

Dear Committee members and residents,

Below is an update on recent management works and monitoring at Koala Beach. If you have any questions or would like further information on any of the below, please contact me, and as always, feel free to raise any issues at any time.

## Koalas

At this year's 2<sup>nd</sup> National Koala Conference in Port Macquarie, John Callaghan presented a summary of a scientific journal article he is preparing, entitled Koala Beach Estate – 20 years on. John is one of the ecologists who carried out koala surveys during the planning stages of the Koala Beach development, and has continued to carry out koala monitoring since. John's presentation can be viewed here: <http://www.koalahospital.org.au/wp-content/uploads/2017/07/John-Callaghan.pdf>



Report your koala sightings online! This new reporting system allows residents to upload photos and pinpoint the location of their sightings for use in monitoring programs. Go to [www.tweed.nsw.gov.au/koalas](http://www.tweed.nsw.gov.au/koalas).

## Habitat Restoration

Bushland Restoration Services, our restoration contractor, has provided the following update on recent work within the Koala Beach bushland. Note: the names in **bold** refer to habitat restoration work zones, which are numbered on the map below.

Bush regenerators continue progressive work through zones in Koala Beach. Work has been focussed on low-lying areas while mosquitoes are dormant. Mosquitoes make conditions very unpleasant and also pose a health risk to workers.

Additional funds were used to plant a small section of forest at the top of **Upper Grey Gum Gully [4]** after large dead acacias were removed. The surrounding forest was worked through at this time.



*Upper Grey Gum Gully.*

**Arthraxon [23]** – after seasonal dieback, the entire patch was sprayed through to reduce competitive grasses and annuals and then mowed. This year the slashings were not raked, partly due to time constraints, loss of rakes after flood, a general absence of enthusiasm from team members (horrible job) and opportunity to trial results of different approach. *Arthraxon* seedlings were observed immediately after the area was slashed during very dry period in August / September. It is expected growth will be vigorous after recent rain.

The forest area behind **Arthraxon [23]** (northern end of **Macadamia West [11]**) has been thoroughly worked and regen response is excellent. Adjacent roadside gardens harboured many invasive species which were controlled to prevent spread into natural areas.



*Giant Devils Figs, Umbrella Trees and other invasive species were controlled in this roadside garden adjacent to natural forest behind **Arthraxon**.*

Established **Plantings [27]** beside the sports fields and 'triangle' along Tom Merchant Drive have had maintenance treatment for weeds. Bush regeneration areas adjacent to plantings - **Creek [10]** have also been attended. Bush regenerators experienced a close encounter with very large brown snake near the bridge.

**Lower Grey Gum Gully [5]** required control of large woody weeds and vines especially around the pond at the bottom of the zone. Exotic grasses and annuals were controlled throughout the zone.



*Bush regenerators control exotic vines around **Lower Grey Gum Gully** pond*

Primary work through **Entrance South [7]** is virtually complete and now links with maintenance areas in **Lower Grey Gum Gully [5]**. Weed control has made access through some areas more inviting to the public. Chairs and table were observed beside the creek. A BMX bike track through the forest is developing beside the park.



*Bush regenerators prepare **Entrance South** for spray treatment. Lantana and Winter Senna climbing into small trees is controlled manually.*

Maintenance work has commenced along the road edge of **Entrance North [6]**. A huge reduction in weeds has been observed in this area. The majority of this zone requires maintenance work but mosquitoes could limit opportunities to spend extended periods of work during the warmer months. Large native vines have been observed causing negative effect on forest structure and reducing diversity. Considered control of vines and scramblers to prevent damage to canopy trees, allow access of fauna and reduce competition to juvenile native species has become part of bush regeneration strategy.

A patch of invasive *Furcraea foetida* and other invasive succulents was discovered dumped on the road edge of Macadamia Drive. Bush regenerators spoke to neighbours and the plants were collected and removed by Council staff. Hopefully the provision of 'green bins' to all residents will see the end of garden dumping in forest areas.

Giant Devils Figs and other invasive species along road edges and adjacent to work areas have been controlled when opportunities arise but complete control of all outbreaks – constantly arriving – would consume time allocated to zones.

Works in the coming months are planned through the remainder of **Entrance North [6]**, **Muskheart [3]**, **Blossom Bat [1]**, **Glossy Black [2]**, **Tongue [12]**, **Aboriginal [13]** and other zones as accessible. The presence of mosquitoes may limit opportunities in some areas during warmer months.



Map of bush regeneration work zones at Koala Beach

## Glossy Black-Cockatoo

The six artificial nest hollows were inspected via pole-mounted camera in August. Wood Ducks continue to use the hollows for nesting, but there is still no evidence of use by Glossy Black-Cockatoo. Predator protection (sleeves at the base of host trees) has reached the end of its useful life and is being replaced.

Glossy Black-Cockatoo feeding activity monitoring was done in September. Despite the hot dry conditions, the survey estimated over 2,000 chewed cones within the reserved feeding habitat, which is similar to the number recorded during the previous two monitoring sessions, in 2014 and 2011. Evidence of feeding was recorded at a number of *Allocasuarina* that had not been previously used.

Please continue to report any sightings of Glossy Black-Cockatoo to Council or [www.glossyblack.org.au](http://www.glossyblack.org.au).

## New addition to public bushland reserve

The NSW state government recently announced that 100 ha of land adjoining Koala Beach has been purchased for addition to the Cudgen Nature Reserve. The land, previously privately-owned, was acquired to provide additional koala habitat and also means that the reserve system around Koala Beach is now fully connected. Council is working with the National Parks and Wildlife Service to plan and complete koala habitat plantings in some of the existing cleared areas.

## Vertebrate pest management

Remote camera monitoring for vertebrate pest management has continued throughout the year, with cameras sited in the Koala Beach bushland reserve but also in the surrounds of Koala Beach. Vertebrate pests including foxes utilise cane and cattle lands, areas of bushland and also residential areas so monitoring and control needs to be undertaken across the landscape. Areas of private land adjoining Koala Beach also provide opportunities to undertake control activities that provide conservation benefits to Koala Beach, particularly where baiting or trapping cannot be undertaken at Koala Beach due to public safety or legislative constraints.



*Fox and Swamp Wallabies recorded during remote camera monitoring.*

Camera monitoring has found very little to no wild dog activity but regular fox activity. Foxes are a significant threat to biodiversity, preying on a wide range of native species including threatened fauna of Koala Beach such as the Bush Stone-curlew, Coastal Planigale and other ground nesting birds such as Black Bittern and Bush Hens. Foxes are even known to prey on large native animals like the Swamp Wallaby and are a potential threat to Koalas, particularly dispersing juveniles. Consequently, a range of control measures have been and continue to be undertaken to control foxes as follows:

- Searches for fox dens were undertaken in June and August, with this time of year the most effective for den searches as foxes are breeding and therefore using 'natal' dens to rear young. Surveys were undertaken using 'Jet' the detection dog and pest control contractor Reconeco. Reconeco map new fox dens, revisit existing fox dens and fumigate any 'active' fox dens. Fox den searches were extensive this year covering public bushland, including Koala Beach, from Bogangar to Wooyung.

- 1080 ground baiting for foxes was done in September, using pest control contractor Wildsearch Environmental Services. 1080 baiting targeted foxes and covered areas from Round Mountain to Pottsville, including bushland at Koala Beach and cane lands west of Koala Beach. If camera monitoring shows continued high fox activity, another round of 1080 baiting will be considered in late November/December.
- Soft-jaw trapping for foxes in two selected sites on the Tweed Coast by pest control contractor Reconeco. These sites were selected on the basis of camera monitoring and detection dog searches as being 'hot spots' for foxes and hence providing the most effective sites for fox trapping. This trapping is currently being undertaken.
- Council is currently developing a Fox Operational Management Plan for the Tweed Coast, to guide future fox management for biodiversity conservation on the Tweed Coast, inclusive of Koala Beach.

Council continues to offer to Koala Beach residents the service of rabbit trap hire, plus rabbit euthanasia through selected vet clinics, for those residents who find unowned rabbits roaming into their yards. Additionally through State Government funding for the Tweed Coastal Crown Reserves, Council is developing an Operational Management Plan for rabbits. Whilst this Plan is specific to the Tweed Coastal Crown Reserve at Casuarina and south Kingscliff, measures within this Plan are likely to be able to be applied for rabbit management (where rabbits are an issue) in the Koala Beach area.

Hare numbers do appear to be increasing, not just in the Koala Beach area but across the entire Tweed Coast. Hares are not a declared pest (unlike wild rabbits) but will be considered in future pest management planning across the Tweed Coast, inclusive of Koala Beach.

Council is also developing a 'cat monitoring protocol' for its Tweed Coast bushland reserve. This will be implemented in 2017 – 2018 and guide monitoring of cats and future control activities.

## Cane Toad

Contractor Wollumbin Environmental Services have continued to work throughout the year at the stormwater detention ponds at Muskheart Circuit, Sassafras Street and Sugar Glider Drive. The purpose of maintaining sediment fences here and trying to encourage dense vegetation surrounding these ponds is to limit the ability of Cane Toads to access these areas for breeding. Due to the past management of these ponds it has been difficult in areas to encourage (through planting and weed control) the growth of a thick perimeter of Lomandra, native sedges and grasses. Sediment fences will remain until a dense perimeter of vegetation is achieved. Due to the nature of Koala Beach and ample areas of ponding water following rain, Cane Toads will always be present at Koala Beach. However limiting access to breeding areas is a key way to reduce the number of toadlets.

Tweed Shire Council has partnered with the Cane Toad Challenge (CTC), which is a University of Queensland initiative that aims to support research and development, and facilitate the uptake of innovative Cane Toad control technologies. The CTC is currently promoting the distribution of commercially available pheromone baits for Cane Toad tadpoles. The rationale for this is that as Cane Toads are prolific breeders, there is a short time window where tadpoles are swarming at the margins of water bodies in the breeding season. This behaviour provides an ideal opportunity to make a dent in intergenerational recruitment through undertaking trapping. The use of pheromone baits is both environmentally sustainable and safe, as well as being simple to implement. The baits will be available for use at Koala Beach this breeding season.

## Rabbit control virus release

**Rabbit owners in the Tweed are being advised to take precautions to protect their pets from a new calicivirus strain that could soon be used to control rabbit numbers in the area.** Koala Beach rabbit owners can also protect their pet rabbits against the virus by ensuring their pets do not come into contact with wild rabbits or eat grass that has been grazed on by wild rabbits. The virus can also be transmitted by fleas, mosquitoes and flies, so try to ensure hutches are insect-proof.

Amy Hockings at North Coast Local Land Services can be contacted on (02) 6623 3906 for more information on the release of the biological control.

See Council's full media release at <http://www.tweed.nsw.gov.au/Newsroom/2202>

Please pass this email on to any Koala Beach residents who you think might be interested. If you know of any neighbours or Koala Beach residents who would like to be on the list, please pass on my contact details. If you no longer want to be on this mailing list, please let me know.