

Powerful Owl Project December Newsletter 2022

Thank You!

Another year draws to a close and what a year it's been! Water, water everywhere with seemingly no end to it at times. Despite the challenges, our volunteers soldiered on whenever it was safe to get out to the owls, and we thank you from the bottom of our hearts for all your hard work. We'd also like to thank our financial supporters, and the members of the public who have shared their Powerful Owl experiences with us this year. Read on to see how our urban owls fared this year and to see what else has been happening in the project in 2022.

You'll find news on:

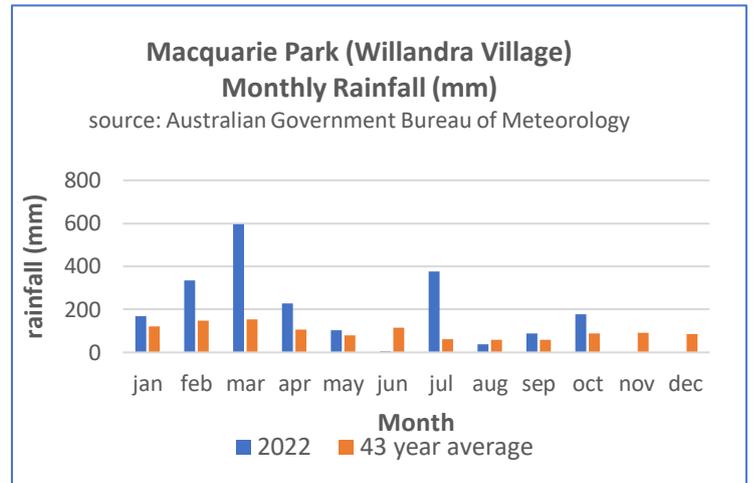
- An Extraordinarily Wet Year
- 2022 Snapshot of Our Owl Territories
- 2022 Breeding Season Results
- Mortality
- Training Sessions For New Volunteers
- Powerful Owls Breed in Nest Box in Sydney
- What Else Have We Been Up To?
- Interesting Observations
- Rodenticides Update
- New BirdLife Australia Website
- Thank You to our Volunteer Citizen Scientists
- Thank You to our Financial Supporters



Photo: Louis Petrucco

An Extraordinarily Wet Year

2022 has been an extraordinarily wet year. The chart illustrates just how wet, showing the monthly rainfalls for 2022 compared to the 43-year average, for a representative location in northern Sydney.



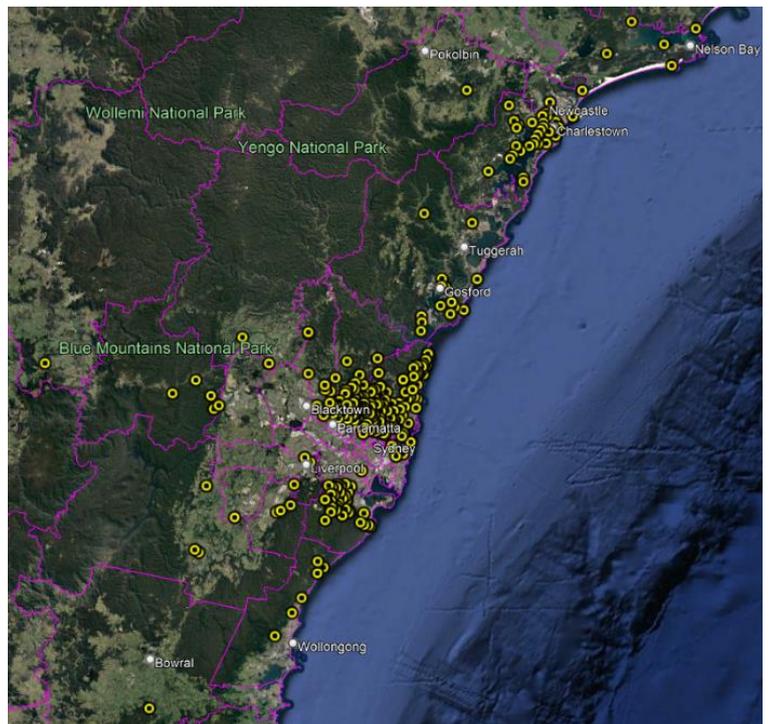
A Soggy Powerful Owllet
Photo: Louis Petrucco

This created havoc with monitoring, particularly in the first half of the breeding season, due to rainy weather, flooded waterways, slippery and muddy conditions in gullies and on tracks, an explosion in the leech and tick population, and many volunteers reporting that their owls had changed from their usual roosting patterns and were difficult to locate.

2022 Snapshot of Our Owl Territories

We've discovered around 270 Powerful Owl territories in the Greater Sydney area, across almost 30 local government areas, in the 11 years since the project began. Not all of those are occupied at any given time, however protecting them all remains important, as habitat that has supported Powerful Owls in the past is likely to be used again in the future if the important features of the site are preserved.

Population densities in our monitoring areas remain the highest in Sydney's north and south, where gullies of remnant bushland are favoured habitat for breeding and roosting.



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2022 Breeding Season Results



*The 2022 breeding season summed up in one photo!
Photo: Dr Nick (Hamilton)*

This year our volunteers managed to collect data in 166 territories despite the terrible weather conditions. Of these, 148 were occupied – 30 with a single adult observed, and 118 with a pair of adults.

Unfortunately, the breeding outcomes for the owls this year have been poor. An attempt at breeding was observed in 80 pairs of owls, with a total of 79 owlets fledged from 58 nests. Compared to previous seasons this represents:

- the lowest ever percentage of pairs attempting to breed (or there were more early fails that we didn't detect due to difficulties monitoring in the wet conditions)
- the highest ever proportion of nests where only one owlet fledged
- the highest ever proportion of nests failing (including 4 hollows where trilling was heard, but no owlets fledged)
- Fledging rate dropped below 1 for the first time

The fledging rate, which this year was 0.99, is calculated by dividing the total number of owlets fledged by the number of nests where breeding was attempted, and in a good year is around 1.4.

We suspect the likely contributing factors were water in hollows either flooding the hollow or creating conditions not conducive to raising healthy owlets, and a drop in the prey population. Many of our volunteers are also wildlife carers and reported large numbers of possums either dead or coming into care during the big wet. Alongside these reports were reports from some volunteers that their males were seen roosting with possums far less frequently than in previous years. We also had reports of a female roosting outside the hollow with her bottom half wet (this was one of the nests that failed twice), and owlets in poor health that reeked when they were taken into care after fledging early.

There was a little good news though. For the first time that we can recall, owls succeeded in a second breeding attempt after an initial failure. Volunteers observed this in one pair in NSW, which tried again in the same tree, and one pair in SE QLD (not included in the NSW data, but an interesting observation) that moved to a new tree for their second attempt. Another 2 pairs in NSW tried a second time but sadly failed again.

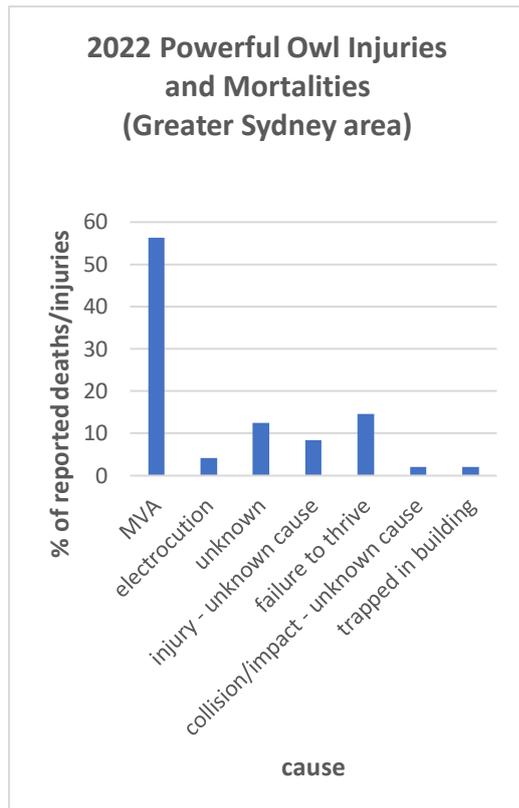


Photos (clockwise from top left): Dr Nick (Hamilton), Jenny Stiles, Michael Bianchino, Gina McFarlane

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Mortality



Motor vehicle accident continues to be the biggest cause of death and injury in Greater Sydney's Powerful Owls. Failure to thrive data includes the nests where trilling was heard but no owls fledged, and forms a higher proportion of total mortalities this year, likely due to the extreme wet weather.

Of the cohort of 79 owlets that fledged this year:

- 3 have died (one found dead of unknown causes; one fledged early, was significantly anaemic and died in care; one was hit on the M7)
- one is in care with a broken wing (cause unknown)
- one (*see story below*) was taken into care, rehabilitated, and released (it fledged early and was significantly anaemic but responded to treatment – sibling of the owlet that died in care)
- one sustained an eye injury (cause unknown – possibly attacked by currawongs), was monitored in the wild and was vastly improved when last seen
- and the rest, as far as we know, are doing well.

A massive shout out to all the rescuers, carers and vets who give their time and resources to get our injured wildlife back out in the wild. You're all amazing!

Sydney's Rescue and Rehab Frequent Flyer

Follow the link below to read the story of young Howie, a Powerful Owl who has been rescued, rehabilitated and released twice in his short life. Howie gives us some rare insight into the movements of dispersing juveniles. When rescued this year, he had travelled around 20km across Sydney from his birth territory.

[Read Howie's Story here](#)

Fern's Story

Follow the link below to read the story of Fern, the owlet who fledged early along with her sibling (who sadly died) and was rescued, rehabilitated and returned to the wild with dad. This owl family has had more than its fair share of tragedy this year - sadly, mum has disappeared and is presumed dead, but dad has done a sterling job as sole parent and at last report, dad and Fern were doing well.

[Read Fern's Story here](#)



Photo: Lynette Twigg

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Training Sessions For New Volunteers

We ran two training sessions this year for new volunteers. The theory content for both were online due to ongoing concerns with Covid. Many thanks to Lane Cove Council and Central Coast Council for sponsoring these sessions. Each one began with a general information session so that people who were interested could get an insight into what the project does and what's involved in being a Powerful Owl Project citizen scientist volunteer. These sessions were followed by dedicated training sessions for folks who decided to sign up. The Central Coast training theory sessions were followed by two training walks...eventually, after false starts due to the weather. One was at Rumbalara Reserve and the other at Wyrabalong National Park. It was fantastic to meet the new volunteers and for them to connect with each other and meet Warren from Central Coast Council. We all really enjoyed the walks. One of our new recruits, Lachlan, was super keen and came on both walks. Within a couple of days of completing the training, he'd located a Powerful Owl nest tree. Awesome work Lachlan!

All up, just over 50 new volunteers joined the project this year. We're super keen to have you all on board and really grateful that you've chosen to spend some of your precious spare time helping monitor Powerful Owls. Despite Lachlan's stellar success, discovering the ins and outs of Powerful Owl territories usually takes time and perseverance and we hope you all stay with us for the long haul.

The next training session for new volunteers is on 11 and 12 March 2023 – theory on 11 March and guided walks on 11 and 12 March. Thank you, Willoughby Council and Lane Cove Council, for sponsoring this event.

Powerful Owls Breed in Nest Box in Sydney

Excitedly this season we have seen a pair of Powerful Owls raise two owlets in a targeted nest box in a reserve in northern Sydney. The pair had been living in the reserve for several years and mating behaviours had been observed, but there appeared to be no tree hollows in the area large enough to accommodate breeding for these owls, so in August 2019 the specially designed nest box was installed.

[Find out more here in our blog story](#)



Photos: Lane Cove Council (left), Narawan Williams – photo of inside the box (right)

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The sampled nest box contents after sorting at the lab at Macquarie Uni

This is just the second known record of a Powerful Owl pair nesting in a constructed timber box, and the first known record in NSW.

As exciting as this is, we need to stress that nest boxes should not be seen as the answer to conserving Powerful Owls, or indeed other hollow-nesting species, nor should any success with their use be used as an excuse to fell/remove hollow-bearing trees.

Hollow-bearing trees are critical to our environment and our priority should always be to conserve them. A nest box can never replace their importance.

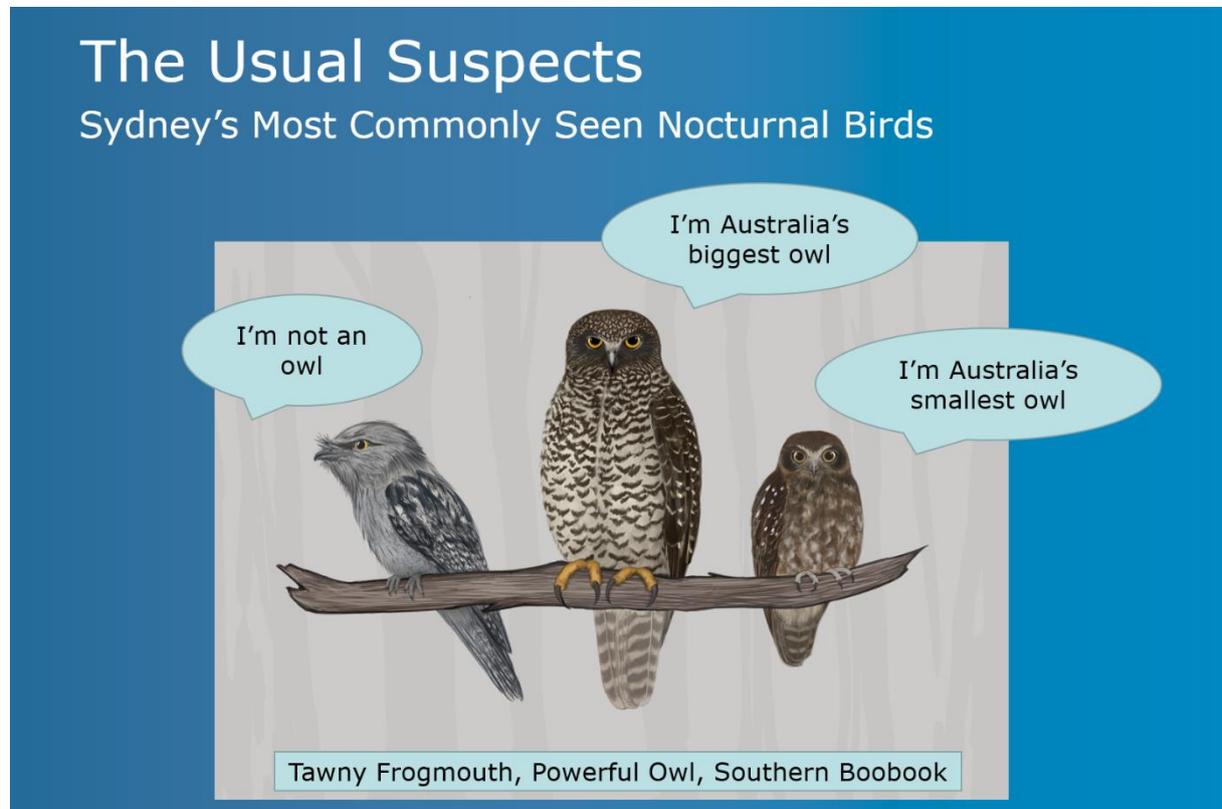
What Else Have We Been Up To?

Advocacy, advice and education actions that have kept us busy in 2022 have included:

- Writing submissions against developments that will adversely impact Powerful Owls
- Reporting on threats to Powerful Owls in Urban Areas. Activities that have repeatedly cropped up, other than developments, include:
 - Unauthorised mountain bike tracks
 - Bush regeneration
- Advising land managers, to help them minimise the impact of specific land management activities on Powerful Owls and their habitat
- Coordinating intensive monitoring efforts where required for rescue, rehabilitation, and release cases
- Guided walks and talks
- Training new volunteers
- Answering enquiries from the general public

Enquiries from the General Public

We get many enquiries from the general public, asking us to identify a nocturnal bird that they've seen. There's also a common misconception that Tawny Frogmouths are owls. Although they're nocturnal birds, they're not owls. A talented BirdLife staff member, Laura Tan, created an artwork for us, that we've overlaid with a bit of text to help with these enquiries.



Urban Development

Loss of habitat and fragmentation of the remaining habitat continues to be the number one threat facing the survival of the species. The project has received requests throughout 2022 to write submissions to advocate for Powerful Owl habitat preservation. These developments have included:

- Removal of bushland for new housing developments
- Major road construction
- School infrastructure
- Urban recreation area construction
- Urban infill creating higher density residential development or repurposing existing land
- Single-site residential knock-down rebuilds

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Powerful Owls in urban areas of Greater Sydney have a high affinity for gullies in remnant patches of bushland with very large, very old hollow-bearing trees for breeding and creeklines lined with dense canopy for cool, protected roost zones. As well as hunting in these remnant patches of bushland, reports from members of the public show that the owls come up into the suburbs at night to hunt, frequenting urban green spaces and suburban backyards. Tracking studies in Victoria by Deakin University's Powerful Owl Research Team show that their movements have a high positive association with tree canopy and green corridors. Tree canopy and green corridors are also important for the dispersal of juveniles. If we lose our remnant bushland, tree canopy and green corridors, we will also lose our urban owls.

Unauthorised Mountain Bike Tracks

Covid lockdowns saw an increase in human activity in natural areas and unfortunately, the construction of numerous unauthorised mountain bike tracks in urban bushland areas. The construction activity continues and is impacting our urban owls. This breeding season we have seen territory abandonment, failure to breed, and failed breeding attempts. Apart from the noise and activity associated with the construction, the tracks then open up the areas to other activity such as walkers (with or without dogs) and motor bike riders. Some of these tracks are substantial, as construction usually begins away from frequented areas and can be quite advanced by the time they are discovered.



If you see this kind of activity, please report it to the relevant land management authority eg local council, National Parks and Wildlife Service.

Damage in core breeding areas Photos: Kerry Sicard (above), Paul van Gaal (below)



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Bush Regeneration

What do you do when a threatened species likes to roost in environmental weeds?

This is a question facing bush regenerators across Greater Sydney, as Powerful Owls love to roost in thickets of broad-leaved privet amongst other species.

We've been working with land managers to help educate their bush regenerators on how to approach this tricky issue. Important points to consider are:

- Consult before cutting – do Powerful Owls use the patch?
- Timing is important – our Vegetation Management Guidelines discuss this in greater detail. Contact us via email at powerfulowl@birdlife.org.au if you would like a hard copy while the online version is offline.
- Mosaic work in sensitive areas can slowly tackle weed control and planting of suitable native vegetation, while maintaining the overall characteristics of the roost zone. In many territories we are able to advise which vegetation is critical to the local owls and ideally should be left till alternative options have developed sufficiently. Over time we aim to build this knowledge for all territories and develop mapping layers for land managers.



Mass cutting of broad-leaved privet impacting a Powerful Owl summer roost zone

Collaboration with Land Managers

Some of the land managers and their sub-contractors that we've worked with in parts of Sydney this year include local councils, NPWS, Sydney Water and AusGrid. Specific land management actions that we have advised on include:

- Bush regeneration
- Hazard reduction burns
- Development applications
- Fire trail maintenance
- Maintenance of walking trails and bridges
- water pipe maintenance
- sewer pop top inspections and repairs
- trimming veg under powerlines
- trimming veg along roads, street sweeping, road sign maintenance

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This has assisted land managers to carry out their activities at a time, or in a way that minimises potential impacts on the local Powerful Owls. Thanks to all land managers who have proactively minimised their impacts on our owls.

Requests for this type of advice have increased exponentially over the past year and we have submitted a grant application for a NSW Environmental Trust Grant to fund the development of resources for land managers, in collaboration with land managers, to help them make these decisions. Many thanks to the land managers that expressed interest in being involved and assisted in the preparation of this application.

Extended monitoring season

Powerful Owls are territorial and habitual. Their territories tend to have favoured areas that are used year after year and include a core nesting area, an owlet nursery area and summer roost zones.

Some of these features can be several hundred metres apart, even in areas with relatively high PO population densities.

Traditionally Powerful Owl Project monitoring has focused on the breeding season, so summer roosting habits for many of our owl families are not well understood. We'd like to encourage volunteers to continue surveys through the summer months to identify the summer roost zones for as many territories as possible. This will be valuable information for developing mapping layers that will assist land managers to protect Powerful Owl habitat.

Interesting Observations

Chick mix-ups



*Three of four owlets involved in Sydney's latest chick mix-up
Photo: Michael Bianchino*

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Every year for the last 3 years we've observed instances of owlets moving in with the neighbouring family. It's happening in areas of high population density. At two of these sites, the known nest trees are around 500m apart. At each of the other two sites, only one of the nest trees was known. The owlets can hear each other trilling at night when they move around their territories. Owlets are naturally inquisitive. We can only speculate, but we wonder if owlets whose parents have gone out hunting, hear some interesting activity next door or dinner being delivered and go to visit.

In 2020, the interloper stayed with its adopted family until it was ready to disperse, and was seen being fed by its adopted parents. In 2021, there were two instances of mix-ups. At one site, the owlets sorted themselves out again and returned to their own parents. At the other site, the interloper briefly went home, then returned to its adopted family and stayed there. This year, two neighbouring families each fledged two owlets. Currently, four owlets are with one family and there is no trilling in the other territory. The extra two have been with their adopted family now for about a month and all appear to be healthy.

In 2020 and 2021, both parents were present in all territories involved. This year, the status of the adults in the territory the owlets appear to have come from is unclear.

Owls on the ground

There is a growing number of accounts of Powerful Owls coming to the ground for various reasons. Some of the scenarios we're aware of include:

- An adult Powerful Owl on the ground for nearly an hour, dispatching and then eating part of a brush-tailed possum before flying away with the rest
- a Powerful Owl that spent the day roosting in a suburban garden, then flew to the lawn at dusk, to the spot where it had dropped some prey remains before daylight. Unfortunately for the owl, the prey remains had been cleaned up.
- Owlets on the ground on a creek bed at dusk, watching the water – perhaps there was something in the water that caught their attention, or perhaps the moving water was interesting enough itself. We also know that owls come down to water to bath.
- A healthy adult owl photographed sitting in the middle of the road. It was temporarily stunned by the headlights but then flew off the road.
- Owls catching terrestrial prey - our pellet analysis study detected rabbit remains in pellets



Photo: Ayla Rowe

Owls on Swing-sets

Just for fun. Seems to have been a thing this year!



*Photos: Jemma (left),
Nick (right)*

Rodenticides Update

We're awaiting the lab results of our second round of rodenticide testing of livers from deceased Powerful Owls, and we'll let you know as soon as the results are in.

In a win for urban wildlife in Sydney's northwest, a condition of consent for the approval of the Mirvac development on the old IBM site adjacent to the Cumberland State Forest in West Pennant Hills, stipulated that Second Generation Anticoagulant Rodenticides (SGARs) are banned from use on this site.

This class of poisons are heavily regulated or banned in Europe and North America and Australia's regulatory body, the APVMA is currently reviewing their availability and use in Australia.

BirdLife Australia's Campaigns team continue to work to keep the issue of SGAR poisoning of non-target native species, including our magnificent owls, in the public arena.

For more information on this issue including what products to buy and what to avoid, and what else you can do to help get these poisons out of the environment, see the Act For Birds web page here: [BirdLife Australia - Rat Poison — Act for Birds](#)

New BirdLife Australia Website

BirdLife Australia is in the process of migrating online content to a new website. The new-look site is live here [BirdLife Australia](#). Jump on and have a look around.

Bear in mind that it is very much a work in progress and the Powerful Owl Project content is still being added. As the threatened species arm of BirdLife Australia's Urban Birds Program, the Powerful Owl Project content is now located within the Urban Birds page. Much of the previous Powerful Owl Project web page content is currently not available. In the meantime, if there is anything in particular from the old web page that you would like to access, please send us an email at powerfulowl@birdlife.org.au.

Stay tuned as more content comes online.

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A huge THANK YOU to our volunteer Citizen Scientists

This year has been a very difficult year for monitoring – rain, rain, more rain, mud, leeches and Covid still lurking. Thank you from the bottom of our hearts for giving your time, energy and support to the project. You are the heart and soul of this project! We could not do what we do without your help.

A huge THANK YOU also to our Financial Supporters

Thank you so much to all who have generously given financial support to the Powerful Owl Project this year:

- Belalberi Foundation
- Lane Cove Council
- Willoughby Council
- Central Coast Council
- Bendigo Bank Community Bank Epping
- Shapes in the Sand Swimwear



Photo: Louis Petrucco

We wish everyone a Merry Christmas and Happy New Year!!

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