

Attachment 1:

Current threatened species monitoring on Council-managed land.

Council's restorations team are currently working on 90 sites, all of which have threatened species on them. However they do not have resources for ecological monitoring, and implementing a monitoring program across Council sites would be very costly. If this were considered a priority in future, it is essential that monitoring is not funded from the restorations budget, as all these funds are needed to enable the restorations team to restore and maintain these sites.

The biodiversity team are not currently resourced to do extensive surveys and monitoring across Council's estate. However staff do undertake monitoring of priority threatened species. Staff undertake a quarterly flying fox census at 6 flying fox camps on Council/Crown land. Council also undertakes koala activity surveys in the Coastal Koala Plan of Management Area, and we are able to do this due to grant funding from NSW DPE under the NSW Koala Strategy. The NSW Koala strategy has also recently funded monitoring to assess the impacts of the 2022 floods on koala habitat plantings, on both Council and private land in Byron Shire. 12-month post flood monitoring is currently underway and can be reported to the BAC once the monitoring program is complete.

Council Sewage Treatment Plants (STPs)

[Including West Byron STP Cell H and areas of forest, woodland and shrubland in the NW part of the site, and Vallances Road STP including land linking to the Ocean Shores STP]

Note: Council does not manage any land linking Vallances Rd STP with Ocean Shores STP.

The bush regen team manage 14 sites, covering over 300ha, at Council's STPs. Current work sites include Cells D, E and H at West Byron Wetlands, plus sites at Vallances Rd and Bangalow STP. Once all these sites are at a maintenance level, the team will have capacity to move on to other priority sites, including the NW section of West Byron STP.

At W Byron STP, Council's bush regen team work in Cells D, E and H 4-5 times/year (hours worked are presented in Table 1 below). They have spent 100s of hours getting rid of hairy commelina and have recently got on top of salvinia in Cell H by reintroducing the salvinia weevil. It is hoped the weevil will also take off in the other cells as the weather warms later in the year. In the northern area they do targeted groundsel eradication but, to date, haven't done any more intensive regen work in this area as they are currently focussing on other sites.

Table 1. Bush Regeneration hours at West Byron Wetlands

| Location | Year | Hours worked | Cost |
|---------------------|-------------|---------------------|-------------|
| West Byron Wetlands | 2019-20 | 2938 | \$161,590 |
| West Byron Wetlands | 2020-21 | 1518.5 | \$83,517 |
| West Byron Wetlands | 2021-22 | 1161 | \$63,855 |

Council is currently developing a Biodiversity Management Plan for West Byron STP, in partnership with Australian Wetlands Consulting (AWC). This plan is intended to collate other biodiversity and ecological reports that have been developed previously for different parts of the site, into one simpler, more accessible document. The Biodiversity Management Plan will list all threatened species that have been recorded from the site (Table 2), and will include a monitoring plan. The draft plan should be complete by August 2023 and Council will be seeking some expert peer review of the plan and would welcome review by interested BAC members.

As part of the Biodiversity Management Plan, AWC would like to establish a reference group for the site, including Council operations staff as well as stakeholder groups such as Byron Bird Buddies and ecological/wetland experts. To date AWC have been prioritising some immediate site management actions (e.g. acid sulfate soils), but they see a reference group as a good opportunity to bring different skill sets together to guide management of this large and complex site.

AWC report that some preliminary monitoring has begun, and seasonal monitoring for Grass Owl, Wallum Froglet and Wallum Sedge Frog is planned for later in the year. Since salvinia has been removed from Cell H, Byron Bird Buddies have reported an increase in waterbird use, however there are some complexities in trying to manage this site for both Comb-crested Jacana and migratory shorebirds, which require different water depths. Monitoring reports can be provided to the BAC as they become available.

Monitoring of Avifauna at West Byron Wetlands and Valances Rd is done by Byron Bird Buddies, funded by Council's Utilities department. The most recent BBB report was reported to the BAC on 15 September 2022 (I2022/1178).

Table 2 Threatened fauna known to occur within the Byron Bay Integrated Waste Management Reserve

| Scientific name | Common name | BC Act | EPBC Act | Potential Habitat within BBIWMR | Specific Habitat Requirements |
|----------------------------------|-------------------------------------|--------|----------|---|--|
| Amphibians | | | | | |
| <i>Crinia tinnula</i> * | Wallum Froglet | V | | Frog & Grass Owl Habitat, Constructed Treatment Cells (F, G, J and I), Cell H | PH range 3-5.7 |
| <i>Litoria alongburensis</i> * | Wallum Sedge Frog / Olongburra Frog | V | V | Frog & Grass Owl Habitat, Constructed Treatment Cells (F and G) | PH range from 3 – 5.7, dense sedges, moist substrate, water |
| Birds | | | | | |
| <i>Amaurornis moluccana</i> | Pale-vented Bush-hen | V | | 24 Hectare Melaleuca Regeneration Habitat, Frog & Grass Owl Habitat | Dense edge vegetation, Paperbark forest. Nests in middle of dense sedges |
| <i>Anseranatidae semipalmata</i> | Magpie Goose | V | | Constructed Treatment Cells (D, EI and J), Cell H | Open water, wet marshlands |
| <i>Botaurus poiciloptilus</i> * | Australasian Bittern | E | E | Cell H, Constructed Treatment Cells (F and G) | Dense sedge edges, wet sedge/marsh, ephemeral open water |
| <i>Calidris ferruginea</i> | Curlew Sandpiper | E | CE | Cell H, Constructed Treatment Cells (D and E) | Mudflats |

| Scientific name | Common name | BC Act | EPBC Act | Potential Habitat within BBIWMR | Specific Habitat Requirements |
|-------------------------------------|---------------------------|--------|----------|---|--|
| <i>Calyptrorhynchus lathamii</i> | Glossy Black-Cockatoo | V | | 24 Hectare Melaleuca Regeneration Habitat, Frog & Grass Owl Habitat | Sheoaks in coastal forests and woodlands, timbered watercourses, and moist and dry eucalypt forests of the coast and the Great Divide up to 1,000 m. |
| <i>Ephippiorhynchus asiaticus</i> * | Black Necked Stork | E | | Cell H | Open water fringes up to about 30cm depth. Primarily feeds on eels and mullet |
| <i>Grus rubicunda</i> | Brolga | V | | Cell H | Open water and associated edges |
| <i>Haliaeetus leucogaster</i> | White-bellied Sea-Eagle | V | | Whole site may provide foraging habitat | Coastal habitats and around terrestrial wetlands characterised by the presence of large areas of open water (larger rivers, swamps, lakes, ocean). |
| <i>Hirundapus caudacutus</i> | White-throated Needletail | | V | Whole site may provide foraging habitat | Aerial foraging generally over woodland and forest. |
| <i>Irediparra gallinacean</i> * | Comb-crested Jacana | V | | Cell H | Lily pads/open water and dense sedge edges |
| <i>Ixobrychus flavicollis</i> * | Black Bittern | V | | Cell H, Constructed Treatment Cells (F and G) | Dense vegetated edges (wet heath) Tree or shrub vegetation adjacent to watercourses |
| <i>Ptilinopus regina</i> | Rose-crowned Fruit Dove | V | | 24 Hectare Melaleuca Regeneration Habitat, Frog & | Subtropical and dry rainforest, moist eucalypt forest and swamp forest. |

| Scientific name | Common name | BC Act | EPBC Act | Potential Habitat within BBIWMR | Specific Habitat Requirements |
|------------------------------------|------------------------|--------|----------|--|---|
| | | | | Grass Owl Habitat, Coastal Wetland | |
| <i>Sternula albifrons</i> | Little Tern | E | | n/a | Almost exclusively coastal, preferring sheltered environments; low dunes or on sandy beaches |
| <i>Stictonetta naevosa</i> | Freckled Duck | V | | Cell H | Open water, wet sedge/marsh with sedge edges |
| <i>Tyto capensis</i> ^{##} | Eastern Grass Owl | V | | Frog & Grass Owl Habitat | Areas of tall grass, including tussocks in swampy areas, grassy plains, swampy heath, cane grass, sedges on flood plains. |
| Insectivorous Bats: | | | | | |
| <i>Miniopterus australis</i> | Little Bentwing Bat | V | | 24 Hectare Melaleuca Regeneration Habitat, Cell H, Constructed Treatment Cells (D and E) | Forage over open water, roost in caves, sometimes in tree hollows (bat roost boxes) |
| <i>Myotis macropus</i> | Southern Myotis | V | | 24 Hectare Melaleuca Regeneration Habitat, Cell H, Constructed Treatment Cells (D, E, F and G) | Forage over open water, Potential roost sites in dense forest (bat roost boxes) |
| <i>Pteropus poliocephalus</i> | Grey-headed Flying Fox | V | V | 24 Hectare Melaleuca Regeneration Habitat, Coastal Wetland, Constructed | Nectar, fleshy fruits. Roosts at colonial sites |

| Scientific name | Common name | BC Act | EPBC Act | Potential Habitat within BBIWMR | Specific Habitat Requirements |
|-------------------------------|-----------------------------|--------|----------|---|--|
| | | | | Treatment Cells (F and G) | |
| <i>Syconycteris australis</i> | Common Blossom Bat | V | | 24 Hectare Melaleuca Regeneration Habitat, Coastal Wetland, Constructed Treatment Cells (F and G) | Nectar, fleshy fruits. Roosts in dense foliage |
| Mammalia | | | | | |
| <i>Phascolarctos cinereus</i> | Koala | E | E | Recorded from Swamp Mahogany (<i>Eucalyptus robusta</i>) on southwest edge of Cell H. Main habitat outside of BBIWMR | Koala feed tree species (not present with BBIWMR) |
| <i>Planigale maculata</i> | Common Planigale | V | | STP Future Development Area, Coastal Wetland, Frog & Grass Owl Habitat | Dense ground strata – prey items House Mouse, Insects, Pollen |
| <i>Potorous tridactylus</i> | Long-nosed Potoroo | V | V | Coastal Wetland, Frog & Grass Owl Habitat | Inhabits coastal heaths and dry and wet sclerophyll forests. Dense understorey with occasional open areas is an essential part of habitat. |
| Gastropoda | | | | | |
| <i>Thersites mitchellae</i> | Mitchell's Rainforest Snail | E | | STP Future Development Area, Coastal Wetland, Frog & Grass Owl Habitat, 24 Hectare Melaleuca | Lowland subtropical and swamp forest |

| Scientific name | Common name | BC Act | EPBC Act | Potential Habitat within BBIWMR | Specific Habitat Requirements |
|-----------------|-------------|--------|----------|---------------------------------|-------------------------------|
| | | | | Regeneration Habitat | |

CE = Critically Endangered; E = Endangered; V = Vulnerable

- NB:
- Under the conditions laid out in NPWS Concurrence Report, Byron Shire Council has specific obligations to consider potential impacts on species marked with * when undertaking activities with the BBIWMR
 - Targeted fauna surveys should be undertaken for species marked with # to confirm presence within the BBIWMR
 - While some species (listed above), such as the Koala, Grey-headed Flying-fox and White-bellied Sea Eagle, have been recorded within the BBIWMR, they are not considered to have optimal habitat within the reserve. Specific mitigation measures have thus not been designed for these species.

At Valances Rd, the bush regen team is currently working in 6 zones. 3 of these zones are at maintenance level and one is close.

Ocean Shores STP site is not currently being worked although it has been in the past. The team will move onto this site once all the aforementioned STP sites are at a maintenance level – this should be fairly soon as Bangalow and Vallances Rd STPs are close to maintenance level. Their work is much more effective if they focus on fewer sites at a time, rather than spreading themselves across all 140 council sites requiring management. In total they are currently working 90 sites, with 50 more on the list. The land between Valances Rd STP and Ocean Shores STP is private, with 4 separate landholders.

At Valances Rd, Earthscapes have also been engaged to do photo point monitoring, which began 1 year ago. Valances Rd, Ocean Shores and West Byron STP sites are also included in Council's koala activity monitoring program.

Land to the east of Lilli Pilli Drive. Includes: Lot 66 DP863772, Lot 46 DP860353, Lot 47 DP854800, Lot 46 DP848543, Lot 24 DP845454, Lot 7 DP809005.

This is a biobanking site, set up as part of the offsets for the Byron Bypass. As such, flora and fauna have been surveyed and there has been rigorous six-monthly monitoring and annual reporting by Earthscapes for the past 4 years (Attachments 1-10).

The restorations team currently work at this site and it is at a maintenance level for most weeds, although they are having difficulty eradicating salvinia from the melaleuca swamp.

Land to the east of the Byron Bypass - Lot 2 DP1289363

This site is owned by the Transport Asset Holding Entity of NSW. Council's bush regeneration team leader has contacted them to request funding for restoration, but so far none has been forthcoming. To date Council has funded restoration of the smaller section of this land immediately north of the bus station (Figure 1 below). Council has also funded restoration of Butler St Reserve (Figure 1), as part of the above and beyond compensatory works for the Byron bypass. Both sites are close to a maintenance level.



Figure 1. Council restoration sites adjacent to Butler St