose down-hole issues and provide well repair options. Under the Landscape SA Act 2019 a permit is required to construct, deepen, rehabilitate or backfill an existing well deeper than 2.5m and a licensed driller must carry out this work.

The Department for Environment and Water (DEW) can provide technical advice on well condition monitoring and well maintenance. Email DEW Water Resource Monitoring Unit [DEW.ResourceMonitoring@sa.gov.au](mailto:DEW.ResourceMonitoring@sa.gov.au)

For water well permits to undertake maintenance works or backfill and construct wells contact DEW Water Licensing and Permits on 8735 1134 or [DEWNRSEWaterLicensing@sa.gov.au](mailto:DEWNRSEWaterLicensing@sa.gov.au)

Online Permit Applications can be accessed at: [forms.business.gov.au/smartforms/sa-dfw/well-construction-permit-html](https://forms.business.gov.au/smartforms/sa-dfw/well-construction-permit-html)

For information on funding opportunities for water management, copies of well maintenance sheets and all other Great Artesian Basin and Far North Prescribed Wells Area enquiries:

Senior Water Resource Officer or Water Project Officer on 8648 5307 or [saaridlands@sa.gov.au](mailto:saaridlands@sa.gov.au)

# Field trial to test water accounting methods

Expressions of interest are being called for from landholders interested in being involved in a field trial to test water accounting methods.

## WHAT YOU CAN DO TO MAINTAIN YOUR WELLS

- Measure and record well water level or pressure
- Test and keep a record of the well capacity
- Test the water salinity
- Check the water for suspended solids by collecting a sample in a bucket and allowing material to settle
- Carry out pump maintenance in accordance with manufacturers specifications
- Repair or replace leaking surface pipework and fittings
- Ensure the wellhead and surrounds are well drained

Applications are open until Thursday 14 April and will be followed by the development of a project and more detailed project plan between the applicant and the Water Accounting project team.

The trial has been boosted by \$45,000 from the Federal Government's \$5 billion Future Drought Fund for a project to identify water-smart technology suitable for the arid South Australian pastoral zone and assess its economic and environmental benefits.

The additional funding will complement the field trials and allow investigation of metering and monitoring methods for water point management.

## WATER ACCOUNTING ADVISORY GROUP

The board's Water Accounting Advisory Group was formed last year. Members have met regularly to understand the project and raise community concerns about the project and water accounting. Members have been actively involved in identifying water accounting methods requiring field trial. On the advisory group are: Donnagh Clarke (Allandale Station), David Bell (Dulkaninna Station), Jake Fennell (Wintinna Station), Tony Williams (Mt Barry Station), Peter Litchfield (Mundowdna Station), Richard Halliday (Mallee Downs), Tim Flowers (Board Member and Water Advisory Committee Representative), Aaron Smith (Senior Water Resource Officer) and Melissa Horgan (Water Project Officer).

Further information about the trial of water accounting methods is available at [www.landscape.sa.gov.au/saal/water/water-accounting](http://www.landscape.sa.gov.au/saal/water/water-accounting) or by contacting Aaron Smith at [aaron.smith3@sa.gov.au](mailto:aaron.smith3@sa.gov.au) or 0417 643 956 or Melissa Horgan at [melissa.horgan@sa.gov.au](mailto:melissa.horgan@sa.gov.au) or 0409 896 402.



## Do you own a GAB well?

Owners of Great Artesian Basin wells should act now to secure co-funding in the Improving Great Artesian Basin Drought Resilience (IGABDR) program for eligible projects.

The program ends in June 2024 and landholders are encouraged to submit an Expression of Interest now. The EOI does not bind the applicant and enables the project to be reviewed for eligibility and funding. As landholders are aware, it can take time to secure contractors for well repairs or installation so it is important to act now to ensure project completion before the end of the program.

Find out more about the program at [www.landscape.sa.gov.au/saal/water/Improving\\_Great\\_Artesian\\_Basin\\_Drought\\_Resilience](http://www.landscape.sa.gov.au/saal/water/Improving_Great_Artesian_Basin_Drought_Resilience) or contact Aaron Smith on 0417 643 956 or [aaron.smith3@sa.gov.au](mailto:aaron.smith3@sa.gov.au)

## 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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National  
Landscape  
Program

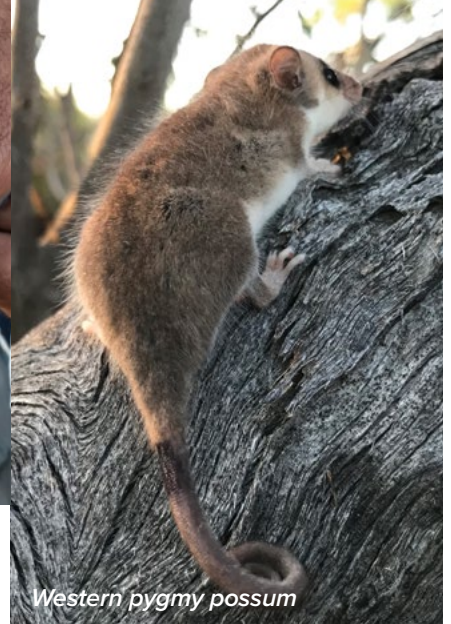


Government of South Australia  
South Australian Arid Lands  
Landscape Board

# Monitoring uncovers an abundance of wildlife



Mitchells hopping mouse



Western pygmy possum

## A Sandhill Dunnart monitoring program has uncovered an abundance of wildlife in the Gawler Ranges.

From the most common Starred knob-tailed gecko (*Nephrurus stallatus*) to rare encounters with a Southern Blind snake (*Anilius bicolor*) and a spinifex slender blue-tongue lizard (*Cyclodomorphus melanops*), it was the greatest number of trapped wildlife some members of the monitoring crew had experienced.

Over 10 days, pitfall traps were set across sites on the Gawler Ranges National Park, and adjoining private properties. In the national park 23 different species were trapped, which included 16 reptiles and six mammal species. On surrounding properties, 19 different species were trapped, including 15 reptile and five mammal species.

Twice as many animals were caught across the national park, compared to surrounding land, with 90 captures (42 reptile and 48 mammals) over the period.

Most common were the very cute Western Pygmy-possum (*Cercartetus concinnus*), the Starred Knob-tailed Gecko (*Nephrurus stallatus*), and the Mitchell's Hopping-mouse (*Notomys mitchelli*).

The rarely-sighted Southern Ningauai (*Ningauai yvonneae*) was also found on park.

As for the Sandhill Dunnart (*Sminthopsis psammophila*), it proved elusive with just one capture recorded outside the national park.

SA Arid Lands Senior Community Ecologist Kristian Bell said the capture of an endangered Sandhill Dunnart represents a significant record in an under-surveyed area.

"Finding the dunnart reinforces the role and importance of lands outside of national parks in the conservation of our native animals," he said.

The monitoring team included ecology and engagement staff from the SA Arid Lands Landscape Board, volunteers and Working on Country Rangers from the Gawler Ranges National Park.

*The monitoring program took place through the Bounceback and Beyond Project, which is supported by the SA Arid Lands Landscape Board, through funding from the Australian Government's National Landcare Program.*

*The Sandhill Dunnart survey took place on the country of Barngarla, Kokatha and Wirangu people, collectively known as the Gawler Ranges People.*

*Members of the Sandhill dunnart monitoring team were, from left, Rob Brandle, Lindsay Brown, Markus Rohl, Alice Smith, Sarah Butcher, Nadine Brown and Abbey Dean*



Southern blind snake



Starred knob-tailed gecko



Sandhill dunnart

