

# Natural Areas Offset Officer Faunal Nest Box Monitoring Program Presentation

# Why do we need to install nest boxes?

# Historical Land Clearing and Logging

- The mature old trees that provided natural arboreal habitat with hollows and spouts were either burnt or harvested long ago
- A lot of areas were successively logged and in some locations it is still happening
- This means that these “habitat trees” are mostly missing from our landscape
- If the habitat isn’t there the animals won’t be there
- Now it has been realised that through fauna surveys carried out on Council managed reserves that this habitat is in low numbers and declining
- In order to protect current biodiversity levels natural area managers need to bridge the gap by installing artificial habitat
- If you provide the habitat the animals will use it

# Unavoidable Clearing



- Historically this timber would have been burnt but until more recently it would have been run through a tub grinder.
- Some may have been salvaged and milled for a profit to offset the cost of clearing
- Council now know there is great ecological value in salvaging this material
- This is now considered best practice management

# Salvage timber nest box project

- Milled 15 cubic metres of 40mm rough sawn boards
- Only high durability Class 1 species
- *Eucalyptus teretecornis*, *Corymbia gumifera* and *eucalyptus microcorys*
- 113 nest boxes suited to arboreal fauna
- Passive Infrared (PIR) detectors fitted on each box
- Life expectancy 40 years plus
- Timber species durability monitoring







# Nest Box Range

**Brushtail Possum (Common & Short-eared)**

**Microbat- hollow-roosting spp.**

**Squirrel/Sugar Glider**

**Greater Glider**

**Antechinus**

**Sooty Owl**

**Powerful Owl**

**Masked Owl**

**Australian Owlet-nightjar**

**Sulphur-crested Cockatoo**

**King Parrot**

**Laughing Kookaburra**

**Yellow-tailed Black Cockatoo**

**Glossy Black Cockatoo**

**Pale-headed Rosella**

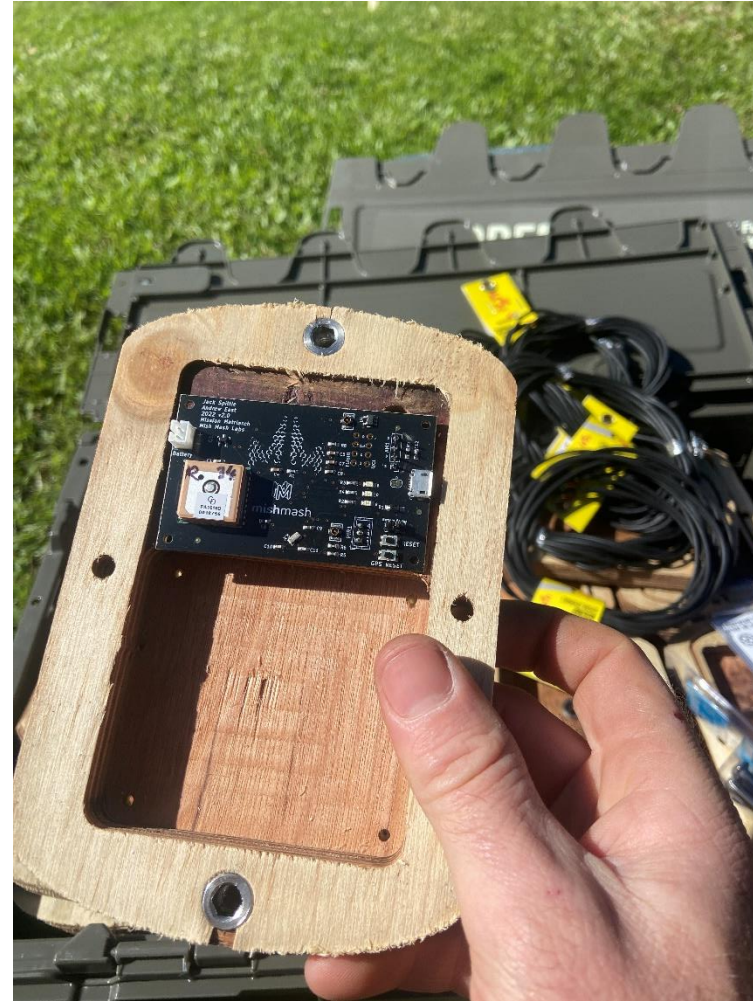
**Forest Kingfisher**



# Project Main Objectives

- **Research & Development**
- **Temperature (insulation qualities)**
- **Humidity (livability)**
- **Presence (use)**

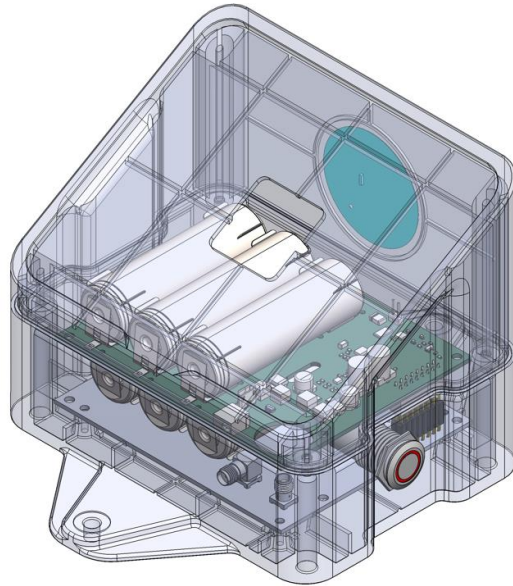
# First PIR's







# Project Ninox Monitoring Device V3



- 3D printed
- PET G plastic reinforced with carbon fibre
- Solar battery charging
- USB charging
- Software upgrade
- Hardware upgrade



## Benefits

- Look, feel & smell
- Longevity
- Replaceable top and bottom
- Monitor on desk top or hand held device
- Monitor in field with binoculars
- No need to climb

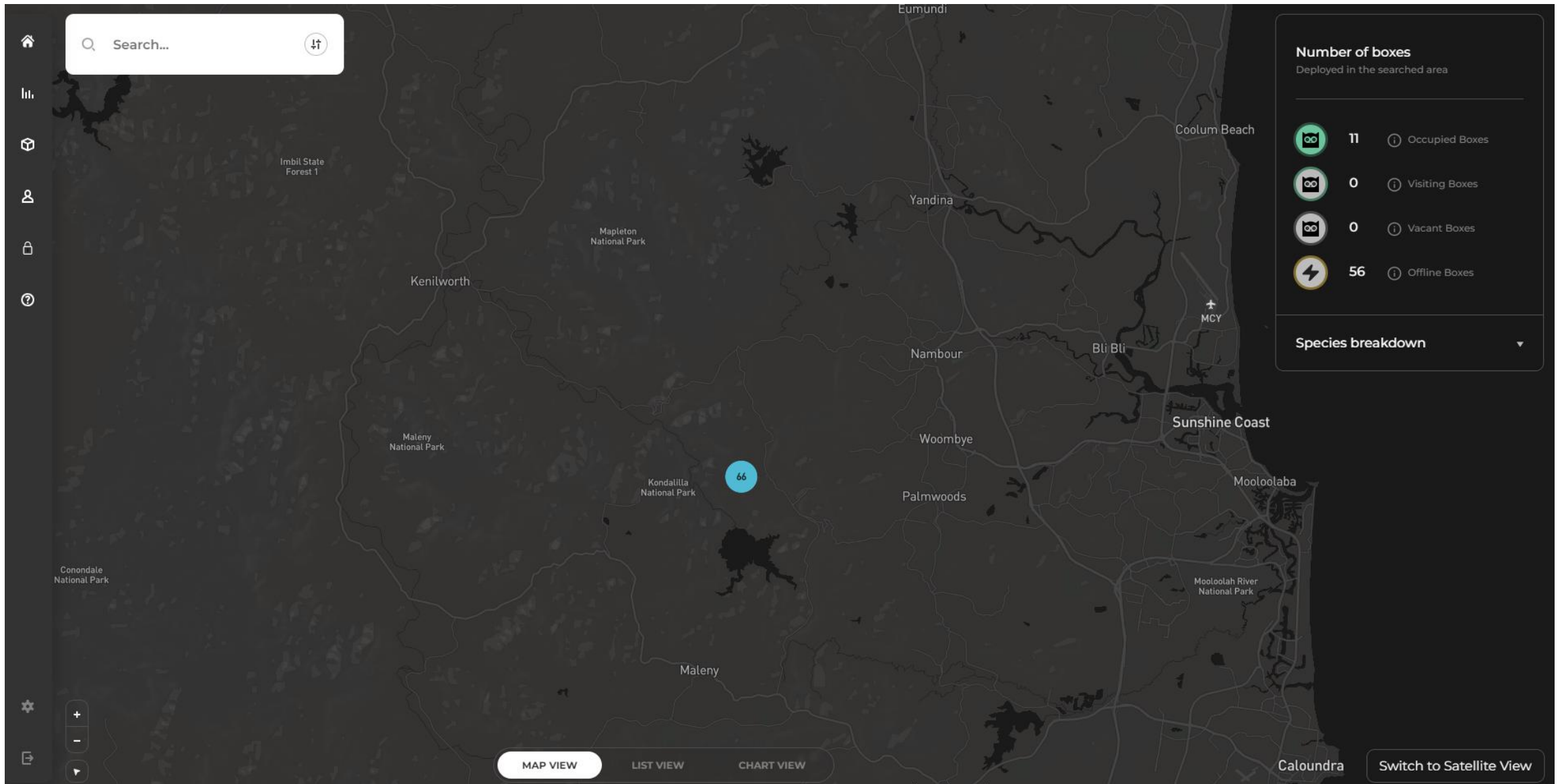


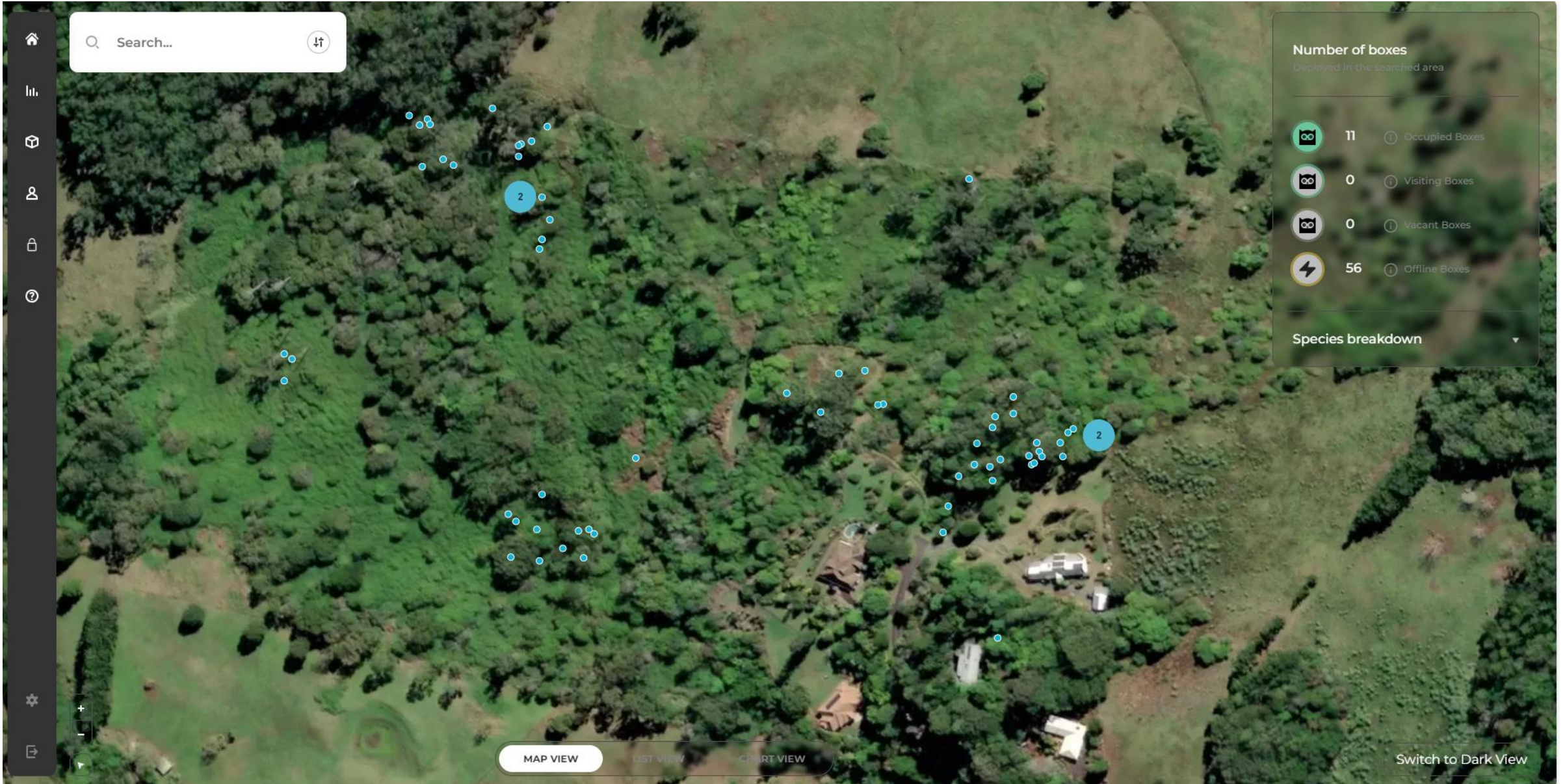


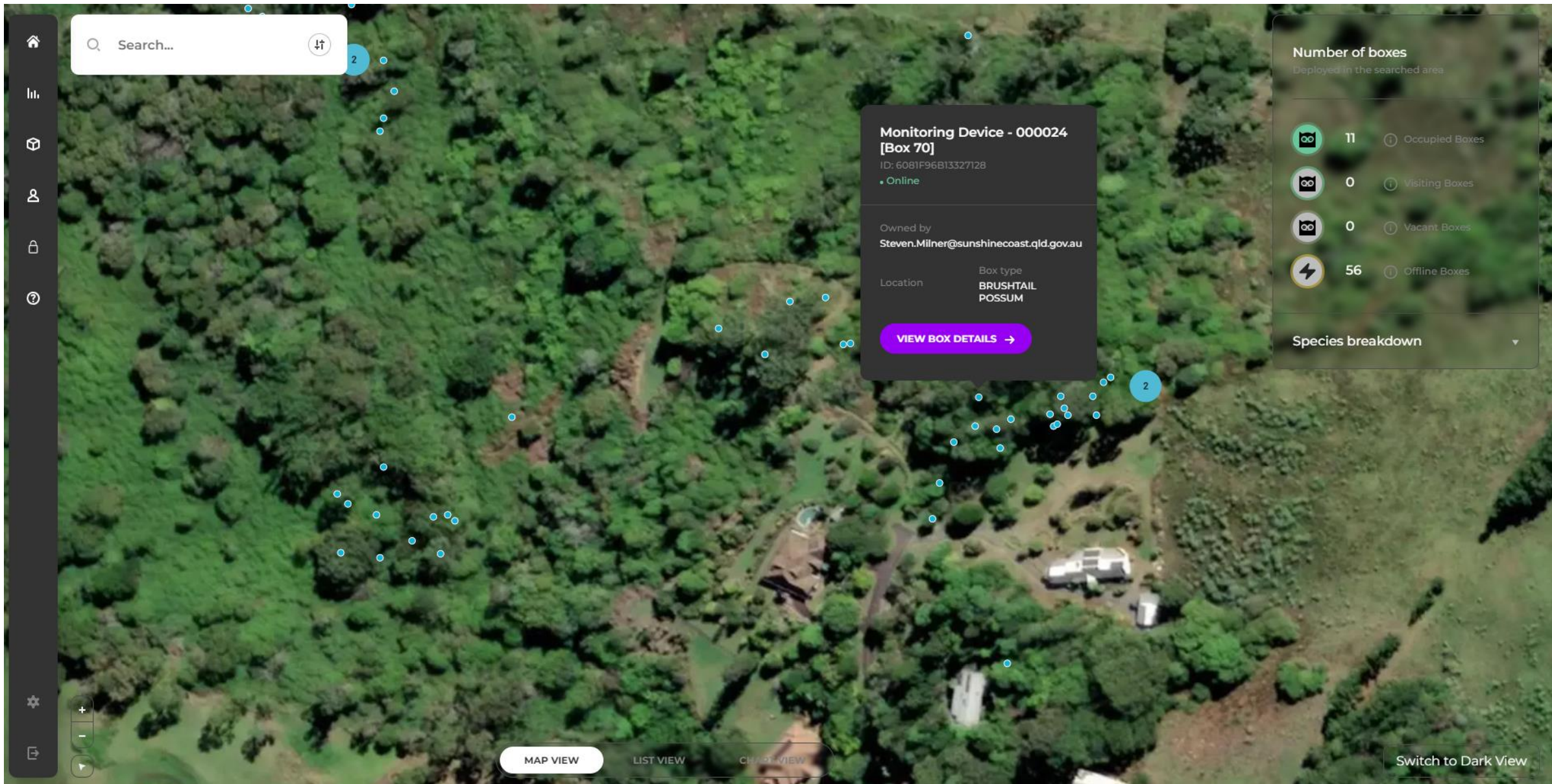












**Monitoring Device - 000024**  
**[Box 70]**  
 ID: 6081F96B13327128  
 • Online

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Owned by  
 Steven.Milner@sunshinecoast.qld.gov.au

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Location: BRUSHTAIL POSSUM

[VIEW BOX DETAILS →](#)

**Number of boxes**  
 Deployed in the searched area

	11	Occupied Boxes
	0	Visiting Boxes
	0	Vacant Boxes
	56	Offline Boxes

Species breakdown ▾



# Monitoring Device - 000024 [Box 70]



ID: 6081F96B13327128 Active status: ● Online

Vacancy: Offline Target Species: BRUSHTAIL POSSUM

Suburb: Lat / long: -26.67764892578125, 152.869970703125

Hollow Orientation: North West Hollow Height: 9

View to public: No Owned by: Steven.Milner@sunshinecoast.qld.gov.au

[EDIT DETAILS](#) [+ ASSIGN DEVICE](#)

Temperature

**38.3 °C**

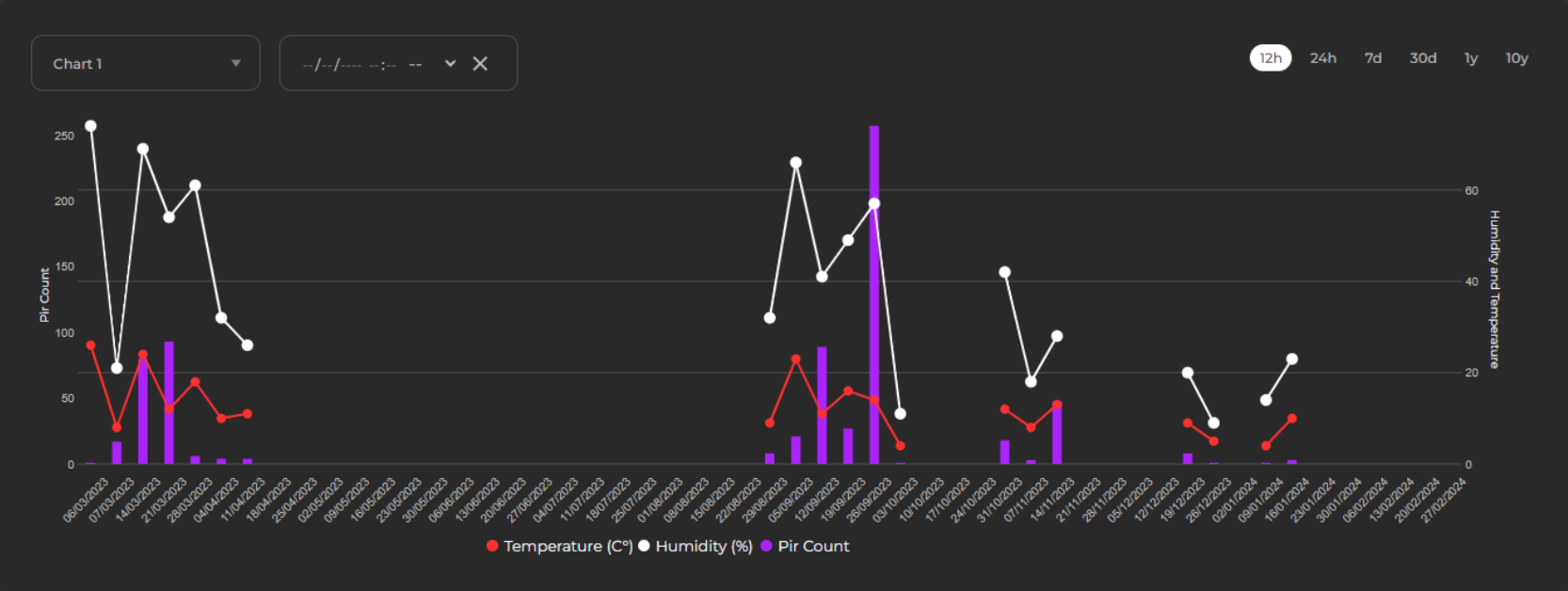
Humidity

**72.19 %**

Battery

**4 %**

Signal

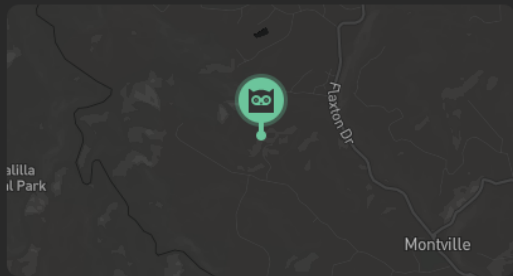


Captured images [UPLOAD IMAGES](#)

+0 more



# Monitoring Device - 000081 [Box 53]



ID: 6081F94469F8B077 Active status: Online

Vacancy: Occupied Box Target Species: PALE-HEADED ROSELLA

Suburb: Lat / long: -26.677242024739584, 152.86927083333333

Hollow Orientation: Hollow Height:

View to public: No Owned by: Steven.Milner@sunshinecoast.qld.gov.au

[EDIT DETAILS](#) [+ ASSIGN DEVICE](#)

Temperature

25 °C

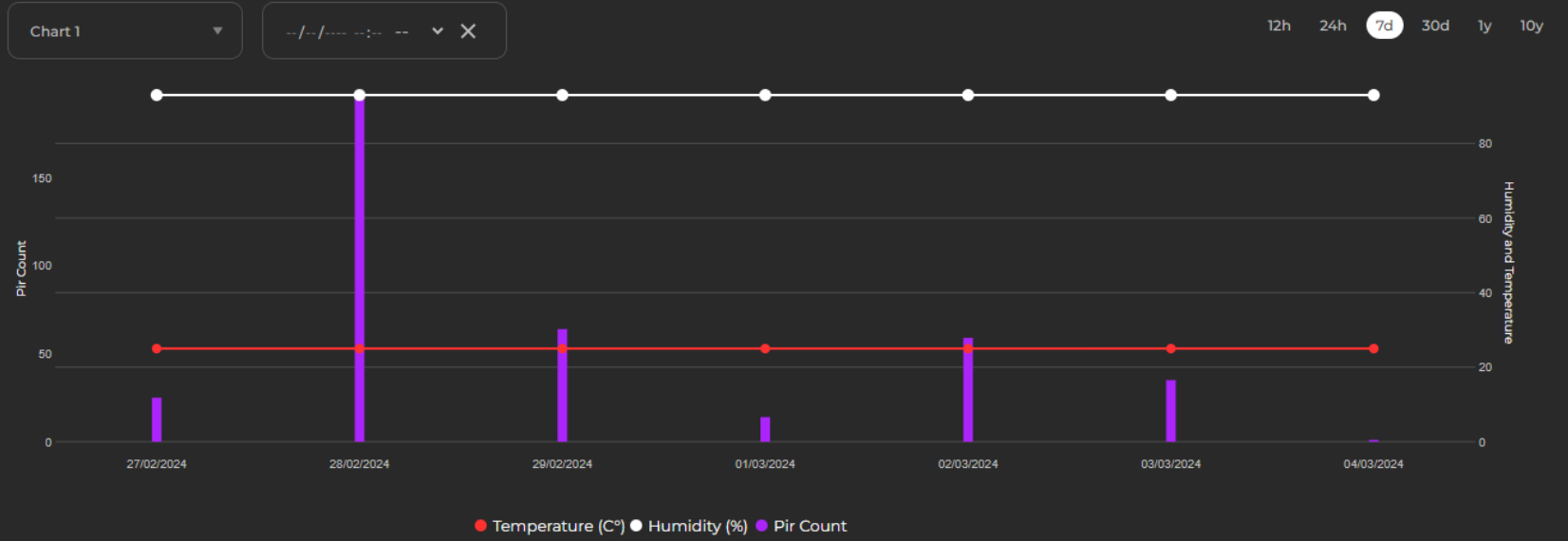
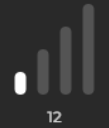
Humidity

92.9 %

Battery

3 %

Signal

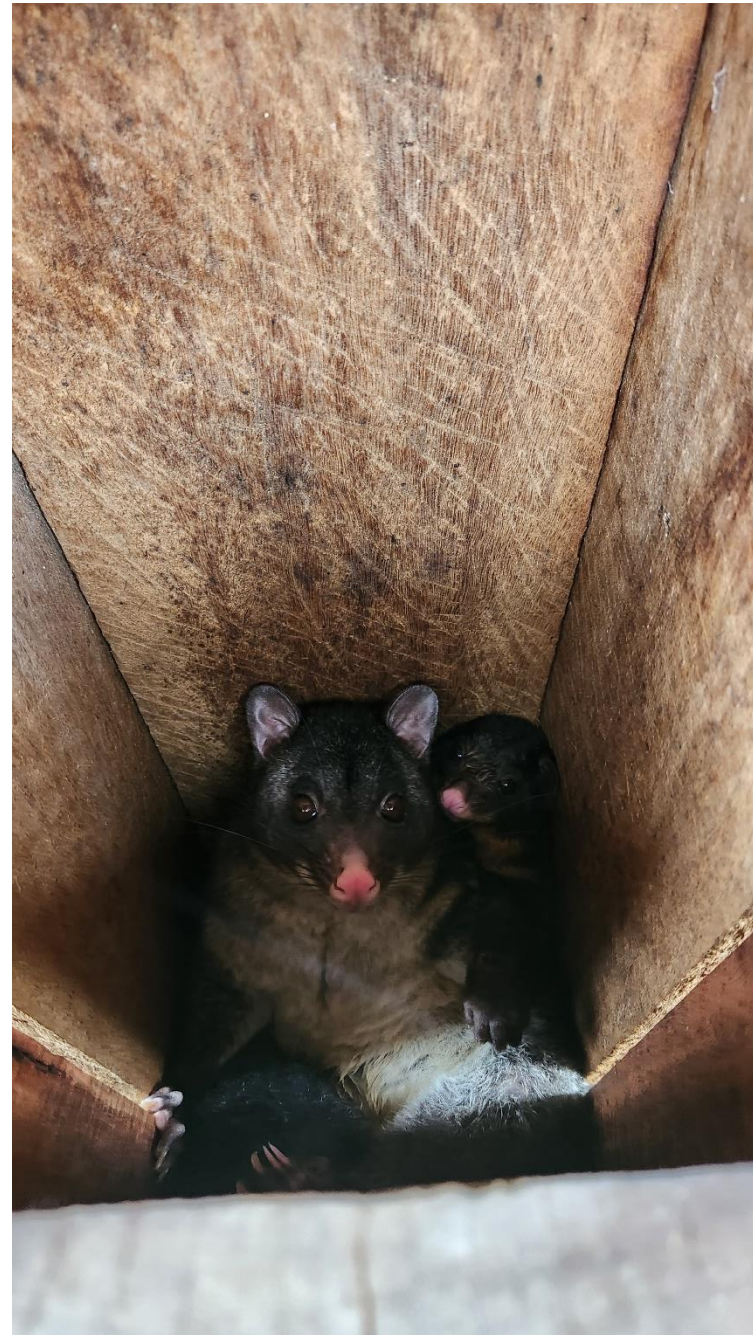


Captured images (0)

[UPLOAD IMAGES](#)

+0 more

<https://youtu.be/Ep2gSnANVUU>







## Evidence of use using endoscopic camera

- Occupation
- Egg/s
- Feathers
- Chewing on wood
- Bedding installed (foliage)
- Scat
- Food / fruits



# Next Steps

- Awaiting monitoring report
- Awaiting manufacture of new device housings
- Awaiting new device hardware
- Install all 77 new devices (plus 2 x plywood nest boxes for 'control' data)
- Complete in field monitoring
- Install live feed camera's

# Thank you.



Our region.  
**Healthy. Smart. Creative.**

See council's website for further details  
[www.sunshinecoast.qld.gov.au](http://www.sunshinecoast.qld.gov.au)