



Kangaroo Island Landscape Board Progress Report

April — June 2023

Nurturing Kangaroo Island's landscapes together to create a thriving sustainable future

This is the vision of the Kangaroo Island Landscape Board (the Board). This report captures the work undertaken through Board projects from 1 April to 30 June 2023 to deliver this vision.

Formed in 2020, the Board aims to deliver practical, on-ground programs to help manage the island's water, land and soil, pests, and biodiversity in partnership with farming groups, environmental non-government organisations, local councils and community groups. The Board consists of seven members, including a Chair, Andrew Heinrich. They have developed a *Kangaroo Island Landscape Plan 2021-2026* (the Plan), which combines community values, local knowledge and scientific evidence into a strategic road map to guide how the Board will work in partnership with the community and investors to support the recovery and management of Kangaroo Island's landscapes into the future. The Plan aims to strike a balance between productivity and profitability, and looking after the environment to maintain biodiversity. The plan contains five regional priorities, each with a suite of focus areas to guide the actions for the Board and the wider regional community over the next five years.

 COMMUNITY	<p>Priority: A connected community at the centre of decision making</p> <p>Focus areas:</p> <ul style="list-style-type: none"> Working with all sectors of the community to improve the island's landscapes Making decisions based on the best available scientific, local and traditional knowledge Understanding, valuing and taking care of the natural environment and cultural heritage
 BIODIVERSITY	<p>Priority: Healthy terrestrial and marine ecosystems and biodiversity</p> <p>Focus areas:</p> <ul style="list-style-type: none"> Safeguarding the structure and function of habitats and ecosystems Protecting biodiversity to minimise species loss Improving our understanding of the environment and the beneficial role it plays
 ECONOMY	<p>Priority: Sustainable primary production and the island's economy</p> <p>Focus areas:</p> <ul style="list-style-type: none"> Improving the health of the soil, water and biodiversity that supports our economy Strengthening the viability of primary production through sustainable practices Working in partnership with industry to ensure the island's economy continues to prosper
 WATER	<p>Priority: Effective water management</p> <p>Focus areas:</p> <ul style="list-style-type: none"> Managing water resources sustainably and equitably for all users Improving water quality in the island's catchments and wetlands Protecting aquatic biodiversity and ecosystems
 PESTS	<p>Priority: Effective terrestrial and marine pest management</p> <p>Focus areas:</p> <ul style="list-style-type: none"> Controlling and, where possible, eradicating weeds, pests and diseases Strengthening KI's biosecurity arrangements Managing the impact of overabundant native species

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Cover image: KI Native Plant Nursery Manager Jo McPhee working with KICE students from to revegetate a waterlogged area at Parndana Campus.

Water Resources Management

Overview:

This program supports the Kangaroo Island (KI) community to manage their water resources in line with the *Landscape South Australia Act 2019*.

Key achievements April–June 2023:

- Delivered over 250 water security maps to over 30 landholders. The water security maps show dam catchment areas, drainage lines, and modelled inflow relative to dam capacity under the current climate, intermediate (RCP4.5) and high (RCP8.5) emission scenarios. *RCP, or Representative Concentration Pathway, is a greenhouse gas concentration trajectory adopted by the Intergovernmental Panel on Climate Change (IPCC).*
- Conducted the first Kangaroo Island Water Policy Sub-committee meeting on 23 May 2023.
- Measured streamflow 25 times at a range of sites and water levels. Streamflow measurements are used to produce a calibrated streamflow time series based on the logged water level time series.

Community engagement:

- Delivered four presentations on climate change and water security to 20 people over two workshops.
- Advised 60 people about water resources management and the requirement for Water Affecting Activities permits and development applications. Advice focussed on assistance with several flood damaged crossings and forestry transition.
- Assessed one Water Affecting Activity permit.



250
water security maps
made for 30 landholders

60
people assisted to
manage water resources

Links to KI Landscape Plan

- Effective water management
- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy

Funded by:

- Government of South Australia:
 - » State Appropriations
- Australian Government:
 - » Future Drought Fund – NRM Drought Resilience Grant

Future directions and upcoming events:

- Review the KI Water Affecting Activities policy taking into account additional monitoring records, mapping layers, changes to legislation and the *KI Ecologically Sustainable Water Take Limits project* final report.

Image left: Significant overflow from the Cygnet River main channel through the Gums/Chain of Ponds Cygnet River overflow. Streamflow was recorded at 15 kilolitres per second at 11 am on 26 June 2023.

Invasive Species Control Program

Overview:

This program manages declared weed and pest animal species in accordance with risk assessment priorities and regional management plans.

Key achievements April–June 2023:

Declared weeds:

- Horehound was controlled along roadsides at Emu Bay, Cassini, North Cape and on the Dudley Peninsula. Mouth Flat Road was included in the program this year.
- The Board has been controlling Italian buckthorn on Kangaroo Island since 2006. It appears to have a very long lived seed and is spread by birds. This year all known sites were revisited over 750 ha, including the four main sites at Kingscote, Smiths Bay, Emu Bay and Grassy Flat on the Dudley Peninsula. 3,000 plants, ranging from seedlings to 3 m tall, were controlled using cut and paint, and herbicide spray.
- Follow up control of Aleppo pine was conducted over 18 ha of roadside vegetation along the Hog Bay Road near Pelican Lagoon on behalf of the Department of Infrastructure and Transport. Around 1,000 trees from 1–6 m were controlled using the cut and paint method.
- Follow up control of about 30 fountain grass plants over 0.6 ha was conducted at Emu Bay using herbicide spray. Not much fountain grass is known to occur on Kangaroo Island.
- Salvation Jane was controlled along the Sheridan Track at Western River Cove.
- Radiata pine was mapped along roadsides.
- Animal and Plant Control Officer Jason Walter investigated Sicilian sea lavender on Kangaroo Island with Chris Brodie, weed botanist from the State Herbarium.

Tasmanian bluegum wildling control

- Megan Tutty joined the team as the new Project Officer, Tasmanian Blue Gum Management.
- The nature and extent of past and future work, and control methodology of Tasmanian blue gum wildling work, was reviewed.
- Initial and follow up Tasmanian blue gum wildling control sites were visited.

Declared animal management:

- Of the 10 domestic pig owners across Kangaroo Island, nine have had their permits issued, with the final outstanding permit to be issued early in July. This is an outstanding outcome and the Board thanks the owners for their proactive approach to managing pigs.
- All domestic goat property inspections have been undertaken and permits updated. There was one new owner reported by a community member, the Board are working to help this owner to become compliant with the policy.

750
ha of Italian buckthorn controlled

1,000
Aleppo pine plants found & removed

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective terrestrial and marine pest management



- Community reports alerted staff to a potential dingo. This was investigated and proven not to be a dingo. Community information continues to be a critical tool in the Boards management of declared plants and animals.
- Work on the eradication programs for feral cats and feral pigs continued (see reports on pages 6, 7 and 8).

Community engagement:

- Veronica Bates has retired after 15 years of service.
- Animal and Plant Control Officers responded to 22 public inquires about weed identification and control methods.
- The Tasmanian Blue Gum Project Officer has visited several plantation properties, including Kilands, and contacted all plantation holders to discuss Tasmanian blue gum wildling control.
- Met with Minister Close on 22 June with the Board and discussed the Tasmanian blue gum wildling issue and progress of control work to date.

Future directions and upcoming events:

- Landholders are encouraged to book the Board's weed wiper to conduct Cape tulip control.
- Continued seasonal control of declared weeds, including African boxthorn, one-leaf Cape tulip, bridal veil and bridal creeper.
- Conduct a trial to evaluate the suitability and cost effectiveness of drones to detect and map African boxthorn for control.

Image previous page below left: Chris Brodie photographing Sicilian sea lavender infestation at American River.

Image this page below: Fountain grass infestation at Emu Bay (Department for Environment and Water (DEW)).



33
people assisted with weed management

9
domestic pig owners assisted

Funded by:

- Kangaroo Island Landscape Levy
- Government of South Australia: » Landscape Priorities Fund

Feral Cat Eradication Program

Overview:

The aim of the KI Feral Cat Eradication Program is to eradicate feral cats from KI, beginning on the Dudley Peninsula and then moving west across KI. The program is being led by the KI Landscape Board in partnership with the Kangaroo Island Council, Nature Foundation and many other partners.

Key achievements April–June 2023:

- Eradication work continued over the Dudley Peninsula with 45 feral cats removed.
 - » 33 feral cats were culled by KI Landscape Board staff over 4,833 trap nights using a combination of soft-jaw foothold and cage traps. The network of feral cat traps were checked five days a week by six staff during the reporting period.
 - » 12 feral cats were removed by Felixer™ Grooming Traps this quarter.
 - » During this quarter feral cat control work focussed on expanding trapping efforts west, resulting in 85% of the Dudley Peninsula now being covered by feral cat traps.
 - » Feral cats re-invading areas already treated continued to be targeted.
- The key strategy during this quarter was to use information gained by the 4G camera network to target specific feral cats. This strategy focussed trapping efforts during the warmer period where cage trap efficacy is low and off-target captures are comparatively high (due to increased goanna activity).
- The pattern of feral cat encounters at cameras between June 2022 and 2023 was analysed.
 - » Based on our observations, it appears that where feral cat densities are low (e.g. in the eastern part of the Dudley Peninsula), individual feral cats encounter cameras more often as they explore new territories.
 - » The decline in feral cat numbers is supported by the analysis of catch per unit effort data, which has continued to decline. This indicates the population is reducing as more effort is required now to capture feral cats compared with 2020.
- The array of 210 4G connected cameras continue to monitor feral cat movements and threatened fauna sightings across the Dudley Peninsula. Initial monitoring has provided a baseline dataset of the presence and absence of KI short-beaked echidnas and other fauna on the Dudley Peninsula.

45
feral cats culled across
the Dudley Peninsula

446
feral cat traps
in operation

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective terrestrial and marine pest management

Visit the
[Feral Free Kangaroo Island Facebook page](#)
to learn more

- » An AI identification system has been used through eVorta to recognise native fauna in images collected by the cameras. KILB staff have trained the image recognition algorithms so eVorta can now detect KI echidnas, southern brown bandicoots, little penguins, hooded plovers and bush stone curlews from dark and blurry images, and images where only a small part of the animal is visible. This has improved the accuracy of the program, providing a valuable tool for research on these species for all eVorta users.
- » Results from the camera network have shown the KI echidna population appears to be stable across the Dudley Peninsula. Seasonal patterns of KI echidna movement were detected with the highest levels of activity in late winter and early spring. The highest number of echidna sightings were associated with continuous native vegetation. KI echidnas were also seen in areas associated with remnant native vegetation but at slightly lower frequencies. Cameras in open farmland had the least sightings.

Community engagement:

- An on-line survey was conducted through Survey Monkey for 20 days in June to gauge the level of community support for the eradication of feral cats on the Dudley Peninsula and the whole of Kangaroo Island.
 - » 204 people completed the survey. The results showed there is still overwhelming community support for the project, with 96.57% (197 respondents) in favour of eradicating feral cats on the Dudley Peninsula and 96.08% (196 respondents) in favour of eradicating feral cats from Kangaroo Island as a whole.
 - » The high level of support is mirrored by KILB staff levels of access to properties on the Dudley Peninsula, with 94% of properties approached permitting access. The areas that we cannot access account for 2.31% of the land area and should not impact our ability to complete the program.
- A brochure was developed for local accommodation on the Dudley Peninsula to promote the project and a fact sheet promoting latest project work was developed.

Future directions and upcoming events:

- Paul Jennings will join the team as Project Leader in July.
- Continue with the increased trapping effort across the Dudley Peninsula over the cooler winter months.
- Conduct a feral cat trapping blitz with the community on the Dudley Peninsula in July and August 2023.
- Determine robust methods for quantifying changes in cat-borne diseases in the environment and in livestock as a result of reductions in feral cat numbers through control and eradication.

Images previous page: The eVorta AI is now able to identify KI echidnas from dark and blurry images. The far left image is what was captured by remote camera. The right image has been rectified post-identification by eVorta.

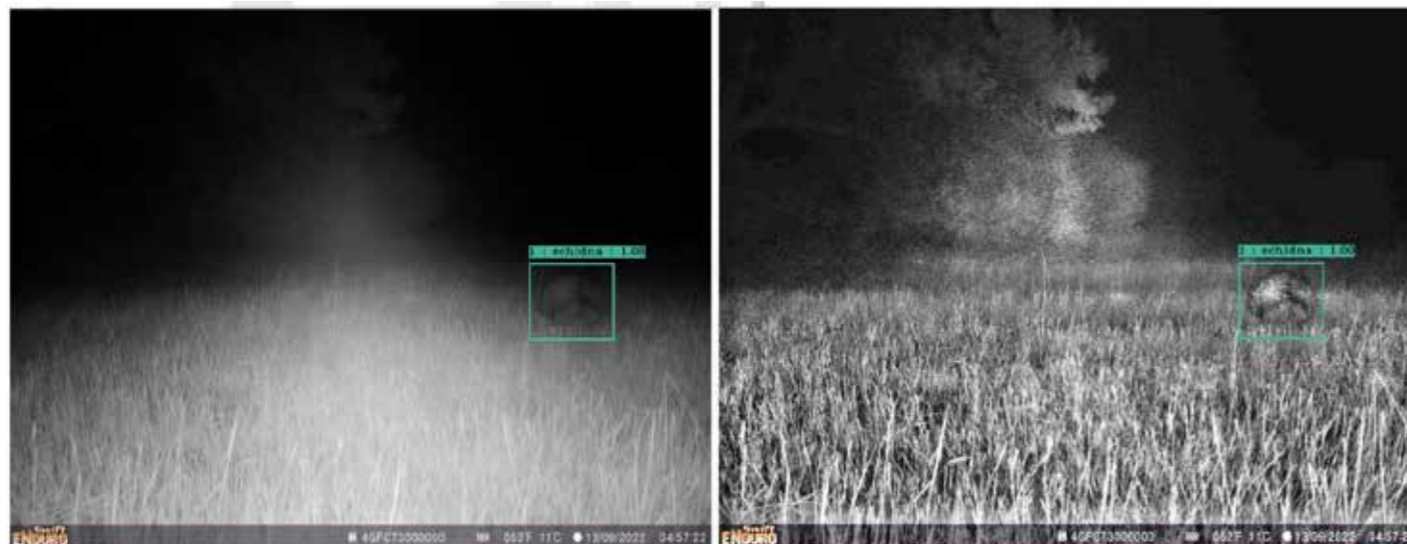
Image this page: The only image of a southern brown bandicoot captured on the Dudley Peninsula over the past year.

204
people completed
on-line survey

96%
KI residents supportive of
feral cat eradication on KI

Funded by:

- Government of South Australia:
 - » Landscape Priorities Fund
- Australian Government:
 - » Regional Land Partnerships
 - » Smart Farms Small Grants
- Foundation for Rural and Regional Renewal
- Members of the public



Feral Pig Eradication Program

Overview:

The program aims to eradicate feral pigs from KI across private and public land, parks, reserves, forestry and agricultural farmland using a coordinated landscape approach. This program is led by the Department of Primary Industries and Regions (PIRSA) in close collaboration with the Landscape Board and KI National Parks and Wildlife Service (NPWS). The achievements below are a record of the direct contributions made by Landscape Board staff.

Key achievements April–June 2023:

- The Feral Pig Control Officer and Feral Animal Control Officer continued to track, monitor and pursue feral pigs on foot. Two boars were removed.
- The Feral Animal Control Officer participated in the final Thermal Assisted Aerial Cull (TAAC) as part of the Department for Environment and Water Aerial Marksman Team. The TAAC operation began in mid-April and continued through to the end of June.
- Both Control Officers continued to assist with the deployment and maintenance of the feral pig camera monitoring network, inspecting and servicing cameras throughout the monitoring area. This system has greatly assisted in targeting aerial effort.

Community engagement:

- During the reporting period, the Control Officers engaged with eight KI landholders to undertake control, monitor for feral pig sign and discuss different aspects of the Feral Pig Eradication Program.

Future directions and upcoming events:

- The Feral Animal Control Officer will assist with on-ground control work, focussing on searching for signs of feral pigs, establishing and monitoring free-feed stations, maintaining the 4G camera network and responding to feral pig detections with targeted baiting and ground shooting.

Map of feral pig control since 2019

KEY

- + Location of feral pig control
- + Location of feral pig control this quarter



2
feral pigs removed

8
landholders assisted with feral pig control

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective terrestrial and marine pest management

Funded by:

- Government of South Australia
 - » National Disaster Recovery Funding Arrangements through the Minister of Primary Industries and Regional Development

Image below: Map of feral pig control undertaken since 2019.

Kangaroo Island Native Plant Nursery

Overview:

The Kangaroo Island Native Plant Nursery grows over 150 different species of KI native plants, which can be used for revegetating land, windbreaks, coastal plantings and home garden use. The Nursery Manager is available for native vegetation management advice to assist landholders with their projects.

Key achievements April–June 2023:

- Continued to finalise plant numbers for orders and prepare individual orders ready for collection. This involved coordinating extra plants to fill late orders and included reassigning plants from a large order that was cancelled.
- A new volunteer began weighing seed and entering details into the seedbank database.
- Commenced propagation of cuttings for next year's growing season and prepared seed to sow for winter germinating species.

Community engagement:

- Landholders began collecting their ordered plants in May.
- Volunteers donated over 120 hours to help with weeding tubestock and getting orders ready for collection.
- Advised and supplied banksia seed to a PhD student for a germination trial.
- Conducted several site visits to assist landholders with their projects.
- Coordinated a days work experience for a student at the nursery who assisted with seed cleaning and cutting propagation.



orders prepared for
168
landholders & community groups

assisted KICE students to plant
200
plants

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy

Funded by:

- Australian Government:
 - » National Landcare Program Regional Land Partnerships
- Prince Albert II of Monaco Foundation
- Collette Travel

- Visited KI Community Education (KICE) Parndana Campus for an information and planting session with year 9 students undertaking a KI Grassroots Grants project. [See link for article.](#)

Future directions and upcoming events:

- Trial growing different species from cuttings that are difficult to propagate from seed.
- Install an app for mapping seed collection sites.

Image left: Nursery Manager Jo McPhee helping Kate Stanton collect her ordered plants.

Sustainable Agriculture Program

Overview:

This program uses a holistic, systems approach to assist primary producers to improve soil health and increase on-farm diversity as the basis for resilient grazing and cropping systems.

Key achievements in community engagement

April–June 2023:

- The Water Management Module was presented to Property Management Planning participants by the KILB Water Officer on 1 and 2 of May 2023.
 - » This module explored: farm hydrology; future impacts of current climate change projections on rainfall, evaporation and surface water flows over the next 80 years; water reliability and strategies to improve water security; farm water requirements; dam construction and maintenance considerations; best practice watercourse management; and legislation, regulations and permits relating to water affecting activities on KI.
 - » All participants were offered free water quality testing to assist them with water management on their farms.
 - » The KILB Sustainable Agriculture Project Officer visited property managers who were unable to attend the module to supplement the training and information they missed.
- The Financial Management Module was presented to Property Management Planning participants by Financial Consultant Beck Burgess on 28 June 2023.
 - » This on-line session guided participants through: clarifying financial objectives; understanding profit and loss; understanding balance sheets; and the importance of cash flow budgeting.
 - » All participants were also offered one-on-one training with Beck Burgess to further develop their understanding of their financial management.
- Landscape Board Soil Extension Officers visited Kangaroo Island from 3–5 May to share their knowledge and skills. On 3 May the team met and shared a range of their skills and explored soil pits at a demonstration site.
- 15 people participated in a viticulture soil day at Bay of Shoals and False Cape Wineries on 4 May with the Soil Extension Officers. The day explored two viticulture demonstration sites and focussed on soil and viticulture health.
 - » Each participant received a folder with relevant material from a number of sources, including information about how to calculate moisture retention in the soil profile and record soil type and pedology.

2
PMP modules on water and financial management held

15
people attended viticulture soil day

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Sustainable primary production and the island's economy

Funded by:

- Australian Government:
 - » National Landcare Program Regional Land Partnerships
 - » Smart Farms Small Grants Program
 - » Future Drought Fund

- » Within a week of the event one viticulturist implemented two of the strategies suggested and another winery is keen to become a demonstration site to trial soil pits and soil moisture water monitoring equipment.
- A biochar training day was held on 5 May at American River with a local viticulturist.
- The Soil Extension Officer gave a presentation about soil health to 20 local people at the Kingscote Community Hub garden on 23 May.
- A soil management workshop was held on 26 June 2023 with mentor Kim Deans from *Reinventing Agriculture* and the four farmers who have been trialling different sustainable agricultural practices on their properties since 2019. The workshop provided the demonstration farmers with an opportunity to discuss the practices and strategies they implemented, and share their challenges and achievements with each other. Kim Deans reviewed, analysed and summarised the results of soil monitoring data and soil health improvements achieved on the demonstration farms during the project. Future actions and engagement with the group were also discussed.
- The Soil Extension Officer has been assisting four farmers to trial different biological soil treatments on their properties. Treatments included combinations of different biological stimulants and microbiology including compost tea, CropBiolife, vermicaste, and commercial microbiological treatments.
- A Growing KI newsletter was published in [June](#) and [April](#).
- The Rural Solutions SA Senior Land Management Consultant supported 14 KI farmers to undertake and interpret the results of 41 soil tests taken on their properties between December 2022 and June 2023. Using this information they were able to provide the landowners with advice on how best to manage their paddocks for soil acidity.

14
farmers assisted to interpret 41 soil tests

2
Growing KI newsletters published

Future directions and upcoming events:

- Edward Scott, President of Soil Science Australia and Primary Advisor of Soil and Land Co. will present the Soil Module to Property Management Planning participants on 1–2 of August. The module will guide participants through the physical, chemical and biological factors of soil health, and how land management practices can influence these factors positively. Ed will also give one-on-one advice to participants about their soil management following the module.
- Re-establish a KI soil health community of practice in soil health.
- Establish a new demonstration site to trial using biology with cover crops to improve soil carbon.

Images previous page: Left: Participants at a soil pit with Geoff Kew on the Soil Extension Officer training day. Right: Explaining the peak, plateau and maturation period of microbiology in the compost and brewing process on farm.

Images this page: Left: Carly Bussenschutt and Lang Wilmott making compost tea. Right: Adam Bussenschutt spreading compost tea.



KI Narrow-leaved Mallee Woodland Threatened Ecological Community Recovery Program

Overview:

This project will improve the condition, extent and connectivity of remnant KI Narrow-leaved Mallee woodland community patches through direct investment in threat mitigation actions and empowering landholders to undertake best practice management of narrow-leaved mallee on their properties.

Key achievements April–June 2023:

- Landholders protected 140.4 ha of remnant native vegetation and KI narrow-leaved mallee woodland from stock grazing and trampling.
- Landholders revegetated 6.5 ha of KI narrow-leaved mallee woodland to strengthen corridors between remnant vegetation patches.
- Landholders installed seven creek crossings to protect watercourses stock access and erosion.

Community engagement:

- Technical advice relating to managing and restoring KI Narrow-leaved Mallee Woodland was given to 34 farmers, 11 lifestyle property owners, six government officials, three commercial business owners, two real estate agents, two viticulturists, one botanist and one student.
- A *Kangaroo Island Narrow-leaved Mallee Woodland Management Guidelines for Landholders* was developed. The guidelines cover all aspects of management from fencing and revegetation to ecological burning and coppicing.

Future directions:

- This project is now complete. Since 2018 this project has assisted landholders to protect 412.7 ha of KI Narrow-leaved Mallee Woodland Threatened Ecological Community (NLM TEC) and revegetate 32.8 ha of NLM TEC.
- To support this work the KI Native Plant Nursery has grown over 35,000 seedlings that have been used to restore NLM TEC throughout the project.
- During this time bridal veil (*Asparagus declinatus*) was controlled over 4,500 ha to reduce invasion of NLM TEC.
- Over the course of the project 60 landholders participated in the on-ground works grant scheme and technical advice about managing NLM TEC was given to over 300 landholders.



60
people advised about KI narrow-leaved mallee

140
ha of KI narrow-leaved mallee protected

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity

Funded by:

- Australian Government: National Landcare Program Regional Land Partnerships

Image below: Revegetation of KI Narrow-leaved Mallee Woodland on the Dudley Peninsula.

Australian Sea Lion Recovery Program

Overview:

This project will conduct a comprehensive risk assessment across the 80 known breeding sites of the Australian sea lion to conduct a risk assessment that identifies key threats and prioritises the future actions to be implemented to recover the species. This assessment will be produced to inform a review of the Australian Sea Lion Recovery Plan, and two national scale workshops will provide a clear strategic opportunity to discuss priorities under-pinning a proposed National Australian Sea Lion Recovery Team.

Key achievements April–June 2023:

- A comprehensive review of published and unpublished data on threats to Australian sea lion populations has been undertaken, and spatial data collected, for use in a risk assessment for Australian sea lion populations. Spatial data encompasses breeding sites and surrounding seas, and includes physical characteristics and anthropogenic risk factors like fisheries distribution, aquaculture production, climate change indicators, proximity to coastal development, and ecotourism. Statistical analysis will correlate risk factors and breeding site trajectories.

Community engagement:

- The first meeting of the National Recovery Team for the Australian sea lion was held in Adelaide on 24 May 2023. The meeting was attended by representatives from the SA Department for Environment and Water; Department of Climate Change, Energy, the Environment and Water; Conservation Council of SA; Western Australian Department of Biodiversity and Attractions; the Australian Marine Conservation Society; Landscapes SA, the science community and Aboriginal representatives. The team will support the Australian Government to develop and implement an updated recovery plan for adoption by the Federal Minister for the Environment and Water later this year.

Future directions and upcoming events:

- Statistically analyse risk factors and breeding site trajectories to undertake a spatial risk assessment for the Australian sea lion. This will be completed by South Australian Research and Development Institute (SARDI).
- Complete the final report containing results from a species-wide risk assessment for the Australian sea lion, research highlights, needs and knowledge gaps, and prioritised on-ground actions to support the recovery of populations.

Image right: The newly formed National Recovery Team for the Australian sea lion.



16
data sets synthesised as basis of risk assessment

1
meeting of newly formed national recovery team

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy

Funded by:

- Australian Government:
 - » National Heritage Trust Emerging Priorities

Glossy black-cockatoo Recovery Program

Overview:

This project will deliver emergency interventions for SA glossy black-cockatoos (*Calyptorhynchus lathami halmaturinus*) affected by bushfires to assist with their recovery, including protecting glossy black-cockatoo (glossy) nests from predators to improve nesting success.

Key achievements April–June 2023:

April to June is the peak nesting period for glossy black-cockatoos, so the team have been busy protecting nests from predators and competitors and monitoring breeding success.

- Four new nest trees were found. Collars were installed around their trunks and their canopies were pruned to exclude possums.
- Eight tree collars on existing nest trees were repaired, and 11 nest trees had their canopies pruned to exclude possums.
- Four feral European honey bee hives in nest trees were treated and then removed.

Nest boxes installed by the project, and natural tree hollows used by glossy black-cockatoos, were monitored for breeding success.

- Of the 96 nest-boxes monitored regularly in 2023, only 14 have not been used this year so far, meaning 85% of our nest boxes have been used by either glossy black-cockatoos, yellow-tailed black-cockatoos or barn owls for breeding.
- We have recorded 82 glossy black-cockatoo breeding attempts, 46 of which have successfully produced a nestling. Some glossy black-cockatoo nests are ongoing and will continue to be monitored in July and August.
- 21 yellow-tailed black-cockatoo nesting attempts have been recorded, with 16 producing a nestling.
- There have been 12 successful barn owl nests, each producing between 2–5 nestlings, and a further two nests are at egg stage currently.
- Nest box programs in other parts of Australia are not always so successful. In the eastern states nest boxes have not been taken up in good numbers by black-cockatoos. The high rates of nest box use by multiple species on KI indicates large tree hollows are a limited resource here. Our data shows that following the loss of many hollow-bearing trees used by glossy black-cockatoos in the 2019-20 bushfires, nest box use has increased.



4
new glossy nest trees
found

46
successful glossy nests
this season

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Effective terrestrial and marine pest management



This breeding season 45 glossy black-cockatoo nestlings have been leg-banded.

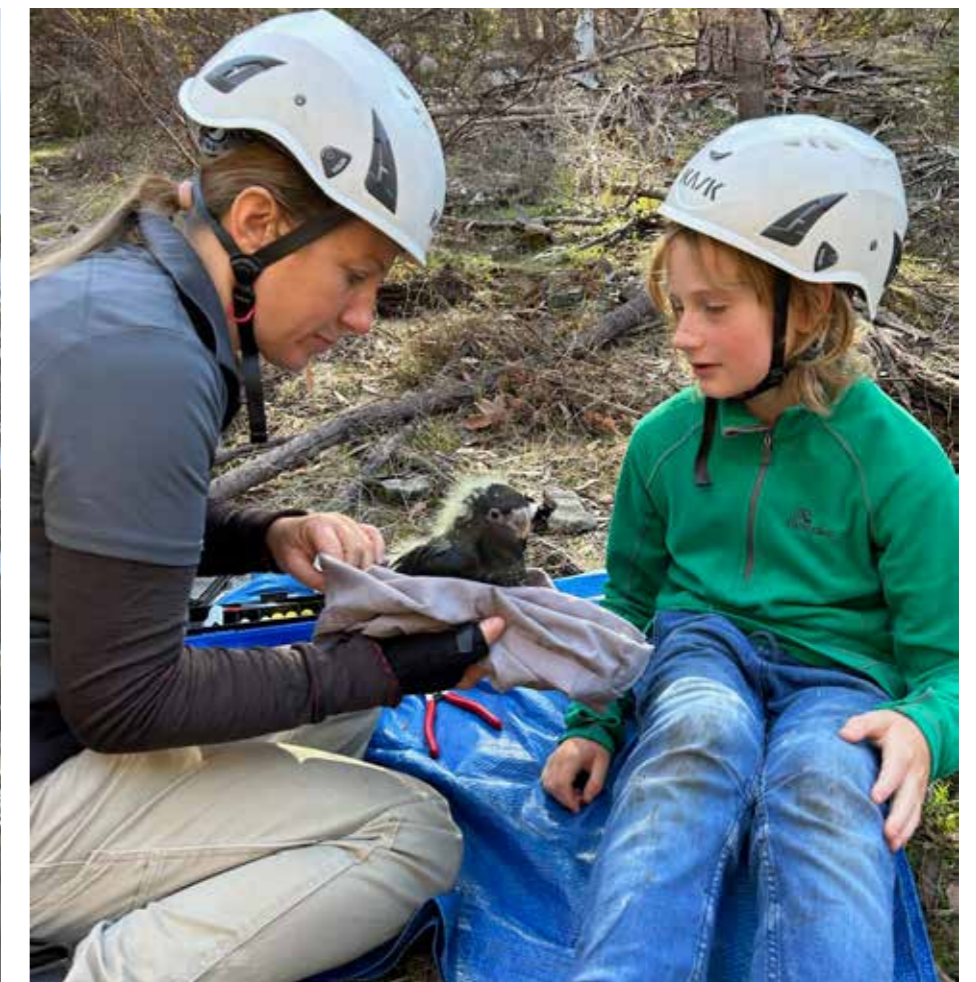
- This is the highest number of nestlings banded since the leg banding program began in 1995.
- Band re-sighting data obtained since 2013 has been analysed. The data shows:
 - » 32% of all birds banded in the last decade have been re-sighted.
 - » Where nestlings fledge from has the biggest influence on whether they make long-distance movements or not.
- This data is being further analysed so it can be published later in the year.

Community engagement:

- A KICE work experience student came out with the program to band glossy black-cockatoo nestlings.

Future directions and upcoming events:

- Small planting days are planned to help landholders plant drooping sheoaks.
- The annual glossy black-cockatoo census will be held between July and September.
- Post-fire data will be compiled and analysed to inform planned articles relating to the work of the recovery program since 2020.



45
glossy nestlings
banded

32%
glossies banded in last
decade re-sighted

Images: Previous page left: Glossy black-cockatoo nestling.

Previous page right: Using a camera atop an extendable pole to monitor an artificial nest box.

This page left: Climbing a sugar gum to maintain a hollow used by glossies.

This page right: Preparing a glossy nestling for measuring and banding.

Kangaroo Island Dunnart Recovery Program

Overview:

This project will support the recovery of the Kangaroo Island dunnart following the 2019–20 bushfires by implementing key priorities of the *2011 Recovery Plan for the Kangaroo Island dunnart* and the 2019 draft *Conservation Advice for the Kangaroo Island dunnart*.

Key achievements April–June 2023

- Artificial habitat refuges for KI dunnarts made of corrugated iron sheeting and terracotta tiles were trialled and tested for their thermal suitability at burnt and unburnt sites within known KI dunnart habitat.
 - » KI dunnarts visited 68% of refuges. At burnt sites 100% of refuges were visited and 75% were entered, whilst at unburnt sites 35% of refuges were visited and 25% entered.
 - » 31 individuals (9 females and 22 males) were captured at the artificial refuges over three separate fortnightly trapping events.
 - » Corrugated iron and terracotta tile artificial refuges showed similar thermal properties under typical ambient temperature ranges.
 - » Preliminary results show both artificial refuge types can provide protection during fire and are suitable for KI's environment.
 - » During fires, site selection appears to be the key determining factor for success. Habitats with an open canopy yield better results.
 - » The findings indicate that habitat augmentation may play a key role in providing critical habitat refuges for the KI dunnart and could aid their rapid recolonisation and survival following future prescribed burning and bushfires.
- 70 fauna surveys were undertaken in long-term KI dunnart sites. 60 sites were within the known contemporary range of the species and 10 sites were outside of this range, but within the species historic (former) range.
 - » KI dunnarts were recorded at 42 of the 70 sites on 249 separate occasions. KI dunnarts were detected at 70% of the sites within the contemporary range of the species. No KI dunnarts were detected within their species historic (former) range.
 - » KI dunnarts were detected at a higher number of burnt sites compared to un-burnt sites, 79% and 48%, respectively.

Community engagement:

- 19 landholders were engaged in a 'Farmer Blitz' program to trap feral cats across an area of approximately 20,000 ha around Stokes Bay.
 - » During the 'Farmer Blitz' farmers managed 124 cage traps fitted with wireless Celium sensor nodes linked to a new mobile app Trap.OZ. KILB supported the blitz by managing a further 174 cage traps along roadsides surrounding, and within, the control area.
 - » Management of these roadside traps meant that at least one KILB staff was in the area each day to support landholders with traps, captures and tech assistance if requested.
 - » During the 'Farmer Blitz' 259 feral cats were removed over 13,209 trap nights across over an eight week period by local farmers and Board staff.
 - » The 'Farmer Blitz' delivered an Australian first initiative where landholders participated in delivering a landscape-scale control program. The Blitz integrated traditional trapping methods with novel trap monitoring technology, linked to an app that alerts landholders when traps are triggered and ensures data is captured.

31
KI dunnarts captured in artificial refuges

100%
artificial refuges visited in burnt sites

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Effective terrestrial and marine pest management

Funded by:

- Australian Government:
 - » Environmental Restoration Fund
- AgKI and Livestock SA
- World Wide Fund for Nature

- » The trial provides a model for future control programs and will help us to develop more effective ways to control feral cats across complex, multi-tenure, landscapes and support landholders who want to be involved.

- [A presentation was given](#) at the Centre for Invasive Species Solutions Trap Alert Systems Online forum attended by over 115 people from Australia, New Zealand and the UK. The presentation focused on how novel technologies have increased the efficiency of landscape scale trapping projects and opportunities to collaborate with stakeholders and support community initiatives.
- [An Australian Geographic article](#) was published entitled 'AI discovers bushfire-ravaged native species are bouncing back' featuring how advances in monitoring and detection through AI has helped to protect species like the KI dunnart, following the catastrophic 2019-2020 KI bushfires.
- [A video](#) was posted on the KILB's facebook page featuring insights into KI dunnart behaviour discovered through the placement of motion activated cameras on natural den entrances.

Future directions and upcoming events:

- Future projects and trials would benefit from focusing on measuring the long-term use of artificial refuges in the years following fire to gain a better understanding of usage by KI dunnarts and other native wildlife.
- Further trials could be undertaken to investigate improving thermal properties of artificial refuges and trialling different materials which have higher thermal properties.
- Continue to support KI landholders being actively involved in effective landscape-scale control of feral cats and expand the program over much larger areas to achieve sustained reductions in feral cat numbers.
- Ensure future programs include opportunities to measure pre- and post-control reductions in feral cat densities and corresponding increases in native wildlife and biodiversity.

259
feral cats removed in Stokes Bay 'Farmer Blitz'

19
landholders participated in 'Farmer Blitz'

Image left: KI dunnart release at artificial refuge (L Heddle). Right: 'Farmer Blitz' participants Stephanie and Tom Wurst (A Cox).



Oyster Reef Construction Program

Overview:

This project has built a series of 20 small, native oyster *Ostrea angasi* shellfish reefs close to Kingscote and American River to provide important habitat for premium recreational fishing species and to contribute to the national shellfish reef restoration initiative. The reefs, will be initially seeded with wild caught native oyster larvae (spat) and will also provide a substrate for natural spat settlement.

Key achievements April–June 2023

- Spat collectors at six sites have been regularly maintained since their installation in November 2022. The collectors at two sites, Red Banks and American River, washed ashore during severe storm conditions in mid June. Spat-on-shell at the four remaining sites will be moved to the reef sites in winter 2023.
- Natural recruitment of native flat oysters to the new reef substrate was surveyed at both Kingscote and American River reef sites in autumn at the end of the native oyster spawning season. The surveys were conducted six months post-construction of the reef's limestone foundation and before the reefs are seeded with locally collected spat.
 - » The surveys after six months showed good natural settlement of native flat oyster at both reef sites. Settlement was higher at Kingscote, though oysters were larger at the American River site. Oyster survival at six months also varied with 15% at Kingscote and 41% at American River. Settlement of native flat oysters outnumbered any other species, shellfish or otherwise, at both sites.
 - » Observations showed terracotta roof tile modules attracting and supporting very high densities of native flat oysters. A roof tile at the American River site was removed and surveyed and had 60 living and 56 dead attached oysters.
 - » The findings of this survey highlight the potential for restoring lost shellfish reefs in Kangaroo Island's coastal waters using natural recruitment of reef-forming native flat oysters to improve fish habitat.
- Native flat oyster spat collector modules were surveyed across Eastern and Western Coves of Nepean Bay at the end of the growing season, seven months post-installation.
 - » Results showed consistent settlement of native flat oyster with densities of spat-on-shell of between 2.5 and 3.3 spat per culch shell across all sites, with higher than anticipated settlement and growth in Eastern Cove. Settlement of native flat oysters outnumbered any other species, shellfish or otherwise, at all sites, comparable with reef survey results.
 - » Survival was relatively high and consistent in the collectors across the two Coves. This suggests high mortality on the Kingscote reef site may be largely due to predation rather than changes in environmental conditions.
 - » This successful trial has given valuable insights to oyster reef restoration on Kangaroo Island. Collection and natural recruitment of local native flat oyster spat can be expected on suitable substrate material installed during the peak spawning months across Nepean Bay. Collection and translocation of local wild native flat oyster spat will enhance shellfish reef restoration on Kangaroo Island and may guide similar efforts across southern Australia. This method of seeding new reefs preserves local genetics and removes the need to use hatchery raised spat, reducing costs and potential biosecurity risks significantly.
- Baited Remote Underwater Video surveys (BRUVs) were conducted at the two restoration sites to measure diversity and abundance of fish life post-reef construction. The BRUV footage shows target recreational fish species, particularly King George whiting, at the new reef sites.

**oyster spat collectors
regularly maintained at
6
sites**

**60
living oysters found on
1 terracotta tile**

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Effective terrestrial and marine pest management

Funded by:

- Australian Government:
 - » Fisheries Habitat Restoration

Community engagement:

- A presentation was given to year 11 and 12 Outdoor Education students at KICE's Kingscote campus regarding the fisheries habitat restoration project and oyster reef restoration approach.

Future directions and upcoming events:

- Analyse the 32 hours of footage collected from the BRUV surveys and compare with the baseline data collected at each site taken in 2021 and 2022, pre-augmentation. Continue to undertake annual BRUV surveys at each site to assess changes over time as the reefs grow.
- Survey each reef site annually to assess annual recruitment, survival to breeding age and growth of reef-forming shellfish. Monitoring the environmental conditions across Nepean Bay in the future may provide further insights into the trends in settlement, recruitment and growth of native flat oyster on the reefs as well.
- Continue to develop an interpretive sign at the Kingscote reef site and simple signs with maps at the Kingscote and American River boat ramps to assist boat users in locating the new reefs.
 - » Work has been undertaken with a local artist to produce watercolour reefscape and target species art pieces to be used in signage for the new oyster reefs. The works produced describe the novel oyster reef components, life cycle of the angasi oyster, a healthy reef system, different project partner contributions to the reefs and the community members who use them.
 - » The Kingscote sign will be installed by the Kingscote Men's Shed, re-purposing old timber from the recently refurbished Kingscote jetty as the sign stand.
- Continue working with KICE year 11 and 12 Outdoor Education students to assist them to learn about the Great Southern Reef and oyster reef restoration initiatives while they construct an environmental monitoring rig for the Kingscote oyster reef, in partnership with AusOcean.

**3
surveys undertaken of
new reefs and collectors**

**32
hours of BRUVs footage
collected at new reef sites**

Images below: Young native flat oysters growing on left: oyster shells from the spat collectors; middle: a ceramic razorfish form from the new American River reef; right: a terracotta tile from the new American River reef.



Community grants programs

Overview:

These grant programs support the KI community to undertake on-ground actions to benefit the natural resources of Kangaroo Island. Grants reported here include the KI Landscape Board Grassroots Grants and Bushfire Recovery Fencing Grants.

Key achievements April–June 2023:

Kangaroo Island Bushfire Recovery Fencing Grants

- Ten landholders completed fencing to protect 465.8 ha of native vegetation through the Bushfire Recovery Fencing Grant.
- The Bushfire Recovery Fencing Grant has now finished. In total 3,963 ha of native vegetation was protected by 56 landholders in fire-affected areas who erected over 460 km of fence lines!

Kangaroo Island Grassroots Grants

- The 2023 KI Grassroots Grants received 22 applications ranging in value from \$1,280 to \$10,884.
 - » The total value of the applications for 2023 was \$144,644.
 - » Ten individual landholders and community groups have been awarded \$57,345 to deliver their projects.
 - » The successful projects focus on a variety of landscape management issues including: arum lily control in Baudin Conservation Park, on-ground actions to protect the threatened Beyeria bush-pea, protecting and replacing burnt native vegetation in shelterbelts, protecting native vegetation along a watercourse, demonstrating options to manage nutritional barriers to liming, supporting the installation of a weather station on western KI, and improving soil health and fertility through clay spreading and establishing perennial pastures.
- A farmer in Gosse used a drone to control African boxthorn, salvation Jane and African daisy to reduce fuel loads and bushfire hazards and increase pasture productivity through a grant from 2022-23.
- A farmer from Dudley Peninsula funded the construction of 12 owl nest boxes around the Peninsula, to encourage barn owl numbers to increase to assist with reducing mice and rat numbers, following the removal of feral cats, through a grant from 2022-23.

Community engagement:

- The KI Nursery Manager assisted KICE Parndana students to deliver their KI Grassroots Grant. [See link.](#)
- KILB staff participated in a Kangaroo Island/Victor Harbor Dolphin Watch survey supported by the KI Grassroots Grants. [See link.](#)

Future directions and upcoming events:

- Assist successful 2023 KI Grassroots Grants participants to begin their projects and access their funding.

Image right: Kangaroo Island/Victor Harbor Dolphin Watch participants surveying common bottlenose dolphins with leader Tony Bartram.

465 ha
regenerating burnt native
vegetation protected

10
successful applicants
granted \$57,345 through
KI Grassroots Grants

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective water management
- Effective terrestrial and marine pest management

Funded by:

- Kangaroo Island Landscape Levy
- Government of South Australia:
 - » State Appropriations
 - » Minister for Environment and Water



Planning and Evaluation Team

Overview:

This team works with all KI Landscape Board projects to support their effective and efficient delivery and to assist them to meet their reporting responsibilities. The team also coordinates the KI Landscape Board's strategic planning, including evaluating performance towards implementing the KI Landscape Plan.

Key achievements April–June 2023:

- Submitted output reports for the following projects to the Australian Government through their on-line reporting tool (MERIT):
 - » Core Services
 - » Recovering the KI Narrow Leaved Mallee Woodland Threatened Ecological Community through local landscape action
 - » Creating a safe haven for the KI dunnart and other priority threatened species by eradicating feral cats from the Dudley Peninsula
 - » Building resilient agricultural systems on Kangaroo Island
 - » Supporting the recovery of the KI dunnart through conservation and management actions
 - » Building native oyster shellfish reefs to improve fish habitat on KI
 - » Prioritising on-ground actions for the Endangered Australian sea lion
 - » KI Echidna monitoring, protection and recovery network.

Community engagement:

- Assisted the Communications and Media team and project staff to develop posters, web pages, media articles, factsheets, newsletters, ute guides and flyers for KI Landscape Board projects.

Future directions and upcoming events:

- Assist projects with reporting and monitoring requirements and liaise with the Australian Government and project staff to meet contracted requirements for projects.
- Seek funding to continue KI Landscape Board project work past July 2023.



8
reports submitted to
project funders

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective water management
- Effective terrestrial and marine pest management

Funded by:

- Australian Government:
 - » National Landcare Program
 - » Regional Land Partnerships

Images below: KICE students from Parndana Campus head out to revegetate their waterlogged paddock with funding from a 2022 KI Grassroots Grant.

Communications and media

Overview:

This project provides professional communication services, processes, advice and support to the Board, General Manager and project staff. All work is in line with the Board's priorities and direction and tailored to the community and national/international audiences through targeted messaging and communication methods.

Key achievements January–March 2023:

1. Media

- Our [3-minute video](#) and media release about the banding of glossy black-cockatoos was picked up by Australian Associated Press (AAP) and run in dozens of newspaper publications across the country including *The West Australian*, *The Canberra Times*, *Launceston Examiner* and *Adelaide's InDaily*.
 - » The video was shared on ABC Adelaide's Instagram page, where it was viewed almost 11,000 times.
- A short [video was created about Parndana Campus students](#) planting an area of their school grounds with assistance from KI Native Plant Nursery Manager Jo McPhee.

2. Social media

- 21 Facebook posts covering glossy black-cockatoo nesting numbers, Grassroots Grants, growing healthy vineyards field day, the opening and further funding of the KI Native Plant Nursery, barn owls taking up residence in new nest boxes, solar panels installed on office building, feral cat eradication, Building Resilient Agriculture surveys, Parndana students planting school grounds, and dolphin survey work.
 - » Two of our Facebook posts with photos of glossy black-cockatoo banding combined to reach over 105,000 people. This included 550 likes and 261 shares.



21
social media posts
reached 120,000 people

Glossy video viewed
11,000
times

Links to KI Landscape Plan

- A connected community at the centre of decision making
- Healthy terrestrial and marine ecosystems and biodiversity
- Sustainable primary production and the island's economy
- Effective water management
- Effective terrestrial and marine pest management

Funded by:

- Australian Government:
 - » National Landcare Program Regional Land Partnerships
- Government of South Australia:
 - » State Appropriations

- » The post about barn owls taking up residence in new nest boxes on the Dudley Peninsula reached over 7,000 people on Facebook and Instagram. The [video about the nest box installations](#) has been watched over 1,400 times across our YouTube and Instagram channels.

Community engagement:

1. Media

- 11/5/23: [Endangered cockatoo numbers continue to climb](#) (*The Canberra Times*)
- 11/5/23: [Breeding boost for endangered Kangaroo Island cockatoos](#) (*InDaily*)
- 17/05/23: [KI's young glossy black-cockatoos get first look at outside world](#) (*The Islander*)
- 15/06/23: [Foundation for National Parks & Wildlife partners with KI Native Plant Nursery](#) (*The Islander*)
- 10/06/23: [Kangaroo Island conservation projects get vital funding from Landscape Board](#) (*The Islander*)
- 30/06/23: [Parndana students get hands dirty for a cleaner, greener future in their back paddock](#) (*The Islander*)

Future directions and upcoming events:

- Shoot and edit short video about the KI dunnart recovery program, to complement a media release with an update on numbers detected.
- Media release about the success of a landholder-led cat trapping project with the use of new technology.
- Complete short video about Property Management Planning.
- Help complete redesign of KI Landscape Board website.



Image previous page below left: Tony Bartram coordinator of Kangaroo Island/ Victor Harbor Dolphin Watch during a dolphin survey on the north coast of KI.

Image this page below right: Newly banded glossy black-cockatoo nestling.

20+
media articles
published

7,000
people viewed barn owl
social media posts

How we can help you



KI Native Plant Nursery

- » local native plants
- » growing, planting and revegetation advice suited to KI soils and climate
- » plant identification

Contact Jo McPhee
0437 322 692
jo.mcphee@sa.gov.au



KI native vegetation

- » advice on how to manage KI native vegetation
- » grants available to protect and revegetate KI native vegetation

Contact Kym Lashmar
8553 2476
kym.lashmar@sa.gov.au



Regional Agricultural Landcare Facilitator

- » assist with sustainable agriculture activities, e.g. workshops, demonstrations and peer learning sessions

Contact Venetia Bolwell
0437 172 877
venetia.bolwell@sa.gov.au



Water management

- » advice on water affecting activities and permits e.g. dams and earth works in or near a water body
- » advice on water resources e.g. salinity, wells

Contact Mark Agnew
8553 2476
mark.agnew@sa.gov.au



Weed control

- » weed management advice
- » weed identification
- » reports of new weeds
- » hire of cape tulip weed wiper

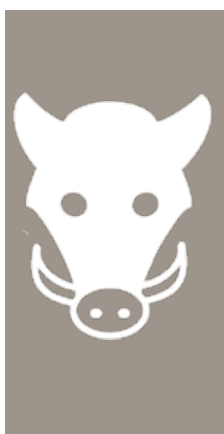
Contact Jason Walter
0418 708 557
jason.walter@sa.gov.au



Pest animal control

- » domestic goat and pig permits
- » feral goat and deer reports

Contact Brenton Florance
0427 618 304
brenton.florance@sa.gov.au



Feral pig control

- » control of feral pigs
- » feral pig trap hire
- » feral pig reports on eastern KI

Contact Brenton Florance
0427 618 304
brenton.florance@sa.gov.au



Feral cat control

- » control of feral cats
- » feral cat trap hire

Contact Paul Jennings
8553 2476
paul.jennings@sa.gov.au