JANUARY 2023

# Feral cat control KI west update

## Celium trap alert technology improves feral cat trapping

**1,277 feral cats** have been **removed** from the western-end of the island over **65,000**+ trap nights.

Control has focused on **protecting native wildlife and supporting landholders** to remove feral cats across the extensive 2019-20 bushfire scar.

In an Australian first, we have successfully **connected** more than **300 traps** via a **Celium network**, covering nearly **a fifth of KI.**

This landscape-scale, wireless, sensor network automatically sends alerts to the team when traps are triggered.

This technology has delivered game changing efficiencies, including a **70% reduction in time taken** to check traps every day.

*Supported by*

Australian Government | National Landcare Program

Encounter Solutions

LANDSCAPE SOUTH AUSTRALIA KANGAROO ISLAND

# Celium trap alert technology roll out

The feral cat management team seasonally use a combination of cage and soft-jaw foothold traps to capture feral cats. Whilst this method is effective at managing feral cat numbers, it is also extremely time consuming and labour intensive, previously taking up the majority of our team's time.

In early 2022, supported by a Landcare Led Bushfire Recovery Grant, we partnered with Encounter Solutions, a New Zealand company specialising in wireless sensor technology, to set up a remote wireless trap monitoring system. The system uses sensors so we can monitor our feral cat traps (whether triggered or open) from the office or remotely in the field, all in real time. This significantly reduces the number of trap visits needed, as we know which traps have been triggered and therefore need to be checked.

Before using this technology we found that on average 80% of our traps were open (un-triggered) when checked, which was enormously inefficient. This easy to use technology uses a sensor (known as a node) mounted to the door or hinge of a trap. When the trap is triggered there is a change in the magnetic field, which sends an alert instantly. This alert is received by a central up-link hub and sent to secure cloud servers where the team can monitor the traps in real time from their phone or device via an app.

We have retrofitted this Celium technology onto our productive feral cat trap arrays along roadsides, in partnership with landholders and across Flinders Chase National Park. A total of 300 cage traps and over 40 soft-jaw foothold traps are now connected, with this network set for further expansion in 2023.

**300 cage traps** and over **40 soft-jaw foothold traps** now **connected** via the Celium network.

**70% reduction** in time taken to check traps **connected** via the Celium network.

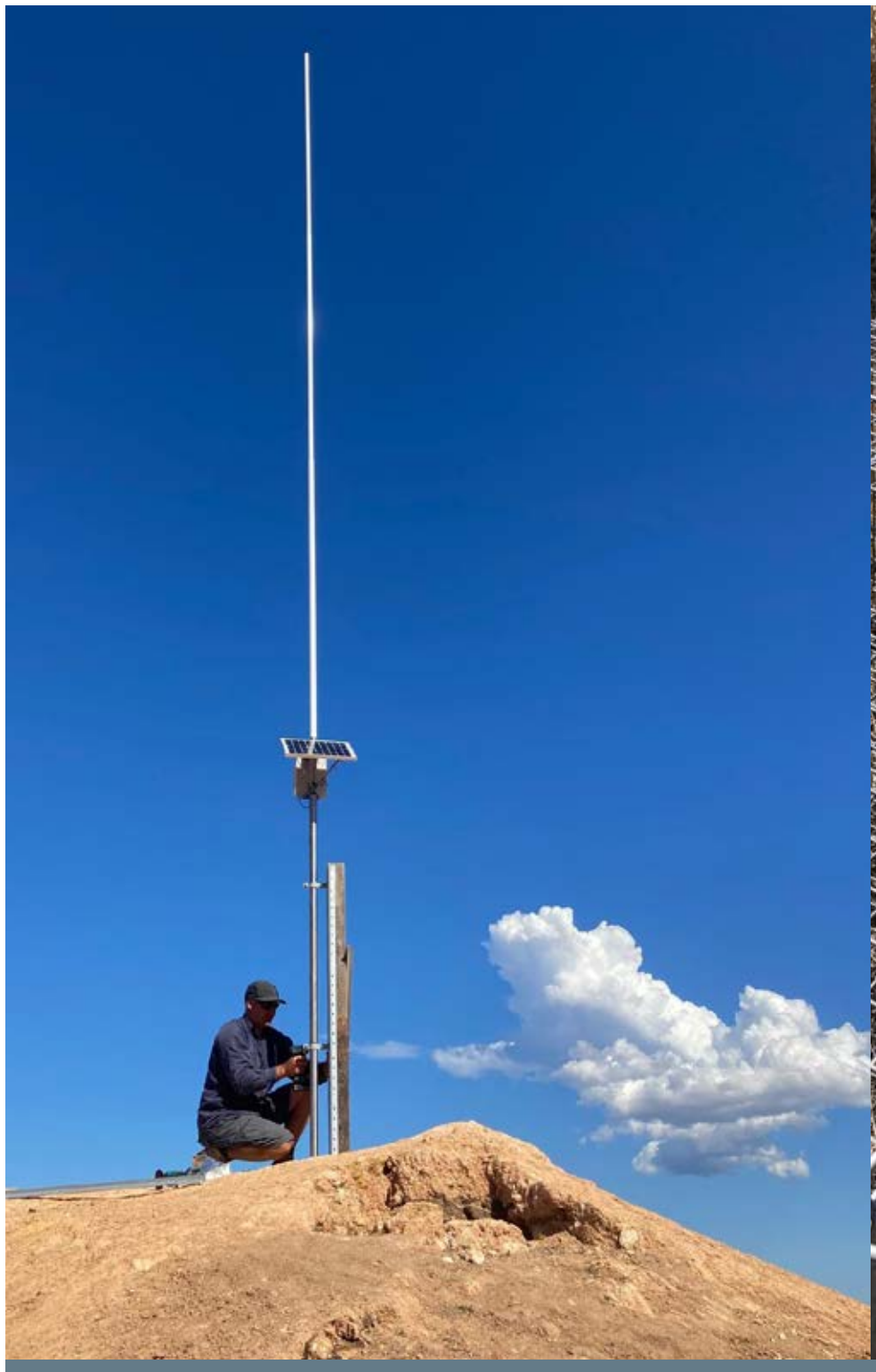

Image left: Building a hub for the remote wireless trap monitoring system.

Image right: Feral cat cage traps with sensors attached.

## Efficiencies gained using Celium technology

As part of the rollout of this technology, we first ran a four week trial to measure the networks efficiency and performance. For comparison the first two weeks were spent manually checking every trap each day. During the second two weeks of the trial, we only checked triggered traps using the trap alert technology. The results were truly mind blowing.

In the first two weeks, it took three staff members a combined 11.5 hours a day to manually check all 180 traps over a 17,000 ha area. In the second two weeks using Celium technology and only checking triggered traps, it took one staff member an average of 3.5 hours. This translates into a 70% reduction in time needed to check traps each and every day. This also meant a decrease in the numbers of staff and vehicle use, from three to one, as well as a 43% decline in kilometres travelled daily. Crucially, we were also able to verify that the alert system correctly detected 100% of triggers.

A number of additional benefits were also seen, including:

- Improved animal welfare outcomes as triggered traps were prioritised and checked earlier.
- Health and safety of staff improved, with issues such as fatigue being managed more effectively.
- Staff had more time to focus on using other control tools to target feral cats more effectively.
- Increased cost effectiveness of feral cat trapping program. Small outlay of initial cost translating into longer term savings.

**Image left: Landholder Alison Buck checking a feral cat trap.**

**Image right: A feral cat caught in a trap connected to the Celium network.**

## Future projects

So what's next for the team? We will continue to support threatened species recovery following the 2019-2020 KI bushfires through sustained feral cat control both within and surrounding critical habitat to reduce predation pressure in a post-fire environment.

We have also partnered with AGKI, and in early 2023 will be delivering a landholder led trapping program in the Stokes Bay area. This aims to protect biodiversity and look at methods that may reduce risk of disease transmission from feral cats to sheep, which greatly impacts the sheep industry on KI. This program will, in another Australian first, use Celium technology to allow landholders to be more actively involved in feral cat control. We know there are many landholders across the island that are interested in, or already trapping feral cats on their properties. Using this technology will make trapping much easier and more time efficient for landholders enabling more coordinated control across the island.

Finally, we will also be running a feral cat trapping program in Seal Bay Conservation Park, testing for the presence of toxoplasmosis and tuberculosis in feral cats caught directly adjacent to this important Australian sea lion breeding colony. This information will support a project being delivered by the KI Landscape Board to identify threats and recovery actions to protect the Endangered Australian sea lion across their entire Australian range from Kangaroo Island to the Abrolhos Islands in Western Australia.

We would like to thank you for both your help and support in undertaking this project. If you are interested in seeking any further information, or if you know other landholders who are interested in being involved in feral cat control, please contact the KI Landscape Board on 8553 2476.

Thanks,

**Kangaroo Island Landscape Board Biodiversity Unit**

*This project is supported by the Kangaroo Island Landscape Board, through funding from the Australian Government's National Landcare Program, Environment Restoration Fund and Landcare Led Bushfire recovery package for wildlife and their habitat.*

**www.landscape.sa.gov.au/ki/native-plants-and-animals/ki-dunnart-recovery-program**